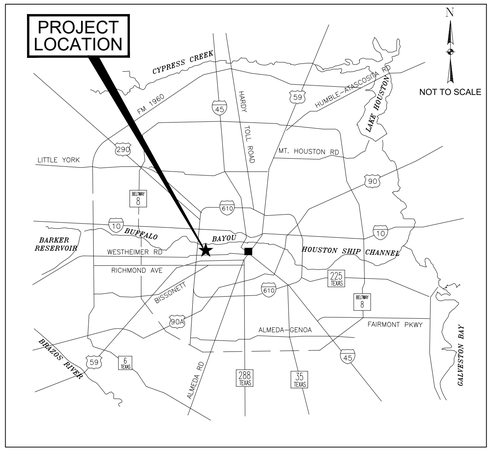
CITY OF HOUSTON

HOUSTON PUBLIC WORKS

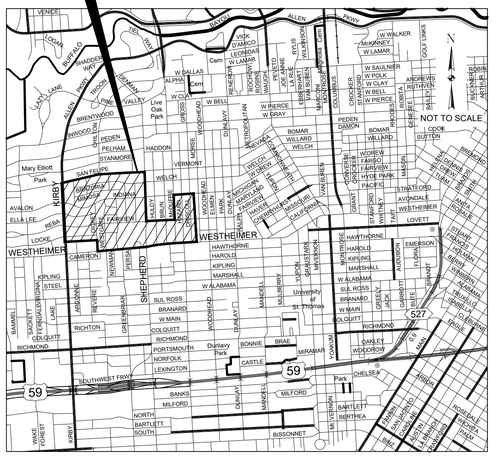
CAPITAL PROJECTS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS (AS069)

WBS NO. R-002011-0089-4



LOCATION MAP



VICINITY MAP

KEY MAP NO 492Q,R,U&V
GIMS MAP NO. 5256B, 5257D, 5356A & 5357C
ZIP CODE 77019

FEDERAL EMERGENCY MANAGEMENT AGENCY–
FLOOD INSURANCE RATE MAP HARRIS COUNTY, TEXAS
MAP NUMBER: 48201C0860L
LOCATED IN UNSHADED ZONE "X"

COUNCIL DISTRICT C&G

TDLR EABPR TABS2020007633

MAYOR
JOHN WHITMIRE

CONTROLLER
CHRIS HOLLINS

DISTRICT
COUNCIL MEMBERS

AMY PECK DISTRICT A	TARSHA JACKSON DISTRICT B	ABBIE KAMIN DISTRICT C	CAROLYN EVANS–SHABAZZ DISTRICT D
FRED FLICKINGER DISTRICT E	TIFFANY D. THOMAS DISTRICT F	MARY NAN HUFFMAN DISTRICT G	MARIO CASTILLO DISTRICT H
JOAQUIN MARTINEZ DISTRICT I	EDWARD POLLARD DISTRICT J	MARTHA CASTEX–TATUM DISTRICT K	

COUNCIL MEMBERS
AT–LARGE

JULIAN RAMIREZ POSITION 1	WILLIE DAVIS POSITION 2
TWILA CARTER POSITION 3	LETITIA PLUMMER POSITION 4
SALLIE ALCORN POSITION 5	

NO.	DATE	REVISION	APP.

OTHON

OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com
SURVEYED BY: AMANI ENGINEERING, INC.
FB NO. P–5723

STATE OF TEXAS
MAUREEN GONALEZ
143557
LICENSED PROFESSIONAL ENGINEER
7/29/2026

PARKS–FORESTRY DEPT.

METRO

HOUSTON WATER

TRANSPORTATION & DRAINAGE OPERATIONS

CAPITAL PROJECTS SURVEY

CITY ENGINEER DATE

DIRECTOR OF HOUSTON PUBLIC WORKS DATE

SHEET NO 1 OF 381 SHEETS

FOR CITY OF HOUSTON USE ONLY

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713–223–4567.

C:\pw_working\othon-pw-01\jason.garza\dms22437\01_COVER SHEET.dwgCOVER SHEET May 21 , 2026 – 10:12AM Jgarza

GENERAL

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	INDEX OF DRAWINGS SHEET 1 OF 2
3.	INDEX OF DRAWINGS SHEET 2 OF 2
4.	CONSTRUCTION NOTES
5.	GENERAL CONSTRUCTION NOTES SHEET 1 OF 2
6.	GENERAL CONSTRUCTION NOTES SHEET 2 OF 2
7.	PROJECT VARIANCE TABLE SHEET 1 OF 3
8.	PROJECT VARIANCE TABLE SHEET 2 OF 3
9.	PROJECT VARIANCE TABLE SHEET 3 OF 3
10.	SYMBOLS
10A.	ABBREVIATIONS
11.	STORM & PAVEMENT LAYOUT SHEET 1 OF 4
12.	STORM & PAVEMENT LAYOUT SHEET 2 OF 4
13.	STORM & PAVEMENT LAYOUT SHEET 3 OF 4
14.	STORM & PAVEMENT LAYOUT SHEET 4 OF 4
15.	PROPOSED SANITARY LAYOUT SHEET 1 OF 4
16.	PROPOSED SANITARY LAYOUT SHEET 2 OF 4
17.	PROPOSED SANITARY LAYOUT SHEET 3 OF 4
18.	PROPOSED SANITARY LAYOUT SHEET 4 OF 4
19.	SOIL BORINGS LAYOUT SHEET 1 OF 4
20.	SOIL BORINGS LAYOUT SHEET 2 OF 4
21.	SOIL BORINGS LAYOUT SHEET 3 OF 4
22.	SOIL BORINGS LAYOUT SHEET 4 OF 4
23.	PROPOSED WATER LAYOUT 1 OF 4
24.	PROPOSED WATER LAYOUT 2 OF 4
25.	PROPOSED WATER LAYOUT 3 OF 4
26.	PROPOSED WATER LAYOUT 4 OF 4
27.	EXISTING TYPICAL SECTIONS SHEET 1 OF 2
28.	EXISTING TYPICAL SECTIONS SHEET 2 OF 2
29.	PROPOSED TYPICAL SECTIONS SHEET 1 OF 16
30.	PROPOSED TYPICAL SECTIONS SHEET 2 OF 16
31.	PROPOSED TYPICAL SECTIONS SHEET 3 OF 16
32.	PROPOSED TYPICAL SECTIONS SHEET 4 OF 16
33.	PROPOSED TYPICAL SECTIONS SHEET 5 OF 16
34.	PROPOSED TYPICAL SECTIONS SHEET 6 OF 16
35.	PROPOSED TYPICAL SECTIONS SHEET 7 OF 16
36.	PROPOSED TYPICAL SECTIONS SHEET 8 OF 16
37.	PROPOSED TYPICAL SECTIONS SHEET 9 OF 16
38.	PROPOSED TYPICAL SECTIONS SHEET 10 OF 16
39.	PROPOSED TYPICAL SECTIONS SHEET 11 OF 16
40.	PROPOSED TYPICAL SECTIONS SHEET 12 OF 16
41.	PROPOSED TYPICAL SECTIONS SHEET 13 OF 16
42.	PROPOSED TYPICAL SECTIONS SHEET 14 OF 16
43.	PROPOSED TYPICAL SECTIONS SHEET 15 OF 16
44.	PROPOSED TYPICAL SECTIONS SHEET 16 OF 16
45.	HORIZONTAL GEOMETRY LAYOUT SHEET 1 OF 13
46.	HORIZONTAL GEOMETRY LAYOUT SHEET 2 OF 13
47.	HORIZONTAL GEOMETRY LAYOUT SHEET 3 OF 13
48.	HORIZONTAL GEOMETRY LAYOUT SHEET 4 OF 13
49.	HORIZONTAL GEOMETRY LAYOUT SHEET 5 OF 13
50.	HORIZONTAL GEOMETRY LAYOUT SHEET 6 OF 13
51.	HORIZONTAL GEOMETRY LAYOUT SHEET 7 OF 13
52.	HORIZONTAL GEOMETRY LAYOUT SHEET 8 OF 13
53.	HORIZONTAL GEOMETRY LAYOUT SHEET 9 OF 13
54.	HORIZONTAL GEOMETRY LAYOUT SHEET 10 OF 13
55.	HORIZONTAL GEOMETRY LAYOUT SHEET 11 OF 13
56.	HORIZONTAL GEOMETRY LAYOUT SHEET 12 OF 13
57.	HORIZONTAL GEOMETRY LAYOUT SHEET 13 OF 13
58.	DRIVEWAY SUMMARY TABLE & DETAILS SHEET 1 OF 5
59.	DRIVEWAY SUMMARY TABLE & DETAILS SHEET 2 OF 5
60.	DRIVEWAY SUMMARY TABLE & DETAILS SHEET 3 OF 5
61.	DRIVEWAY SUMMARY TABLE & DETAILS SHEET 4 OF 5
62.	DRIVEWAY SUMMARY TABLE & DETAILS SHEET 5 OF 5
63.	SURVEY CONTROL MAP SHEET 1 OF 9
64.	SURVEY CONTROL MAP SHEET 2 OF 9
65.	SURVEY CONTROL MAP SHEET 3 OF 9
66.	SURVEY CONTROL MAP SHEET 4 OF 9
67.	SURVEY CONTROL MAP SHEET 5 OF 9

GENERAL (CONTINUE)

SHEET NO.	DESCRIPTION
68.	SURVEY CONTROL MAP SHEET 6 OF 9
69.	SURVEY CONTROL MAP SHEET 7 OF 9
70.	SURVEY CONTROL MAP SHEET 8 OF 9
71.	SURVEY CONTROL MAP SHEET 9 OF 9
72.	SURVEY SWING–TIES SHEET 1 OF 5
73.	SURVEY SWING–TIES SHEET 2 OF 5
74.	SURVEY SWING–TIES SHEET 3 OF 5
75.	SURVEY SWING–TIES SHEET 4 OF 5
76.	SURVEY SWING–TIES SHEET 5 OF 5

DRAINAGE CALCULATION

SHEET NO.	DESCRIPTION
77.	EXISTING DRAINAGE AREA MAP SHEET 1 OF 4
78.	EXISTING DRAINAGE AREA MAP SHEET 2 OF 4
79.	EXISTING DRAINAGE AREA MAP SHEET 3 OF 4
80.	EXISTING DRAINAGE AREA MAP SHEET 4 OF 4
81.	EXISTING DRAINAGE CALCULATIONS FAIRVIEW SYSTEM 2–YR
82.	EXISTING DRAINAGE CALCULATIONS INDIANA SYSTEM 2–YR
83.	EXISTING DRAINAGE CALCULATIONS SHEPHERD SYSTEM 2–YR SHEET 1 OF 3
84.	EXISTING DRAINAGE CALCULATIONS SHEPHERD SYSTEM 2–YR SHEET 2 OF 3
85.	EXISTING DRAINAGE CALCULATIONS SHEPHERD SYSTEM 2–YR SHEET 3 OF 3
86.	PROPOSED DRAINAGE AREA MAP SHEET 1 OF 4
87.	PROPOSED DRAINAGE AREA MAP SHEET 2 OF 4
88.	PROPOSED DRAINAGE AREA MAP SHEET 3 OF 4
89.	PROPOSED DRAINAGE AREA MAP SHEET 4 OF 4
90.	PROPOSED DRAINAGE CALCULATIONS FAIRVIEW SYSTEM 2–YR
91.	PROPOSED DRAINAGE CALCULATIONS INDIANA SYSTEM 2–YR
92.	PROPOSED DRAINAGE CALCULATIONS SHEPHERD SYSTEM 2–YR SHEET 1 OF 3
93.	PROPOSED DRAINAGE CALCULATIONS SHEPHERD SYSTEM 2–YR SHEET 2 OF 3
94.	PROPOSED DRAINAGE CALCULATIONS SHEPHERD SYSTEM 2–YR SHEET 3 OF 3
95.	PROPOSED XPSWMM DRAINAGE CALCULATIONS 5–YR SHEET 1 OF 3
96.	PROPOSED XPSWMM DRAINAGE CALCULATIONS 5–YR SHEET 2 OF 3
97.	PROPOSED XPSWMM DRAINAGE CALCULATIONS 5–YR SHEET 3 OF 3
98.	PROPOSED XPSWMM DRAINAGE CALCULATIONS 100–YR SHEET 1 OF 3
99.	PROPOSED XPSWMM DRAINAGE CALCULATIONS 100–YR SHEET 2 OF 3
100.	PROPOSED XPSWMM DRAINAGE CALCULATIONS 100–YR SHEET 3 OF 3

DEMOLITION SHEETS

SHEET NO.	DESCRIPTION
101.	DEMOLITION PLAN SHEET 1 OF 7
102.	DEMOLITION PLAN SHEET 2 OF 7
103.	DEMOLITION PLAN SHEET 3 OF 7
104.	DEMOLITION PLAN SHEET 4 OF 7
105.	DEMOLITION PLAN SHEET 5 OF 7
106.	DEMOLITION PLAN SHEET 6 OF 7
107.	DEMOLITION PLAN SHEET 7 OF 7

PLAN AND PROFILES

SHEET NO.	DESCRIPTION
108.	ARGONNE STREET PLAN STA 0+00 TO STA 4+40
109.	ARGONNE STREET PROFILE STA 0+00 TO STA 4+40
110.	ARGONNIE STREET PLAN AND PROFILE STA 4+40 TO END
111.	AVALON PL PLAN AND PROFILE STA 0+00 TO STA 4+00
112.	AVALON PL PLAN STA 4+00 TO STA 8+00
113.	AVALON PL PROFILE STA 4+00 TO STA 8+00
114.	AVALON PL PLAN STA 8+00 TO STA 12+00
115.	AVALON PL PROFILE STA 8+00 TO STA 12+00
116.	AVALON PL PLAN AND PROFILE STA 12+00 TO STA 16+00
117.	AVALON PL PLAN AND PROFILE STA 16+00 TO STA 20+00
118.	AVALON PL PLAN AND PROFILE STA 20+00 TO STA 23+60
119.	AVALON PL PLAN AND PROFILE STA 23+60 TO END
120.	BRAZORIA PLAN AND PROFILE STA 0+00 TO END
121.	BRUN STREET PLAN AND PROFILE STA 0+00 TO STA 4+20
122.	BRUN STREET PLAN AND PROFILE STA 4+20 TO END
123.	DEVONSHIRE STREET PLAN AND PROFILE STA 0+00 TO END
124.	DICKEY PLACE PLAN STA 0+00 TO STA 4+00
125.	DICKEY PLACE PROFILE STA 0+00 TO STA 4+00
126.	DICKEY PLACE PLAN STA 4+00 TO STA 7+60
127.	DICKEY PLACE PROFILE STA 4+00 TO STA 7+60

PLAN AND PROFILES (CONTINUE)

SHEET NO.	DESCRIPTION
128.	DICKEY PLACE PLAN STA 7+60 TO STA 11+00
129.	DICKEY PLACE PROFILE STA 7+60 TO STA 11+00
130.	DICKEY PLACE PLAN STA 11+00 TO STA 14+00
131.	DICKEY PLACE PROFILE STA 11+00 TO STA 14+00
132.	DICKEY PLACE PLAN STA 14+00 TO END
133.	DICKEY PLACE PROFILE STA 14+00 TO END
134.	DRISCOLL STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
135.	DRISCOLL STREET PLAN STA 4+00 TO STA 8+50
136.	DRISCOLL STREET PROFILE STA 4+00 TO STA 8+50
137.	DRISCOLL STREET PLAN AND PROFILE STA 8+50 TO STA 12+00
138.	DRISCOLL STREET PLAN AND PROFILE STA 12+00 TO END
139.	DUNRAVEN STREET PLAN AND PROFILE STA 0+00 TO END
140.	ELLA LEE LN PLAN AND PROFILE STA 0+00 TO STA 4+00
141.	ELLA LEE LN PLAN AND PROFILE STA 4+00 TO STA 8+00
142.	ELLA LEE LN PLAN STA 8+00 TO END
143.	ELLA LEE LN PROFILE STA 8+00 TO END
144.	FAIRVIEW STREET PLAN STA 0+00 TO STA 4+00
145.	FAIRVIEW STREET PROFILE STA 0+00 TO STA 4+00
146.	FAIRVIEW STREET PLAN STA 4+00 TO STA 8+00
147.	FAIRVIEW STREET PROFILE STA 4+00 TO STA 8+00
148.	FAIRVIEW STREET PLAN STA 8+00 TO STA 12+20
149.	FAIRVIEW STREET PROFILE STA 8+00 TO STA 12+20
150.	FAIRVIEW STREET PLAN STA 12+20 TO STA 16+70
151.	FAIRVIEW STREET PROFILE STA 12+20 TO STA 16+70
152.	FAIRVIEW STREET PLAN AND PROFILE STA 16+70 TO STA 21+00
153.	FAIRVIEW STREET PLAN AND PROFILE STA 21+00 TO STA 25+40
154.	FAIRVIEW STREET PLAN AND PROFILE STA 25+40 TO STA 28+60
155.	FAIRVIEW STREET PLAN STA 28+60 TO END
156.	FAIRVIEW STREET PROFILE STA 28+60 TO END
157.	HAZARD STREET PLAN AND PROFILE STA 0+00 TO STA 4+50
158.	HAZARD STREET PLAN AND PROFILE STA 4+50 TO STA 8+50
159.	HAZARD STREET PLAN AND PROFILE STA 8+50 TO 12+50
160.	HAZARD STREET PLAN AND PROFILE STA 12+50 TO END
161.	HULDY STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
162.	HULDY STREET PLAN AND PROFILE STA 4+00 TO END
163.	KINGSTON STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
164.	KINGSTON STREET PLAN AND PROFILE STA 4+00 TO STA 7+60
165.	KINGSTON STREET PLAN STA 7+60 TO STA 12+00
165A.	KINGSTON STREET PROFILE STA 7+60 TO STA 12+00
166.	KINGSTON STREET PLAN AND PROFILE STA 12+00 TO END
167.	LOCKE STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
168.	LOCKE STREET PLAN AND PROFILE STA 4+00 TO STA 8+00
169.	LOCKE STREET PLAN STA 8+00 TO END
170.	LOCKE STREET PROFILE STA 8+00 TO END
171.	MIMOSA STREET PLAN AND PROFILE STA 0+00 TO STA 3+60
172.	MIMOSA STREET PLAN AND PROFILE STA 3+60 TO STA 8+00
173.	MIMOSA STREET PLAN AND PROFILE STA 8+00 TO STA 12+00
174.	MIMOSA STREET PLAN AND PROFILE STA 12+00 TO END
175.	PECKHAM STREET PLAN AND PROFILE STA 0+00 TO STA 4+40
176.	PECKHAM STREET PLAN AND PROFILE STA 4+40 TO END
177.	PERSA STREET PLAN AND PROFILE STA 0+00 TO STA 4+50
178.	PERSA STREET PLAN AND PROFILE STA 4+50 TO STA 9+00
179.	PERSA STREET PLAN AND PROFILE STA 9+00 TO END
180.	REBA STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
181.	REBA STREET PLAN AND PROFILE STA 4+00 TO STA 8+00
182.	REBA STREET PLAN STA 8+00 TO END
183.	REBA STREET PROFILE STA 8+00 TO END
184.	REVERE STREET PLAN STA 0+00 TO STA 4+00
185.	REVERE STREET PROFILE STA 0+00 TO STA 4+00
186.	REVERE STREET PLAN AND PROFILE STA 4+00 TO END
187.	SALISBURY STREET PLAN AND PROFILE STA 0+00 TO END
188.	SAN FELIPE STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
189.	SAN FELIPE STREET PLAN AND PROFILE STA 4+00 TO STA 8+00
190.	SAN FELIPE STREET PLAN AND PROFILE STA 8+00 TO STA 11+60
191.	SAN FELIPE STREET PLAN AND PROFILE STA 11+60 TO STA 15+60
192.	SAN FELIPE STREET PLAN AND PROFILE STA 15+60 TO STA 19+20
193.	SAN FELIPE STREET PLAN AND PROFILE STA 19+20 TO STA 22+60

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

OTHON, INC. TBPE NO. F-1471

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CONSULTING ENGINEERS www.othon.com

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HOUSTON, TEXAS 77074
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TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

INDEX OF DRAWINGS
SHEET 1 OF 2

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **2** OF 391	

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PLAN AND PROFILES (CONTINUE)

SHEET NO.	DESCRIPTION
194.	SAN FELIPE STREET PLAN AND PROFILE STA 22+60 TO END
195.	SAN SABA STREET PLAN STA 0+00 TO STA 3+80
196.	SAN SABA STREET PROFILE STA 0+00 TO STA 3+80
197.	SAN SABA STREET PLAN STA 3+80 TO STA 8+00
198.	SAN SABA STREET PROFILE STA 3+80 TO STA 8+00
199.	SAN SABA STREET PLAN STA 8+00 TO END
200.	SAN SABA STREET PROFILE STA 8+00 TO END
201.	SPANN STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
202.	SPANN STREET PLAN AND PROFILE STA 4+00 TO END
203.	WELCH STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
204.	WELCH STREET PLAN AND PROFILE STA 4+00 TO STA 7+00
205.	WELCH STREET PLAN AND PROFILE STA 7+00 TO STA 11+00
206.	WELCH STREET PLAN AND PROFILE STA 11+00 TO STA 15+00
207.	WELCH STREET PLAN AND PROFILE STA 15+00 TO STA 18+00
208.	WELCH STREET PLAN AND PROFILE STA 18+00 TO END
209.	WESTGATE STREET PLAN AND PROFILE STA 0+00 TO STA 4+00
210.	WESTGATE STREET PLAN AND PROFILE STA 4+00 TO STA 7+80
211.	WESTGATE STREET PLAN AND PROFILE STA 7+80 TO STA 12+20
212.	WESTGATE STREET PLAN AND PROFILE STA 12+20 TO END

STORM SEWER LATERALS

SHEET NO.	DESCRIPTION
213.	STORM SEWER LATERALS SHEET 1 OF 22
214.	STORM SEWER LATERALS SHEET 2 OF 22
215.	STORM SEWER LATERALS SHEET 3 OF 22
216.	STORM SEWER LATERALS SHEET 4 OF 22
217.	STORM SEWER LATERALS SHEET 5 OF 22
218.	STORM SEWER LATERALS SHEET 6 OF 22
219.	STORM SEWER LATERALS SHEET 7 OF 22
220.	STORM SEWER LATERALS SHEET 8 OF 22
221.	STORM SEWER LATERALS SHEET 9 OF 22
222.	STORM SEWER LATERALS SHEET 10 OF 22
223.	STORM SEWER LATERALS SHEET 11 OF 22
224.	STORM SEWER LATERALS SHEET 12 OF 22
225.	STORM SEWER LATERALS SHEET 13 OF 22
226.	STORM SEWER LATERALS SHEET 14 OF 22
227.	STORM SEWER LATERALS SHEET 15 OF 22
228.	STORM SEWER LATERALS SHEET 16 OF 22
229.	STORM SEWER LATERALS SHEET 17 OF 22
230.	STORM SEWER LATERALS SHEET 18 OF 22
231.	STORM SEWER LATERALS SHEET 19 OF 22
232.	STORM SEWER LATERALS SHEET 20 OF 22
233.	STORM SEWER LATERALS SHEET 21 OF 22
234.	STORM SEWER LATERALS SHEET 22 OF 22

TREE PROTECTION SHEETS

SHEET NO.	DESCRIPTION
235.	TREE PROTECTION PLAN SHEET 1 OF 22
236.	TREE PROTECTION PLAN SHEET 2 OF 22
237.	TREE PROTECTION PLAN SHEET 3 OF 22
238.	TREE PROTECTION PLAN SHEET 4 OF 22
239.	TREE PROTECTION PLAN SHEET 5 OF 22
240.	TREE PROTECTION PLAN SHEET 6 OF 22
241.	TREE PROTECTION PLAN SHEET 7 OF 22
242.	TREE PROTECTION PLAN SHEET 8 OF 22
243.	TREE PROTECTION PLAN SHEET 9 OF 22
244.	TREE PROTECTION PLAN SHEET 10 OF 22
245.	TREE PROTECTION PLAN SHEET 11 OF 22
246.	TREE PROTECTION PLAN SHEET 12 OF 22
247.	TREE PROTECTION PLAN SHEET 13 OF 22
248.	TREE PROTECTION PLAN SHEET 14 OF 22
249.	TREE PROTECTION PLAN SHEET 15 OF 22
250.	TREE PROTECTION PLAN SHEET 16 OF 22
251.	TREE PROTECTION PLAN SHEET 17 OF 22
252.	TREE PROTECTION PLAN SHEET 18 OF 22
253.	TREE PROTECTION PLAN SHEET 19 OF 22
254.	TREE PROTECTION PLAN SHEET 20 OF 22
255.	TREE PROTECTION PLAN SHEET 21 OF 22
256.	TREE PROTECTION PLAN SHEET 22 OF 22

TRAFFIC CONTROL PLAN SHEETS

SHEET NO.	DESCRIPTION
257.	TCP-01 TRAFFIC CONTROL NOTES
258.	TCP-02 CONSTRUCTION PHASING PLAN
259.	TCP-03 OVERALL LAYOUT ADVANCE WARNING SIGNS
260.	TCP-04 PHASE I KIRBY DR & SAN SABA ST
261.	TCP-05 PHASE I – STEP 1 REBA DRIVE & FAIRVIEW STREET
262.	TCP-06 PHASE I – STEP 1 LOCKE LANE
263.	TCP-07 PHASE I – STEP 1 SAN SABA STREET
264.	TCP-08 PHASE I – STEP 2 REBA DRIVE & FAIRVIEW STREET
265.	TCP-09 PHASE I – STEP 2 LOCKE LANE
266.	TCP-10 PHASE I – STEP 2 SAN SABA STREET
267.	TCP-11 PHASE II – STEP 1 BRAZORIA ST/WELCH ST & REVERE ST
268.	TCP-12 PHASE II – STEP 1 WELCH ST & SPANN ST
268A.	TCP-12A PHASE II – STEP 1 WELCH ST & SPANN ST
269.	TCP-13 PHASE II – STEP 2 BRAZORIA ST/WELCH ST & REVERE ST
269A.	TCP-13A PHASE II – STEP 2 BRAZORIA ST/WELCH ST & REVERE ST
270.	TCP-14 PHASE II – STEP 2 WELCH ST & SPANN ST
270A.	TCP-14A PHASE II – STEP 2 WELCH ST & SPANN ST
271.	TCP-15 PHASE II AVALON PLACE
272.	TCP-16 PHASE II – STEPS 1 & 2 ELLA LEE LANE
273.	TCP-17 PHASE II – STEPS 1 & 2 ARGONNE STREET
274.	TCP-18 PHASE II – STEPS 1 & 2 DICKEY PLACE
275.	TCP-19 PHASE III – STEP 1 MIMOSA DRIVE
276.	TCP-20 PHASE III – STEP 2 MIMOSA DRIVE
277.	TCP-21 PHASE III – STEP 1 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE
277A.	TCP-21A PHASE III – STEP 1 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE
278.	TCP-22 PHASE III – STEP 2 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE
278A.	TCP-22A PHASE III – STEP 2 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE
279.	TCP-23 PHASE III – STEP 2 KINGSTON, DEVOSHIRE
280.	TCP-24 PHASE IV – STEP 1 PERSA ST & PECKHAM ST
280A.	TCP-24A PHASE IV – STEP 1 PERSA ST & PECKHAM ST
281.	TCP-25 PHASE IV – STEP 1 WESTGATE ST, KINGSTON ST & DUNRAVEN LN
281A.	TCP-25A PHASE IV – STEP 1 WESTGATE ST, KINGSTON ST & DUNRAVEN LN
282.	TCP-26 PHASE IV – STEP 2 WESTGATE ST, KINGSTON ST & DUNRAVEN LN
282A.	TCP-26A PHASE IV – STEP 2 WESTGATE ST, KINGSTON ST & DUNRAVEN LN
283.	TCP-27 PHASE V – STEP 1 SAN FELIPE ST, REVERE ST & SPANN ST
283A.	TCP-27A PHASE V – STEP 1 SAN FELIPE ST, REVERE ST & SPANN ST
284.	TCP-28 PHASE V – STEP 2 SAN FELIPE ST, REVERE ST & SPANN ST
284A.	TCP-28A PHASE V – STEP 2 SAN FELIPE ST, REVERE ST & SPANN ST
285.	TCP-29 PHASE V – STEP 1 AVALON PL & PERSA ST
286.	TCP-30 PHASE V – STEP 2 AVALON PL & PERSA ST
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311.	STORM WATER POLLUTION PREVENTION PLAN SHEET 5 OF 12
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313.	STORM WATER POLLUTION PREVENTION PLAN SHEET 7 OF 12
314.	STORM WATER POLLUTION PREVENTION PLAN SHEET 8 OF 12
315.	STORM WATER POLLUTION PREVENTION PLAN SHEET 9 OF 12
316.	STORM WATER POLLUTION PREVENTION PLAN SHEET 10 OF 12
317.	STORM WATER POLLUTION PREVENTION PLAN SHEET 11 OF 12
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342.	STREET LIGHTING PLAN SHEET 6 OF 12
343.	STREET LIGHTING PLAN SHEET 7 OF 12
344.	STREET LIGHTING PLAN SHEET 8 OF 12
345.	STREET LIGHTING PLAN SHEET 9 OF 12
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358.	STORM SEWER DETAILS SHEET 3 OF 5
359.	STORM SEWER DETAILS SHEET 4 OF 5
360.	STORM SEWER DETAILS SHEET 5 OF 5

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

STANDARD DETAILS

SHEET NO.	DESCRIPTION
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362.	STORM SEWER MANHOLE DETAILS
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384.	CONSTRUCTION SIGN STANDARD

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

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DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 3 OF 391	

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CONSTRUCTION NOTES

ONLY APPLICATION IF CALLED FOR ON PLANS.

1. REMOVE PORTION OF EXISTING RCP AND MODIFY MANHOLE OPENING TO MATCH PROPOSED SEWER SIZE.
2. PROPOSED ASPHALT OVERLAY/TRANSITION 20LF (UNLESS OTHERWISE NOTED) MATCH EXISTING OR PROPOSED GRADES AND CROSS SLOPES. COMPLY WITH STREET CUT ORDINANCE COH STANDARD DWG NO. 02902-1, 02902-2 AND 02951-02.
3. PROPOSE SAWED JOINT AND EXPOSE 15" OF REINFORCING STEEL. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE NO 11.
4. PROPOSED ESPLANADE CURB.
5. PROPOSED STANDARD MONOLITHIC CURB AND GUTTER AS SHOWN ON STANDARD DRAWING CURB, CURB AND GUTTER AND HEADER DETAILS.
6. DOWEL ON 6" CURB AFTER ASPHALTIC SURFACING IS IN PLACE, OR INTO EXISTING CONCRETE PAVEMENT AS APPLICABLE.
7. REMOVE SIDEWALK/WALKWAY. DO NOT REPLACE. RESTORE TO MATCH EXISTING GROUND WITH TOPSOIL AND PLACEMENT OF SOD.
8. REMOVE AND REPLACE SIDEWALK, LIMITS OF REPLACEMENT AS SHOWN ON DRAWING.
9. PROPOSED 3/4" BOARD EXPANSION OR PREMOLDED NON-EXTRUDING JOINT BETWEEN WALK AND CURB.
10. REMOVE A SUFFICIENT LENGTH OF PIPE, AS DETERMINED BY THE ENGINEER, CONNECT TO PROPOSED JUNCTION BOX OR INLET. IF JUNCTION BOX IS USED, THEN CONNECT JUNCTION BOX TO PROPOSED INLET/MANHOLE WITH MINIMUM 24" REINFORCED CONCRETE PIPE.
11. HORIZONTAL DOWELS SHALL BE NO. 6 BARS, 24" LONG, DRILLED AND EMBEDDED 12" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL. DOWELS SHALL BE 12" C-C, UNLESS OTHERWISE SPECIFIED.
12. THE CONTRACTOR SHALL NOTIFY THE CITY, TRAFFIC SIGNAL DIVISION, 10 WORKING DAYS IN ADVANCE FOR RELOCATION OF EXISTING TRAFFIC SIGNAL POLES.
13. CONVERT B INLET TO B-B INLET
14. DECREASE CURB EXPOSURE FROM 6" TO 2" IN 1 FOOT
15. DECREASE CURB EXPOSURE FROM 6" TO 2" IN 4 FOOT
16. DECREASE CURB EXPOSURE FROM 6" TO 2" IN 2 FOOT
17. PROPOSED REINFORCED CONCRETE SIDEWALK RAMPS SHALL BE COLORED BLACK FOR CONCRETE ROADWAYS AND UNCOLORED FOR ASPHALTIC CONCRETE ROADWAYS.
18. CUT AND REMOVE EXISTING STORM SEWER RCP, INCLUDES BACKFILL.
19. PLUG EXISTING STORM MANHOLE
20. MEET EXISTING CURB OR CURB AND GUTTER FOR GRADE AND ALIGNMENT.
21. ADJUST EXISTING STORM MANHOLE/INLET TO NEW GRADE.
22. PROPOSED WHEELCHAIR RAMP, AS SHOWN ON THE CITY OF HOUSTON STANDARD DRAWING "WHEELCHAIR RAMP DETAILS".
23. REMOVE EXISTING STORM SEWER INLET OR MANHOLE, INCLUDES BACKFILL.
24. EXISTING STORM SEWER TO REMAIN IN SERVICE.
25. EXISTING STORM SEWER INLET OR MANHOLE TO REMAIN.
26. REMOVE AND RETURN EXISTING BUS SHELTER TO METRO.
27. ADJUST EXISTING 3" OR 4" CURB DRAINS TO NEW PROPOSED CURB LIMIT.
28. ABANDON STORM SEWER IN PLACE, INCLUDES BACKFILL.
29. SAWCUT EXISTING CONCRETE OR ASPHALT PAVEMENT NEATLY TO PROVIDE A SMOOTH EDGE (MINIMUM DEPTH 2 INCHES).
30. PROPOSED RETAINING WALL ADJACENT TO ROW. SEE "STRUCTURAL DETAILS" SHEET FOR MORE INFORMATION. INCREASE RETAINING WALL HEIGHT AS NEEDED TO MATCH EXISTING GRADE.
31. PROPOSED PAVEMENT MARKINGS AS SHOWN ON STANDARD DRAWINGS "STANDARD PAVEMENT MARKING".
32. PROPOSED WHITE PLASTIC MARKER AS SHOWN ON TRAFFIC AND TRANSPORTATION DRAWING "STANDARD ELONGATED WORD AND ARROW SYMBOL DESIGN DETAILS FOR PAVEMENT MARKINGS".
33. PROPOSED PLASTIC MARKER, AS SHOWN ON TRAFFIC AND TRANSPORTATION DRAWING "STANDARD FOR LEFT TURN CHANNELIZATION".
34. PROPOSED STANDARD CONCRETE PAVING HEADER AS SHOWN ON STANDARD DRAWING 02771-01 "CURB, CURB AND GUTTER AND HEADER DETAILS". THE PROPOSED JOINT SHALL BE LOCATED AT THE EXISTING PAVEMENT JOINT.
35. ADJUST EXISTING AT&T HAND HOLE LOCATION TO AVOID CONFLICT.
36. EXISTING ELECTRICAL MANHOLE/JUNCTION BOX OR CABLE BOX TO BE ADJUSTED TO FIT NEW GRADE (BY OTHERS: CENTERPOINT ENERGY).
37. EXISTING GAS MAIN TO BE RELOCATED/ADJUSTED (BY CENTERPOINT ENERGY).
38. ADJUST AT&T JUNCTION BOX/HANDHOLE TO PROPOSED GRADE (BY OTHERS, AT&T).
39. CUT AND REMOVE PORTION OF EXISTING RCP AND CONNECT TO PROPOSED INLET OR MANHOLE; RCP END(S) TO BE FLUSH WITH INSIDE WALL FACE.
40. REMOVE EXISTING ENCROACHMENT STRUCTURE.
41. BREAK INTO BARREL OF EXISTING MONOLITHIC REINFORCED CONCRETE STORM SEWER. (SEE CITY OF HOUSTON DRAWING NUMBER 02081-07)
42. CONCRETE PLUG RCP AT PROJECT LIMITS.
43. TIE-IN PROPOSED STANDARD MONOLITHIC CURB TO EXISTING CURB.
44. LIMITS OF CUT & RESTORE ARE TO THE NEAREST CONSTRUCTION OR EXPANSTION JOINT BEYOND EDGE OF EXCAVATION. SEE DRAWING 02951-02 FOR MORE INFORMATION.
45. CUT & PLUG EXISTING SANITARY LINE. REMOVE PORTIONS OF EXISTING SANITARY LINE IF IN CONFLICT WITH PROPOSED ELEMENTS. REMOVE ABANDONED SANITARY SEWER WITHIN STREET ROW UNLESS OTHERWISE NOTED.
46. ADJUST EXISTING WATER VALVE/METER BOXES TO NEW GRADE, REPLACE ALL MISSING OR DAMAGED WATER VALVE/METER BOXES AND COVERS.
47. END RETAINING WALL, TCP OF WALL TO BE FLUSH WITH PAVEMENT ELEVATION.
48. REMOVE AND SALVAGE EXIST FIRE HYDRANT.
49. BORING LOCATION. SEE "PROJECT LAYOUT AND BORING LOCATIONS" SHEET FOR ALL BORING LOCATIONS.
50. REMOVE EXISTING WALL TO ACCOMMODATE SIDEWALK.
51. PROPOSED STREET LIGHT. SEE "STREET LIGHT LAYOUT" SHEETS FOR MORE INFORMATION. CONTRACTOR TO FIELD VERIFY LOCATIONS OF EXISTING UTILITIES BEFORE PLACING DRILL SHAFT FOUNDATIONS.
52. PROPOSED PEDESTRIAN LIGHT. SEE "STREET LIGHT LAYOUT" SHEETS FOR MORE INFORMATION. CONTRACTOR TO FIELD VERIFY LOCATIONS UTILITIES BEFORE PLACING DRILL SHAFT FOUNDATIONS.
53. PROPOSED WATER LINE OFFSET.
54. EXISTING HEADWALL ENCROACHMENT TO REMAIN
55. PROVIDE I FULL SECTION (18FT MIN) OF SANITARY SEWER CENTERED ON WATERLINE CROSSING WITH RESTRAINED JOINTS. EMBED TOTAL LENGTH OF PIPE SEGMENT PLUS 1 FOOT BEYOND THE JOINTS ON EACH END IN CEMENT STABILIZED SAND EXCEPT AS NOTED IN CHAPTER 7, TABLE 7.3 OF INFRASTRUCTURE DESIGN MANUEL
56. PROVIDE 1 FULL SECTION (18FT MIN) OF WATERLINE CENTERED ON SANITARY SEWER CROSSING WITH RESTRAINED JOINTS.
57. PLUG NEW 8" SANITARY SEWER LINE.
58. RELOCATE EXISTING WATER METER AND RECONNECT WATER SERVICE.
59. RELOCATE POWER POLE (BY CENTERPOINT ENERGY)
60. TIE PROPOSED RETAINING WALL/SIDEWALK INTO EXISTING STAIRCASE/WALKWAY.
61. TIE PROPOSED STORM SEWER INTO EXISTING STORM SEWER BUILD BY OTHERS.
62. CONTRACTOR TO REMOVE EXISTING CONCRETE HOUSE NUMBER AND REINSTALL AT SAME LOCATION.
63. EXISTING SAN. SEWER TO REMAIN IN SERVICE.
64. EXISTING SAN. MANHOLE TO REMAIN IN SERVICE. ADJUST TO PROPOSED GRADE. IF OUTSIDE OF PAVEMENT AND OR SIDEWALK, RIM SHOULD BE 6" ABOVE PROPSED GRADE.
65. ABANDON STORM INLET/MANHOLE IN PLACE.
66. REMOVE AND PLACE BACK HISTORICAL MARKERS AT OR NEAR SAME LOCATION AS REMOVED. (www.bluetileproject.com)
67. EXISTING SAN. SEWER MANHOLE TO REMAIN IN SERVICE. DO NOT ADJUST TO GRADE.
68. REMOVE AND PLACE BACK TRAFFIC SIGN.
69. REMOVE AND RELOCATE TRAFFIC SIGN BECAUSE OF NEW ROAD GEOMETRY.
70. PRIVATE PROPERTY SIGN, COORDINATE WITH PROPERTY OWNER.
71. ABANDON SAN. SEWER IN PLACE.
72. REHABILITATE EXISTING SAN. MANHOLE/REALIGN FLOW CHANNELS TO ACCOMODATE NEW SEWER.
73. PROPOSED 24" RCP STORM SEWER.
74. REFERENCE SPECIFICATION 01562. HAND DIG OR TRENCHLESS CONSTRUCTION TO PROTECT EXISTING TREE ROOTS FOR PROPOSED SANITARY SEWER SERVICE.
75. REMOVE CULVERT. BACKFILL, COMPACT, AND SOD ADJACENT DITCH AREA FROM BACK OF CURB TO SIDEWALK AND/OR BACK OF SIDEWALK TO RIGHT-OF-WAY.
76. ABANDON SAN. MANHOLE IN PLACE.
77. EXISTING SAN. MANHOLE TO BE REMOVED.
78. REMOVE AND REPLACE EXISTING SAN SEWER.
79. PROPOSED WHEEL CHAIR RAMP, REFER TO COH DETAILS 02775-02 AND 02775-06. RAMP CONFIGURATION MAY DIFFER FROM STANDARD DETAIL BUT MUST MEET ADA STANDARDS.
80. ZERO CUTBACK CURB, REFER TO TREE PROTECTION PLAN FOR LIMITS.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

CONSTRUCTION NOTES

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 4 OF 391	

GENERAL NOTES– INSIDE CITY LIMITS

1. UNLESS OTHERWISE NOTED AND APPROVED ON DRAWINGS, CONSTRUCT CIVIL INFRASTRUCTURE IN ACCORDANCE WITH THE EFFECTIVE EDITION OF THE HOUSTON PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, AND SUPPLEMENTS, ADDENDA AND AMENDMENTS THERETO. THE LATEST EDITION OF THE ABOVE PUBLICATIONS CAN BE FOUND AT: HTTP://WWW.HOUSTONPERMITTINGCENTER.ORG/OFFICE-CITY-ENGINEER/DESIGN-AND-CONSTRUCTION-STANDARDS
2. THE DESIGN MUST BE CONSISTENT WITH THE EFFECTIVE EDITION OF HOUSTON PUBLIC WORKS INFRASTRUCTURE DESIGN MANUAL AND TCEQ (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) REQUIREMENTS.
3. THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS CONDUCTED IN ACCORDANCE WITH CHAPTER 11 OF THE LATEST EDITION OF THE PUBLICATION INFRASTRUCTURE DESIGN MANUAL, PUBLISHED BY HOUSTON PUBLIC WORKS. SOILS REPORT WAS PREPARED BY [GEOTECHNICAL ENGINEERING FIRM] REPORT NO. [NO. OF REPORT], DATED [DATE OF REPORT].
4. UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION. UTILITIES MARKED WITHIN THE PUBLIC RIGHT OF WAY OR IN EASEMENTS SHALL COMPLY WITH TAC TITLE 16, PART 1, CHAPTER 18, RULE §18.6 AND THE AMERICAN PUBLIC WORKS ADMINISTRATION (APWA) UNIFORM COLOR CODE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE EFFECTIVE EDITION OF HOUSTON PUBLIC WORKS, STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC, REFERENCED ABOVE AND SUPPLEMENTS, ADDENDA AND AMENDMENTS THERETO, AT NO ADDITIONAL COST TO THE CITY OF HOUSTON.
6. CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, HOUSTON PUBLIC WORKS @ 832-394-9098 OR VIA FAX AT 832-395-4424 FOR INSPECTION AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
7. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF THE OWNING AUTHORITY.
8. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
9. CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.
10. CONTRACTOR SHALL MAINTAIN A SET OF REDLINE DRAWINGS AND RECORD AS-BUILT CONDITIONS DURING CONSTRUCTION. THESE AS-BUILT DRAWINGS WILL BE SUBMITTED TO THE DESIGN CONSULTANT WHO WILL MAKE THE CHANGES ON THE ORIGINAL TRACINGS, LABEL EACH SHEET IN THE SET AS "RECORD DRAWINGS", AND RETURN IT TO THE OFFICE OF THE CITY ENGINEER.

AT&T TEXAS/SWBT FACILITIES

1. THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL CALL 1-800-344-8377 (TEXAS 811) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
3. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWBT FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWBT FACILITIES.
4. WHEN AT&T TEXAS/SWBT FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES, THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
5. THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
6. PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. AT (713)567-4552 OR EMAIL HIM AT rl7259@att.com, IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWBT FACILITIES.
7. AT&T SHALL NOT REGARD CONSTRUCTIBILITY ISSUES AS CONFLICTS. THE EXCAVATING CONTRACTOR SHALL SUPPORT AT&T FACILITIES EXPOSED WITHIN THEIR TRENCH, WHICH ARE NOT IN DIRECT CONFLICT WITH ROADWAY OR OTHER IMPROVEMENTS.

SANITARY SEWERS NOTES

1. ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON "STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC" AND ALL CURRENT AMENDMENTS THERETO AND BE SUBJECT TO A STANDARD EXFILTRATION TEST. TESTS ARE TO BE PERFORMED ON THE TOTAL FOOTAGE OF SEWER LINE INCLUDED IN THE PROJECT. REQUIREMENTS OF TEXAS ADMINISTRATIVE CODE, TITLE 30 CHAPTER 317, "DESIGN CRITERIA FOR SEWERAGE SYSTEMS" SHALL GOVERN WHERE CONFLICTS EXIST EXCEPT WHERE CITY REQUIREMENTS ARE MORE STRINGENT.
2. ALL MANHOLES ARE TO BE PER CITY OF HOUSTON STANDARD DETAILS DRAWING NUMBERS 02082-01, 02082-02, 02082N-02, 02082-03, AND 02082N-03 UNLESS OTHERWISE NOTED. USE 2010 VERSION AS APPLICABLE.
3. SANITARY SEWER MANHOLES WILL HAVE BEDDING AND BACKFILL PER CITY OF HOUSTON STANDARD DETAILS DRAWING NO. 02317-08 UNLESS OTHERWISE NOTED.
4. THE SANITARY SEWER PVC PIPE SHALL BE ASTM D 3034 TYPE PSM SDR 26 GRAVITY SEWER PIPE, ASTM D2241 SDR 26 PRESSURE RATED SEWER PIPE OR AWWA C-900 DR-18 GREEN PVC PRESSURE RATED SEWER PIPE BASED ON CONSTRUCTION CONDITION REQUIREMENT AND CONFORMING TO ASTM D1784 AND CITY OF HOUSTON STANDARD SPECIFICATION SECTION 02506 POLVINYL CHLORIDE PIPE.
5. WHEN SS PRESSURE RATED PVC PIPE IS USED ON WATERLINE (WL) CROSSING UNDER CONDITION 1 OF COH IDM TABLE 7.3' THE SAME TYPE OF D2241 SDR 26 PVC PIPE OR C-900 GREEN DR-18 PVC GREEN PRESSURED TO BE UTILIZING INBETWEEN TWO SS MH'S OR TO UTILIZE A DI TRANSITION ADAPTER FOR THE CONNECTION OF ASTM D-3034 PVC GRAVITY PIPE TO DI-OD AWWA C-900 PVC PIPE CENTERED AT WL WHEN CONNECTING TWO DIFFERENT TYPES OF PVC PIPE FOR SEWER CONSTRUCTION.
6. AWWA C-900 DR-18 PVC PIPE USES EITHER AWWA C900 DR-18 PVC FITTINGS OR DIP FITTINGS.
7. ALL SANITARY SEWER LINES UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL HAVE BEDDING PER CITY OF HOUSTON STANDARD DETAILS DRAWING NUMBERS 02317-01, 02317-02, OR 02317-03 AS APPLICABLE, WITH 1 ½ SACK CEMENT/CY STABILIZED SAND BACKFILL UP TO THE BOTTOM OF THE PAVEMENT SUBGRADE. 100 PSI PERFORMANCE RESULTS ARE STILL REQUIRED.
8. ALL SANITARY SEWERS CROSSING WATER LINES WITH A CLEARANCE BETWEEN 12 INCHES AND 9 FEET SHALL HAVE A MINIMUM OF ONE 18' JOINT OF 150 PSI DUCTILE IRON OR (GREEN) C900 PVC PIPE MEETING ASTM SPECIFICATION D2241 CENTERED ON WATER LINE. WHEN WATER LINE IS BELOW SANITARY SEWER PROVIDE MINIMUM 2 FOOT SEPARATION.
9. CONTRACTOR SHALL PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 9' FEET BETWEEN WATER LINES AND SANITARY SEWER MANHOLES AND LINES.
10. SANITARY SEWER MANHOLE RIMS OUTSIDE OF PROPOSED PAVING WILL BE SET 3" – 6" ABOVE THE SURROUNDING LEVEL FINISHED GRADE AFTER PAVING WITH SLOPED BACKFILL ADDED FOR STORM WATER DRAIN AWAY FROM MANHOLE RIM.
11. IN WET STABLE TRENCH AREAS USE BEDDING PER CITY OF HOUSTON STANDARD DETAILS DRAWING NUMBER 02317-02 (2002).
12. DEFLECTION TEST: DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID SEWER PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5% IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED AS PER 30 TAC 317.2 LATEST AMENDMENT AND WITHOUT MECHANICAL PULLING DEVICES. NO BALL-TYPE MANDREL IS ALLOWED.
13. INFILTRATION, EXFILTRATION OR LOW-PRESSURE AIR TEST: EITHER OF THE FOLLOWING TESTS SHALL BE PERFORMED AS PER TAC, TITLE 30 317.2 WITHIN THE SPECIFIED TOLERANCES ON ALL GRAVITY SEWERS.

    A. INFILTRATION OR EXFILTRATION TEST: TOTAL LEAKAGE AS DETERMINED BY A HYDROSTATIC HEAD TEST SHALL NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO (2) FEET.

    B. LOW-PRESSURE AIR TEST: PERFORM TEST ACCORDING TO UNI-B-6-90 OR OTHER APPROPRIATE PROCEDURES. FOR SECTIONS OF PIPE LESS THAN 36" (INCH) AVERAGE INSIDE DIAMETER, THE MINIMUM ALLOWABLE TIME FOR PRESSURE DROP FROM 3.5 P.S.I.G. TO 2.5 P.S.I.G. SHALL BE AS FOLLOWS:

    6" 340 SECONDS OR 0.855(L) FOR TEST LENGTHS GREATER THAN 398'
    8" 454 SECONDS OR 1.520(L) FOR TEST LENGTHS GREATER THAN 298'
    10" 567 SECONDS OR 2.374(L) FOR TEST LENGTHS GREATER THAN 239'
    15" 850 SECONDS OR 5.342(L) FOR TEST LENGTHS GREATER THAN 159'
    18" 1020 SECONDS OR 7.693(L) FOR TEST LENGTHS GREATER THAN 133'

    WHERE L = LENGTH OF LINE OF SAME PIPE SIZE IN FEET.

14. "SAN. S.E." INDICATES "SANITARY SEWER EASEMENT"
15. FOR SANITARY MANHOLE (MH) RIMS SET INSIDE OF OR @ CURB & GUTTER PAVEMENT AND/OR BELOW T.C., MH RIMS WILL BE SET FLUSHED WITH AN ABUTTING PAVED SURFACE. THE (VALCUN, NEENAH OR EQUAL) HEAVY DUTY BOLTED SOLID MH COVER SHALL BE PROPERLY (AND SECURELY) ATTACHED AND SEALED TO ITS COMPATIBLE GASKETED FRAME BY USING BOTH A NEOPRENE GASKET AND (AT LEAST) 4 COUNTER-SUNK HEX-HEAD COARSE THREADED ½"-13 UNC STAINLESS STEEL BOLTS. THE HEAVY DUTY FRAME MH COVER SHALL BE SOLID (NO AIR HOLES). SAID FRAME SHALL BE BOTH EMBEDDED INTO THE MH'S TOP ALSO SECURELY ANCHORED TO THE UNDERLYING MH STRUCTURE WITH EITHER SECURELY ATTACHED EMBEDDED ANCHOR BOLTS OR THE CONCRETE MH'S EXPOSED REBARS WELDED TO THE FRAME OR OTHER EQUALLY SECURED METHODS TO PREVENT MH COVER/FRAME BLOW-OFFS/EJECTIONS.

SWPPP CONSTRUCTION NOTES

1. CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
2. DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEPT BACK INTO THE EXCAVATED AREA.
3. CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FORM THE EXCAVATED AREA.
4. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
5. CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

    . DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY TABILIZED.
    . AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
    . STRUCTURAL CONTROL MEASURES.
    LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

6. CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

STREET AND BRIDGE NOTES

1. FILL AREAS ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY PRIOR TO INSTALLATION OF WATER LINE AND FILL AREA SHALL BE SEEDED AND FERTILIZED WITHIN 10 WORKING DAYS.
2. UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURBED INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE.
3. CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE 1 CURB INLETS.
4. EXISTING PAVEMENTS, CURBS, DRIVEWAYS, AND SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF HOUSTON STANDARDS, WITH LATEST ADDENDA AND AMENDMENTS THERETO.
5. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY UPON COMPLETION OF JOB SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.
6. EXPOSED 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE #6 BARS 24" LONG 24" C-C DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL.
7. WHEELCHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.
8. PRIOR TO STREET CONSTRUCTION, THE CONTRACTOR SHALL CONTACT HOUSTON PUBLIC WORKS AT (PHONE) 832-394-9578 AND COMPLY WITH ALL REQUIREMENTS FOR THE ISSUANCE OF NECESSARY PERMITS/WORK ORDERS FOR STREET CONSTRUCTION.
9. DOUBLE REFLECTORIZED BLUE TRAFFIC MARKERS SHALL BE PLACED 6-INCHES OFFSET OF THE CENTERLINE OF ALL FIRE HYDRANT LOCATIONS BY THE PAVING CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE A BUTTON PLACED ON EACH STREET.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

GENERAL CONSTRUCTION NOTES – SHEET 1 OF 2

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 5 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\05_GENERAL NOTES – SHEET 1 OF 2.dwgCONSTRUCTION NOTES May 21 , 2026 – 10:26AM Jgarza

STORM SEWER NOTES

1. STORM SEWER SHALL BE REINFORCED CONCRETE PIPE (C-76, CLASS III), AND SHALL BE INSTALLED, BEDDED, AND BACK FILLED IN ACCORDANCE WITH THE CITY OF HOUSTON DRAWING NOS. 2317-02, 02317-3, 02317-05, 02317-06, AND 02317-07 (OCT. 2002) AS APPLICABLE UNLESS OTHERWISW SHOWN ON THE DRAWINGS.

2. ALL STORM SEWER CONSTRUCTED IN SIDELOT EASMENT SHALL BE R.C.P (C-76, CLASSIII) AND SHALL BE EMBEDDED IN ACCORDANCE WITH THE CITY OF HOUSTON DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07 AS APPLICABLE.

3. ALL SEWER UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1-1/2 SACK CEMENT/C.Y. STABLIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE. THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL.

4. ALL TRENCH BACKFILL SHALL BE IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS IN EACH LIFT, AND MECHNICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMACTION TEST (ASTM D-698/AASHTO T99).

5. CIRCULAR AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL BE INSTALLED USING RUBBER GASKET JOINT CONFORMING TO ASTM C443 AND ASTM C877 RESPECTIVELY.

6. ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24" AND LARGER R.C.P. (C-76, CLASSIII).

7. ALL PRPOSED PIPE STUB-OUTS FROM MANHOLES AND INLET LEADS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.

8. MINIMUM HORIZONTAL CLEARANCE BETWEEN ANY STORM PIPE AND BOX SHALL BE AT LEAST 48-INCHES FROM EXTERIOR OF THE STORM PIPE OR BOX TO THE EXTERIOR OF THE EXISTING OR PROPOSED PUBLIC OR PRIVATE UTILITY AND OTHER APPURTENANCES. MINIMUM VERTICAL CLEARANCE BETWEEN ANY STORM PIPE AND BOX SHALL BE AT LEAST 18-INCHES FROM EXTERIOR OF THE STORM PIPE OR BOX TO THE EXTERIOR OF THE EXISTING OR PROPOSED PUBLIC OR PRIVATE UTILITY AND OTHER APPURTENANCES.

9. ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 02086-ADJUSTING MANHOLES, INLETS, AND VALAVE BOXES TO GRADE.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF THIS WORK.

11. ALL DITCHES SHALL BE GRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREA SHALL BE REGRADED, SEEDED, AND FERTILIZED.

12. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.

WATER LINE NOTES

1. ALL 4" THROUGH 12" WATER LINE TO BE AWWA C-900 PVC DR-18 BLUE PRESSURE RATED WATER MAIN WITH 2" AND SMALLER WATER SERVICE LINE TO BE CONTINUOUS TYPE K COPPER TUBING PER COH STANDARD SPECIFICATION SECTION 02503. ALL 4" THRU 54" DI PIPE WATER LINES SHALL BE AWWA C151 WITH INSIDE LINING WITH AWWA C104 AND DOUBLE WRAPPED WITH 8-MIL POLYETHYLENE SHEETS.

2. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AS NECESSARY TO PREVENT PIPE MOVEMENT. USE RESTRAINED JOINTS WHERE PREVENTING MOVEMENT OF 16" OR GREATER PIPE IS NECESSARY DUE TO THRUST.

3. ALL WATER LINES UNDER PROPOSED OR FUTURE PAVING AND TO A POINT OF ONE (1)FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE ENCASED IN BANK SAND TO 12" OVER PIPE AND BACKFILLED WITH CEMENT STABILIZED SAND TO WITHIN ONE (1)FOOT OF SUBGRADE.

4. ALL WATER LINE AND SEWER LINE CROSSINGS SHALL BE CONSTRUCTED PER CITY OF HOUSTON AND TCEQ REGULATIONS.

5. ALL WATER VALVES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C-500 AND SHALL BE OF THE RESILIENT SEAT TYPE.

6. ALL WATER LINES TO BE DISINFECTED IN CONFORMANCE WITH AWWA C-651 AND THE TEXAS STATE DEPARTMENT OF HEALTH. AT LEAST ONE BACTERIOLOGICAL SAMPLE SHALL BE COLLECTED FOR EVERY 1,000 LINEAR FEET OF WATER LINE AND SHALL BE REPEATED IF CONTAMINATION PERSISTS.

7. ALL BELOW GRADE VALVES SHALL BE GASKETED, HUB-END GATE VALVE WITH A CAST IRON BOX, EXCEPT WHERE FLANGES ARE CALLED OUT ON THE PLANS.

8. 4" THRU 12" FITTINGS SHALL BE CEMENT MORTAR LINED COMPACT DUCTILE IRON PRESSURE FITTINGS PER ANSI A21.53, OR PUSH ON FITTING PER ANSI A21.10 PRESSURE RATED AT 250 PSIG.

9. HYDROSTATIC TESTING: ALL WATER PIPE SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH THE LATEST CITY OF HOUSTON STANDARD CONSTRUCTION SPECIFICATIONS. TESTS ARE TO BE PERFORMED ON THE ENTIRE FOOTAGE OF WATER PIPE LINE INCLUDED IN THE PROJECT.

10. ALL WATER LINES TO HAVE 4' MINIMUM COVER TO FINISHED GRADE AND MINIMUM 12" CLEARANCE TO OTHER UTILITIES AT CROSSING UNLESS OTHERWISE NOTED ON PLANS. ALL WATER LINE INSTALLED OVER 8' DEEP SHALL UTILIZE RESTRAINED JOINT FITTINGS.

11. CONTRACTOR SHALL KEEP WATER PIPE CLEAN AND CAPPED (OR OTHERWISE EFFECTIVELY COVERED) OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.

TRAFFIC ENGINEERING NOTES

CONTRACTOR OR OWNER SHALL SUBMIT TRAFFIC CONTROL PLANS WITH THE MOBILITY PERMIT APPLICATION. THE PLANS SHALL BE DRAWN TO SCALE AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.

THE GENERAL NOTES THAT SHALL BE INCLUDED ON THE TRAFFIC CONTROL PLAN CAN BE FOUND IN CHAPTER 15 (15.12 TRAFFIC CONTROL PLAN) OF THE CITY OF HOUSTON'S (CITY) INFRASTRUCTURE DESIGN MANUAL (IDM). BELOW ARE SEVERAL KEY NOTES FROM THE IDM TO BE AWARE OF:

1. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) LATEST EDITION WITH REVISIONS DURING THE ENTIRE CONSTRUCTION PERIOD.

2. NO WORK SHALL BE PERFORMED IN RESIDENTIAL AREAS FROM 7:00 PM TO 7:00 AM.

3. CONTRACTOR SHALL MAINTAIN APPROVED NUMBER OF LANES OF TRAFFIC IN EACH DIRECTION DURING CONSTRUCTION WORKING HOURS. TRAFFIC CONTROL PLANS SHALL INCLUDE ONE-WAY AND/OR DETOUR PLANS. CONTRACTOR SHALL MAINTAIN ADA COMPLAINT PEDESTRIAN ACCESS TO BUS STOP AND ADEQUATE BUS ACCESS TO THE BUS STOP.

4. CONTRACTOR SHALL COVER OPEN PAVEMENT EXCAVATIONS FOR MINOR UTILITY WORK WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, OPEN LANES FOR NORMAL TRAFFIC FLOW WHEN FEASIBLE.

5. CONTRACTOR SHALL SECURE LANE/SIDEWALK/BICYCLE FACILITY CLOSURE PERMITS FROM TRANSPORTATION & DRAINAGE OPERATIONS (MOBILITY PERMIT SECTION AT www.gims.houston.gov) BEFORE IMPLEMENTING THE TRAFFIC CONTROL PLAN. THE APPLICATION MUST BE SUBMITTED AT LEAST TEN BUSINESS DAYS PRIOR TO THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN AND/OR BEGINNING CONSTRUCTION WORK. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS, CONSTRUCTION SEQUENCING, AND CONSTRUCTION SCHEDULE WITH THE APPLICATION.

6. CONTRACTOR SHALL HAVE APPROVED TRAFFIC CONTROL PLAN AND PERMIT AT THE JOB SITE FOR INSPECTION AT ALL TIME.

7. ACCESS TO DRIVEWAY ADJACENT TO THE CONSTRUCTION WORK ZONE SHALL BE MAINTAINED AT ALL TIMES AS MUCH AS POSSIBLE. ADDITIONAL CONES AND/OR DELINEATORS MAY BE REQUIRED TO DELINEATE THE DRIVEWAY ACCESS ROUTE THROUGH THE CONSTRUCTION WORK ZONE. A MINIMUM OF ONE TRAVEL LANE SHALL BE MAINTAINED ACROSS THE DRIVEWAY, UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE CITY OF HOUSTON.

8. ADDITIONAL OFF DUTY POLICE OFFICERS/FLAGGERS MAY BE REQUESTED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED AT THE DIRECTION OF THE CITY EVEN IF THEY ARE NOT SPECIFICALLY IDENTIFIED ON THE PROJECT PLANS.

SPACING FOR CHANNELIZING DEVICES

A. PLASTIC DRUMS ON MERGING TAPER @ 30' C-C WITH CHEVRON SIGN @ 60' C-C AND WARNING LIGHTS FOR OVERNIGHT CLOSURE.
B. PLASTIC DRUMS ON DOWNSTREAM TAPER @ 35' C-C (RETURN TAPER AND BARRICADE ARE OPTIONAL IN DIVIDED ROADWAY SECTION)
C. PLASTIC DRUMS ON RADII @ 5' C-C
D. PLASTIC DRUMS ON TANGENT @ 35' C- C WITH VERTICAL PANEL @ 70' C-C AND APPROVED WARNING LIGHT @ 70' C-C (FOR OVERNIGHT CLOSURE)
E. PLASTIC DRUMS IN FRONT OF CONSTRUCTION ZONE @ 20' C-C WITH VERTICAL PANEL @ 40' C-C AND APPROVED WARNING LIGHT @ 40' C-C (FOR OVERNIGHT CLOSURE)
F. CONCRETE TRAFFIC BARRIER (CTB) OR LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) WITH APPROVED REFLECTORS @ 10' C-C IF PAVEMENT DROP IS MORE THAN TWELVE INCHES (12") OR
G. PLASTIC DRUMS W/GUARD RAIL MOUNTED.
H. SELF-RIGHTING
1. 4 LANES TO 2 LANES UNDIVIDED ROADWAY SECTIONS @ 20' C-C.
2. 4 LANES DIVIDED ROADWAY TO ONE SIDE TWO WAY ROAD @ 20' C-C.
3. LEFT LANE AND RIGHT LANE STORAGE BAYS @15' C-C.

NOTE: SPACING SHOWN ON TRAFFIC CONTROL PLANS SHALL SUPERSEDE THE ABOVE SPACING. SPACING MAY BE ADJUSTED TO PROVIDE DRIVEWAYS, INTERSECTIONS AND/OR MEDIAN OPENINGS.

GRADING NOTES

1. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.

2. BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.

3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDING AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.

4. CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.

5. ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF-SITE, LAWFUL LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER.

CENTERPOINT ENERGY ID No. 1404012605

CAUTION: UNDERGROUND GAS FACILITIES

THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

- WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713)207-5463 OR (713)945-8037 (7:00 AM TO 4:30 PM) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
- FOR EMERGENCIES REGARDING GAS LINES CALL (713)659-3552 OR (713)207-4200.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

WARNING: OVERHEAD ELECTRICAL LINES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX(6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY (713)207-2222.

ACTIVITIES ON/OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY
NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713)207-6348 OR (713)207-5769.

STANDARD NOTES FOR CONSTRUCTION DRAWINGS (HCFCD):

1. OBTAIN AND COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS AND APPROVALS, WITH ASSISTANCE FROM ENGINEER, IF NECESSARY. OBTAIN PERMIT (CERTIFICATION) FROM HARRIS COUNTY ENGINEER TO ENTER HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY.

2. NOTIFY THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S PROPERTY MANAGEMENT DEPARTMENT IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. SUBMIT THE HCFCD 48 HOUR PRE-CONSTRUCTION NOTIFICATION FORM, A COPY OF THE APPROVED CONSTRUCTION DRAWINGS, AND A COPY OF THE CORPS OF ENGINEERS INDIVIDUAL SECTION 404 PERMIT, IF APPLICABLE, TO HCFCD, 9900 NORTHWEST FREEWAY, HOUSTON, TEXAS 77092, ATTN: PROPERTY MANAGEMENT DEPT. BY HAND DELIVERY, OR FAX TO 713-684-4129 (FAX NUMBER).

3. ENGINEER SHALL SUBMIT CERTIFICATION LETTER AND RECORD DRAWINGS TO THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S PROPERTY MANAGEMENT DEPARTMENT REQUESTING INSPECTION OF ITEMS CONSTRUCTED IN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY. PRIOR TO REQUESTING INSPECTION, THE DRAINAGE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE STAKED AND FLAGGED.

4. PROTECT, MAINTAIN, AND RESTORE EXISTING BACKSLOPE DRAINAGE SYSTEMS.

5. BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATIONS AND LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATIONS SHALL BE FIELD VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.

6. ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL OR DETENTION RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED. MINIMUM ACCEPTANCE CRITERIA ARE 75% COVERAGE OF LIVE BERMUDA GRASS AND NO EROSION OR RILLS DEEPER THAN 4".

7. BACKFILL IN ACCORDANCE WITH THE HARRIS COUNTY FLOOD CONTROL DISTRICT STANDARD SPECIFICATION, SECTION 02315 - EXCAVATING AND BACKFILLING, OR EQUIVALENT.

8. EXCAVATE CHANNEL FLOWLINE TO DESIGN ELEVATION AS SHOWN ON PLANS AND DOWNSTREAM, AS NECESSARY, TO ENSURE NO WATER REMAINS IN THE FACILITY (STORM SEWER, LATERAL CHANNEL, OR DRY BOTTOM DETENTION BASIN) DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL, SO THE FACILITY WILL FUNCTION AS INTENDED. FOR WET BOTTOM DETENTION BASINS, ENSURE NO WATER IS ABOVE THE DESIGN LEVEL IN THE WET BOTTOM DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL.

9. MAINTAIN FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORE CHANNEL TO ORIGINAL CONDITION.

10. REMOVE ALL EXCAVATED MATERIAL FROM THE HARRIS COUNTY FLOOD CONTROL DISTRICT OR DRAINAGE RIGHT-OF-WAY. NO FILL IS TO BE PLACED WITHIN A DESIGNATED FLOOD PLAIN AREA WITHOUT FIRST OBTAINING A FILL PERMIT FROM THE APPROPRIATE JURISDICTIONAL AUTHORITY.

GENERAL NOTES - METRO:

1. CONTRACTOR SHALL NOTIFY METRO AT 713-615-6195 TWO WEEKS PRIOR TO DISTURBING EXISTING BUS STOPS.

1. CONTRACTOR SHALL COORDINATE WITH METRO TO REMOVE EXISTING AMENITIES.

2. BUS STOPS SHALL CONSTRUCTED PER CITY OF HOUSTON INFRASTRUCTURE DESIGN MANUAL AND MEET CURRENT ADA REQUIREMENTS

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

GENERAL CONSTRUCRION NOTES – SHEET 2 OF 2

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 6 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\06_GENERAL NOTES - SHEET 2 OF 2.dwgCONSTRUCTION NOTES May 21 , 2026 - 10:28AM Jgarza

ITEM NO.	IDM CHAPT	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	8	8.04 J.2.f. (1)(a) SANITARY SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONSTRUCT PROPOSED 15" SANITARY SEWER TO MATCH SPRING LINE WITH PROPOSED 24" SANITARY SEWER INSTEAD OF MATCHING CROWNS	ARGONNE STREET AT AVALON PLACE	APPROX STA 0+54 ARGONNE, 4+67 AVALON	CONFLICT RESOLUTION BETWEEN PROPOSED 15" SANITARY SEWER AND EXISTING 54" MONOLITHIC STORM SEWER	120, 121

ITEM NO.	OCE COMMENT	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	146	8	8.04 G.2. LINE DEPTH	PROPOSED SANITARY SEWER LESS THAN 4 FT OF COVER	DRISCOLL ST	STA 11+97.50	REQUIRED DISCHARGE TO EXIST. 8" SAN SWR ON FAIRVIEW	147, 148

IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
8	8.04 J.2.f. (1)(a) SANITARY SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED 24" SANITARY SEWER WITH SPRING LINE TO MATCH SPRING LINE OF EXISTING 36" SANITARY SEWER INSTEAD OF MATCHING CROWNS	SAN SABA ST AT INTERSECTION WITH KIRBY DR	STA 0+60 (25' RT)	CONNECT TO EXISTING 36" SANITARY SEWER; AVOID CONFLICT WITH PROPOSED 72-IN STORM ON FAIRVIEW AND EXISTING 54" MONOLITHIC STORM SEWER ON AVALON	205, 206
8	8.04 D.3. SANITARY SEWER LATERALS	TIE SANITARY SEWER LATERALS DIRECTLY TO A MANHOLE	DICKEY PL MIMOSA ST	STA 14+37 (18' RT) STA 1+00 (20' LT)	EXISTING CONDITION; DESIGN INTENT IS TO TRANSFER EXISTING 6-IN SANITARY SEWER CROSSING ROW TO PROPOSED SEWER	144 181
8	8.04. D.1. SANITARY SEWER LATERALS	LATERAL LOCATION NOT ON LOT LINE	THROUGHOUT PROJECT	THROUGHOUT PROJECT	AVOID CONFLICTS WITH TREES, WALLS, DRIVEWAYS, OR UTILITIES DURING CONSTRUCTION	THROUGH-OUT PROJECT
						-

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION (STORM WATER OPERATIONS)	STREET	STATION OR LOCATION	REASON	DWG No.
1	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	AVALON PL	4+84.01, 14+40 (Exist MH), 18+52 (Exist M)	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	124-125, 128, 129
2	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	DICKEY PL	3+43.81, 5+11.58	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	136-137, 138-139
3	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	ELLA LEE LN	1+66, 6+69, 10+70.14,	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	151, 152
4	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	FAIRVIEW ST	0+82.16, 2+64.16, 3+05.04, 3+61.74, 4+96.49, 6+66.35, 7+67.72	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	155-156, 157-158,
5	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	LOCKE LN	10+59.87	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	179-180
6	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	REBA DR	5+62.00	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	191
7	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	REBA/FAIRVIEW	11+37.55	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	192-193
8	9	9.05 C.4.c. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT CROWN OF PROPOSED STORM SEWER BELOW CROWN INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	WESTGATE ST	16+02 (Exist MH)	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	222
9	9	9.05 C.4.c. MATCH CROWNS AT PIPE SIZE CHANGE	MATCH FLOW LINE	ARGONNE ST	0+51.07	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	120-121
10	9	9.05 C.4.c. MATCH CROWNS AT PIPE SIZE CHANGE	MATCH FLOW LINE	FAIRVIEW ST	15+70.59	EXISTING CONDITIONS, CONNECT TO EXISTING OUTFALL	161-162
11	9	9.05 C.4.c. MATCH CROWNS AT PIPE SIZE CHANGE	MATCH FLOW LINE	FAIRVIEW ST	18+80.56	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	163
12	9	9.05 C.4.c. MATCH CROWNS AT PIPE SIZE CHANGE	MATCH FLOW LINE	FAIRVIEW ST	27+50.54	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	165
13	9	9.05 C.4.c. MATCH CROWNS AT PIPE SIZE CHANGE	MATCH FLOW LINE	HAZARD ST	7+70.16	EXISTING CONDITIONS, AVOID CONFLICT, OR AVOID SHALLOW STORM SEWER	168

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION (STORM WATER OPERATIONS)	STREET	STATION OR LOCATION	REASON	DWG No.
14	9	9.05 C.4.b. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED LARGER DIAMETER SEWER TO EXISTING SMALLER DIAMETER SEWER	REVERE ST	6+05 (Exist MH), REVERE ST @ SAN FELIPE ST INTERSECTION	CONSTRUCTION OF STORM SEWER @ SAN FELIPE ST IS BEYOND SCOPE OF PROJECT	196
15	9	9.05 C.4.b. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED LARGER DIAMETER SEWER TO EXISTING SMALLER DIAMETER SEWER	SPANN ST	5+75 (Exist MH), SAN FELIPE @ SPANN ST INTERSECTION	CONSTRUCTION OF STORM SEWER @ SAN FELIPE ST IS BEYOND SCOPE OF PROJECT	212
16	9	9.05 C.4.b. STORM SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED LARGER DIAMETER SEWER TO EXISTING SMALLER DIAMETER SEWER	FAIRVIEW ST	15+70.59	EXISTING CONDITIONS, CONNECT TO EXISTING OUTFALL	161-162
17	9	9.02 A.1. 100-YEAR RAINFALL EVENT SIZING	5-YEAR RAINFALL EVENT	THROUGHOUT PROJECT	THROUGHOUT PROJECT	ECONOMIC CONSIDERATION	NA
18	9	9.05 c.7.j. INLET LOCATION	INLET LOCATION IN FRONT OF DRIVEWAYS	SAN SABA ST	4+46.10 (NORTH)	MEET EXISTING ROADWAY SAG POINT, PRECLUDE TREE IMPACTS	207
22	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	FAIRVIEW ST	17+70, 20+55, 27+40 (clearance with exist sanitary sewer)	EXISTING CONDITIONS, AVOID CONFLICT	163, 163, 165
23	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	HULDY ST	7+55 (clearance with AT&T)	EXISTING CONDITIONS, AVOID CONFLICT	172

ITEM NO.	OCE COMMENT	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION (STORM WATER OPERATIONS)	STREET	STATION OR LOCATION	REASON	DWG No.
1	120	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	ARGONNE ST	1+93.03	MATCH CROWN OF PROPOSED 15" SANITARY SEWER	120, 121
2	121	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	ARGONNE ST	0+55	MATCH CROWN OF PROPOSED 24" SANITARY SEWER	120, 121
3	147	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	DRISCOLL ST	7+70.11	EXISTING CONDITIONS PROPOSED 8" SAN SWR IS AT MIN DEPTH. WILL RAISE TO EXTENT FEASIBLE	147
4	165	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	FAIRVIEW ST HAZARD ST	27+33 7+70	EXISTING CONDITIONS PROPOSED 8" SAN SWR IS AT MIN DEPTH. WILL RAISE TO EXTENT FEASIBLE	165 168
5	170	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	HAZARD ST	15+70	EXISTING CONDITIONS PROPOSED 8" SAN SWR IS AT MIN DEPTH. WILL RAISE TO EXTENT FEASIBLE	170

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	8	8.04 J.2.f. (1)(a) SANITARY SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED SANITARY SEWER AT 6" ABOVE SPRING LINE OF PROP 24" SAN SWR INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	KINGSTON ST AT FAIRVIEW ST	STA 7+23	EXISTING CONDITION FIXES ELEVATION OF PROP 24" SANITARY SEWER CONNECTION TO EXISTING 36" SAN SWR ON KIRBY DRIVE. EXISTING CONDITION FIXES ELEVATION OF PROP 72-IN STORM SEWER TO EXISTING OUTFALL AT SHEPHERD DRIVE. REFER TO NOTE 1.	165, 165A
2	8	8.04 J.2.f. (1)(a) SANITARY SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED SANITARY SEWER TO MATCH SPRING LINE OF PROP 24" SAN SWR INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	PERSA ST AT FAIRVIEW ST	STA 9+76	EXISTING CONDITION FIXES ELEVATION OF PROP 24" SANITARY SEWER CONNECTION TO EXISTING 36" SAN SWR ON KIRBY DRIVE. EXISTING CONDITION FIXES ELEVATION OF PROP 72-IN STORM SEWER TO EXISTING OUTFALL AT SHEPHERD DRIVE. REFER TO NOTE 1.	177

OCE COMMENT NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	BRUN ST	INTERSECTION OF BRUN AT WESTHEIMER (MATCH EXISTING RADIUS)	MATCH EXISTING RADIUS TO PRECLUDE WORK ON THOROUGHFARES AND OUTSIDE PROJECT LIMITS (PER CITY DIRECTION)	121
1	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	DRISCOLL ST	INTERSECTION OF DRISCOLL AT WESTHEIMER (MATCH EXISTING RADIUS)	MATCH EXISTING RADIUS TO PRECLUDE WORK ON THOROUGHFARES AND OUTSIDE PROJECT LIMITS (PER CITY DIRECTION)	134
1	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	DRISCOLL ST	INTERSECTION OF DRISCOLL AT INDIANA (MATCH EXISTING RADIUS)	MATCH EXISTING RADIUS TO PRECLUDE WORK ON THOROUGHFARES AND OUTSIDE PROJECT LIMITS (PER CITY DIRECTION)	138
1	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	HAZARD ST	INTERSECTION OF HAZARD AT WESTHEIMER (MATCH EXISTING RADIUS)	MATCH EXISTING RADIUS TO PRECLUDE WORK ON THOROUGHFARES AND OUTSIDE PROJECT LIMITS (PER CITY DIRECTION)	157
1	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	HAZARD ST	HAZARD AT INDIANA INTERSECTION (MATCH EXISTING RADIUS)	MATCH EXISTING RADIUS TO PRECLUDE WORK ON THOROUGHFARES AND OUTSIDE PROJECT LIMITS (PER CITY DIRECTION)	160
1	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	SPANN ST	INTERSECTION OF SPANN AT SAN FELIPE (MATCH EXISTING RADIUS)	MATCH EXISTING RADIUS TO PRECLUDE WORK ON THOROUGHFARES AND OUTSIDE PROJECT LIMITS (PER CITY DIRECTION)	191, 202
2	10	10.06 H.1., SW Width Min = 5'	NO SIDEWALK PROVIDED	WELCH ST	FROM STA 3+00 TO 5+00 (WEST SIDE)	EXISTING SIDEWALK AND LANDSCAPE AT 2245 PRECLUDE SIDEWALK CONSTRUCTION/MATCH EXISTING SIDEWALK LOCATION PER COMMUNITY REQUEST	203

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

ITEM NO.	OCE COMMENT	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION (STORM WATER OPERATIONS)	STREET	STATION OR LOCATION	REASON	DWG No.
1	1	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	FAIRVIEW ST	28+02.72	THE EXISTING 8" SAN SWR IS A FIXED CONDITION. A STEEL CASING IS PROVIDED FOR THE EXISTING 8" SANITARY SEWER.	222
2	1	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	HAZARD ST	8+14.04	FLOW LINE OF PROPOSED 8" SANITARY SEWER IS RESTRICTED DUE TO CONNECTION TO EXISTING 8" SANITARY SEWER. A STEEL CASING IS PROVIDED FOR THE PROPOSED 8" SANITARY SEWER.	223
3	NA	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	FAIRVIEW ST AT KINGSTON STREET	7+23	RESTRICTION CAUSED BY EXISTING CONDITIONS. PROPOSED 24" SAN SWR CONNECTS TO EXISTING SAN SWR AT KIRBY DRIVE. PROPOSED 72" STORM SEWER CONNECTS TO EXISTING OUTFALL AT SHEPEHD DRIVE. CLEARANCE BETWEEN PROPOSED 8" SAN SWR AND 72" STORM SEWER IS LESS THAN 18". A CASING IS PROVIDED FOR PROPOSED 8" SANITARY SEWER.	165, 165A
4	NA	9	9.05 C. 4.i. STORM SEWER VERTICAL CLEARANCE	STORM SEWER VERTICAL CLEARANCE TO OTHER UTILITIES LESS THAN 18"	FAIRVIEW ST AT PERSA STREET	9+78	RESTRICTION CAUSED BY EXISTING CONDITIONS. PROPOSED 24" SAN SWR CONNECTS TO EXISTING SAN SWR AT KIRBY DRIVE. PROPOSED 72" STORM SEWER CONNECTS TO EXISTING OUTFALL SEWER AT SHEPEHD DRIVE. CLEARANCE BETWEEN PROPOSED 8" SAN SWR AND 72" STORM SEWER IS LESS THAN 18". A STEEL CASING IS PROVIDED FOR PROPOSED 8" SANITARY SEWER.	177
5	2	9	9.4.01.A.10. SHOW 100 -YR HGL ON PROFILE DWG	100-YR HGL NOT SHOWN	THROUGHOUT PROJECT	THROUGHOUT PROJECT	PROJECT DESIGN IS BASED ON 2-YR DESIGN EVENT, 5-YR LEVEL OF SERVICE. INSTRUCTED BY CITY TO OMIT THE 100-YR HGL ON PROFILE DWGS.	ALL PROFILE DWGS

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STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROJECT VARIANCE TABLE
SHEET 1 OF 3

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 7 OF 391	

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ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	AVALON PL	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	123-130
2	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	DEVONSHIRE ST	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	135
3	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	DICKEY PL	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	140-144
4	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 30' INSTEAD OF 26'	DRISCOLL ST	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	146-149
5	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 30' INSTEAD OF 26'	HAZARD ST	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	167-170
6	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	SALISBURY LN	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	197
7	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	DUNRAVEN LN	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	150
8	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	LOCKE LN	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	177-179
9	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	REBA DR	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	190-192
10	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	ELLA LEE LN	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	151-153
11	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	WESTGATE ST	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	220-222
12	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	WELCH ST	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	213-218
13	10	10.06 B.f., Table 10.06-01, Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 27' INSTEAD OF 26'	KINGSTON DR	FROM BEGIN TO END	COMMUNITY PREFERENCE FOR WIDER STREETS	174-176
14	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	KIRBY TO ARGONNE (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	123-124
15	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	ARGONNE TO DICKEY (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	124-126
16	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	DICKEY TO WESTGATE (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	126-128
17	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	WESTGATE TO KINGSTON (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	128-129
18	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	KINGSTON TO PERSA (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	129-130
19	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	PERSA TO PECKHAM (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	130-131
20	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	PECKHAM TO SHEPHERD (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	131
21	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	KIRBY TO ARGONNE (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	123-124
22	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	ARGONNE TO DICKEY (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	124-126
23	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	DICKEY TO WESTGATE (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	126-128
24	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	WESTGATE TO KINGSTON (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	128-129
25	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	KINGSTON TO PERSA (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	129-130
26	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	PERSA TO PECKHAM (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	130-131
27	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	AVALON PL	PECKHAM TO SHEPHERD (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	131
28	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	BRUN ST	WESTHEIMER TO FAIRVIEW (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	133-134
29	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	BRUN ST	WESTHEIMER TO FAIRVIEW (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	133-134
30	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DEVONSHIRE ST	WESTGATE TO KINGSTON (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	135
31	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DEVONSHIRE ST	WESTGATE TO KINGSTON (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	135
32	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DICKEY PL	SAN SABA TO LOCKE (W)	SHORT SECTION OF SW; 5' WIDTH LIMITED BY TREES (1043, 1044, 1045); MEETS TDLR REQUIREMENTS	136-138
33	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DICKEY PL	REBA TO ELLA LEE (W)	SHORT SECTION OF SW; 5' WIDTH LIMITED BY TREES (1078, 1079); MEETS TDLR REQUIREMENTS	140-142
34	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DICKEY PL	ELLA LEE TO AVALON (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	142-144
35	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DICKEY PL	LOCKE TO REBA (E)	SHORT SECTIONS OF SW; 5' WIDTH LIMITED BY ORDINANCE TREE (1054); MEETS TDLR REQUIREMENTS	138-140
36	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DICKEY PL	REBA TO ELLA LEE (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH	140-142
37	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DICKEY PL	ELLA LEE TO AVALON (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH	142-144
38	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DRISCOLL ST	WESTHEIMER TO FAIRVIEW (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	146-147
39	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DRISCOLL ST	FAIRVIEW TO INDIANA (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	147-149
40	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3.7' MIN; 4' TYP	DRISCOLL ST	WESTHEIMER TO FAIRVIEW (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	146-147
41	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DRISCOLL ST	FAIRVIEW TO INDIANA (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	147-149
42	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DUNRAVEN LN	WESTGATE TO KINGSTON (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	150
43	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	DUNRAVEN LN	WESTGATE TO KINGSTON (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES (1002, 006, 1007); MEETS TDLR REQUIREMENTS	150
44	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	ELLA LEE LN	KIRBY TO DICKEY PL (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	151-153
45	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	ELLA LEE LN	KIRBY TO DICKEY PL (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	151-153
46	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	DICKEY TO WESTGATE (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	155
47	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	WESTGATE TO KINGSTON (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	155-157
48	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	KINGSTON TO PERSA (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	157-159
49	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	PERSA TO PECKHAM (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	159-161
50	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	PECKHAM TO SHEPHERD (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	161
51	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	SHEPHERD TO HULDY (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	161-163
52	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	HULDY TO BRUN (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	163-164
53	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3' MIN; 4' TYP	FAIRVIEW ST	MCDUFFIE TO HAZARD (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	164-165
54	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	HAZARD TO DRISCOLL (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	165-166
55	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	DICKEY TO WESTGATE (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	155
56	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	KINGSTON TO PERSA (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	157-159
57	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	PERSA TO PECKHAM (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	159-161
58	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	PECKHAM TO SHEPHERD (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	161
59	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	SHEPHERD TO HULDY (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	161-163
60	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	HULDY TO BRUN (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	163-164
61	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3' MIN; 4' TYP	FAIRVIEW ST	BRUN TO MCDUFFIE (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	164
62	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	MCDUFFIE TO HAZARD (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	164-165
63	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	FAIRVIEW ST	HAZARD TO DRISCOLL (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; MEETS TDLR REQUIREMENTS	165-166
64	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3' MIN; 4' TYP	HAZARD ST	WESTHEIMER TO FAIRVIEW (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	167-168
65	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3.5' MIN; 4' TYP	HAZARD ST	FAIRVIEW TO INDIANA (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	168-169
66	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 2.7' MIN; 4' TYP	HAZARD ST	WESTHEIMER TO FAIRVIEW (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	167-168
67	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3' MIN; 4' TYP	HAZARD ST	FAIRVIEW TO INDIANA (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS (Relocation of the existing fence encroachment is required)	168-169
68	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	HULDY ST	WESTHEIMER TO FAIRVIEW (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	171-172
69	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	HULDY ST	WESTHEIMER TO FAIRVIEW (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	171-172
70	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	WESTHEIMER TO DUNRAVEN (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	173-174
71	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	DUNRAVEN TO FAIRVIEW (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	174-175
72	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	FAIRVIEW TO SALISBURY (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	175
73	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	SALISBURY TO DEVONSHIRE (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	175-176
74	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	DEVONSHIRE TO AVALON (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	176
75	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3.1' MIN; 4' TYP	KINGSTON DR	DUNRAVEN TO FAIRVIEW (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	174-175
76	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	FAIRVIEW TO SALISBURY (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	175
77	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	SALISBURY TO DEVONSHIRE (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	175-176
78	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	KINGSTON DR	DEVONSHIRE TO AVALON (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	176
79	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	LOCKE LN	KIRBY TO DICKEY (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	177-179
80	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	LOCKE LN	KIRBY TO DICKEY (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	177-179
81	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	MIMOSA DR	ARGONINE TO REVERE (N)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	181
82	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	MIMOSA DR	REVERE TO SPANN (N)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	183
83	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	MIMOSA DR	SPANN TO END (N)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	184
84	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	REBA DR	KIRBY TO DICKEY (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	190-192
85	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	REBA DR	KIRBY TO DICKEY (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	190-192
86	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	REVERE ST	MIMOSA TO BRAZORIA (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	194
87	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SALISBURY LN	WESTGATE TO KINGSTON (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	197
88	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SALISBURY LN	WESTGATE TO KINGSTON (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	197
89	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SAN FELIPE ST	AT CHILTON	5' WIDTH LIMITED BY EXISTING FEATURES; MEETS TDLR REQUIREMENTS	200
90	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SAN FELIPE ST	CHILTON TO SHARP	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	201-203
91	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SAN SABA ST	FROM KIRBY TO ARGONNE (N)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	205-207
92	10	10.06 H.1., SW Width Min = 5'	NO SIDEWALK PROVIDED	SAN SABA ST	FROM ARGONNE TO DICKEY (N)	AVOID CONFLICT WITH EXISTING FENCES AND TREES; SW PROVIDED ON SOUTH SIDE	207-209
93	10	10.06 H.1., SW Width Min = 5'	NO SIDEWALK PROVIDED	SAN SABA ST	FROM KIRBY TO ARGONNE (S)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS; SW PROVIDED ON NORTHSIDE	205-207
94	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SPANN ST	MIMOSA TO WELCH (W)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	211
95	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	SPANN ST	MIMOSA TO WELCH (E)	5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	211
96	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WELCH ST	REVERE TO SPANN (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	213-215
97	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3.5' MIN, 4' TYP	WELCH ST	SPANN TO PERSA (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	215-216
98	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WELCH ST	PERSA TO SHEPHERD (N)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY PRIVATE TREES; MEETS TDLR REQUIREMENTS	216-218
99	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WELCH ST	REVERE TO SPANN (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	213-215
100	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WELCH ST	PERSA TO SHEPHERD (S)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	216-218
101	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	DUNRAVEN TO FAIRVIEW (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	220-221
102	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	FAIRVIEW TO SALISBURY (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	221
103	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	SALISBURY TO DEVONSHIRE (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	221-222
104	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	DEVONSHIRE TO AVALON (W)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	222
105	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	DUNRAVEN TO FAIRVIEW (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	220-221
106	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 3' MIN; 4' TYP	WESTGATE ST	FAIRVIEW TO SALISBURY (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	221
107	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	SALISBURY TO DEVONSHIRE (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	221-222
108	10	10.06 H.1., SW Width Min = 5'	SIDEWALK WIDTH = 4'	WESTGATE ST	DEVONSHIRE TO AVALON (E)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; 5' WIDTH LIMITED BY TREES; MEETS TDLR REQUIREMENTS	222
109	10	10.06 D.1.a. 10.06 D.1.d., Appendix 1, Residential Street with Bike Lane IDM pg 10-45	REDUCE TRAVEL LANE WIDTH FROM 11'-0" TO 10'-6"	FAIRVIEW ST	DRISCOLL TO PERSA	COMMUNITY PREFERENCE VERMONT COMMONS HOA INCREASE BIKE LANE WIDTH REDUCE TREE IMPACTS	155-166
110	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	AVALON PL	AVALON @ ARGONNE INTERSECTION (R 13' WEST & R 18' EAST)	TO MATCH EXISTING PAVEMENT LIMITS AND COMMUNITY PREFERENCE	124
111	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	AVALON PL	AVALON @ DICKEY INTERSECTION (R 14' or R 15') (WEST & EAST)	TO MATCH EXISTING PAVEMENT LIMITS AND COMMUNITY PREFERENCE	126
112	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	ELLA LEE LN	ELLA LEE @ DICKEY INTERSECTION (R 14' SOUTH CORNER & R 15' NORTH CORNER)	TO MATCH EXISTING PAVEMENT LIMITS AND COMMUNITY PREFERENCE	153
113	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	FAIRVIEW ST	FAIRVIEW @ BRUN INTERSECTION (R 20') (NORTH SIDE CORNERS)	TO MATCH EXISTING PAVEMENT LIMITS	164
114	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	REBA DR	REBA DR @ DICKEY INTERSECTION (R 15') WEST SIDE TWO CORNER	TO MATCH EXISTING PAVEMENT LIMITS AND COMMUNITY PREFERENCE	192
115	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	REVERE ST	REVERE @ SAN FELIPE INTERSECTION (R 20') (WEST SIDE & EAST SIDE)	TO MATCH EXISTING PAVEMENT LIMITS	196
116	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	REVERE ST	REVERE @ WELCH INTERSECTION (R 15' OR R 13') (FOUR CORNER)	TO MATCH EXISTING PAVEMENT LIMITS	194
117	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	REVERE ST	REVERE @ MIMOSA INTERSECTION (R 20') (WEST CORNER)	TO MATCH EXISTING PAVEMENT LIMITS	194
118	10	10.06 D.3.b., Dwg No. 10.06-04, Inter. Curb Radius	CURB RADIUS < 25'	SAN SABA ST	SAN SABA @ ARGONNE INTERSECTION (R 20') (WEST SIDE & EAST SIDE)	TO MATCH EXISTING PAVEMENT LIM

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
125	10	Dwg. No. 02775-01, SIDEWALK	CURVING SIDEWALK TO MISS EXISTING OBSTRUCTIONS	MULTIPLE STREETS	VARIOUS LOCATIONS	TO AVOID TREE OR OBSTRUCTIONS	120-222
126	10	Dwg. No. 02775-01, SIDEWALK	DISTANCE FROM BACK OF SIDEWALK TO ROW ≤ 2'	MULTIPLE STREETS	VARIOUS LOCATIONS	MATCH EXISTING BACK OF SIDEWALK LOCATION PER COMMUNITY REQUEST AND TO REDUCE IMPACTS TO TREES	120-222
127	10	10.06. D.2., Roadway Curve Radius	CANNOT MEET MINIMUM IDM ROADWAY CURVE AND REVERSE CURVE RADIUS	WELCH ST	FROM STA 11+00 TO STA 14+00	CHANGING NON-COMPLIANT ROADWAY GEOMETRY WOULD NEED LAND ACQUISITION	216
128	15	15.08 C.1.f., Table 15.08.01, DRIVEWAY RADIUS ≥ 4'	RADIUS LESS THAN 4'	AVALON PL BRUN ST DEVONSHIRE ST DRISCOLL ST DUNRAVEN LN ELLA LEE LN FAIRVIEW ST HAZARD ST HULDY ST KINGSTON DR MOMOSA DR REVERE ST SPANN ST WELCH ST	VARIOUS LOCATIONS	ADJACENT DRIVEWAYS ARE TOO CLOSE TO ACCOMMODATE 4' CURB RADIUS	120-222
129	15	15.08 C.1.f., Table 15.08.01, DRIVEWAY WIDTH ≥ 12'	DRIVEWAY WIDTH < 12'	THROUGHOUT PROJECT	THROUGHOUT PROJECT	TO MATCH EXISTING DRIVEWAY WIDTH	120-222
130	15	15.08 C.3.b., Table 15.08.02, DRIVEWAY SPACING ≥ 20'	DRIVEWAY SPACING < 20'	THROUGHOUT PROJECT	THROUGHOUT PROJECT	TO MATCH EXISTING DRIVEWAY LOCATION	120-222
131	Refer to Notes 1 ,2 & 3	POWER POLES/LIGHT POLES, min ≥ 2' behind back of curb	RELOCATE POWER POLES TOO CLOSE TO ROADWAYS	THROUGHOUT PROJECT	THROUGHOUT PROJECT	AVOID ELECTRICAL SERVICE INTERRUPTIONS / CENTERPOINT REQUEST	120-222

NOTES:
1. Guidelines for Street Lighting Installations and Relocations, City of Houston.
2. Designing Walkable Urban Thoroughfares - A Context Sensitive Approach, Institute of Transportation Engineers.
3. TxDOT Highway Illumination Manual (Chapter 6 Lighting Design and Layout)

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 6+89.30 (SOUTH SIDE)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; TO MATCH PROPOSED SIDE WALK	157
2	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 7+36.83 (NORTH SIDE)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; TO MATCH PROPOSED SIDE WALK	157
3	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 24+65.27 (NORTH SIDE)	TO MATCH EXISTING SIDEWALK WIDTH	164
4	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 25+09.82 (NORTH SIDE)	5' WIDTH LIMITED BY TREES	164
5	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 27+15.89 (NORTH SIDE)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; TO MATCH PROPOSED SIDE WALK	165
6	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 29+57.98 (NORTH SIDE)	5' WIDTH LIMITED BY TREES & FENCE ENCROACHMENT	166
7	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	FAIRVIEW ST.	STA 30+10.52 (SOUTH SIDE)	5' WIDTH LIMITED BY TREES	166
8	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	KINGSTON DR.	STA 10+84.92 (WEST SIDE)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; TO MATCH PROPOSED SIDE WALK	175
9	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	KINGSTON DR.	STA 13+66.85 (WEST SIDE)	COMMUNITY PREFERENCE FOR 4' SW WIDTH; TO MATCH PROPOSED SIDE WALK	176
10	10	Standard Drawing No: 02775-02	LANDING AND RAMP ARE 4' WIDE (ADA COMPLIANT) INSTEAD OF CITY STANDARD 5'	SAN SABA ST.	STA 1+14.00 (NORTH SIDE)	TO MATCH EXISTING SIDEWALK WIDTH	205
11	10	Standard Drawing No: 02775-02	RAMP SLOPE 1:12 (ADA COMPLIANT) INSTEAD OF CITY STANDARD 1:15	SAN SABA ST.	STA 1+14.00 (NORTH SIDE)	TO MATCH EXISTING SIDEWALK ELEVATION	205
12	10	10.06 H.1.	NO NEW SIDEWALK CONSTRUCTED AS PART OF PROJECT	MIMOSA DR.	STA 3+60 TO APPROX STA 8+25	STANFORD OAKS HOA WORKING WITH OFFICE OF CITY ENGINEER TO UPGRADE EXISTING PAVER SIDEWALK TO COMPLIANCE	182-183

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	10	10.06 B.f., Table 10.06-01; Dwg. No. 10.06-01, Street Width	LOCAL STREET WIDTH = 35' INSTEAD OF 32'	MIMOSA DR.	FROM STA 0+00 TO APPROX. STA 8+25	REQUEST FROM STANFORD OAKS HOA TO MATCH EXISTING STREET WIDTH	181-183
2	10	10.06 H.1., SW Width Min = 5'	NO SIDEWALK PROVIDED	SAN SABA ST.	FROM STA 2+19 TO 3+96 (SOUTH SIDE)	EXISTING BUILDING LOCATED ON ROW WITH NO ROOM FOR SIDEWALK; ALTERNATIVE PROPOSED TDLR COMPLIANT ROUTE PROVIDED ON NORTH SIDE	205-208
3	15	Standard Drawing No: 02754-03	EXCEEDS MAXIMUM SLOPE OF 17%	SAN SABA	FROM STA 2+19 TO 3+96 (SOUTH SIDE)	EXISTING BUILDING LOCATED ON ROW PROHIBITS CONSTRUCTION BEYOND ROW; MATCH EXISTING SLOPE OF 20%	205-208

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	10	10.06 D.2.a.(3)	RADIUS OF STREET CURVE LESS THAN 300' (Existing Radius R=140', R=167') REFER TO NOTE 1	WELCH ST. AT PERSA ST.	STA 11+42.78 TO STA13+73.53	COMMUNITY PREFERENCE TO MATCH EXISTING STREET GEOMETRY	46
2	10	10.06 D.2.a.(3)	RADIUS OF STREET CURVE LESS THAN 300' (Existing Radius R=220', R=247') REFER TO NOTE 2	WESTGATE ST.	STA 14+43.07 TO STA13+31.68	COMMUNITY PREFERENCE TO MATCH EXISTING STREET GEOMETRY	48
3	10	10.06 D.2.a.(3)	RADIUS OF STREET CURVE LESS THAN 300' (Existing Radius R=214', R=90'; R=262', R=118') REFER TO NOTE 1	AVALON PL.	STA 19+72.34 TO STA 20+68.50	COMMUNITY PREFERENCE TO MATCH EXISTING STREET GEOMETRY	49
4	10	10.06 D.2.a.(3)	RADIUS OF STREET CURVE LESS THAN 300' (Existing Radius R=226', R=253') REFER TO NOTE 2	DUNRAVEN LN.	STA 2+36.11 TO STA 3+68.65	COMMUNITY PREFERENCE TO MATCH EXISTING STREET GEOMETRY	53
5	10	10.06 D.7.	MEDIAN GEOMETRY (Median length, nose geometry, taper geometry non-compliant) REFER TO NOTE 3	FAIRVIEW ST.	APPROX STA 0+75 TO APPROX STA 9+40	COMMUNITY PREFERENCE TO MATCH EXISTING STREET GEOMETRY	53, 54
6	10	10.06 D.4.a.,b., e.	DID NOT ACQUIRE RIGHT OF WAY CORNER CUT-BACKS	87 LOCATIONS THROUGHOUT PROJECT AREA	REFER TO ATTACHED SURVEY CONTROL DRAWINGS (1, 2, 3, 4, 5, 6, 7, AND 8)	EXISTING NEIGHBORHOOD - ACQUISITION OF RIGHT OF WAY CUT-BACK NOT NEEDED TO COMPLY WITH ADA RULES, SIGNAL DESIGN, AND SIGNING REQUIREMENTS	56, 60, 61, 62, 63, 64, 65, AND 66
7	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Reba Ln & Kirby Dr	APPROX. STA 1+22.25	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	190
8	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Revere St NB & Welch St	APPROX. STA 2+76.42	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	132, 213
9	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Revere St SB & Welch St	APPROX. STA 3+28.16	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	132, 213
10	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Mimosa St & Argonne St	APPROX. STA 0+50.02	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	120, 181
11	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Revere St & Mimosa St	APPROX. STA 0+86.19	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	182, 194
12	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Spann St & San Felipe St	APPROX. STA 5+27.32	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	201, 212
13	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	San Saba St & Argonne St	APPROX. STA 4+55.92	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	207
14	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	San Saba St & Kirby St	APPROX. STA 1+25.58	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	205
15	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Spann St & Mimosa St	APPROX. STA 0+69.75	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	183, 211
16	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Locke St & Kirby Ln	APPROX. STA 0+95.93	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	177
17	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Fairview St & McDuffie St NB	APPROX. STA 24+95.05	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	164
18	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Fairview St & McDuffie St SB	APPROX. STA 24+82.70	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	164
19	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Fairview St & Hazard St NB	APPROX. STA 7+39.03	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	165, 168
20	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Fairview St & Hazard St SB	APPROX. STA 8+01.52	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	165, 168
21	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Fairview St & Driscoll St NB	APPROX. STA 7+40.08	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	147, 166
22	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Fairview St & Driscoll St SB	APPROX. STA 8+02.51	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	147, 166
23	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Huldy St & Westheimer Rd	APPROX. STA 0+96.29	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	171
24	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Brun St & Westheimer Rd	APPROX. STA 1+09.80	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	133
25	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Driscoll St & Westheimer Rd	APPROX. STA 0+97.65	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	146
26	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Argonne St & Avalon Pl	APPROX. STA 0+83.63	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	120, 124
27	10	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Ella Lee Ln & Kirby Dr	APPROX. STA 1+08.78	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	151
28	31	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Peckham St & Avalon Pl	APPROX. STA 8+15.43	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	186
29	32	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Avalon Pl & Shepherd Dr	APPROX. STA 26+83.10	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	131
30	33	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Argonne St & San Felipe St	APPROX. STA 7+84.37	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	122, 198
31	34	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Revere St & San Felipe St	APPROX. STA 5+41.87	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	196, 199
32	35	10.06 D.6.a.,c.	INTERSECTION SIGHT DISTANCE	Brazoria St & Argonne St	APPROX. STA 0+65.51	EXISTING OBSTRUCTIONS (REFER TO SPREADSHEET AND EXHIBITS)	122, 132

NOTES:
1. For a minimum radius of 135 ft, AASHTO Greenbook recommends a design speed of 25 mph. The proposed design provides advisory speed signs (25 mph) for this location as shown on the Pavement Marking and Signing drawings.
2. For a minimum radius of 215 ft, AASHTO Greenbook recommends a design speed of 30 mph. A speed limit of 30 mph is City standard for local streets.
3. Nose geometry, taper geometry, taper length, and median length vary from Standard Detail Drawings 10.06-06, 10.06-07, and 10.06-08. Length of tangent section from end of taper to intersecting street curb line is less than standard of 120'.

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No.
1	8	8.04 J.2.f. (1)(a) SANITARY SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED SANITARY SEWER AT 6" ABOVE SPRING LINE OF PROP 24" SAN SWR INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	KINGSTON ST AT FAIRVIEW ST	KINGSTON STA 8+65 (FAIRVIEW STA 7+23)	EXISTING CONDITION FIXES ELEVATION OF PROP 24" SANITARY SEWER CONNECTION TO EXISTING 36" SAN SWR ON KIRBY DRIVE. EXISTING CONDITION FIXES ELEVATION OF PROP 72-IN STORM SEWER TO EXISTING OUTFALL AT SHEPHERD DRIVE. REFER TO NOTE 1.	165, 165A
2	8	8.04 J.2.f. (1)(a) SANITARY SEWER CONNECTION TO DIFFERENT SIZE SEWER	CONNECT PROPOSED SANITARY SEWER TO MATCH SPRING LINE OF PROP 24" SAN SWR INSTEAD OF MATCHING CROWNS WHEN DIFFERENT DIAMETERS	PERSA ST AT FAIRVIEW ST	PERSA STA 0+60 (FAIRVIEW STA 9+76)	EXISTING CONDITION FIXES ELEVATION OF PROP 24" SANITARY SEWER CONNECTION TO EXISTING 36" SAN SWR ON KIRBY DRIVE. EXISTING CONDITION FIXES ELEVATION OF PROP 72-IN STORM SEWER TO EXISTING OUTFALL AT SHEPHERD DRIVE. REFER TO NOTE 1.	177

NOTES:
1. Flow line elevations of the proposed 24" sanitary sewer and the proposed 72" storm sewer are fixed at the connection of the proposed sewers to the existing infrastructure. The design of the propsed 72" storm sewer was adjusted to accommodate pavement design which reduced the available clearance between the proposed 72" storm sewer and the proposed 8" sanitary sewer. The requested variance is needed to achieve adequate clearance between the proposed 72" storm sewer and the proposed 8" sanitary sewer.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

ITEM NO.	IDM CHAPTER	IDM SUBCHAPTER	VARIANCE DESCRIPTION	STREET	STATION OR LOCATION	REASON	DWG No
1	10	10.3.02.A.2.b, Table 10.3 - INTERSECTION STANDARD CURB RADII	CURB RADIUS < 20'	DRISCOLL ST	INTERSECTION OF DRISCOLL AT WESTHEIMER. MATCH EXISTING WEST RADIUS (16'R) TO PRECLUDE WORK ON MAJOR THOROUGHFARES AND OUTSIDE PROJECT LIMITS.	MAINTAIN THE EXISTING WEST RADIUS TO MATCH THE EXISTING SYMMETRY OF THE INTERSECTION AND TO ELIMINATE RELOCATION OF TWO EXISTING CENTERPOINT UTILITY POLES. DUE TO SPACE CONSTRAINTS RELOCATION OF CENTERPOINT POLES MAY ADVERSELY IMPACT THE PROJECT SCHEDULE. Refer to Exhibit #1.	134
2	10	10.3.02.A.2.b, Table 10.3 - INTERSECTION STANDARD CURB RADII	CURB RADIUS < 20'	DRISCOLL ST	INTERSECTION OF DRISCOLL AT WESTHEIMER. MATCH EXISTING EAST RADIUS (14'R) TO PRECLUDE WORK ON MAJOR THOROUGHFARES AND OUTSIDE PROJECT LIMITS.	MAINTAIN THE EXISTING EAST RADIUS TO PRECLUDE ROW ACQUISITION AND BUILDING ACQUISITION. ROW/BLDG ACQUISITION WILL ADVERSELY IMPACT PROJECT COST AND SCHEDULE. Refer to Exhibit #2.	134
3	10	10.3.02.A.2.b, Table 10.3 - INTERSECTION STANDARD CURB RADII	CURB RADIUS < 20'	HAZARD ST	INTERSECTION OF HAZARD AT WESTHEIMER. MATCH EXISTING WEST RADIUS (14'R)TO PRECLUDE WORK ON MAJOR THOROUGHFARES AND OUTSIDE PROJECT LIMITS.	MAINTAIN THE EXISTING WEST RADIUS TO MATCH THE EXISTING SYMMETRY OF THE INTERSECTION AND TO ELIMINATE RELOCATION OF THE EXISTING TRAFFIC SIGNAL POLE, THE EXISTING PEDESTRIAN SIGNAL POLE, AND THE EXISTING CENTERPOINT POWER POLE. THIS ADDITIONAL WORK WILL ADVERSELY IMPACT PROJECT COST AND SCHEDULE. Refer to Exhibit #3 and Note #1.	157
4	10	10.3.02.A.2.b, Table 10.3 - INTERSECTION STANDARD CURB RADII	CURB RADIUS < 20'	HAZARD ST	INTERSECTION OF HAZARD AT WESTHEIMER. MATCH EXISTING EAST RADIUS (13'R)TO PRECLUDE WORK ON MAJOR THOROUGHFARES AND OUTSIDE PROJECT LIMITS.	MAINTAIN THE EXISTING EAST RADIUS TO PRECLUDE ROW ACQUISITION, BUILDING ACQUISITION, AND RELOCATION OF THE EXISTING TRAFFIC SIGNAL POLE. ROW/BLDG ACQUISITION AND SIGNAL POLE RELOCATION WILL ADVERSELY IMPACT PROJECT COST AND SCHEDULE. Refer to Exhibit #4 and Note #1.	157

NOTES:

1. In accorance with department of Transportation and Drainage Operation's policy, the relocation of the traffic signal poles must incude upgrading the signal heads and control system architecture to the current code requirements. This will increase project cost and adversely impact project schedule.

OTHON

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROJECT VARIANCE TABLE
SHEET 3 OF 3

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 9 OF 391	

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ABBREVIATIONS:

&	AND
@	AT
AB	ALL BELL
AC	ACRE / ASBESTOS CEMENT
AI/VR	AIR INLET / VACUUM RELIEF
APPROX	APPROXIMATELY
ASPH	ASPHALT
AVE	AVENUE
℄	BASELINE
B/B	BACK TO BACK
BC	BACK OF CURB
BFV	BUTTERFLY VALVE
BL	BUILDING LINE
BLDG	BUILDING
BLVD	BOULEVARD
℄	CENTER LINE
C/C	CENTER TO CENTER
CGMP	CORRUGATED GALVANIZED METAL PIPE
CMP	CORRUGATED METAL PIPE
CIP	CAST IRON PIPE
CLR	CLEARANCE
CO	CLEAN OUT
COH	CITY OF HOUSTON
CONC	CONCRETE
CONSTR	CONSTRUCTION
CPEE	CENTERPOINT ENERGY ELECTRIC
CPEG	CENTERPOINT ENERGY GAS
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DRIVE
DWG	DRAWING
DWY	DRIVEWAY
E	EAST
EL	ELEVATION
EP	EDGE OF PAVEMENT
E/R	END OF RADIUS
ESMT	EASEMENT
EXST	EXISTING
FC	FACE OF CURB
F/F	FACE TO FACE
FH	FIRE HYDRANT
℄	FLOW LINE
FM	FORCE MAIN
FT	FEET
GPS	GLOBAL POSITIONING SYSTEM
GV	GATE VALVE
GV&B	GATE VALVE AND BOX
HCFCD	HARRIS COUNTY FLOOD CONTROL DISTRICT
HDPE	HIGH-DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HP	HIGH PRESSURE
INV EL	INVERT ELEVATION
IP	INTERMEDIATE PRESSURE
IR	IRON ROD

ABBREVIATIONS:

J-BOX	JUNCTION BOX
JT	JOINT
JUNCT	JUNCTION
LF	LINEAR FEET
LN	LANE
LPT	LOW POINT
LT	LEFT
LS	LIFT STATION
MAX	MAXIMUM
METRO	METROPOLITAN TRANSIT AUTHORITY
MH	MANHOLE
MIN	MINIMUM
MON	MONUMENT
N	NORTH
NA	NOT APPLICABLE
NAVD	NORTH AMERICAN VERTICAL DATUM
NG	NATURAL GROUND
NO	NUMBER
NTS	NOT TO SCALE
OCC	ZERO CURB CUT
OS	OFFSET
OH	OVERHEAD
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVATURE
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PERM	PERMANENT
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PNT	POINT
PPCA	POTENTIALLY PETROLEUM CONTAMINATED AREA
PRC	POINT OF REVERSE
PROP	PROPOSED
PSI	POUND PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE / POINT OF VERTICAL CURVATURE
PVMT	PAVEMENT
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY

ABBREVIATIONS:

(R)	RECORD DRAWING
R	RADIUS
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REINF	REINFORCED
REM	REMOVABLE
RJ	RESTRAINED JOINT
ROW	RIGHT OF WAY
RR	RAILROAD
RRPM	REFLECTIVE REMOVABLE PAVEMENT MARKERS
RT	RIGHT
S	SOUTH
SAN	SANITARY
SCHED	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SSE	SANITARY SEWER EASEMENT
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STM	STORM
SWBT	SOUTHWESTERN BELL TELEPHONE
SWR	SEWER
SY	SQUARE YARD
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TEMP	TEMPORARY
TOB	TOP OF BANK
TOC	TOP OF CURB
TOP	TOP OF PAVEMENT
TOS	TOP OF STACK
TS&V	TAPPING SLEEVE AND VALVE
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
TYP	TYPICAL
UE	UTILITY EASEMENT
UGND	UNDERGROUND
VC	VERTICAL CURVE
VPI	VERTICAL POINT OF INTERSECTION
W	WEST
W/	WITH
WL	WATER LINE
WLE	WATER LINE EASEMENT
WM	WATER METER
WP	WOOD POLE
WSEL	WATER SURFACE ELEVATION
WV	WATER VALVE
WWTP	WASTE WATER TREATMENT PLANT

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

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AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

ABBREVIATIONS

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 10AOF 391

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EXISTING PLAN VIEW

- WATER METER
- WATER VALVE (GATE)
- WATER VALVE (BUTTERFLY)
- FIRE HYDRANT/FLUSHING VALVE
- TAPPING SLEEVE & VALVE
- REDUCER
- ROUND CONNECTION
- SANITARY SEWER CLEANOUT & MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER INLETS
- CULVERT PIPE AND HEADWALL
- TOP OF CURB ELEVATION
- GUTTER ELEVATION
- TOP OF PAVEMENT ELEVATION
- CONTOUR LINE
- ROW LINE
- PROPERTY LINE
- LOT LINES
- EASEMENT LINE
- CENTER LINE OF ROW
- TRANSIT LINE
- EDGE OF DITCHES
- CENTER LINE OF DITCHES
- EDGE OF DITCHES
- FENCE LINE, WOOD
- FENCE LINE, CHAIN LINK
- FENCE LINE, BARBED WIRE
- FENCE LINE, HOG WIRE
- EDGE OF CONCRETE
- CURB LINE
- CONCRETE WALK
- EDGE OF ASPHALT
- EDGE OF SHELL OR GRAVEL
- DIMENSION LINE
- AERIAL POWER LINE
- UNDERGROUND POWER LINE
- GAS LINE
- UNKNOWN UNDERGROUND LINE
- OIL PIPELINE
- UNDERGROUND TELECOMM LINE W/VAULT
- AERIAL TELECOMM LINE
- RAILROAD LINE
- WATER LINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE
- NON-POTABLE WATER LINE
- GAS METER
- GAS VALVE
- PROPANE LINE
- STEAM LINE
- MISC UNDERGROUND PIPELINE LABLE

PROPOSED PLAN VIEW

- WATER METER
- WATER VALVE (GATE)
- WATER VALVE (BUTTERFLY)
- FIRE HYDRANT/FLUSHING VALVE
- TAPPING SLEEVE & VALVE
- REDUCER
- ROUND CONNECTION
- SANITARY SEWER CLEANOUT & MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER INLETS
- CULVERT PIPE AND HEADWALL
- TOP OF CURB ELEVATION
- GUTTER ELEVATION
- TOP OF PAVEMENT ELEVATION
- CONTOUR LINE
- ROW LINE
- PROPERTY LINE
- LOT LINES
- EASEMENT LINE
- CENTER LINE OF ROW
- TRANSIT LINE
- EDGE OF DITCHES
- CENTER LINE OF DITCHES
- EDGE OF DITCHES
- FENCE LINE, WOOD
- FENCE LINE, CHAIN LINK
- FENCE LINE, BARBED WIRE
- FENCE LINE, HOG WIRE
- EDGE OF CONCRETE
- CURB LINE
- CONCRETE WALK
- EDGE OF ASPHALT
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- DIMENSION LINE
- AERIAL POWER LINE
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- GAS LINE
- UNKNOWN UNDERGROUND LINE
- OIL PIPELINE
- UNDERGROUND TELECOMM LINE W/ VAULT
- AERIAL TELECOMM LINE
- RAILROAD LINE
- WATER LINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE
- NON-POTABLE WATER LINE
- GAS METER
- GAS VALVE
- PROPANE LINE
- STEAM LINE
- MISC UNDERGROUND PIPELINE LABLE
- MATCH LINE

EXISTING PLAN VIEW

- PAVING HEADER
- BUILDING, RESIDENTIAL
- BUILDING, COMMERCIAL
- TREE
- HEDGE
- IRON PIPE OR IRON ROD MONUMENT
- POINT OF INTERSECTION (PI)
- POINT OF CURVE (PC)
- POINT OF TANGENCY (PT)
- POWER POLE
- POWER POLE W/DOWN GUY

EXISTING PROFILE VIEW

- NORTH OR EAST PROPERTY LINE
- SOUTH OR WEST PROPERTY LINE
- NORTH OR EAST CURB
- SOUTH OR WEST CURB
- NORTH OR EAST DITCH
- SOUTH OR WEST DITCH
- NORTH OR EAST NATURAL GROUND
- SOUTH OR WEST NATURAL GROUND
- NORTH OR EAST CULVERT
- SOUTH OR WEST CULVERT
- CENTERLINE OF ROW
- CENTERPOINT ENERGY CONDUIT
- GAS LINE
- WESTERN UNION
- AT&T CONDUIT
- WATER LINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE
- NON-POTABLE WATER LINE
- CENTERPOINT ENERGY MANHOLE
- AT&T MANHOLE
- WATER LINE MANHOLE
- SANITARY SEWER MANHOLE & CLEANOUT
- STORM SEWER MANHOLE
- STORM SEWER INLET

PROPOSED PLAN VIEW

- PAVING HEADER
- BUILDING, RESIDENTIAL
- BUILDING, COMMERCIAL
- TREE
- HEDGE
- IRON PIPE OR IRON ROD MONUMENT
- POINT OF INTERSECTION (PI)
- POINT OF CURVE (PC)
- POINT OF TANGENCY (PT)
- POWER POLE
- POWER POLE W/DOWN GUY

PROPOSED PROFILE VIEW

- NORTH OR EAST PROPERTY LINE
- SOUTH OR WEST PROPERTY LINE
- NORTH OR EAST CURB
- SOUTH OR WEST CURB
- NORTH OR EAST DITCH
- SOUTH OR WEST DITCH
- NORTH OR EAST NATURAL GROUND
- SOUTH OR WEST NATURAL GROUND
- NORTH OR EAST CULVERT
- SOUTH OR WEST CULVERT
- CENTERLINE OF ROW
- CENTERPOINT ENERGY CONDUIT
- GAS LINE
- WESTERN UNION
- AT&T CONDUIT
- WATER LINE
- SANITARY SEWER LINE
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- SANITARY SEWER FORCE MAIN
- RECLAIMED WATER LINE
- NON-POTABLE WATER LINE
- CENTERPOINT ENERGY MANHOLE
- AT&T MANHOLE
- WATER LINE MANHOLE
- SANITARY SEWER MANHOLE & CLEANOUT
- STORM SEWER MANHOLE
- STORM SEWER INLET

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

MISC STANDARD ELEMENTS

- COH NORTH ARROW
- COH BAR SCALE (0' 10' 20' 40'; SCALE: 1"=20')
- REVISION CLOUD/DELTA
- DETAIL/SECTION TITLE (1 VIEWTITLE, SCALE)
- SECTION CALLOUT (1/XX)
- DETAIL CALLOUT (1/1)

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TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SYMBOLS

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 10 OF 391	

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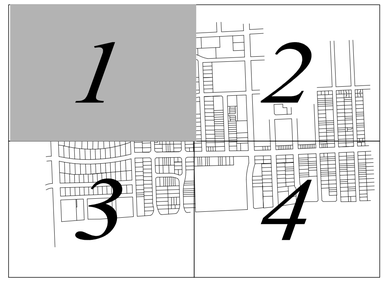
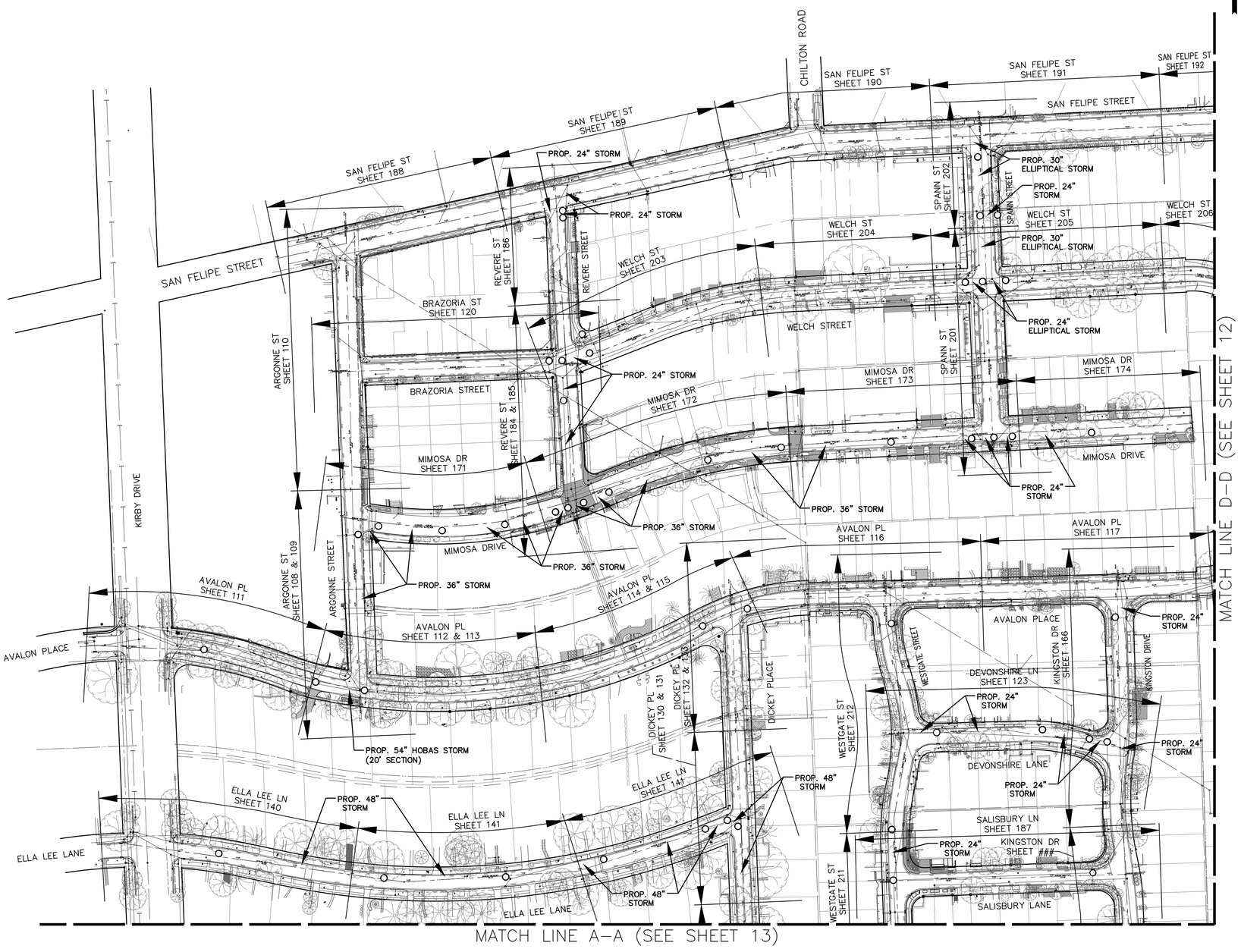
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)





LEGEND

ALL LEADS TO BE 24" RCP. ALL INLET SHALL BE B-B INLETS.

BRAZORIA ST SHEET 120

PLAN AND PROFILE SHEET LOCATION

OTHON

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM & PAVEMENT LAYOUT – SHEET 1 OF 4

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **11** OF 391

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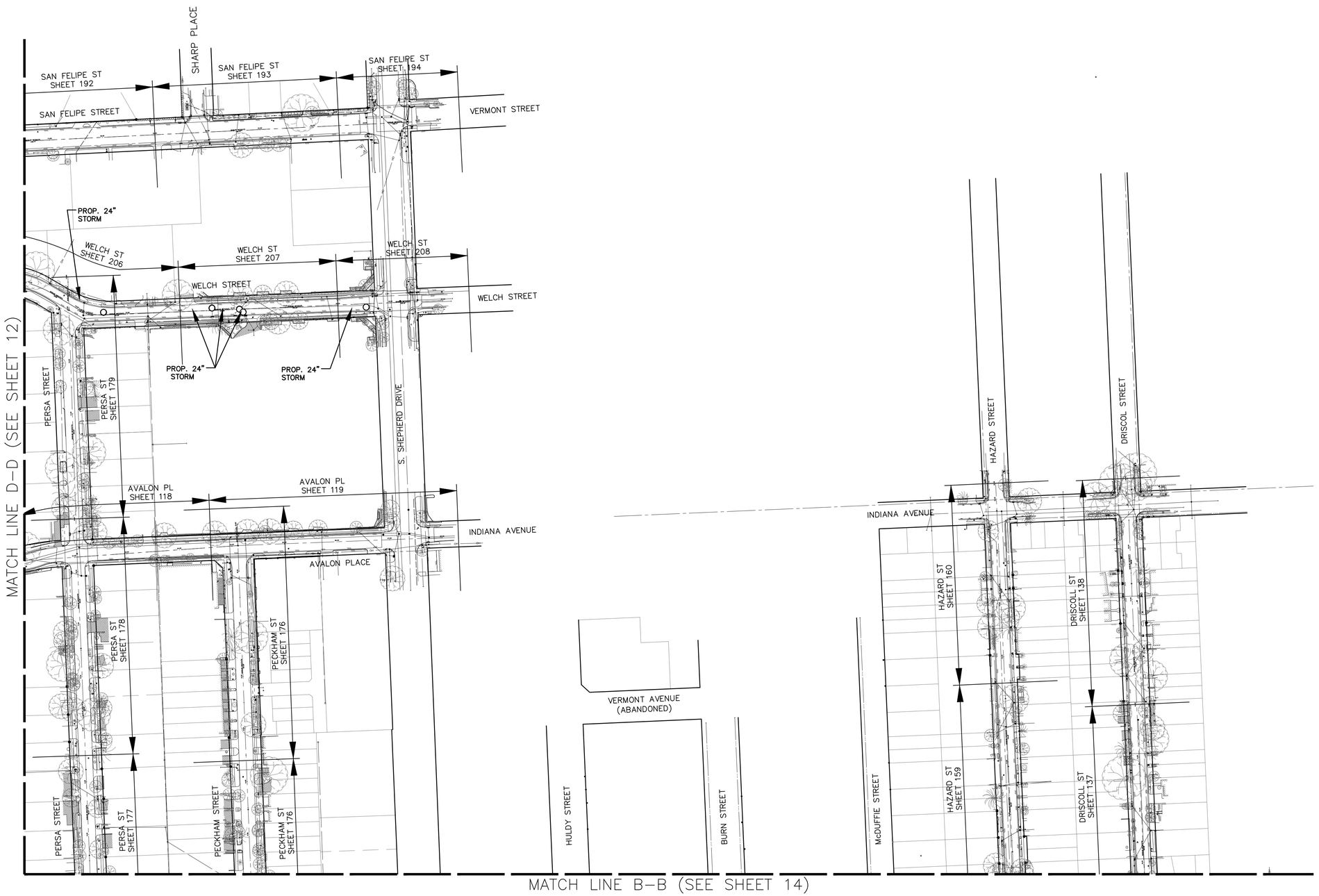

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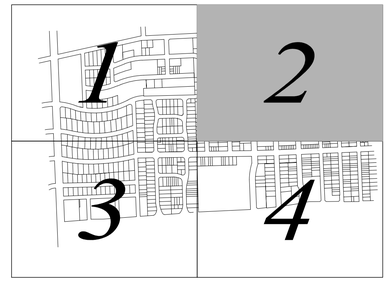
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

ALL LEADS TO BE 24" RCP. ALL INLET SHALL BE B-B INLETS.

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

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143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM & PAVEMENT LAYOUT – SHEET 2 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **12** OF 391	

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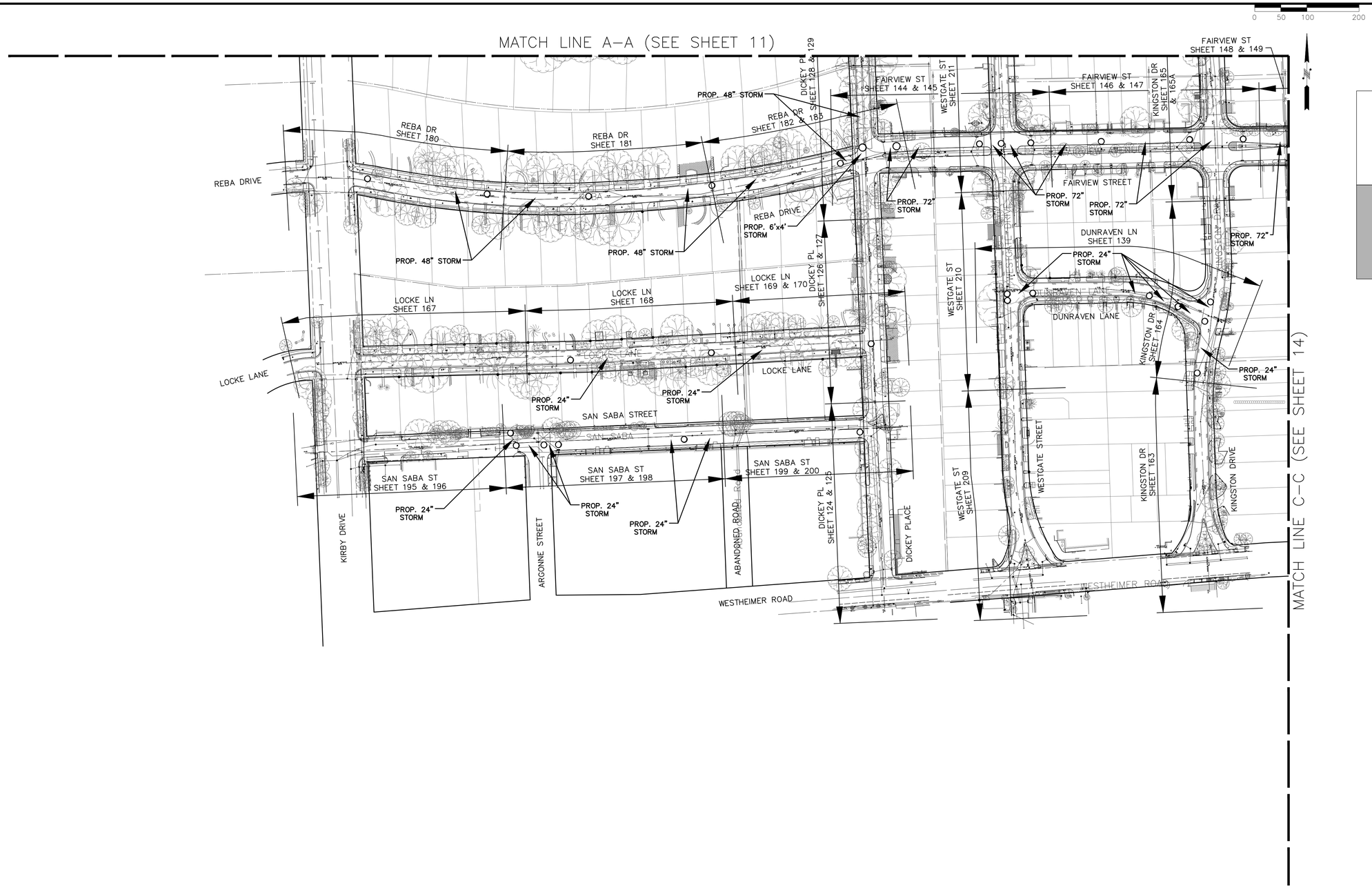

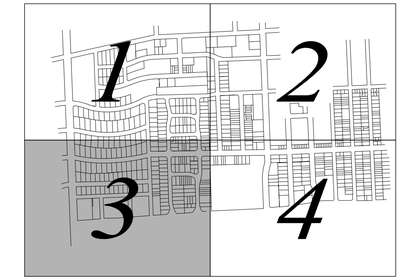

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

LEGEND

ALL LEADS TO BE 24" RCP. ALL INLET SHALL BE B–B INLETS.

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

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TBPE REG NO: F–4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM & PAVEMENT LAYOUT – SHEET 3 OF 4

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 13 OF 391	

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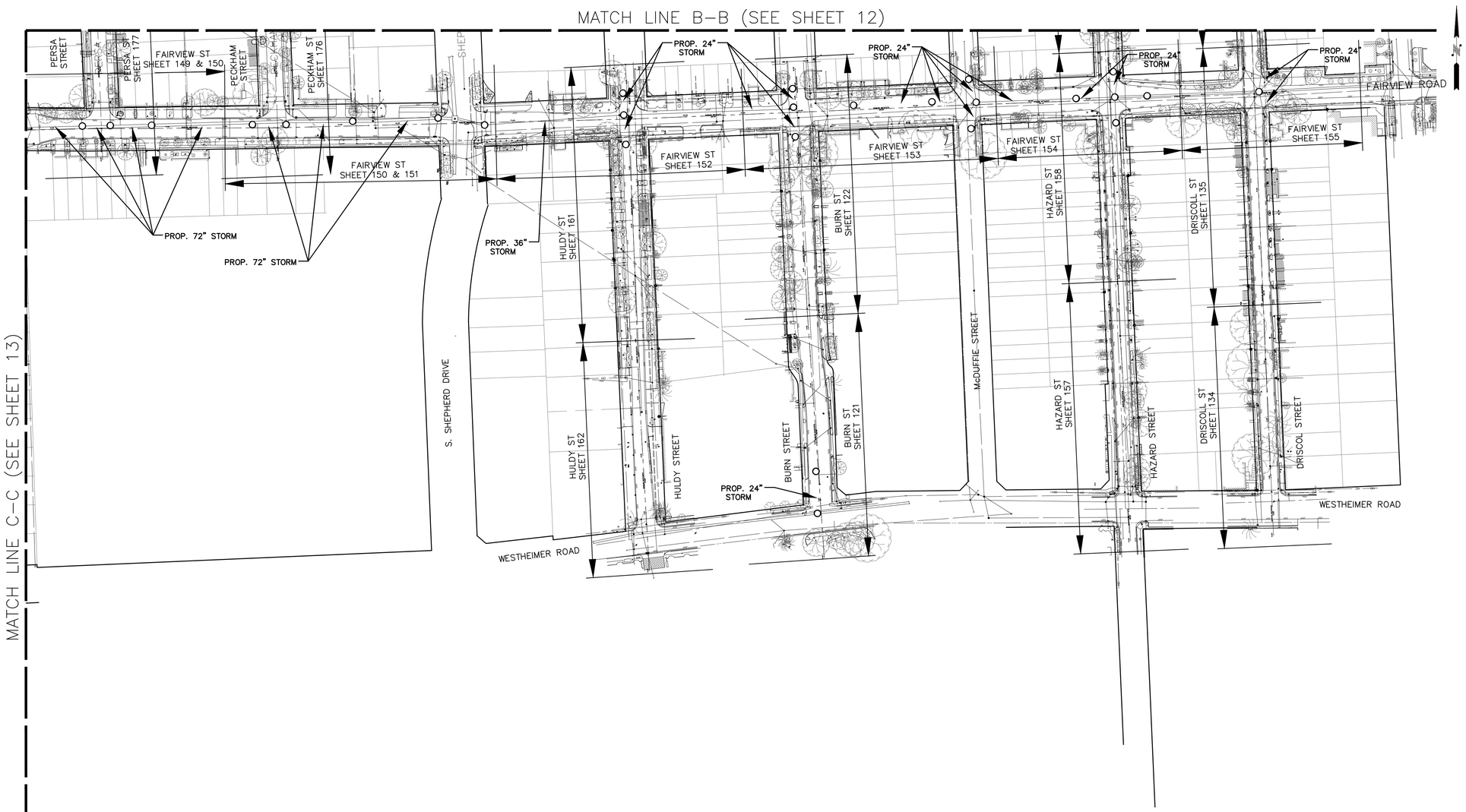

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

LEGEND

ALL LEADS TO BE 24" RCP. ALL INLET SHALL BE B–B INLETS.

BRAZORIA ST SHEET 120

PLAN AND PROFILE SHEET LOCATION

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM & PAVEMENT LAYOUT – SHEET 4 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **14** OF 391	

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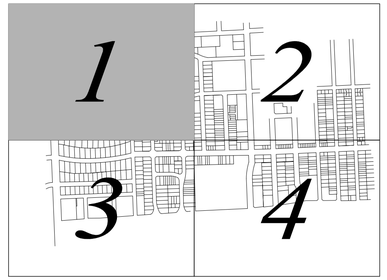
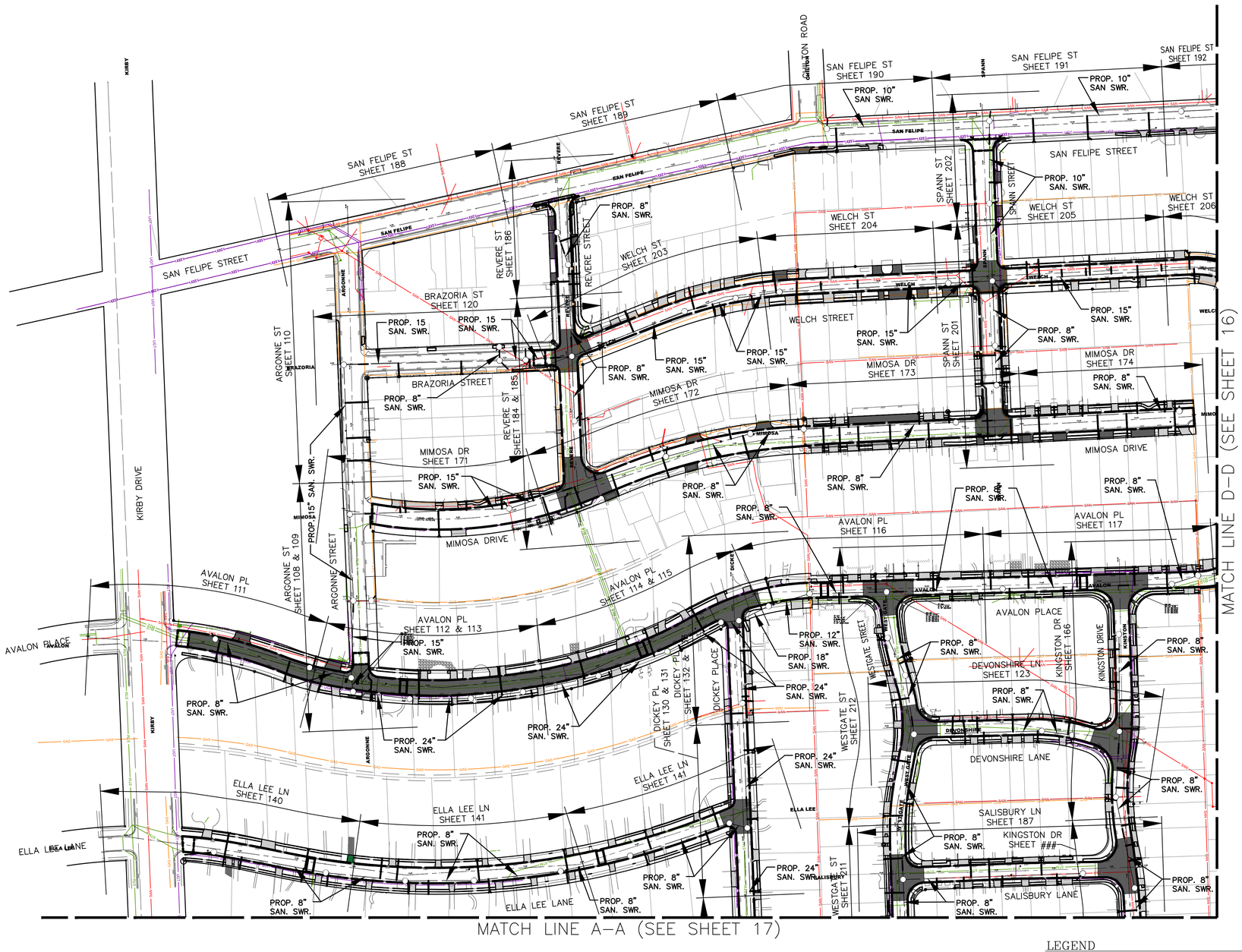
N

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)





LEGEND

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

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TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED SANITARY OVERALL LAYOUT – SHEET 1 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **15** OF 391	

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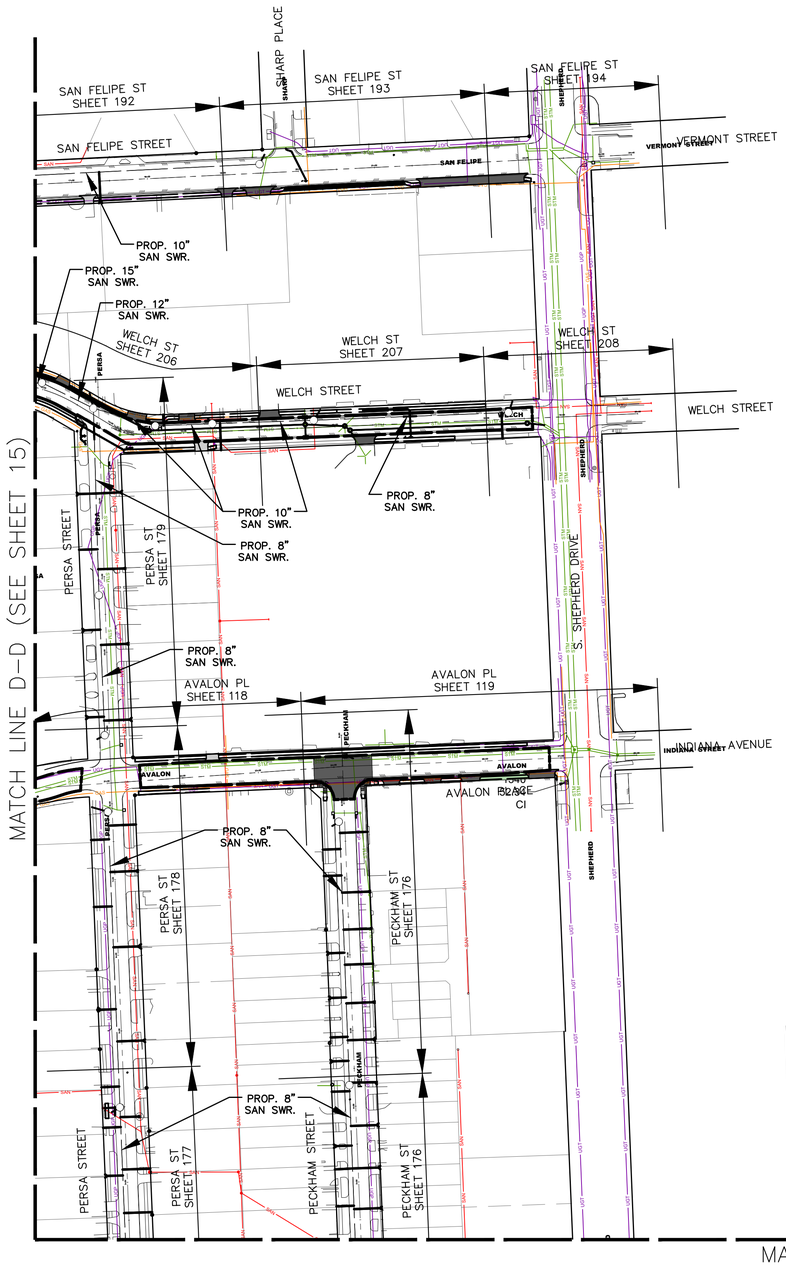


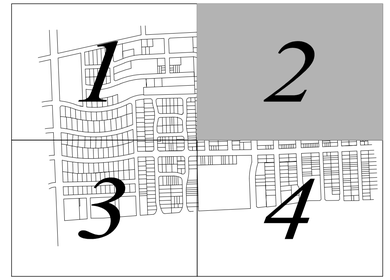


0 50 100 200

N

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

BRAZORIA ST
SHEET 120
PLAN AND PROFILE
SHEET LOCATION

OTHON

OTHON, INC. TBPE NO. F-1471

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED SANITARY OVERALL LAYOUT – SHEET 2 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **16** OF 391	

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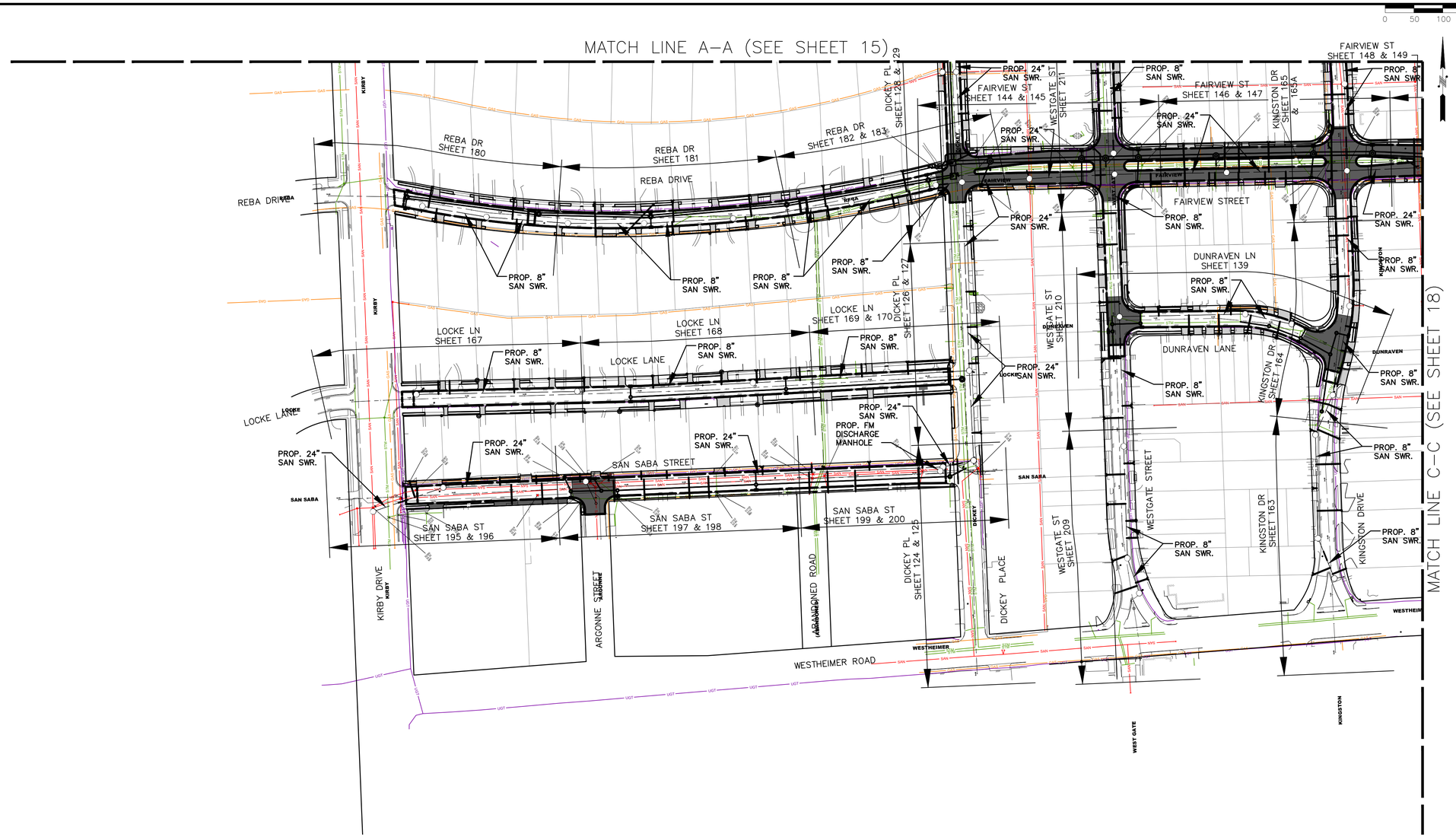



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

LEGEND

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

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LICENSED
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07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED SANITARY OVERALL LAYOUT – SHEET 3 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 17 OF 391	

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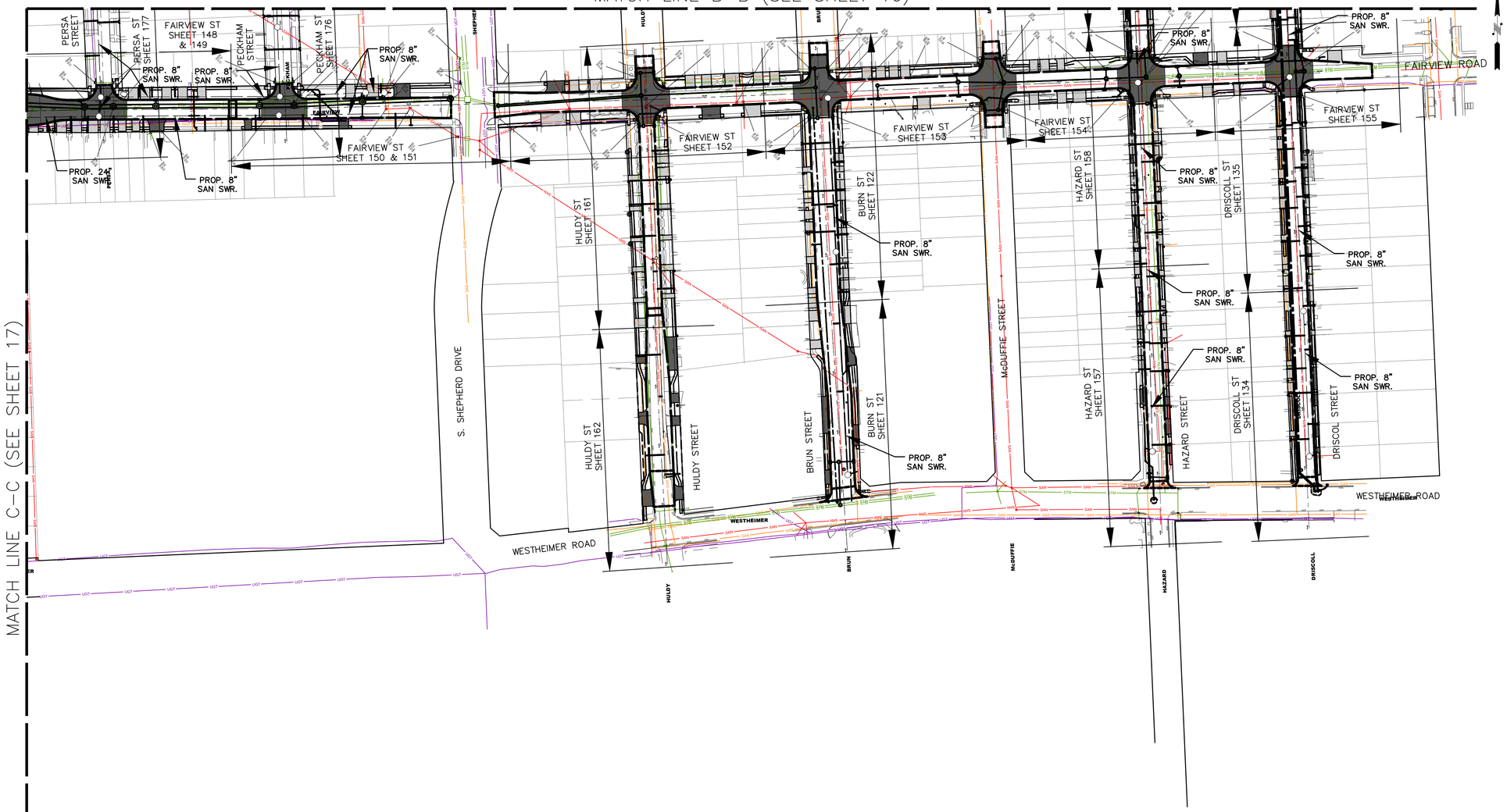
0 50 100 200

MATCH LINE B–B (SEE SHEET 16)

MATCH LINE C–C (SEE SHEET 17)





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

LEGEND

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

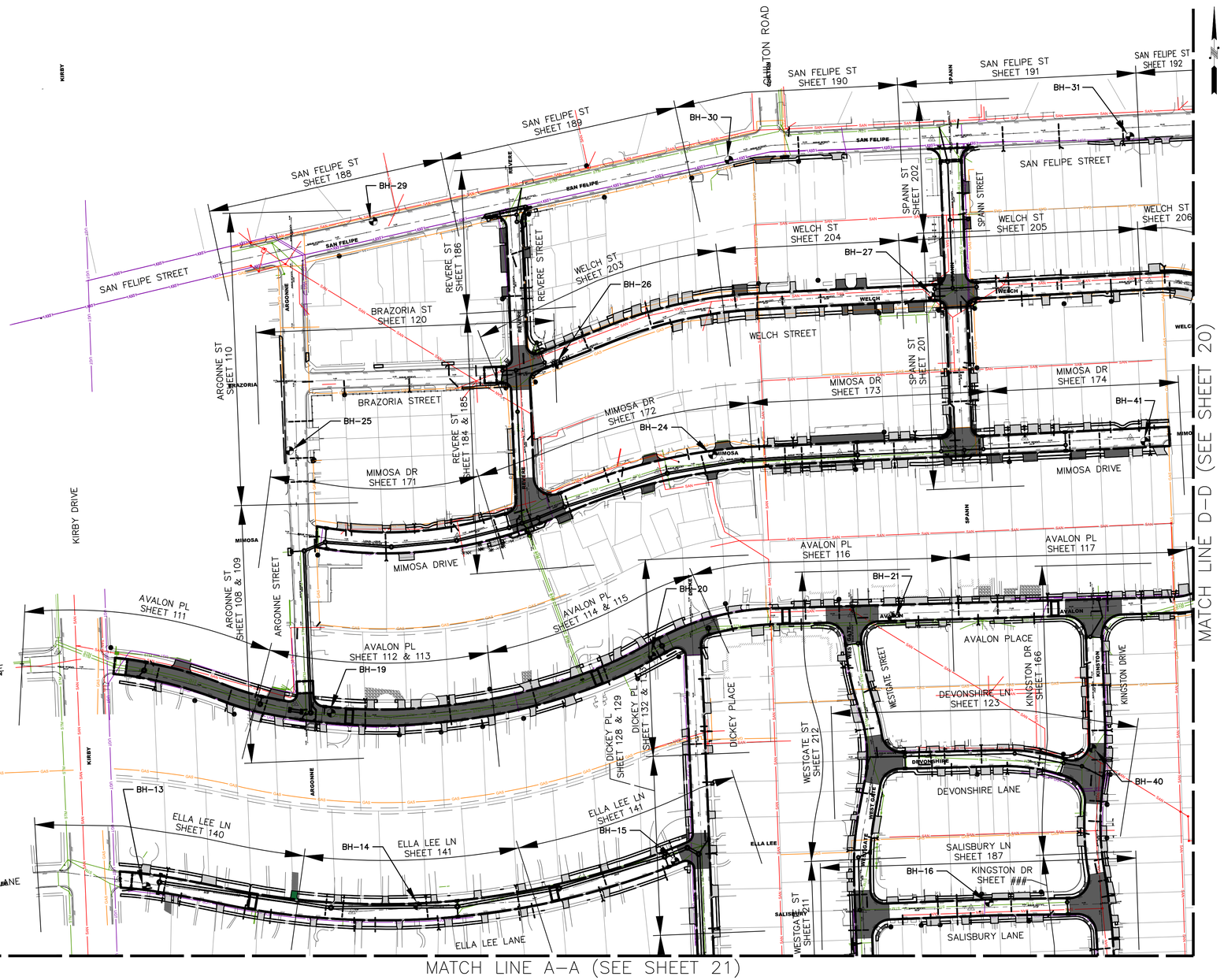
STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

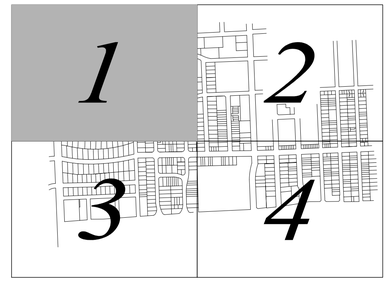
PROPOSED SANITARY OVERALL LAYOUT – SHEET 4 OF 4

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **18** OF 391



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



BORING LOCATION	NORTHING FEET	EASTING FEET	ELEVATION
BH-13	3105144.09	13837546.91	51.64
BH-14	3105598.63	13837514.41	54.14
BH-15	3106030.33	13837588.68	51.50
BH-16	3106556.68	13837519.85	51.66
BH-19	3105454.03	13837837.14	58.79
BH-20	3105991.73	1387932.93	51.33
BH-21	3106392.79	13837998.54	52.05
BH-24	3106093.13	13838270.10	52.62
BH-25	3105384.00	13838276.75	53.17
BH-26	3105384.61	13838420.86	53.45
BH-27	3106460.43	13838534.84	51.45
BH-29	3105524.39	13838661.29	53.11
BH-30	3106120.42	13838763.63	52.26
BH-31	3106792.50	13838803.16	52.45
BH-40	3106728.97	13837778.32	51.68
BH-41	3106817.44	13838292.30	52.14

LEGEND

S1C-XX — SOIL BORING NO. AND LOCATION

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SOIL BORINGS LAYOUT – SHEET 1 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **19** OF 391	

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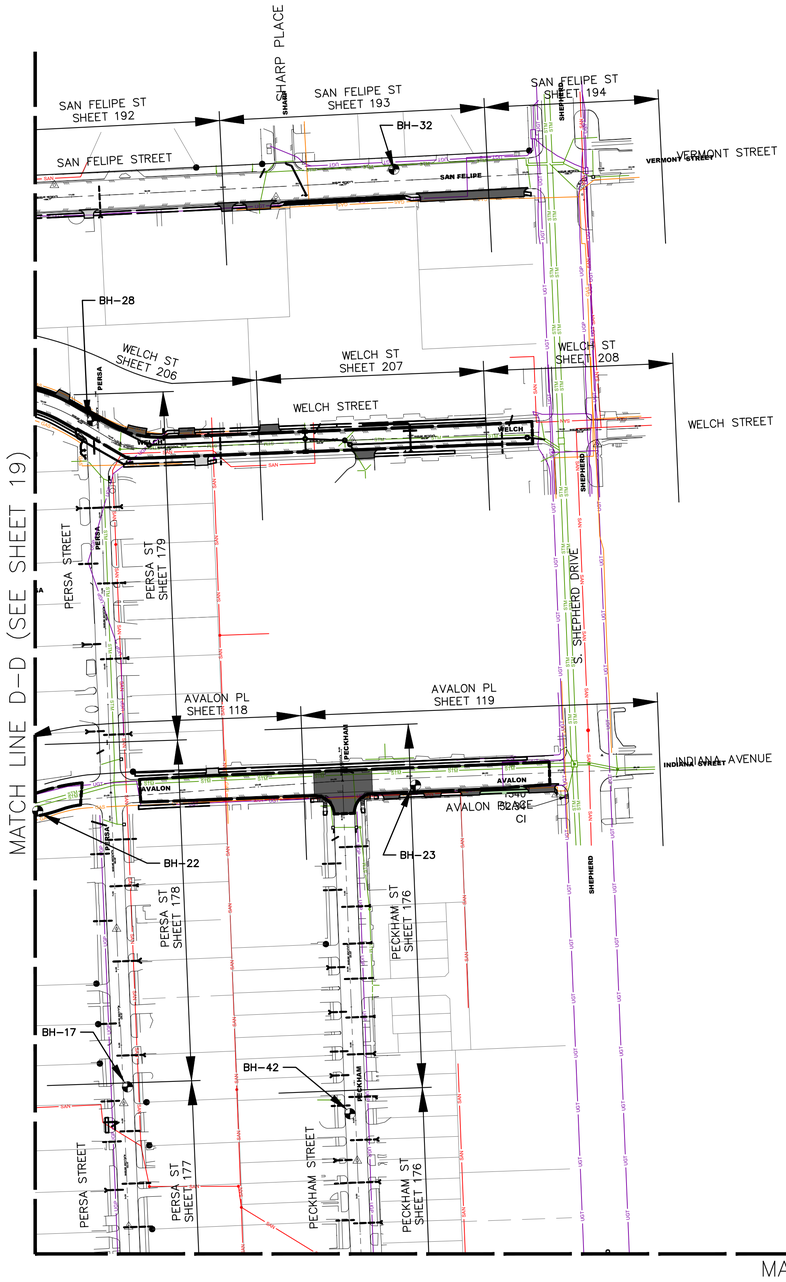
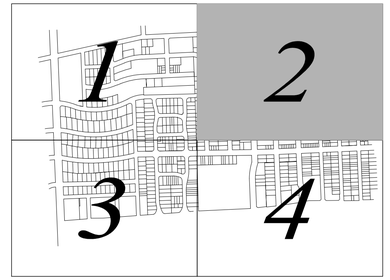




0 50 100 200

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



BORING LOCATION	NORTHING FEET	EASTING FEET	ELEVATION
BH-17	3107020.35	13837651.02	53.03
BH-22	3106901.90	13838015.14	52.50
BH-23	3107400.52	13838049.07	52.53
BH-28	3106974.09	13838530.05	51.99
BH-32	3107372.00	13838861.94	51.95
BH-42	3107314.07	13837615.51	53.02
BH-47	3108759.52	13837618.88	52.06
BH-48	3108759.41	13838021.83	52.40
BH-50	3109034.45	13837446.27	51.44
BH-51	3109012.68	13837949.58	52.63

LEGEND

S1C-XX — SOIL BORING NO. AND LOCATION

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

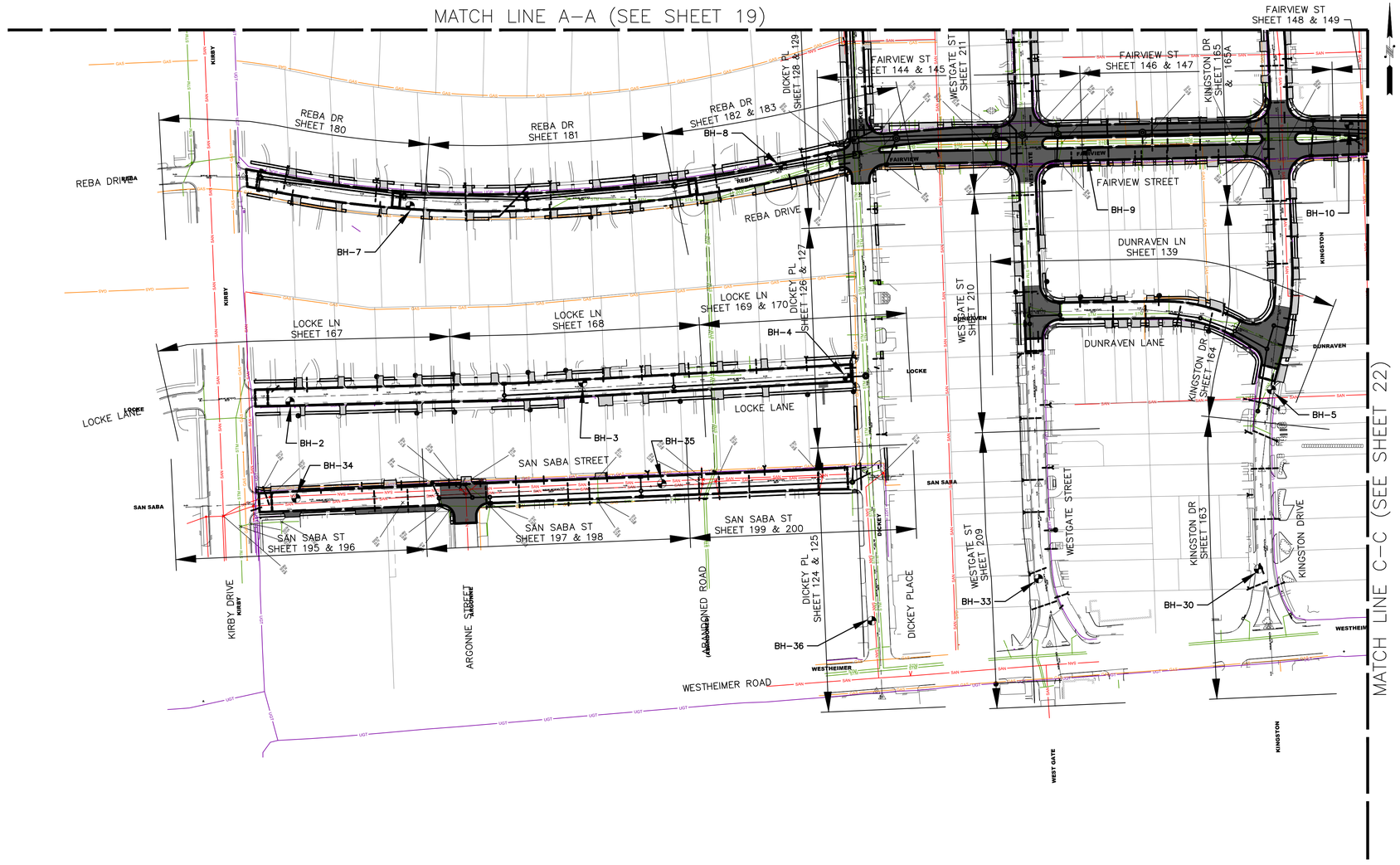
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SOIL BORINGS LAYOUT
– SHEET 2 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **20** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\19-22_PROP. SOIL BORINGS LAYOUT.dwgSOIL 2 May 21 , 2026 – 1:14PM Jgarza





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

BORING LOCATION	NORTHING FEET	EASTING FEET	ELEVATION
BH–2	3105183.65	13836838.87	55.15
BH–3	3105649.51	13836869.05	51.30
BH–4	3106070.43	13836876.90	51.86
BH–5	3106745.45	13836958.10	52.03
BH–7	3105374.67	13837150.55	50.75
BH–8	3105967.53	13837214.23	51.62
BH–9	3106451.74	13837237.79	51.74
BH–10	3106868.87	13837279.77	50.33
BH–30	3106724.83	13836572.66	52.26
BH–33	3106374.65	13836557.31	51.30
BH–34	3105193.20	13836685.14	53.24
BH–35	3105775.25	13836708.45	52.46
BH–36	3106109.48	13836490.32	51.75

LEGEND

S1C–XX — SOIL BORING NO. AND LOCATION

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SOIL BORINGS LAYOUT – SHEET 3 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **21** OF 391	

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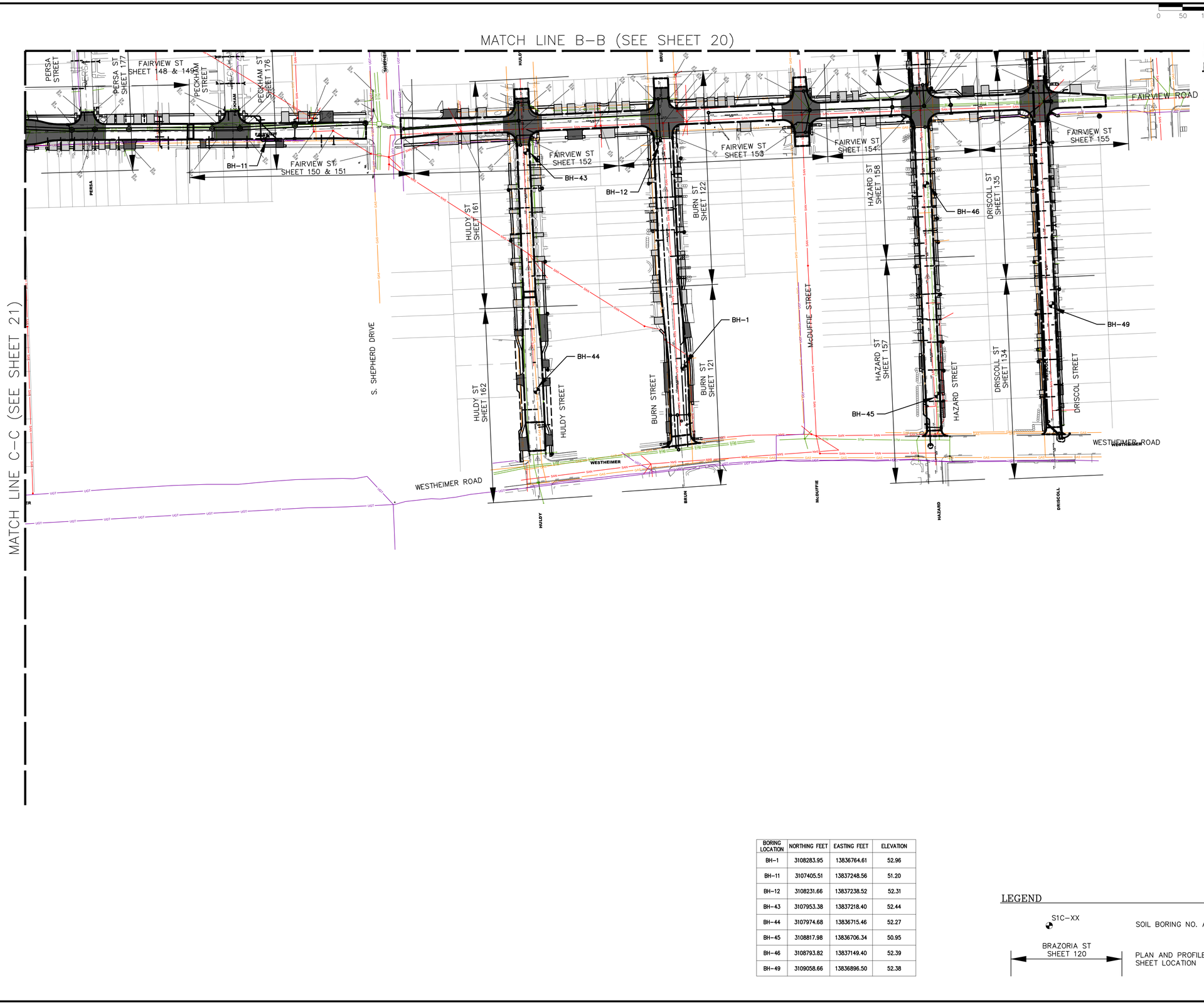

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

BORING LOCATION	NORTHING FEET	EASTING FEET	ELEVATION
BH–1	3108283.95	13836764.61	52.96
BH–11	3107405.51	13837248.56	51.20
BH–12	3108231.66	13837238.52	52.31
BH–43	3107953.38	13837218.40	52.44
BH–44	3107974.68	13836715.46	52.27
BH–45	3108817.98	13836706.34	50.95
BH–46	3108793.82	13837149.40	52.39
BH–49	3109058.66	13836896.50	52.38

LEGEND

S1C–XX — SOIL BORING NO. AND LOCATION

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

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TBPE REG NO: F–4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SOIL BORINGS LAYOUT – SHEET 4 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **22** OF 391	

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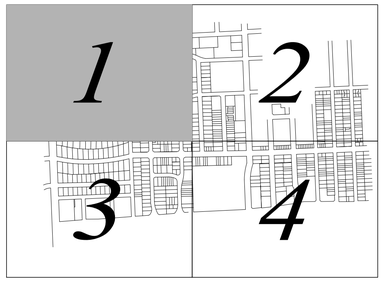
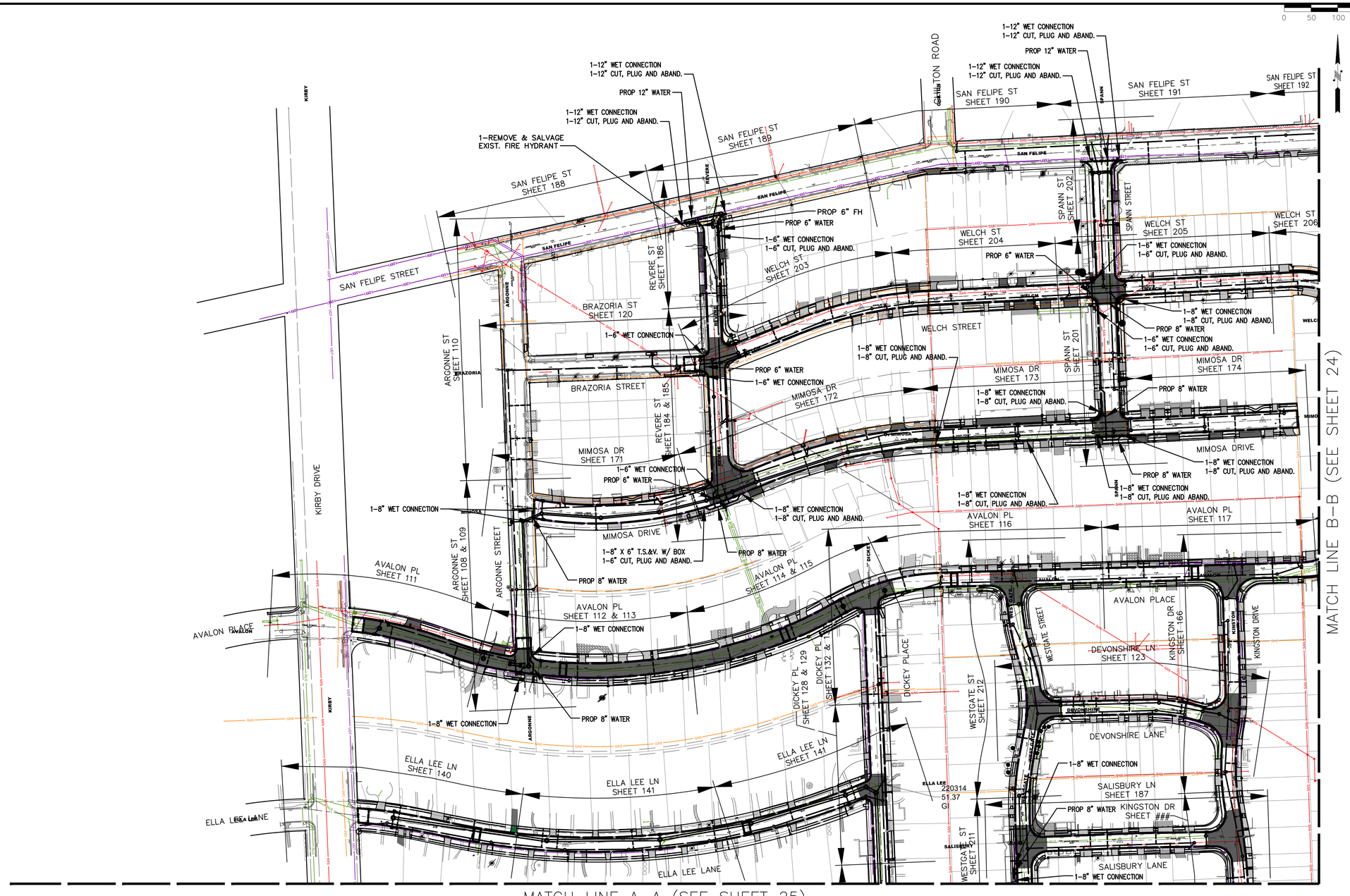
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)





LEGEND

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED WATER OVERALL LAYOUT SHEET 1 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **23** OF 391	

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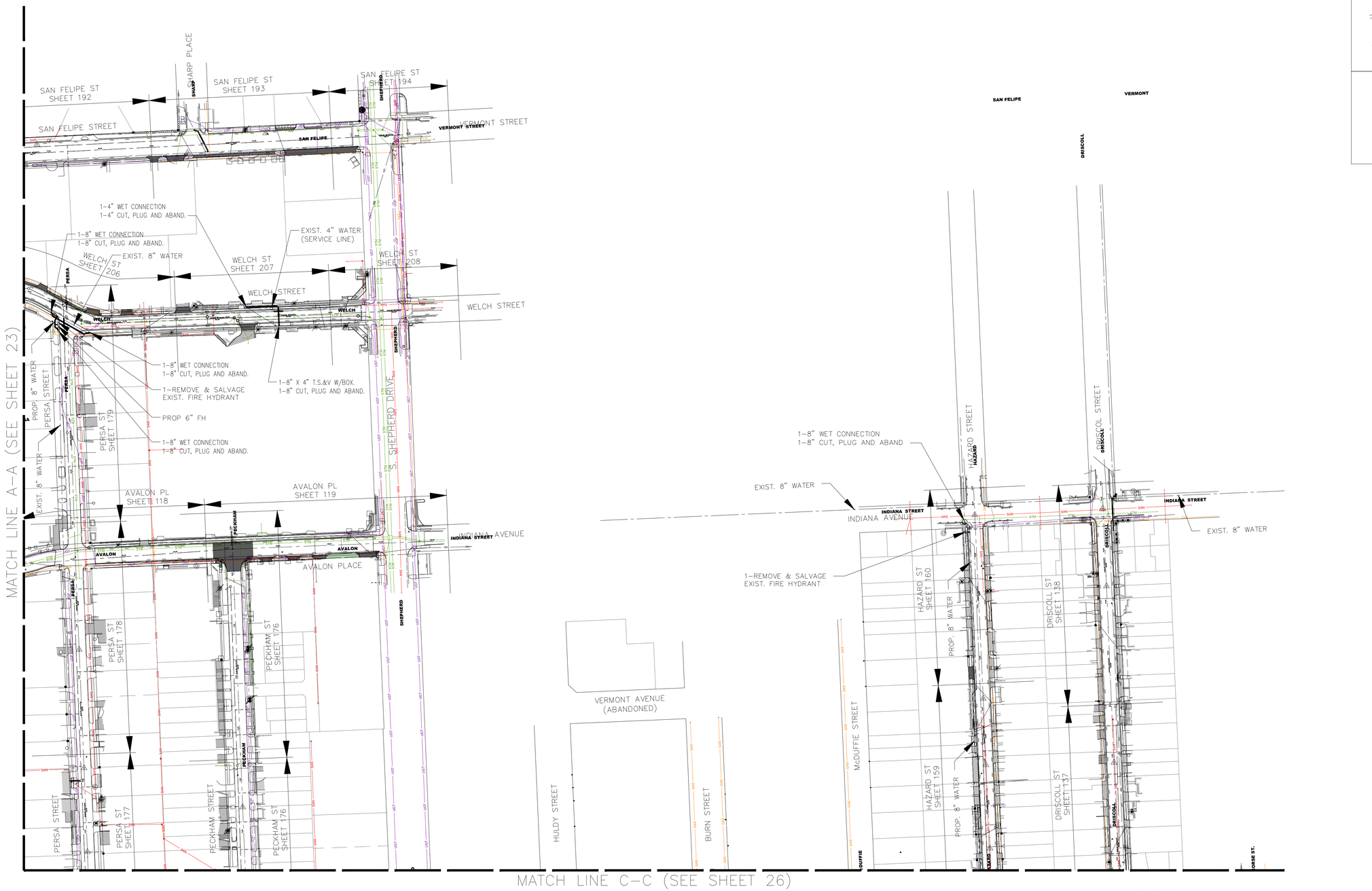

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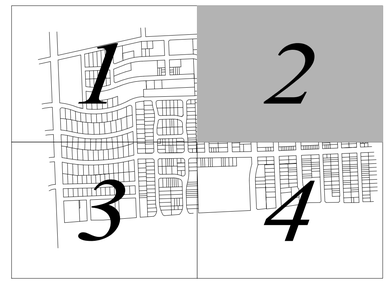
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



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07/29/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED WATER OVERALL LAYOUT SHEET 2 OF 4

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 24 OF 391

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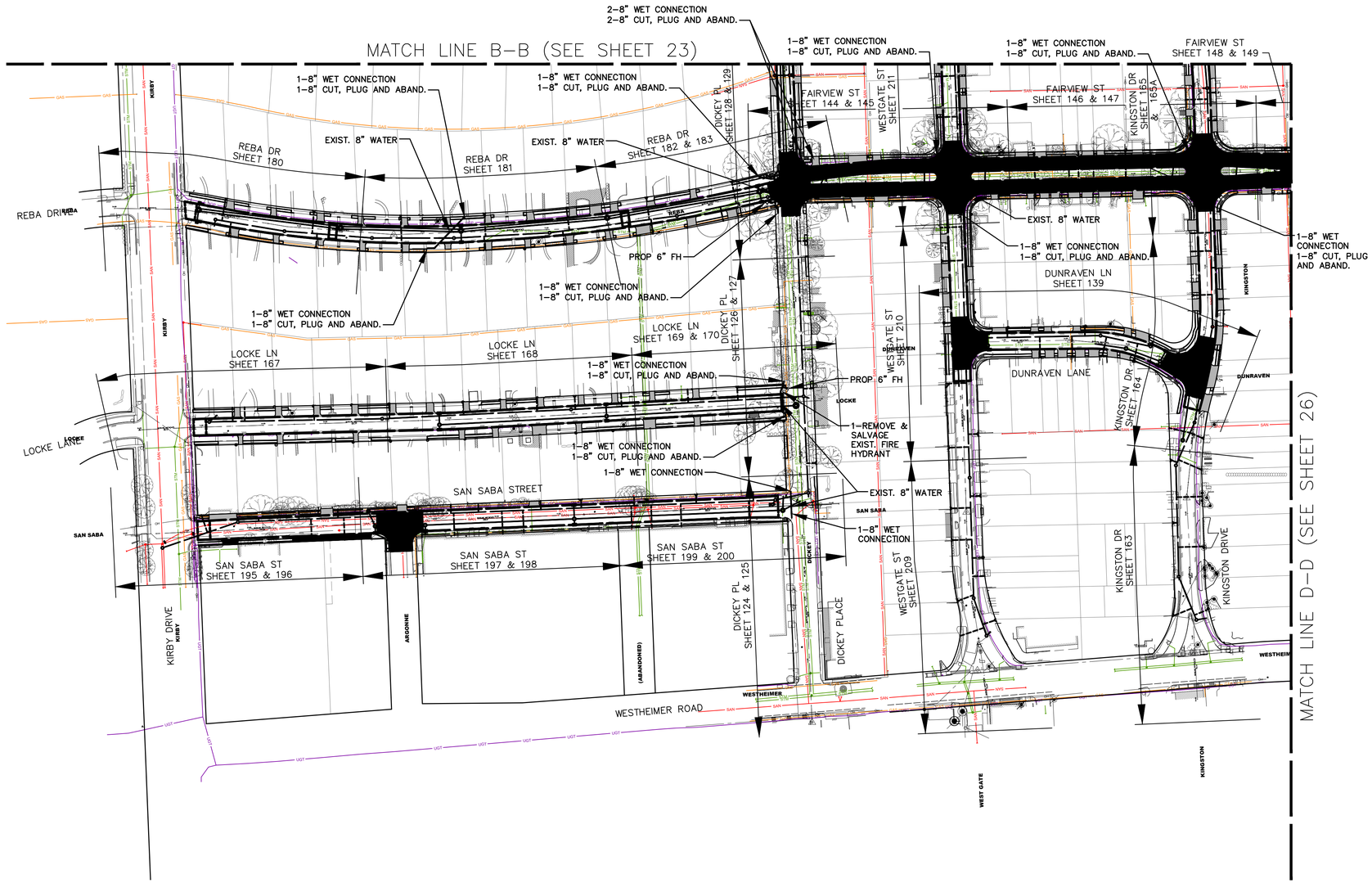

0 50 100 200

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

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LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED WATER OVERALL LAYOUT SHEET 3 OF 4

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **25** OF 391

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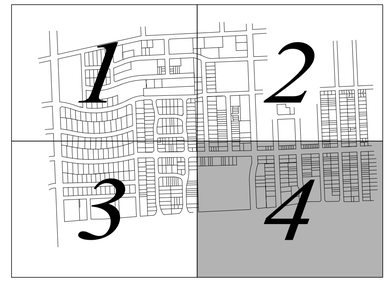
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



MATCH LINE C–C (SEE SHEET 24)

MATCH LINE D–D (SEE SHEET 25)

PERSA STREET
PERSA ST SHEET 177
FAIRVIEW ST SHEET 148 & 149
PECKHAM STREET
PECKHAM ST SHEET 176
FAIRVIEW ST SHEET 150 & 151
S. SHEPHERD DRIVE
HULDY ST SHEET 161
HULDY ST SHEET 162
HULDY STREET
FAIRVIEW ST SHEET 152
BURN ST SHEET 122
BURN ST SHEET 121
BURN STREET
FAIRVIEW ST SHEET 153
McDUFFIE STREET
FAIRVIEW ST SHEET 154
HAZARD ST SHEET 158
HAZARD ST SHEET 157
HAZARD STREET
DRISCOLL ST SHEET 135
DRISCOLL ST SHEET 134
DRISCOLL STREET
FAIRVIEW ST SHEET 155
FAIRVIEW ROAD
WESTHEIMER ROAD

1–8" WET CONNECTION
1–8" CUT, PLUG AND ABAND.
PROP. 8" WATER
PROP 6" FH
2–8" WET CONNECTION
2–8" CUT, PLUG AND ABAND.
1–REMOVE & SALVAGE EXIST. FIRE HYDRANT
EXIST. 8" WATER
1–8" X 8" T.S.&V W/ BOX

LEGEND

BRAZORIA ST SHEET 120 — PLAN AND PROFILE SHEET LOCATION

OTHON

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED WATER OVERALL LAYOUT SHEET 4 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **26** OF 391	

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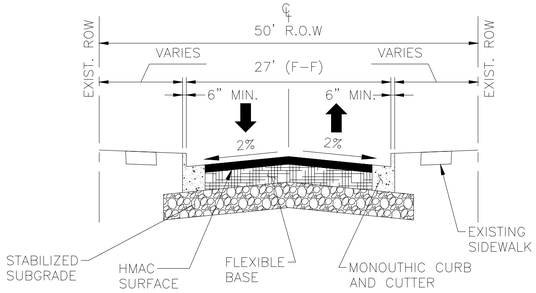
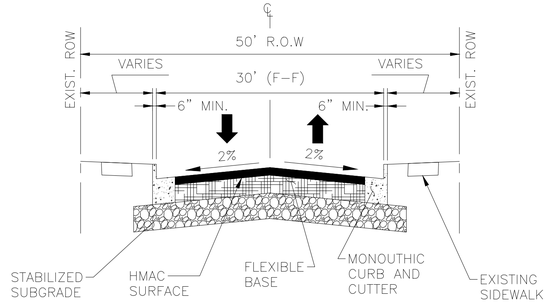


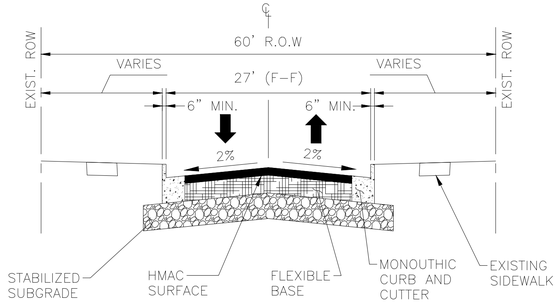
EXISTING TYPICAL SECTION

ARGONNE STREET (BEGINNING TO 3+15)
AVALON PLACE (13+00 TO 19+85)
BRAZORIA STREET
DEVONSHIRE STREET
DICKEY PLACE (8+65 TO END)
DUNRAVEN STREET
KINGSTON STREET
SALISBURY LANE
WESTGATE DRIVE



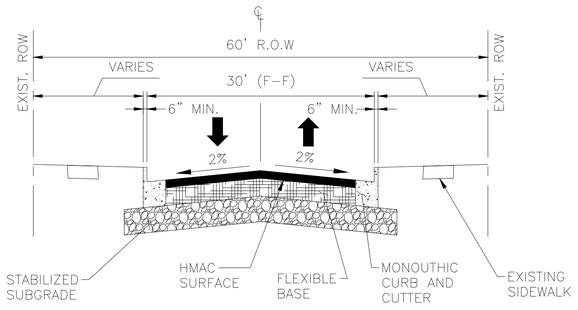
EXISTING TYPICAL SECTION

AVALON PLACE (21+30 TO 27+00)
DRISCOLL STREET
HAZARD STREET (2+75 TO END)
SAN SABA STREET (BEGINNING TO 4+05)



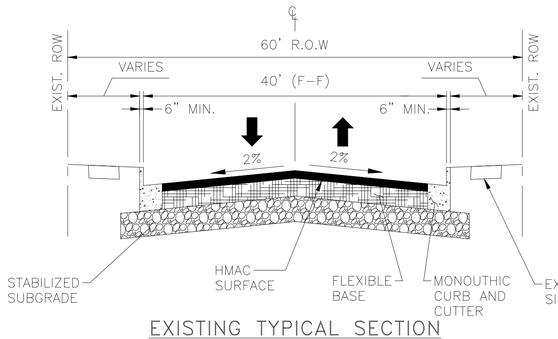
EXISTING TYPICAL SECTION

AVALON PLACE (BEGINNING TO 13+00)
ELLA LEE LANE
LOCKE LANE
PECKHAM STREET
REBA DRIVE
WELCH STREET (BEGINNING TO 3+30)



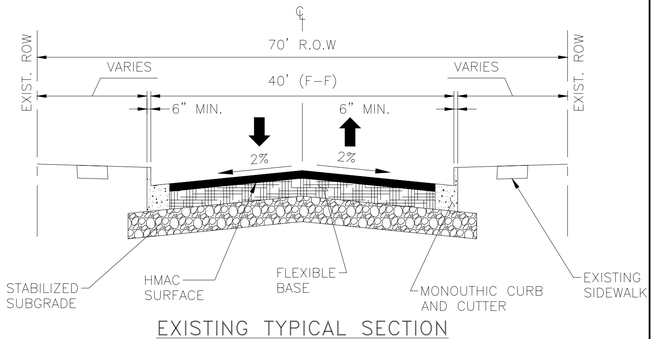
EXISTING TYPICAL SECTION

MIMOSA DRIVE (8+25 TO END)
SPANN STREET (BEGINNING TO 3+00)



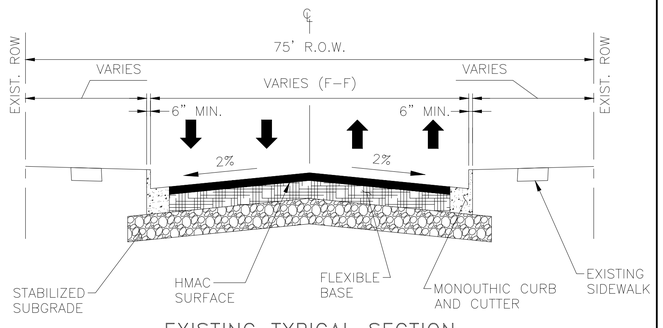
EXISTING TYPICAL SECTION

BRUN STREET
SAN FELIPE STREET



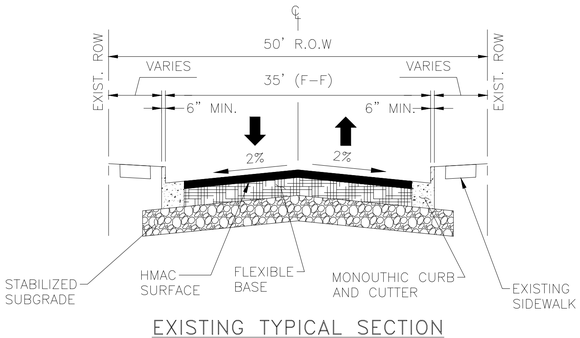
EXISTING TYPICAL SECTION

BRUN STREET



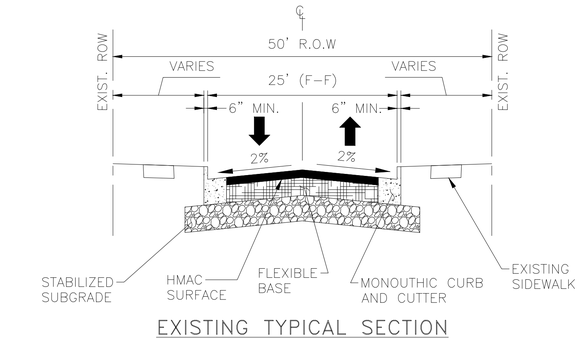
EXISTING TYPICAL SECTION

FAIRVIEW STREET (8+75 TO END)



EXISTING TYPICAL SECTION

REVERE STREET (BEGINNING TO 3+00)



EXISTING TYPICAL SECTION

REVERE STREET (3+00 TO END)

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

EXISTING TYPICAL SECTIONS – SHEET 1 OF 2

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1=10	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **27** OF 391	

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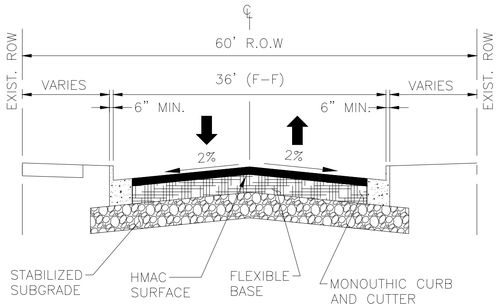
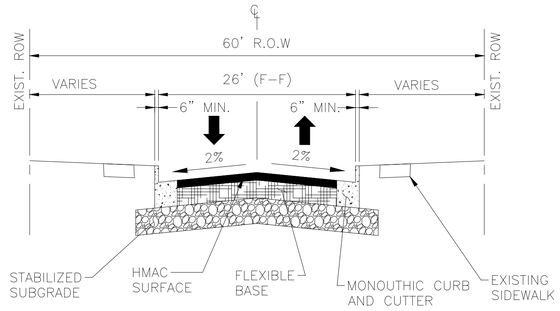
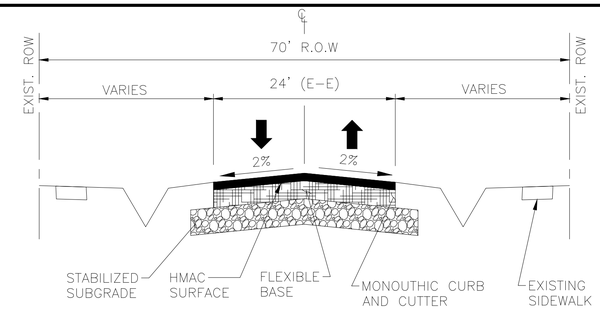


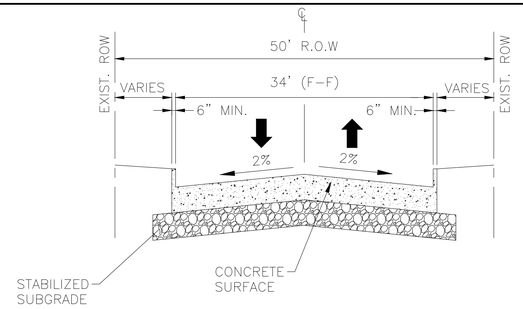
EXISTING TYPICAL SECTION
SPANN STREET (3+00 TO END)



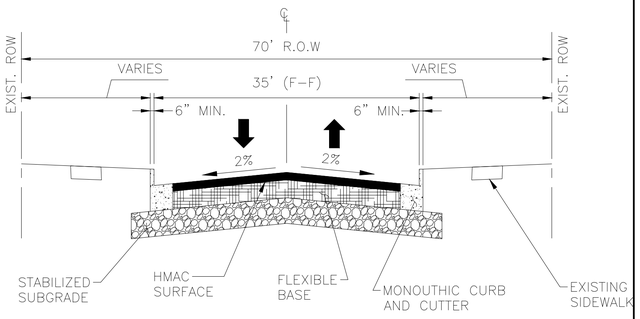
EXISTING TYPICAL SECTION
WELCH STREET (4+30 TO 18+10)



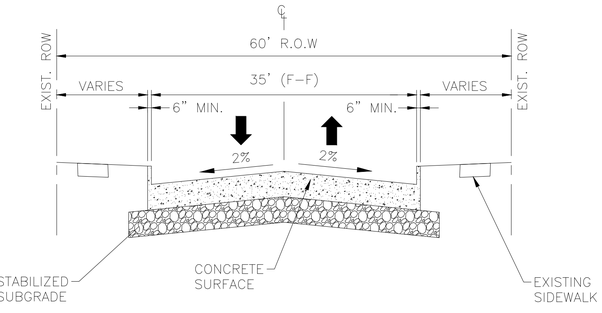
EXISTING TYPICAL SECTION
HULDY STREET (2+75 TO 7+50)



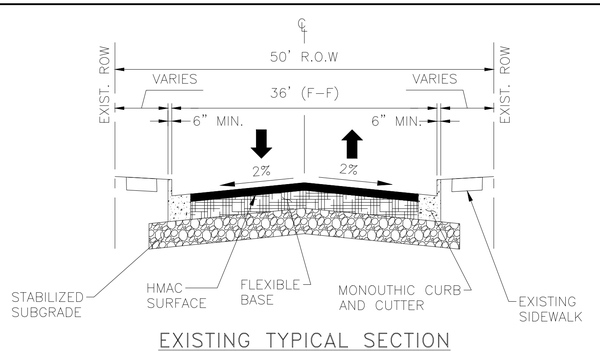
EXISTING TYPICAL SECTION
DICKEY PLACE (BEGINNING TO 3+50)
SAN SABA STREET (4+05 TO END)



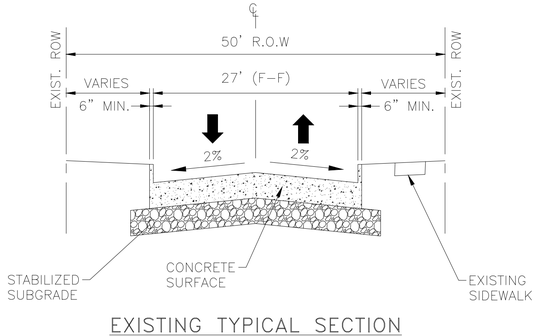
EXISTING TYPICAL SECTION
HULDY STREET 1+00



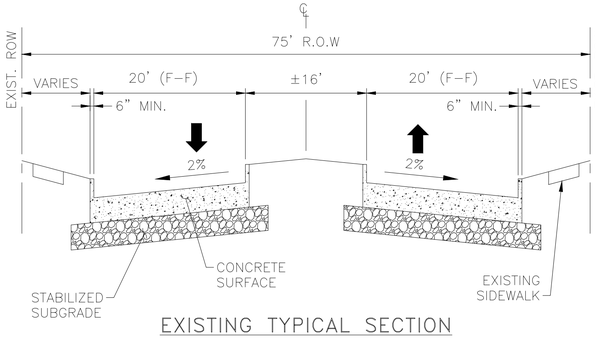
EXISTING TYPICAL SECTION
MIMOSA DRIVE (BEGINNING TO 8+00)



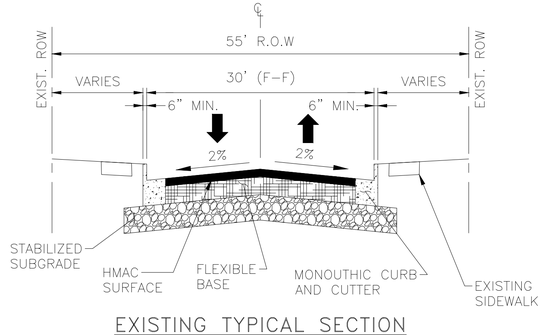
EXISTING TYPICAL SECTION
ARGONNE STREET (4+85 TO END)



EXISTING TYPICAL SECTION
DICKEY PLACE (3+50 TO 8+65)



EXISTING TYPICAL SECTION
FAIRVIEW STREET (BEGINNING TO 8+75)



EXISTING TYPICAL SECTION
HAZARD STREET (BEGINNING TO 2+75)

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

EXISTING TYPICAL SECTIONS – SHEET 2 OF 2

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1=10	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **28** OF 391	

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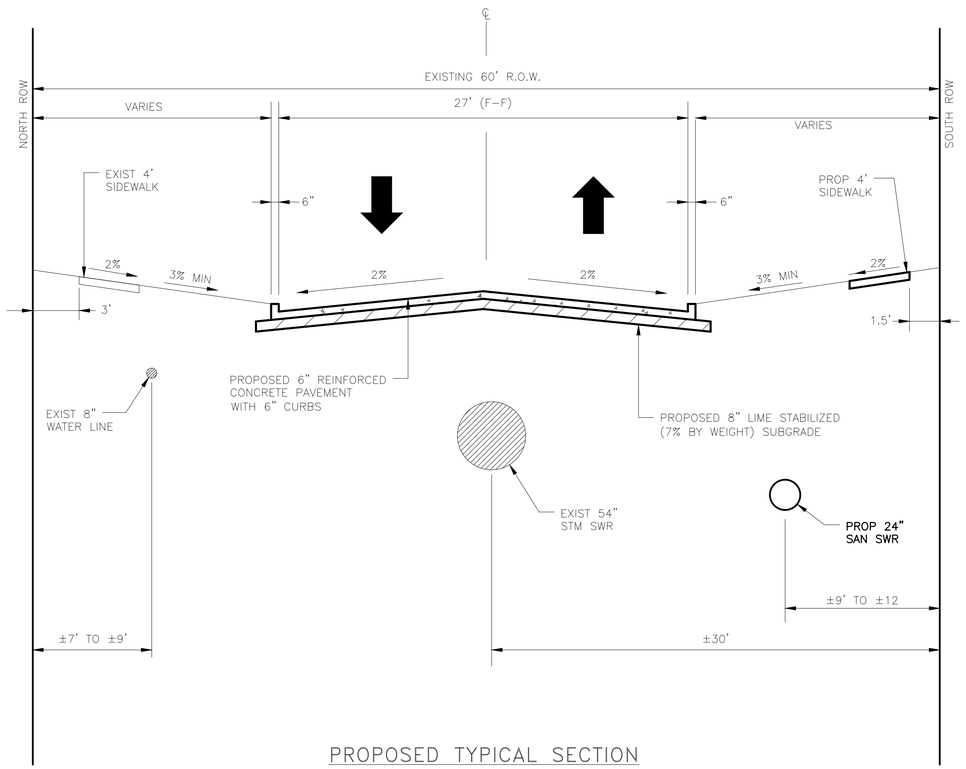
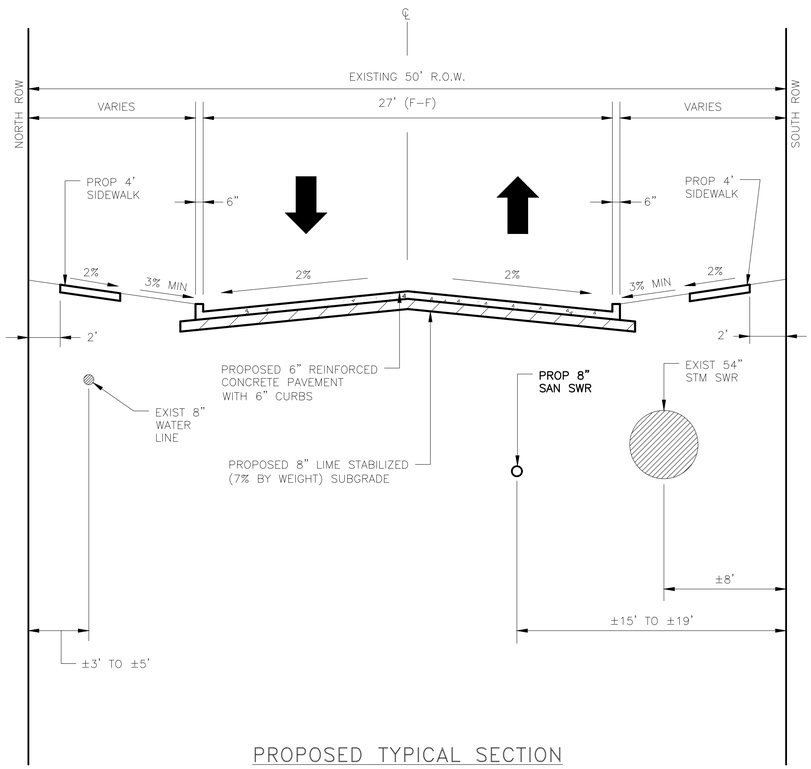
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING EAST)
AVALON PLACE (SHEET 112)
STA 7+00



PROPOSED TYPICAL SECTION
(LOOKING EAST)
AVALON PLACE (SHEET 116)
STA 16+00

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 1 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **29** OF 391	

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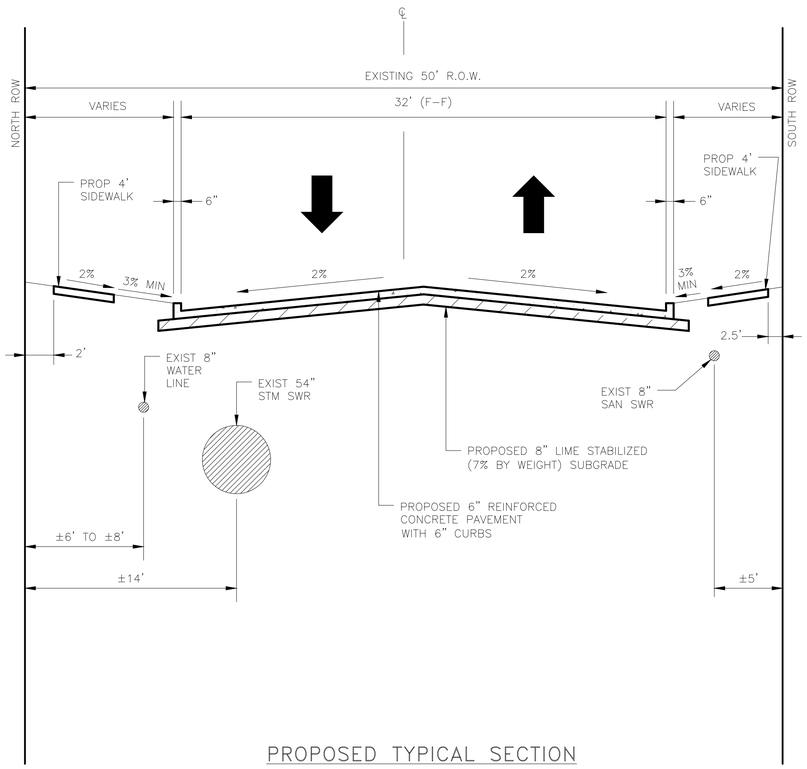
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

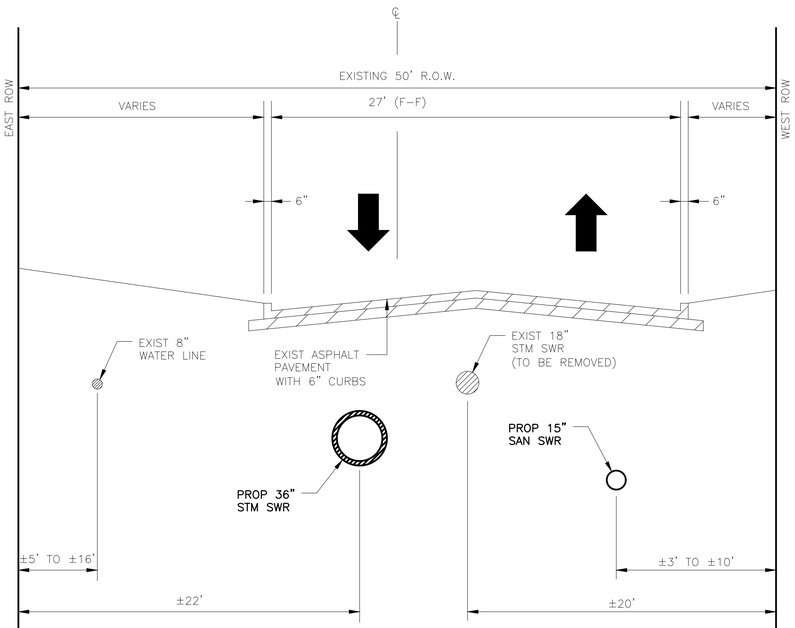


PROPOSED TYPICAL SECTION

(LOOKING EAST)

AVALON PLACE (SHEET 119)

STA 25+00



PROPOSED TYPICAL SECTION

(LOOKING SOUTH)

ARGONNE STREET (SHEET 108)

STA 2+50

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CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 2 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **30** OF 391	

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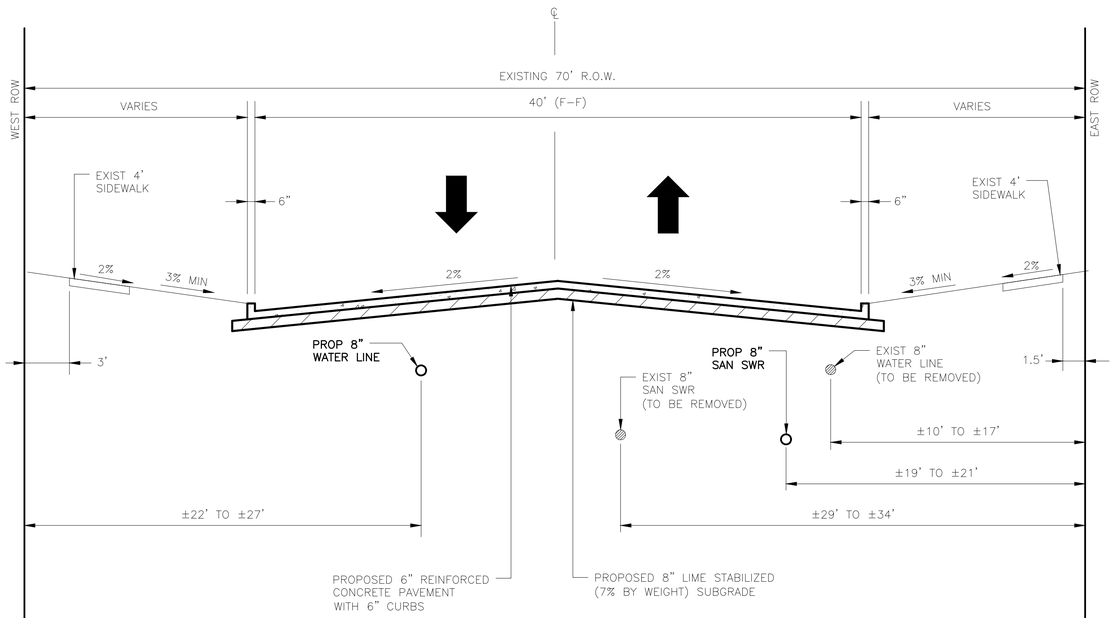
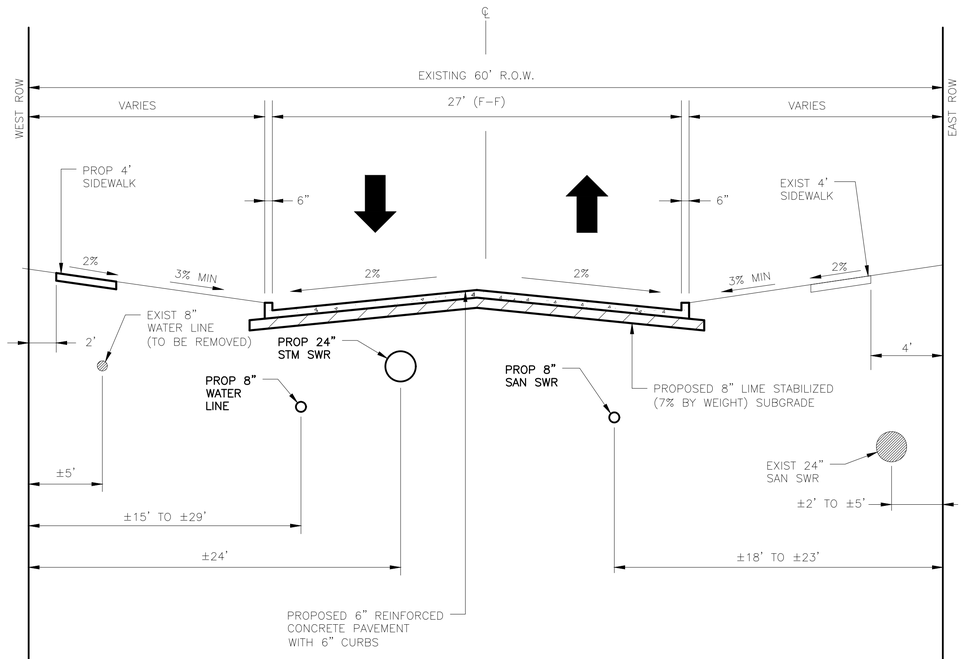


PROPOSED TYPICAL SECTION
(LOOKING NORTH)
BRUN STREET (SHEET 122)
STA 5+25



PROPOSED TYPICAL SECTION
(LOOKING NORTH)
BRUN STREET (SHEET 121)
STA 1+45

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 3 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **31** OF 391	

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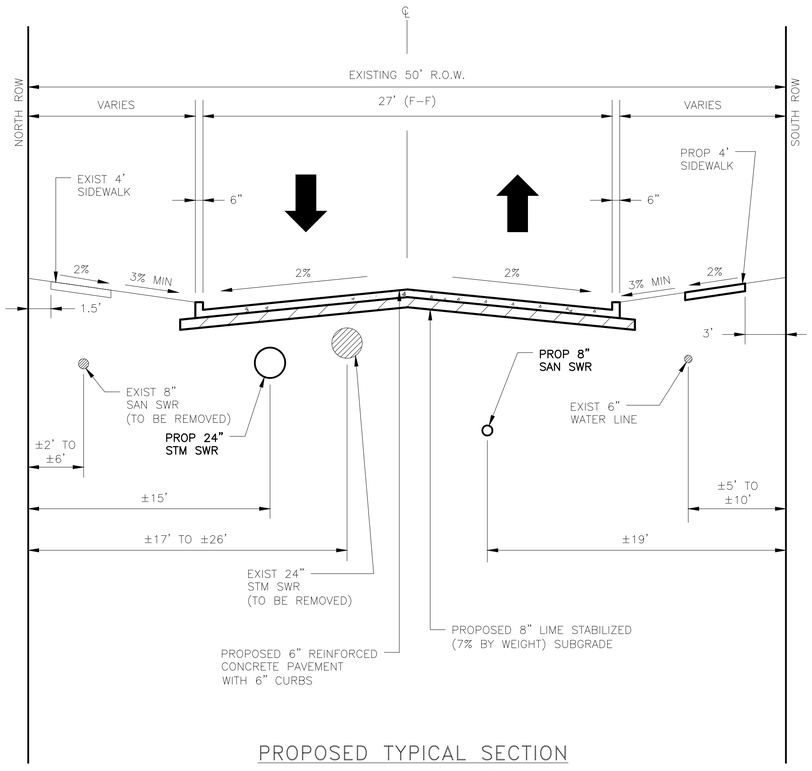
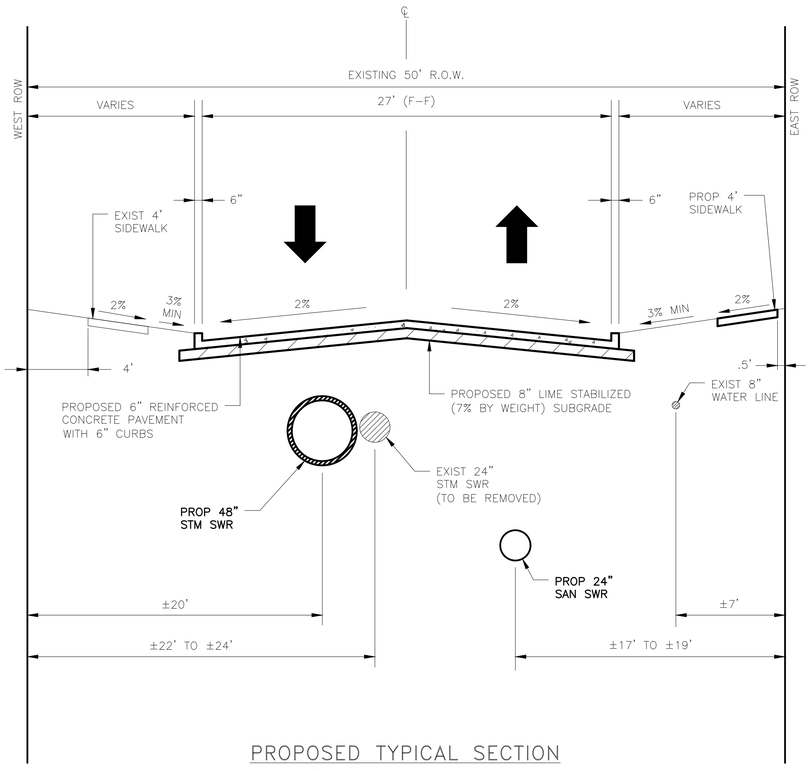
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING EAST)
DEVONSHIRE LANE (SHEET 123)
STA. 1+70



PROPOSED TYPICAL SECTION
(LOOKING NORTH)
DICKEY PLACE (SHEET 128)
STA 10+00

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 4 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **32** OF 391	

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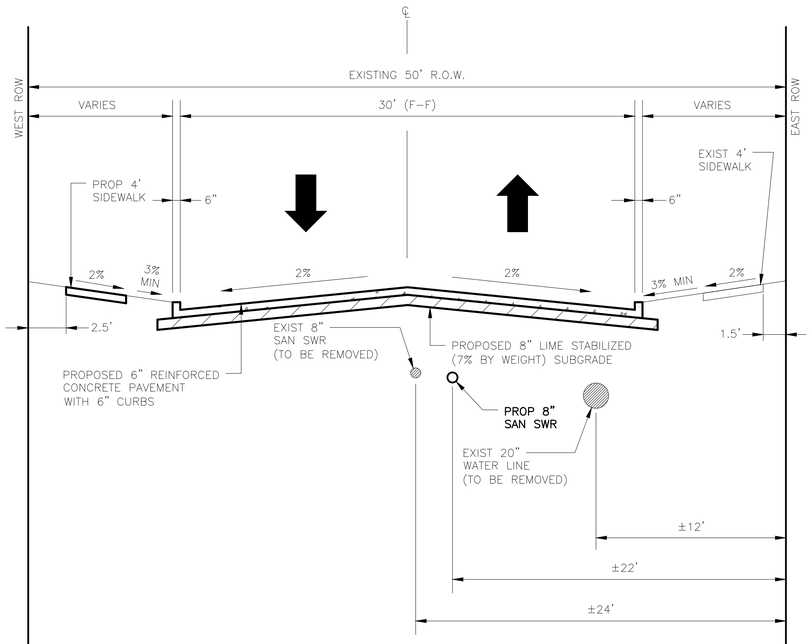
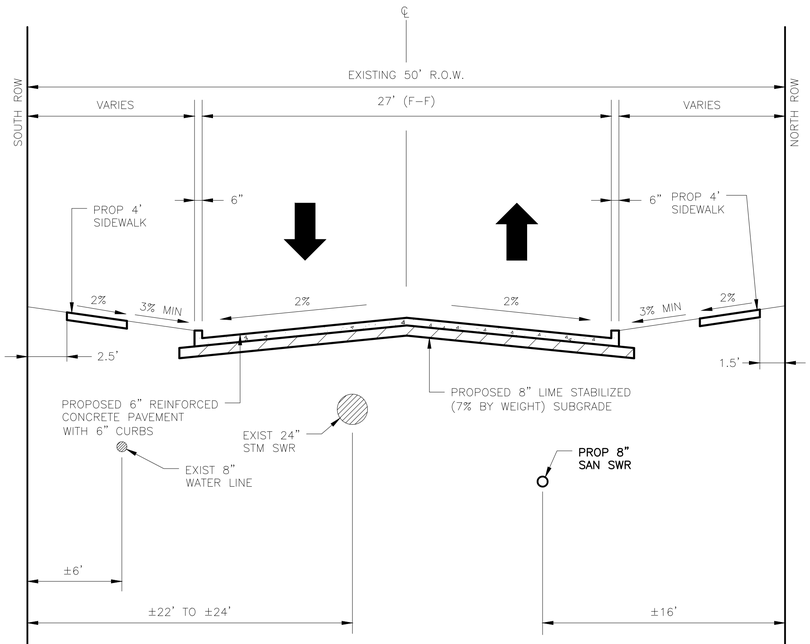
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING NORTH)
DRISCOLL STREET (SHEET 135)
STA 6+25



PROPOSED TYPICAL SECTION
(LOOKING WEST)
DUNRAVEN STREET (SHEET 139)
STA 1+25

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SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 5 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **33** OF 391

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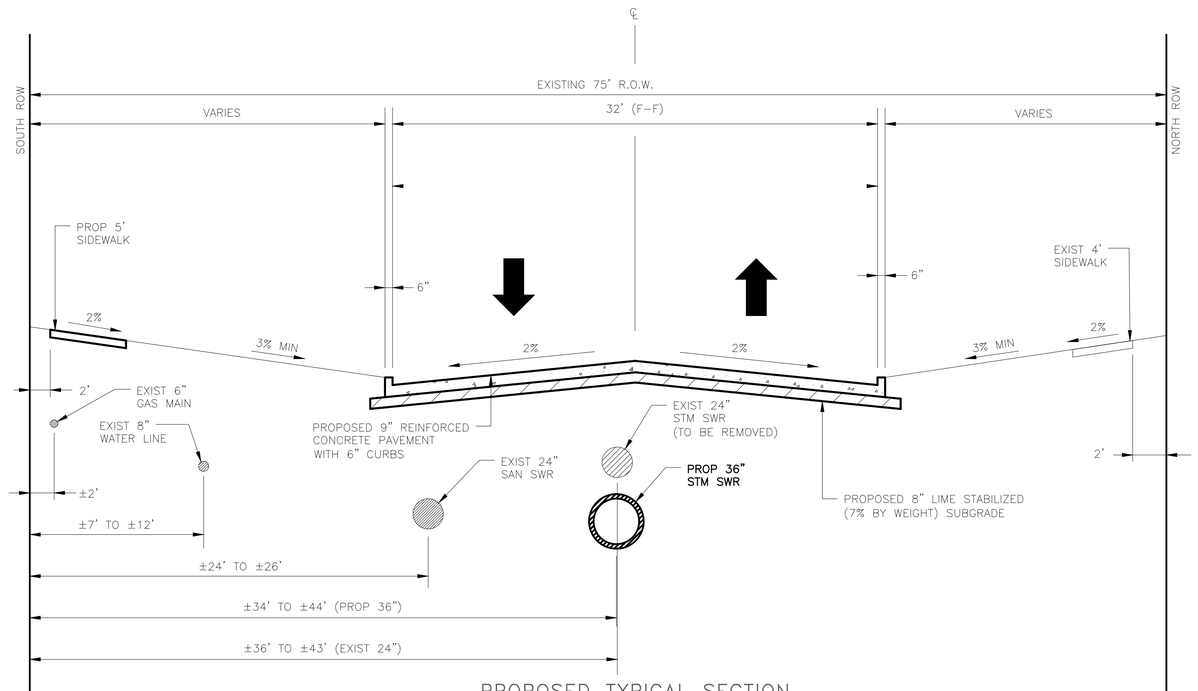
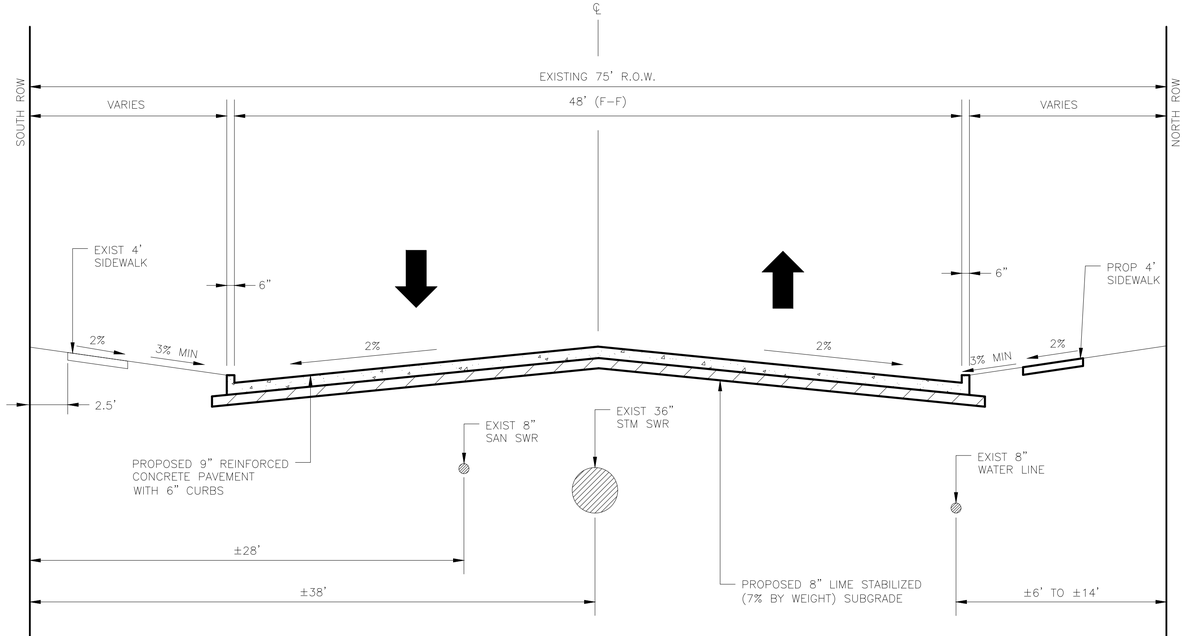


PROPOSED TYPICAL SECTION
(LOOKING WEST)
FAIRVIEW STREET (SHEET 152)
STA 17+00



PROPOSED TYPICAL SECTION
(LOOKING WEST)
FAIRVIEW STREET (SHEET 154)
STA 28+00

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
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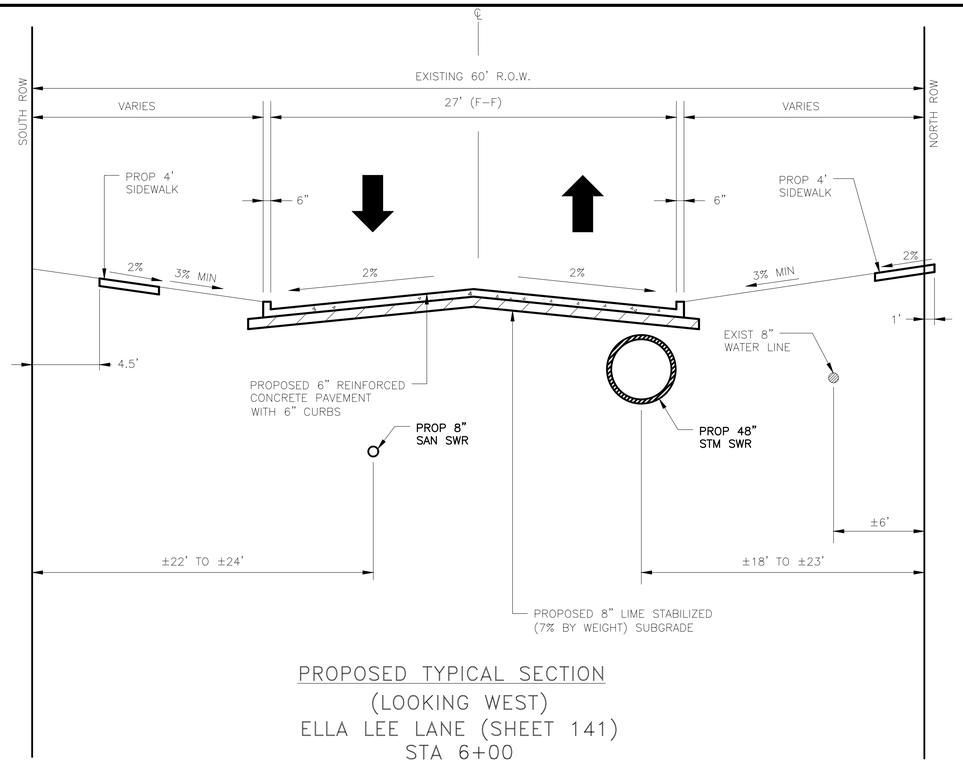
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

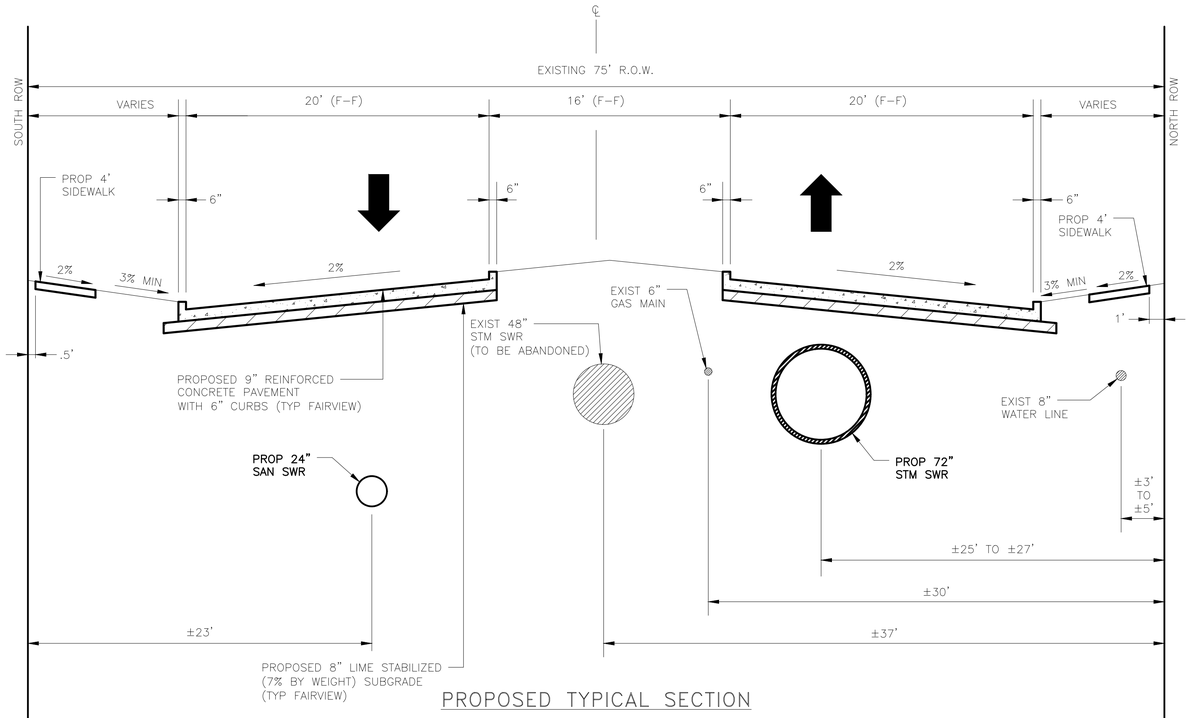
PROPOSED TYPICAL SECTIONS – SHEET 7 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **35** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms224371\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 7 May 21 , 2026 - 2:23PM jgarza



PROPOSED TYPICAL SECTION
(LOOKING WEST)
ELLA LEE LANE (SHEET 141)
STA 6+00



PROPOSED TYPICAL SECTION
(LOOKING WEST)
FAIRVIEW STREET (SHEET 146)
STA 5+75

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

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HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

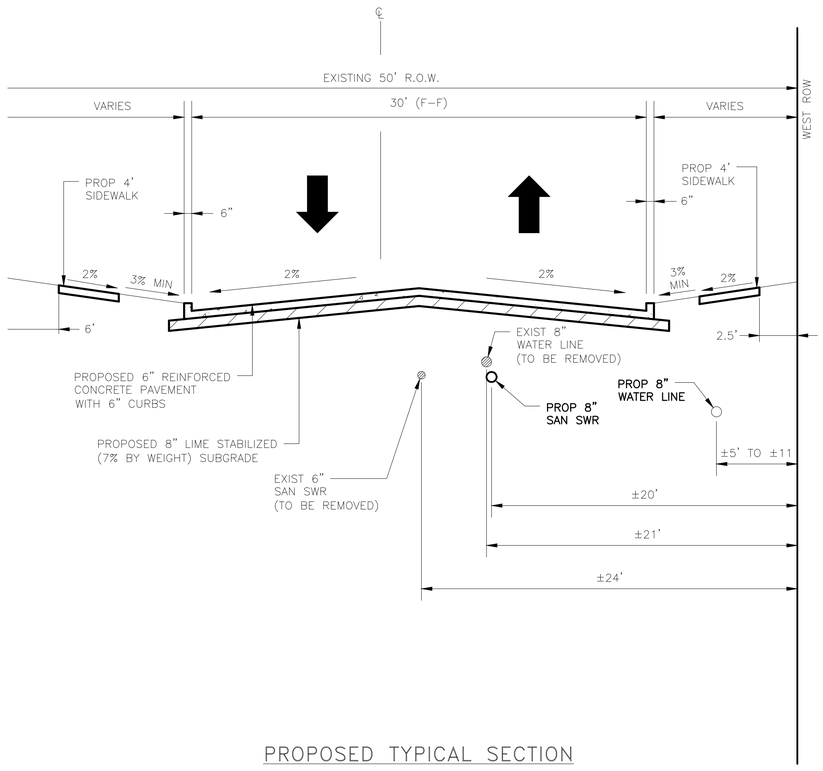
PROPOSED TYPICAL SECTIONS – SHEET 6 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 34 OF 391

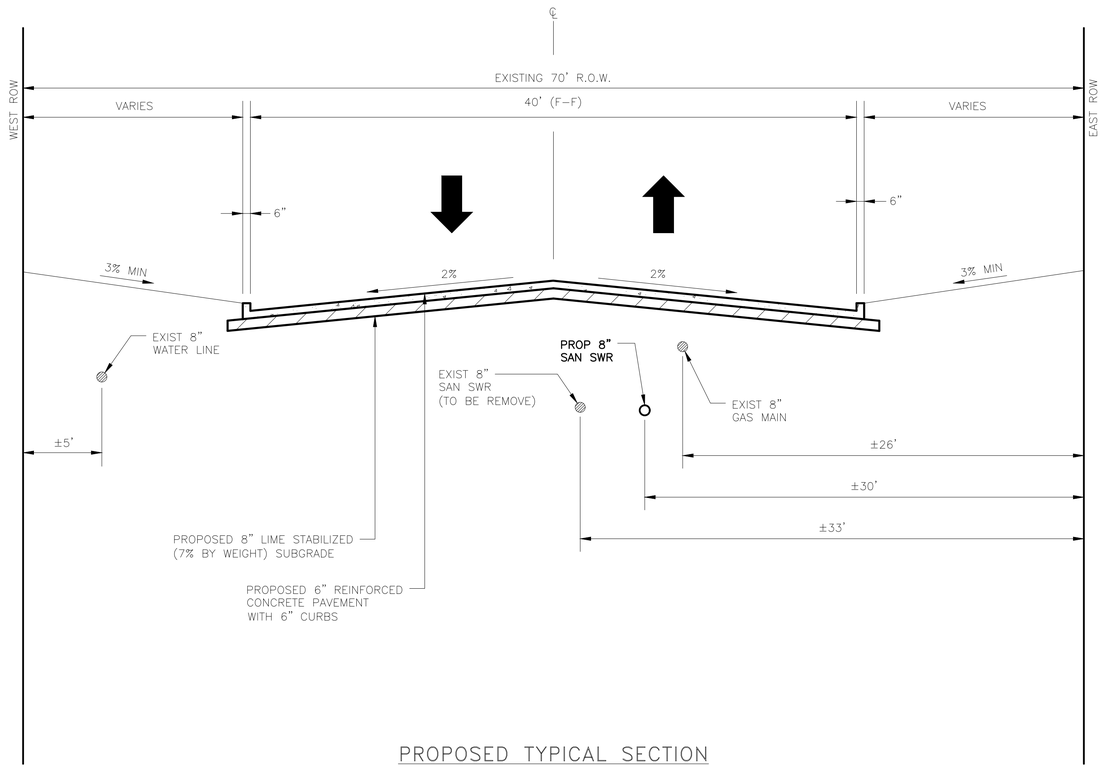
C:\pw_working\othon-pw-01\jason.garza\dms224371\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 6 May 21 , 2026 - 2:28PM jgarza

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
HAZARD STREET (SHEET 159)
STA 9+40



PROPOSED TYPICAL SECTION
(LOOKING NORTH)
HULDY STREET (SHEET 161)
STA 3+00

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HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

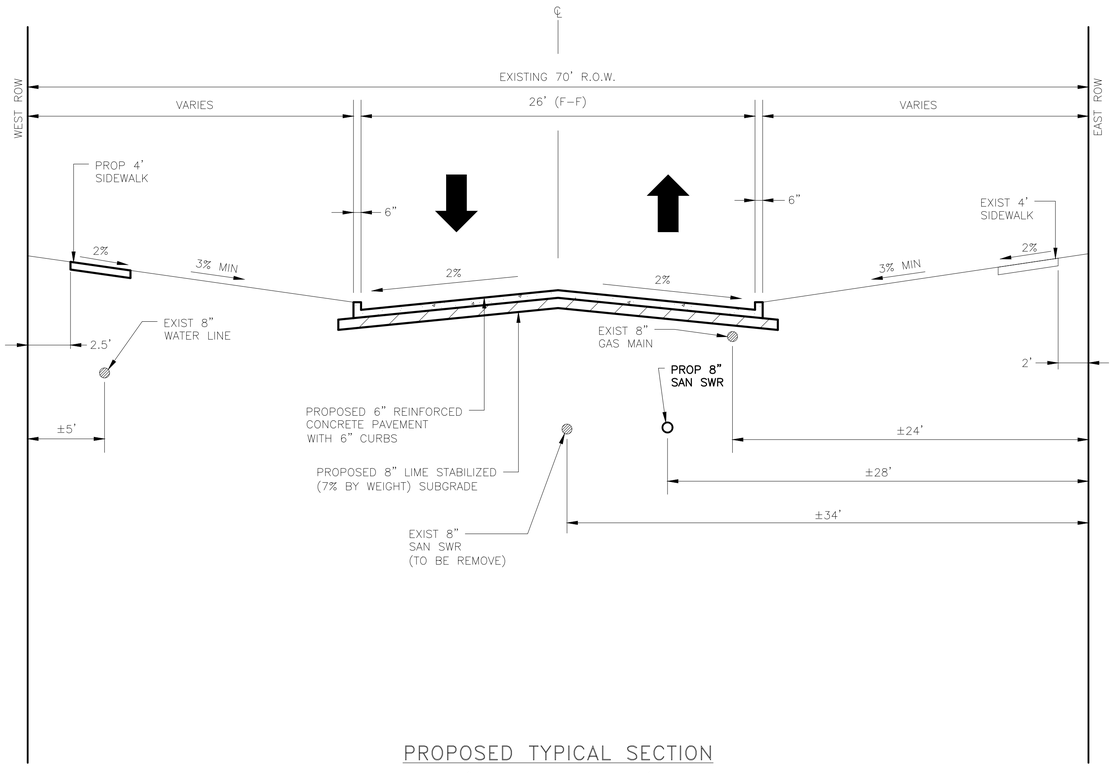
PROPOSED TYPICAL SECTIONS – SHEET 8 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **36** OF 391

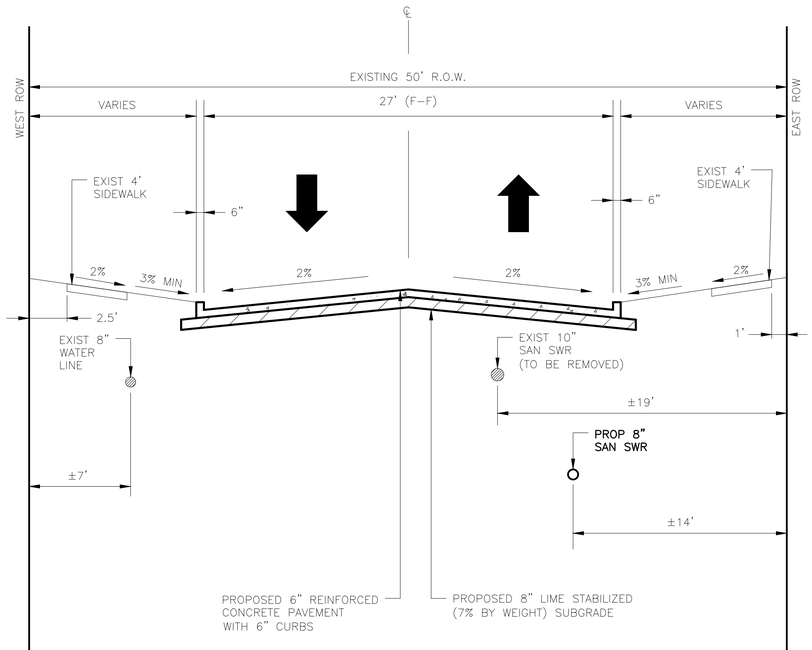
C:\pw_working\othon-pw-01\jason.garza\dms22437\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 8 May 21 , 2026 - 2:33PM jgarza

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
HULDY STREET (SHEET 162)
STA 6+25



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
KINGSTON DRIVE (SHEET ###)
STA 9+75

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FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

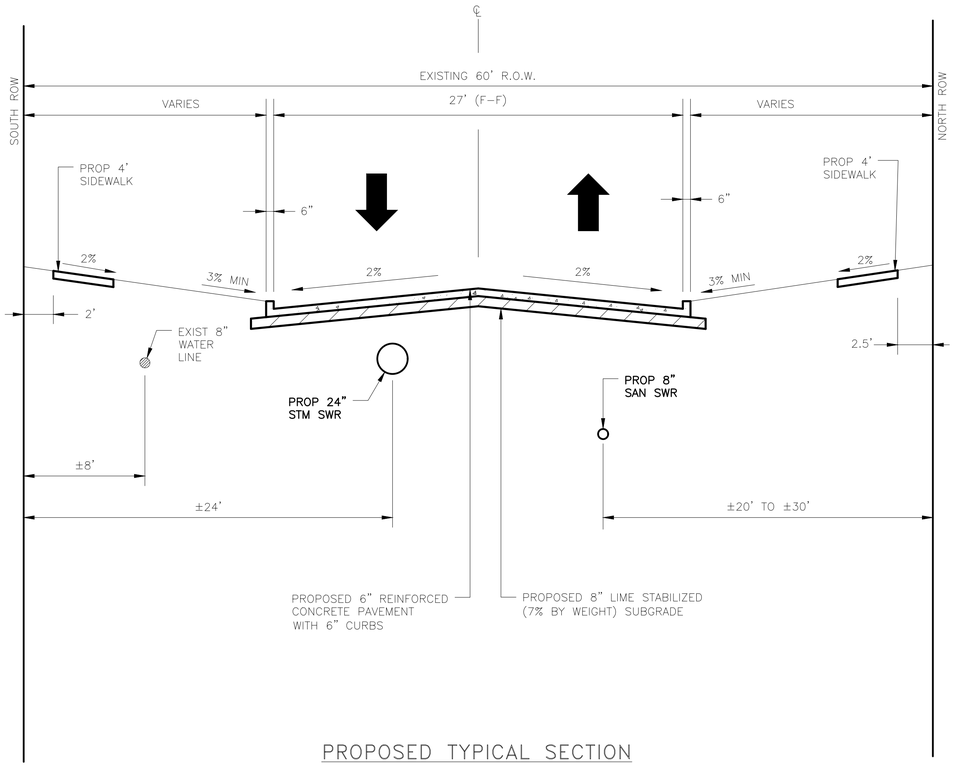
PROPOSED TYPICAL SECTIONS – SHEET 9 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **37** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 9 May 21 , 2026 - 2:38PM jgarza

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

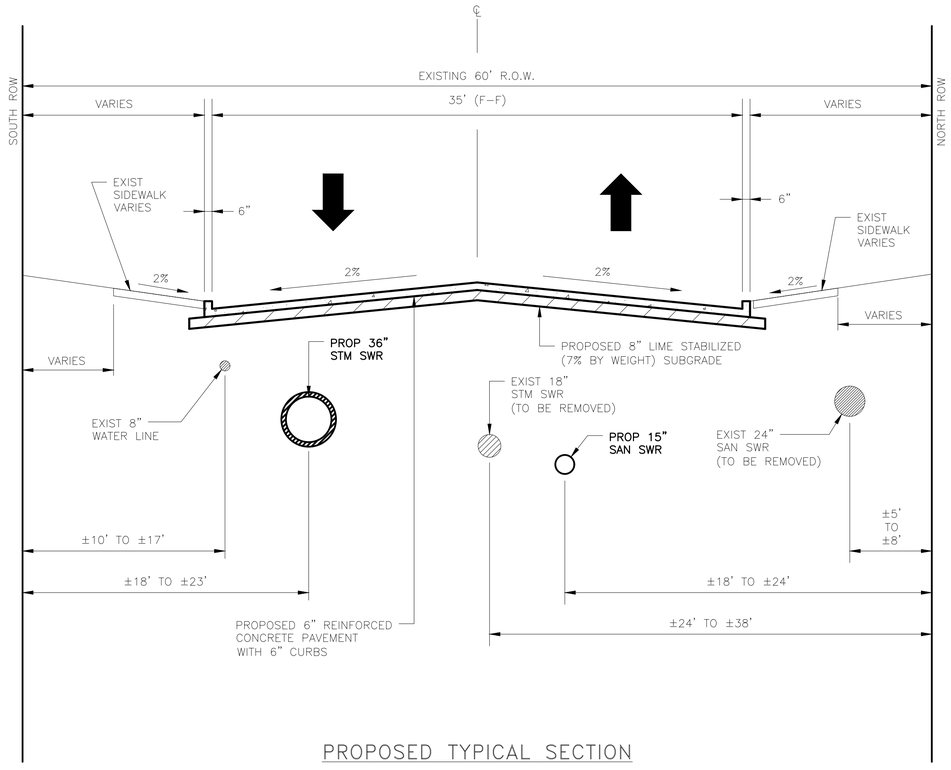


PROPOSED TYPICAL SECTION

(LOOKING WEST)

LOCKE LANE (SHEET 168)

STA 6+80



PROPOSED TYPICAL SECTION

(LOOKING WEST)

MIMOSA DRIVE (SHEET 172)

STA 5+50

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 10 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **38** OF 391	

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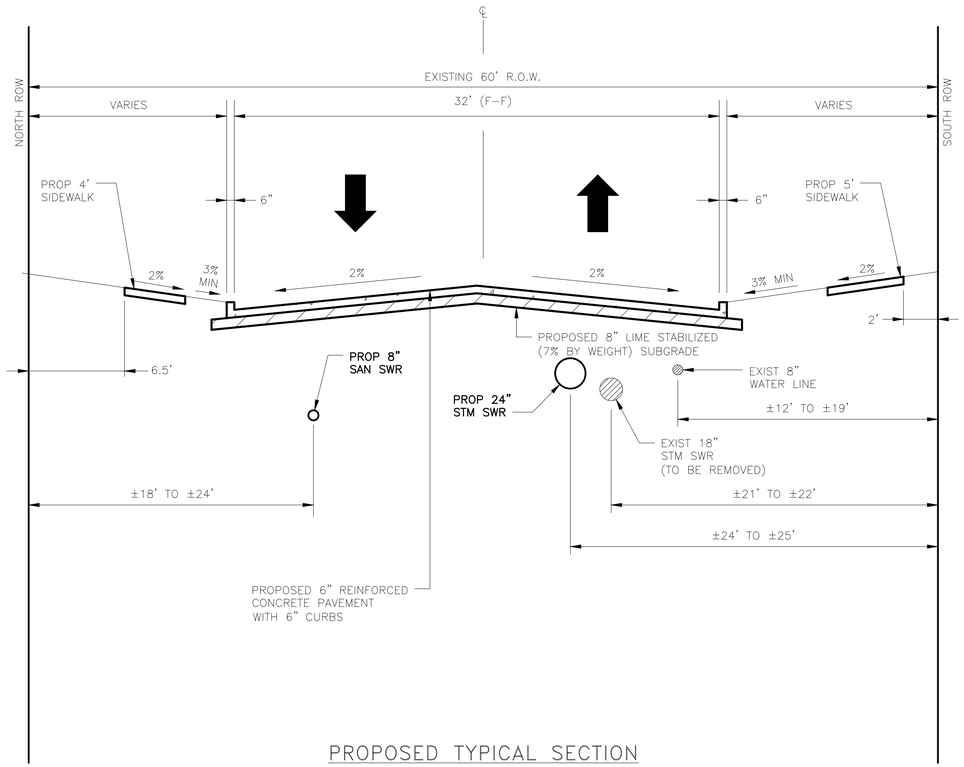
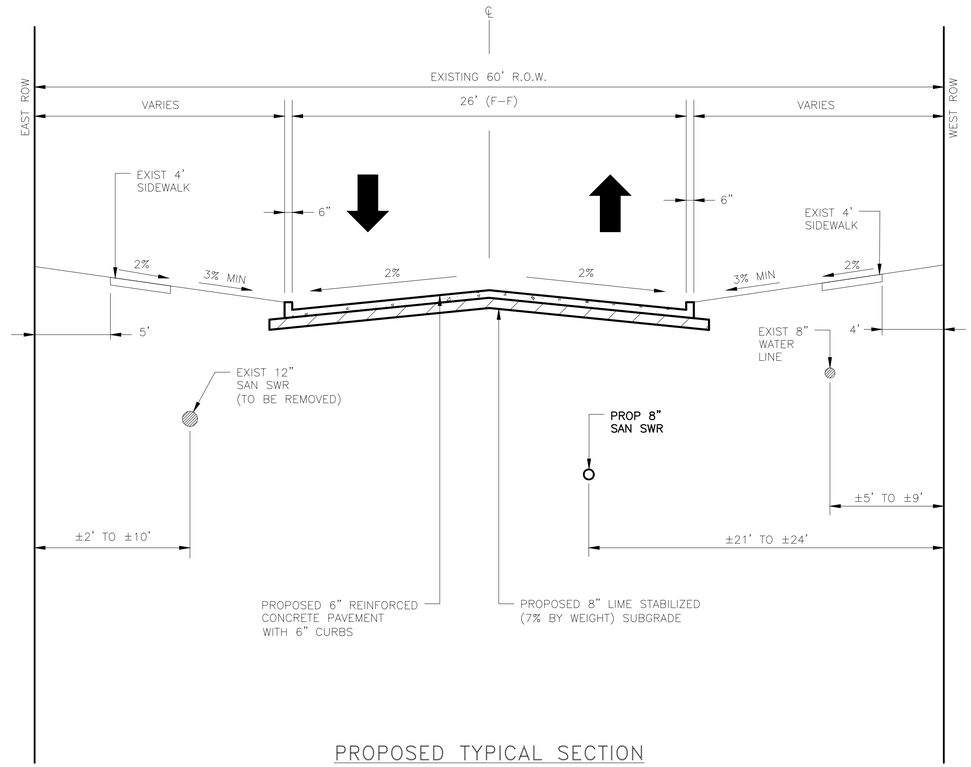
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING EAST)
MIMOSA DRIVE (SHEET 173)
STA 10+72



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
PERSA STREET (SHEET 177)
STA 4+00

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 11 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **39** OF 391

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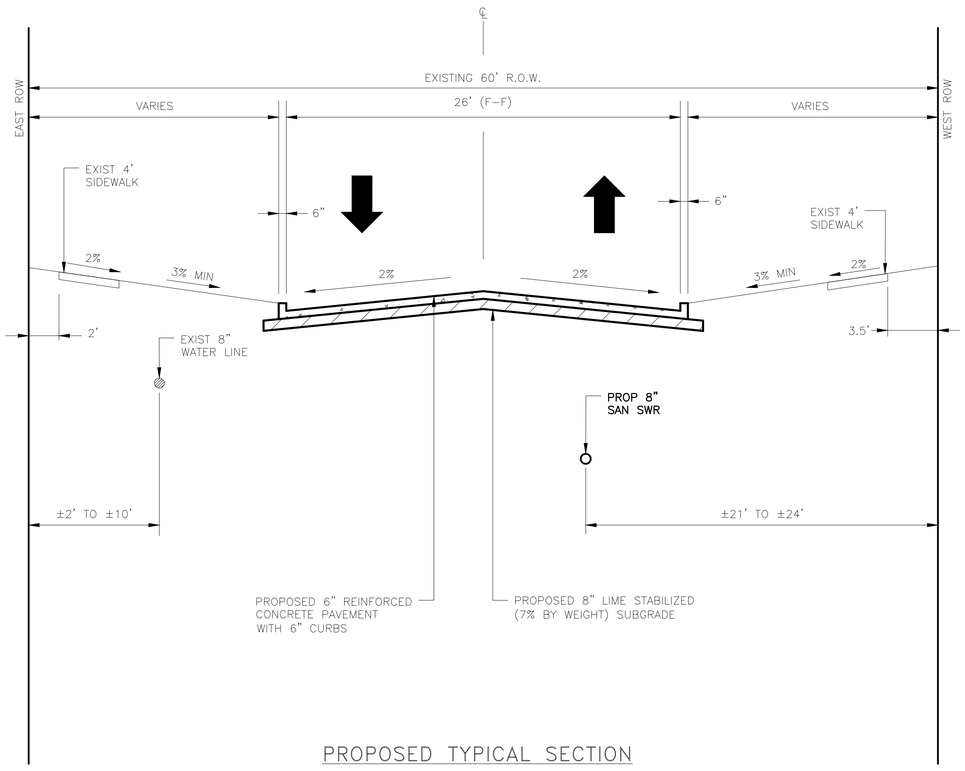
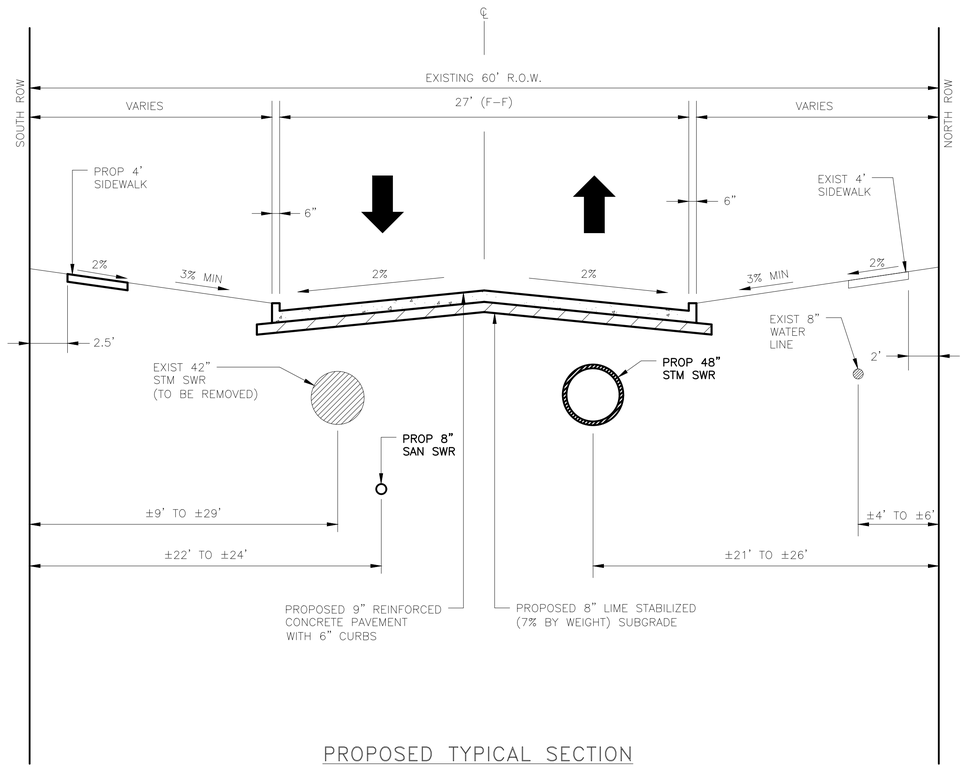
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
PECKHAM STREET (SHEET 175)
STA 4+00



PROPOSED TYPICAL SECTION
(LOOKING WEST)
REBA DRIVE (SHEET 182)
STA 9+75

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 12 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **40** OF 391

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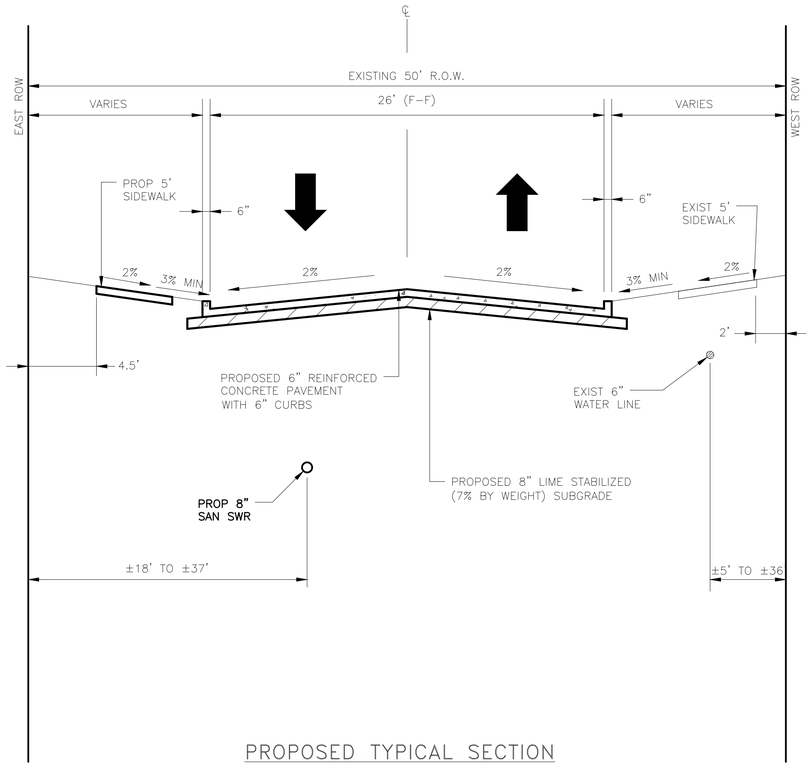
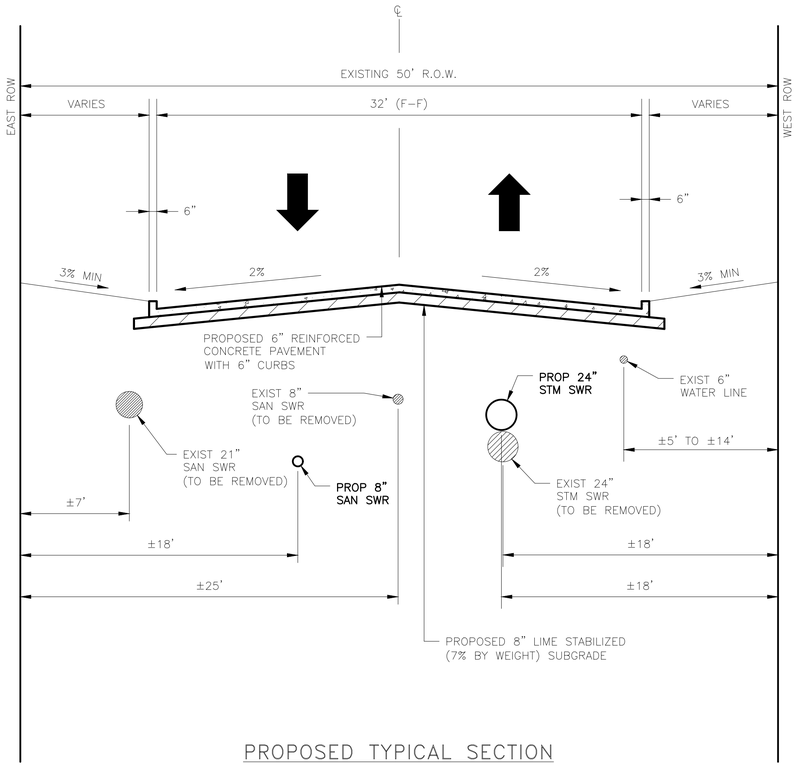
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION

(LOOKING SOUTH)
REVERE STREET (SHEET 186)
STA 4+15



PROPOSED TYPICAL SECTION

(LOOKING SOUTH)
REVERE STREET (SHEET 184)
STA 2+20

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07/29/2026

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

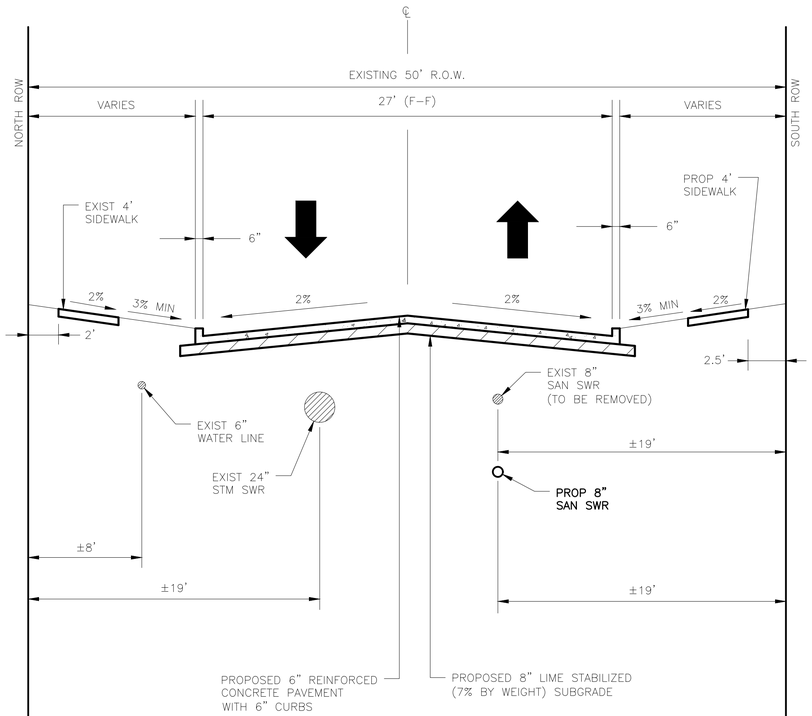
PROPOSED TYPICAL SECTIONS – SHEET 13 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **41** OF 391

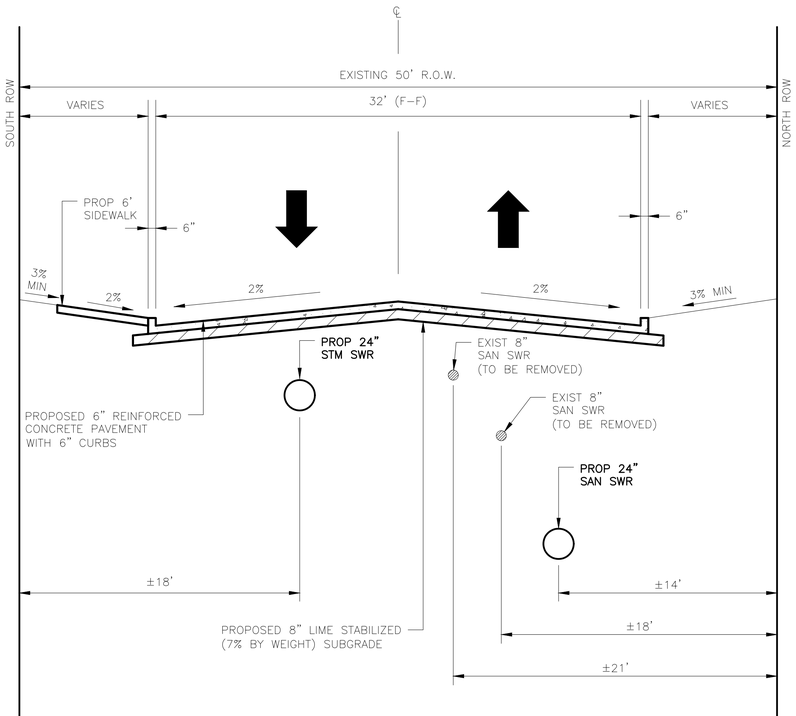
C:\pw_working\othon-pw-01\jason.garza\dms22437\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 13 May 21 , 2026 – 3:01PM Jgarza

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING EAST)
SALISBURY LANE (SHEET 187)
STA 2+00



PROPOSED TYPICAL SECTION
(LOOKING WEST)
SAN SABA STREET (SHEET 199)
STA 9+50

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07/29/2026

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 14 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **42** OF 391	

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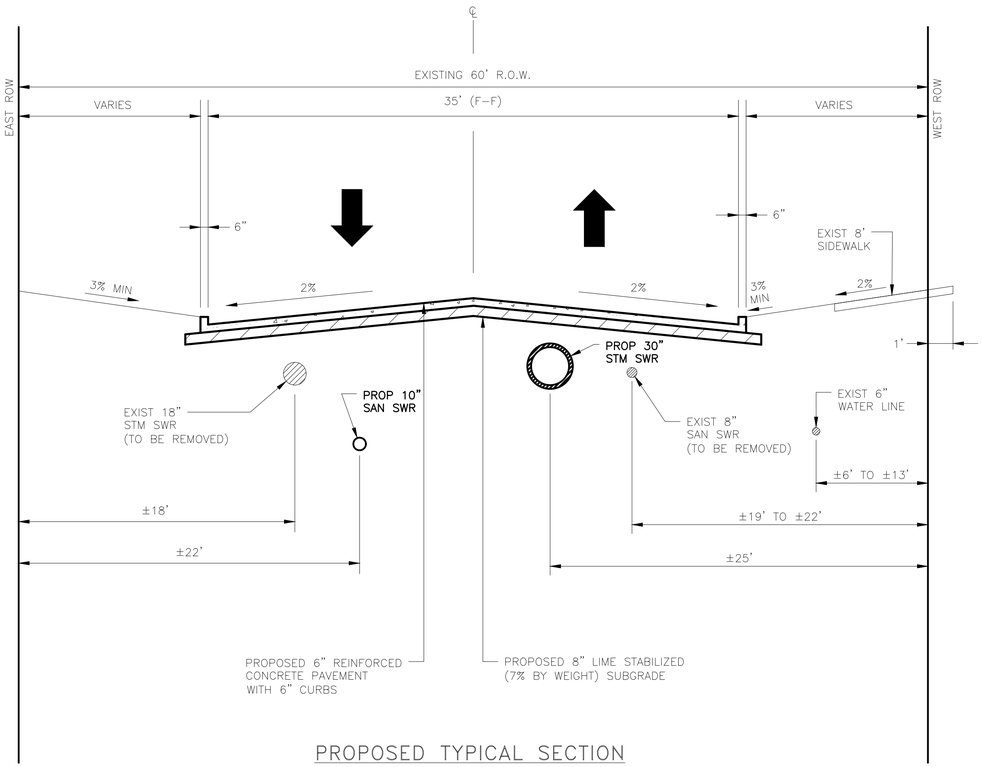
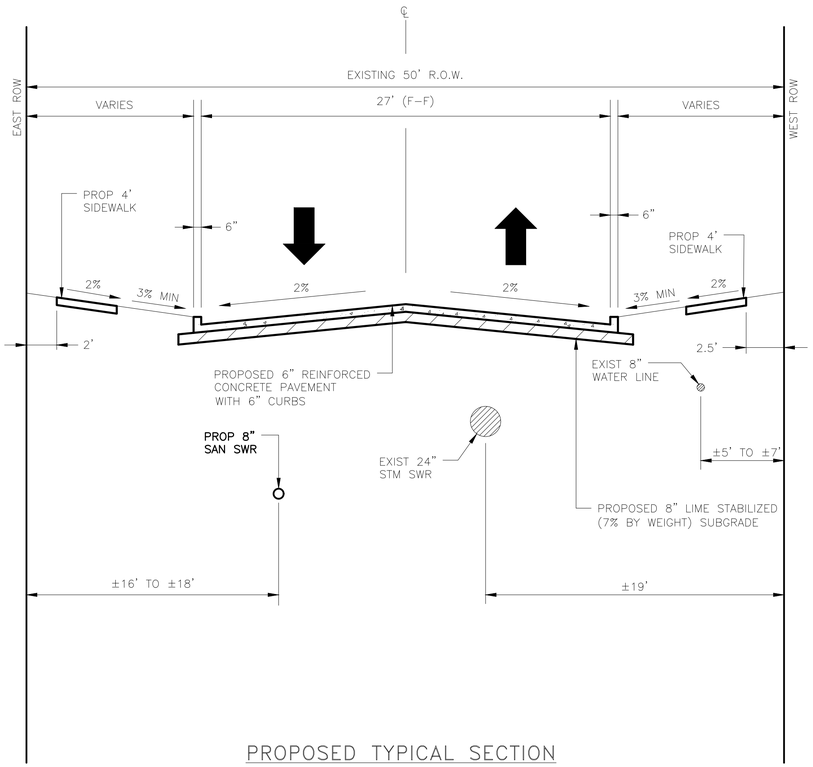
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
SPANN STREET (SHEET 201)
STA 3+50



PROPOSED TYPICAL SECTION
(LOOKING SOUTH)
WESTGATE STREET (SHEET 211)
STA 9+50

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143557
LICENSED ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

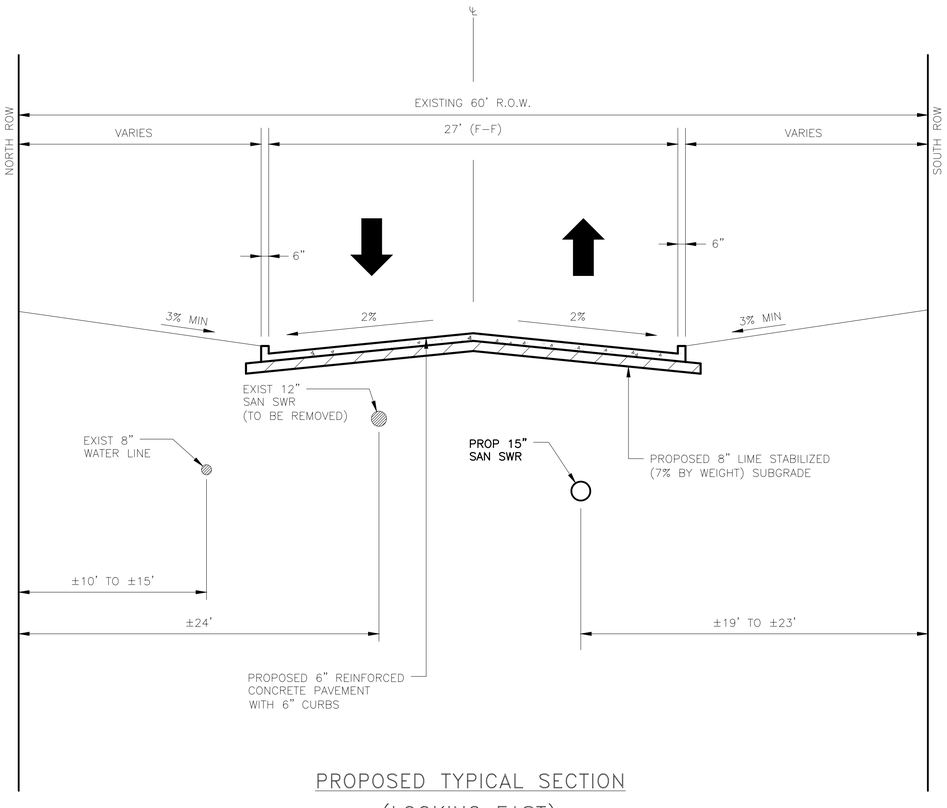
PROPOSED TYPICAL SECTIONS – SHEET 15 OF 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 5'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **43** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 15 May 21 , 2026 - 3:11PM Jgarza

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

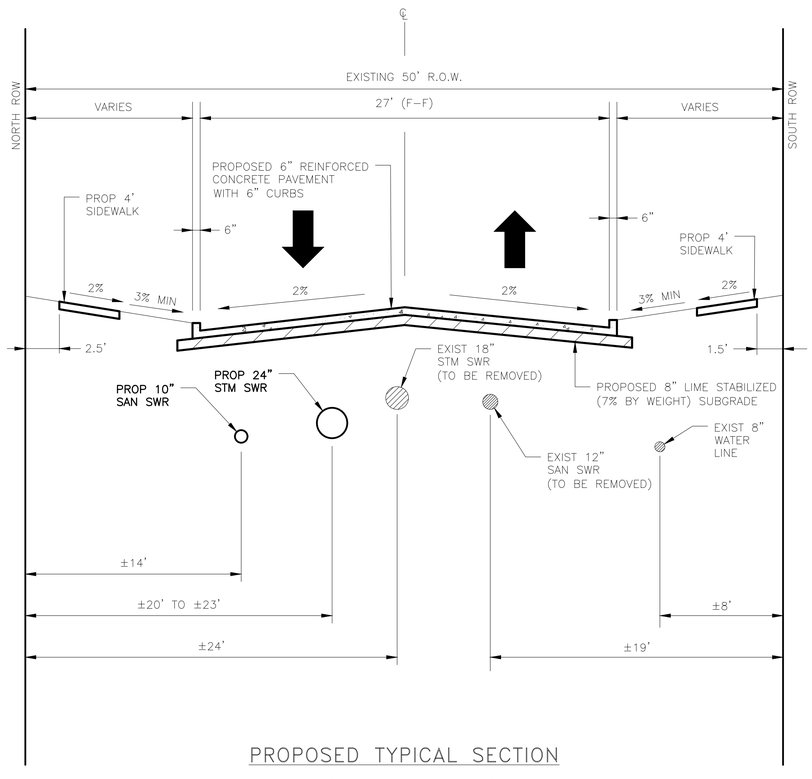


PROPOSED TYPICAL SECTION

(LOOKING EAST)

WELCH STREET (SHEET 204)

STA 5+50



PROPOSED TYPICAL SECTION

(LOOKING EAST)

WELCH STREET (SHEET 206)

STA 13+85

OTHON

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07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED TYPICAL SECTIONS – SHEET 16 OF 16

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 5'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **44** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms224371\29-44_PROPOSED TYPICAL SECTIONS.dwgSHEET 16 May 21 , 2026 – 3:17PM Jgarza

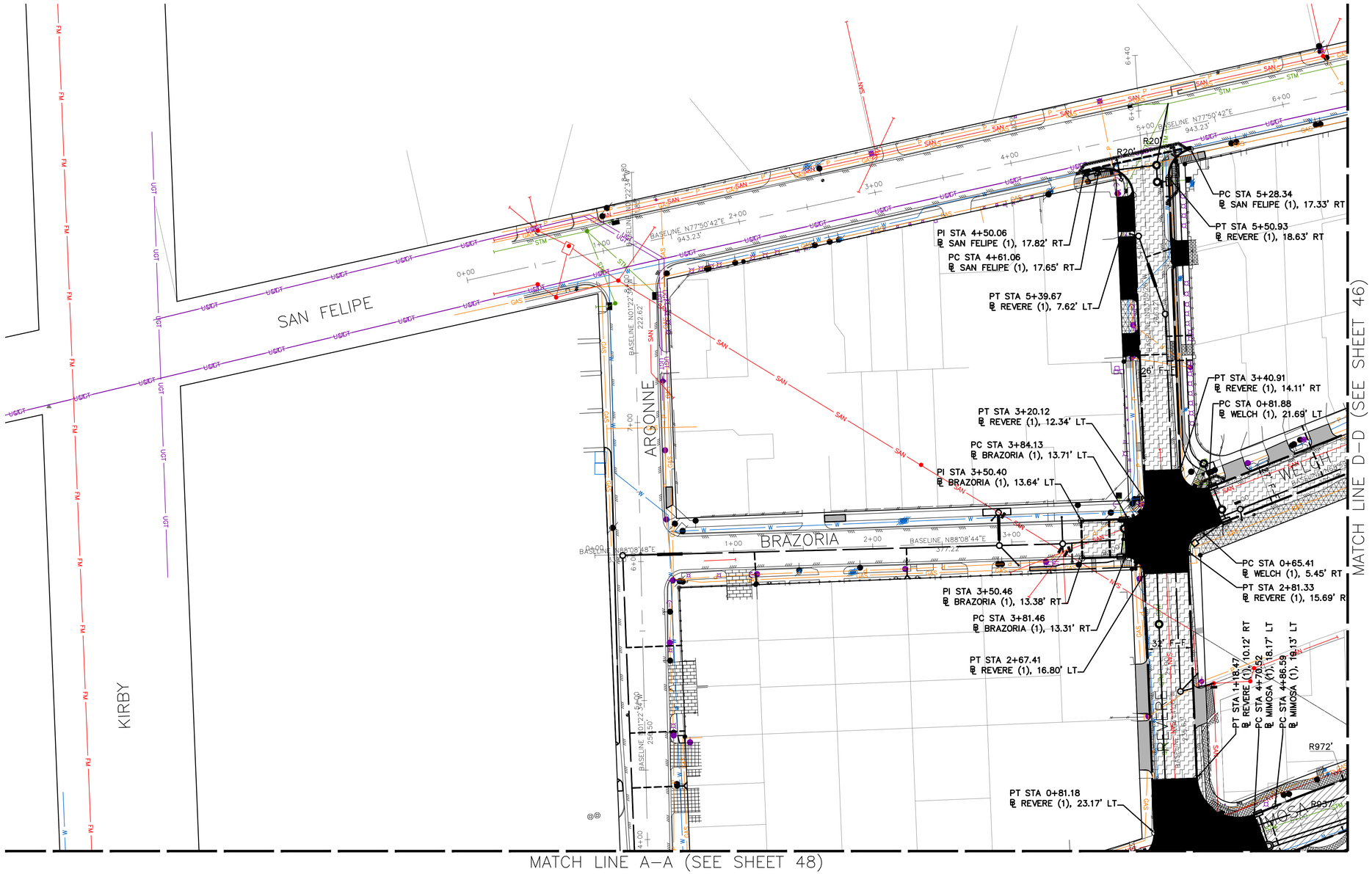
0 20 40 80

N

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)





NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 1 OF 13

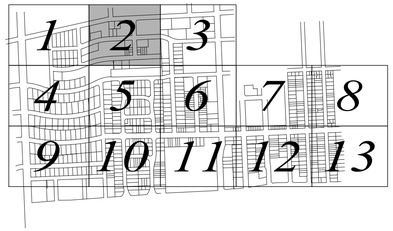
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **45** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\45-57_HORIZONTAL GEOMETRY LAYOUT.dwgLayout1 Jun 30, 2026 - 10:54AM Jgarza

0 20 40 80

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



MATCH LINE D–D (SEE SHEET 45)

MATCH LINE E–E (SEE SHEET 47)

MATCH LINE B–B (SEE SHEET 49)

SAN FELIPE

CHILTON

WELCH

SPANN

MIMOSA

BASELINE N77°50'42"E 943.23'

BASELINE N87°09'47"E 1496.77'

PC STA 2+09.47
℄ WELCH (1), 22.81' LT

PC STA 2+09.70
℄ WELCH (1), 4.19' RT

PT STA 4+59.29
℄ WELCH (1), 16.12' LT

PT STA 4+57.44
℄ WELCH (1), 10.82' RT

PI STA 5+40.65
℄ SPANN (1), 38.20' LT

PI STA 5+20.51
℄ SPANN (1), 18.98' LT

PI STA 4+75.62
℄ SPANN (1), 18.88' LT

PT STA 3+28.21
℄ SPANN (1), 18.90' LT

PC STA 7+58.55
℄ WELCH (1), 11.90' LT

PC STA 7+57.78
℄ WELCH (1), 15.09' RT

PT STA 2+71.22
℄ SPANN (1), 18.93' LT

PI STA 5+40.65
℄ SPANN (1), 36.71' RT

PI STA 5+20.51
℄ SPANN (1), 16.71' RT

PI STA 4+75.61
℄ SPANN (1), 16.12' RT

PT STA 3+29.01
℄ SPANN (1), 16.10' RT

PC STA 8+23.48
℄ WELCH (1), 11.93' LT

PC STA 8+22.89
℄ WELCH (1), 15.08' RT

PT STA 2+71.99
℄ SPANN (1), 16.07' RT

PT STA 0+70.96
℄ SPANN (1), 19.08' LT

PC STA 11+19.69
℄ MIMOSA (1), 16.23' LT

PT STA 0+71.53
℄ SPANN (1), 15.92' RT

PC STA 11+84.77
℄ MIMOSA (1), 16.13' LT

PT STA 7+98.40
℄ MIMOSA (1), 19.81' LT

PI STA 8+73.80
℄ MIMOSA (1), 17.72' LT

PT STA 7+98.62
℄ MIMOSA (1), 15.19' RT

PI STA 8+73.19
℄ MIMOSA (1), 14.27' RT

R780'
R753'
R972'
R937'
R20'
R20'

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 2 OF 13

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **46** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22437\45-57_HORIZONTAL GEOMETRY LAYOUT.dwg\layout2 Jun 30, 2026 - 10:55AM Jgarza

0 20 40 80

N

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



SHARP

SAN FELIPE

VERMONT

SHEPHERD

WELCH

PERSA

MIMOSA

BASELINE N87°09'47"E 1496.77'

PC STA 11+42.79
℄ WELCH (1), 14.20' LT

PT STA 12+29.40
℄ WELCH (1), 14.20' LT

PI STA 12+56.76
℄ WELCH (1), 11.07' RT

PC STA 12+87.37
℄ WELCH (1), 15.34' LT

PI STA 13+29.66
℄ WELCH (1), 14.30' RT

PT STA 13+73.53
℄ WELCH (1), 14.82' LT

PC STA 11+44.60
℄ WELCH (1), 12.73' RT

PT STA 12+27.59
℄ WELCH (1), 12.74' RT

PI STA 12+56.79
℄ WELCH (1), 12.82' RT

PI STA 12+90.41
℄ WELCH (1), 10.55' RT

PI STA 13+68.40
℄ WELCH (1), 12.17' RT

PI STA 13+29.98
℄ WELCH (1), 15.66' RT

PI STA 13+27.59
℄ WELCH (1), 14.88' RT

PI STA 14+99.86
℄ MIMOSA (1), 14.87' LT

PI STA 14+99.73
℄ MIMOSA (1), 17.13' RT

PI STA 18+60.70
℄ WELCH (1), 14.57' LT

PI STA 17+85.70
℄ WELCH (1), 13.60' LT

PI STA 17+85.62
℄ WELCH (1), 13.40' RT

PI STA 18+60.63
℄ WELCH (1), 14.75' RT

R167'

R140'

MATCH LINE E-E (SEE SHEET 46)

MATCH LINE C-C (SEE SHEET 50)

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 3 OF 13

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **47** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22437\45-57_HORIZONTAL GEOMETRY LAYOUT.dwg\layout3 Jun 30 , 2026 - 10:56AM jgarza

MATCH LINE A–A (SEE SHEET 45)

0 20 40 80

PI STA 0+48.03
℄ MIMOSA (1), 17.53' LT

PCC STA 1+67.90
℄ MIMOSA (1), 16.83' LT

MIMOSA

R668'

R652'

R703'

PC STA 3+78.41
℄ MIMOSA (1), 13.34' LT

PI STA 0+52.07
℄ MIMOSA (1), 17.30' RT

PCC STA 1+68.10
℄ MIMOSA (1), 18.17' RT

PC STA 4+88.78
℄ MIMOSA (1), 15.81' RT

PT STA 5+30.63
℄ MIMOSA (1), 19.25' RT

PC STA 1+55.24
℄ AVALON (1), 20.87' LT

PCC STA 2+21.37
℄ AVALON (1), 17.94' LT

PI STA 1+03.33
℄ ARGONNE (1), 14.09' LT

PT STA 0+83.33
℄ ARGONNE (1), 14.13' LT

PCC STA 4+50.82
℄ AVALON (1), 12.16' LT

PCC STA 4+23.60
℄ AVALON (1), 10.41' LT

PCC STA 3+42.65
℄ AVALON (1), 12.91' LT

R444'

R658'

AVALON

ARGONNE

PI STA 1+03.16
℄ ARGONNE (1), 13.17' RT

PT STA 0+77.85
℄ ARGONNE (1), 13.02' RT

PCC STA 5+12.93
℄ AVALON (1), 13.34' LT

PCC STA 6+34.06
℄ AVALON (1), 12.26' LT

PCC STA 8+11.49
℄ AVALON (1), 15.10' LT

REMOVE & REPLACE
SPEED BUMP @ SAME
LOCATION REFER DETAIL
0274–02.

PCC STA 9+69.61
℄ AVALON (1), 10.89' LT

R668'

PCC STA 2+22.74
℄ AVALON (1), 9.02' RT

PC STA 1+53.82
℄ AVALON (1), 6.31' RT

PCC STA 3+39.05
℄ AVALON (1), 13.84' RT

R422'

R982'

R1220'

PCC STA 8+14.16
℄ AVALON (1), 11.77' RT

R1100'

PCC STA 9+67.42
℄ AVALON (1), 16.02' RT

R695'

PCC STA 4+25.24
℄ AVALON (1), 16.54' RT

PCC STA 6+32.18
℄ AVALON (1), 14.68' RT

REMOVE & REPLACE
SPEED BUMP @ SAME
LOCATION REFER DETAIL
0274–02.

KIRBY

MATCH LINE K–K (SEE SHEET 49)

PC STA 0+97.46
℄ ELLA LEE (1), 13.97' LT

PCC STA 1+63.57
℄ ELLA LEE (1), 15.97' LT

PCC STA 2+85.29
℄ ELLA LEE (1), 9.79' LT

REMOVE & REPLACE
SPEED BUMP @ SAME
LOCATION REFER DETAIL
0274–02.

REMOVE & REPLACE
SPEED BUMP @ SAME
LOCATION REFER DETAIL
0274–02.

R579'

R2229'

R583'

R2260'

ELLA LEE

R1305'

R1332'

PCC STA 1+62.89
℄ ELLA LEE (1), 11.03' RT

PC STA 1+02.88
℄ ELLA LEE (1), 12.58' RT

PCC STA 2+83.42
℄ ELLA LEE (1), 17.15' RT

MATCH LINE F–F (SEE SHEET 53)

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

1	2	3			
4	5	6	7	8	
9	10	11	12	13	

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 4 OF 13

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **48** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\45-57_HORIZONTAL GEOMETRY LAYOUT.dwg Layout4 Jun 30, 2026 - 10:57AM Jgarza

MATCH LINE B–B (SEE SHEET 46)

MATCH LINE K–K (SEE SHEET 48)

MATCH LINE L–L (SEE SHEET 50)

MATCH LINE G–G (SEE SHEET 54)

0 20 40 80

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

1 2 3
4 5 6 7 8
9 10 11 12 13

REMOVE & REPLACE SPEED BUMP @ SAME LOCATION REFER DETAIL 0274–02.

PC STA 13+00.18
℄ AVALON (1), 14.84' LT

T STA 10+88.69
AVALON (1), 12.06' LT

STA 10+79.28
AVALON (1), 11.26' LT

PC STA 10+81.59
℄ AVALON (1), 15.64' RT

PT STA 10+90.99
℄ AVALON (1), 14.84' RT

PCC STA 11+19.23
℄ AVALON (1), 13.39' RT

PC STA 15+66.22
℄ DICKEY (1), 12.67' LT

PC STA 12+68.28
℄ DICKEY (1), 13.98' LT

PCC STA 10+72.16
℄ ELLA LEE (1), 13.56' LT

PCC STA 10+54.83
℄ ELLA LEE (1), 14.99' RT

PC STA 12+08.89
℄ DICKEY (1), 14.12' LT

PC STA 13+00.14
℄ AVALON (1), 12.16' RT

PCC STA 11+80.20
℄ AVALON (1), 16.87' RT

PT STA 15+84.47
℄ DICKEY (1), 14.41' RT

PC STA 13+88.84
℄ AVALON (1), 12.30' RT

PT STA 15+76.49
℄ WESTGATE (1), 11.96' LT

PC STA 15+52.25
℄ WESTGATE (1), 12.99' LT

PT STA 14+80.47
℄ WESTGATE (1), 13.36' LT

PC STA 14+43.07
℄ WESTGATE (1), 10.18' LT

PT STA 13+31.68
℄ WESTGATE (1), 11.84' LT

PC STA 12+76.76
℄ WESTGATE (1), 12.55' LT

PCC STA 12+05.14
℄ WESTGATE (1), 11.40' LT

PT STA 11+39.11
℄ WESTGATE (1), 13.36' LT

PI STA 10+59.62
℄ WESTGATE (1), 13.36' LT

PC STA 14+76.16
℄ AVALON (1), 12.43' RT

PT STA 15+71.45
℄ WESTGATE (1), 15.60' RT

PC STA 15+49.69
℄ WESTGATE (1), 13.89' RT

PT STA 14+82.76
℄ WESTGATE (1), 13.54' RT

PC STA 14+45.35
℄ WESTGATE (1), 16.72' RT

PCC STA 14+08.44
℄ WESTGATE (1), 17.09' RT

PT STA 0+87.86
℄ DEVONSHIRE (1), 7.23' LT

PC STA 2+55.45
℄ DEVONSHIRE (1), 13.84' RT

PT STA 0+80.76
℄ DEVONSHIRE (1), 19.72' RT

PC STA 13+29.33
℄ WESTGATE (1), 15.13' RT

PT STA 12+76.41
℄ WESTGATE (1), 14.45' RT

PCC STA 12+03.57
℄ WESTGATE (1), 15.56' RT

PCC STA 11+47.67
℄ WESTGATE (1), 13.68' RT

PC STA 0+66.50
℄ SALISBURY (1), 10.79' LT

PI STA 2+41.49
℄ SALISBURY (1), 13.50' LT

PC STA 0+73.90
℄ SALISBURY (1), 16.09' RT

PI STA 2+41.37
℄ SALISBURY (1), 13.50' RT

PT STA 10+67.76
℄ WESTGATE (1), 13.70' RT

PC STA 17+89.90
℄ AVALON (1), 12.92' RT

PT STA 15+64.97
℄ KINGSTON (1), 11.86' LT

PC STA 2+50.71
℄ DEVONSHIRE (1), 12.74' LT

PCC STA 3+61.33
℄ DEVONSHIRE (1), 13.48' LT

PT STA 13+83.79
℄ KINGSTON (1), 9.33' LT

PC STA 3+68.63
℄ DEVONSHIRE (1), 15.33' RT

PCC STA 12+84.10
℄ KINGSTON (1), 19.46' LT

PCC STA 11+63.70
℄ KINGSTON (1), 18.08' LT

PT STA 3+76.74
℄ SALISBURY (1), 11.25' LT

PC STA 3+88.61
℄ SALISBURY (1), 15.96' RT

PT STA 10+68.97
℄ KINGSTON (1), 10.54' LT

PI STA 9+99.48
℄ KINGSTON (1), 9.62' LT

PC STA 18+83.32
℄ AVALON (1), 15.07' RT

PT STA 15+63.90
℄ KINGSTON (1), 15.16'

PC STA 14+11.44
℄ KINGSTON (1), 17.75'

PC STA 13+03.54
℄ KINGSTON (1), 10.47'

PT STA 11+67.28
℄ KINGSTON (1), 8.69'

PI STA 11+51.26
℄ KINGSTON (1), 10.87'

PI STA 10+77.76
℄ KINGSTON (1), 16.34' RT

PI STA 9+99.36
℄ KINGSTON (1), 17.38' RT

R440' R695' R1305' R1332' R373' R400' R1157' R1130' R404' R431' R327' R700' R487' R460'

220314
51.37
GI

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

OTHON, INC. TBPE NO. F-1471

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 5 OF 13

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **49** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\45-57_HORIZONTAL GEOMETRY LAYOUT.dwgLayout5 Jun 30, 2026 - 10:58AM Jgarza

MATCH LINE C–C (SEE SHEET 47)

0 20 40 80

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



PT STA 19+73.49 ℄ AVALON (1), 8.08' LT
PC STA 19+98.69 ℄ AVALON (1), 10.56' LT
PT STA 20+22.91 ℄ AVALON (1), 16.47' LT
PC STA 20+68.50 ℄ AVALON (1), 21.74' LT
R262'
R118'
R90'
R214'
AVALON
PERSA
PI STA 21+44.30 ℄ AVALON (1), 20.85' LT
PI STA 22+24.30 ℄ AVALON (1), 19.81' LT
PI STA 21+43.80 ℄ AVALON (1), 9.09' RT
PI STA 22+23.27 ℄ AVALON (1), 12.17' RT
PT STA 19+72.34 ℄ AVALON (1), 18.89' RT
PCC STA 20+39.05 ℄ AVALON (1), 11.22' RT
PC STA 20+64.24 ℄ AVALON (1), 6.95' RT
PC STA 23+73.05 ℄ AVALON (1), 17.03' RT
PT STA 8+05.30 ℄ PECKHAM (1), 12.85' LT
PECKHAM
PI STA 26+09.68 ℄ AVALON (1), 13.74' LT
PI STA 26+84.91 ℄ AVALON (1), 14.40' LT
PI STA 26+09.68 ℄ AVALON (1), 18.26' RT
PI STA 26+84.70 ℄ AVALON (1), 15.51' RT
PC STA 24+50.51 ℄ AVALON (1), 18.26' RT
PT STA 8+05.43 ℄ PECKHAM (1), 14.04' RT
PI STA 8+05.30 ℄ PECKHAM (1), 14.04' RT
INDIANA
SHEPHERD
BASELINE N02°22'40"W 180.08'
BASELINE N02°21'57"W 230.32'
BASELINE N02°21'57"W 163.10'
BASELINE N02°21'14"W 561.63'
BASELINE N87°54'37"E 1365.53'
BASELINE N85°25'24"E 1766.96'
1340
RT
SAN
GAS
UGT
UGP
NVS
STM
W
P

MATCH LINE L–L (SEE SHEET 49)

MATCH LINE M–M (SEE SHEET 51)

MATCH LINE H–H (SEE SHEET 55)

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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MAUREEN GONZALEZ
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07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 6 OF 13

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **50** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms224371\45-57_HORIZONTAL GEOMETRY LAYOUT.dwgLayout6 Jun 30, 2026 - 10:59AM Jgarza

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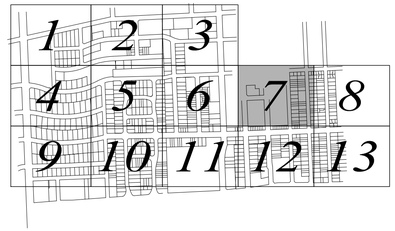
0 20 40 80

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



MATCH LINE M–M (SEE SHEET 50)

MATCH LINE N–N (SEE SHEET 52)

MATCH LINE I–I (SEE SHEET 56)

INDIANA

VERMONT

HULDY

BRUN

MCDUFFY

HAZARD

PI STA 15+61.93
℄ HAZARD (1), 22.46' RT

PI STA 15+63.46
℄ HAZARD (1), 25.36' LT

PI STA 15+50.63
℄ HAZARD (1), 15.33' LT

PI STA 15+50.56
℄ HAZARD (1), 14.80' RT

PI STA 15+00.63
℄ HAZARD (1), 15.19' LT

PI STA 15+00.56
℄ HAZARD (1), 14.81' RT

PI STA 13+24.98
℄ HAZARD (1), 15.30' LT

PI STA 13+24.96
℄ HAZARD (1), 14.70' RT

PI STA 24+73.64
℄ FAIRVIEW, 74.05' LT

PI STA 25+00.00
℄ FAIRVIEW, 74.12' LT

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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CONSULTING ENGINEERS www.othon.com

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

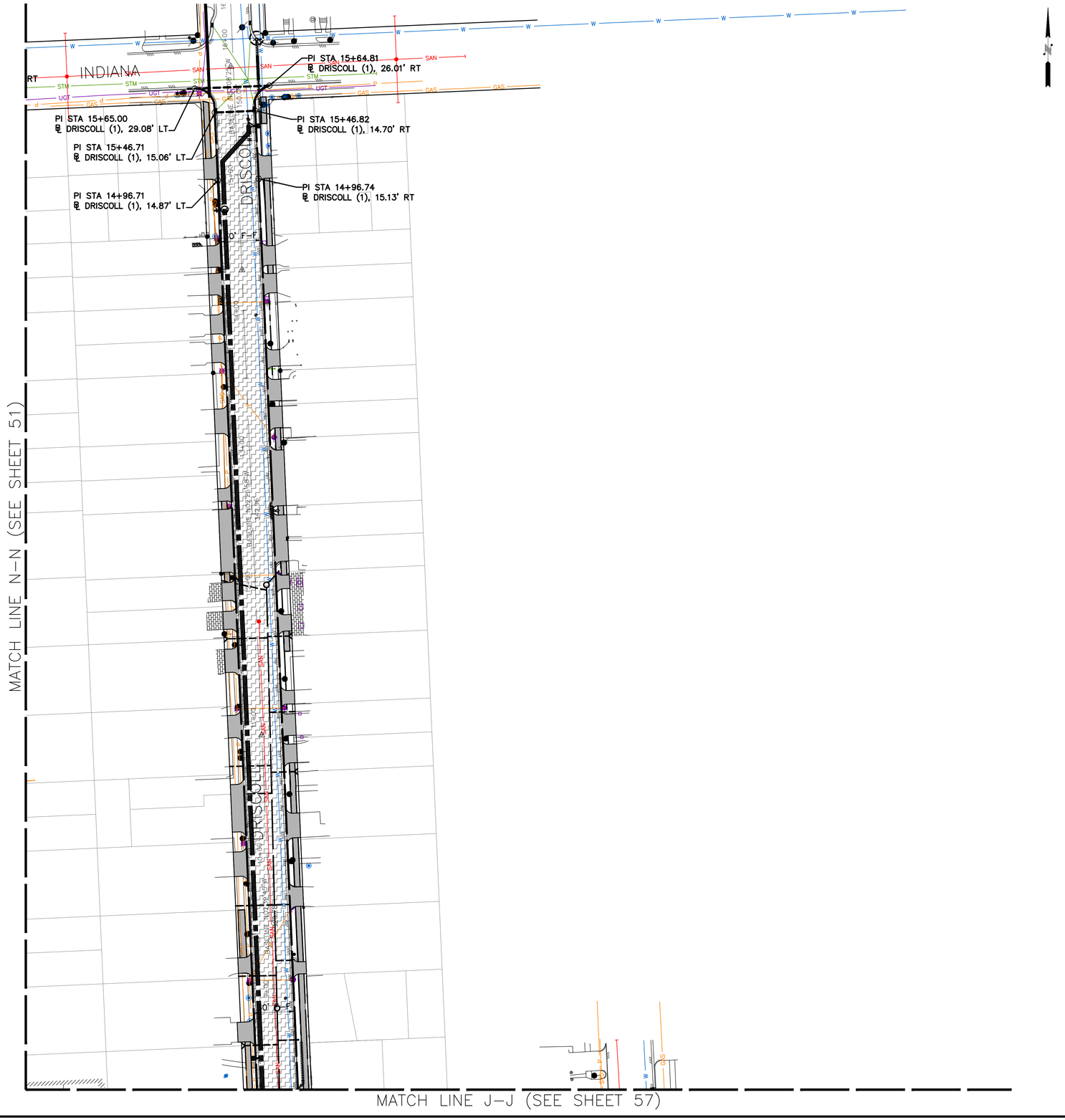
STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 7 OF 13

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **51** OF 391	



0 20 40 80

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 8 OF 13

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **52** OF 391

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MATCH LINE G–G (SEE SHEET 49)

0 20 40 80

MATCH LINE O–O (SEE SHEET 53)

MATCH LINE P–P (SEE SHEET 55)

PT STA 9+20.44
℄ DICKEY (1), 12.59' RT
PC STA 0+80.11
℄ FAIRVIEW (1), 9.34' LT
PC STA 0+84.44
℄ FAIRVIEW (1), 31.22' LT
PI STA 1+01.54
℄ FAIRVIEW (1), 11.88' LT
PT STA 9+14.51
℄ WESTGATE (1), 14.42' LT
PC STA 2+76.13
℄ FAIRVIEW (1), 15.78' LT
PC STA 2+66.72
℄ FAIRVIEW (1), 36.01' LT
PI STA 1+62.14
℄ FAIRVIEW (1), 16.81' LT
PT STA 9+14.34
℄ WESTGATE (1), 12.58' RT
PC STA 3+52.84
℄ FAIRVIEW (1), 34.82' LT
PC STA 7+47.60
℄ FAIRVIEW (1), 10.82' LT
PC STA 6+68.94
℄ FAIRVIEW (1), 31.40' LT
PT STA 9+11.91
℄ KINGSTON (1), 15.43' RT
PC STA 7+57.66
℄ FAIRVIEW (1), 30.85' LT
PT STA 9+14.91
℄ KINGSTON (1), 11.51' LT
PI STA 7+54.63
℄ FAIRVIEW (1), 10.83' LT
PT STA 8+88.17
℄ DICKEY (1), 14.45' LT
PCC STA 10+75.39
℄ REBA (1), 13.28' LT
PI STA 1+75.34
℄ FAIRVIEW (1), 1.11' LT
PC STA 0+84.82
℄ FAIRVIEW (1), 17.58' RT
PC STA 2+65.15
℄ FAIRVIEW (1), 20.63' RT
PT STA 0+80.50
℄ FAIRVIEW (1), 2.07' LT
PT STA 2+75.77
℄ FAIRVIEW (1), 0.84' RT
PI STA 1+74.77
℄ FAIRVIEW (1), 18.88' RT
PT STA 8+21.92
℄ DICKEY (1), 13.38' RT
PI STA 8+18.36
℄ DICKEY (1), 13.35' RT
PT STA 7+96.19
℄ WESTGATE (1), 13.68' LT
PC STA 3+55.93
℄ FAIRVIEW (1), 21.87' RT
PT STA 7+96.33
℄ WESTGATE (1), 13.32' RT
PC STA 6+62.86
℄ FAIRVIEW (1), 24.15' RT
PT STA 7+47.60
℄ FAIRVIEW (1), 6.18' RT
PI STA 7+58.81
℄ FAIRVIEW (1), 6.17' RT
PT STA 7+89.07
℄ KINGSTON (1), 13.56' LT
PC STA 7+60.80
℄ FAIRVIEW (1), 25.90' RT
PT STA 7+91.53
℄ KINGSTON (1), 13.42' RT
PCC STA 10+65.14
℄ REBA (1), 14.06' RT
PT STA 8+30.04
℄ DICKEY (1), 14.07' LT
PI STA 8+18.32
℄ DICKEY (1), 14.11' LT
PT STA 6+30.41
℄ WESTGATE (1), 15.70' RT
PC STA 2+36.11
℄ DUNRAVEN (1), 16.17' LT
PC STA 0+70.90
℄ DUNRAVEN (1), 14.27' LT
PT STA 6+53.06
℄ KINGSTON (1), 14.66' RT
PT STA 6+52.82
℄ KINGSTON (1), 12.33' LT
PCC STA 5+80.72
℄ KINGSTON (1), 17.61' RT
PCC STA 5+87.40
℄ KINGSTON (1), 9.59' LT
PCC STA 3+63.75
℄ DUNRAVEN (1), 13.30' LT
PI STA 10+39.30
℄ LOCKE (1), 13.73' LT
PI STA 9+88.97
℄ LOCKE (1), 13.64' LT
PI STA 5+46.72
℄ WESTGATE (1), 12.71' LT
PI STA 5+26.72
℄ WESTGATE (1), 12.91' LT
PC STA 0+73.26
℄ DUNRAVEN (1), 12.75' RT
PC STA 2+39.07
PT STA 5+48.03 ℄ DUNRAVEN (1), 10.66' RT
℄ WESTGATE (1), 14.47' RT
PI STA 5+46.67
℄ WESTGATE (1), 14.45' RT
PI STA 5+26.67
℄ WESTGATE (1), 14.17' RT
PT STA 3+68.65
℄ DUNRAVEN (1), 14.81' RT
PC STA 3+96.69
℄ DUNRAVEN (1), 19.81' RT
PT STA 4+91.34
℄ KINGSTON (1), 17.95' LT
PI STA 4+90.89
℄ KINGSTON (1), 17.98' LT
PI STA 4+70.89
℄ KINGSTON (1), 19.45' LT
PI STA 4+86.92
℄ KINGSTON (1), 8.87' RT
PI STA 4+67.18
℄ KINGSTON (1), 5.62' RT
PC STA 5+44.26
℄ KINGSTON (1), 15.37'
PI STA 5+04.37
℄ KINGSTON (1), 11.73'
PI STA 9+88.96
℄ LOCKE (1), 13.36' RT
PI STA 10+38.66
℄ LOCKE (1), 13.29' RT
PI STA 10+54.07
℄ SAN SABA (1), 17.56' LT
PI STA 10+04.07
℄ SAN SABA (1), 16.35' LT
PI STA 10+04.12
℄ SAN SABA (1), 15.65' RT
PI STA 10+54.12
℄ SAN SABA (1), 17.08' RT

DICKEY
REBA
LOCKE
SAN SABA
WESTGATE
DUNRAVEN
KINGSTON

R2466'
R2493'
R499'
R472'
R253'
R2200'
R1425'

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

1 2 3
4 5 6 7 8
9 10 11 12 13

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 10 OF 13

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **54** OF 391	

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MATCH LINE F–F (SEE SHEET 48)

0 20 40 80

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

1 2 3
4 5 6 7 8
9 10 11 12 13

REBA

PI STA 1+11.32
℄ REBA (1), 13.15' LT

PT STA 1+68.33
℄ REBA (1), 12.10' LT

REMOVE & REPLACE SPEED BUMP @ SAME LOCATION REFER DETAIL 0274–02.

PC STA 5+82.47
℄ REBA (1), 11.31' LT

PT STA 6+41.00
℄ REBA (1), 12.98' LT

REMOVE & REPLACE SPEED BUMP @ SAME LOCATION REFER DETAIL 0274–02.

R1718'

R1745'

R2466'

R2493'

PT STA 1+67.69
℄ REBA (1), 14.90' RT

PI STA 1+17.70
℄ REBA (1), 13.76' RT

PC STA 5+83.13
℄ REBA (1), 15.68' RT

PT STA 6+41.84
℄ REBA (1), 14.00' RT

KIRBY

LOCKE

PI STA 0+87.64
℄ LOCKE (1), 13.27' LT

PI STA 1+37.64
℄ LOCKE (1), 13.21' LT

PI STA 3+91.79
℄ LOCKE (1), 4.75' LT

PI STA 5+08.08
℄ LOCKE (1), 11.09' LT

PI STA 1+37.49
℄ LOCKE (1), 13.79' RT

PI STA 0+87.49
℄ LOCKE (1), 13.37' RT

PI STA 5+08.36
℄ LOCKE (1), 15.92' RT

PI STA 1+16.90
℄ SAN SABA (1), 16.70' LT

PI STA 2+16.91
℄ SAN SABA (1), 17.15' LT

SAN SABA

PC STA 4+06.14
℄ SAN SABA (1), 15.93' RT

PT STA 4+26.02
℄ SAN SABA (1), 35.98' RT

PI STA 4+26.00
℄ SAN SABA (1), 46.17' RT

PI STA 2+16.72
℄ SAN SABA (1), 14.85' RT

PI STA 1+16.73
℄ SAN SABA (1), 13.38' RT

PC STA 4+81.03
℄ SAN SABA (1), 16.12' RT

PT STA 4+61.04
℄ SAN SABA (1), 36.38' RT

PI STA 4+61.17
℄ SAN SABA (1), 46.38' RT

ARGONNE

ABANDONED ROAD

MATCH LINE O–O (SEE SHEET 54)

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

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TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 9 OF 13

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 53 OF 391	

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MATCH LINE H–H (SEE SHEET 50)

0 20 40 80

PI STA 0+85.35
℄ PERSA (1), 11.71' LT
PC STA 9+47.85
℄ FAIRVIEW (1), 16.48' LT
PC STA 8+37.03
℄ FAIRVIEW (1), 4.74' LT
PT STA 8+57.12
℄ FAIRVIEW (1), 28.11' LT
PC STA 9+32.54
℄ FAIRVIEW (1), 16.65' LT
R140'
R160'
PERSA
BASELINE N02°07' 406.59'
0+BASELINE N02°07'
PT STA 0+95.31
℄ PERSA (1), 11.72' LT
PI STA 0+94.97
℄ PERSA (1), 14.41' RT
PT STA 0+92.78
℄ PERSA (1), 14.47' RT
PC STA 10+23.74
℄ FAIRVIEW (1), 16.06' LT
PT STA 0+96.78
℄ PECKHAM (1), 14.23' LT
PC STA 12+50.86
℄ FAIRVIEW (1), 16.00' LT
PECKHAM
BASELINE N02°21' 406.50'
0+BASELINE N02°21'
PI STA 0+97.26
℄ PECKHAM (1), 13.00' RT
PT STA 0+94.05
℄ PECKHAM (1), 13.05' RT
PC STA 13+28.65
℄ FAIRVIEW (1), 15.49' LT
PI STA 15+54.64
℄ FAIRVIEW (1), 12.25' LT
PI STA 15+04.43
℄ FAIRVIEW (1), 13.05' LT
PI STA 16+61.88
℄ FAIRVIEW (1), 18.75' LT
PI STA 17+11.88
℄ FAIRVIEW (1), 16.00' RT
BASELINE N87°35'08" 1,010.59'
0+BASELINE N87°35'08"
T. FAIRVIEW
SHEPHERD
PI STA 9+87.92
℄ FAIRVIEW (1), 16.93' RT
PC STA 9+28.82
℄ FAIRVIEW (1), 16.31' RT
PCC STA 8+92.34
℄ FAIRVIEW (1), 22.60' LT
PCC STA 8+93.18
℄ FAIRVIEW (1), 20.20' RT
PT STA 8+59.45
℄ FAIRVIEW (1), 24.34' RT
PT STA 8+37.01
℄ FAIRVIEW (1), 0.94' RT
REMOVE & REPLACE SPEED BUMP @ SAME LOCATION REFER DETAIL 0274–02.
PI STA 12+90.99
℄ FAIRVIEW (1), 17.01' RT
PI STA 15+04.13
℄ FAIRVIEW (1), 19.95' RT
PI STA 15+55.26
℄ FAIRVIEW (1), 22.43' RT
PI STA 16+61.84
℄ FAIRVIEW (1), 21.86' RT
PI STA 17+11.97
℄ FAIRVIEW (1), 17.00'

MATCH LINE P–P (SEE SHEET 54)

MATCH LINE Q–Q (SEE SHEET 56)

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

1 2 3
4 5 6 7 8
9 10 11 12 13

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

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TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 11 OF 13

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 55 OF 391

C:\pw_working\othon-pw-01\jason.garza\dms224371\45-57_HORIZONTAL GEOMETRY LAYOUT.dwgLayout11 Jun 30 , 2026 – 11:05AM jgarza

MATCH LINE I–I (SEE SHEET 51)

MATCH LINE Q–Q (SEE SHEET 55)

MATCH LINE R–R (SEE SHEET 57)

PI STA 8+58.76
℄ HULDY, 17.04' LT

STA 8+38.83
HULDY (1), 17.00' LT

STA 8+27.49
HULDY (1), 16.75' LT

PI STA 8+59.06
℄ HULDY, 13.06' RT

PI STA 8+39.06
℄ HULDY (1), 13.25' RT

PT STA 8+27.66
℄ HULDY (1), 13.26' RT

PC STA 19+41.09
℄ FAIRVIEW (1), 17.41' LT

PC STA 19+38.10
℄ FAIRVIEW (1), 15.60' RT

PT STA 7+44.48
℄ HULDY (1), 10.97' RT

PC STA 18+62.83
℄ FAIRVIEW (1), 16.59' RT

PC STA 7+44.12
℄ HULDY (1), 15.03' LT

PI STA 8+39.07
℄ BRUN (1), 13.51' LT

PT STA 8+13.00
℄ BRUN (1), 14.04' LT

PC STA 21+60.10
℄ FAIRVIEW (1), 18.66' LT

PC STA 21+50.10
℄ FAIRVIEW (1), 14.40' RT

PT STA 7+35.30
℄ BRUN (1), 19.38' LT

PI STA 8+38.46
℄ BRUN (1), 16.84' RT

PT STA 8+13.67
℄ BRUN (1), 16.81' RT

PI STA 24+29.40
℄ FAIRVIEW (1), 30.04' LT

PC STA 24+39.44
℄ FAIRVIEW (1), 20.01' LT

PC STA 23+59.87
℄ FAIRVIEW (1), 20.47' LT

PI STA 23+56.33
℄ FAIRVIEW (1), 19.04' LT

STA 22+30.12
FAIRVIEW (1), 18.95' LT

PI STA 24+72.96
℄ FAIRVIEW (1), 54.05' LT

PT STA 24+42.47
℄ FAIRVIEW (1), 19.04' LT

PI STA 23+69.40
℄ FAIRVIEW (1), 20.01' LT

PI STA 25+01.14
℄ FAIRVIEW (1), 54.13' LT

PT STA 25+02.02
℄ FAIRVIEW (1), 42.40' LT

PC STA 25+27.08
℄ FAIRVIEW (1), 19.28' LT

PC STA 25+27.46
℄ FAIRVIEW (1), 13.72' RT

PT STA 24+72.28
℄ FAIRVIEW (1), 42.56' LT

PT STA 25+02.59
℄ FAIRVIEW (1), 38.72' RT

PI STA 25+02.61
℄ FAIRVIEW (1), 50.30' RT

PC STA 26+98.71
℄ FAIRVIEW (1), 12.80' RT

PT STA 7+28.52
℄ HAZARD (1), 15.32' LT

PT STA 7+28.49
℄ HAZARD (1), 14.68' RT

PC STA 27+78.69
℄ FAIRVIEW (1), 12.44' RT

PT STA 27+83.78
℄ FAIRVIEW (1), 12.42' RT

PC STA 27+87.34
℄ FAIRVIEW (1), 13.88' RT

PI STA 27+96.83
℄ FAIRVIEW (1), 23.37' RT

PI STA 23+83.02
℄ FAIRVIEW (1), 13.98' RT

PC STA 23+84.69
℄ FAIRVIEW (1), 14.68' RT

PI STA 23+95.00
℄ FAIRVIEW (1), 24.98' RT

PT STA 23+11.80
℄ FAIRVIEW (1), 14.01' RT

PC STA 23+08.26
℄ FAIRVIEW (1), 15.48' RT

PI STA 22+98.73
℄ FAIRVIEW (1), 25.02' RT

PI STA 22+58.73
℄ FAIRVIEW (1), 25.04' RT

PC STA 22+49.19
℄ FAIRVIEW (1), 15.51' RT

PT STA 22+45.66
℄ FAIRVIEW (1), 14.04' RT

PC STA 22+40.14
℄ FAIRVIEW (1), 14.05' RT

PT STA 7+35.31
℄ BRUN (1), 20.63' RT

PI STA 24+35.00
℄ FAIRVIEW (1), 24.96' RT

PC STA 24+45.12
℄ FAIRVIEW (1), 14.83' RT

PCC STA 24+47.24
℄ FAIRVIEW (1), 13.95' RT

PT STA 24+72.25
℄ FAIRVIEW (1), 38.89' RT

PI STA 24+72.28
℄ FAIRVIEW (1), 50.39' RT

REMOVE & REPLACE SPEED BUMP @ SAME LOCATION REFER DETAIL 0274–02.

STA 4+29.91
HULDY (1), 12.70' LT

PI STA 4+30.08
℄ HULDY (1), 13.30' RT

PI STA 4+28.12
℄ BRUN (1), 21.79' LT

PI STA 4+28.41
℄ BRUN (1), 18.23' RT

STA 3+05.26
HULDY (1), 18.99' LT

PI STA 3+04.71
℄ HULDY (1), 21.00' RT

PI STA 2+62.59
℄ BRUN (1), 15.05' LT

PI STA 2+62.74
℄ BRUN (1), 24.98' RT

PI STA 1+57.82
℄ HULDY (1), 20.82' LT

PI STA 1+57.32
℄ HULDY (1), 19.18' RT

PI STA 0+97.36
℄ HULDY (1), 17.29' LT

PI STA 0+97.34
℄ HULDY (1), 17.61' RT

PI STA 1+47.24
℄ BRUN (1), 18.89' LT

PI STA 1+05.01
℄ BRUN (1), 19.67' LT

PI STA 1+45.91
℄ BRUN (1), 21.09' RT

PI STA 1+06.86
℄ BRUN (1), 20.75' RT

PI STA 0+84.06
℄ BRUN (1), 40.31' LT

PI STA 0+87.97
℄ BRUN (1), 40.09' RT

PI STA 1+36.96
℄ HAZARD (1), 13.93' RT

PI STA 1+37.10
℄ HAZARD (1), 16.07' LT

PI STA 0+87.11
℄ HAZARD (1), 16.79' LT

PI STA 0+76.49
℄ HAZARD (1), 26.29' LT

PI STA 0+86.96
℄ HAZARD (1), 13.91' RT

PI STA 0+74.40
℄ HAZARD (1), 25.96' RT

FAIRVIEW

MCDUFFY

HULDY

WESTHEIMER

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

1 2 3
4 5 6 7 8
9 10 11 12 13

Ⓐ PT STA 26+13.04
℄ FAIRVIEW, 19.74' LT

Ⓑ PC STA 26+15.33
℄ FAIRVIEW, 20.70' LT

Ⓒ PI STA 26+25.33
℄ FAIRVIEW, 30.81' LT

Ⓓ PI STA 26+85.33
℄ FAIRVIEW, 31.13' LT

Ⓔ PC STA 26+94.91
℄ FAIRVIEW, 21.64' LT

Ⓕ PCC STA 26+98.46
℄ FAIRVIEW, 20.20' LT

Ⓖ PT STA 8+11.41
℄ HAZARD, 15.63' LT

Ⓗ PT STA 8+11.59
℄ HAZARD, 14.37' RT

Ⓘ PCC STA 27+78.49
℄ FAIRVIEW, 20.56' LT

Ⓙ PC STA 27+82.02
℄ FAIRVIEW, 22.04' LT

Ⓚ PI STA 27+91.52
℄ FAIRVIEW, 31.61' LT

Ⓛ PT STA 26+48.05
℄ FAIRVIEW, 13.07' RT

Ⓜ PC STA 26+50.96
℄ FAIRVIEW, 14.26' RT

Ⓝ PI STA 26+60.81
℄ FAIRVIEW, 24.00' RT

Ⓞ PI STA 26+80.81
℄ FAIRVIEW, 23.90' RT

Ⓟ PC STA 26+90.29
℄ FAIRVIEW, 14.31' RT

Ⓠ PT STA 26+93.82
℄ FAIRVIEW, 12.83' RT

Ⓧ PCC STA 24+47.33
℄ FAIRVIEW, 19.05' LT

Ⓨ PI STA 24+73.64
℄ FAIRVIEW, 74.05' LT

Ⓩ PI STA 25+00.00
℄ FAIRVIEW, 74.12' LT

Ⓐⓐ PI STA 8+50.08
℄ BRUN, 13.60' LT

Ⓑⓑ PI STA 8+58.46
℄ BRUN, 16.67' RT

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 12 OF 13

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	1" = 40'
CITY OF HOUSTON PM	ROBERT MILES, P.E.
SHEET NO. 56 OF 391	

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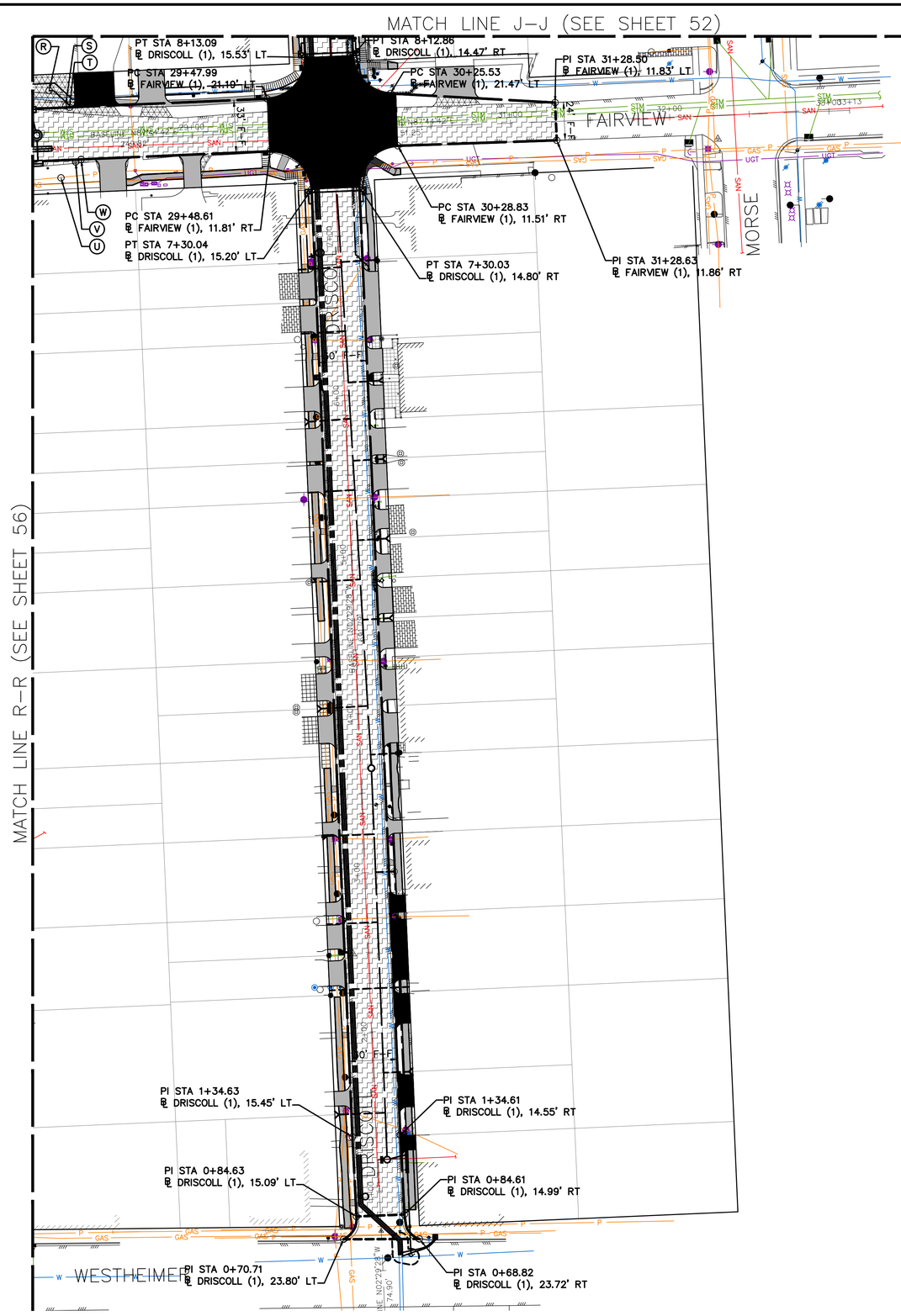



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

Ⓡ PI STA 28+11.52
℄ FAIRVIEW, 31.69' LT

Ⓢ PC STA 28+21.54
℄ FAIRVIEW, 21.74' LT

Ⓣ PT STA 28+24.00
℄ FAIRVIEW, 20.73' LT

Ⓤ PI STA 28+16.83
℄ FAIRVIEW, 23.30' RT

Ⓥ PC STA 28+26.41
℄ FAIRVIEW, 13.71' RT

Ⓦ PT STA 28+29.93
℄ FAIRVIEW, 12.25' RT

NOTE:

REFER TO SURVEY CONTROL MAPS FOR COMPLETE BASELINE DATA.

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

HORIZONTAL GEOMETRY LAYOUT
SHEET 13 OF 13

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **57** OF 391

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DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
1	WELCH	1+04.15	21.26	L	11.40	16.00	3.00	4.50			11.40	5.00%					53.24	
2	WELCH	1+38.16	22.01	L	14.80	16.50	5.00	4.70	1.50	33.33%	9.30	16.94%	3.00	2.00%	1.00	2.50%	54.88	
3	WELCH	1+70.84	22.65	L	11.20	16.00	5.00	4.70			11.20	7.05%					53.66	
4	WELCH	2+01.97	22.68	L	11.00	16.00	5.00	3.70	1.50	9.00%	9.50	11.10%		1.50%			54.23	
5	WELCH	2+27.27	22.55	L	15.50	16.95	4.70	5.00	1.50	8.00%	9.63	9.56%	4.00	1.50%	0.37	0.00%	54.23	
6	WELCH	2+58.30	21.66	L	17.00	15.88	5.00	5.00	1.50	10.42%	5.65	10.42%	4.00	2.00%	5.85	3.42%	53.12	
7	WELCH	2+90.75	19.23	L	17.00	16.00	5.00	3.00	1.50	10.00%	8.91	10.00%	4.00	1.50%	2.59	6.56%	54.41	
8	WELCH	3+20.88	15.84	L	17.00	16.46	5.00	5.00	1.50	14.00%	8.83	14.00%	4.00	1.50%	2.67	6.74%	54.71	
9	WELCH	3+16.63	10.19	R	17.00	15.75	5.00	3.00	1.50	13.00%	7.64	15.08%	5.00	1.50%	2.86	3.00%	54.55	
10	WELCH	3+42.96	15.23	L	17.00	17.84	3.00	5.00	1.50	13.00%	8.65	12.95%	4.00	1.50%	2.85	4.00%	54.42	
11	WELCH	3+69.57	9.23	R	17.00	20.40	5.00	3.50	1.50	12.00%	7.75	14.65%	5.00	1.50%	2.75	0.00%	54.21	
12	WELCH	3+98.37	8.46	R	17.00	19.56	3.50	5.00	1.50	24.50%	7.82	16.06%	5.00	1.50%	2.68	5.00%	54.53	
13	WELCH	4+30.46	17.06	L	17.00	25.00	5.00	5.00	1.50	6.11%	8.36	7.11%	4.00	1.67%	3.14	0.00%	53.31	
14	WELCH	4+44.50	9.56	R	17.00	17.60	5.00	5.00	1.50	29.00%	7.95	16.32%	5.00	1.50%	2.55	5.50%	54.45	
15	WELCH	4+68.94	14.99	L	17.00	11.80	5.00	5.00	1.50	13.15%	8.21	13.93%	4.00	1.50%	3.29	0.00%	53.80	
16	WELCH	5+11.91	13.17	R	17.00	18.24	5.00	5.00	1.50	13.00%	8.00	12.44%	5.00	1.50%	2.50	0.00%	53.49	
17	WELCH	5+18.49	12.79	L	17.00	9.13	5.00	5.00	1.50	8.00%	8.72	8.00%	4.00	1.50%	2.78	12.95%	52.72	
18	WELCH	5+64.70	13.47	R	17.00	8.38	5.00	5.00	1.50	12.00%	9.03	12.98%	5.00	1.50%	1.47	2.50%	53.46	
19	WELCH	5+98.63	12.31	L	17.00	15.74	5.00	9.50	1.50	7.13%	4.98	7.13%	7.00	1.73%	3.52	1.45%	52.57	
20	WELCH	6+03.13	13.70	R	17.00	9.65	5.00	4.00	1.50	10.00%	8.93	10.92%	5.00	1.50%	1.57	4.00%	53.10	
21	WELCH	6+31.43	12.14	L	17.00	16.21	9.50	5.00	1.50	13.30%	5.21	13.00%	6.82	1.73%	3.47	4.55%	52.56	
22	WELCH	6+36.91	13.89	R	17.00	40.24	4.00	4.50	1.50	19.62%	8.93	14.83%	5.00	1.50%	1.57	0.50%	53.39	
23	WELCH	6+75.85	14.12	R	17.00	19.34	4.50	5.00	1.50	15.74%	9.43	11.29%	5.00	1.50%	1.07	11.00%	53.03	
24	WELCH	7+23.23	14.39	R	17.00	26.39	5.00	5.00	1.50	14.11%	9.96	10.00%	5.00	1.50%	0.54	0.93%	52.62	
25	WELCH	9+40.61	14.29	R	17.00	12.75	5.00	5.00	1.50	12.02%	1.00	12.00%	5.00	1.50%	9.50	5.32%	52.35	
26	WELCH	10+10.02	14.15	R	17.00	14.89	5.00	5.00	1.50	12.03%	1.00	12.00%	5.00	1.50%	9.50	9.00%	52.91	
27	WELCH	10+59.40	14.05	R	17.00	10.00	5.00	5.00	1.50	11.20%	2.00	11.00%	4.00	1.50%	9.50	7.37%	52.98	
28	WELCH	11+24.82	14.07	L	15.00	18.68	5.00	5.00	1.50	11.63%			4.00	1.50%	9.50	8.84%	53.09	
29	WELCH	11+77.18	11.40	L	16.29	30.37	5.00	5.00	1.50	11.00%	5.08	11.00%	4.86	1.50%	4.85	8.39%	53.37	
30	WELCH	12+20.25	14.52	L	10.00	20.17	5.00	5.00	1.50	11.18%			4.00	1.50%	4.50	7.33%	52.22	
31	WELCH	13+33.43	17.53	L	10.00	25.25	5.00	5.00	0.58	31.46%			4.00	1.60%	5.42	15.98%	52.89	
32	WELCH	14+05.06	14.42	L	11.00	20.58	5.00	5.00	1.50	22.00%	2.74	15.16%	4.00	2.00%	2.76	3.99%	53.08	
33	WELCH	14+22.62	12.59	R	12.00	17.17	5.00	5.00	1.50	11.75%	5.59	5.63%	4.00	1.50%	0.91	6.59%	52.98	
34	WELCH	15+14.35	14.30	L	11.00	24.69	10.00	10.00	1.50	18.77%	2.63	12.00%	4.00	1.50%	2.87	9.41%	52.95	
35	WELCH	16+38.62	13.82	R	12.00	24.97	10.00	10.00	1.50	19.26%	4.20	9.48%	4.00	1.27%	2.30	6.05%	52.93	
37	MIMOSA	0+90.54	16.04	L	12.20	17.45	5.00	2.00	1.50	33.30%	6.70	14.49%	4.00	2.00%			53.67	
38	MIMOSA	1+34.62	15.28	L	12.60	53.80	2.00	5.00	1.50	8.00%	6.90	13.10%	4.00	2.00%	0.20	10.00%	53.11	
39	MIMOSA	1+87.79	15.69	L	12.70	24.97	5.00	5.00			7.33	12.91%	4.00	2.00%	1.37	10.00%	53.35	
40	MIMOSA	2+00.20	16.47	R	12.50	25.28	5.00	5.00			7.14	10.60%	4.00	2.00%	1.36	0.30%	53.07	
41	MIMOSA	2+62.16	16.48	R	12.93	12.88	5.00	5.00			7.62	11.80%	4.00	2.00%	1.31	6.55%	53.52	
42	MIMOSA	3+25.66	13.67	L	13.26	9.18	5.00	5.00	1.50	18.50%	4.29	16.45%	4.00	2.00%	3.47	6.34%	53.59	
43	MIMOSA	3+45.26	18.95	R	11.44	17.08	5.00	5.00			5.00	16.86%	5.00	2.00%	1.44	0.00%	53.18	
44	MIMOSA	4+66.79	15.66	R	12.50	23.96	5.00	5.00	1.50	26.00%	6.00	16.30%	5.00	2.00%			53.36	
45	MIMOSA	6+16.32	14.57	R	12.26	22.09	5.00	5.00			5.84	11.27%	5.00	2.00%	1.42	8.45%	53.21	
46	MIMOSA	6+34.76	16.15	L	12.74	24.30	10.00	10.00			5.89	5.79%	5.00	2.00%	1.85	4.00%	52.90	
47	MIMOSA	7+28.78	14.36	R	12.32	16.22	10.00	10.00	1.50	26.00%	4.03	16.37%	5.00	2.00%	1.79	6.50%	53.68	
48	MIMOSA	7+53.03	17.27	L	12.84	24.66	10.00	10.00			5.49	11.93%	5.28	2.00%	2.07	5.50%	52.98	
49	MIMOSA	8+33.25	17.83	L	13.00	11.45	5.00	5.00	1.50	33.00%	3.00	15.04%	4.00	2.00%	4.50	5.00%	53.34	
50	MIMOSA	8+42.05	14.33	R	13.67	19.45	5.00	3.40	1.50	33.30%	4.95	17.00%	5.00	2.00%	2.22	8.51%	53.69	
51	MIMOSA	8+71.32	14.87	R	14.59	16.78	4.00	5.00	1.50	27.00%	5.50	14.81%	5.00	2.00%	2.59	6.50%	53.47	
52	MIMOSA	8+84.38	16.89	L	13.40	15.70	5.00	2.80	1.50	20.00%	2.17	14.48%	4.00	2.00%	5.73	9.00%	53.15	
53	MIMOSA	9+03.83	14.86	R	14.00	19.07	5.00	5.00			7.00	16.99%	5.00	2.00%	2.00	4.00%	53.25	
54	MIMOSA	9+53.62	15.69	R	14.00	28.65	5.00	5.00	1.50	7.75%	5.49	13.57%	5.00	2.00%	2.01	4.00%	52.77	
55	MIMOSA	9+61.15	15.74	L	14.00	123.72	2.80	4.00	1.50	22.00%	2.19	15.11%	4.00	2.00%	6.31	3.00%	52.64	
56	MIMOSA	9+94.54	16.25	R	14.50	17.90	5.00	5.00	1.50	26.00%	4.78	16.04%	5.14	2.00%	3.08	6.00%	53.07	
57	MIMOSA	10+24.69	16.26	R	14.50	16.00	5.00	5.00	1.50	28.00%	4.93	16.36%	5.12	2.00%	2.95	6.00%	53.04	
58	MIMOSA	10+37.34	15.73	L	13.50	16.00	4.00	1.60	1.50	33.30%	2.20	12.99%	4.00	2.00%	5.80	2.00%	52.46	
59	MIMOSA	10+51.31	16.27	R	14.50	17.65	5.00	5.00	1.50	13.00%	5.41	14.61%	5.00	2.00%	2.59	8.00%	52.74	
60	MIMOSA	10+59.42	15.73	L	13.50	15.88	1.60	5.00	1.50	33.30%	3.50	16.64%	4.00	2.00%	4.50	9.50%	53.01	
61	MIMOSA	11+27.14	16.13	R	14.40	12.70	5.00	5.00	1.50	33.30%	5.50	14.73%	5.00	2.00%	2.40	7.00%	52.80	
62	MIMOSA	12+05.87	15.95	R	14.00	25.86	5.00	5.00	1.50	25.00%	5.50	16.45%	5.00	2.00%	2.00	1.00%	52.72	
63	MIMOSA	12+16.11	15.71	L	14.00	16.64	5.00	4.70	1.50	33.33%	8.43	17.00%	3.00	2.00%	3.48	17.00%	54.10	3.00
64	MIMOSA	12+43.31	15.63	L	14.00	18.35	4.70	5.00	1.50	33.33%	7.63	17.00%	3.00	2.00%	1.97	17.00%	54.03	2.00
65	MIMOSA	12+65.51	16.42	R	14.25	23.67	5.00	5.00	1.50	33.33%	7.00	16.62%	5.00	2.00%	0.75	0.50%	53.30	
66	MIMOSA	12+70.92	15.55	L	14.00	17.53	5.00	1.60	1.50	33.33%	7.40	17.00%	3.00	2.00%	2.12	17.00%	54.13	2.00
67	MIMOSA	12+94.18	15.47	L	14.00	17.63	1.60	2.80	1.50	33.33%	7.30	17.00%	3.00	2.00%	1.25	17.00%	54.08	1.00
68	MIMOSA	13+13.61	15.42	L	13.76	8.78	2.90	5.00	1.50	33.33%	7.00	16.89%	4.00	2.00%	1.26	0.50%	53.48	
69	MIMOSA	13+46.49	16.67	R	14.17	24.07	5.00	5.00	1.50	26.58%	5.02	14.30%	5.00	2.00%	2.65	0.50%	53.08	
70	MIMOSA	13+63.53	15.26	L	13.84	11.80	5.00	5.00	1.50	25.00%	6.50	16.63%	4.00	2.00%	1.84	2.50%	53.49	
70A	MIMOSA	14+09.34	16.77	R	14.09	40.88	3.00	5.00			7.32	12.58%	4.00	2.00%	2.77	2.50%	53.15	
71	MIMOSA	14+46.26	16.97	R	14.23	16.65	3.00	5.00	1.50	10.36%	5.65	11.38%	4.00	2.00%	3.08	6.50%	53.30	
72	MIMOSA	14+81.59	17.08	R	14.00	17.36	5.00	5.00	1.50	10.13%	5.95	8.52%	4.00	2.00%	2.55	6.50%	53.28	
482	MIMOSA	14+59.28	14.97	L	14.00	10.00	5.00	5.00	1.50	4.47%	6.50	2.47%	4.00	2.00%	2.00	14.50%	52.71	
73	AVALON	2+32.75	8.58	R	17.10	8.50	5.00	5.00			11.30	9.90%	4.00	2.00%	1.80	4.50%	52.86	
74	AVALON	2+64.17	18.73	L	14.40	27.00	10.00	10.00			10.40	15.87%	4.00	2.00%			53.41	
75	AVALON	3+58.35	16.05	R	15.20	10.00	5.00	5.00			8.90	11.48%	4.00	2.00%	2.30	6.00%	52.79	
76	AVALON	4+05.88	17.47	R	15.40	15.50	5.00	5.00			10.30	11.77%	4.00	2.00%	1.10	8.00%	52.78	
77	AVALON	4+28.67	10.72	L	15.10	24.00	5.00	5.00	1.50	33.33%	9.10	15.50%	4.50	2.00%			53.46	
78	AVALON	4+42.30	15.50	R	16.10	14.50	5.00	5.00			10.90	14.79%	4.00	2.00%	1.20	6.50%	53.00	
79	AVALON	4+93.60	12.30	R	15.50	15.00	5.00	3.25			9.70	16.53%	4.00	2.00%	1.80	6.50%	52.88	
80	AVALON	5+15.14	13.86	R	15.70	11.50	5.00	5.00			10.90	16.26%	4.50	2.00%	0.30	6.00%	53.02	
81	AVALON	5+79.47	15.66	R	15.39	10.00	5.00	5.00			10.35	13.80%	5.00	2.00%	0.04	5.00%	52.89	
82	AVALON	5+92.66	11.48	L	15.90	12.00	5.00	5.00			11.85	14.00%	4.00	2.00%	0.05	1.50%	53.14	
83	AVALON	6+46.46	11.59	L	15.62	12.00	5.00	5.00			11.63	14.40%	3.00	2.00%	0.99	0.50%	53.30	
84	AVALON	6+44.69	15.33	R	15.57	9.50	5.00	5.00			10.38	13.03%	4.00	2.00%	1.19	4.00%	53.06	
85	AVALON	6+70.75	10.68	L	17.03	16.00	5.00	5.00			10.61	11.83%	4.00	2.00%	2.42	3.50%	53.08	
86	AVALON	7+15.32	10.27	L	16.61	16.00	5.00	2.00			9.65	10.84%	4.00	2.00%	2.96	2.50%	53.01	
87	AVALON	7+15.18	16.72	R	16.43	9.00	5.00	5.00			10.43	9.97%	4.00	2.00%	2.00	5.00%	53.03	
88	AVALON	7+34.25	10.61	L	16.56	9.50	2.00	5.00			10.07	8.84%	4.00	2.00%	2.49	2.00%	52.89	
89	AVALON	7+95.17	13.34	R	16.28	11.00	5.00	5.00			10.72	10.76%	4.00	2.00%	1.56	3.00%	53.10	
90	AVALON	8+64.96	5.08	R	16.30	10.00	5.00	5.00			10.81	13.44%	4.00	2.00%	1.49	6.50%	53.24	
91	AVALON	8+67.66	23.11	L	15.17	31.00	5.00	5.00			10.76	10.68%	4.00	2.00%	0.41	5.00%	52.85	
92	AVALON	9+27.08	11.81	R	15.56	19.00	5.00	5.00			9.89	12.06%	4.00	2.00%	1.67	4.00%	52.76	
93	AVALON	9+52.55	12.49	L	14.77	18.00	5.00	5.00			10.73	15.45%	4.00	2.00%	0.04	6.50%	52.84	
94	AVALON	10+07.10	8.98	L	15.69	16.00	5.00	2.00			11.69	15.57%	4.00	2.00%			52.89	
95	AVALON	10+29.19	8.85	L	19.23	12.50	2.00	5.00			11.24	13.62%	4.00	2.00%	3.99	6.00%	52.95	
96	AVALON	10+75.25	10.93	L	16.69	13.00	5.00	5.00			11.04	11.83%	4.00	2.00%	1.65	7.50%	52.50	
97	AVALON	11+44.64	13.29	L	14.33	16.50	5.00	5.00			10.33	13.17%	4.00	2.00%			52.54	
98	AVALON	11+90.56	8.92	L	10.78	13.00	5.00	5.00	1.50	33.33%	9.28	16.92%		2.00%			53.39	
99	AVALON	12+36.19	10.27	L	10.37	21.00	5.00	5.00			10.37	10.80%		2.00%			52.60	
100	AVALON	12+72.93	13.01	R	16.93	20.00	5.00	5.00			3.86	17.00%	5.00	2.00%	8.07	14.30%	53.52	
101	AVALON	13+04.02	14.83	L	6.21	10.00	5.00	5.00			6.21	13.69%		2.00%			52.57	
102	AVALON	13+05.25	12.16	R	10.80	10.00	5.00	5.00	1.50	33.33%	2.47	14.39%	4.00	2.00%	2.83	13.59%	53.04	
103	AVALON	13+43.99	14.74	L	10.54	17.00	5.00	5.00			6.53	13.77%	3.00	2.00%	1.01	5.00%	52.60	
104	AVALON	13+70.23	14.73	L	12.18	17.50	5.00	2.00	1.50	33.33%	4.68	16.03%	4.00	2.00%	2.00	8.50%	53.00	
105	AVALON	22+42.64	12.80	R	8.50	17.00	5.00	5.00	1.50	33.33%	2.40	17.00%	3.00	2.00%	1.60	12.63%	53.31	
106	AVALON	13+95.26	14.69	L	12.12	18.00	2.00	5.00			6.40	16.28%	4.00	2.00%	1.72	11.50%	52.74	
107	AVALON	14+51.58	14.60	L	10.23	18.50	5.00	5.00			6.23	15.41%	4.00	2.00%			52.42	
108	AVALON	14+99.98	14.53	L	12.13	20.00	5.00	5.00			5.90	13.00%	4.00	2.00%	2.23	6.86%	52.56	
109	AVALON	15+30.17	12.51	R	10.89	17.00	5.00	5.00			4.00	17.00%	3.50	2.00%	3.39	4.42%	52.56	
110	AVALON	15+40.00	14.46	L	11.76	39.50	5.00	5.00			6.00	17.00%	4.00	2.00%	1.76	15.91%	53.07	
111	AVALON	15+82.63	12.59	R	10.92	13.00	5.00	3.00			4.50	7.48%	4.00	2.00%	2.42	8.00%	52.28	
112	AVALON	16+03.30	14.37	L	9.91	13.00	5.00	3.50			5.90	5.92%		2.00%	4.01	4.50%	52.42	
113	AVALON	16+07.05	12.63	R	4.75	20.00	3.00	5.00			4.75	12.42%		2.00%			52.48	
114	AVALON	16+25.93	14.33	L	9.95	18.00	3.50	5.00			6.00	13.40%	3.00	2.00%	0.95	8.00%	52.89	
115	AVALON	16+55.74	14.28	L	10.07	19.00	5.00	5.00			6.10	9.95%	3.00	2.00%	0.97	6.50%	52.78	

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

PROPOSED COMMERCIAL 9–INCH DEPTH HIGH EARLY STRENGTH CONCRETE DRIVEWAY.

PREFERRED DRIVEWAY OPTIONS:

CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION FOR OWNER'S DRIVEWAY CONSTRUCTION PREFERENCE.
OPTION – 1 CITY OF HOUSTON DESIGN STANDARD.
OPTION 2 – CITY GRADES THE SUBGRADE TO PROPER SLOPE AND HOMEOWNER WORKS WITH THEIR CONTRACTOR TO FINISH THE DRIVEWAY WITH THEIR DESIRED FINISH. OWNER PAYS FOR THE WORK PERFORMED BY THEIR CONTRACTOR WITH OPTION 2.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRIVEWAY SUMMARY TABLE & DETAILS – SHEET 1 OF 5

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **58** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\58-62_DRIVEWAY TYP.dwg SHEET 1 May 21 , 2026 – 3:43PM Jgarza

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
116	AVALON	16+78.60	12.74	R	9.00	17.00	5.00	5.00	1.50	33.33%	3.40	11.63%	4.00	2.00%	0.10	14.50%	53.04	
117	AVALON	16+96.42	14.22	L	9.96	19.00	5.00	4.00			3.90	12.22%	4.00	2.00%	2.06	6.00%	52.68	
118	AVALON	17+19.59	14.18	L	10.00	9.50	4.00	5.00			6.00	8.00%	4.00	2.00%			52.49	
119	AVALON	17+27.07	12.82	R	8.73	18.00	5.00	5.00	1.50	33.33%	3.20	10.61%	4.00	2.00%	0.03	1.50%	52.83	
120	AVALON	17+53.91	14.13	L	5.62	10.00	5.00	5.00			5.62	6.58%		2.00%			52.20	
121	AVALON	17+98.19	14.06	L	12.00	24.00	5.00	5.00			5.91	15.14%	4.00	2.00%	2.09	5.50%	52.78	
122	AVALON	18+76.51	12.24	L	12.00	18.00	5.00	2.50	1.50	33.33%	4.20	14.68%	4.00	2.00%	2.30	14.50%	53.23	
123	AVALON	19+01.72	11.16	L	12.00	18.00	2.50	5.00	1.50	33.33%	4.30	17.00%	4.00	2.00%	2.20	10.87%	53.33	
124	AVALON	19+30.78	9.92	L	11.90	17.00	5.00	5.00			5.60	15.38%	4.00	2.00%	2.30	13.00%	53.11	
125	AVALON	19+54.80	18.14	R	11.10	18.50	5.00	5.00	1.50	33.33%	3.50	14.00%	4.00	2.00%	2.10	5.24%	53.12	
126	AVALON	19+60.61	8.63	L	11.90	16.00	5.00	5.00			5.20	14.80%	4.00	2.00%	2.70	11.50%	53.12	
127	AVALON	19+85.62	19.08	R	2.85	12.00	5.00	5.00	1.50	27.00%	1.35	16.67%					52.65	
128	AVALON	19+90.33	8.91	L	19.40	16.50	5.00	5.00			6.00	14.18%	4.00	2.00%	9.40	8.50%	53.77	
130	AVALON	22+40.79	19.27	L	7.90	17.00	5.00	5.00	1.50	33.33%	2.40	16.88%	3.00	2.00%	1.00	8.50%	53.18	
131	AVALON	24+75.21	18.26	R	7.80	20.00	10.00	10.00	1.50	33.33%	1.50	17.00%	3.00	2.00%	1.80	11.95%	53.37	
132	AVALON	25+29.57	18.26	R	7.60	21.00	10.00	10.00	1.50	33.33%	1.10	13.19%	4.00	2.00%	1.00	4.50%	53.28	
133	AVALON	25+80.04	18.26	R	7.50	23.00	10.00	10.00	1.50	33.33%	1.20	14.50%	4.00	2.00%	0.80	2.00%	53.32	
134	AVALON	26+71.55	15.84	R	9.60	34.00	10.00	5.00			4.80	11.29%	4.50	2.00%	0.30	6.00%	52.92	
135	ELLA LEE	1+39.90	16.12	L	16.00	16.02	5.00	5.00	1.50	7.45%	8.19	7.45%	4.00	2.00%	2.31	1.73%	52.60	
136	ELLA LEE	1+81.94	11.55	R	14.00	11.62	5.00	1.55			9.74	13.43%	4.00	2.00%	0.26	0.00%	53.34	
137	ELLA LEE	1+98.29	12.15	R	14.01	7.50	1.55	5.00			10.01	8.25%	4.00	2.00%			52.89	
138	ELLA LEE	2+47.66	12.41	L	15.00	24.18	5.00	5.00	1.50	9.82%	6.97	10.39%	4.00	2.00%	2.53	0.00%	53.07	
139	ELLA LEE	2+72.88	16.34	R	15.06	11.78	5.00	5.00			11.06	6.44%	4.00	2.00%			52.90	
140	ELLA LEE	3+42.30	19.40	R	15.00	10.73	5.00	5.00	1.50	7.96%	9.18	7.96%	4.00	2.00%	0.32	12.50%	52.86	
141	ELLA LEE	3+86.93	7.62	L	14.00	21.47	5.00	5.00	1.50	9.98%	6.27	9.98%	4.00	2.00%	2.23	4.04%	52.62	
142	ELLA LEE	4+30.32	17.92	R	15.04	10.04	5.00	5.00	1.50	6.10%	9.14	7.43%	4.40	2.00%			52.47	
143	ELLA LEE	4+66.76	11.45	L	14.00	11.91	5.00	5.00	1.50	13.48%	5.96	13.48%	4.00	2.00%	2.54	2.36%	52.56	
144	ELLA LEE	5+03.02	14.46	R	14.96	10.38	5.00	5.00	1.50	7.82%	9.46	8.67%	4.00	2.00%			52.39	
145	ELLA LEE	5+48.69	9.20	L	14.00	9.72	5.00	5.00	2.11	10.38%	5.09	10.38%	4.00	2.00%	2.80	1.07%	52.02	
146	ELLA LEE	5+70.51	18.88	R	14.96	9.61	5.00	5.00	1.50	8.03%	9.46	8.77%	4.00	2.00%			52.18	
147	ELLA LEE	6+30.83	7.08	L	13.00	9.75	5.00	5.00	1.56	15.97%	4.49	15.97%	5.00	2.00%	1.95	4.10%	52.05	
148	ELLA LEE	6+52.40	19.62	R	14.81	12.75	5.00	5.00	1.50	7.55%	9.31	9.70%	4.00	2.00%			51.99	
149	ELLA LEE	7+04.56	9.57	L	13.00	11.77	5.00	5.00	1.50	16.46%	5.48	16.46%	4.00	2.00%	2.02	3.47%	52.29	
150	ELLA LEE	7+13.31	16.91	R	14.81	10.30	5.00	5.00	1.50	9.74%	9.31	10.92%	4.00	2.00%			52.26	
151	ELLA LEE	7+79.68	16.39	L	13.00	12.10	5.00	5.00	1.42	14.04%	5.56	14.04%	4.00	2.00%	2.02	3.96%	52.41	
152	ELLA LEE	7+79.41	10.81	R	14.61	10.96	5.00	5.00	1.50	10.93%	9.11	12.47%	4.00	2.00%			52.65	
153	ELLA LEE	8+47.34	14.59	R	14.99	9.34	5.00	5.00	1.50	9.28%	9.49	11.91%	4.00	2.00%			52.88	
154	ELLA LEE	8+58.55	11.62	L	13.00	12.72	5.00	5.00	1.50	15.86%	4.57	15.86%	5.00	2.00%	1.93	3.50%	52.71	
155	ELLA LEE	9+17.58	18.34	R	14.58	10.23	5.00	5.00	1.50	9.19%	9.08	10.40%	4.00	2.00%			52.54	
156	ELLA LEE	9+25.45	8.47	L	14.00	13.80	5.00	5.00	1.50	15.24%	5.69	15.24%	4.00	1.00%	2.81	3.00%	52.55	
157	ELLA LEE	10+12.56	9.53	L	14.00	9.77	5.00	5.00	1.50	14.67%	4.96	14.67%	5.00	2.00%	2.54	3.15%	52.13	
158	REBA	1+84.91	11.77	L	14.21	13.23	5.00	5.00			10.21	7.92%	4.00	2.00%			52.28	
159	REBA	1+98.39	15.35	R	13.89	12.77	5.00	5.00	1.50	8.30%	8.39	8.66%	4.00	2.00%			52.20	
160	REBA	2+56.34	12.25	L	14.04	8.68	5.00	5.00	1.50	6.64%	8.55	8.28%	3.99	2.00%			51.98	
161	REBA	2+66.09	14.46	R	14.58	9.10	5.00	5.00	1.50	5.44%	9.08	5.44%	4.00	2.00%			51.71	
162	REBA	3+33.49	11.95	L	15.00	11.65	5.00	5.00	1.50	8.54%	8.92	8.54%	4.00	2.00%	0.58	1.72%	51.84	
163	REBA	3+36.80	15.13	R	14.26	8.50	5.00	5.00	1.50	7.38%	8.76	7.49%	4.00	0.52%			51.64	
164	REBA	3+98.84	11.65	L	14.15	8.67	5.00	5.00	1.50	7.19%	8.65	10.31%	4.00	2.00%			51.74	
165	REBA	4+04.14	14.60	R	15.00	9.29	5.00	5.00	1.50	8.25%	8.79	8.25%	4.02	2.00%	0.69	14.43%	51.68	
166	REBA	4+71.38	11.86	L	15.00	9.55	5.00	5.00	1.50	8.84%	8.89	8.84%	3.66	2.00%	0.95	12.29%	51.55	
167	REBA	4+72.40	14.49	R	14.10	10.75	5.00	5.00	1.50	9.54%	8.60	9.81%	4.00	1.16%			51.47	
168	REBA	5+40.85	11.09	L	14.16	9.00	5.00	5.00	1.50	12.31%	8.66	14.27%	4.00	2.00%			51.74	
169	REBA	5+40.19	16.27	R	14.14	9.41	5.00	5.00	1.50	11.56%	8.72	11.56%	3.92	1.79%			51.50	
170	REBA	6+06.63	12.30	L	14.18	9.78	5.00	5.00	1.50	9.27%	8.68	11.00%	4.00	2.00%			51.47	
171	REBA	6+05.67	15.04	R	14.25	10.00	5.00	5.00	1.50	10.43%	8.75	10.43%	4.00	2.00%			51.46	
172	REBA	6+68.94	12.38	R	15.00	9.20	5.00	5.00	1.50	11.00%	9.01	11.00%	4.00	2.00%	0.49	10.20%	51.78	
173	REBA	6+75.15	14.24	L	14.84	12.00	5.00	5.00	1.50	10.91%	9.34	12.52%	4.00	2.00%			51.92	
174	REBA	7+36.59	9.10	R	14.08	12.41	5.00	5.00	1.50	12.43%	8.58	13.25%	4.00	2.00%			52.09	

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
175	REBA	7+43.82	18.38	L	15.00	11.55	5.00	5.00	1.50	12.15%	9.21	13.89%	4.00	2.00%	0.29	0.00%	52.26	
176	REBA	7+84.49	20.07	L	14.33	19.00	5.00	5.00	1.50	15.01%	8.83	16.71%	4.00	2.00%			52.61	
177	REBA	7+99.17	7.90	R	14.18	11.88	5.00	5.00	1.50	9.37%	8.68	11.33%	4.00	2.00%			52.09	
178	REBA	8+14.52	18.35	L	14.04	12.12	5.00	5.00	1.50	12.76%	7.42	14.48%	5.12	2.00%			52.29	
179	REBA	8+54.41	10.84	R	15.00	22.95	5.00	5.00	1.50	8.71%	8.78	8.71%	4.22	2.00%	0.50	15.12%	52.14	
180	REBA	8+74.17	13.66	L	13.95	12.82	5.00	5.00	1.50	10.24%	7.47	10.24%	4.98	2.00%			52.30	
181	REBA	9+33.21	13.84	R	15.00	14.51	5.00	5.00	1.50	9.92%	8.62	9.92%	4.00	2.00%	0.88	6.82%	52.46	
182	REBA	9+44.45	12.58	L	16.00	10.51	5.00	5.00	1.50	5.88%	7.94	5.88%	4.00	2.00%	2.56	8.59%	52.20	
183	REBA	9+99.62	15.10	R	13.96	15.32	5.00	5.00	1.50	10.74%	8.46	10.74%	4.00	2.00%			52.47	
184	FAIRVIEW	0+93.43	31.86	L	16.00	11.00	5.00	5.00			11.00	7.55%	5.00	2.00%			52.21	
185	FAIRVIEW	1+56.37	34.85	L	12.00	30.00	5.00	4.70			7.80	16.01%	4.00	2.00%	0.20	10.50%	52.85	
186	FAIRVIEW	1+54.55	18.58	R	9.58	22.00	5.00	5.00	1.50	33.33%	2.76	16.30%	3.00	2.00%	2.32	16.39%	53.04	
187	FAIRVIEW	1+87.63	36.44	L	10.00	13.00	4.70	5.00			6.28	14.90%	3.40	2.00%	0.32	8.21%	52.70	
188	FAIRVIEW	1+92.11	19.21	R	9.45	22.00	5.00	5.00	1.50	33.33%	3.06	17.00%	4.00	2.00%	0.89	10.10%	52.90	
189	FAIRVIEW	3+75.14	22.01	R	9.50	11.00	5.00	5.00	1.50	30.00%	3.10	17.00%	4.00	2.00%	5.50	17.00%	52.59	#VALUE!
190	FAIRVIEW	4+20.78	34.08	L	9.00	20.50	5.00	5.00	1.50	24.00%	2.90	16.79%	4.00	2.00%	0.60	10.50%	52.40	
191	FAIRVIEW	4+33.32	22.44	R	9.50	11.00	5.00	4.80			5.00	15.50%	4.00	2.00%	0.50	7.00%	52.34	
192	FAIRVIEW	4+51.24	33.75	L	9.00	18.00	5.00	5.00			4.20	12.60%	4.00	2.00%	0.80	5.10%	52.15	
193	FAIRVIEW	4+54.04	22.60	R	10.00	15.00	4.80	1.40			5.10	15.00%	4.00	2.00%	0.90	10.56%	52.45	
194	FAIRVIEW	4+74.77	22.75	R	10.00	14.00	1.40	5.00			5.20	14.50%	4.00	2.00%	0.80	12.00%	52.43	
195	FAIRVIEW	5+00.13	33.22	L	3.80	17.00	5.00	4.80	1.50	30.00%	2.30	16.96%					52.17	
196	FAIRVIEW	5+01.77	22.95	R	10.00	18.50	5.00	1.70	1.50	30.00%	3.90	17.00%	3.00	2.00%	0.33	17.00%	52.79	#VALUE!
197	FAIRVIEW	5+26.32	23.13	R	10.00	17.50	1.70	4.80	1.50	30.00%	4.00	17.00%	3.00	2.00%	1.50	13.33%	52.62	
198	FAIRVIEW	5+26.37	32.94	R	8.50	19.00	4.80	2.50	1.50	27.00%	2.30	16.91%	4.00	2.00%	0.70	10.86%	52.16	
199	FAIRVIEW	5+49.24	32.69	R	8.75	12.00	2.50	5.00	1.50	27.00%	2.50	15.00%	4.00	2.00%	0.28	17.00%	52.18	#VALUE!
200	FAIRVIEW	5+53.00	23.33	R	10.50	20.00	4.80	5.00	1.50	27.50%	4.20	16.85%	4.00	2.00%	0.80	1.28%	52.27	
201	FAIRVIEW	6+06.32	23.72	R	10.60	17.00	5.00	5.00	1.50	33.33%	4.00	17.00%	4.00	2.00%	4.34	17.00%	52.79	4.00
202	FAIRVIEW	6+07.70	32.06	L	3.70	16.50	4.90	5.00			3.70	11.20%					51.02	
203	FAIRVIEW	8+03.45	29.58	L	4.50	18.00	5.00	5.00			4.50	12.44%					51.03	
204	FAIRVIEW	8+14.36	25.05	R	10.60	16.00	5.00	5.00	1.50	33.33%	4.10	15.85%	3.00	2.00%	2.00	15.01%	52.00	
205	FAIRVIEW	8+65.20	24.14	R	12.00	16.00	5.00	5.00			6.20	15.00%	4.00	2.00%	1.80	9.44%	51.84	
206	FAIRVIEW	8+71.52	26.96	L	11.60	17.00	5.00	5.00	1.50	33.33%	4.90	17.00%	3.00	2.00%	2.20	16.68%	52.43	
207	FAIRVIEW	9+12.42	17.05	R	20.30	16.50	5.00	4.60			13.30	14.00%	4.00	2.00%	3.00	6.93%	52.96	
208	FAIRVIEW	9+38.84	16.41	R	21.60	16.50	4.60	5.00			13.90	11.50%	4.00	2.00%	3.70	13.28%	53.06	
209	FAIRVIEW	9+64.80	16.70	R	21.90	17.00	5.00	1.50			13.60	12.00%	4.00	2.00%	4.30	8.56%	53.06	
210	FAIRVIEW	9+88.40	16.95	R	21.80	17.00	1.50	5.00			13.30	12.00%	4.00	2.00%	4.50	10.98%	53.22	
211	FAIRVIEW	10+15.75	16.93	R	19.90	13.00	5.00	5.00			13.00	12.00%	4.00	2.00%	2.90	7.59%	53.00	
212	FAIRVIEW	10+32.84	16.05	L	20.70	16.50	5.00	2.00			15.90	10.00%	4.50	2.00%	0.30	10.00%	53.25	
213	FAIRVIEW	10+38.80	16.94	R	19.80	13.00	5.00	5.00			12.90	12.50%	4.00	2.00%	2.90	7.84%	53.15	
214	FAIRVIEW	10+56.30	16.05	L	20.90	16.00	2.00	5.00			16.50	11.00%	4.00	2.00%	0.40	3.75%	53.34	
215	FAIRVIEW	10+74.04	16.92	R	19.70	24.60	10.00	10.00			13.00	10.00%	4.00	2.00%	2.70	5.93%	52.64	
216	FAIRVIEW	10+91.15	16.04	L	21.30	16.10	5.00	5.00			16.80	11.00%	4.00	2.00%	0.50	5.60%	53.41	
217	FAIRVIEW	11+18.16	16.03	L	21.60	16.00	5.00	5.00			16.90	10.00%	4.00	2.00%	0.70	4.29%	53.40	
218	FAIRVIEW	11+50.34	16.02	L	21.90	14.40	5.00	5.00			17.00	5.00%	4.00	2.00%	0.90	5.56%	52.52	
220	FAIRVIEW	12+28.47	16.99	R	17.80	12.00	5.00	5.00			13.00	7.65%	4.00	2.00%	0.80	4.50%	52.52	
223	FAIRVIEW	13+89.58	18.36	R	18.20	16.00	5.00	5.00			12.80	9.82%	4.00	2.00%	1.40	4.50%	52.78	
224	FAIRVIEW	14+01.96	14.46	L	23.90	16.00	5.00	0.50			16.30	7.10%	4.00	2.00%	3.60	9.50%	52.92	
225	FAIRVIEW	14+39.64	13.94	L	24.10	19.50	5.00	5.00			16.40	9.55%	4.00	2.00%	3.70	5.50%	53.07	
226	FAIRVIEW	14+89.06	13.25	L	24.30	27.50	5.00	5.00			16.70	6.89%	4.00	2.00%	3.60	5.00%	52.70	
228	FAIRVIEW	17+43.10	16.91	R	22.80	43.00	5.00	3.00			15.80	7.34%	5.00	2.00%	2.00	1.00%	53.15	
229	FAIRVIEW	17+46.51	16.02	L	19.30	30.00	10.00	3.90			13.10	9.65%	4.00	2.00%	2.20	2.00%	53.27	
230	FAIRVIEW	17+80.84	16.18	L	22.20	16.00	3.90	5.00			15.10	8.60%	4.00	2.00%	3.10	2.00%	53.56	
231	FAIRVIEW	17+81.77	16.81	R	19.80	18.50	3.00	5.00			13.50	7.95%	5.00	2.00%	1.30	0.50%	53.28	
232	FAIRVIEW	18+16.44	16.28	L	20.40	18.50	5.00	5.00			14.10	9.33%	4.00	2.00%	2.30	1.50%	53.52	
233	FAIRVIEW	19+76.86	17.61	L	20.90	16.00	5.00	5.00			14.40	9.58%	4.50	2.00%	2.00	2.50%	53.88	
234	FAIRVIEW	20+04.49	17.77	L	20.80	16.00	5.00	5.00			14.90	8.60%	4.00	2.00%	1.90	2.00%	53.87	
235	FAIRVIEW	20+10.28	15.19	R	21.20	31.00	5.00	5.00			14.30	4.35%	5.00	2.00%	1.90	2.00%	53.25	
236	FAIRVIEW	20+47.97	18.02	L	20.70	24.50	5.00	5.00			14.90	5.03%	4.00	2.00%	1.80	4.50%	53.55	

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

PROPOSED COMMERCIAL 9–INCH DEPTH HIGH EARLY STRENGTH CONCRETE DRIVEWAY.

PREFERRED DRIVEWAY OPTIONS:

CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION FOR OWNER'S DRIVEWAY CONSTRUCTION PREFERENCE.
OPTION – 1 CITY OF HOUSTON DESIGN STANDARD.
OPTION 2 – CITY GRADES THE SUBGRADE TO PROPER SLOPE AND HOMEOWNER WORKS WITH THEIR CONTRACTOR TO FINISH THE DRIVEWAY WITH THEIR DESIRED FINISH. OWNER PAYS FOR THE WORK PERFORMED BY THEIR CONTRACTOR WITH OPTION 2.

OTHON

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRIVEWAY SUMMARY TABLE & DETAILS – SHEET 2 OF 5

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **59** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22437\58-62_DRIVEWAY TYP.dwgSHEET 2 May 21 , 2026 – 3:43PM Jgarza

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
237	FAIRVIEW	20+80.00	14.79	R	21.40	28.00	5.00	5.00			14.90	3.83%	4.50	2.00%	2.00	4.00%	53.29	
238	FAIRVIEW	20+91.84	18.27	L	20.50	16.00	5.00	5.00			14.80	8.31%	4.00	2.00%	1.70	0.00%	53.82	
239	FAIRVIEW	21+19.74	18.42	L	20.50	16.00	5.00	5.00			13.80	9.27%	4.50	2.00%	2.20	0.50%	53.81	
240	LOCKE	1+58.50	13.08	L	17.00	9.28	5.00	5.00	1.50	8.81%	8.86	8.81%	4.00	1.91%	2.64	1.38%	52.71	
241	LOCKE	1+62.61	13.93	R	16.00	6.93	5.00	5.00	1.50	7.15%	8.79	7.15%	4.00	1.23%	1.71	0.63%	52.55	
242	LOCKE	2+25.06	12.70	L	17.00	18.18	5.00	5.00	1.50	8.67%	8.99	8.67%	4.00	2.00%	2.51	1.99%	52.60	
243	LOCKE	2+26.45	14.29	R	16.00	9.25	5.00	5.00	0.50	7.88%	10.10	7.88%	4.00	2.00%	1.40	2.86%	52.52	
244	LOCKE	2+87.14	12.34	L	17.00	9.98	5.00	5.00	1.51	9.36%	9.20	9.36%	4.00	2.00%	2.29	0.87%	52.49	
245	LOCKE	3+48.57	11.99	L	17.00	10.23	5.00	5.00	1.50	13.18%	9.02	13.18%	4.00	2.00%	2.48	1.21%	52.71	
246	LOCKE	3+48.68	14.99	R	16.00	7.60	5.00	5.00	0.50	11.79%	9.76	11.79%	4.00	2.00%	1.74	1.72%	52.53	
247	LOCKE	4+09.71	11.64	L	17.00	9.42	5.00	5.00	1.50	11.76%	9.14	11.76%	4.00	2.00%	2.36	1.27%	52.39	
248	LOCKE	4+69.66	11.29	L	17.00	11.87	5.00	5.00	1.50	11.65%	9.25	11.65%	4.00	2.00%	2.25	2.22%	52.24	
249	LOCKE	5+19.54	14.98	R	17.00	9.12	5.00	5.00	1.50	11.99%	8.33	11.99%	4.00	2.00%	3.17	2.21%	52.05	
250	LOCKE	5+28.46	11.12	L	17.00	9.52	5.00	5.00	1.50	8.01%	9.31	8.01%	4.00	1.28%	2.19	5.42%	51.73	
251	LOCKE	5+73.67	13.70	R	17.00	9.51	5.00	5.00	1.00	12.09%	9.40	12.09%	4.00	2.00%	2.60	3.85%	52.00	
252	LOCKE	5+88.21	12.69	L	17.00	9.18	5.00	5.00	1.50	9.27%	8.88	9.27%	4.00	2.00%	2.62	3.44%	51.65	
253	LOCKE	6+44.24	12.81	R	17.00	22.38	5.00	5.00	1.50	9.93%	9.11	9.93%	4.00	2.00%	2.39	1.67%	51.53	
254	LOCKE	6+48.97	13.18	L	17.00	9.71	5.00	5.00	1.50	13.01%	8.58	13.01%	4.00	2.00%	2.92	3.77%	51.84	
255	LOCKE	7+08.14	12.82	R	17.00	8.95	5.00	5.00	1.50	9.34%	9.08	9.34%	4.00	2.00%	2.42	1.65%	51.28	
256	LOCKE	7+14.34	13.67	L	16.50	9.28	5.00	5.00	1.50	12.90%	8.71	12.90%	4.00	2.00%	2.29	3.49%	51.63	
257	LOCKE	7+68.53	13.66	L	16.50	9.50	5.00	5.00	1.00	10.74%	9.12	10.74%	4.00	2.00%	2.38	1.68%	51.33	
258	LOCKE	8+22.49	13.33	R	16.50	19.15	5.00	5.00	1.50	12.83%	8.01	12.83%	5.00	2.00%	1.99	5.53%	51.59	
259	LOCKE	8+29.10	13.65	L	16.50	8.50	5.00	5.00	1.50	11.07%	8.31	11.07%	4.00	2.00%	2.69	4.46%	51.79	
260	LOCKE	8+99.39	13.35	R	16.50	9.95	5.00	5.00	1.50	9.71%	8.94	9.71%	4.00	2.00%	2.06	5.83%	52.14	
261	LOCKE	8+99.74	13.64	L	16.50	10.13	5.00	5.00	1.50	10.20%	8.86	10.20%	4.00	2.00%	2.14	2.34%	52.13	
262	SAN SABA	1+58.74	16.48	L	10.00	44.50	5.00	5.00	1.50	14.85%	3.10	14.85%	4.00	2.00%	1.40	10.00%	53.65	
263	SAN SABA	1+66.72	13.56	R	10.00	23.88	10.00	10.00	1.50	13.34%	2.15	13.34%	4.00	2.00%	2.35	7.66%	53.75	
265	SAN SABA	3+26.50	16.52	L	9.00	20.00	5.00	5.00	1.50	33.33%	1.50	17.00%	4.00	2.00%	1.67	17.00%	53.62	2.00
266	SAN SABA	3+32.69	15.51	R	9.00	127.12	5.00	5.00							0.09	20.22%	53.87	
268	SAN SABA	4+47.72	15.86	L	9.00	16.00	5.00	5.00	1.50	33.33%	0.50	17.00%	3.00	2.00%	2.92	17.00%	53.34	3.00
269	SAN SABA	6+61.13	15.61	L	9.00	15.85	5.00	5.00	1.50	33.00%	2.15	14.62%	4.00	2.00%	1.35	10.37%	52.72	
270	DEVONSHIRE	1+38.07	6.18	L	10.00	21.14	5.00	5.00	1.50	22.00%	2.65	16.00%	4.00	2.00%	1.85	1.84%	52.13	
271	DEVONSHIRE	1+50.90	19.90	R	14.00	7.58	5.00	5.00	1.50	7.81%	5.41	7.81%	4.00	2.00%	3.09	4.54%	52.15	
272	DEVONSHIRE	1+83.33	5.89	L	10.00	16.19	5.00	5.00	1.50	16.00%	2.61	16.67%	4.00	2.00%	1.89	10.32%	52.29	
273	DEVONSHIRE	2+03.30	20.23	R	14.00	9.14	5.00	5.00	1.50	13.48%	5.24	13.48%	4.01	2.00%	3.25	6.76%	52.48	
274	DEVONSHIRE	2+28.19	18.44	R	14.00	16.17	5.00	2.70	1.50	28.00%	5.13	16.00%	4.00	2.00%	3.37	16.10%	53.07	
275	DEVONSHIRE	2+50.84	14.37	R	14.00	16.27	2.20	5.00	1.50	26.00%	5.21	16.50%	4.00	2.00%	3.29	14.84%	52.94	
276	DEVONSHIRE	2+53.23	12.67	L	10.00	19.32	5.00	3.00	1.50	27.00%	2.44	17.00%	3.78	2.00%	2.28	11.77%	52.26	
277	DEVONSHIRE	2+80.04	15.44	L	10.00	18.91	3.00	5.00	1.50	29.50%	2.81	17.00%	4.00	2.00%	1.69	12.91%	52.19	
278	DEVONSHIRE	3+08.94	9.08	R	15.00	11.84	5.00	5.00	1.50	14.31%	4.85	14.31%	3.30	2.00%	5.35	13.91%	52.57	
279	SALIS BURY	0+79.58	11.00	L	11.00	18.90	5.00	5.00	1.50	15.00%	1.10	16.00%	4.00	2.00%	4.40	11.80%	52.95	
280	SALIS BURY	1+43.17	12.08	L	10.20	18.37	5.00	5.00	1.50	26.00%	2.80	17.00%	4.00	2.00%	1.90	11.26%	52.92	
281	SALIS BURY	1+47.10	14.65	R	12.80	22.16	5.00	5.00	1.50	10.00%	4.90	9.06%	4.00	2.00%	2.40	17.00%	53.06	
282	SALIS BURY	2+01.07	13.04	R	13.00	12.32	5.00	5.00	1.50	13.00%	5.17	13.06%	4.00	2.00%	2.33	1.29%	52.50	
283	SALIS BURY	2+21.75	13.07	L	10.00	12.20	5.00	5.00	1.50	18.00%	2.16	15.93%	4.05	2.00%	2.29	1.97%	52.17	
284	SALIS BURY	2+49.51	12.88	R	13.20	12.91	5.00	5.00	1.50	7.00%	5.36	10.00%	4.00	2.00%	2.34	10.64%	52.41	
285	SALIS BURY	2+60.18	13.13	L	10.00	27.33	5.00	4.25	1.50	26.80%	2.41	16.92%	4.03	2.00%	2.06	4.87%	52.19	
286	SALIS BURY	2+97.08	12.19	L	11.00	27.83	4.25	5.00	1.50	15.00%	3.09	14.24%	4.00	2.00%	2.41	1.87%	51.99	
287	SALIS BURY	2+94.16	13.81	R	12.42	18.89	5.00	5.00	1.50	25.00%	4.84	16.00%	4.00	2.00%	2.08	15.89%	52.85	
288	SALIS BURY	3+22.19	14.77	R	12.42	18.78	5.00	5.00	1.50	22.00%	4.79	15.00%	4.00	2.00%	2.13	8.99%	52.53	
289	DUNRAVEN	0+92.70	12.57	L	10.00	22.13	5.00	5.00	1.50	16.50%	1.81	15.00%	4.00	2.00%	2.69	11.44%	52.46	
290	DUNRAVEN	1+49.61	12.49	L	10.00	12.71	5.00	4.40	1.50	13.50%	1.65	14.58%	4.00	2.00%	2.85	9.12%	52.55	
291	DUNRAVEN	1+50.47	13.51	R	14.00	10.00	5.00	5.00	1.50	11.17%	5.74	11.17%	4.00	2.00%	2.76	0.72%	52.69	
292	DUNRAVEN	1+72.26	13.54	R	14.00	15.59	5.00	2.20	1.50	12.60%	5.64	12.60%	4.00	2.00%	2.86	13.29%	53.23	
293	DUNRAVEN	1+71.26	12.45	L	10.00	11.86	4.40	5.00	1.50	16.29%	1.57	16.29%	4.00	2.00%	2.93	9.90%	52.72	
294	DUNRAVEN	1+94.97	13.57	R	14.00	15.47	2.20	5.00	1.50	11.78%	5.86	11.78%	4.00	2.00%	2.64	12.50%	53.22	
295	DUNRAVEN	2+16.44	13.57	L	10.00	11.84	5.00	5.00	1.19	12.28%	2.26	12.28%	4.00	2.00%	2.55	10.20%	52.77	
296	DUNRAVEN	2+23.22	11.97	R	14.00	16.50	5.00	2.00	1.50	9.05%	5.72	9.05%	4.00	2.00%	2.78	6.47%	52.87	

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
297	DUNRAVEN	2+47.38	9.10	R	14.00	17.34	2.00	5.00	1.50	12.54%	5.38	12.54%	4.00	2.00%	3.12	4.81%	52.93	
298	DUNRAVEN	2+75.10	8.74	R	12.00	16.17	5.00	2.00	1.50	15.32%	4.35	15.32%	4.00	2.00%	2.15	2.79%	52.69	
299	DUNRAVEN	2+99.41	12.07	R	10.00	16.26	2.00	5.00	1.50	16.63%	3.96	16.63%	4.00	2.00%	0.54	9.26%	52.56	
300	DUNRAVEN	2+97.33	15.42	L	13.00	11.51	5.00	3.30	1.50	9.56%	5.21	9.56%	4.00	2.00%	2.29	1.31%	52.34	
301	DUNRAVEN	3+18.78	15.17	L	14.00	22.47	3.30	5.00	1.50	16.82%	4.44	16.82%	4.00	2.00%	4.06	4.19%	52.76	
302	REVERE	5+28.53	7.86	L	12.00	24.77	2.00	5.00	1.50	12.50%	4.50	12.58%	5.00	1.50%	1.00	11.14%	54.04	
303	REVERE	4+96.19	17.43	R	12.00	17.92	5.00	5.00	1.50	31.62%	1.00	16.50%	5.00	2.00%	4.50	16.44%	54.41	
304	REVERE	4+86.01	8.77	L	12.00	45.05	5.00	2.00	1.50	14.50%	4.50	14.50%	5.00	1.50%	1.00	11.50%	54.28	
305	REVERE	4+32.49	9.92	L	12.00	86.61	5.00	2.00	1.50	11.00%	3.50	11.00%	5.00	1.50%	2.00	1.75%	54.04	
306	REVERE	1+86.24	18.58	L	10.00	35.52	2.50	5.00	1.50	30.00%	3.50	15.00%	3.00	2.00%	2.00	6.50%	53.88	
307	REVERE	1+69.43	10.86	R	10.00	26.93	5.00	5.00	1.50	13.00%	1.50	13.00%	4.00	1.00%	3.00	7.33%	53.32	
308	REVERE	1+43.20	20.07	L	10.00	35.28	5.00	2.50	1.50	30.00%	3.50	15.00%	3.00	2.00%	2.00	5.00%	53.72	
309	SPANN	4+73.54	15.90	R	11.73	20.00	8.00	8.00			11.73	11.76%		1.50%			53.23	
646	SPANN	3+76.80	18.89	L	6.32	28.00	5.00	10.00			6.32	6.65%		1.50%			52.41	
645	SPANN	4+14.00	16.10	R	11.95	20.00	5.00	5.00			11.95	10.29%		1.50%			53.37	
312	DICKEY	14+76.98	13.93	R	12.00	17.63	5.00	5.00	1.50	8.26%	5.34	9.29%	4.00	2.00%	1.16	1.72%	52.59	
313	DICKEY	14+37.89	13.23	L	11.00	11.97	4.50	5.00	1.50	9.83%	4.50	12.06%	4.00	2.00%	1.00	7.00%	52.62	
314	DICKEY	14+30.11	13.72	R	12.00	14.60	5.00	5.00	1.50	11.74%	5.51	11.74%	4.00	1.50%	0.99	10.81%	52.75	
315	DICKEY	14+11.82	13.35	L	11.00	21.63	5.00	4.50	1.50	9.20%	4.50	9.20%	4.00	2.00%	1.00	2.80%	52.37	
316	DICKEY	14+07.61	13.63	R	12.00	12.06	5.00	5.00	1.50	13.12%	5.59	13.12%	3.89	2.00%	1.02	7.06%	52.78	
317	DICKEY	13+02.54	13.83	L	11.00	11.61	5.00	5.00	1.50	14.10%	4.50	14.10%	4.00	2.00%	1.00	14.40%	52.45	
318	DICKEY	12+94.81	13.13	R	12.00	8.05	5.00	5.00	1.50	10.47%	5.50	10.47%	4.50	1.50%	0.50	9.92%	52.22	
319	DICKEY	12+33.05	12.90	R	12.00	9.26	5.00	5.00	1.50	27.97%	5.88	14.00%	4.00	2.00%	0.62	12.46%	52.73	
320	DICKEY	11+70.53	12.84	R	12.00	19.33	5.00	5.00	1.50	10.11%	5.85	10.11%	4.00	1.50%	0.65	8.76%	52.60	
321	DICKEY	11+30.41	14.19	L	11.00	27.02	5.00	5.00	1.50	29.09%	5.31	14.00%	4.00	1.95%	0.19	11.71%	53.26	
322	DICKEY	10+99.18	12.77	R	12.00	11.85	5.00	5.00	1.50	9.01%	5.97	9.01%	4.00	1.50%	0.53	8.86%	52.94	
323	DICKEY	10+36.66	12.70	R	12.00	10.92	5.00	5.00	1.50	12.34%	6.06	12.34%	3.70	2.00%	0.74	3.12%	53.12	
644	DICKEY	9+51.42	12.61	R	12.00	16.50	5.00	5.00			7.47	12.30%	4.00	2.00%	0.53	4.00%	52.86	
324	DICKEY	10+25.59	14.30	L	11.00	26.48	5.00	5.00	1.50	13.59%	4.60	7.03%	4.00	1.50%	0.90	8.09%	52.72	
345	WEST GATE	15+46.81	13.46	L	11.60	10.00	5.00	5.00	1.50	33.33%	3.22	17.00%	3.00	2.00%	4.22	17.00%	53.00	4.00
346	WEST GATE	15+08.70	12.24	R	11.00	18.00	5.00	5.00	1.50	28.00%	2.40	17.00%	4.00	2.00%	0.71	17.00%	52.69	#VALUE!
347	WEST GATE	14+80.93	13.40	L	11.90	9.00	4.70	5.00			5.50	14.15%	4.00	2.00%	2.40	5.50%	52.40	
348	WEST GATE	14+73.80	14.28	R	11.20	18.50	5.00	5.00	1.50	17.00%	2.60	14.83%	4.00	2.00%	3.10	17.00%	52.94	#VALUE!
349	WEST GATE	14+51.71	10.89	L	12.80	29.00	5.00	4.70			7.40	10.57%	4.00	2.00%	1.40	7.00%	52.56	
350	WEST GATE	13+78.80	14.03	L	15.70	12.50	5.00	5.00			9.50	12.09%	4.00	2.00%	2.20	5.50%	52.57	
351	WEST GATE	13+21.88	11.96	L	12.10	8.00	5.00	5.00			6.30	11.49%	4.00	2.00%	1.80	2.00%	52.47	
352	WEST GATE	12+68.46	12.58	L	11.40	9.00	5.00	5.00			4.00	11.83%	4.00	2.00%	3.40	5.50%	52.61	
353	WEST GATE	12+61.93	14.53	R	11.70	28.00	5.00	5.00	1.50	29.00%	1.50	16.93%	4.00	2.00%	4.70	13.00%	53.28	
354	WEST GATE	12+27.59	10.38	L	11.90	15.50	5.00	5.00	1.50	24.00%	3.50	16.17%	4.00	2.00%	2.90	6.00%	53.23	
355	WEST GATE	11+75.09	12.75	L	12.00	11.00	5.00	5.00			4.10	7.63%	4.00	2.00%	3.90	3.00%	52.80	
356	WEST GATE	11+53.87	13.24	L	11.50	16.00	5.00	5.00			4.20	11.24%	4.00	2.00%	3.30	6.00%	53.12	
357	WEST GATE	10+33.20	13.55	L	11.60	18.50	5.00	5.00	1.50	20.00%	3.00	16.58%	4.00	2.00%	3.10	7.50%	53.45	
358	WEST GATE	10+31.01	13.43	R	11.40	18.00	1.10	5.00			5.70	13.41%	4.00	2.00%	1.70	1.50%	53.20	
359	WEST GATE	10+06.12	13.24	R	11.50	19.50	5.00	1.10			5.70	9.98%	4.00	2.00%	1.80	9.50%	53.08	
360	WEST GATE	9+76.56	13.03	R	11.70	21.50	5.00	5.00	1.50	21.00%	4.30	16.80%	4.00	2.00%	1.90	7.50%	53.43	
361	WEST GATE	9+63.63	14.06	L	11.20	12.00	5.00	5.00			4.60	16.91%	4.00	2.00%	2.60	2.00%	53.04	
362	WEST GATE	7+57.72	13.57	L	12.20	14.00	5.00	5.00			5.00	12.64%	4.00	2.00%	3.20	6.50%	53.00	
363	WEST GATE	7+06.04	13.44	L	12.40	22.00	5.00	5.00	1.50	22.00%	3.50	16.54%	4.00	2.00%	3.40	6.50%	53.44	
364	WEST GATE	7+00.58	13.57	R	10.50	21.00	5.00	5.00			4.20	11.67%	4.00	2.00%	2.30	0.00%	52.82	
365	WEST GATE	6+57.87	13.31	L	12.70	21.50	5.00	5.00			5.40	15.11%	4.00	2.00%	3.30	8.00%	53.35	
366	WEST GATE	6+09.71	13.14	L	12.90	11.50	5.00	5.00			6.50	14.50%	4.00	2.00%	2.40	14.48%	53.41	
387	KINGSTON	15+45.83	15.47	R	11.80	16.00	5.00	5.00	1.50	27.00%	4.20	17.00%	3.00	2.00%	3.10	14.23%	52.80	
388	KINGSTON	15+02.10	10.79	L	11.20	18.50	5.00	5.00	1.50	20.00%	3.40	17.00%	3.00	2.00%	3.30	9.15%	52.56	
389	KINGSTON	14+90.33	16.41	R	11.80	19.00	5.00	5.00	1.50	15.00%	4.26	13.46%	4.00	2.00%	2.04	3.50%	52.31	
390	KINGSTON	14+70.81	10.26	L	10.40	18.00	5.00	5.00	1.50	22.00%	3.28	16.88%	4.00	2.00%	1.62	1.00%	52.40	
391	KINGSTON	14+43.08	17.21	R	11.70	11.00	4.80	5.00			5.90	5.73%	4.00	2.00%	1.80	14.00%	52.18	
392	KINGSTON	14+21.03	17.58	R	11.70	13.50	5.00	4.80			5.40	15.83%	4.00	2.00%	2.30	5.00%	52.64	
393	KINGSTON	14+17.68	9.35	L	10.50	18.00	5.00	5.00			5.30	10.75%	4.00	2.00%	1.20	5.85%	52.32	

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

PROPOSED COMMERCIAL 9–INCH DEPTH HIGH EARLY STRENGTH CONCRETE DRIVEWAY.

PREFERRED DRIVEWAY OPTIONS:
CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION FOR OWNER'S DRIVEWAY CONSTRUCTION PREFERENCE.
OPTION – 1 CITY OF HOUSTON DESIGN STANDARD.
OPTION 2 – CITY GRADES THE SUBGRADE TO PROPER SLOPE AND HOMEOWNER WORKS WITH THEIR CONTRACTOR TO FINISH THE DRIVEWAY WITH THEIR DESIRED FINISH. OWNER PAYS FOR THE WORK PERFORMED BY THEIR CONTRACTOR WITH OPTION 2.

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AMANI ENGINEERING, INC.
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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRIVEWAY SUMMARY TABLE & DETAILS – SHEET 3 OF 5

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **60** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\58-62_DRIVEWAY TYP.dwgSHEET 3 May 21 , 2026 – 3:43PM Jgarza

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
394	KINGSTON	13+90.34	17.79	R	12.00	13.00	4.10	5.00			5.70	8.58%	4.00	2.00%	2.30	17.00%	52.44	
395	KINGSTON	13+68.29	17.12	R	12.60	16.50	2.90	4.10			6.50	16.00%	4.00	2.00%	2.10	14.29%	52.79	
396	KINGSTON	13+44.34	15.67	R	12.30	16.00	5.00	2.90			6.20	15.50%	4.00	2.00%	2.10	15.19%	52.62	
397	KINGSTON	12+92.39	8.75	R	10.10	13.00	5.00	5.00			4.30	8.00%	4.00	2.00%	1.80	7.00%	51.84	
398	KINGSTON	12+36.72	4.52	R	10.20	17.00	4.10	5.00			4.90	13.62%	5.00	2.00%	0.30	7.50%	52.16	
399	KINGSTON	12+52.19	22.00	L	11.50	19.00	5.00	5.00	1.50	28.00%	4.60	15.00%	3.00	2.00%	2.40	7.08%	52.75	
400	KINGSTON	12+21.47	22.46	L	12.20	18.00	5.00	5.00			6.10	16.00%	5.00	2.00%	1.10	2.18%	52.56	
401	KINGSTON	12+10.04	4.87	R	10.00	18.00	5.00	4.10			4.50	14.67%	4.00	2.00%	1.50	10.00%	52.40	
402	KINGSTON	11+67.94	8.59	R	9.40	20.00	3.90	5.00			4.20	13.86%	4.00	2.00%	1.20	6.50%	52.29	
403	KINGSTON	11+41.15	11.69	R	8.90	20.00	1.90	3.90			4.90	12.86%	4.00	2.00%			52.40	
404	KINGSTON	11+18.84	13.53	R	11.80	13.00	5.00	1.90			6.00	8.83%	4.00	2.00%	1.80	5.00%	52.50	
405	KINGSTON	10+88.19	15.64	R	12.20	11.00	4.70	5.00			6.30	12.78%	4.00	2.00%	1.90	5.00%	52.60	
406	KINGSTON	10+66.37	16.49	R	11.40	16.00	2.00	4.70			5.50	17.00%	4.00	2.00%	1.90	16.58%	52.88	
407	KINGSTON	10+43.31	16.80	R	10.80	16.00	5.00	2.00			5.00	17.00%	4.00	2.00%	1.80	15.56%	52.70	
408	KINGSTON	10+14.70	17.17	R	9.70	24.00	5.00	5.00	1.50	28.00%	2.90	16.91%	4.00	2.00%	1.30	11.50%	52.54	
409	KINGSTON	10+01.74	9.65	L	13.30	16.00	5.00	5.00			6.80	9.85%	4.00	2.00%	2.50	10.00%	52.36	
410	KINGSTON	9+55.63	16.36	R	9.30	23.00	3.50	5.00			4.50	16.09%	4.00	2.00%	0.80	12.00%	52.12	
411	KINGSTON	9+49.54	13.31	L	13.30	11.00	5.00	5.00			7.20	7.60%	4.00	2.00%	2.10	12.50%	52.10	
412	KINGSTON	9+24.68	15.71	R	9.40	18.00	5.00	3.50	1.50	28.00%	1.30	17.00%	4.00	2.00%	2.60	16.50%	52.28	
413	KINGSTON	7+67.57	13.36	L	12.50	17.00	5.00	5.00	1.50	33.33%	3.90	17.00%	3.00	2.00%	0.55	17.00%	53.14	1.00
414	KINGSTON	7+66.71	13.64	R	10.50	16.00	5.00	5.00	1.50	26.50%	3.70	16.86%	4.00	2.00%	1.30	10.65%	52.45	
415	KINGSTON	7+11.32	12.85	L	12.60	12.00	5.00	5.00			5.30	17.00%	4.00	2.00%	3.30	1.48%	52.45	
416	KINGSTON	7+08.06	14.17	R	10.40	22.00	5.00	5.00			5.00	12.82%	4.00	2.00%	1.40	6.36%	52.24	
417	KINGSTON	6+67.31	12.46	L	12.60	17.00	5.00	5.00			5.60	3.21%	3.50	2.00%	3.50	9.43%	52.16	
418	KINGSTON	6+57.64	14.62	R	10.40	15.00	1.00	5.00			4.70	9.86%	4.00	2.00%	1.70	3.32%	52.23	
419	KINGSTON	6+35.88	14.52	R	10.50	19.00	5.00	1.00			5.10	13.37%	4.00	2.00%	1.40	0.57%	52.46	
420	KINGSTON	6+38.98	12.41	L	12.50	17.00	5.00	5.00	1.50	29.00%	3.60	17.00%	4.00	2.00%	3.40	4.21%	52.96	
421	KINGSTON	5+91.62	17.26	R	11.30	30.50	5.00	5.00			5.40	12.06%	4.00	2.00%	1.90	11.50%	52.74	
422	KINGSTON	5+24.22	13.79	R	13.90	37.00	5.00	5.00			7.90	7.09%	4.00	2.00%	2.00	7.50%	52.44	
423	KINGSTON	4+82.07	7.13	R	13.60	29.00	5.00	5.00			8.80	6.05%	4.50	2.00%	0.30	2.50%	52.25	
438	HULDY	6+85.39	11.43	R	22.00	15.87	3.00	5.00	1.50	13.21%	13.94	13.21%	4.92	2.00%	1.64	10.46%	53.99	
439	HULDY	6+61.47	11.62	R	22.00	15.73	5.00	3.00	1.50	13.17%	13.93	13.17%	4.94	2.00%	1.63	10.50%	54.04	
440	HULDY	6+54.20	14.32	L	22.00	8.72	5.00	5.00	1.50	7.86%	14.13	7.86%	4.00	2.00%	2.37	6.75%	53.24	
441	HULDY	6+03.20	12.08	R	22.00	9.80	5.00	5.00	1.50	7.48%	15.04	7.48%	3.87	0.30%	1.59	1.99%	53.14	
442	HULDY	6+02.00	13.90	L	22.00	7.89	5.00	5.00	1.50	6.47%	13.94	6.47%	3.99	2.00%	2.57	5.46%	53.15	
443	HULDY	5+51.07	12.49	R	22.00	8.06	5.00	5.00	1.50	3.81%	15.18	3.81%	3.76	2.00%	1.56	3.51%	52.85	
444	HULDY	5+49.43	13.49	L	22.00	6.90	5.00	5.00	1.50	5.22%	13.67	5.22%	4.00	1.00%	2.83	1.06%	52.95	
445	HULDY	5+00.34	12.89	R	22.00	10.26	5.00	5.00	1.50	3.19%	15.03	3.19%	4.26	2.00%	1.21	2.88%	52.88	
446	HULDY	4+99.30	13.10	L	22.00	8.53	5.00	5.00	1.50	3.64%	13.73	3.64%	4.00	1.00%	2.77	3.25%	52.92	
447	HULDY	4+52.31	13.42	R	22.00	7.85	5.00	5.00	1.50	2.87%	15.03	2.87%	4.00	1.00%	1.47	2.72%	52.93	
448	HULDY	4+47.13	12.72	L	22.00	7.93	5.00	5.00	1.50	3.08%	13.63	3.08%	4.00	1.00%	2.87	0.00%	52.91	
449	HULDY	4+08.30	13.45	L	21.00	15.86	5.00	5.00	1.50	4.15%	12.75	4.15%	3.99	2.00%	2.76	3.27%	53.25	
450	HULDY	3+54.57	17.91	R	18.00	56.48	5.00	5.00	1.50	6.09%	12.50	6.09%	4.00	2.00%			53.25	
451	HULDY	3+45.62	16.02	L	18.00	11.13	5.00	5.00	1.50	7.35%	9.50	7.26%	4.00	2.00%	3.00	2.00%	53.24	
452	HULDY	2+79.26	20.74	R	15.00	16.00	5.00	5.00			0.50	2.00%	4.00	2.00%	10.50	8.73%	53.11	
453	HULDY	2+48.04	19.68	L	15.00	20.00	10.00	10.00			0.50	2.00%	6.00	2.00%	8.50	10.53%	53.03	
454	HULDY	2+40.61	20.21	R	15.00	16.00	5.00				0.50	2.00%	6.00	2.00%	8.50	12.86%	53.20	
455	HULDY	1+20.84	17.59	R	15.50	22.00	5.00	5.00	1.50	28.00%	6.90	17.00%	4.00	2.00%	3.10	8.50%	53.02	
456	HULDY	1+12.97	18.51	L	18.00	28.00	5.00	5.00	1.50	10.00%	10.80	9.94%	4.00	2.00%	1.70	1.53%	52.64	
457	BRUN	6+64.55	20.29	R	15.00	12.90	5.00	5.00	1.50	13.29%	7.95	13.29%	4.00	2.00%	1.55	12.26%	53.11	
458	BRUN	6+45.70	19.79	L	15.00	8.72	5.00	5.00	1.50	11.59%	7.04	11.59%	3.83	2.00%	2.63	11.92%	53.01	
459	BRUN	6+43.94	20.19	R	15.00	9.37	5.00	3.00	1.50	13.65%	7.74	13.65%	4.00	2.00%	1.76	13.07%	53.21	
460	BRUN	6+19.93	20.06	R	15.00	15.82	1.50	5.00	1.50	11.47%	8.32	11.47%	3.72	2.00%	1.46	6.55%	53.02	
461	BRUN	5+97.45	19.86	R	15.00	15.97	5.00	1.50	1.50	11.87%	8.29	11.87%	4.00	1.68%	1.21	5.19%	53.06	
462	BRUN	5+93.28	20.17	L	15.00	6.82	5.00	5.00	1.50	8.87%	6.69	8.87%	4.33	2.00%	2.48	9.81%	52.85	
463	BRUN	5+70.71	20.36	L	15.00	15.15	2.00	5.00	1.50	13.36%	6.49	13.36%	4.00	2.00%	3.01	9.97%	53.31	
464	BRUN	5+48.38	20.56	L	15.00	15.44	5.00	2.00	1.50	13.75%	6.49	13.75%	4.00	2.00%	3.01	9.97%	53.40	
465	BRUN	5+39.88	19.36	R	15.00	9.82	5.00	5.00	1.50	7.75%	9.03	7.75%	3.00	2.00%	1.47	7.48%	52.94	
466	BRUN	4+92.79	21.04	L	15.00	11.88	5.00	5.00	1.50	8.90%	6.68	8.90%	4.00	1.30%	2.82	3.48%	52.97	

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
467	BRUN	4+89.31	18.92	R	15.00	9.78	4.00	5.00	1.50	9.07%	8.27	9.07%	4.00	2.00%	1.23	0.81%	53.09	
468	BRUN	4+69.09	18.74	R	15.00	16.17	1.75	4.00	1.50	7.74%	8.26	7.74%	3.98	1.93%	1.26	5.81%	53.07	
469	BRUN	4+46.86	18.55	R	15.00	15.89	5.00	1.75	1.50	7.00%	8.67	7.00%	4.00	1.50%	0.83	6.02%	53.05	
470	BRUN	4+41.70	21.49	L	15.00	10.24	3.25	5.00	1.50	6.53%	6.62	6.53%	4.06	2.00%	2.82	1.02%	52.88	
471	BRUN	4+21.54	20.87	L	16.00	17.45	2.00	3.25	1.50	9.31%	6.40	9.31%	4.97	2.00%	3.13	3.21%	53.25	
472	BRUN	3+96.88	18.88	R	14.00	30.62	5.00	5.00	1.50	13.20%	3.17	13.20%	4.02	2.00%	5.31	11.48%	53.69	
473	BRUN	3+97.75	20.48	L	17.00	18.00	5.00	2.00	1.50	6.18%	9.13	6.18%	5.11	2.00%	1.26	3.00%	53.17	
474	BRUN	3+50.63	18.63	L	20.05	14.71	5.00	5.00	1.50	3.68%	11.00	3.68%	5.09	2.00%	2.46	5.62%	53.22	
475	BRUN	3+26.56	22.46	R	13.00	30.69	5.00	5.00	1.50	8.49%	4.36	8.49%	4.00	2.00%	3.14	4.14%	53.31	
476	BRUN	2+29.79	15.66	L	11.00	22.50	5.00	5.00	1.50	12.66%	2.50	12.66%	3.97	2.00%	3.03	7.94%	53.33	
477	BRUN	1+93.08	22.46	R	10.00	34.71	5.00	5.00	1.50	5.10%	4.10	9.00%	4.00	2.00%	0.40	0.00%	52.76	
478	BRUN	1+25.35	19.34	L	10.00	24.16	5.00	5.00	1.50	10.98%	2.55	10.98%	4.00	2.00%	1.95	10.26%	52.90	
483	SPANN	1+02.69	18.89	L	12.00	16.03	5.00	5.00	1.50	23.64%	1.06	14.00%	4.13	2.00%	5.31	13.70%	53.02	
484	SPANN	1+26.27	15.01	R	14.00	16.24	5.00	5.00	1.50	30.00%	2.15	14.00%	4.00	2.00%	6.35	11.81%	53.42	
485	SPANN	1+28.99	18.99	L	12.00	15.82	5.00	2.50	1.50	14.67%	1.45	13.00%	3.87	2.00%	5.18	11.83%	52.96	
486	SPANN	1+53.75	15.92	R	13.00	16.33	5.00	5.00	1.50	25.00%	1.44	13.00%	4.00	2.00%	6.06	11.72%	53.34	
487	SPANN	1+52.16	19.06	L	12.00	15.74	2.50	5.00	1.50	20.22%	1.39	14.00%	4.00	2.00%	5.11	13.11%	53.22	
489	SAN FELIPE	8+33.20	13.36	R	10.92	25.06	8.00	8.00			4.92	11.18%	4.00	2.00%	2.00	0.50%	53.25	
490	SAN FELIPE	9+25.73	15.53	R	10.80	23.95	8.00	8.00			4.80	8.75%	4.00	2.00%	2.00	6.50%	52.75	
491	SAN FELIPE	10+52.63	17.02	R	11.40	15.99	5.00	5.00			3.93	17.00%	4.00	2.00%	3.47	13.31%	53.47	
492	SAN FELIPE	15+22.92	17.06	R	11.28	9.35	8.00	8.00			4.28	17.00%	4.00	2.00%	3.00	6.08%	53.33	
493	SAN FELIPE	15+80.53	17.06	R	11.20	8.96	6.00	6.00			4.20	12.26%	4.00	2.00%	3.00	2.50%	52.77	
494	SAN FELIPE	16+03.76	17.06	R	11.24	12.57	6.00	6.00			4.24	12.15%	4.00	2.00%	3.00	1.50%	52.76	
495	SAN FELIPE	17+21.56	17.07	R	11.32	12.42	6.00	6.00			4.33	14.33%	4.00	2.00%	2.99	3.00%	52.76	
496	SAN FELIPE	19+03.96	17.08	R	11.20	14.08	8.00	8.00			4.20	16.31%	4.00	2.00%	3.00	1.50%	52.23	
497	SAN FELIPE	19+45.83	17.09	R	11.20	31.23	8.00	8.00			4.20	11.79%	4.00	2.00%	3.00	4.50%	52.09	
498	SAN FELIPE	22+28.28	17.15	R	11.43	137.18	5.00	5.00			5.43	17.00%	4.00	2.00%	2.00	6.34%	52.87	
503	FAIRVIEW	22+74.97	18.96	L	21.10	16.00	5.00	3.80			13.60	5.74%	5.00	2.00%	2.50	4.00%	53.17	
504	FAIRVIEW	22+98.70	18.97	L	21.10	16.00	3.80	3.20			13.60	6.05%	5.00	2.00%	2.50	3.50%	53.13	
505	FAIRVIEW	23+20.45	18.98	L	21.10	16.00	3.20	1.80			13.40	9.63%	5.00	2.00%	2.70	1.50%	53.40	
506	FAIRVIEW	23+42.17	18.99	L	21.10	16.00	1.80	5.00			13.40	5.08%	5.00	2.00%	2.70	7.00%	52.97	
507	FAIRVIEW	23+68.63	13.98	R	20.90	22.00	5.00	2.40			15.30	7.83%	3.50	2.00%	2.10	2.00%	53.22	
508	FAIRVIEW	25+55.99	13.56	R	20.80	15.50	5.00	5.00			14.70	9.82%	4.00	2.00%	2.10	7.00%	53.71	
509	FAIRVIEW	25+56.24	19.43	L	21.20	14.50	5.00	1.40			9.80	15.70%	3.50	2.00%	7.90	0.02%	53.65	
510	FAIRVIEW	25+77.91	19.55	L	21.20	16.00	1.40	5.00			9.40	13.80%	4.00	2.00%	7.80	3.50%	53.75	
511	FAIRVIEW	26+02.91	19.68	L	21.20	12.50	5.00	3.20			9.40	12.84%	3.50	2.00%	8.30	4.50%	53.77	
512	FAIRVIEW	26+03.17	13.31	R	20.80	16.00	5.00	5.00			14.60	9.40%	4.00	2.00%	2.20	4.00%	53.66	
513	FAIRVIEW	26+32.92	13.15	R	20.80	22.00	5.00	4.10			14.20	6.53%	4.50	2.00%	2.10	3.00%	53.06	
515	FAIRVIEW	28+40.34	20.79	L	21.30	25.00	3.50	5.00			0.30	2.00%	4.50	2.00%	16.50	7.78%	53.34	
516	FAIRVIEW	28+49.39	12.17	R	20.70	16.50	5.00	5.00			13.90	4.60%	4.00	2.00%	2.80	5.00%	52.86	
517	FAIRVIEW	28+75.98	20.92	R	21.30	16.50	5.00	5.00			0.50	2.00%	4.50	2.00%	16.30	9.69%	53.69	
518	FAIRVIEW	28+99.23	11.98	R	20.70	11.00	5.00	5.00			11.00	7.24%	4.00	2.00%	5.70	2.00%	52.90	
518 A	FAIRVIEW	30+66.11	17.46	L	19.30	24.00	5.00	5.00			19.30	1.66%		2.00%			52.82	
519	HAZARD	1+39.78	13.44	R	10.00	12.18	5.00	5.00	1.50	20.00%	3.29	13.16%	4.35	2.00%	0.86	6.16%	51.54	
520	HAZARD	1+78.74	13.63	R	10.00	25.86	5.00	5.00	1.50	13.45%	2.83	13.45%	3.98	2.00%	1.69	5.94%	51.56	
521	HAZARD	2+21.73	13.84	R	10.00	14.45	5.00	5.00	1.50	26.67%	3.12	12.56%	4.00	2.00%	1.38	9.42%	51.93	
522	HAZARD	2+31.19	15.19	L	11.00	24.89	10.00	10.00	1.68	12.63%	3.98	12.63%	4.59	2.00%	0.75	1.09%	51.80	
523	HAZARD	2+80.82	14.13	R	10.00	11.69	5.00	5.00	1.50	33.33%	4.05	13.32%	3.00	2.00%	1.45	8.97%	52.35	
524	HAZARD	2+84.78	14.84	L	11.00	14.84	5.00	3.80	1.50	26.62%	1.99	10.85%	4.63	2.00%	2.88	11.37%	52.20	
525	HAZARD	3+08.46	14.73	L	11.00	14.83	3.80	5.00	1.50	26.65%	2.18	13.80%	4.72	2.00%	2.60	11.75%	52.33	
526	HAZARD	3+35.51	14.60	L	11.00	15.48	5.00	3.00	1.50	26.67%	2.16	12.48%	4.94	2.00%	2.40	10.88%	52.35	
527	HAZARD	3+35.22	14.39	R	10.00	13.22	5.00	5.00	1.50	33.33%	3.25	15.24%	4.00	2.00%	1.25	8.00%	52.48	
528	HAZARD	3+59.77	14.48	L	11.00	15.65	3.80	5.00	1.50	20.00%	2.64	12.98%	5.00	2.00%	1.86	12.37%	52.36	
529	HAZARD	3+59.82	14.51	R	10.00	13.51	5.00	5.00	1.50	33.33%	4.01	13.54%	3.00	2.00%	1.49	9.40%	52.61	
530	HAZARD	3+87.83	14.65	R	10.00	10.18	5.00	5.00	1.50	33.29%	3.44	14.27%	3.82	2.00%	1.24	9.16%	52.65	
531	HAZARD	4+22.84	14.33	L	11.00	14.98	5.00	3.00	1.50	33.42%	3.36	14.15%	4.00	2.00%	2.14	12.15%	52.91	
532	HAZARD	4+37.84	14.53	R	10.00	15.15	5.00	5.00	1.50	15.03%	2.97	15.03%	4.00	2.00%	1.53	9.80%	52.52	
533	HAZARD	4+45.80	14.53	L	11.00	17.19	3.00	2.50	1.50	29.99%	2.50	14.61%	3.97	2.00%	3.03	11.57%	52.91	
534	HAZARD	4+68.27	14.72	L	11.00	16.87	2.50	2.70	1.50	19.99%	2.46	14.33%	4.00	2.00%	3.04	11.84%	52.82	

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

PROPOSED COMMERCIAL 9–INCH DEPTH HIGH EARLY STRENGTH CONCRETE DRIVEWAY.

PREFERRED DRIVEWAY OPTIONS:
CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION FOR OWNER'S DRIVEWAY CONSTRUCTION PREFERENCE.
OPTION – 1 CITY OF HOUSTON DESIGN STANDARD.
OPTION 2 – CITY GRADES THE SUBGRADE TO PROPER SLOPE AND HOMEOWNER WORKS WITH THEIR CONTRACTOR TO FINISH THE DRIVEWAY WITH THEIR DESIRED FINISH. OWNER PAYS FOR THE WORK PERFORMED BY THEIR CONTRACTOR WITH OPTION 2.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRIVEWAY SUMMARY TABLE & DETAILS – SHEET 4 OF 5

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **61** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22437\58-62_DRIVEWAY TYP.dwgSHEET 4 May 21 , 2026 – 3:43PM Jgarza

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
535	HAZARD	4+88.18	14.89	L	11.00	10.03	2.70	5.00	1.50	13.75%	2.35	13.75%	4.00	2.00%	3.15	11.75%	52.77	
536	HAZARD	4+94.85	14.04	R	10.00	16.26	5.00	4.50	1.50	20.00%	3.22	14.96%	3.74	2.00%	1.54	9.43%	52.81	
537	HAZARD	5+20.00	13.96	R	10.00	15.14	4.50	5.00	1.50	33.33%	3.00	13.15%	4.22	2.00%	1.28	9.03%	52.98	
538	HAZARD	5+45.66	15.00	L	11.00	16.03	5.00	3.00	1.50	13.38%	2.35	13.38%	3.00	2.00%	4.15	7.23%	52.85	
539	HAZARD	5+46.28	13.99	R	10.00	15.96	5.00	2.50	1.50	33.39%	3.42	14.07%	4.17	2.00%	0.91	7.32%	53.11	
540	HAZARD	5+69.30	14.98	L	11.00	15.23	5.00	3.00	1.50	14.26%	1.94	14.26%	5.11	2.00%	2.45	11.34%	52.82	
541	HAZARD	5+68.97	14.01	R	10.00	15.28	2.50	4.50	1.50	26.67%	2.75	14.97%	4.08	2.00%	1.67	10.08%	53.01	
542	HAZARD	5+89.07	14.03	R	10.00	8.44	4.50	5.00	1.50	10.56%	3.32	10.56%	4.00	2.00%	1.18	3.39%	52.49	
543	HAZARD	5+95.59	14.95	L	11.00	15.22	5.00	3.00	1.50	26.67%	2.12	13.30%	5.12	2.00%	2.26	10.96%	52.86	
544	HAZARD	6+19.08	14.93	L	11.00	15.87	3.00	5.00	1.50	26.67%	2.99	12.40%	4.00	2.00%	2.51	11.16%	52.87	
545	HAZARD	6+45.29	14.09	R	10.00	15.38	5.00	4.00	1.50	26.67%	2.76	12.24%	4.91	2.00%	0.83	5.04%	52.50	
546	HAZARD	6+46.47	14.90	L	11.00	15.85	5.00	1..25	1.50	33.33%	2.85	14.96%	4.01	2.00%	2.64	11.36%	52.92	
547	HAZARD	6+68.61	14.88	L	11.00	16.00	1.25	5.00	1.50	33.33%	3.51	15.68%	3.00	2.00%	2.99	11.71%	53.00	
548	HAZARD	6+69.68	14.11	R	10.00	15.33	4.00	5.00	1.50	26.67%	2.50	11.52%	4.00	2.00%	2.00	10.50%	52.51	
549	HAZARD	8+59.70	15.41	L	11.00	16.80	3.00	5.00	1.50	33.00%	2.85	15.00%	3.00	2.00%	3.65	12.33%	52.35	
550	HAZARD	8+62.57	13.56	R	10.00	9.45	5.00	5.00	1.50	27.00%	3.12	13.00%	4.00	2.00%	1.38	5.80%	51.90	
551	HAZARD	9+15.06	15.74	L	11.00	9.10	5.00	5.00	1.50	33.00%	2.48	16.00%	4.00	2.00%	3.02	12.58%	52.44	
552	HAZARD	9+13.88	13.26	R	10.00	10.20	5.00	5.00	1.50	29.04%	2.66	12.00%	4.00	2.00%	1.84	7.07%	52.05	
553	HAZARD	9+63.22	15.63	L	11.00	9.47	5.00	5.00	1.50	30.06%	2.44	13.00%	4.00	2.00%	3.06	8.17%	52.33	
554	HAZARD	9+62.79	13.36	R	10.00	8.71	5.00	5.00	1.50	33.00%	2.81	15.00%	4.00	2.00%	1.69	7.69%	52.36	
555	HAZARD	10+21.33	15.29	L	11.00	16.38	5.00	1.50	1.50	32.69%	3.44	16.00%	3.00	2.00%	3.06	13.07%	52.91	
556	HAZARD	10+20.91	13.70	R	10.00	16.15	5.00	2.00	1.50	33.00%	2.59	15.00%	4.00	2.00%	1.91	9.95%	52.56	
557	HAZARD	10+43.76	15.16	L	11.00	16.38	1.40	4.00	1.50	33.33%	3.56	17.00%	3.00	2.00%	2.94	10.92%	52.96	
558	HAZARD	10+44.26	13.83	R	10.00	16.24	2.00	5.00	1.50	33.00%	2.32	16.00%	4.00	2.00%	2.18	10.55%	52.65	
559	HAZARD	10+83.47	14.93	L	11.00	48.40	4.00	4.50	1.50	30.00%	2.64	14.00%	4.00	2.00%	2.86	9.79%	52.77	
560	HAZARD	11+06.21	14.08	R	10.00	21.43	5.00	5.00	1.50	29.00%	2.57	14.00%	4.00	2.00%	1.93	6.22%	52.68	
561	HAZARD	11+22.18	14.93	L	11.00	11.77	4.50	4.00	1.50	28.00%	3.17	14.00%	4.00	2.00%	2.33	10.73%	52.90	
562	HAZARD	11+42.84	14.96	L	11.00	12.14	4.00	5.00	1.50	25.00%	2.59	12.00%	4.00	2.00%	2.91	7.90%	52.77	
563	HAZARD	11+49.06	14.02	R	10.00	9.78	5.00	1.50	1.50	30.00%	2.50	15.00%	4.00	2.00%	2.00	5.00%	52.81	
564	HAZARD	11+66.16	14.00	R	10.00	11.56	1.50	5.00	1.50	22.95%	2.60	14.00%	4.00	2.00%	1.90	5.79%	52.74	
565	HAZARD	12+46.68	13.99	R	9.20	10.03	5.00	4.00			4.20	11.28%	5.00	2.00%			52.45	
566	HAZARD	12+67.70	14.04	R	10.00	16.59	4.00	2.25	1.50	32.22%	2.68	13.50%	4.80	2.00%	1.02	2.35%	53.12	
567	HAZARD	12+71.50	14.94	L	11.00	23.27	5.00	5.00	1.50	15.00%	2.59	15.00%	4.00	2.00%	2.91	8.93%	53.11	
568	HAZARD	12+91.12	14.11	R	10.00	16.64	2.25	5.00	1.50	25.93%	2.51	13.00%	4.80	2.00%	1.19	2.86%	53.05	
569	HAZARD	13+10.24	14.83	L	11.00	9.52	5.00	5.00	1.50	12.00%	2.35	12.00%	4.00	2.00%	3.15	8.25%	53.07	
570	HAZARD	13+29.70	14.21	R	10.00	37.02	5.00	4.00	1.50	11.50%	1.78	11.50%	4.00	1.50%	2.72	3.68%	52.90	
571	HAZARD	13+64.21	14.30	R	10.00	13.74	4.00	5.00	1.50	23.38%	2.42	12.00%	4.00	2.00%	2.08	8.65%	53.33	
572	HAZARD	13+66.65	14.69	L	11.00	16.90	5.00	2.50	1.50	12.00%	2.70	12.00%	4.00	2.00%	2.80	7.14%	53.20	
573	HAZARD	13+91.42	14.62	L	11.00	17.30	2.50	5.00	1.50	9.50%	2.55	9.50%	4.00	2.00%	2.95	6.44%	53.01	
574	HAZARD	14+16.84	14.43	R	10.00	15.64	5.00	3.50	1.50	30.75%	2.50	14.00%	4.00	2.00%	2.00	7.50%	53.31	
575	HAZARD	14+17.93	15.55	L	10.00	15.94	5.00	2.00	1.50	12.00%	2.73	12.00%	4.00	2.00%	1.77	6.21%	52.96	
576	HAZARD	14+40.61	15.50	L	10.00	15.84	5.00	2.00	1.50	13.50%	2.63	13.50%	4.00	2.00%	1.87	4.28%	52.92	
577	HAZARD	14+41.60	14.50	R	10.00	16.49	3.50	5.00	1.50	32.32%	2.32	13.00%	4.00	2.00%	2.18	8.72%	53.26	
578	HAZARD	14+63.77	15.44	L	10.00	13.98	4.50	5.00	1.50	12.50%	3.11	12.50%	4.00	2.00%	1.39	10.07%	52.93	
579	HAZARD	14+67.04	14.56	R	10.00	16.12	5.00	2.25	1.50	27.60%	2.34	14.00%	4.00	2.00%	2.16	10.65%	53.17	
580	HAZARD	14+90.78	14.63	R	10.00	16.66	2.25	5.00	1.50	32.83%	2.25	14.00%	4.00	2.00%	2.25	9.78%	53.15	
581	DRISCOLL	1+29.47	14.95	R	9.50	9.00	5.00	5.00			3.70	12.00%	4.00	2.00%	1.80	7.00%	51.74	
582	DRISCOLL	1+59.01	15.43	L	10.40	9.00	5.00	5.00			4.10	14.00%	4.00	2.00%	2.30	10.70%	52.09	
583	DRISCOLL	1+62.04	14.56	R	9.60	20.00	5.00	5.00			4.00	15.00%	4.00	2.00%	1.60	10.62%	52.05	
584	DRISCOLL	2+13.56	14.58	R	9.60	19.00	5.00	4.25			4.30	16.50%	4.00	2.00%	1.30	15.42%	52.35	
585	DRISCOLL	2+37.04	15.40	L	10.40	16.00	5.00	3.50	1.50	33.33%	2.50	16.15%	5.00	2.00%	1.40	16.16%	52.67	
586	DRISCOLL	2+49.82	14.60	R	9.60	38.00	4.50	2.50			4.50	17.00%	4.00	2.00%	1.10	12.27%	52.46	
587	DRISCOLL	2+60.09	15.39	L	10.40	15.00	3.50	3.00	1.50	33.33%	2.50	16.15%	5.00	2.00%	1.40	16.16%	52.74	
588	DRISCOLL	2+79.15	15.38	L	10.40	8.50	3.00	5.00			3.80	12.53%	5.00	2.00%	1.60	1.50%	52.16	
589	DRISCOLL	2+81.01	14.61	R	9.60	10.50	2.25	5.00			4.30	15.50%	4.00	2.00%	1.30	16.42%	52.53	
590	DRISCOLL	3+28.71	15.36	L	10.40	8.00	5.00	5.00			4.00	12.30%	4.00	2.00%	2.40	2.00%	52.18	
591	DRISCOLL	3+28.02	14.63	R	9.60	8.00	5.00	5.00			4.10	11.71%	4.00	2.00%	1.50	0.33%	52.28	
592	DRISCOLL	3+90.66	15.34	L	10.40	17.00	5.00	5.00			3.80	15.47%	5.00	2.00%	1.60	7.00%	52.71	
593	DRISCOLL	3+89.70	14.65	R	9.60	19.00	5.00	4.00			4.30	13.91%	4.50	2.00%	0.80	11.50%	52.70	

DRWY. NO.	RDWY ALIGNMENT/ NAME	STATION	OFFSET		LENGTH (FT)	WIDTH (FT)	RADIUS 1 (FT)	RADIUS 2 (FT)	L1	S1	L2	S2	L3	S3	L4	S4	ELEV AT ROW/EASEMENT	ESMT LENGTH
594	DRISCOLL	4+17.52	15.33	L	10.40	17.00	5.00	5.00			3.80	15.47%	5.00	2.00%	1.60	4.50%	52.76	
595	DRISCOLL	4+17.78	14.66	R	9.60	19.00	4.00	5.00			4.00	9.50%	4.00	2.00%	1.60	16.25%	52.72	
596	DRISCOLL	4+40.93	15.32	L	10.40	8.50	5.00	5.00			4.10	13.29%	4.00	2.00%	2.30	5.00%	52.81	
597	DRISCOLL	4+47.26	14.68	R	9.60	17.00	5.00	2.50			4.00	14.14%	5.50	2.00%	0.10	4.50%	52.78	
598	DRISCOLL	4+71.14	14.69	R	9.60	16.00	2.50	4.50			4.00	9.95%	5.60	2.00%			52.68	
599	DRISCOLL	4+90.72	15.39	L	10.40	9.00	5.00	5.00			4.10	10.21%	4.00	2.00%	2.30	0.50%	52.69	
600	DRISCOLL	4+93.57	14.70	R	9.60	12.00	4.50	5.00			4.20	10.05%	4.00	2.00%	1.40	7.00%	52.76	
601	DRISCOLL	5+21.34	14.71	R	9.60	12.00	5.00	5.00			4.20	8.48%	4.00	2.00%	1.40	6.00%	52.58	
602	DRISCOLL	5+46.27	15.27	L	10.40	17.00	5.00	1.00			4.50	15.06%	4.00	2.00%	1.90	7.50%	52.86	
603	DRISCOLL	5+46.89	14.72	R	9.60	16.50	5.00	2.50	1.50	33.33%	2.60	14.62%	4.00	2.00%	1.50	8.00%	53.04	
604	DRISCOLL	5+71.60	15.26	L	10.40	21.00	1.00	5.00	1.50	33.33%	2.80	13.84%	4.00	2.00%	2.10	2.50%	52.89	
605	DRISCOLL	5+70.10	14.73	R	9.60	17.00	2.80	5.00	1.50	33.33%	2.40	17.00%	4.00	2.00%	1.70	14.24%	53.10	
606	DRISCOLL	5+89.12	14.74	R	9.60	15.00	5.00	4.00	1.50	33.33%	4.00	16.30%	3.00	2.00%	1.10	8.00%	52.95	
607	DRISCOLL	5+98.64	15.25	L	10.40	15.50	5.00	5.00	1.50	33.33%	2.60	14.00%	4.00	2.00%	2.30	12.44%	52.99	
608	DRISCOLL	6+47.55	15.23	L	10.40	16.50	5.00	2.00	1.50	33.33%	2.80	16.00%	3.00	2.00%	3.10	8.78%	52.85	
609	DRISCOLL	6+56.65	14.76	R	9.60	40.50	5.00	5.00	1.50	33.33%	2.40	16.00%	4.00	2.00%	1.70	10.36%	52.68	
610	DRISCOLL	6+71.08	15.22	L	10.40	16.50	2.00	5.00			4.40	17.00%	4.00	2.00%	2.00	11.60%	52.56	
611	DRISCOLL	8+69.14	15.34	L	10.00	14.50	5.00	5.00	1.50	33.33%	1.90	17.00%	3.00	2.00%	2.39	17.00%	52.91	2.00
612	DRISCOLL	9+14.47	14.81	R	10.00	9.00	5.00	5.00	1.50	33.33%	2.60	17.00%	4.00	2.00%	1.90	12.00%	52.53	
613	DRISCOLL	9+17.56	15.17	L	10.00	11.50	5.00	5.00	1.50	33.33%	1.90	17.00%	3.50	2.00%	3.10	14.94%	52.65	
614	DRISCOLL	9+66.94	14.99	R	10.00	14.50	5.00	5.00	1.50	33.33%	2.50	17.00%	3.50	2.00%	2.50	9.00%	52.66	
615	DRISCOLL	9+92.85	14.91	L	10.00	18.00	5.00	5.00	1.50	33.33%	2.10	17.00%	3.00	2.00%	3.40	10.68%	52.80	
616	DRISCOLL	10+19.44	15.17	R	10.00	18.00	5.00	5.00	1.50	33.33%	2.60	17.00%	4.00	2.00%	1.90	4.63%	52.70	
617	DRISCOLL	10+34.09	14.77	L	10.00	35.00	5.00	5.00	1.50	33.33%	2.20	17.00%	5.00	2.00%	1.30	7.39%	52.71	
618	DRISCOLL	10+71.66	15.34	R	10.00	14.00	3.00	3.00	1.50	33.33%	2.50	17.00%	4.00	2.00%	2.00	13.25%	53.02	
619	DRISCOLL	10+94.23	14.60	L	10.00	16.50	5.00	5.00	1.50	33.33%	2.10	17.00%	4.00	2.00%	2.40	11.38%	53.03	
620	DRISCOLL	10+94.09	15.39	R	10.00	16.00	3.00	3.50	1.50	33.33%	2.50	17.00%	4.00	2.00%	2.00	9.75%	53.02	
621	DRISCOLL	11+14.76	15.38	R	10.00	10.00	3.50	5.00			4.10	16.35%	4.00	2.00%	1.90	0.50%	52.64	
622	DRISCOLL	11+42.76	14.63	L	10.00	17.00	5.00	5.00	1.50	33.33%	2.50	17.00%	4.00	2.00%	2.00	15.75%	53.28	
623	DRISCOLL	11+68.86	15.34	R	10.00	12.00	5.00	5.00			3.90	16.10%	4.00	2.00%	2.10	2.00%	52.79	
624	DRISCOLL	11+72.05	14.65	L	10.00	13.00	5.00	4.00	1.50	33.33%	2.20	14.00%	3.00	2.00%	3.30	14.00%	53.38	
625	DRISCOLL	11+93.65	14.66	L	10.00	13.00	4.00	4.00	1.50	33.33%	2.30	14.00%	4.00	2.00%	2.20	14.00%	53.33	
626	DRISCOLL	11+99.06	15.33	R	10.00	10.00	5.00	5.00			4.20	17.00%	4.00	2.00%	1.80	13.11%	53.16	
627	DRISCOLL	12+30.75	14.68	L	10.00	46.50	4.00	3.00			3.70	15.00%	3.00	2.00%	3.30	5.91%	53.04	
628	DRISCOLL	12+30.59	15.31	R	10.00	34.00	5.00	3.50			4.10	14.54%	4.00	2.00%	1.90	6.00%	53.02	
629	DRISCOLL	12+66.04	14.70	L	10.00	9.50	3.00	5.00			3.50	13.43%	4.00	2.00%	2.50	4.00%	52.98	
630	DRISCOLL	11+76.58	15.28	R	10.00	41.00	3.50	5.00			4.00	14.00%	4.00	2.00%	2.00	12.50%	53.25	
631	DRISCOLL	13+19.32	14.74	L	10.00	18.00	5.00	5.00			3.80	11.16%	4.00	2.00%	2.20	3.00%	53.04	
632	DRISCOLL	13+19.17	15.25	R	10.00	15.50	5.00	2.00			4.10	16.78%	4.00	2.00%	1.90	8.00%	53.39	
633	DRISCOLL	13+41.98	15.24	R	10.00	16.00	2.00	5.00			4.10	15.30%	4.00	2.00%	1.90	15.41%	53.41	
634	DRISCOLL	13+68.95	14.77	L	10.00	14.00	5.00	3.50			3.70	14.00%	5.00	2.00%	1.30	10.92%	53.08	
635	DRISCOLL	13+91.45	14.78	L	10.00	14.00	3.50	5.00			3.90	16.00%	5.00	2.00%	1.10	9.45%	53.09	
636	DRISCOLL	14+18.37	15.19	R	10.00	14.50	5.00	3.00			3.90	17.00%	4.00	2.00%	2.10	15.57%	53.24	
637	DRISCOLL	14+19.03	14.80	L	10.00	16.00	5.00	2.25			4.00	17.00%	4.00	2.00%	2.00	3.50%	53.00	
638	DRISCOLL	14+42.15	14.82	L	10.00	16.00	2.25	5.00	1.50	33.33%	2.40	12.20%	4.00	2.00%	2.10	12.25%	53.24	
639	DRISCOLL	14+40.73	15.17	R	10.00	14.50	3.00	5.00	1.50	33.33%	2.50	9.80%	4.00	2.00%	2.00	15.75%	53.25	
640	DRISCOLL	15+04.98	15.03	R	10.00	16.50	5.00	5.00			4.10	17.00%	4.00	2.00%	1.90	13.32%	52.95	
641	DRISCOLL	15+05.44	14.91	L	10.00	15.50	5.00	5.00			4.10	17.00%	4.00	2.00%	1.90	8.05%	52.84	
642	DRISCOLL	6+20.92	14.75	R	9.60	15.00	4.00	4.00	1.50	33.33%	4.00	17.00%	3.00	2.00%	0.37	17.00%	53.04	
643	DRISCOLL	13+64.28	15.22	R	10.00	12.00	5.00	5.00			3.90	17.00%	5.00	2.00%	1.10	7.91%	53.19	

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

PROPOSED COMMERCIAL 9-INCH DEPTH HIGH EARLY STRENGTH CONCRETE DRIVEWAY.

PREFERRED DRIVEWAY OPTIONS:

CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS PRIOR TO CONSTRUCTION FOR OWNER'S DRIVEWAY CONSTRUCTION PREFERENCE.
OPTION – 1 CITY OF HOUSTON DESIGN STANDARD.
OPTION 2 – CITY GRADES THE SUBGRADE TO PROPER SLOPE AND HOMEOWNER WORKS WITH THEIR CONTRACTOR TO FINISH THE DRIVEWAY WITH THEIR DESIRED FINISH. OWNER PAYS FOR THE WORK PERFORMED BY THEIR CONTRACTOR WITH OPTION 2.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRIVEWAY SUMMARY TABLE & DETAILS – SHEET 5 OF 5

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **62** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22437\58-62_DRIVEWAY TYP.dwgSHEET 5 May 21 , 2026 – 3:43PM Jgarza



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

SCALE: 1"=60' FULL SIZE

SCALE: 1"=120' HALF SIZE

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE. (DESTROYED)
ELEV.= 50.70 FEET NAVD 1988 (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE NORTH AMERICAN DATUM OF 1983 (2011 ADJ) (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.999893080.
SURFACE = GRID/CSF
GRID = SURFACE*CSF

2. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12A), AND WERE TIED TO CITY OF HOUSTON SURVEY MONUMENT 5356-0215 HAVING AN ELEVATION OF 51.74 USING DIFFERENTIAL LEVELING.

3. SURVEY BENCHMARK 5256-1613 USED FOR THE TOPOGRAPHIC SURVEY HAS BEEN FOUND TO HAVE BEEN DESTROYED DURING CONSTRUCTION OF A WHEEL-CHAIR RAMP AT INTERSECTION OF WESTHEIMER & GREENBRIAR.

4. ACCORDING TO F.I.R.M. MAPS 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

OTHON
OTHON, INC. TBPE NO. F-1471
11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 973 8555
CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
11011 RICHMOND AVENUE, SUITE 700
HOUSTON, TEXAS 77042
TEL: (713) 270-5700
TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

STATE OF TEXAS
REGISTERED
WILLIAM H. REIMER III
4044
PROFESSIONAL
LAND SURVEYOR

William H. Reimer III
10-13-2025

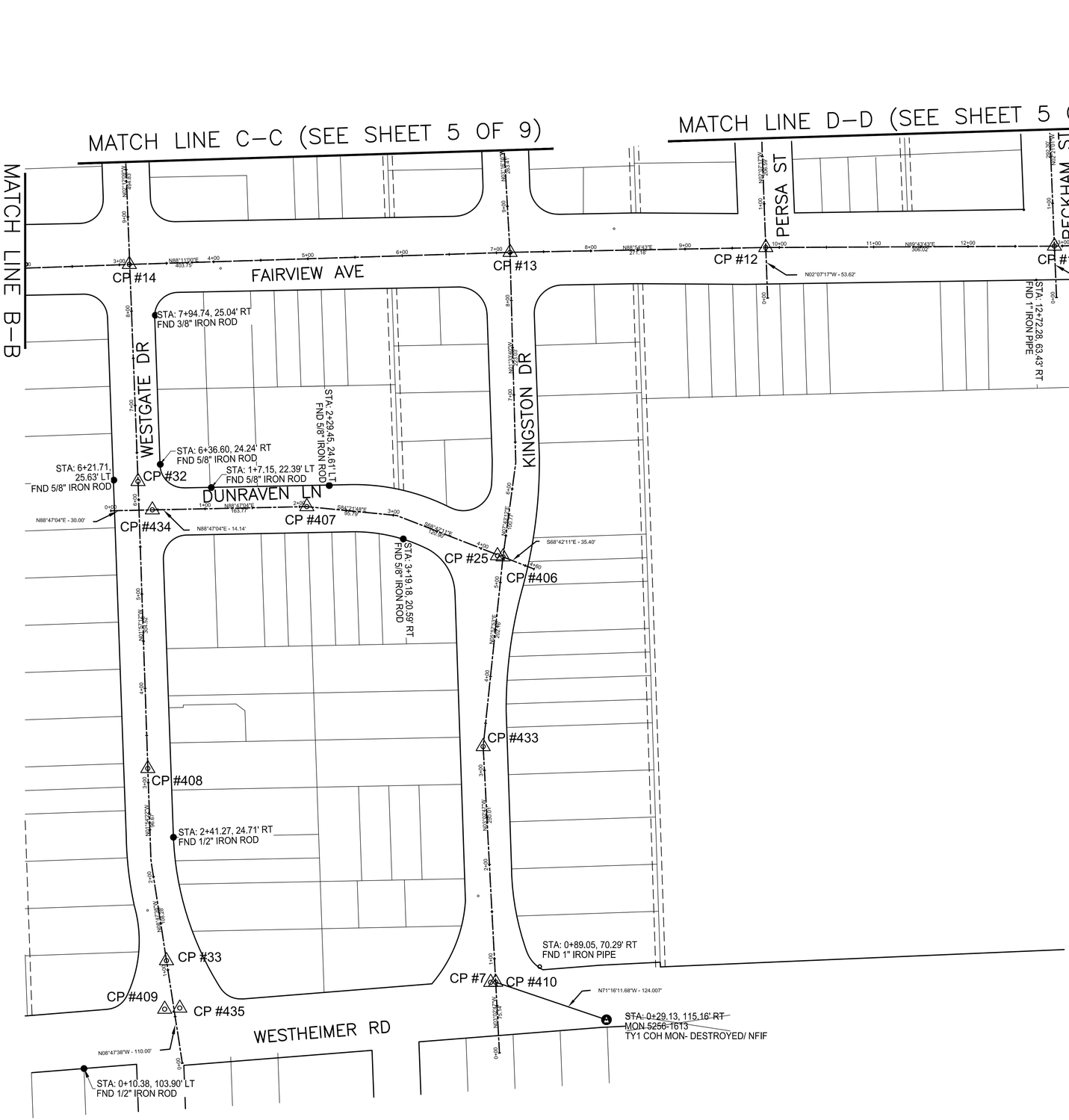
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP (SHEET 1 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
1" = 60'
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 63 OF 381

THIS PROJECT IS IN ZONE X AREAS, ACCORDING TO F.I.R.M. MAPS 48201C0860L, DATED JUNE 18, 2007.

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-01.dwgModel Oct 13 , 2025 - 7:41PM WReimer



SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE. (DESTROYED)
ELEV.= 50.70 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (CORS96) (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.9998930800.
SURFACE = GRID/CSF
GRID = SURFACE*CSF

2. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12A), AND WERE TIED TO CITY OF HOUSTON SURVEY MONUMENT 5356-0215 HAVING AN ELEVATION OF 51.74 USING DIFFERENTIAL LEVELING.

3. SURVEY BENCHMARK 5256-1613 USED FOR THE TOPOGRAPHIC SURVEY HAS BEEN FOUND TO HAVE BEEN DESTROYED DURING CONSTRUCTION OF A WHEEL-CHAIR RAMP AT INTERSECTION OF WESTHEIMER & GREENBRIAR.

4. ACCORDING TO F.I.R.M. MAP 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.

No.	Description	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

OTHON
OTHON, INC. TBPE NO. F-1471
11111 Wilcrest Green Dr. Suite 128. Houston, TX 77042 • TEL 713 973 8555
CONSULTING ENGINEERS www.othon.com
AMANI ENGINEERING, INC.
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TEL: (713) 270-5700
TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

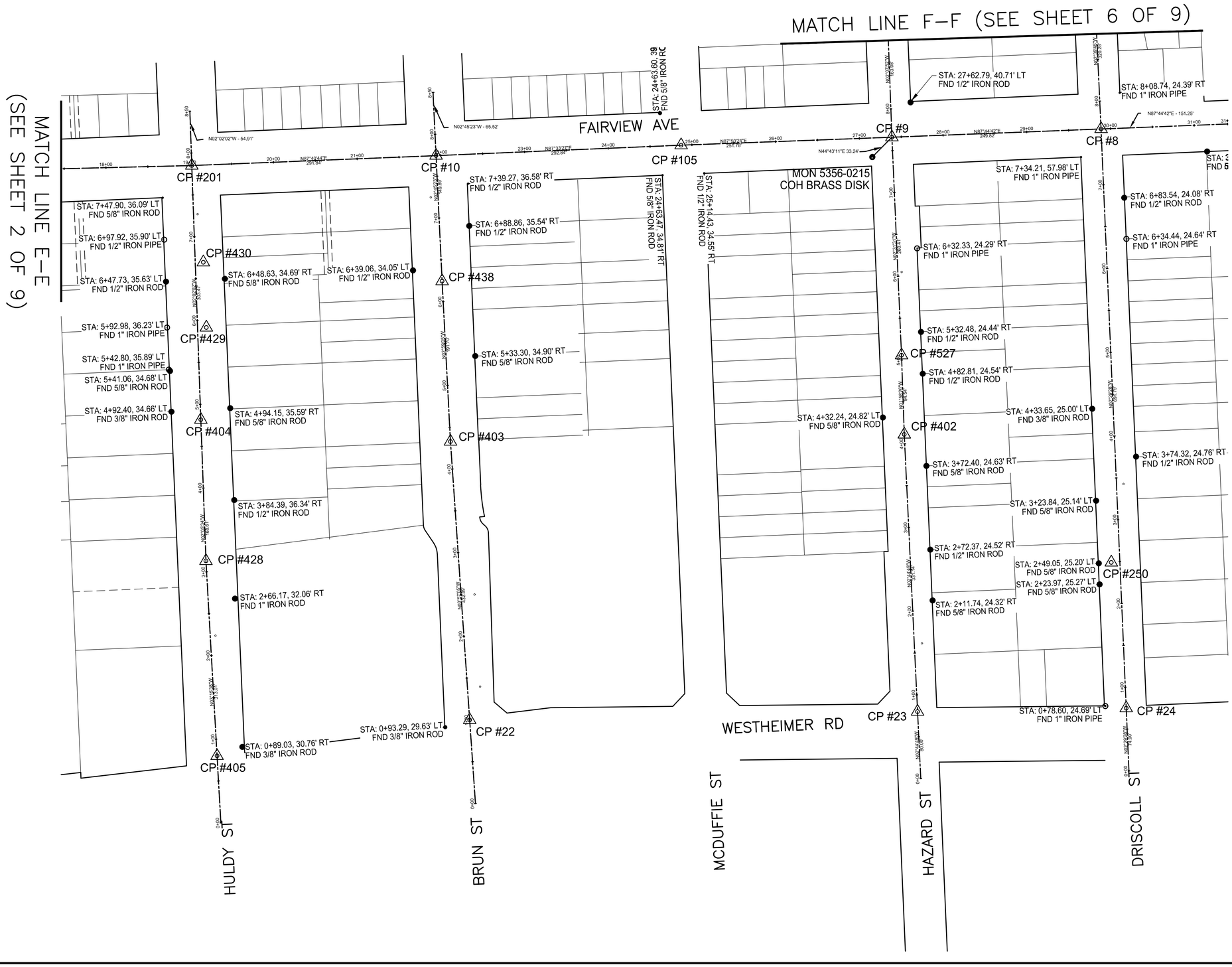
STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL LAND SURVEYOR
William H. Reimer III 10-13-2025

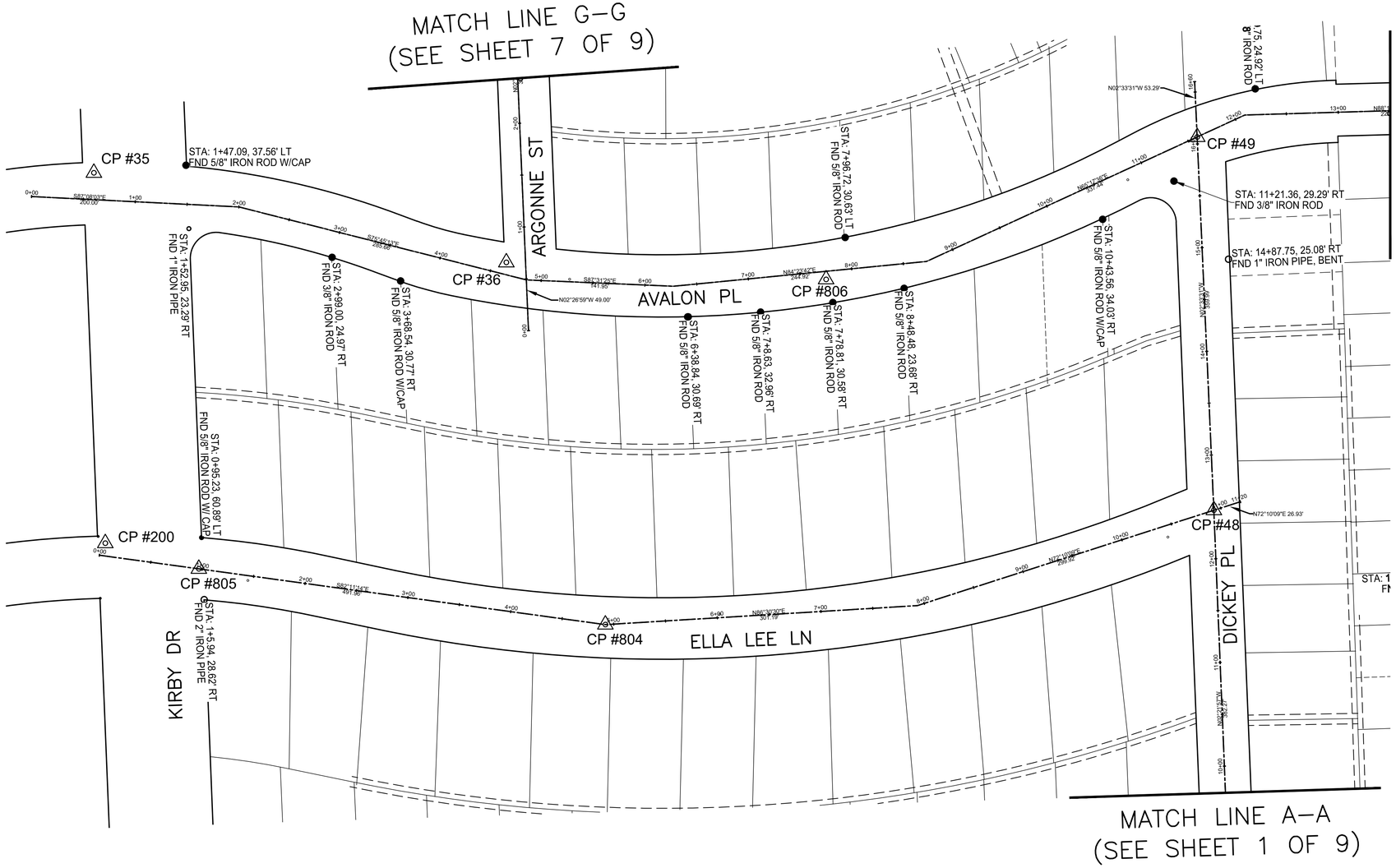
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP (SHEET 2 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
1" = 60'
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 64 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-02.dwgModel Oct 13 , 2025 - 7:45PM WReimer


MATCH LINE E–E (SEE SHEET 2 OF 9)
MATCH LINE F–F (SEE SHEET 6 OF 9)
FAIRVIEW AVE
CP #201
CP #10
CP #105
CP #9
CP #8
CP #430
CP #438
CP #429
CP #404
CP #403
CP #527
CP #402
CP #428
CP #250
CP #405
CP #22
CP #23
CP #24
MON 5356-0215
COH BRASS DISK
WESTHEIMER RD
HULDY ST
BRUN ST
MCDUFFIE ST
HAZARD ST
DRISCOLL ST
STA: 7+47.90, 36.09' LT FND 5/8" IRON ROD
STA: 6+97.92, 35.90' LT FND 1/2" IRON PIPE
STA: 6+47.73, 35.63' LT FND 1/2" IRON ROD
STA: 5+92.98, 36.23' LT FND 1" IRON PIPE
STA: 5+42.80, 35.89' LT FND 1" IRON PIPE
STA: 5+41.06, 34.68' LT FND 5/8" IRON ROD
STA: 4+92.40, 34.66' LT FND 3/8" IRON ROD
STA: 3+84.39, 36.34' RT FND 1/2" IRON ROD
STA: 2+66.17, 32.06' RT FND 1" IRON ROD
STA: 0+89.03, 30.76' RT FND 3/8" IRON ROD
STA: 0+93.29, 29.63' LT FND 3/8" IRON ROD
STA: 6+48.63, 34.69' RT FND 5/8" IRON ROD
STA: 6+39.06, 34.05' LT FND 1/2" IRON ROD
STA: 4+94.15, 35.59' RT FND 5/8" IRON ROD
STA: 7+39.27, 36.58' RT FND 1/2" IRON ROD
STA: 6+88.86, 35.54' RT FND 1/2" IRON ROD
STA: 5+33.30, 34.90' RT FND 5/8" IRON ROD
STA: 24+63.47, 34.81' RT FND 5/8" IRON ROD
STA: 24+63.60, 39 FND 5/8" IRON RO
STA: 25+14.43, 34.55' RT FND 1/2" IRON ROD
STA: 4+32.24, 24.82' LT FND 5/8" IRON ROD
STA: 27+62.79, 40.71' LT FND 1/2" IRON ROD
STA: 8+08.74, 24.39' RT FND 1" IRON PIPE
STA: 7+34.21, 57.98' LT FND 1" IRON PIPE
STA: 6+32.33, 24.29' RT FND 1" IRON PIPE
STA: 5+32.48, 24.44' RT FND 1/2" IRON ROD
STA: 4+82.81, 24.54' RT FND 1/2" IRON ROD
STA: 4+33.65, 25.00' LT FND 3/8" IRON ROD
STA: 3+72.40, 24.63' RT FND 5/8" IRON ROD
STA: 3+23.84, 25.14' LT FND 5/8" IRON ROD
STA: 2+72.37, 24.52' RT FND 1/2" IRON ROD
STA: 2+49.05, 25.20' LT FND 5/8" IRON ROD
STA: 2+23.97, 25.27' LT FND 5/8" IRON ROD
STA: 2+11.74, 24.32' RT FND 5/8" IRON ROD
STA: 0+78.60, 24.69' LT FND 1" IRON PIPE
STA: 6+83.54, 24.08' RT FND 1/2" IRON ROD
STA: 6+34.44, 24.64' RT FND 1" IRON PIPE
STA: 3+74.32, 24.76' RT FND 1/2" IRON ROD
N02°02'02"W - 54.91'
N02°45'23"W - 65.52'
N87°40'44"E 291.84'
N87°33'27"E 292.64'
N87°50'24"E 251.78'
N44°43'11"E 33.24'
N87°44'42"E 249.82'
N87°44'42"E - 151.25'
N02°16'58"W 600.00'
N02°16'58"W 600.00'
N02°16'58"W 600.00



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

SCALE: 1"=60' FULL SIZE

SCALE: 1"=120' HALF SIZE

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE.
ELEV.= 50.70 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (CORS96) (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.9998930800.
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GRID = SURFACE*CSF

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3. SURVEY BENCHMARK 5256-1613 USED FOR THE TOPOGRAPHIC SURVEY HAS BEEN FOUND TO HAVE BEEN DESTROYED DURING CONSTRUCTION OF A WHEEL-CHAIR RAMP AT INTERSECTION OF WESTHEIMER & GREENBRIAR.

4. ACCORDING TO F.I.R.M. MAP 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.

No.	Revision	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

OTHON
OTHON, INC. TBPE NO. F-1471
11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713.973.8555
CONSULTING ENGINEERS www.othon.com
AMANI ENGINEERING, INC.
11011 RICHMOND AVENUE, SUITE 700
HOUSTON, TEXAS 77042
TEL: (713) 270-5700
TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

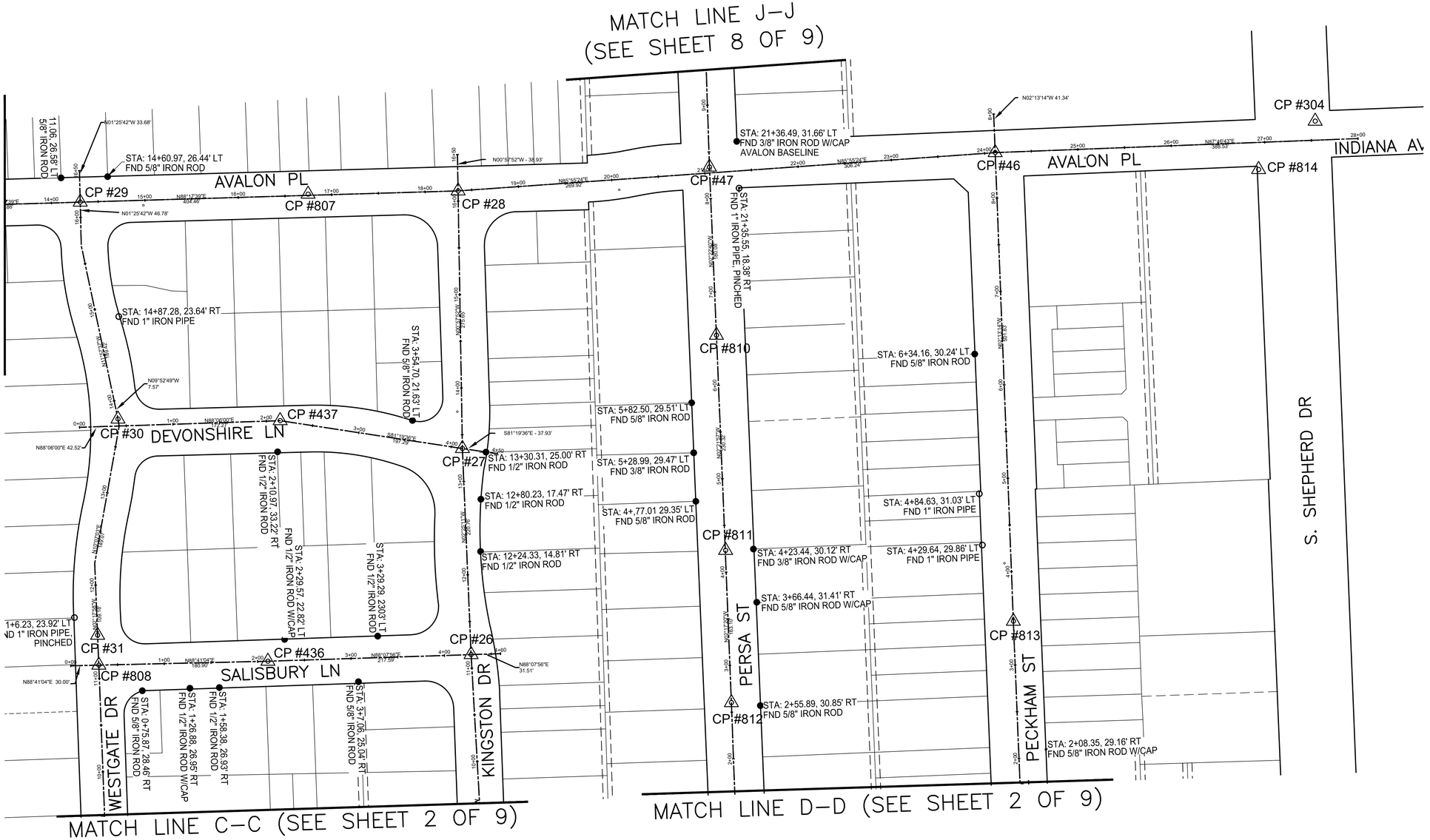
STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL LAND SURVEYOR
William H. Reimer III
10-13-2025

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP (SHEET 4 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
NOT TO SCALE
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 66 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-04.dwgModel Oct 13, 2025 - 7:50PM WReimer



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

SCALE: 1"=60' FULL SIZE

SCALE: 1"=120' HALF SIZE

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE.
ELEV.= 50.70 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (CORS96) (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.9998930800.
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GRID = SURFACE*CSF

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4. ACCORDING TO F.I.R.M. MAP 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.

REVISIONS		Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

OTHON
OTHON, INC. TBPE NO. F-1471
11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com
AMANI ENGINEERING, INC.
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HOUSTON, TEXAS 77042
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TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

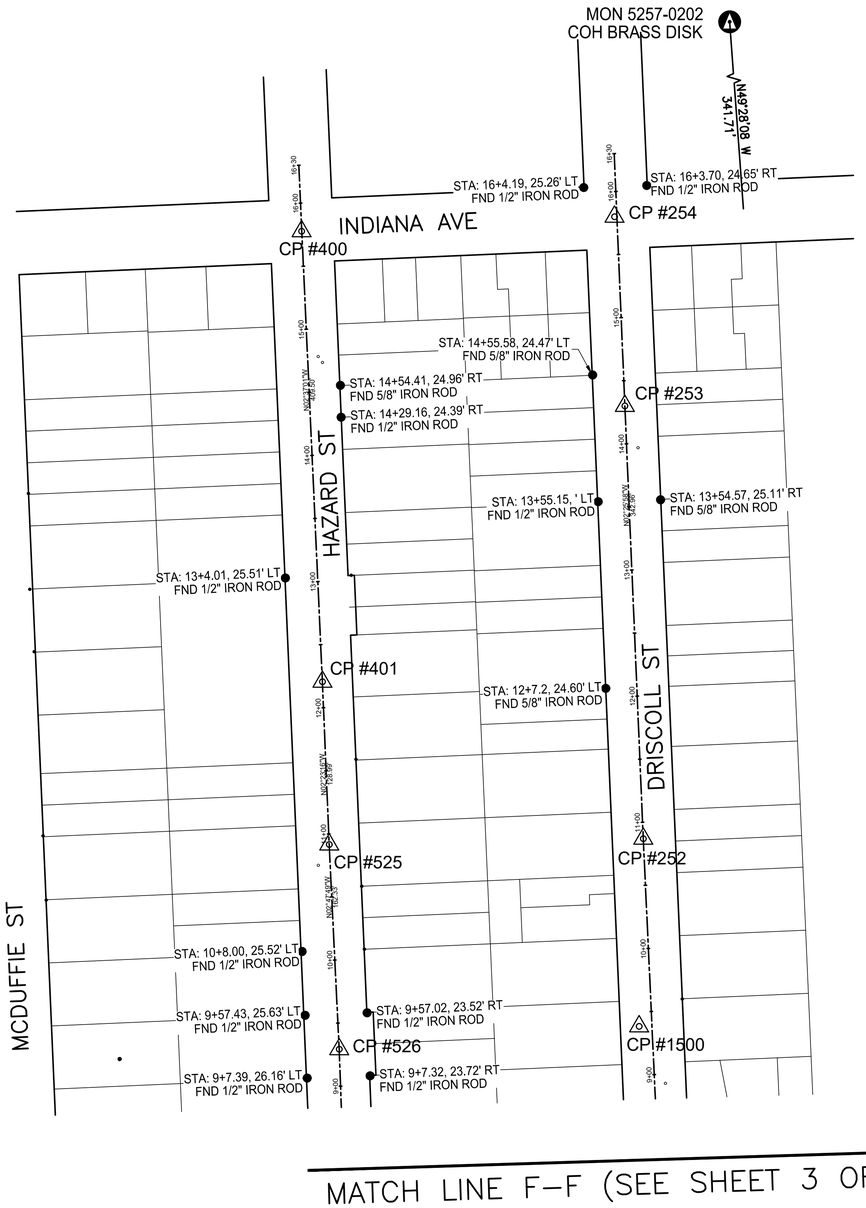
STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL LAND SURVEYOR
William H. Reimer III 10-13-2025

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP (SHEET 5 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
1" = 60'
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 67 OF 381

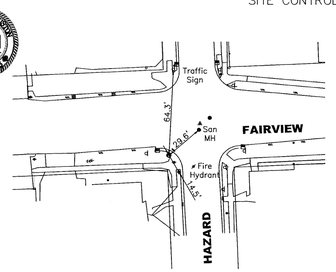
P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-05.dwgModel Oct 13 , 2025 - 7:53PM WReimer



MATCH LINE F-F (SEE SHEET 3 OF 9)

CITY OF HOUSTON

CITY SURVEY 5356-0215
SITE CONTROL MONUMENT



Project WBS# R-002011-0089-3
Texas Coordinate System of 1983, South Central Zone, U. S. Survey Feet
X= 3,108,426.37
Y= 13,835,807.15

Lat.= N29° 44' 40.71"
Lon.= W95° 24' 25.79"

Keymap Page: 492 V
Orthometric Elevation = 51.74
Ellipsoid Height= -37.90
Geoid: 12A
Datum Source & Adjustment: STATIC GPS OBSERVATION MADE ON 03/06/2013

Reference Frame Used: NAD_83(2011)(EPOCH: 2010.0000)
Vertical Adjustment used: NAVD 88 GEOD12A
General Location: SOUTHWEST CORNER OF INTERSECTION HAZARD ST. AND FAIRVIEW ST.

Date Set: 10/17/2012 Type of Mark: BRASS DISK

3 Nearest project control points (bearings and distances stated below):
1. CP# 8, SET MAG NAIL, S83°2'20.14"W,275.08'
2. CP# 9, SET MAG NAIL, N044°53'54.32"W,33.19'
3. CP# 10, SET MAG NAIL, S89°49'50.53"E,520.75'

NOTE:
1. Bearings are grid bearings.
2. Scale Factor (S.F)= 0.999893080000
3. Surface= Grid / S.F.

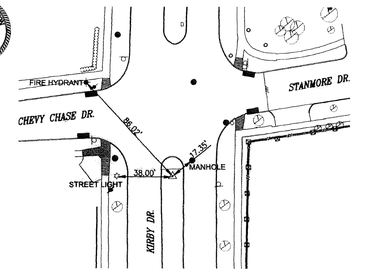
Surveyed By: Amani Engineering, Inc.
8313 Southwest Freeway Suite # 350
Houston, TX 77074

STATE OF TEXAS REGISTERED RICKY J. RICHARDSON 5445 PROFESSIONAL LAND SURVEYOR
1/30/14

V:\Codd\2013\13005 Othon-NSSI Shepherd\Survey Control\SURVEY CONTROL SHEET.dwgModel Apr 30 , 2014 - 10:40AM guest3

CITY OF HOUSTON

CITY SURVEY 5257-8302
SITE CONTROL MONUMENT



Project WBS# R-002011-0089-3
Texas Coordinate System of 1983, South Central Zone, U. S. Survey Feet
X= 3,104,677.04
Y= 13,837,331.94

Lat.= N 29° 44' 56.93"
Lon.= W 95° 25' 07.77"

Keymap Page: 492 Q
Orthometric Elevation = 53.55
Ellipsoid Height= N/A
Geoid: 12A
Datum Source & Adjustment: CONVENTIONAL-STATIC GPS OBSERVATION MADE ON COH MON 5356-0215 ON 03/06/2013

Reference Frame Used: NAD_83(2011)(EPOCH: 2010.0000)
Vertical Adjustment used: NAVD 88 GEOD12A
General Location: ON SOUTH MEDIAN OF STANMORE DR. AND KIRBY DR. INTERSECTION.

Date Set: 01/29/2007 Type of Mark: 4A

3 Nearest project control points (bearings and distances stated below):
1. CP# 3, SET 5/8"IR W/CAP, S07°29'29"W, 315.69'
2. CP# 500, SET MAG NAIL, S061°21'03"E, 451.92'
3. CP# 38, SET MAG NAIL, S42°32'14"E, 568.55'

NOTE:
1. Bearings are grid bearings.
2. Scale Factor (S.F)= 0.999893080000
3. Surface= Grid / S.F.

Surveyed By: Amani Engineering, Inc.
8313 Southwest Freeway Suite # 350
Houston, TX 77074

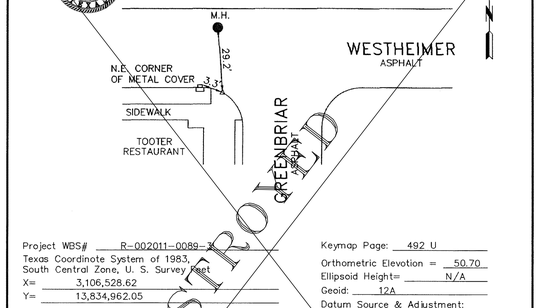
STATE OF TEXAS REGISTERED RICKY J. RICHARDSON 5445 PROFESSIONAL LAND SURVEYOR
1/30/14

V:\Codd\2013\13005 Othon-NSSI Shepherd\Survey Control\SURVEY CONTROL SHEET.dwgModel Apr 30 , 2014 - 10:41AM guest3

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
SCALE: 1"=60' FULL SIZE
SCALE: 1"=120' HALF SIZE

CITY OF HOUSTON

CITY SURVEY 5256-1613
SITE CONTROL MONUMENT



Project WBS# R-002011-0089-3
Texas Coordinate System of 1983, South Central Zone, U. S. Survey Feet
X= 3,106,528.62
Y= 13,834,962.05

Lat.= N 29° 44' 32.92"
Lon.= W 95° 24' 47.68"

Keymap Page: 492 U
Orthometric Elevation = 50.70
Ellipsoid Height= N/A
Geoid: 12A
Datum Source & Adjustment: CONVENTIONAL-STATIC GPS OBSERVATION MADE ON COH MON 5356-0215 ON 03/06/2013

Reference Frame Used: NAD_83(2011)(EPOCH: 2010.0000)
Vertical Adjustment used: NAVD 88 GEOD12A
General Location: SOUTHWEST CORNER OF GREENBRIAR AND WESTHEIMER

Date Set: 05/07/1975 Type of Mork: 1

3 Neorest project control points (bearings and distances stated below):
1. CP# 7, SET MAG NAIL, N72°06'06"W, 128.95'
2. CP# 33, SET MAG NAIL, N82°210'5"W, 470.64'
3. CP# 6, SET MAG NAIL, S85°07'20"W, 746.56'

NOTE:
1. Bearings are grid bearings.
2. Scale Factor (S.F)= 0.999893080000
3. Surface= Grid / S.F.

Surveyed By: Amani Engineering, Inc.
8313 Southwest Freeway Suite # 350
Houston, TX 77074

STATE OF TEXAS REGISTERED RICKY J. RICHARDSON 5445 PROFESSIONAL LAND SURVEYOR
1/30/14

V:\Codd\2013\13005 Othon-NSSI Shepherd\Survey Control\SURVEY CONTROL SHEET.dwgModel Apr 30 , 2014 - 10:40AM guest3

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE.
ELEV.= 50.70 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (CORS96) (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.9998930800.
SURFACE = GRID/CSF
GRID = SURFACE*CSF

2. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12A), AND WERE TIED TO CITY OF HOUSTON SURVEY MONUMENT 5356-0215 HAVING AN ELEVATION OF 51.74 USING DIFFERENTIAL LEVELING.

3. SURVEY BENCHMARK 5256-1613 USED FOR THE TOPOGRAPHIC SURVEY HAS BEEN FOUND TO HAVE BEEN DESTROYED DURING CONSTRUCTION OF A WHEEL-CHAIR RAMP AT INTERSECTION OF WESTHEIMER & GREENBRIAR.

4. ACCORDING TO F.I.R.M. MAP 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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AMANI ENGINEERING, INC.
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HOUSTON, TEXAS 77042
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TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4046 PROFESSIONAL LAND SURVEYOR
William H. Reimer III. 10-13-2025

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

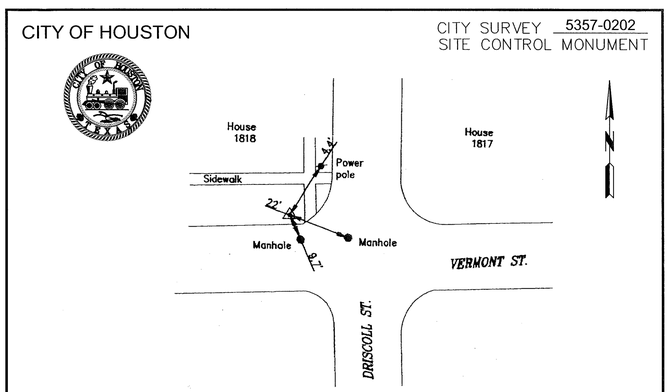
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP
(SHEET 6 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
1" = 60'
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 68 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-06.dwgModel Oct 13 , 2025 - 7:56PM WReimer

COH MONUMENT POINTS TABLE

SURVEY MONUMENT #	Northing (Grid)	Easting (Grid)	Elevation	Description	Station	Remarks
COH 5356-0215	13,835,807.15	3,108,426.37	51.74	BRASS DISK	STA 27+14.64, 22.70' RT.	BL FAIRVIEW
~~COH 5256-1613~~	~~13,834,962.05~~	~~3,106,528.62~~	50.70	TY 1 MARKER ON CURB	MON DESTROYED DURING RAMP CONSTRUCTION	
COH 5257-8302	13,837,331.94	3,104,677.04	53.55	BRASS DISK	N49°28'08" W, 341.71' FROM STA 0+00, SAN FELIPE BL	
COH 5257-0202	13,837,465.56	3,108,602.19	52.07	BRASS DISK	N4°26'50" W, 764.97' FROM STA 16+30, DRISCOLL BL	



Project WBS# R-002011-0089-3

Texas Coordinate System of 1983,
South Central Zone, U. S. Survey Feet

X= 3,108,934.60

Y= 13,838,945.22'

Lat.= N 29° 45' 11.61"

Lon.= W 95° 24' 18.93"

Keymap Page: 492 R

Orthometric Elevation = 52.07

Ellipsoid Height= -11.456

Geoid: 12A

Datum Source & Adjustment:
STATIC GPS OBSERVATION
MADE ON 05/02/14

Reference Frame Used: NAD_83(2011)(EPOCH: 2010.0000)

Vertical Adjustment used: NAVD 88 GEOD12A

General Location: NORTHWEST CORNER OF VERMONT ST. AND DRISCOLL ST. INSTERSECTION.

Date Set: 03/05/1975 Type of Mark: 4A

3 Nearest project control points (bearings and distances stated below):

1. CP# 1, SET MAG NAIL, S85°33'05"W, 1322.13'
2. CP# 1500, SET MAG NAIL, S03°06'45"E, 1456.04'
3. CP# 304, SET MAG NAIL, S56°22'11"W, 1546.82'

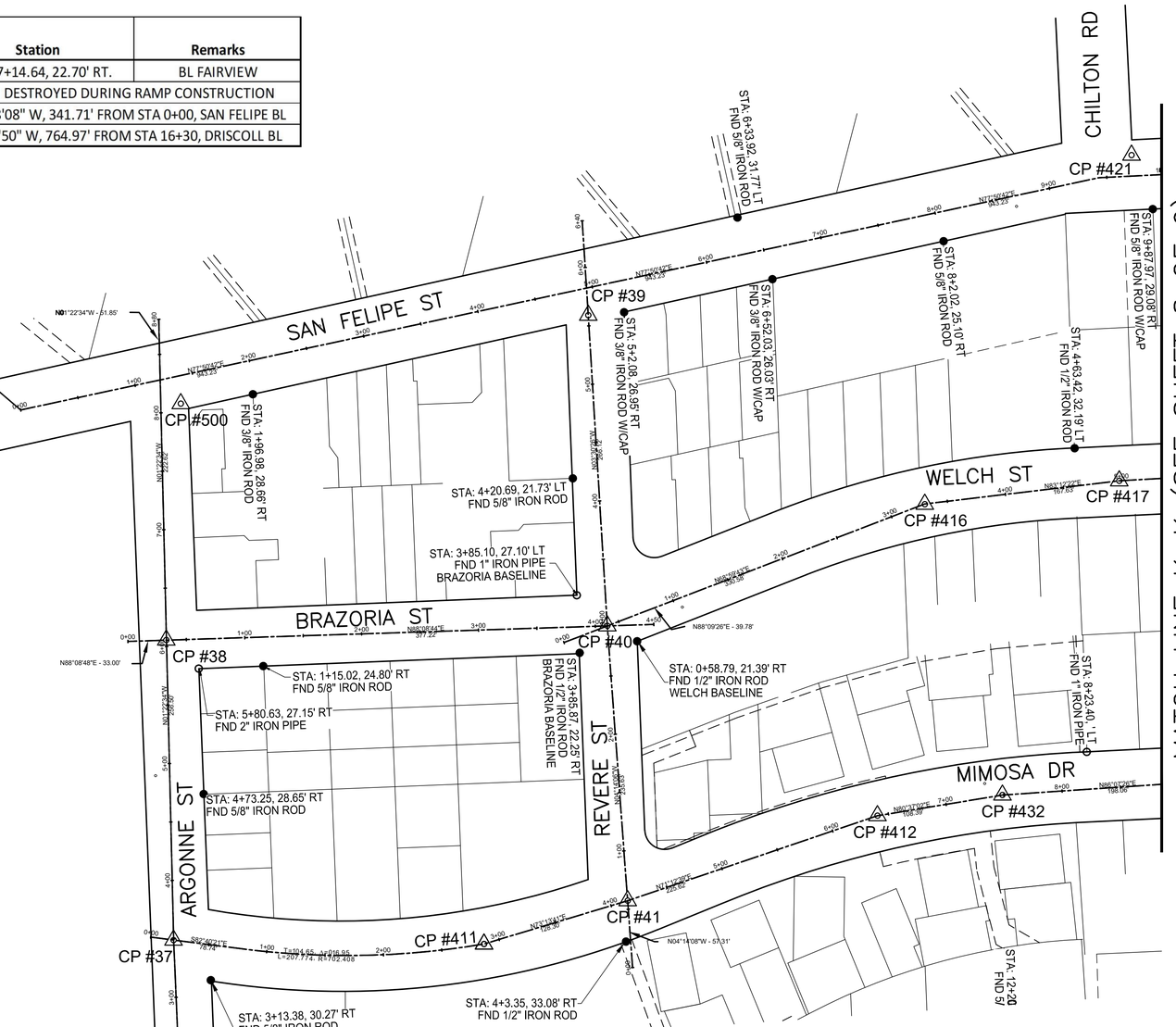
NOTE:
1. Bearings are grid bearings.
2. Scale Factor (S.F)= 0.999893080000
3. Surface= Grid / S.F.

Surveyed By: Amani Engineering, Inc.
8313 Southwest Freeway Suite # 350
Houston, TX 77074

STATE OF TEXAS · REGISTERED · RICKY J. RICHARDSON · 5445 · PROFESSIONAL LAND SURVEYOR

5/8/14

V:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\SURVEY CONTROL SHEET.dwgModel May 08 , 2014 - 10:07AM guest3



MATCH LINE G-G
(SEE SHEET 4 OF 9)

MATCH LINE K-K (SEE SHEET 8 OF 9)

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
SCALE: 1"=60' FULL SIZE
SCALE: 1"=120' HALF SIZE

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE.
ELEV.= 50.70 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (CORS96) (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.9998930800.
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4. ~~ACCORDING TO F.I.R.M. MAP 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.~~

		Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

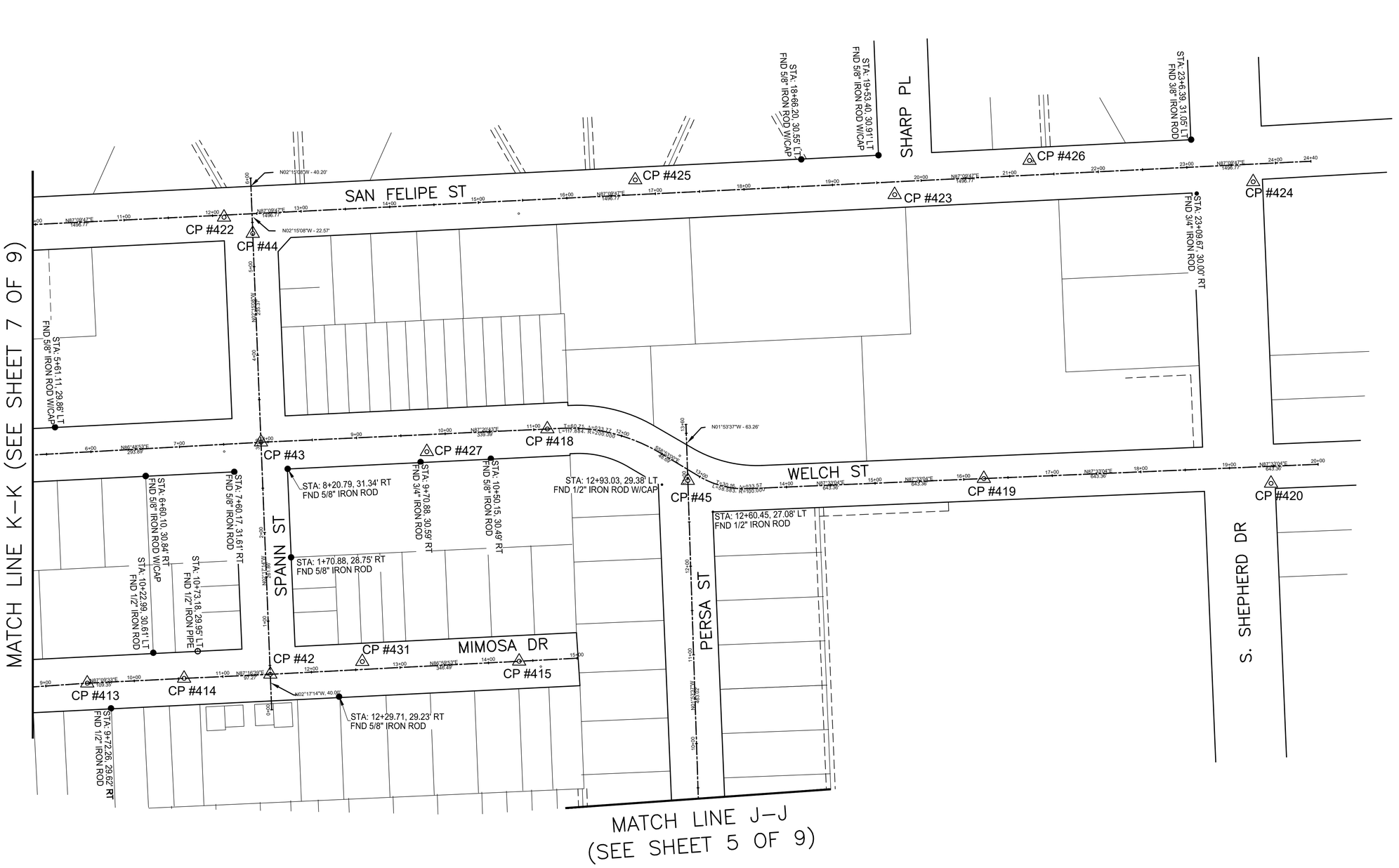
STATE OF TEXAS · REGISTERED · WILLIAM H. REIMER III · 4044 · PROFESSIONAL LAND SURVEYOR
William H. Reimer III
10-13-2025

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP
(SHEET 7 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
1" = 60'
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 69 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-07.dwgModel Oct 13 , 2025 - 7:59PM WReimer



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)

SCALE: 1"=60' FULL SIZE

SCALE: 1"=120' HALF SIZE

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
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CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
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CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE.
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SURVEY NOTES:

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No.	Revision Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

STATE OF TEXAS REGISTERED W. WILLIAM H. REIMER III 4044 PROFESSIONAL LAND SURVEYOR
William H. Reimer III 10-13-2025

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL MAP (SHEET 8 OF 9)

WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
1" = 60'
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 70 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Control-08.dwgModel Oct 13 , 2025 - 8:06PM WReimer

CONTROL POINTS TABLE

Point #	Northing (Grid)	Easting (Grid)	Elevation	Description	Station	Remarks
4	13,835,739.61	3,104,769.59	52.09	5/8"IRON ROD W/CAP	1+01.03, 22.71' LT	REBA BL
7	13,835,001.66	3,106,405.94	51.58	X CUT	0+75.23, 5.27' LT	KINGSTON BL
8	13,835,840.59	3,108,699.36	52.87	MAG NAIL	7+66.70	DRISCOLL BL
9	13,835,830.78	3,108,449.76	52.24	MAG NAIL	27+38.93	FAIRVIEW BL
10	13,835,808.77	3,107,905.66	53.64	MAG NAIL	7+74.48	BRUN BL
11	13,835,781.90	3,107,003.46	52.36	MAG NAIL	12+91.61	FAIRVIEW BL
12	13,835,780.45	3,106,697.48	52.33	MAG NAIL	9+85.59	FAIRVIEW BL
13	13,835,775.30	3,106,426.38	50.88	X CUT	7+14.41	FAIRVIEW BL
14	13,835,762.50	3,106,022.87	51.84	X CUT	3+10.66	FAIRVIEW BL
15	13,835,753.12	3,105,758.52	52.53	X CUT	0+45.92	FAIRVIEW BL
16	13,835,406.48	3,105,771.89	52.64	X CUT	10+64.32	LOCKE BL
18	13,835,224.76	3,105,425.65	52.65	X CUT	7+40.60	SAN SABA BL
19	13,835,212.86	3,105,128.04	52.26	MAG NAIL	4+42.59	SAN SABA BL
20	13,835,196.60	3,104,792.08	53.21	MAG NAIL	1+07.30, 19.98' LT	SAN SABA BL
22	13,835,135.61	3,107,945.77	52.68	MAG NAIL W/SHINER	1+00.00	BRUN BL
23	13,835,145.44	3,108,480.38	51.17	MAG NAIL	0+80.00	HAZARD BL
24	13,835,149.53	3,108,729.43	51.42	MAG NAIL W/SHINER	0+74.90	DRISCOLL BL
25	13,835,453.92	3,106,413.10	52.29	MAG NAIL W/SHINER	4+18.67, 0.83' RT	DUNRAVEN BL
26	13,836,038.25	3,106,411.35	52.02	MAG NAIL W/SHINER	4+28.49	SALISBURY BL
27	13,836,258.79	3,106,402.03	51.74	MAG NAIL W/SHINER	4+12.07	DEVONSHIRE BL
28	13,836,534.37	3,106,397.39	52.20	MAG NAIL W/SHINER	18+35.30	AVALON BL
29	13,836,522.33	3,105,993.15	52.01	MAG NAIL W/SHINER	14+30.84	AVALON BL
30	13,836,290.29	3,106,033.57	52.13	MAG NAIL W/SHINER	0+41.47, 7.50' LT	DEVONSHIRE BL
31	13,836,058.95	3,106,011.78	52.71	MAG NAIL W/SHINER	11+46.27	WEST GATE BL
32	13,835,532.60	3,106,032.08	52.31	MAG NAIL W/SHINER	6+19.47	WEST GATE BL
33	13,835,024.68	3,106,062.22	51.56	MAG NAIL W/SHINER	1+10.04	WEST GATE BL
34	13,835,361.10	3,104,708.75	52.63	MAG NAIL	0+00.00	LOCKE BL
35	13,836,460.07	3,104,663.79	52.39	X CUT	0+57.99	AVALON BL
36	13,836,373.72	3,105,061.10	51.70	MAG NAIL	4+62.87, 11.52' LT	AVALON BL
37	13,836,656.66	3,105,067.54	52.80	MAG NAIL	0+19.82	MIMOSA BL
38	13,836,913.06	3,105,061.38	54.02	MAG NAIL	0+33.00	BRAZORIA BL
39	13,837,190.86	3,105,422.08	53.27	MAG NAIL	5+59.07	REVERE BL
40	13,836,925.26	3,105,438.36	53.85	MAG NAIL	4+10.22	BRAZORIA BL
41	13,836,690.30	3,105,455.76	52.55	MAG NAIL	4+14.81	MIMOSA BL
42	13,836,804.06	3,106,180.21	52.28	MAG NAIL W/SHINER	11+53.51	MIMOSA BL
43	13,837,065.68	3,106,169.76	52.82	MAG NAIL W/SHINER	7+92.10	WELCH BL
44	13,837,300.85	3,106,160.51	52.35	MAG NAIL W/SHINER	5+37.23	SPANN BL
45	13,837,022.56	3,106,651.04	52.59	MAG NAIL W/SHINER	12+90.44, 10.59' RT	WELCH BL
46	13,836,575.50	3,106,972.02	53.19	MAG NAIL	24+11.47	AVALON BL
47	13,836,559.91	3,106,666.63	52.29	X CUT	21+05.22, 6.27' LT	AVALON BL
48	13,836,135.03	3,105,742.55	51.98	MAG NAIL	10+93.07	ELLA LEE BL
49	13,836,494.62	3,105,726.48	51.56	MAG NAIL	11+59.41	AVALON BL
105	13,835,821.28	3,108,198.20	52.67	MAG NAIL	24+87.15	FAIRVIEW BL
200	13,836,103.26	3,104,674.81	52.58	X CUT	0+04.09, 12.19' LT	ELLA LEE BL
201	13,835,796.99	3,107,614.10	53.75	MAG NAIL	19+02.48	FAIRVIEW BL
250	13,835,323.44	3,108,711.64	52.04	MAG NAIL	2+49.44, 10.25' LT	DRISCOLL BL
252	13,836,160.48	3,108,684.49	53.13	MAG NAIL	10+86.97	DRISCOLL BL
253	13,836,503.10	3,108,669.94	53.19	MAG NAIL	14+29.94	DRISCOLL BL
254	13,836,652.92	3,108,661.71	52.84	MAG NAIL	15+79.98, 1.90' LT	DRISCOLL BL
302	13,835,808.21	3,107,293.68	51.94	5/8"IRON ROD W/CAP	15+82.41, 19.16' LT	FAIRVIEW BL
304	13,836,608.67	3,107,314.04	51.97	X CUT	27+54.91, 20.35' LT	AVALON BL
400	13,836,641.49	3,108,413.87	52.58	MAG NAIL	15+77.70	HAZARD BL
401	13,836,284.72	3,108,430.40	52.94	MAG NAIL	12+20.50	HAZARD BL
402	13,835,476.16	3,108,464.49	52.55	MAG NAIL	4+11.14	HAZARD BL
403	13,835,467.67	3,107,922.84	53.23	MAG NAIL	4+32.89	BRUN BL
404	13,835,493.73	3,107,624.85	53.45	MAG NAIL	4+81.62	HULDY BL
405	13,835,092.64	3,107,644.26	51.61	MAG NAIL	0+80.00	HULDY BL

CONTROL POINTS TABLE

Point #	Northing (Grid)	Easting (Grid)	Elevation	Description	Station	Remarks
406	13,835,452.54	3,106,418.92	52.28	MAG NAIL	4+24.60	DUNRAVEN BL
407	13,835,505.85	3,106,210.97	52.46	MAG NAIL	2+07.91	DUNRAVEN BL
408	13,835,228.29	3,106,042.46	52.20	MAG NAIL	3+14.96	WEST GATE BL
409	13,834,973.29	3,106,060.36	51.50	X CUT	0+59.43, 9.72' LT	WEST GATE BL
410	13,835,001.86	3,106,411.20	51.57	MAG NAIL	0+75.14	KINGSTON BL
411	13,836,653.32	3,105,332.98	52.84	MAG NAIL	2+86.51	MIMOSA BL
412	13,836,762.79	3,105,669.42	52.89	MAG NAIL	6+40.44	MIMOSA BL
413	13,836,794.02	3,105,973.85	52.26	MAG NAIL	9+46.89	MIMOSA BL
414	13,836,799.44	3,106,083.06	52.28	MAG NAIL	10+56.24	MIMOSA BL
415	13,836,818.78	3,106,460.87	52.71	MAG NAIL	14+34.59	MIMOSA BL
416	13,837,029.53	3,105,709.92	54.33	MAG NAIL	3+30.58	WELCH BL
417	13,837,049.35	3,105,876.35	53.19	MAG NAIL	4+98.21	WELCH BL
418	13,837,080.65	3,106,492.60	53.08	MAG NAIL	11+15.32	WELCH BL
419	13,837,024.76	3,106,984.84	52.65	MAG NAIL	16+22.77	WELCH BL
420	13,837,019.43	3,107,308.55	52.72	X CUT	19+46.00, 19.16' RT	WELCH BL
421	13,837,327.80	3,105,886.60	52.10	MAG NAIL	9+72.06, 17.92' LT	SAN FELIPE BL
422	13,837,319.34	3,106,128.05	52.65	MAG NAIL	12+12.80, 2.49' RT	SAN FELIPE BL
423	13,837,344.97	3,106,884.24	51.62	MAG NAIL	19+69.41, 14.31' RT	SAN FELIPE BL
424	13,837,359.37	3,107,288.51	52.42	X CUT	23+73.94, 19.94' RT	SAN FELIPE BL
425	13,837,361.37	3,106,591.72	52.26	MAG NAIL W/SHINER	16+78.03, 16.55' LT	SAN FELIPE BL
426	13,837,383.41	3,107,036.38	52.21	MAG NAIL	21+23.29, 16.55' LT	SAN FELIPE BL
427	13,837,054.99	3,106,356.70	53.13	5/8"IRON ROD W/CAP	9+78.40, 19.32' RT	WELCH BL
428	13,835,325.25	3,107,631.00	53.43	MAG NAIL	3+13.01	HULDY BL
429	13,835,603.76	3,107,631.43	53.17	MAG NAIL	5+91.36, 10.48' RT	HULDY BL
430	13,835,681.53	3,107,627.90	53.26	MAG NAIL	6+69.21, 9.71' RT	HULDY BL
431	13,836,818.31	3,106,283.98	52.05	MAG NAIL	12+57.90, 8.79' LT	MIMOSA BL
432	13,836,780.63	3,105,776.26	52.71	X CUT	7+48.83	MIMOSA BL
433	13,835,251.49	3,106,397.91	52.44	MAG NAIL	3+25.15	KINGSTON BL
434	13,835,502.38	3,106,047.25	52.07	MAG NAIL	0+44.14	DUNRAVEN BL
435	13,834,974.40	3,106,076.31	51.47	X CUT	0+58.12, 6.25' RT	WEST GATE BL
436	13,836,031.16	3,106,193.89	52.12	MAG NAIL	2+10.88	SALISBURY BL
437	13,836,288.54	3,106,207.02	51.63	MAG NAIL	2+14.78	DEVONSHIRE BL
438	13,835,659.09	3,107,912.85	52.82	MAG NAIL	6+24.59	BRUN BL
500	13,837,115.30	3,105,073.59	52.89	MAG NAIL	8+07.43, 17.06' RT	ARGONNE BL
525	13,836,155.85	3,108,435.76	52.59	MAG NAIL	10+91.51	HAZARD BL
526	13,835,993.72	3,108,443.70	52.23	MAG NAIL	9+29.17	HAZARD BL
527	13,835,570.63	3,108,461.23	52.83	MAG NAIL	5+05.68	HAZARD BL
800	13,835,380.80	3,105,315.82	51.22	MAG NAIL	6+07.50	LOCKE BL
801	13,835,365.14	3,104,794.29	52.63	MAG NAIL	0+85.67	LOCKE BL
802	13,835,676.10	3,105,118.82	51.23	MAG NAIL	4+53.33	REBA BL
803	13,835,716.76	3,104,777.08	52.16	MAG NAIL	1+08.82	REBA BL
804	13,836,024.86	3,105,156.47	51.86	MAG NAIL	4+91.96	ELLA LEE BL
805	13,836,078.61	3,104,764.90	52.53	MAG NAIL	0+96.70	ELLA LEE BL
806	13,836,357.38	3,105,369.06	52.49	MAG NAIL	7+74.46, 7.81' RT	AVALON BL
807	13,836,530.87	3,106,236.90	52.56	MAG NAIL	16+74.76, 1.28' LT	AVALON BL
808	13,836,027.01	3,106,013.06	52.75	MAG NAIL	0+30.00	SALISBURY BL
809	13,834,898.31	3,105,784.76	52.40	X CUT	0+09.24, 8.56' LT	DICKEY BL
810	13,836,379.93	3,106,673.81	52.58	MAG NAIL	6+53.63	PERSA BL
811	13,836,149.83	3,106,683.32	53.34	MAG NAIL	4+23.31	PERSA BL
812	13,835,986.88	3,106,689.83	52.71	MAG NAIL	2+60.21	PERSA BL
813	13,836,073.98	3,106,991.48	53.14	X CUT	3+46.83	PECKHAM BL
814	13,836,557.21	3,107,253.56	52.93	MAG NAIL	26+92.40, 28.97' RT	AVALON BL
900	13,834,889.50	3,105,793.68	52.87	5/8"IRON ROD W/CAP	0+00.00	DICKEY BL
901	13,835,238.28	3,105,778.50	52.03	X CUT	10+93.74, 0.68' RT	SAN SABA BL
1500	13,836,011.84	3,108,681.24	52.25	MAG NAIL	9+38.60, 10.15' LT	DRISCOLL BL

SITE CONTROL MONUMENT BENCHMARKS:

CITY OF HOUSTON MONUMENT 5356-0215, A BRASS DISK IN CONCRETE, LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HAZARD STREET & FAIRVIEW STREET.
ELEV.= 51.74 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5257-8302, A BRASS DISK IN CONCRETE, LOCATED ON SOUTH MEDIAN OF STANMORE AND KIRBY DRIVE INTERSECTION.
ELEV.= 53.55 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5356-1613, A TYPE 1 SURVEY MARKER, LOCATED AT THE SW CURB AT INTERSECTION OF WESTHEIMER ROAD AND GREENBRIAR DRIVE.
ELEV.= 50.70 FEET NAVD 1988 (CORS96) (GEOID 12A)

CITY OF HOUSTON MONUMENT 5357-0202, A BRASS DISK IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF DRISCOLL ST. & VERMONT ST. INTERSECTION.
ELEV.= 52.07 FEET NAVD 1988 (CORS96) (GEOID 12A)

SURVEY NOTES:

1. THIS SURVEY IS REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (EPOCH 2010.00000). ALL COORDINATES SHOWN HERE ARE GRID VALUES AND ALL DISTANCES SHOWN ARE SURFACE VALUES. GRID VALUES COULD BE CONVERTED TO SURFACE & VICE-VERSA BY USING A COMBINED SCALE FACTOR (CSF) OF 0.9998930800.
SURFACE = GRID/CSF
GRID = SURFACE*CSF

2. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12A), AND WERE TIED TO CITY OF HOUSTON SURVEY MONUMENT 5356-0215 HAVING AN ELEVATION OF 51.74 USING DIFFERENTIAL LEVELING.

3. SURVEY BENCHMARK 5256-1613 USED FOR THE TOPOGRAPHIC SURVEY HAS BEEN FOUND TO HAVE BEEN DESTROYED DURING CONSTRUCTION OF A WHEEL-CHAIR RAMP AT INTERSECTION OF WESTHEIMER & GREENBRIAR.

4. ACCORDING TO F.I.R.M. MAP 48201C0860L (DATED JUNE 18, 2007), THIS PROJECT FALLS IN ZONE X.

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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TBPE REG. NO.: F-4528 TBPELS REG. NO.:10028200

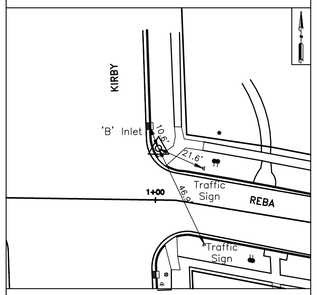
STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4040 PROFESSIONAL LAND SURVEYOR
William H. Reimer III 10-13-2025

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
SURVEY CONTROL SHEET
(SHEET 9 OF 9)

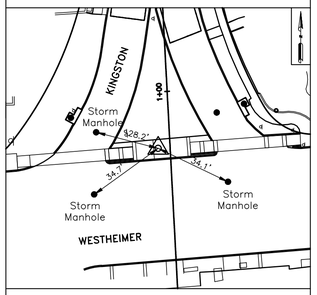
WBS NUMBER	
WBS. NO. R-002011-0089-3	
DRAWING SCALE	
N.T.S.	
CITY OF HOUSTON PM	
MOHAMMAD HAIDER, P.E.	
SHEET NO. 71 OF 381	

CP-4 -- 5/8" IRON ROD W/CAP



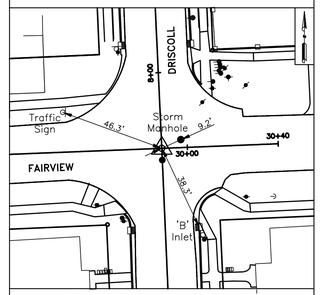
STA 1+01.03, 22.71' Lt., Reba Baseline

CP-7 -- X CUT



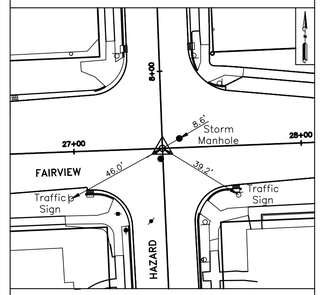
STA 0+75.23, 5.27' Lt., Kingston Baseline

CP-8 -- MAG NAIL



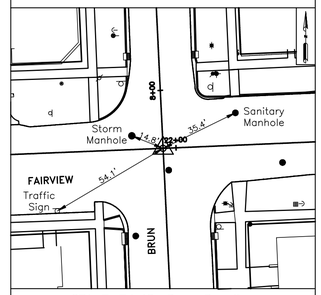
STA 7+66.70, Driscoll Baseline
STA 29+88.76, Fairview Baseline

CP-9 -- MAG NAIL



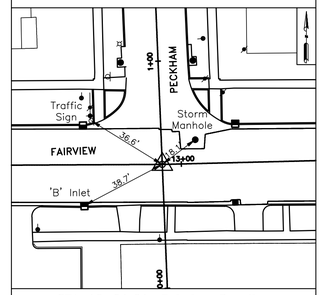
STA 27+38.93, Fairview Baseline
STA 7+66.09, Hazard Baseliine

CP-10 -- MAG NAIL



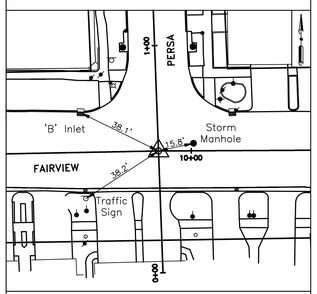
STA 7+74.48, Brun Baseline
STA 21+94.32, Fairview Baseline

CP-11 -- MAG NAIL



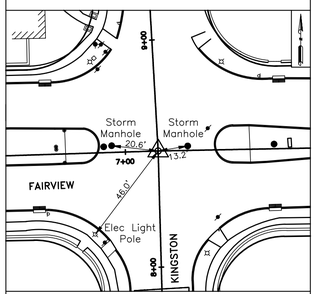
STA 12+91.61, Fairview Baseline
STA 0+54.53, Peckham Baseline

CP-12 -- MAG NAIL



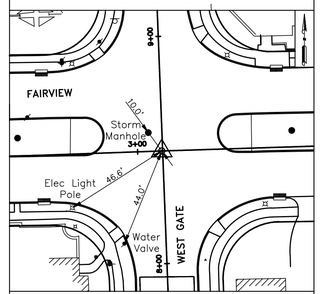
STA 9+85.59, Fairview Baseline
STA 0+53.62, Persa Baseline

CP-13 -- X CUT



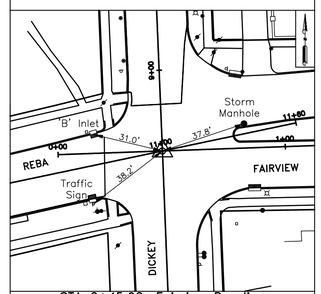
STA 7+14.41, Fairview Baseline
STA 8+51.10, Kingston Baseline

CP-14 -- X CUT



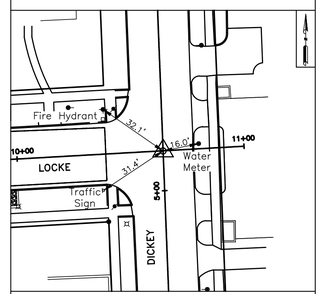
STA 3+10.66, Fairview Baseline
STA 8+49.59, West Gate Baseline

CP-15 -- X CUT



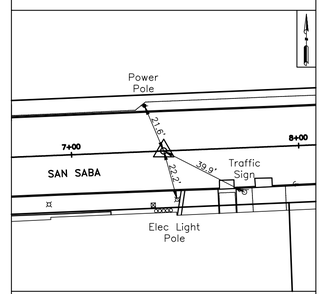
STA 0+45.92, Fairview Baseline
STA 8+64.45, Dickey Baseline
STA 11+00.00, Reba Baseline

CP-16 -- X CUT



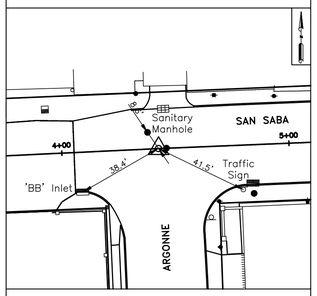
STA 10+64.32, Locke Baseline
STA 5+17.48, Dickey Baseline

CP-18 -- X CUT



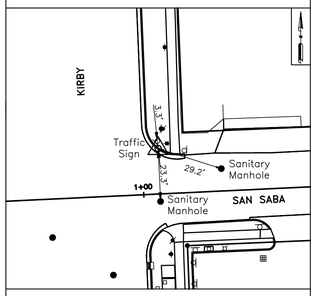
STA 7+40.60, San Saba Baseline

CP-19 -- MAG NAIL



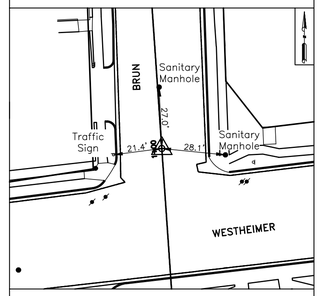
STA 4+42.59, San Saba Baseline

CP-20 -- MAG NAIL



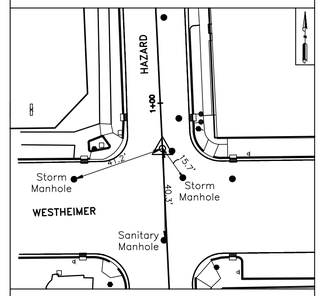
STA 1+07.30, 19.98' Lt., San Saba Baseline

CP-22 -- MAG NAIL W/SHINER



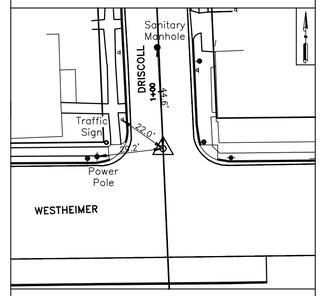
STA 1+00.00, Brun Baseline

CP-23 -- MAG NAIL



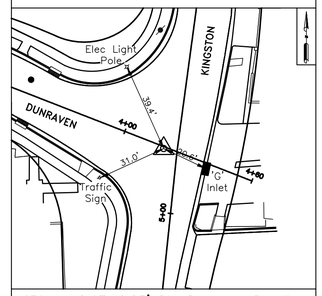
STA 0+80.00, Hazard Baseline

CP-24 -- MAG NAIL W/SHINER



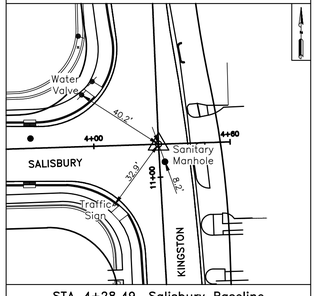
STA 0+74.90, Driscoll Baseline

CP-25 -- MAG NAIL W/SHINER



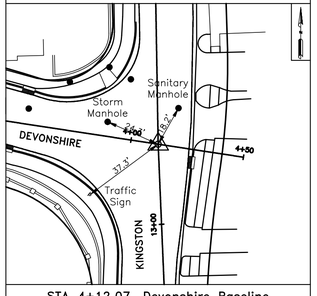
STA 4+18.67, 0.83' Rt., Dunraven Baseline
STA 5+27.89, 5.95' Lt., Kingston Baseline

CP-26 -- MAG NAIL W/SHINER



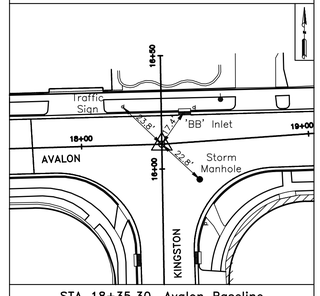
STA 4+28.49, Salisbury Baseline
STA 11+14.51, Kingston Baseline

CP-27 -- MAG NAIL W/SHINER



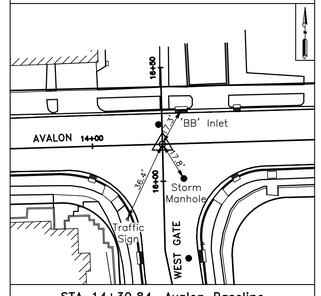
STA 4+12.07, Devonshire Baseline
STA 13+35.27, Kingston Baseline

CP-28 -- MAG NAIL W/SHINER



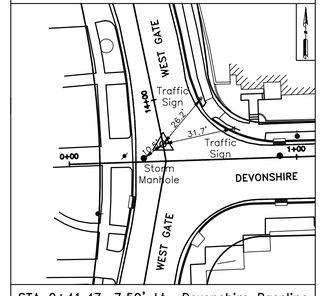
STA 18+35.30, Avalon Baseline
STA 16+10.92, Kingston Baseline

CP-29 -- MAG NAIL W/SHINER



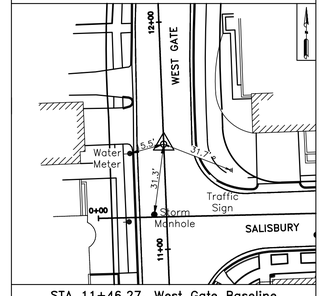
STA 14+30.84, Avalon Baseline
STA 16+16.32, West Gate Baseline

CP-30 -- MAG NAIL W/SHINER



STA 0+41.47, 7.50' Lt., Devonshire Baseline
STA 13+80.13, West Gate Baseline

CP-31 -- MAG NAIL W/SHINER



STA 11+46.27, West Gate Baseline
STA 0+29.47, 31.93' LT, Salisbury Baseline

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

OTHON
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TBPE REG. NO.: F-4528 TBPELS REG. NO.: 10028200

STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL ENGINEER AND SURVEYOR
William H. Reimer III 10-13-2025

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

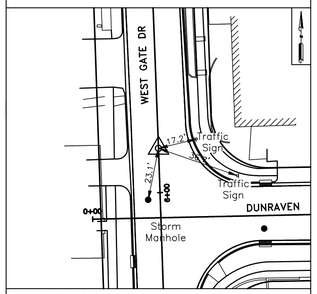
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SURVEY SWING TIES SHEET 1 OF 5

WBS NUMBER	
WBS. NO. R-002011-0089-3	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
MOHAMMAD HAIDER, P.E.	
SHEET NO. 72 OF 381	

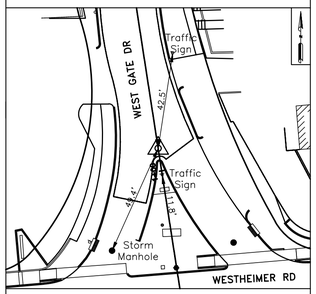
P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Swing Ties.dwgModel Oct 13 , 2025 - 8:21PM WReimer

CP-32 -- MAG NAIL W/SHINER



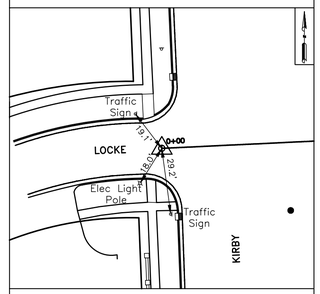
STA 6+19.47, West Gate Baseline
STA 0+29.61, 30.54' LT, Dunraven Baseline

CP-33 -- MAG NAIL W/SHINER



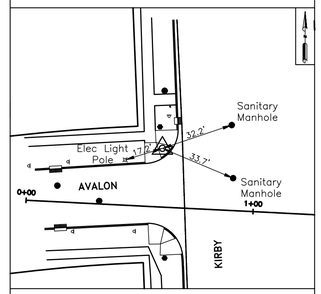
STA 1+10.04, West Gate Baseline

CP-34 -- MAG NAIL



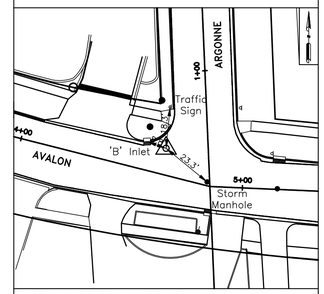
STA 0+00.00, Locke Baseline

CP-35 -- X CUT



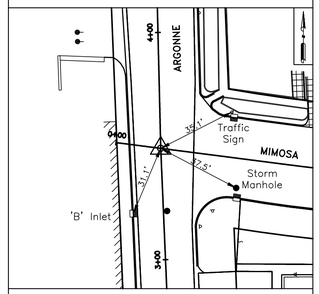
STA 0+57.99, 25.89' Lt., Avalon Baseline

CP-36 -- MAG NAIL



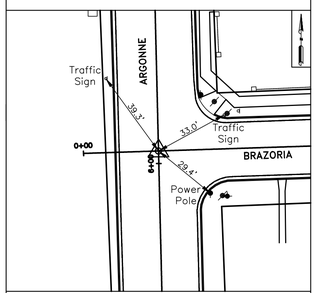
STA 4+62.87, 11.52' Lt., Avalon Baseline
STA 0+66.58, 18.52' Lt., Argonne Baseline

CP-37 -- MAG NAIL



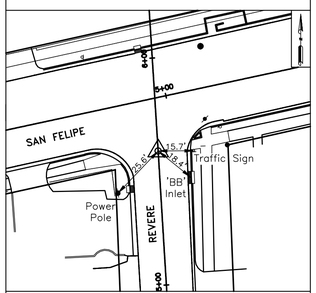
STA 0+19.82, Mimosa Baseline
STA 3+49.02, Argonne Baseline

CP-38 -- MAG NAIL



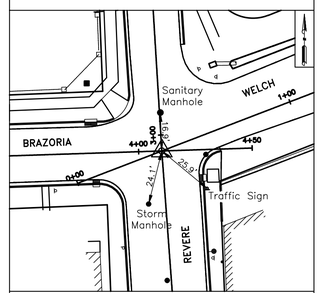
STA 0+33.00, Brazoria Baseline
STA 6+05.52, Argonne Baseline

CP-39 -- MAG NAIL



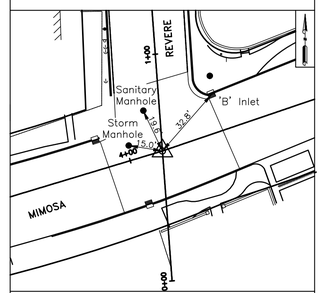
STA 5+59.07, Revere Baseline
STA 4+91.57, 23.05' RT, San Felipe Baseline

CP-40 -- MAG NAIL



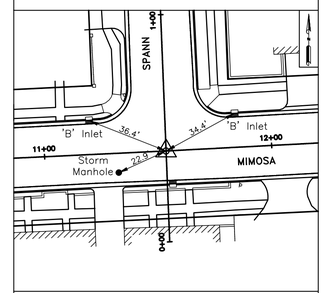
STA 4+10.22, Brazoria Baseline
STA 0+39.66, Welch Baseline
STA 2+92.94, Revere Baseline

CP-41 -- MAG NAIL



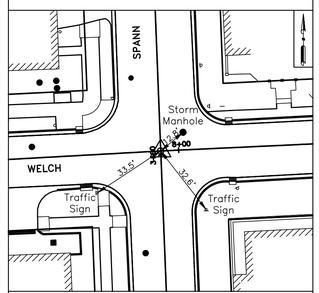
STA 4+14.81, Mimosa Baseline
STA 0+57.31, Revere Baseline

CP-42 -- MAG NAIL W/SHINER



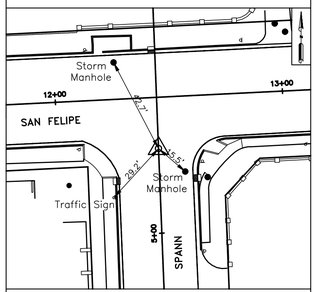
STA 11+53.51, Mimosa Baseline
STA 0+40.00, Spann Baseline

CP-43 -- MAG NAIL W/SHINER



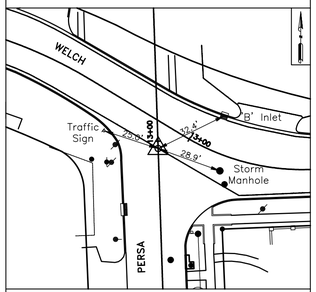
STA 7+92.10, Welch Baseline
STA 3+01.86, Spann Baseline

CP-44 -- MAG NAIL W/SHINER



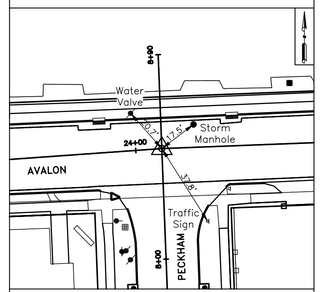
STA 5+37.23, Spann Baseline
STA 12+44.31, 22.57' RT, San Felipe Baseline

CP-45 -- MAG NAIL W/SHINER



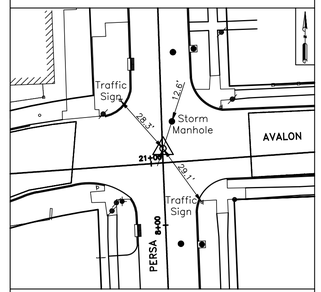
STA 12+90.44, 10.59' Rt., Welch Baseline
STA 12+96.73, Persa Baseline

CP-46 -- MAG NAIL



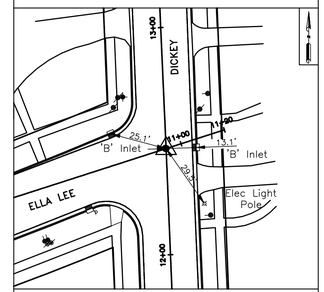
STA 24+11.47, Avalon Baseline
STA 8+48.66, Peckham Baseline

CP-47 -- X CUT



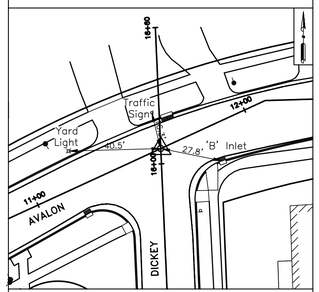
STA 21+05.22, 6.27' Lt., Avalon Baseline
STA 8+33.72, 0.27' Rt. Persa Baseline

CP-48 -- MAG NAIL



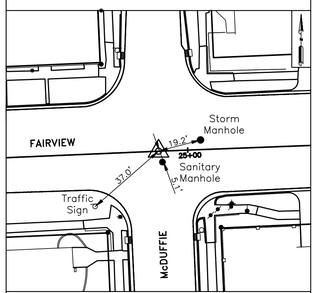
STA 10+93.07, Ella Lee Baseline
STA 12+46.72, Dickey Baseline

CP-49 -- MAG NAIL



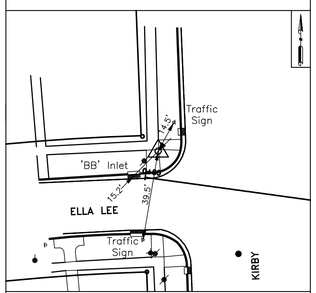
STA 11+59.41, Avalon Baseline
STA 16+06.71, Dickey Baseline

CP-105 -- MAG NAIL



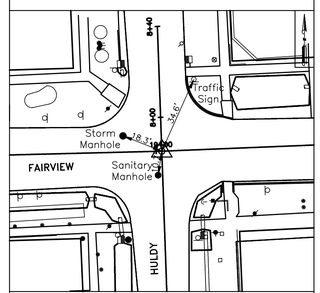
STA 24+87.15, Fairview Baseline

CP-200 -- X CUT



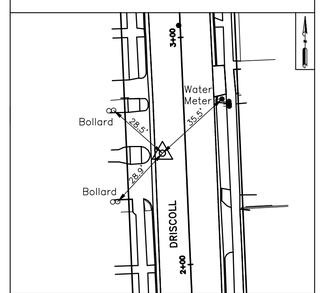
STA 0+04.09, 12.19' Lt., Ella Lee Baseline

CP-201 -- MAG NAIL



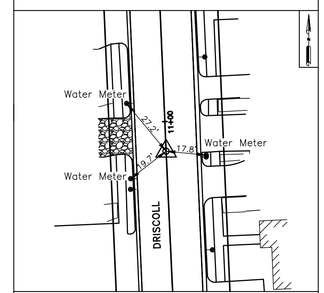
STA 19+02.48, Fairview Baseline
STA 7+85.09, Huldy Baseline

CP-250 -- MAG NAIL



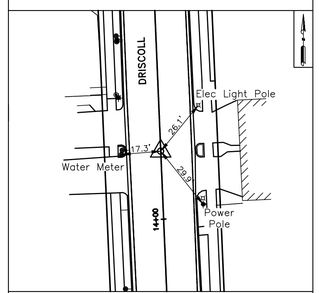
STA 2+49.44, 10.25' Lt., Driscoll Baseline

CP-252 -- MAG NAIL



STA 10+86.97, Driscoll Baseline

CP-253 -- MAG NAIL



STA 14+29.94, Driscoll Baseline

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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TBPE REG. NO.: F-4528 TBPELS REG. NO.: 10028200

STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL ENGINEER AND SURVEYOR

William H. Reimer III 10-13-2025

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

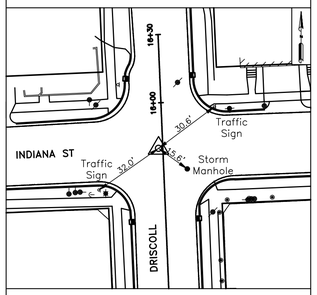
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SURVEY SWING TIES SHEET 2 OF 5

WBS NUMBER	
WBS. NO. R-002011-0089-3	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
MOHAMMAD HAIDER, P.E.	
SHEET NO. 73 OF 381	

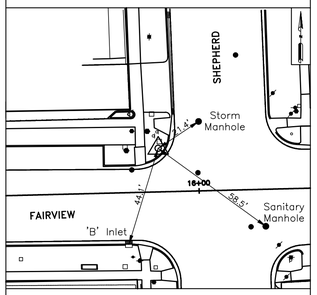
P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Swing Ties.dwgModel Oct 13 , 2025 - 8:23PM WReimer

CP-254 -- MAG NAIL



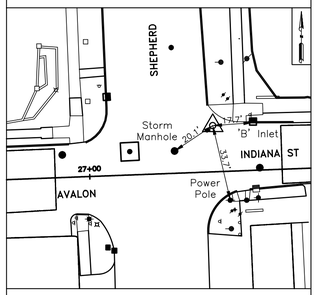
STA 15+79.98, 1.90' Lt., Driscoll Baseline

CP-302 -- 5/8" IR w/CAP



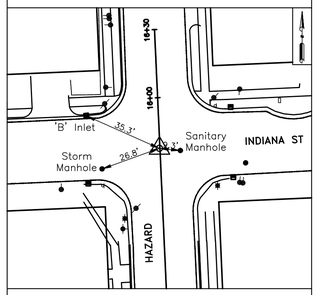
STA 15+82.41, 19.16' Lt., Fairview Baseline

CP-304 -- X CUT



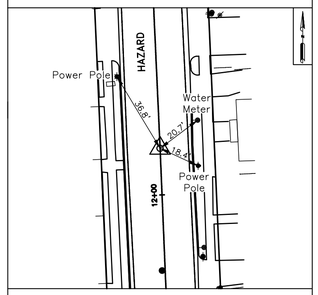
STA 27+54.95, 20.35' Lt., Avalon Baseline

CP-400 -- MAG NAIL



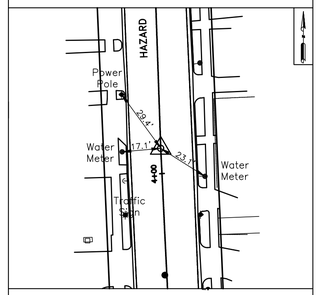
STA 15+77.70, Hazard Baseline

CP-401 -- MAG NAIL



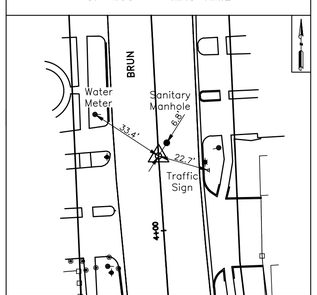
STA 12+20.50, Hazard Baseline

CP-402 -- MAG NAIL



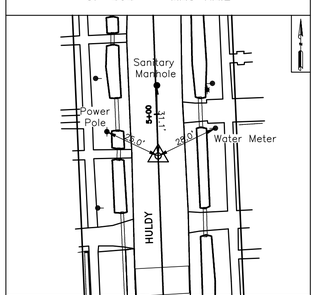
STA 4+11.14, Hazard Baseline

CP-403 -- MAG NAIL



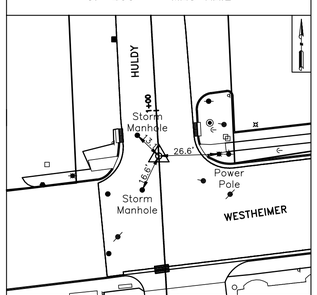
STA 4+32.89, Brun Baseline

CP-404 -- MAG NAIL



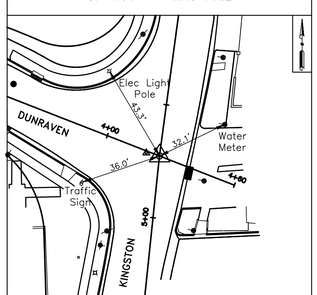
STA 4+81.62, Huldy Baseline

CP-405 -- MAG NAIL



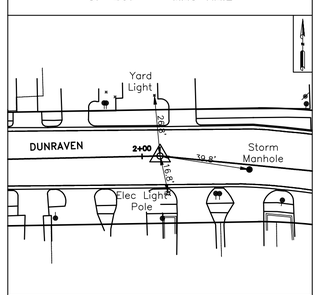
STA 0+80.00, Huldy Baseline

CP-406 -- MAG NAIL



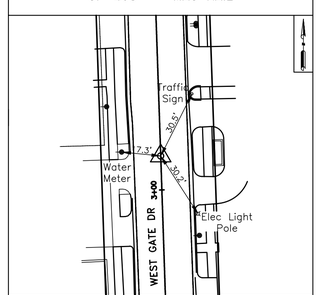
STA 4+24.60, Dunraven Baseline
STA 5+27.31, Kingston Baseline

CP-407 -- MAG NAIL



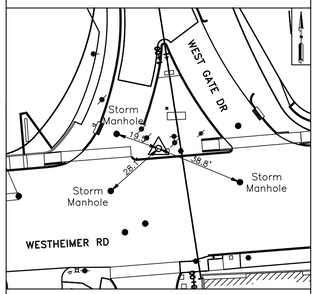
STA 2+07.91, Dunraven Baseline

CP-408 -- MAG NAIL



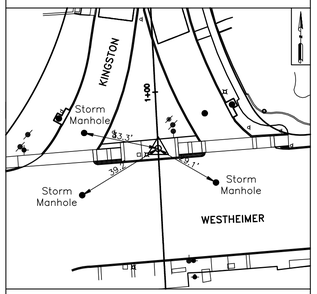
STA 3+14.96, West Gate Baseline

CP-409 -- X CUT



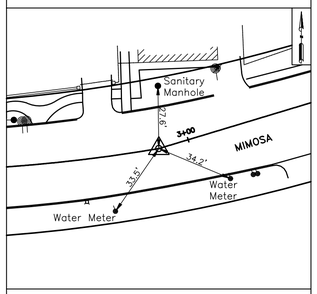
STA 0+59.43, 9.72' Lt., West Gate Baseline

CP-410 -- MAG NAIL



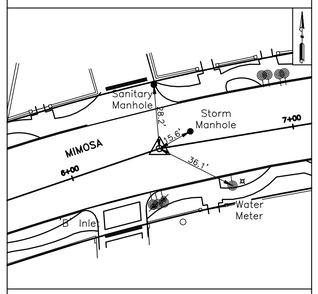
STA 0+75.14, Kingston Baseline

CP-411 -- MAG NAIL



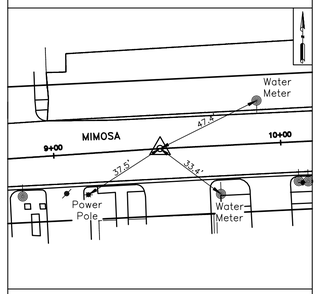
STA 2+86.51, Mimosa Baseline

CP-412 -- MAG NAIL



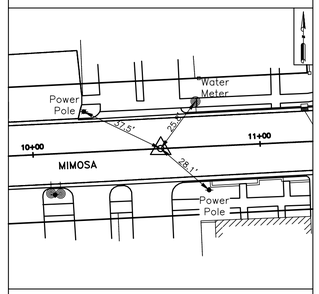
STA 6+40.44, Mimosa Baseline

CP-413 -- MAG NAIL



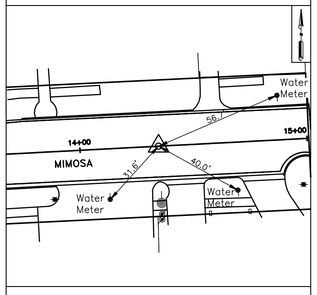
STA 9+46.89, Mimosa Baseline

CP-414 -- MAG NAIL



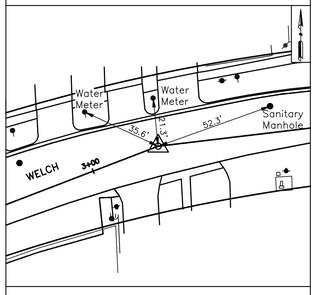
STA 10+56.24, Mimosa Baseline

CP-415 -- MAG NAIL



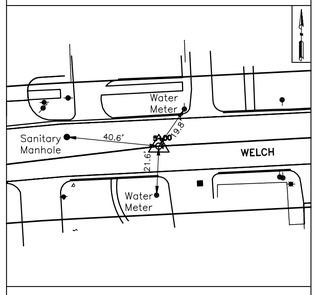
STA 14+34.59, Mimosa Baseline

CP-416 -- MAG NAIL



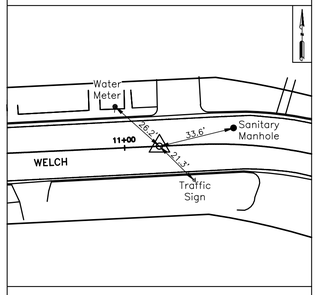
STA 3+30.58, Welch Baseline

CP-417 -- MAG NAIL



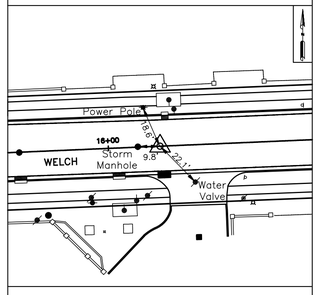
STA 4+98.21, Welch Baseline

CP-418 -- MAG NAIL



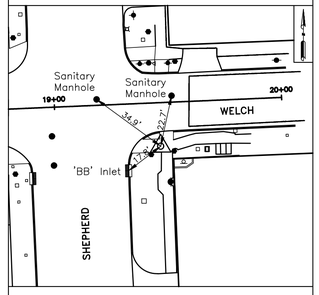
STA 11+15.32, Welch Baseline

CP-419 -- MAG NAIL



STA 16+22.77, Welch Baseline

CP-420 -- X CUT



STA 19+46.00, 19.16' Rt., Welch Baseline

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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TBPE REG. NO.: F-4528 TBPELS REG. NO.: 10028200

STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL LAND SURVEYOR
William H. Reimer III. 10-13-2025

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

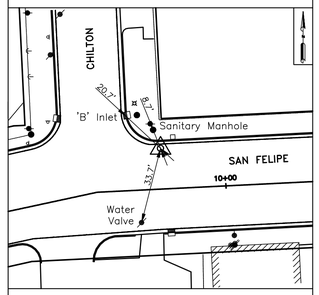
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SURVEY SWING TIES SHEET 3 OF 5

WBS NUMBER	
WBS. NO. R-002011-0089-3	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
MOHAMMAD HAIDER, P.E.	
SHEET NO. 74 OF 381	

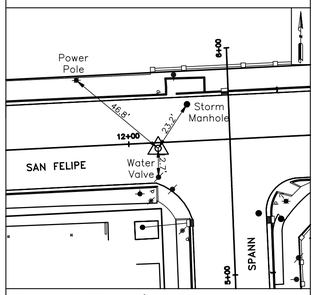
P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Swing Ties.dwgModel Oct 13, 2025 - 8:24PM WReimer

CP-421 -- MAG NAIL



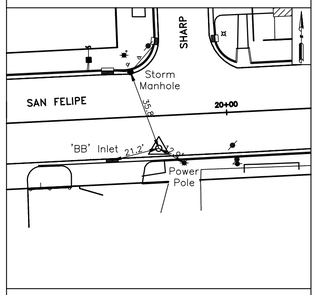
STA 9+72.06, 17.92' Lt., San Felipe Baseline

CP-422 -- MAG NAIL



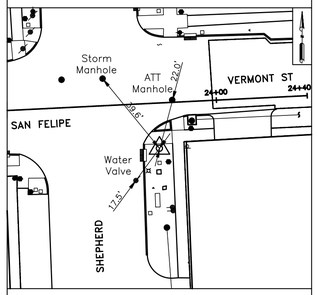
STA 12+12.80, 2.49' Rt, San Felipe Baseline
STA 5+56.96, 31.72' Lt, Spann Baseline

CP-423 -- MAG NAIL



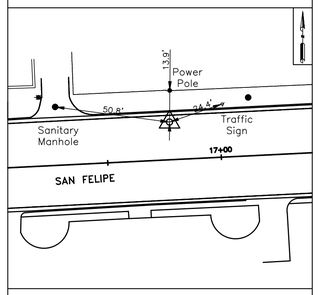
STA 19+69.41, 14.31' Rt., San Felipe Baseline

CP-424 -- X CUT



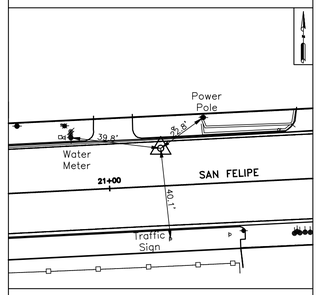
STA 23+73.94, 19.94' Rt, San Felipe Baseline

CP-425 -- MAG NAIL W/SHINER



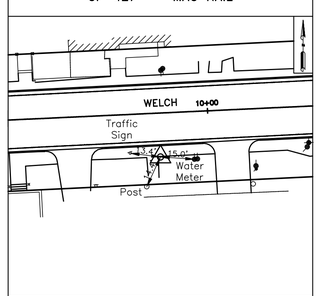
STA 16+78.03, 16.55' Lt, San Felipe Baseline

CP-426 -- MAG NAIL



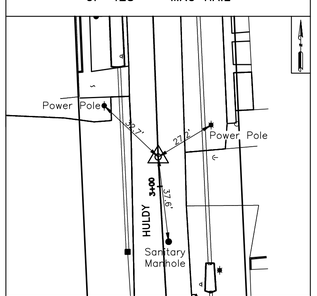
STA 21+23.29, 16.55' Lt, San Felipe Baseline

CP-427 -- MAG NAIL



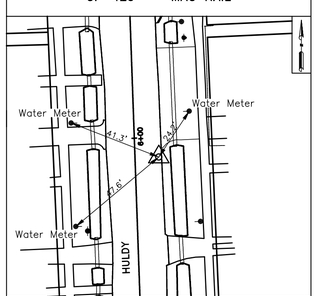
STA 9+78.40, 19.32' Rt, Welch Baseline

CP-428 -- MAG NAIL



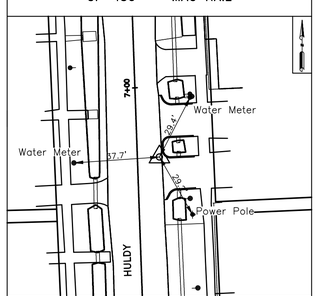
STA 3+13.01, Huldy Baseline

CP-429 -- MAG NAIL



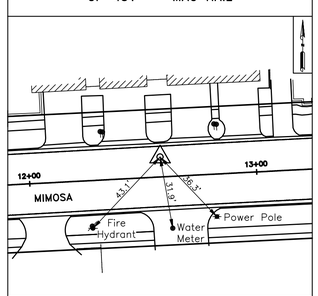
STA 5+91.36, 10.48' Rt., Huldy Baseline

CP-430 -- MAG NAIL



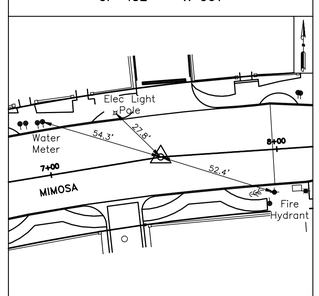
STA 6+69.21, 9.71' Rt., Huldy Baseline

CP-431 -- MAG NAIL



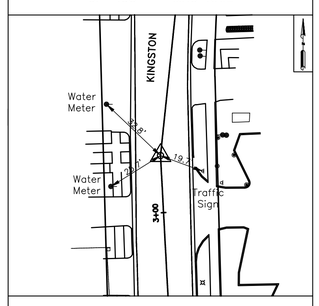
STA 12+57.90, 8.79' Lt., Mimosa Baseline

CP-432 -- X CUT



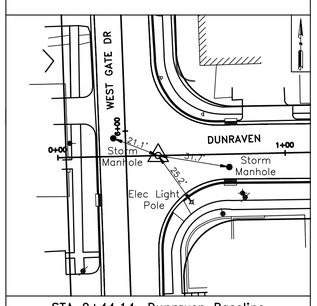
STA 7+48.83, Mimosa Baseline

CP-433 -- MAG NAIL



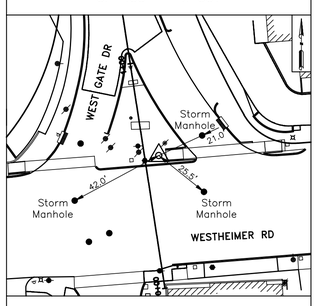
STA 3+25.15, Kingston Baseline

CP-434 -- MAG NAIL



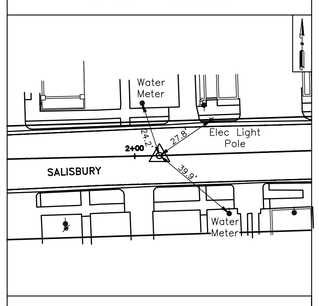
STA 0+44.14, Dunraven Baseline
STA 5+88.74, 14.11' Rt, West Gate Baseline

CP-435 -- X CUT



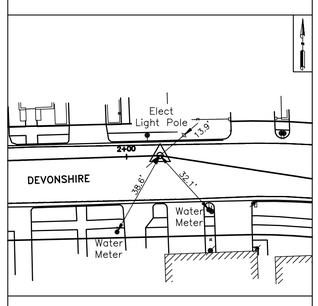
STA 0+58.12, 6.25' Rt., West Gate Baseline

CP-436 -- MAG NAIL



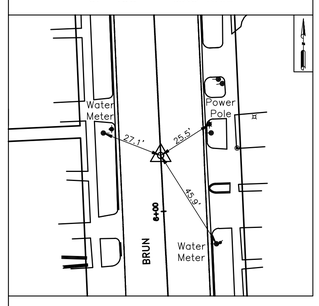
STA 2+10.88, Salisbury Baseline

CP-437 -- MAG NAIL



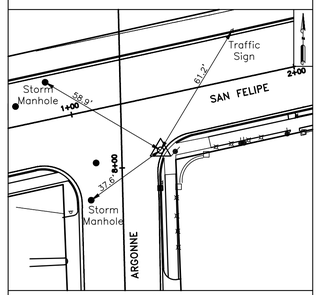
STA 2+14.78, Devonshire Baseline

CP-438 -- MAG NAIL



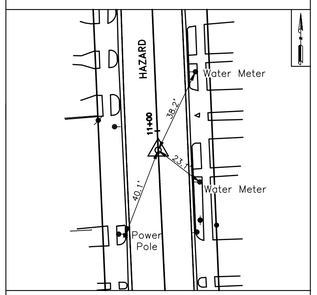
STA 6+24.59, Brun Baseline

CP-500 -- MAG NAIL



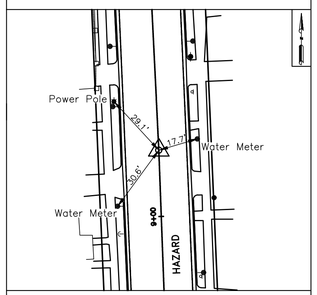
STA 8+07.43, 17.06' Rt, Argonne Baseline
STA 1+34.94, 23.54' Rt, San Felipe Baseline

CP-525 -- MAG NAIL



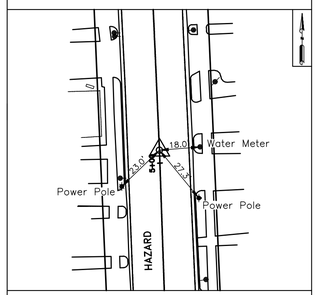
STA 10+91.51, Hazard Baseline

CP-526 -- MAG NAIL



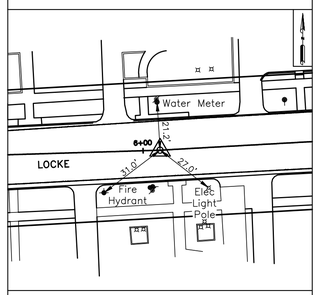
STA 9+29.17, Hazard Baseline

CP-527 -- MAG NAIL



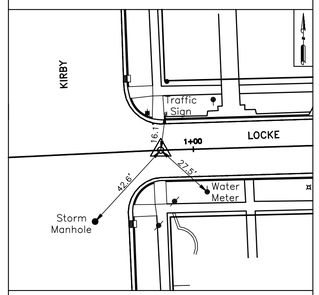
STA 5+05.68, Hazard Baseline

CP-800 -- MAG NAIL



STA 6+07.50, Locke Baseline

CP-801 -- MAG NAIL



STA 0+85.67, Locke Baseline

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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HOUSTON, TEXAS 77042
TEL: (713) 270-5700
TBPE REG. NO.: F-4528 TBPELS REG. NO.: 10028200

STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL ENGINEER AND SURVEYOR
William H. Reimer III 10-13-2025

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

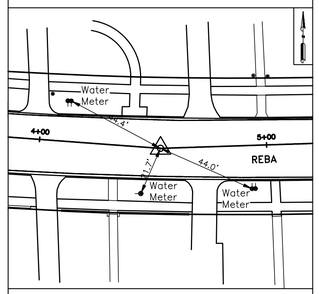
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SURVEY SWING TIES
SHEET 4 OF 5

WBS NUMBER	
WBS. NO. R-002011-0089-3	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
MOHAMMAD HAIDER, P.E.	
SHEET NO. 75 OF 381	

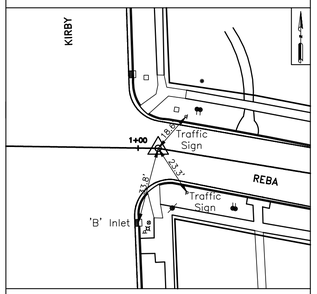
P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Swing Ties.dwgModel Oct 13 , 2025 - 8:25PM WReimer

CP-802 -- MAG NAIL



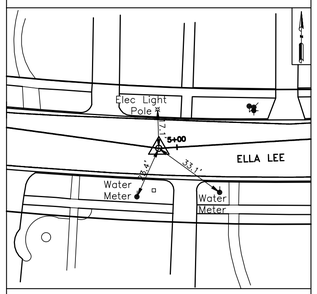
STA 4+53.33, Reba Baseline

CP-803 -- MAG NAIL



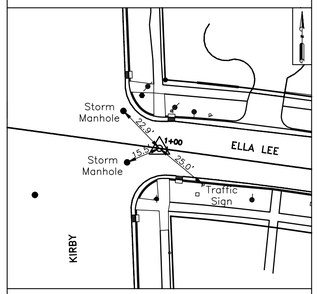
STA 1+08.82, Reba Baseline

CP-804 -- MAG NAIL



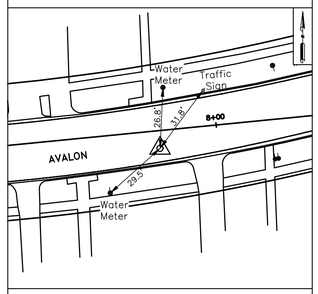
STA 4+91.96, Ella Lee Baseline

CP-805 -- MAG NAIL



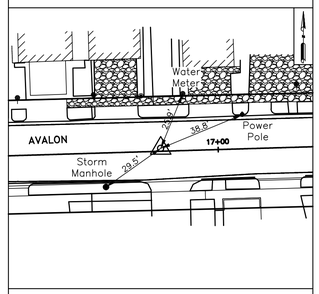
STA 0+96.70, Ella Lee Baseline

CP-806 -- MAG NAIL



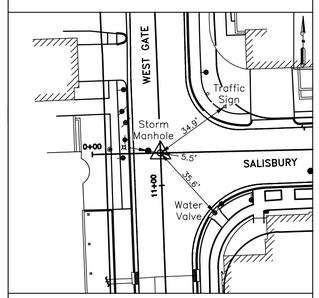
STA 7+74.46, 7.81' Rt., Avalon Baseline

CP-807 -- MAG NAIL



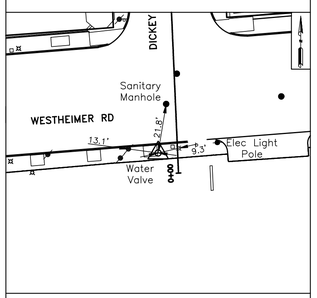
STA 16+74.76, 1.28' Lt, Avalon Baseline

CP-808 -- MAG NAIL



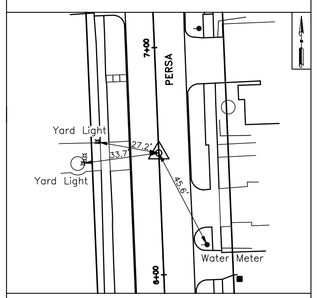
STA 0+30.00, Salisbury Baseline
STA 11+14.30, West Gate Baseline

CP-809 -- X CUT



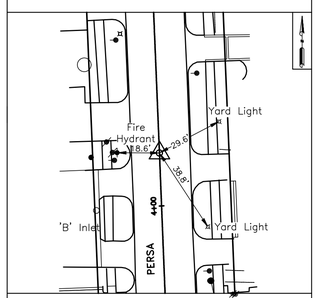
STA 0+09.24, 8.56' Lt., Dickey Baseline

CP-810 -- MAG NAIL



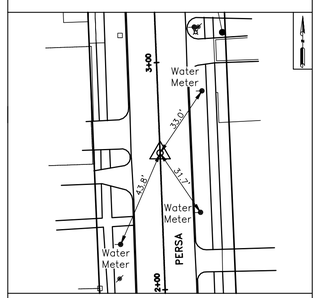
STA 6+53.63, Persa Baseline

CP-811 -- MAG NAIL



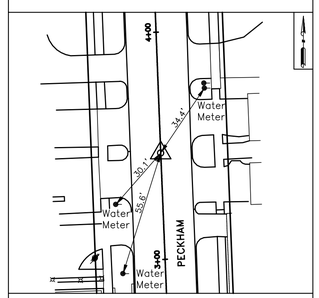
STA 4+23.31, Persa Baseline

CP-812 -- MAG NAIL



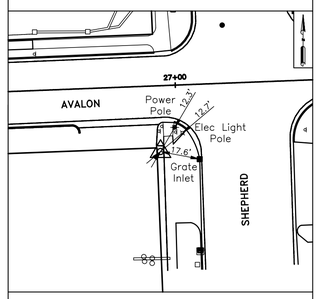
STA 2+60.21, Persa Baseline

CP-813 -- X CUT



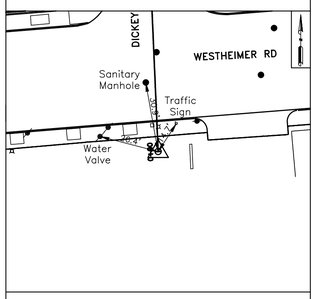
STA 3+46.83, Peckham Baseline

CP-814 -- MAG NAIL



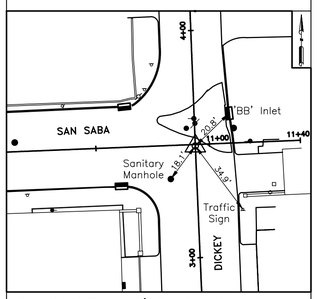
STA 26+92.40, 28.97' Rt., Avalon Baseline

CP-900 -- 5/8" IRON ROD W/CAP



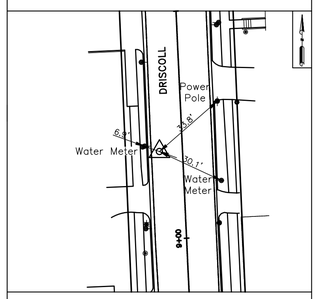
STA 0+00.00, Dickey Baseline

CP-901 -- X CUT



STA 10+93.74, 0.68' Rt., San Saba Baseline
STA 3+49.15, Dickey Baseline

CP-1500 -- MAG NAIL



STA 9+38.60, 10.15' Lt., Driscoll Baseline

Revision	Comments	Date	App.
1	UPDATE CONTROL POINTS	10-13-25	WHR

SURVEYED BY: AMANI FB NO. P-5723

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TEL: (713) 270-5700
TBPE REG. NO.: F-4528 TBPELS REG. NO.: 10028200

STATE OF TEXAS REGISTERED WILLIAM H. REIMER III 4044 PROFESSIONAL LAND SURVEYOR

William H. Reimer III 10-13-2025

CITY OF HOUSTON

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SURVEY SWING TIES
SHEET 5 OF 5

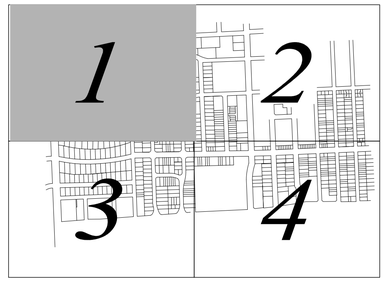
WBS NUMBER
WBS. NO. R-002011-0089-3
DRAWING SCALE
NOT TO SCALE
CITY OF HOUSTON PM
MOHAMMAD HAIDER, P.E.
SHEET NO. 76 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Survey Control\NSSI-Shepherd Survey Swing Ties.dwgModel Oct 13 , 2025 - 8:26PM WReimer

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- XX(0") / 0.0/0.0 — [INDIANA SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW(CFS)
- XX(0") / 0.0/0.0 — [SHEPHERD SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW (CFS)
- XX(0") / 0.0/0.0 — [FAIRVIEW SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW (CFS)
- I.D. / 0.00 / 0.00/0.00 — DRAINAGE AREA NO. DRAINAGE AREA (AC) 2 YR/100 YR RUNOFF (CFS)
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]



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TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

EXISTING DRAINAGE AREA MAP
SHEET 1 OF 4

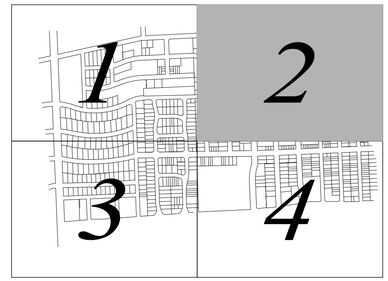
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **77** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\77-80_DRN_Existing.dwgGEN 1 May 22 , 2026 - 9:28AM Jgarza

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



OUTLET [SHEPHERD SYSTEM]

SHARP

VERMONT STREET

SAN FELIPE

WELCH

AVALON

INDIANA STREET

INDIANA AVENUE

VERMONT AVENUE ~ 60'

HULDY ~ 70'

PERSA

PECKHAM

SHEPHERD

HERD

HULDY

BRUN

MCBUFFY

HAZARD

DRISCOLL

MATCH LINE D–D (SEE SHEET 77)

MATCH LINE B–B (SEE SHEET 80)

OUTLET (INDIANA ST.) → OUTLET [INDIANA SYSTEM]

LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- XX(0") 0.0/0.0 — [INDIANA SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW(CFS)
- XX(0") 0.0/0.0 — [SHEPHERD SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW (CFS)
- XX(0") 0.0/0.0 — [FAIRVIEW SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW (CFS)
- I.D. / 0.00 / 0.00/0.00 — DRAINAGE AREA NO. DRAINAGE AREA (AC) 2 YR/100 YR RUNOFF (CFS)
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

07/29/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

EXISTING DRAINAGE AREA MAP SHEET 2 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **78** OF 391	

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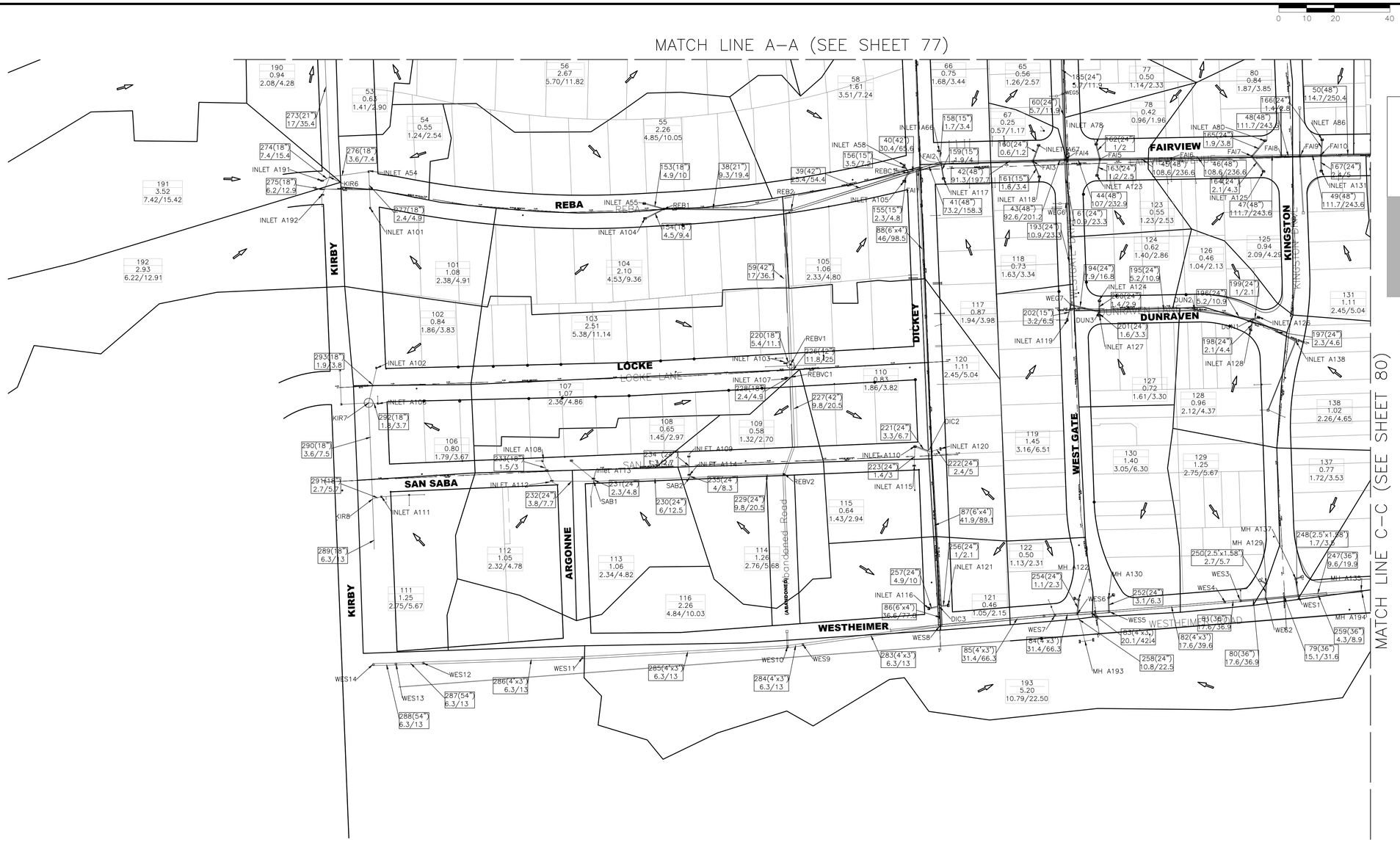
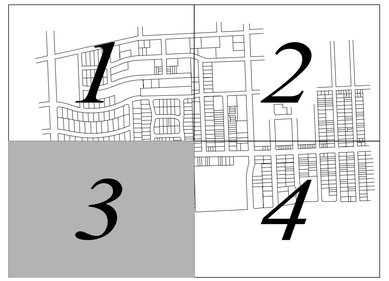


BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- XX(0") / 0.0/0.0 — [INDIANA SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW(CFS)
- XX(0") / 0.0/0.0 — [SHEPHERD SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW (CFS)
- XX(0") / 0.0/0.0 — [FAIRVIEW SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW (CFS)
- I.D. / 0.00 / 0.00/0.00 — DRAINAGE AREA NO. DRAINAGE AREA (AC) 2 YR/100 YR RUNOFF (CFS)
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]

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TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

EXISTING DRAINAGE AREA MAP
SHEET 3 OF 4

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **79** OF 391

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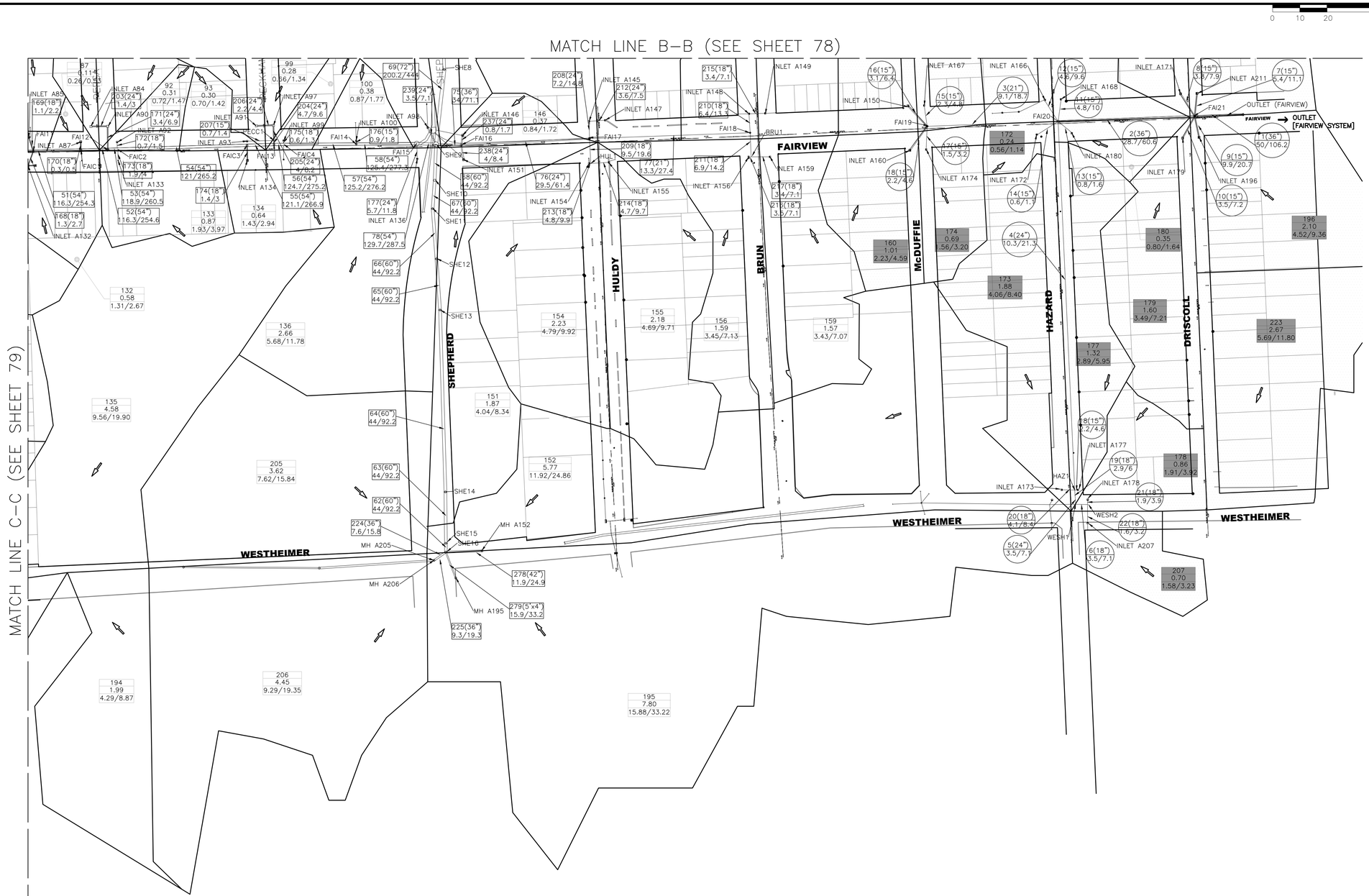

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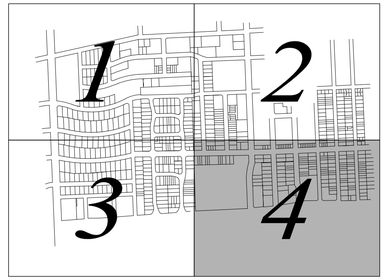
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- XX(0") / 0.0/0.0 — [INDIANA SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR/100 YR ACCUMULATIVE FLOW(CFS)
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STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

EXISTING DRAINAGE AREA MAP SHEET 4 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **80** OF 391	

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HouStorm (City Of Houston STORM DRAIN DESIGN) Version 2.1, Update: Nov/01/2007
Run @ 4/25/2017 2:19:40 PM

PROJECT NAME : Untitled
JOB NUMBER :
PROJECT DESCRIPTION :
PROJECT File: P:\municipal\12104003\Documentation\Design\Calculations\Houstorm

DESIGN FREQUENCY : 2 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 2 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A211	0.65	2.51	26.76	26.76	3.29	0.000	5.368
A196	0.65	4.77	28.17	28.17	3.20	0.000	9.931
A171	0.65	1.76	26.05	26.05	3.34	0.000	3.817
A179	0.65	1.60	25.86	25.86	3.35	0.000	3.483
A180	0.65	0.35	23.31	23.31	3.53	0.000	0.802
A168	0.65	2.25	26.54	26.54	3.30	0.000	4.833
A177	0.65	1.32	25.50	25.50	3.37	0.000	2.894
A207	0.65	0.70	24.39	24.39	3.45	0.000	1.569
A166	0.65	2.16	26.45	26.45	3.31	0.000	4.647
A172	0.65	0.24	22.78	22.78	3.57	0.000	0.556
A173	0.65	1.88	26.18	26.18	3.33	0.000	4.066
A178	0.65	0.86	24.74	24.74	3.42	0.000	1.914
A150	0.65	0.74	24.48	24.48	3.44	0.000	1.656
A167	0.65	1.05	25.09	25.09	3.40	0.000	2.321
A174	0.65	0.69	24.37	24.37	3.45	0.000	1.548
A160	0.65	1.01	25.02	25.02	3.41	0.000	2.236

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim (ft)	Grate Area (sf)	LeFt-Slope Longi (%)	LeFt-Slope Transv (%)	Right-Slope Longi (%)	Right-Slope Transv (%)	n	Gutter DepW (ft)	Gutter Head Allowed (ft)
A168	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A166	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A180	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A172	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A167	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A150	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A174	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A160	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A177	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A173	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A178	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A207	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A211	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A171	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A196	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A179	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Actual Head (ft)	Ponded Left (ft)	Width Right (ft)
A168	Combi	2.50	5.00	1.67	4.833	10.993	0.767	10.85	10.85
A166	Combi	2.50	5.00	1.67	4.647	10.993	0.729	10.70	10.70
A180	Combi	2.50	5.00	1.67	0.802	10.993	0.264	5.55	5.55
A172	Combi	2.50	5.00	1.67	0.556	10.993	0.257	4.85	4.85
A167	Combi	2.50	5.00	1.67	2.321	10.993	0.369	8.25	8.25
A150	Combi	2.50	5.00	1.67	1.656	10.993	0.311	7.25	7.25
A174	Combi	2.50	5.00	1.67	1.548	10.993	0.303	7.10	7.10
A160	Combi	2.50	5.00	1.67	2.236	10.993	0.361	8.15	8.15
A177	Curb	2.50	n/a	n/a	2.894	7.511	0.436	8.95	8.95
A173	Curb	2.50	n/a	n/a	4.066	7.511	0.616	10.20	10.20
A178	Combi	2.50	5.00	1.67	1.914	10.993	0.331	7.70	7.70
A207	Combi	2.50	5.00	1.67	1.569	10.993	0.305	7.10	7.10
A211	Combi	2.50	5.00	1.67	5.368	10.993	0.888	11.30	11.30
A171	Combi	2.50	5.00	1.67	3.817	10.993	0.573	9.95	9.95
A196	Combi	2.50	5.00	1.67	9.931	10.993	2.435	14.25	14.25
A179	Curb	2.50	n/a	n/a	3.483	7.511	0.519	9.60	9.60

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr. Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
A168	Combi	0.650	2.25	26.54	3.30		0.00	4.833
A166	Combi	0.650	2.16	26.45	3.31		0.00	4.647
A180	Combi	0.650	0.35	23.31	3.53		0.00	0.802
A172	Combi	0.650	0.24	22.78	3.57		0.00	0.556
A167	Combi	0.650	1.05	25.09	3.40		0.00	2.321
A150	Combi	0.650	0.74	24.48	3.44		0.00	1.656
A174	Combi	0.650	0.69	24.37	3.45		0.00	1.548
A160	Combi	0.650	1.01	25.02	3.41		0.00	2.236
A177	Curb	0.650	1.32	25.50	3.37		0.00	2.894
A173	Curb	0.650	1.88	26.18	3.33		0.00	4.066
A178	Combi	0.650	0.86	24.74	3.42		0.00	1.914
A207	Combi	0.650	0.70	24.39	3.45		0.00	1.569
FA121	CrcMh	0.650	23.89	29.37	3.13		0.00	48.647
FA120	CrcMh	0.650	13.25	28.61	3.18		0.00	27.360
FA119	CrcMh	0.650	3.49	25.17	3.39		0.00	7.701
HAZ1	CrcMh	0.650	4.76	26.21	3.33		0.00	10.289
WESH2	CrcMh	0.650	1.56	25.03	3.40		0.00	3.452
WESH1	CrcMh	0.650	1.56	25.03	3.40		0.00	3.452
A211	Combi	0.650	2.51	26.76	3.29		0.00	5.368
A171	Combi	0.650	1.76	26.05	3.34		0.00	3.817
A196	Combi	0.650	4.77	28.17	3.20		0.00	9.931
A179	Curb	0.650	1.60	25.86	3.35		0.00	3.483
OUT	Outlit	0.650	23.89	29.37	3.13		0.00	48.647

Conveyance Configuration Data

Run #	Node US	I.D. DS	FlowLine Elev. US (ft)	FlowLine Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	FA121	OUT	42.50	41.60	Cir 1	0.00	3.00	89.9	1.001	0.013
2	FA120	FA121	43.20	42.50	Cir 1	0.00	3.00	250.8	0.279	0.013
3	FA119	FA120	45.75	43.22	Cir 1	0.00	1.75	240.7	1.051	0.013
4	HAZ1	FA120	45.74	43.36	Cir 1	0.00	2.00	677.2	0.351	0.013
5	WESH1	HAZ1	46.48	45.72	Cir 1	0.00	2.00	26.2	2.906	0.013
6	WESH2	WESH1	47.35	47.13	Cir 1	0.00	1.50	21.8	1.008	0.013
7	A211	FA121	48.74	47.24	Cir 1	0.00	1.25	42.5	3.532	0.013
8	A171	FA121	48.32	46.52	Cir 1	0.00	1.25	48.8	3.690	0.013
9	A196	FA121	47.91	46.48	Cir 1	0.00	1.25	39.2	3.653	0.013
10	A179	FA121	48.37	46.68	Cir 1	0.00	1.25	45.2	3.740	0.013
11	A168	FA120	48.05	46.52	Cir 1	0.00	1.25	40.9	3.747	0.013
12	A166	FA120	47.76	46.03	Cir 1	0.00	1.25	46.2	3.747	0.013
13	A180	FA120	48.68	47.64	Cir 1	0.00	1.25	33.3	3.122	0.013
14	A172	FA120	48.66	46.31	Cir 1	0.00	1.25	46.5	5.064	0.013
15	A167	FA119	48.82	47.34	Cir 1	0.00	1.25	38.7	3.828	0.013
16	A150	FA119	48.66	46.78	Cir 1	0.00	1.25	50.9	3.696	0.013
17	A174	FA119	49.52	48.00	Cir 1	0.00	1.25	42.8	3.558	0.013
18	A160	FA119	48.35	46.36	Cir 1	0.00	1.25	54.3	3.667	0.013
19	A177	HAZ1	47.80	46.56	Cir 1	0.00	1.50	6.7	18.862	0.013
20	A173	HAZ1	47.89	45.84	Cir 1	0.00	1.50	24.5	8.400	0.013
21	A178	WESH2	46.62	46.62	Cir 1	0.00	1.50	9.0	0.011	0.013
22	A207	WESH2	47.54	47.54	Cir 1	0.00	1.50	34.2	0.003	0.013

Conveyance Hydraulic Computations. Tailwater = 44.600 (ft)

Run #	Hyd. US (ft)	Gr. line DS (ft)	Crit. Elev US (ft)	Fr. Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (ft/s)	Velocity Actual (ft/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1*	45.30	44.60	51.92	0.527	1.90	3.00	10.30	6.88	48.6	67.0	0.221
2	45.57	45.30	51.92	0.167	1.99	2.80	5.51	3.99	27.4	35.4	0.074
3*	46.83	45.57	51.92	0.234	0.85	1.75	6.66	3.20	7.7	16.3	0.048
4	47.10	45.57	51.14	0.205	1.31	2.00	4.71	3.28	10.3	13.5	0.050
5*	47.13	47.10	51.18	0.023	0.40	1.38	7.60	1.49	3.5	38.7	0.003
6*	47.99	47.13	50.78	0.107	0.59	0.59	5.34	5.34	3.5	10.6	0.044
7*	49.68	48.49	51.40	0.685	0.58	1.25	9.59	4.37	5.4	12.2	0.000
8*	49.11	47.77	51.37	0.346	0.48	1.25	8.90	3.11	3.8	12.5	0.000
9*	49.09	47.73	51.41	2.343	0.85	1.25	11.19	8.09	9.9	12.4	0.000
10*	49.12	47.93	51.27	0.288	0.45	1.25	8.72	2.84	3.5	12.5	0.000
11*	48.94	47.77	51.05	0.555	0.54	1.25	9.53	3.94	4.8	12.6	0.000
12*	48.63	47.28	51.06	0.513	0.53	1.25	9.44	3.79	4.6	12.6	0.000
13*	49.01	48.89	51.38	0.015	0.22	1.25	5.36	0.65	0.8	11.5	0.000
14*	48.94	47.56	51.33	0.007	0.17	1.25	5.70	0.45	0.6	14.6	0.000
15*	49.43	48.59	51.12	0.128	0.36	1.25	7.85	1.89	2.3	12.7	0.000
16*	48.97	46.83	51.36	0.065	0.31	0.31	7.04	7.04	1.7	12.5	0.000
17*	50.01	49.25	51.47	0.057	0.30	1.25	6.81	1.26	1.5	12.2	0.000
18*	48.71	46.83	51.15	0.119	0.36	0.47	7.65	5.36	2.2	12.4	0.000
19*	48.06	47.10	50.70	0.075	0.26	0.54	14.44	5.02	2.9	45.8	0.000
20*	48.66	47.10	50.79	0.149	0.37	1.26	11.98	2.56	4.1	30.6	0.000
21	47.99	47.99	50.32	0.033	1.50	1.50	1.08	1.08	1.9	1.1	0.000
22	48.18	47.99	50.42	0.022	1.50	1.50	0.89	0.89	1.6	0.6	0.000

* Supercritical flow.

SUMMARY OF STORM DRAIN STRUCTURE QUANTITIES

NOTE:
The convey length should be from upstream to downstream inside box.
This length may alsa be used as Pay Item.
Using hydraulic length, from node center to node center, may result in profile error,
and this length should not be used as Pay Item.

LINKS:

Type of Convey Structure	Material	Rise (ft)	Span (ft)	Number of Links of this type	Quantity (ft)
Circular	Concrete	3.0	0.0	2	340.72
Circular	Concrete	1.75	0.0	1	240.69
Circular	Concrete	2.0	0.0	2	703.32
Circular	Concrete	1.5	0.0	5	96.19
Circular	Concrete	1.25	0.0	12	529.21

NODES:

Type of Inlet Structure	Type of Grate	Inlet Length (ft)	Grate Width (ft)	Grate Length (ft)	Grate Area (ft)	Grate Perimeter (ft)	Quantity (each)
Curb And Grate In Sag	Transverse	2.5	0.0	0.0	1.67	5.0	13
Curb In Sag		2.5	0.0	0.0	0.0	0.0	3
Circular Manhole		0.0	0.0	0.0	0.0	0.0	6
Outlet		0.0	0.0	0.0	0.0	0.0	1

END

NORMAL TERMINATION OF HOUSTORM.

Warning Messages for current project:

Runoff Frequency of: 2 Years
Discharge decreased downstream node Id= WESH1 Previous intensity used.
Computed right ponded width exceeds allowable width at inlet Id= A196
Computed left ponded width exceeds allowable width at inlet Id= A196
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 7
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 8
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 9
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 10
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 11
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 12
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 13
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 14
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 15
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 17
Run# 21 Insufficient capacity.
Run# 22 Insufficient capacity.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

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TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

EXISTING DRAINAGE CALCULATIONS
FAIRVIEW SYSTEM 2-YR

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **81** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\81-85_EX-CAL_2YR.dwgFAIRVIEW 2YR May 22 , 2026 - 9:35AM Jgarza

HouStorm (City Of Houston STORM DRAIN DESIGN) Version 2.1, Update: Nov/01/2007
Run @ 4/25/2017 2:25:36 PM

PROJECT NAME : NSSI_INDIANA St
JOB NUMBER :
PROJECT DESCRIPTION :
PROJECT File: P:\municipal\12104003\Documentation\Design\Calculations\Houstorm

DESIGN FREQUENCY : 2 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 2 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A162	0.65	1.30	25.47	25.47	3.37	0.000	2.852
A163	0.65	0.67	24.32	24.32	3.45	0.000	1.504
A164	0.65	0.18	22.39	22.39	3.60	0.000	0.421
A169	0.65	0.20	22.53	22.53	3.59	0.000	0.466
A209	0.65	0.61	24.17	24.17	3.46	0.000	1.374
A210	0.65	0.86	24.74	24.74	3.42	0.000	1.914
A170	0.65	0.42	23.58	23.58	3.51	0.000	0.958
A208	0.65	0.67	23.58	23.58	3.51	0.000	1.528
A212	0.65	1.17	25.28	25.28	3.39	0.000	2.576

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim (ft)	Grate Area (sf)	Left-Slope Longi (%)	Left-Slope Transv (%)	Right-Slope Longi (%)	Right-Slope Transv (%)	n	Gutter DeprW (ft)	Head Allowed (ft)
A164	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A210	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A163	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A212	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A170	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A209	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A169	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A162	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Actual Head (ft)	Ponded Width Left (ft)	Ponded Width Right (ft)
A164	Combi	2.50	5.00	1.67	0.421	10.993	0.254	4.35	4.35
A210	Combi	2.50	5.00	1.67	1.914	10.993	0.331	7.70	7.70
A163	Combi	2.50	5.00	1.67	1.504	10.993	0.300	7.00	7.00
A212	Combi	2.50	5.00	1.67	2.576	10.993	0.397	8.60	8.60
A170	Combi	2.50	5.00	1.67	0.958	10.993	0.270	5.90	5.90
A209	Combi	2.50	5.00	1.67	1.374	10.993	0.292	6.80	6.80
A169	Combi	2.50	5.00	1.67	0.466	10.993	0.255	4.50	4.50
A162	Combi	2.50	5.00	1.67	2.852	10.993	0.430	8.90	8.90

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr. Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
A164	Combi	0.650	0.18	22.39	3.60		0.00	0.421
IND4	CrcMh	0.650	5.41	26.90	3.28		0.00	11.539
A210	Combi	0.650	0.86	24.74	3.42		0.00	1.914
A163	Combi	0.650	0.67	24.32	3.45		0.00	1.504
A212	Combi	0.650	1.17	25.28	3.39		0.00	2.576
A170	Combi	0.650	0.42	23.58	3.51		0.00	0.958
IND3	CrcMh	0.650	2.29	25.87	3.35		0.00	4.983
IND2	CrcMh	0.650	1.48	25.51	3.37		0.00	3.244
A209	Combi	0.650	0.61	24.17	3.46		0.00	1.374
A169	Combi	0.650	0.20	22.53	3.59		0.00	0.466
A162	Combi	0.650	1.30	25.47	3.37		0.00	2.852
OUT	Outlt	0.650	5.41	26.90	3.28		0.00	11.539

Conveyance Configuration Data

Run #	Node I.D. US	Node I.D. DS	FlowLine Elev. US (ft)	FlowLine Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	IND4	OUT	44.25	44.15	Cir 1	0.00	1.75	50.0	0.200	0.013
2	IND3	IND4	45.20	44.55	Cir 1	0.00	1.50	222.8	0.292	0.013
3	IND2	IND3	45.33	45.20	Cir 1	0.00	1.50	63.2	0.206	0.013
4	A210	IND4	48.85	44.85	Cir 1	0.00	1.25	41.4	9.712	0.013
5	A163	IND4	48.34	44.85	Cir 1	0.00	1.25	48.1	7.269	0.013
6	A170	IND4	48.37	44.65	Cir 1	0.00	1.25	33.5	11.170	0.013
7	A212	IND4	47.74	45.59	Cir 1	0.00	1.25	22.5	9.608	0.013
8	A209	IND3	49.05	48.38	Cir 1	0.00	1.25	24.0	2.799	0.013
9	A169	IND3	48.49	47.77	Cir 1	0.00	1.25	8.3	8.676	0.013
10	A162	IND2	48.51	46.77	Cir 1	0.00	1.25	24.5	7.135	0.013
11	A164	IND2	48.77	47.77	Cir 1	0.00	1.25	8.7	11.557	0.013

Conveyance Hydraulic Computations. Tailwater = 45.900 (ft)

Run #	Hyd. Gr. line US (ft)	Hyd. Gr. line DS (ft)	Crit.Elev US (ft)	Fr.Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Junc Cap (cfs)	Junc Loss (ft)
1	46.27	45.90	52.75	0.526	1.75	1.75	4.80	4.80	11.5	7.1	0.107
2	46.44	46.27	52.11	0.223	1.09	1.50	3.62	2.82	5.0	5.7	0.037
3	46.52	46.44	51.98	0.095	0.91	1.24	2.90	2.08	3.2	4.8	0.020
4*	49.40	46.27	51.79	0.087	0.26	1.25	10.34	1.56	1.9	20.2	0.000
5*	48.82	46.27	51.79	0.054	0.25	1.25	8.69	1.23	1.5	17.5	0.000
6*	48.76	46.27	51.77	0.022	0.18	1.25	8.85	0.78	1.0	21.7	0.000
7*	48.38	46.27	51.79	0.158	0.30	0.68	11.23	3.77	2.6	20.1	0.000
8*	49.64	49.63	51.65	0.045	0.30	1.25	6.04	3.34	1.4	10.9	0.000
9*	49.02	49.02	51.74	0.005	0.13	1.25	6.52	2.61	0.5	19.1	0.000
10*	49.19	48.02	51.61	0.193	0.34	1.25	10.40	2.32	2.9	17.3	0.000
11*	49.02	49.02	51.75	0.004	0.12	1.25	7.00	2.49	0.4	22.1	0.000

* Supercritical flow.

SUMMARY OF STORM DRAIN STRUCTURE QUANTITIES

NOTE:
The convey length should be from upstream to downstream inside box.
This length may also be used as Pay Item.
Using hydraulic length, from node center to node center, may result in profile error,
and this length should not be used as Pay Item.

LINKS:

Type of Convey Structure	Material	Rise (ft)	Span (ft)	Number of Links of this type	Quantity (ft)
Circular	Concrete	1.75	0.0	1	50.0
Circular	Concrete	1.5	0.0	2	285.99
Circular	Concrete	1.25	0.0	8	210.95

NODES:

Type of Inlet Structure	Type of Grate	Inlet Length (ft)	Grate Width (ft)	Grate Length (ft)	Grate Area (ft)	Grate Perimeter (ft)	Quantity (each)
Curb And Grate In Sag	Transverse	2.5	0.0	0.0	1.67	5.0	8
Circular Manhole		0.0	0.0	0.0	0.0	0.0	3
Outlet		0.0	0.0	0.0	0.0	0.0	1

END

NORMAL TERMINATION OF HOUSTORM.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

EXISTING DRAINAGE CALCULATIONS
INDIANA SYSTEM 2-YR

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **82** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\81-85_EX-CAL-2YR.dwgINDIANA 2YR May 22, 2026 - 9:35AM jgarza

HouStorm (City Of Houston STORM DRAIN DESIGN) Version 2.1, Update: Nov/01/2007
Run @ 4/25/2017 2:04:31 PM

PROJECT NAME : NSSI
JOB NUMBER :
PROJECT DESCRIPTION :
PROJECT File: P:\municipal\12104003\Documentation\Design\Calculations\Houstorm

DESIGN FREQUENCY : 2 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 2 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A1	0.65	0.93	24.87	24.87	3.42	0.000	2.065
A2	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A3	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A4	0.65	0.65	24.27	24.27	3.46	0.000	1.461
A5	0.65	0.54	23.97	23.97	3.48	0.000	1.221
A6	0.65	1.36	25.56	25.56	3.37	0.000	2.978
A10B	0.65	0.69	24.27	24.27	3.46	0.000	1.461
A118	0.65	0.73	24.46	24.46	3.44	0.000	1.634
A119	0.65	1.45	25.68	25.68	3.36	0.000	3.167
A120	0.65	1.11	25.19	25.19	3.39	0.000	2.449
A121	0.65	0.46	23.72	23.72	3.50	0.000	1.046
A122	0.65	0.50	23.85	23.85	3.49	0.000	1.134
A123	0.65	0.55	24.00	24.00	3.48	0.000	1.243
A124	0.65	0.62	24.19	24.19	3.46	0.000	1.396
A125	0.65	0.94	24.89	24.89	3.41	0.000	2.086
A126	0.65	0.46	23.72	23.72	3.50	0.000	1.046
A127	0.65	2.66	26.88	26.88	3.28	0.000	5.676
A137	0.65	0.77	24.55	24.55	3.44	0.000	1.721
A138	0.65	1.02	25.03	25.03	3.40	0.000	2.257
A140	0.65	8.29	29.51	29.51	3.12	0.000	16.838
A141	0.65	12.41	30.58	30.58	3.07	0.000	24.726
A142	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A143	0.65	1.51	25.75	25.75	3.36	0.000	3.294
A144	0.65	4.23	27.89	27.89	3.22	0.000	8.853
A19	0.65	0.69	24.27	24.27	3.45	0.000	1.548
A20	0.65	0.65	24.27	24.27	3.46	0.000	1.461
A21	0.65	1.46	25.69	25.69	3.36	0.000	3.189
A22	0.65	1.49	25.73	25.73	3.36	0.000	3.252
A23	0.65	1.18	25.30	25.30	3.39	0.000	2.597
A24	0.65	0.99	24.98	24.98	3.41	0.000	2.193
A25	0.65	0.79	24.59	24.59	3.44	0.000	1.764
A26	0.65	0.94	24.87	24.87	3.42	0.000	2.065
A27	0.65	0.93	24.87	24.87	3.42	0.000	2.065
A37	0.65	0.46	23.72	23.72	3.50	0.000	1.046
A38	0.65	0.97	24.95	24.95	3.41	0.000	2.150
A39	0.65	0.91	24.84	24.84	3.42	0.000	2.022
A40	0.65	0.90	24.82	24.82	3.42	0.000	2.000
A41	0.65	0.30	23.09	23.09	3.54	0.000	0.691
A42	0.65	0.50	23.85	23.85	3.49	0.000	1.134
A43	0.65	0.42	23.58	23.58	3.51	0.000	0.958
A44	0.65	1.61	25.87	25.87	3.35	0.000	3.504
A45	0.65	0.92	24.85	24.85	3.42	0.000	2.043
A55	0.65	2.65	26.54	26.54	3.30	0.000	4.854
A56	0.65	2.67	26.89	26.89	3.28	0.000	5.696
A57	0.65	0.73	24.46	24.46	3.44	0.000	1.634
A58	0.65	1.61	25.87	25.87	3.35	0.000	3.504
A59	0.65	0.15	22.16	22.16	3.62	0.000	0.352
A60	0.65	0.46	23.72	23.72	3.50	0.000	1.046
A61	0.65	0.44	23.65	23.65	3.50	0.000	1.002
A62	0.65	0.63	24.22	24.22	3.46	0.000	1.417
A63	0.65	0.73	24.46	24.46	3.44	0.000	1.634
A73	0.65	0.62	24.19	24.19	3.46	0.000	1.396
A74	0.65	0.55	24.00	24.00	3.48	0.000	1.243
A75	0.65	0.25	22.83	22.83	3.56	0.000	0.579
A76	0.65	0.70	24.39	24.39	3.45	0.000	1.569
A77	0.65	0.50	23.85	23.85	3.49	0.000	1.134
A78	0.65	0.42	23.58	23.58	3.51	0.000	0.958
A79	0.65	0.66	24.29	24.29	3.46	0.000	1.483
A80	0.65	0.84	24.70	24.70	3.43	0.000	1.871
A81	0.65	0.80	24.61	24.61	3.43	0.000	1.786
A91	0.65	0.97	24.95	24.95	3.41	0.000	2.150
A92	0.65	0.31	23.14	23.14	3.54	0.000	0.713
A93	0.65	0.30	23.09	23.09	3.54	0.000	0.691
A94	0.65	0.51	23.88	23.88	3.49	0.000	1.155
A95	0.65	0.69	24.37	24.37	3.45	0.000	1.548
A96	0.65	1.05	25.09	25.09	3.40	0.000	2.321
A97	0.65	0.84	24.70	24.70	3.43	0.000	1.871
A98	0.65	1.59	25.85	25.85	3.35	0.000	3.462
A99	0.65	0.28	22.99	22.99	3.55	0.000	0.646
A109	0.65	0.58	24.09	24.09	3.47	0.000	1.308
A110	0.65	0.83	24.68	24.68	3.43	0.000	1.850
A111	0.65	1.25	25.40	25.40	3.38	0.000	2.746
A112	0.65	1.05	25.09	25.09	3.40	0.000	2.321
A113	0.65	1.06	25.10	25.10	3.40	0.000	2.342
A114	0.65	1.26	25.42	25.42	3.38	0.000	2.767
A115	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A116	0.65	2.20	26.54	26.54	3.30	0.000	4.854
A117	0.65	0.87	24.76	24.76	3.42	0.000	1.936
A127	0.65	0.72	24.44	24.44	3.45	0.000	1.613
A128	0.65	0.96	24.93	24.93	3.41	0.000	2.129
A129	0.65	1.25	25.40	25.40	3.38	0.000	2.746
A130	0.65	1.40	25.61	25.61	3.37	0.000	3.062
A131	0.65	1.11	25.19	25.19	3.39	0.000	2.449
A132	0.65	0.58	24.09	24.09	3.47	0.000	1.308
A133	0.65	0.87	24.76	24.76	3.42	0.000	1.936
A134	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A135	0.65	4.58	28.07	28.07	3.21	0.000	9.553
A145	0.65	1.62	25.89	25.89	3.35	0.000	3.524
A146	0.65	0.37	23.39	23.39	3.52	0.000	0.847
A147	0.65	1.68	25.96	25.96	3.34	0.000	3.650
A148	0.65	1.38	25.59	25.59	3.37	0.000	3.020
A149	0.65	1.58	25.84	25.84	3.35	0.000	3.440
A150	0.65	1.41	25.62	25.62	3.36	0.000	3.084
A151	0.65	1.87	26.17	26.17	3.33	0.000	4.046
A152	0.65	5.77	28.62	28.62	3.18	0.000	11.913
A153	0.65	0.70	24.39	24.39	3.45	0.000	1.569
A154	0.65	2.23	26.52	26.52	3.31	0.000	4.791
A155	0.65	2.13	26.47	26.47	3.31	0.000	4.689
A156	0.65	1.59	25.85	25.85	3.35	0.000	3.462
A157	0.65	1.20	25.33	25.33	3.38	0.000	2.640
A158	0.65	1.96	26.26	26.26	3.32	0.000	4.233
A159	0.65	1.97	26.28	26.28	3.32	0.000	4.419
A160	0.65	1.08	25.14	25.14	3.40	0.000	2.385
A162	0.65	1.30	25.47	25.47	3.37	0.000	2.852
A172	0.65	0.24	22.78	22.78	3.57	0.000	0.556
A173	0.65	1.88	26.18	26.18	3.33	0.000	4.066
A174	0.65	0.69	24.37	24.37	3.45	0.000	1.548
A175	0.65	0.94	24.89	24.89	3.41	0.000	2.086
A176	0.65	0.44	23.72	23.72	3.50	0.000	1.046
A177	0.65	1.32	25.50	25.50	3.37	0.000	2.894
A178	0.65	0.86	24.74	24.74	3.42	0.000	1.914
A179	0.65	1.60	25.86	25.86	3.35	0.000	3.483
A180	0.65	0.30	23.13	23.31	3.53	0.000	0.802
A190	0.65	0.94	24.89	24.89	3.41	0.000	2.086
A191	0.65	3.52	27.48	27.48	3.25	0.000	7.425
A192	0.65	2.93	27.08	27.08	3.27	0.000	6.228
A193	0.65	5.20	28.37	28.37	3.19	0.000	10.786
A194	0.65	1.99	26.29	26.29	3.32	0.000	4.295
A195	0.65	7.80	29.36	29.36	3.13	0.000	15.886
A196	0.65	4.77	28.17	28.17	3.20	0.000	9.931
A163	0.65	1.28	25.44	25.44	3.38	0.000	2.809
A164	0.65	0.18	22.39	22.39	3.60	0.000	0.421
A165	0.65	1.25	25.40	25.40	3.38	0.000	2.746
A166	0.65	2.16	26.45	26.45	3.31	0.000	4.647
A167	0.65	1.05	25.09	25.09	3.40	0.000	2.321
A168	0.65	2.25	26.54	26.54	3.30	0.000	4.833
A169	0.65	0.23	22.53	22.53	3.59	0.000	0.466
A170	0.65	0.42	23.58	23.58	3.51	0.000	0.958
A171	0.65	1.76	26.05	26.05	3.34	0.000	3.817
A181	0.65	0.95	24.91	24.91	3.41	0.000	2.107
A182	0.65	0.84	24.70	24.70	3.43	0.000	1.871
A183	0.65	0.81	24.64	24.64	3.43	0.000	1.807
A184	0.65	0.19	22.46	22.46	3.59	0.000	0.444
A185	0.65	0.17	22.32	22.32	3.60	0.000	0.398
A186	0.65	0.37	23.39	23.39	3.52	0.000	0.847
A187	0.65	0.78	24.57	24.57	3.44	0.000	1.742
A188	0.65	3.35	27.37	27.37	3.25	0.000	7.081
A189	0.65	2.21	26.50	26.50	3.31	0.000	4.750
A199	0.65	0.36	23.35	23.35	3.52	0.000	0.825
A205	0.65	3.62	27.54	27.54	3.24	0.000	7.627
A206	0.65	4.45	28.01	28.01	3.21	0.000	9.293
A15	0.65	0.93	24.87	24.87	3.42	0.000	2.065
A16	0.65	1.19	25.31	25.31	3.39	0.000	2.619
A17	0.65	0.75	24.51	24.51	3.44	0.000	1.677
A18	0.65	0.39	23.47	23.47	3.52	0.000	0.891
A28	0.65	1.27	25.43	25.43	3.38	0.000	2.788
A29	0.65	1.24	25.39	25.39	3.38	0.000	2.724
A30	0.65	0.51	23.88	23.88	3.49	0.000	1.155
A31	0.65	0.44	23.65	23.65	3.50	0.000	1.002
A32	0.65	2.52	26.77	26.77	3.29	0.000	5.388
A33	0.65	0.72	24.44	24.44	3.45	0.000	1.613
A34	0.65	0.62	24.19	24.19	3.46	0.000	1.396
A35	0.65	1.04	25.07	25.07	3.40	0.000	2.300
A36	0.65	0.49	23.82	23.82	3.49	0.000	1.112
A46	0.65	0.69	24.37	24.37	3.45	0.000	1.548
A47	0.65	0.26	22.89	22.89	3.56	0.000	0.601
A48	0.65	3.00	27.13	27.13	3.27	0.000	6.370
A49	0.65	1.07	25.12	25.12	3.40	0.000	2.364
A50	0.65	1.15	25.25	25.25	3.39	0.000	2.534
A51	0.65	1.01	25.02	25.02	3.41	0.000	2.236
A52	0.65	0.13	21.98	21.98	3.63	0.000	0.307
A53	0.65	0.63	24.22	24.22	3.46	0.000	1.417
A54	0.65	0.55	24.00	24.00	3.48	0.000	1.243
A64	0.65	0.77	24.55	24.55	3.44	0.000	1.721
A65	0.65	0.56	24.03	24.03	3.47	0.000	1.265
A66	0.65	0.75	24.51	24.51	3.44	0.000	1.677
A67	0.65	0.25	22.83	22.83	3.56	0.000	0.579
A68	0.65	0.26	22.89	22.89	3.56	0.000	0.601
A7	0.65	1.18	25.30	25.30	3.39	0.000	2.597
A8	0.65	0.71	24.41	24.41	3.45	0.000	1.591
A9	0.65	0.63	24.22	24.22	3.46	0.000	1.417
A10	0.65	0.83	24.68	24.68	3.43	0.000	1.850
A11	0.65	1.42	25.64	25.64	3.36	0.000	3.104
A13	0.65	1.44	25.66	25.66	3.36	0.000	3.147
A69	0.65	0.59	24.11	24.11	3.47	0.000	1.330
A70	0.65	0.47	23.76	23.76	3.49	0.000	1.068
A71	0.65	0.47	23.76	23.76	3.49	0.000	1.068
A72	0.65	0.45	23.69	23.69	3.50	0.000	1.024
A82	0.65	0.85	24.72	24.72	3.43	0.000	1.893
A83	0.65	1.36	25.56	25.56	3.37	0.000	2.978
A84	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A85	0.65	0.47	23.76	23.76	3.49	0.000	1.068
A86	0.65	0.60	24.14	24.14	3.47	0.000	1.352
A87	0.65	0.11	21.78	21.78	3.65	0.000	0.261
A88	0.65	1.22	25.36	25.36	3.38	0.000	2.682
A89	0.65	1.79	26.08	26.08	3.33	0.000	3.879
A90	0.65	0.88	24.78	24.78	3.42	0.000	1.957
A100	0.65	0.38	23.43	23.43	3.52	0.000	0.869
A101	0.65	1.08	25.14	25.14	3.40	0.000	2.385
A102	0.65	0.84	24.70	24.70	3.43	0.000	1.871
A103	0.65	2.51	26.76	26.76	3.29	0.000	5.368
A104	0.65	2.10	26.40	26.40	3.31	0.000	4.523
A105	0.65	1.06	25.10	25.10	3.40	0.000	2.342
A106	0.65	0.80	24.61	24.61	3.43	0.000	1.786
A107	0.65	1.07	25.12	25.12	3.40	0.000	2.364
A207	0.65	0.70	24.39	24.39	3.45	0.000	1.569

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim (ft)	Grate Area (sf)	Left-Slope Longi (%)	Left-Slope Transv (%)	Right-Slope Longi (%)	Right-Slope Transv (%)	n	Gutter DeprW (ft)	Gutter Width (ft)	Head Allowed (ft)
A19	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A3	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A17	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A4	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A40	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A82	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A88	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A41	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A89	Curb	10.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A94	Curb	10.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A42	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A43	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A46	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A47	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A48	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A52	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A51	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A57	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A63	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A64	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A74	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A70	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A73	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A72	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A83	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A76	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A79	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A75	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A77	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A65	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A45	Curb	2.50	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A183	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A11	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A25	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A36	Curb	10.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A37	Combi	5.00	7.50	3.34	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A38	Combi	5.00	7.50	3.34	2.150	21.985	0.276	8.00	8.00		
A39	Grate	n/a	7.50	3.34	2.020	21.985	0.197	7.85	7.85		
A13	Combi	2.50	5.00	1.67	3.147	10.993	0.469	9.25	9.25		
A182	Curb	2.50	n/a	n/a	1.871	7.511	0.328	7.60	7.60		
A49	Curb	2.50	n/a	n/a	2.364	7.511	0.374	8.30	8.30		
A27	Curb	5.00	n/a	n/a	2.065	15.022	0.274	7.90	7.90		
A50	Curb	2.50	n/a	n/a	2.534	7.511	0.392	8.55	8.55		
A29	Curb	5.00	n/a	n/a	2.724	15.022	0.291	8.75	8.75		
A61	Curb	2.50	n/a	n/a	1.002	7.511	0.272	8.00	8.00		
A30	Curb	2.50	n/a	n/a	1.155	7.511	0.280	6.35	6.35		
A60	Curb	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A59	Combi	2.50	5.00	1.67	1.046	10.993	0.274	6.10	6.10		
A31	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A62	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	1.50
A15	Combi	5.00	7.50	3.34	2.065	21.985	0.274	7.90	7.90		
A44	Combi	5.00	7.50	3.34	2.504	21.985	0.318	9.65	9.65		
A16	Curb	2.50	n/a	n/a	2.619	7.511	0.402	8.65	8.65		
A26	Curb	2.50	n/a	n/a	2.065	7.511	0.344	7.90	7.90		
A18	Curb	2.50	n/a	n/a	0.891	7.511	0.268	5.75	5.75		
A28	Curb	2.50	n/a	n/a	2.788	7.511	0.422	8.85	8.85		
A20	Curb	2.50	n/a	n/a	1.461	7.511	0.297	6.95	6.95		
A21	Curb	2.50	n/a	n/a	3.189	7.511	0.475	9.30	9.30		
A32	Curb	2.50	n/a	n/a	5.388	7.511	0.893	11.30	11.30		
A24	Curb	2.50	n/a	n/a	2.193	7.511	0.357	8.10	8.10		
A68	Combi	5.00	7.50	3.34	0.601	21.985	0.252	4.95	4.95		
A33	Combi	2.50	5.00	1.67	1.613	10.993	0.308	7.20	7.20		
A69	Combi	2.50	5.00	1.67	1.330	10.993	0.289	6.70	6.70		
A34	Curb	5.00	n/a	n/a	1.396	15.022	0.261	6.80	6.80		
A81	Combi	5.00	7.50	3.34	1.786	21.985	0.268	7.50	7.50		
A71	Combi	5.00	7.50	3.34	1.068	21.985	0.256	6.15	6.15		
A35	Curb	5.00	n/a	n/a	2.439	15.022	0.279	8.20	8.20		
A148	Combi	2.50	5.00	1.67	3.020	10.993	0.452	9.10	9.10		
A149	Combi	2.50	5.00	1.67	3.440	10.993	0.512	9.55	9.55		
A156	Curb	5.00	n/a	n/a	3.462	15.022	0.316	9.60	9.60		
A159	Curb	5.00	n/a	n/a	3.419	15.022	0.315	9.55	9.55		
A145	Curb	2.50	n/a	n/a	3.524	7.511	0.525	9.65	9.65		
A147	Curb	2.50	n/a	n/a	3.650	7.511	0.545	9.80	9.80		
A154	Curb	2.50	n/a	n/a	4.791	7.511	0.759	10.85	10.85		
A128	Curb	5.00	n/a	n/a	2.129	15.022	0.275	8.00	8.00		
A95	Combi	5.00	7.50	3.34	1.548	21.985	0.263	7.10	7.10		
A199	Curb	10.00	n/a	n/a	0.825	30.045	0.251	5.60	5.60		
A124	Curb	5.00	n/a	n/a	1.396	15.022	0.261	6.80	6.80		
A127	Curb	5.00	n/a	n/a	1.613	15.022	0.264	7.20	7.20		
A119	Curb	5.00	n/a	n/a	3.167	15.022	0.306	9.25	9.25		
A78	Curb	5.00	n/a	n/a	0.958	15.022	0.255	5.90	5.90		
A67	Curb	5.00	n/a	n/a	0.579	15.022	0.252	4.90	4.90		
A119	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A78	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A67	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A155	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A142	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A80	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A86	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A131	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A125	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A138	Grate	7.50	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A126	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A123	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A118	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A54	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50	
A55	Combi	5.00

A119	Curb	0.650	1.45	25.68	3.36	0.00	0.00	3.167
A78	Curb	0.650	0.42	23.58	3.51	0.00	0.00	0.958
A67	Curb	0.650	0.25	22.83	3.56	0.00	0.00	0.579
A155	Curb	0.650	2.18	26.47	3.31	0.00	0.00	4.689
A142	Combi	0.650	0.64	24.24	3.46	0.00	0.00	1.439
A141	CrcMh	0.650	13.05	30.58	3.07	0.00	0.00	26.001
A80	Combi	0.650	0.84	24.70	3.43	0.00	0.00	1.871
A86	Combi	0.650	0.60	24.14	3.47	0.00	0.00	1.352
A131	Curb	0.650	1.11	25.19	3.39	0.00	0.00	2.449
A125	Combi	0.650	0.94	24.89	3.41	0.00	0.00	2.086
A138	Grate	0.650	1.02	25.03	3.40	0.00	0.00	2.257
A126	Curb	0.650	0.46	23.72	3.50	0.00	0.00	1.046
A123	Curb	0.650	0.55	24.00	3.48	0.00	0.00	1.243
A118	Curb	0.650	0.73	24.46	3.44	0.00	0.00	1.634
A54	Combi	0.650	1.63	25.35	3.38	0.00	0.00	3.584
A55	Combi	0.650	2.26	25.54	3.30	0.00	0.00	4.854
A58	Combi	0.650	1.61	25.87	3.35	0.00	0.00	3.504
A66	Curb	0.650	0.75	24.51	3.44	0.00	0.00	1.677
A112	Curb	0.650	1.70	25.09	3.40	0.00	0.00	3.758
A113	Curb	0.650	1.06	25.10	3.40	0.00	0.00	2.342
A114	Curb	0.650	1.84	25.42	3.38	0.00	0.00	4.040
A115	Curb	0.650	0.64	24.24	3.46	0.00	0.00	1.439
A116	Curb	0.650	2.26	25.54	3.30	0.00	0.00	4.854
A117	Curb	0.650	0.87	24.76	3.42	0.00	0.00	1.936
A120	Curb	0.650	1.11	25.19	3.39	0.00	0.00	2.449
A121	Curb	0.650	0.46	23.72	3.50	0.00	0.00	1.046
A191	Curb	0.650	3.52	27.08	3.27	0.00	0.00	7.745
A192	Curb	0.650	2.93	27.08	3.27	0.00	0.00	6.228
A101	Combi	0.650	1.08	25.14	3.40	0.00	0.00	2.385
A102	Combi	0.650	0.84	24.70	3.43	0.00	0.00	1.871
A103	Combi	0.650	2.51	26.76	3.29	0.00	0.00	5.368
A104	Combi	0.650	2.10	26.40	3.31	0.00	0.00	4.523
A105	Combi	0.650	1.06	25.10	3.40	0.00	0.00	2.342
A106	Combi	0.650	0.80	24.61	3.43	0.00	0.00	1.786
A107	Combi	0.650	1.07	25.12	3.40	0.00	0.00	2.364
A108	Combi	0.650	0.65	24.27	3.46	0.00	0.00	1.461
A109	Grate	0.650	0.58	24.09	3.47	0.00	0.00	1.308
A110	Curb	0.650	1.47	24.68	3.43	0.00	0.00	3.276
A111	Combi	0.650	1.25	25.40	3.38	0.00	0.00	2.746
A93	Combi	0.650	0.30	23.09	3.54	0.00	0.00	0.691
A96	Grate	0.650	1.05	25.09	3.40	0.00	0.00	2.321
A100	Combi	0.650	0.38	23.43	3.52	0.00	0.00	0.869
WEL1	CrcMh	0.650	1.42	25.69	3.36	0.00	0.00	3.104
REV1	CrcMh	0.650	1.34	24.40	3.45	0.00	0.00	3.004
REV2	CrcMh	0.650	2.73	24.75	3.42	0.00	0.00	6.076
MIM3	CrcMh	0.650	8.74	27.51	3.24	0.00	0.00	18.425
AVA4	CrcMh	0.650	34.91	31.30	3.03	0.00	0.00	68.675
MIM3	CrcMh	0.650	2.18	25.43	3.38	0.00	0.00	4.654
ARG1	CrcMh	0.650	3.07	25.48	3.37	0.00	0.00	6.732
A181	Combi	0.650	0.95	24.91	3.41	0.00	0.00	2.107
AVA2	CrcMh	0.650	23.97	29.73	3.11	0.00	0.00	48.489
AVA3	CrcMh	0.650	24.90	29.83	3.11	0.00	0.00	50.287
A184	Curb	0.650	17.26	28.41	3.19	0.00	0.00	35.777
AVA1	CrcMh	0.650	18.99	28.56	3.18	0.00	0.00	39.251
AVAC1	Junct	0.650	19.83	29.66	3.12	0.00	0.00	40.154
AVA4	CrcMh	0.000	0.00	0.00	0.00	0.00	0.00	0.000
AVAC2	Junct	0.650	36.06	31.94	2.99	0.00	0.00	70.157
AVAC3	Junct	0.650	37.30	32.12	2.98	0.00	0.00	72.343
AVAC4	Junct	0.650	37.74	32.19	2.98	0.00	0.00	73.118
AVAC5	Junct	0.650	38.71	32.55	2.96	0.00	0.00	74.524
AVA5	CrcMh	0.650	44.41	32.61	2.96	0.00	0.00	85.412
AVA6	CrcMh	0.650	45.72	32.68	2.96	0.00	0.00	87.826
AVA7	CrcMh	0.650	47.31	32.98	2.94	0.00	0.00	90.987
AVA8	CrcMh	0.650	47.61	32.98	2.94	0.00	0.00	90.987
AVA9	CrcMh	0.650	52.90	33.53	2.91	0.00	0.00	100.165
AVAC6	Junct	0.650	53.29	33.53	2.91	0.00	0.00	100.733
AVA10	CrcMh	0.650	56.55	33.64	2.91	0.00	0.00	106.881
AVAC7	Junct	0.650	57.05	33.69	2.91	0.00	0.00	107.750
AVA11	CrcMh	0.650	57.05	33.69	2.91	0.00	0.00	107.750
SHE5	CrcMh	0.650	184.50	37.97	2.74	0.00	0.00	328.759
WEG1	CrcMh	0.650	5.11	29.31	3.14	0.00	0.00	10.417
WEG2	CrcMh	0.650	4.22	28.58	3.18	0.00	0.00	8.719
DEV3	CrcMh	0.650	3.45	28.43	3.19	0.00	0.00	7.148
DEV2	CrcMh	0.650	2.43	25.85	3.35	0.00	0.00	5.290
DEV1	CrcMh	0.650	1.36	25.80	3.35	0.00	0.00	2.978
REB1	CrcMh	0.650	4.36	26.62	3.30	0.00	0.00	9.349
REB2	CrcMh	0.650	12.54	29.65	3.12	0.00	0.00	25.404
REBC1	Junct	0.650	15.21	30.35	3.08	0.00	0.00	30.431
FAI1	CrcMh	0.650	39.09	34.19	2.88	0.00	0.00	73.217
FAI2	CrcMh	0.650	48.85	34.31	2.88	0.00	0.00	91.312
FAI3	CrcMh	0.650	49.83	34.69	2.86	0.00	0.00	92.567
WES7	CrcMh	0.650	15.69	30.32	3.08	0.00	0.00	31.404
WES8	CrcMh	0.650	18.58	31.22	3.03	0.00	0.00	36.604
A135	CrcMh	0.650	4.58	28.07	3.21	0.00	0.00	9.553
DIC3	CrcMh	0.650	21.30	31.36	3.02	0.00	0.00	41.859
A193	CrcMh	0.650	5.20	28.37	3.19	0.00	0.00	10.786
A194	CrcMh	0.650	1.99	26.29	3.32	0.00	0.00	4.295
KIR1	CrcMh	0.650	17.07	28.39	3.19	0.00	0.00	35.394
KIR2	CrcMh	0.650	17.07	28.39	3.19	0.00	0.00	35.394
KIR3	CrcMh	0.650	11.62	28.27	3.20	0.00	0.00	23.337
KIR4	CrcMh	0.650	0.76	24.29	3.46	0.00	0.00	1.708
KIR5	CrcMh	0.650	0.95	24.41	3.45	0.00	0.00	2.129
KIR6	CrcMh	0.650	8.08	27.52	3.24	0.00	0.00	17.030
A152	CrcMh	0.650	5.77	28.62	3.18	0.00	0.00	11.913
A195	CrcMh	0.650	7.80	29.36	3.13	0.00	0.00	15.886
WEL2	CrcMh	0.650	1.88	27.13	3.27	0.00	0.00	3.992
WEL3	CrcMh	0.650	5.20	27.36	3.25	0.00	0.00	10.993
A134	Combi	0.650	0.64	24.24	3.46	0.00	0.00	1.439
WEL4	CrcMh	0.650	6.13	27.81	3.22	0.00	0.00	12.849
SHE3	JctBx	0.650	200.53	38.15	2.71	0.00	0.00	352.687
PER1	CrcMh	0.650	1.28	24.67	3.43	0.00	0.00	2.853
PER2	CrcMh	0.650	3.22	26.58	3.30	0.00	0.00	6.910
PER3	CrcMh	0.650	2.07	25.39	3.38	0.00	0.00	4.548
MIM1	CrcMh	0.650	4.97	26.80	3.29	0.00	0.00	10.620
WES9	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
WES10	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
WES11	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
WES12	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
WES13	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
WES14	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
KIR8	CrcMh	0.650	2.89	25.97	3.34	0.00	0.00	6.276
KIR7	CrcMh	0.650	1.64	24.93	3.41	0.00	0.00	3.636
OUT	Outlt	0.650	200.53	38.15	2.71	0.00	0.00	352.687

Conveyance Configuration Data

Run #	Node US	I.D. DS	Flow (ft)	Line US (ft)	Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
44	FAI4	FAI5	43.28	43.28	Cir 1	0.00	4.00	63.1	0.002	0.013	
45	FAI5	FAI6	43.16	43.16	Cir 1	0.00	4.00	138.5	0.001	0.013	
46	FAI6	FAI7	43.34	43.34	Cir 1	0.00	4.00	144.7	0.001	0.013	
47	FAI7	FAI8	43.24	43.09	Cir 1	0.00	4.00	53.1	2.283	0.013	
48	FAI8	FAI9	42.99	42.95	Cir 1	0.00	4.00	60.9	0.066	0.013	
49	FAI9	FAI10	42.90	42.74	Cir 1	0.00	4.00	38.0	0.421	0.013	
50	FAI10	FAI11	42.69	42.31	Cir 1	0.00	4.00	98.9	0.384	0.013	
51	FAI11	FAIC1	42.23	42.23	Cir 1	0.00	4.50	87.8	0.001	0.013	
52	FAIC1	FAI12	42.23	42.23	Cir 1	0.00	4.50	49.0	0.001	0.013	
53	FAI12	FAIC2	42.13	42.12	Cir 1	0.00	4.50	17.9	0.045	0.013	
54	FAIC2	FAI13	42.12	42.01	Cir 1	0.00	4.50	247.8	0.046	0.013	
56	FAI13	FAIC4	41.84	41.77	Cir 1	0.00	4.50	17.6	0.391	0.013	
57	FAIC4	FAI14	41.77	41.25	Cir 1	0.00	4.50	133.3	0.391	0.013	
58	FAI14	FAI15	41.18	41.03	Cir 1	0.00	4.50	111.5	0.161	0.013	
153	A55	REB1	47.42	46.73	Cir 1	0.00	1.50	36.8	1.876	0.013	
154	A104	REBC1	48.63	46.90	Cir 1	0.00	1.25	17.7	9.838	0.013	
155	A98	REBC2	48.98	46.90	Cir 1	0.00	1.25	16.3	9.106	0.013	
59	REBV1	REB2	44.36	44.00	Cir 1	0.00	3.50	286.8	0.126	0.013	
158	A66	FAI2	47.29	45.88	Cir 1	0.00	1.25	22.3	6.347	0.013	
159	A117	FAI2	46.98	45.98	Cir 1	0.00	1.25	28.3	3.508	0.013	
160	A67	FAI3	48.10	46.67	Cir 1	0.00	2.00	30.5	4.592	0.013	
161	A118	FAI3	47.60	46.97	Cir 1	0.00	1.25	30.7	2.051	0.013	
60	WEG5	FAI4	44.95	43.63	Cir 1	0.00	2.00	118.6	1.113	0.013	
61	WEG6	FAI4	44.37	44.33	Cir 1	0.00	2.00	79.0	0.051	0.013	
162	A78	FAI5	47.33	46.18	Cir 1	0.00	2.00	28.2	4.077	0.013	
163	A123	FAI5	46.75	44.58	Cir 1	0.00	2.00	29.7	7.326	0.013	
189	A79	SAL1	47.33	47.03	Cir 1	0.00	2.00	20.7	1.452	0.013	
190	A75	WEG3	48.20	46.62	Cir 1	0.00	1.25	98.6	1.603	0.013	
191	A65	WEG4	47.99	47.23	Cir 1	0.00	2.00	8.7	8.749	0.013	
192	A77	WEG4	48.08	47.18	Cir 1	0.00	2.00	18.3	4.916	0.013	
193	WEG7	WEG6	44.52	44.47	Cir 1	0.00	2.00	181.8	0.028	0.013	
194	DUN3	WEG7	45.88	44.62	Cir 1	0.00	2.00	52.6	2.397	0.013	
195	DUN2	DUN3	45.98	45.98	Cir 1	0.00	2.00	171.7	0.001	0.013	
196	DUN1	DUN2	46.48	45.91	Cir 1	0.00	2.00	105.7	0.539	0.013	
197	A138	DUN1	46.83	46.83	Cir 1	0.00	2.00	86.6	0.001	0.013	
198	A128	DUN1	47.08	47.08	Cir 1	0.00	2.00	19.9	0.005	0.013	
199	A126	DUN1	46.98	46.73	Cir 1	0.00	2.00	11.5	2.180	0.013	
200	A124	DUN3	47.24	47.03	Cir 1	0.00	2.00	20.0	1.050	0.013	
201	A127	DUN3	47.44	47.23	Cir 1	0.00	2.00	6.7	3.122	0.013	
164	A125	FAI7	45.65	43.09	Cir 1	0.00	2.00	34.4	7.456	0.013	
165	A80	FAI7	45.30	45.16	Cir 1	0.00	2.00	37.2	0.376	0.013	
166	A86	FAI10	47.33	44.59	Cir 1	0.00	2.00	28.7	9.581	0.013	
167	A131	FAI10	45.55	44.74	Cir 1	0.00	2.00	28.2	2.876	0.013	
168	A132	FAI11	47.49	46.06	Cir 1	0.00	1.50	28.1	5.096	0.013	
169	A85	FAI11	47.04	45.76	Cir 1	0.00	1.50	27.0	4.744	0.013	
170	A87	FAI2	47.40	42.25	Cir 1	0.00	1.50	14.4	42.365	0.013	
172	A92	FAIC2	48.23	42.12	Cir 1	0.00	1.50	13.2	52.348	0.013	
173	A133	FAIC2	48.12	42.12	Cir 1	0.00	1.50	20.8	30.147	0.013	
171	A90	FAI12	46.14	45.83	Cir 1	0.00	2.00	42.5	0.729	0.013	
203	A84	A90	44.47	46.19	Cir 1	0.00	2.00	30.8	0.908	0.013	
55	FAIC3	FAI13	42.01	41.99	Cir 1	0.00	4.50	49.5	0.046	0.013	
174	A134	FAIC3	47.41	42.01	Cir 1	0.00	1.50	28.2	19.506	0.013	
175	A99	FAIC4	47.94	41.77	Cir 1	0.00	1.50	7.1	171.60	0.013	
176	A100	FAI14	48.48	48.27	Cir 1	0.00	1.25	6.4	2.355	0.013	
177	A136	FAI15	48.59	46.85	Cir 1	0.00	2.00	28.0	6.226	0.013	
178	DIC1	FAI2	46.30	44.75	Cir 1	0.00	2.00	398.0	0.389	0.013	
179	ELL1	DIC1	47.56	46.80	Cir 1	0.00	2.00	414.5	0.181	0.013	
180	A48	ELL1	49.05	48.30	Cir 1	0.00	1.25	15.9	4.737	0.013	
181	A56	ELL1	48.22	47.85	Cir 1	0.00	1.25	16.0	2.310	0.013	
182	A51	DIC1	48.70	47.50	Cir 1	0.00	1.25	24.8	4.846	0.013	
183	A57	DIC1	48.88	47.10	Cir 1	0.00	1.25	42.8	4.162	0.013	
184	A63	DIC1	48.80	47.20	Cir 1	0.00	1.25	13.5	11.909	0.013	
185	WEG4	WEG5	45.05	45.05	Cir 1	0.00	2.00	83.4	0.001	0.013	
186	WEG5	WEG4	45.05	45.15	Cir 1	0.00	2.00	55.5	0.181	0.013	
187	SAL1	WEG3	46.03	45.40	Cir 1	0.00	2.00	347.6	0.181	0.013	
188	A76	SAL1	46.04	46.04	Cir 1	0.00	2.00	7.1	0.014	0.013	
204	PEC1	FAI13	45.63	45.39	Cir 1	0.00	2.00	7.4	3.249	0.013	
205	A97	PEC1	45.52	45.63	Cir 1	0.00	2.00	27.5	0.242	0.013	
206	A91	A97	46.84	46.59	Cir 1	0.00	2.00	31.8	0.785	0.013	
207	A93	PEC1	48.27	45.63	Cir 1	0.00	1.25	49.2	5.376	0.013	
63	SHE15	SHE14	37.91	37.82	Cir 1	0.00	5.00	94.2	0.096	0.013	
62	SHE16	SHE15	37.92	37.91	Cir 1	0.00	5.00	16.3	0.062	0.013	
64	SHE14	SHE13	37.82	37.69	Cir 1	0.00	5.00	334.1	0.039	0.013	
139	A81	AVA7	42.51	42.46	Cir 1	0.00	2.00	34.5	0.145	0.013	
140	PER2	AVA9	45.45	45.42	Cir 1	0.00	2.00	30.5	0.754	0.013	
141	PER3	AVA9	46.46	46.14	Cir 1	0.00	2.00	54.0	0.592	0.013	
142	A41	AVAC6	40.41	40.38	Cir 1	0.00	1.25	3.4	0.806	0.013	
143	A94	AVA10	42.62	42.48	Cir 1	0.00	2.00	72.3	0.194	0.013	
144	A42	AVAC7	41.18	41.06	Cir 1	0.00	2.00	3.5	0.028	0.013	
145	A68	WEG1	47.28	47.03	Cir 1	0.00	2.00	6.2	4.055	0.013	
146	A62	WEG1	47.40	46.50	Cir 1	0.00	2.00	21.3	4.221	0.013	
34	WEG2	WEG1	46.41	46.50	Cir 1	0.00	2.00	199.0	0.307	0.013	
35	DEV3	WEG2	47.33	46.66	Cir 1	0.00	2.00	59.8	1.121	0.013	
36	DEV2	DEV3	48.23	48.13	Cir 1	0.00	2.00	260.4	0.038	0.013	
37	DEV1	DEV2	47.63	44.63	Cir 1	0.00	2.00	35.2	8.559	0.013	
147	A64	WEG2	47.14	46.80	Cir 1	0.00	2.00	20.1	1.392	0.013	
148	A70	DEV3	47.79	47.53	Cir 1	0.00	2.00	6.2	4.190	0.013	
149	A74	DEV3	47.76	47.33	Cir 1	0.00	2.00	20.6	2.091	0.013	
150	A72	DEV2	48.06	47.48	Cir 1	0.00	2.00	8.2	7.100	0.013	
151	A71	DEV2	48.24	47.53	Cir 1	0.00	2.00	55.6	1.278	0.013	
152	A83	DEV1	47.87	47.78	Cir 1	0.00	2.00	41.0	0.220	0.013	
38	REB1	REBC	46.53	45.58	Cir 1	0.00	1.75	229.4	0.414	0.013	
39	REBC1	REBC2	48.98	45.98	Cir 1	0.00	1.25	98.6	1.003	0.013	
40	REBC1	FAI1	43.98	43.98	Cir 1	0.00	3.50	18.8	0.005	0.013	
41	FAI1	FAI2	43.98	43.91	Cir 1	0.00	4.00	43.0	0.163	0.013	
42	FAI2	FAI3	43.71	43.57	Cir 1	0.00	4.00	165.3	0.085	0.013	
43	FAI3	FAI4	43.52	43.28	Cir 1	0.00	4.00	57.6	0.417	0.013	
65	SHE13	SHE12	37.69	37.63	Cir 1	0.00	5.00	94.1	0.064	0.013	
193	WEG7	WEG6	44.52	44.47	Cir 1	0.00	2.00	181.8	0.028	0.013	
194	DUN3	WEG7	45.88	44.62	Cir 1	0.00	2.00	52.6	2.397	0.013	
195	DUN2	DUN3	45.98	45.98	Cir 1	0.00	2.00	171.7	0.001	0.013	
196	DUN1	DUN2	46.48	45.91	Cir 1	0.00	2.00	105.7	0.539	0.013	
197	A138	DUN1	46.83	46.83	Cir 1	0.00	2.00	86.6	0.001	0.013	
198	A128	DUN1	47.08	47.08	Cir 1	0.00	2.00	19.9	0.005	0.013	
199	A126	DUN1	46.98	46.73	Cir 1	0.00	2.00	11.5	2.180	0.013	
200	A124	DUN3	47.24	47.03	Cir 1	0.00	2.00	20.0	1.050	0.013	
201	A127	DUN3	47.44	47.23	Cir 1	0.00	2.00	6.7	3.122	0.013	
66	SHE12	SHE11	37.63	37.59	Cir 1	0.00	5.00	92.3	0.043	0.013	
67	SHE11	SHE10	37.59	37.56	Cir 1	0.00	5.00	32.3	0.057	0.013	
68	SHE10	SHE9	37.56	37.53	Cir 1	0.00	5.00	66.1	0.045	0.013	
69	SHE9	SHE8	37.53	37.36	Cir 1	0.00	6.00	138.0	0.123	0.013	
70	SHE8	SHE7	37.36	36.81	Cir 1	0.00	6.00	433.1	0.127	0.013	
71	SHE7	SHE6	36.81	36.73	Cir 1	0.00	6.00	99.1	0.135	0.013	
72	SHE6	SHE5	36.73	36.50	Cir 1	0.00	6.00	171.9	0.134	0.013	
73	SHE5	A140	36.50	35.73	Cir 1	0.00	7.00	400.5	0.192	0.013	
74	A140	SHE3	35.73	35.66	Cir 1	0.00	7.00	35.0	0.200	0.013	
90	SHE3	OUT	35.66	35.47	Cir 1	0.00	7.00	92.8	0.200	0.013	
75	FAI16	SHE9	40.65	40.55	Cir 1	0.00	3.00	46.4	0.216	0.013	
76	FAI17	FAI16	46.49	43.00	Cir 1	0.00	2.00	25.9	13.500	0.013	
77	FAI18	FAI17	47.33	46.74	Cir 1	0.00	2.00	235.7	0.251	0.013	
208	A145	FAI17	47.08	46.78	Cir 1	0.00	2.00	31.8	0.944	0.013	
212	A147	A145	47.92	47.13	Cir 1	0.00	2.00	30.0	2.638	0.013	
209	HUL1	FAI17	47.01	46.74	Cir 1	0.00	1.50	45.7	0.590	0.013	
210	A148	FAI18	47.96	47.42	Cir 1	0.00	1.50	35.0	1.544	0.013	
211	BRU1	FAI18	47.71	47.33	Cir 1	0.00	1.50	44.1	0.862	0.013	
213	A154	HUL1	47.18	47.06	Cir 1	0.00	1.50	32.2	3.718	0.013	
214	A155	HUL1	47.60	47.16	Cir 1	0.00	1.50	33.5	1.314	0.013	
215	A149	A148	49.78	47.91	Cir 1	0.00	1.50	30.1	6.223	0.013	
216	A156	BRU1	48.06	48.06	Cir 1	0.00	1.50	4.9	0.020	0.013	
217	A150	BRU1	48.46	47.81	Cir 1	0.00	1.50	35.1	1.910	0.013	
218	PER1	PER2	46.94	45.78	Cir 1	0.00	2.00	371.7	0.312	0.013	
219	REV1	REV2	49.35	47.69	Cir 1	0.00	1.50	33.4	4.979	0.013	
221	HIL10	DIC2	47.31	47.17	Cir 1	0.00	2.00	28.7	0.488	0.013	
78	FAI15	SHE9	41.00	40.98	Cir 1	0.00	4.50	23.2	0.086	0.013	
119	A3	A17	48.92	47.88	Cir 1	0.00	1.50	26.9	3.869	0.013	
120	A17	REV2	47.67	47.67	Cir 1	0.00	1.50	24.9	0.004	0.013	
7	REV2	MIM3	42.89	42.15	Cir 1	0.00	2.00	209.7	0.353	0.013	
6	MIM2	MIM3	42.72	41.85	Cir 1	0.00	1.50	254.3	0.342	0.013	
121	A18	MIM3	48.55	48.08	Cir 1	0.00	1.50	15.1	3.124	0.013	
122	A20	MIM3	48.63	48.08	Cir 1	0.00	1.50	42.8	0.888	0.013	
8	MIM3	A28	48.10	42.00	Cir 1	0.00	3.00	27.4	0.365	0.013	
9	A28	AVA4	42.00	41.71	Cir 1	0.00	3.00	273.3	0.106	0.013	
123	A16	MIM4	49.23	49.04	Cir 1	0.00	1.50	31.0	0.614	0.013	
124	A26	MIM4	49.14	49.14	Cir 1	0.00	1.50	4.3	0.002	0.013	
10	MIM4	ARG1	48.94	47.08	Cir 1	0.00	1.50	32.1	5.799	0.013	
125	A181	ARG1	48.98	46.88	Cir 1	0.00	1.

11	58.36	57.06	52.58	0.407	1.50	1.50	3.81	3.81	6.7	6.2	0.203
129×	57.07	57.06	51.53	0.050	0.34	1.50	8.02	3.73	2.4	21.7	0.000
12×	57.56	57.53	51.88	0.033	1.19	4.50	10.65	6.41	35.8	235.3	0.000
101×	48.64	47.99	51.93	0.229	0.41	1.07	8.78	2.78	3.1	13.2	0.000
1	47.99	47.74	52.00	0.087	0.90	1.30	2.82	1.91	3.1	4.7	0.045
102×	49.39	49.39	52.45	0.010	0.24	1.50	5.82	2.93	1.0	19.4	0.000
2	47.74	47.55	52.84	0.143	0.85	1.41	3.87	2.31	4.0	6.5	0.058
103×	49.16	48.49	52.31	0.042	0.30	0.70	8.64	2.67	2.2	25.1	0.000
104×	48.49	47.55	51.49	0.156	0.75	0.75	4.73	4.73	4.2	8.4	0.000
105×	49.11	47.55	52.03	0.235	0.48	0.48	7.24	7.24	3.1	10.1	0.000
131×	56.06	56.06	51.47	0.058	0.18	1.50	20.65	3.83	2.5	80.8	0.000
33×	55.39	54.84	51.13	0.210	0.98	2.00	6.82	5.54	10.4	21.7	0.476
220×	73.41	73.38	50.41	0.259	0.44	1.50	12.50	4.90	5.4	29.0	0.000
222×	73.65	73.65	51.63	0.012	0.52	2.00	3.82	3.54	2.4	16.9	0.000
223×	73.65	73.65	51.66	0.004	0.41	2.00	3.13	3.02	1.4	15.9	0.000
224×	51.39	51.39	51.41	0.013	0.80	3.00	5.03	4.48	7.6	48.7	0.000
225×	51.40	51.39	51.41	0.019	0.89	3.00	5.30	4.74	9.3	48.7	0.000
226	73.40	73.38	60.00	0.014	1.75	3.50	2.45	1.23	11.8	2.1	0.014
227	73.43	73.40	60.25	0.009	1.75	3.50	2.05	1.02	9.8	2.3	0.010
228×	73.40	73.40	50.60	0.050	0.13	1.50	32.35	3.73	2.4	158.0	0.000
229	73.65	73.43	52.85	0.188	1.44	2.00	4.07	3.13	9.8	11.4	0.107
230	73.74	73.65	52.67	0.071	1.41	2.00	2.54	1.92	6.0	7.1	0.040
231	73.74	73.74	51.75	0.011	1.22	2.00	1.17	0.75	2.3	3.4	0.000
232	73.80	73.74	52.00	0.027	1.01	2.00	2.36	1.20	3.8	7.4	0.000
233×	73.80	73.80	50.79	0.019	0.34	1.50	4.81	3.25	1.5	12.8	0.000
234×	73.65	73.65	51.21	0.003	0.27	2.00	5.12	2.96	1.3	33.3	0.000
235×	73.65	73.65	51.92	0.032	0.46	2.00	7.34	4.08	4.3	34.6	0.000
236×	49.54	49.53	52.13	0.029	0.61	2.00	4.82	4.03	3.9	19.5	0.000
239×	50.98	50.98	51.15	0.023	0.61	2.00	4.24	3.90	3.5	17.0	0.000
240×	50.20	50.20	52.16	0.005	0.35	2.00	4.12	0.08	1.5	22.7	0.005
237	51.50	51.45	51.48	0.001	0.36	2.00	2.19	0.27	0.8	11.9	0.000
238	51.50	51.45	51.58	0.032	0.90	2.00	2.95	1.29	4.0	9.7	0.000
241	48.64	48.54	52.08	0.021	0.67	2.00	3.56	1.05	3.3	13.6	0.000
242	47.19	47.05	56.30	0.151	1.74	3.00	6.13	3.68	26.0	41.0	0.151
244	49.70	49.60	51.78	0.001	0.38	2.00	2.01	0.26	0.8	10.7	0.000
246×	47.77	47.43	51.54	0.004	0.22	0.69	7.89	1.49	1.4	59.2	0.000
243	47.43	47.19	51.54	0.013	1.66	4.00	3.68	1.53	26.0	32.6	0.210
79	74.73	74.66	51.35	0.051	1.88	3.00	3.26	2.14	15.1	21.3	0.043
80	74.66	74.58	51.45	0.069	2.02	3.00	3.49	2.49	17.6	22.4	0.058
81	74.58	74.52	51.37	0.069	1.97	3.00	3.58	2.49	17.6	23.0	0.048
82	74.52	74.32	51.47	0.020	1.35	3.00	3.25	1.47	17.6	40.7	0.017
83	74.32	74.25	51.48	0.026	1.50	3.00	3.35	1.67	20.1	40.2	0.026
84	74.25	74.15	51.53	0.064	1.84	3.00	4.27	2.62	31.4	47.6	0.064
85	74.15	74.00	51.59	0.064	2.04	3.00	3.85	2.62	31.4	41.3	0.053
86	74.00	73.96	52.32	0.014	1.66	4.00	3.68	1.53	36.5	95.9	0.045
87	73.95	73.65	52.03	0.018	1.74	4.00	4.00	1.74	41.9	101.8	0.047
88	73.65	72.69	52.64	0.022	1.50	4.00	5.12	1.92	46.0	138.9	0.057
247	74.84	74.73	50.93	0.004	1.37	3.00	3.05	1.35	9.6	22.6	0.000
248×	74.73	74.73	50.70	0.004	0.24	1.58	2.90	2.81	1.7	20.7	0.000
250×	74.66	74.66	50.81	0.010	0.32	1.58	3.49	3.28	2.7	21.3	0.000
252×	74.33	74.32	50.84	0.018	0.56	2.00	4.20	3.77	3.1	17.7	0.000
254×	74.25	74.04	51.06	0.002	0.35	2.00	3.13	2.91	1.1	17.5	0.000
256×	73.95	73.95	51.47	0.002	0.34	2.00	2.90	2.77	1.0	16.3	0.000
257×	73.96	73.95	51.60	0.046	0.76	2.00	4.41	4.31	4.9	15.8	0.000
258	74.38	74.25	50.90	0.225	1.19	2.00	5.51	3.43	10.8	16.2	0.000
259	74.86	74.73	50.93	0.004	0.89	3.00	2.45	0.61	4.3	22.6	0.000
157×	50.43	49.53	52.32	0.421	0.59	1.00	4.83	2.96	2.3	3.6	0.000
260×	57.88	57.56	52.57	0.032	0.74	4.50	20.75	6.39	35.4	606.6	0.317
261	68.93	68.89	52.51	0.427	2.00	2.00	11.27	11.27	35.4	14.7	1.973
262	70.35	68.93	52.61	1.055	2.00	2.00	7.43	7.43	23.3	16.5	0.858
263×	69.09	68.93	52.71	0.026	0.46	1.50	3.69	3.50	1.7	8.3	0.133
264	69.17	68.94	52.50	0.041	0.60	1.50	3.23	1.20	2.1	6.4	0.016
265×	69.17	69.17	52.12	0.022	0.31	1.50	5.98	3.29	1.5	17.1	0.000
266×	69.17	69.17	51.88	0.003	0.21	1.50	4.02	2.10	0.6	14.4	0.000
267	68.94	68.93	52.16	0.133	1.50	1.50	2.18	2.18	3.8	1.5	0.000
268×	69.09	69.09	52.16	0.001	0.13	1.50	4.10	1.34	0.3	19.9	0.001
269×	69.09	69.09	52.03	0.018	0.28	1.50	6.19	3.11	1.4	18.6	0.000
270×	70.35	70.35	51.77	0.039	0.28	1.50	9.25	3.57	2.1	28.0	0.000
271×	70.39	70.35	52.19	0.203	0.49	1.50	9.58	4.70	4.8	21.0	0.000
272×	69.04	68.93	52.16	0.451	0.58	1.50	11.25	5.47	7.1	22.5	0.000
273	74.78	70.35	52.10	1.145	1.75	1.75	7.08	7.08	17.0	4.8	0.779
274×	74.86	74.78	51.55	0.495	0.93	1.50	6.43	5.59	7.4	10.5	0.000
275	74.91	74.78	51.54	0.349	1.50	1.50	3.52	3.52	6.2	4.4	0.000
276×	74.87	74.78	51.69	0.115	0.67	1.50	4.69	4.25	3.6	8.8	0.000
277×	74.90	74.87	51.78	0.051	0.46	1.50	5.15	3.74	2.4	11.6	0.000
278	51.46	51.39	51.50	0.014	1.37	3.50	3.41	1.24	11.9	36.9	0.000
279×	51.39	51.39	51.50	0.004	0.29	4.00	11.01	4.68	15.9	581.4	0.004
3×	47.55	43.84	52.39	0.477	0.90	1.75	8.85	4.57	11.0	21.2	0.325
4×	43.84	43.53	52.86	0.037	1.10	3.00	5.46	5.22	12.8	44.9	0.296
106×	50.20	50.20	52.44	0.024	0.65	2.00	3.94	3.92	3.5	15.3	0.000
108×	52.77	52.77	51.69	0.006	0.30	2.00	6.03	2.26	1.8	37.0	0.000
109	52.93	52.77	51.65	0.002	0.40	2.00	2.45	0.35	1.1	12.5	0.000
110×	51.65	51.65	51.89	0.010	0.36	2.00	5.98	3.49	2.3	32.7	0.000
111×	51.65	51.65	51.79	0.008	0.33	2.00	5.87	3.34	2.0	33.8	0.000
112×	51.54	51.54	51.86	0.007	0.39	2.00	4.38	3.26	1.9	22.8	0.000
113×	51.54	51.54	51.76	0.014	0.46	2.00	4.99	3.60	2.7	23.7	0.000
114×	65.31	65.30	51.35	0.043	0.36	1.50	6.68	3.66	2.2	17.3	0.000
115×	65.30	65.17	51.32	0.506	0.57	1.50	12.15	5.61	7.5	24.5	0.000
116×	65.20	65.17	51.27	0.091	0.36	1.50	9.95	4.01	3.2	26.0	0.000
5	65.17	59.80	51.77	1.014	1.50	1.50	6.01	6.01	10.6	8.1	0.505
117×	57.57	57.56	52.77	0.019	0.33	1.50	5.04	3.25	1.5	13.7	0.000
118×	57.56	57.56	52.73	0.022	0.30	1.50	6.12	3.29	1.5	17.6	0.000
13	57.53	57.14	52.21	0.040	2.37	4.50	4.61	2.47	39.3	72.3	0.095
126×	57.53	57.53	51.55	0.029	0.16	1.50	17.33	3.45	1.8	72.7	0.000
127×	57.53	57.53	51.87	0.038	0.17	1.50	18.23	3.47	2.0	74.0	0.000
128×	57.15	57.14	51.26	0.031	0.17	1.50	16.80	3.71	1.9	68.4	0.000
14	57.14	57.06	60.00	0.041	2.32	4.50	4.86	2.53	40.2	76.8	0.059
15	57.06	56.88	51.85	0.060	2.55	4.50	5.22	3.05	48.5	79.3	0.144
130×	56.89	56.88	51.49	0.008	0.29	2.00	7.27	3.37	2.1	45.2	0.000
280	51.00	50.95	53.02	0.008	0.61	2.00	2.53	0.66	2.1	10.2	0.000
281	50.10	50.02	51.68	0.002	0.38	2.00	2.31	0.30	1.0	12.3	0.000
282×	52.68	52.68	51.31	0.002	0.26	2.00	4.49	2.80	1.1	30.0	0.000
16	56.88	56.46	51.98	0.065	2.74	4.50	4.95	3.16	50.3	73.2	0.109
17	56.46	56.06	51.50	0.121	4.50	4.50	4.32	4.32	68.7	21.8	0.203
132×	55.82	55.81	50.88	0.067	0.20	1.50	19.24	3.92	2.7	70.8	0.000
18	56.06	55.81	60.00	0.126	4.50	4.50	4.41	4.41	70.2	20.2	0.181
19	55.81	55.60	60.00	0.134	4.50	4.50	4.55	4.55	72.3	21.4	0.193
133×	55.60	55.60	50.95	0.009	0.12	1.50	15.19	7.86	1.0	77.5	0.000
134×	55.27	55.26	51.97	0.012	0.19	1.50	9.03	3.02	1.2	34.7	0.000
135×	55.26	55.26	51.71	0.043	0.13	1.50	28.25	3.64	2.2	134.5	0.000
20	55.60	55.26	60.00	0.137	4.50	4.50	4.60	4.60	73.1	21.4	0.197
21	55.26	54.90	60.00	0.142	4.50	4.50	4.69	4.69	74.5	19.8	0.205
22×	54.90	54.84	51.41	0.144	1.93	4.50	11.49	8.14	74.8	196.9	0.000
23	54.84	54.35	51.79	0.187	4.50	4.50	5.37	5.37	85.4	13.1	0.448
136×	54.85	54.84	51.33	0.002	0.21	2.00	5.57	2.61	1.0	42.1	0.000
24×	54.35	53.27	51.35	0.198	2.51	4.50	9.61	8.64	87.8	146.9	0.696
25×	53.27	52.64	52.87	0.198	2.25	4.50	11.04	5.52	87.8	4.4	0.237
26	52.64	51.97	51.86	0.212	4.50	4.50	5.72	5.72	91.0	32.4	0.509
27	51.97	51.26	51.86	0.212	4.50	4.50	5.72	5.72	91.0	78.7	0.305
28	51.26	49.94	52.02	0.257	4.50	4.50	6.30	6.30	100.2	35.2	0.616
29	49.94	49.46	60.00	0.260	4.50	4.50	6.33	6.33	100.7	35.0	0.374
30	49.46	48.99	52.77	0.293	4.50	4.50	6.72	6.72	106.9	54.4	0.421
31	48.99	47.83	60.00	0.298	4.50	4.50	6.77	6.77	107.7	54.5	0.428
32×	47.83	47.05	52.07	0.298	1.46	4.50	24.20	9.38	107.7	478.1	0.683
137×	54.37	54.35	51.45	0.023	0.26	1.50	7.80	3.35	1.6	24.5	0.000
138×	52.64	52.64	51.65	0.004	0.27	2.00	5.63	3.03	1.4	37.0	0.000
283	74.28	74.00	52.43	0.003	0.66	3.00	2.39	0.52	6.3	41.5	0.002
284	74.31	74.28	52.41	0.003	0.67	3.00	2.35	0.52	6.3	40.5	0.002
285	74.71	74.31	52.47	0.003	0.66	3.00	2.39	0.52	6.3	41.3	0.002
286	75.03	74.71	52.79	0.003	0.66	3.00	2.39	0.52	6.3	41.4	0.002
287×	75.15	75.03	52.71	0.001	0.51	4.50	6.23	3.95	6.3	228.0	0.122
288×	75.39	75.15	53.22	0.001	0.57	4.50	5.41	3.95	6.3	186.2	0.243
289	76.60	75.39	53.44	0.354	1.50	1.50	3.55	3.55	6.3	3.4	0.137
290	76.75	76.60	52.68	0.119	1.04	1.50	2.77	2.06	3.6	4.4	0.059
291×	76.61	76.60	52.55	0.068	0.30	1.50	3.17	3.91	2.7	32.6	0.000
292×	76.76	76.75	51.83	0.029	0.31	1.50	6.76	3.48	1.8	19.1	0.000
293×	76.77	76.75	51.73	0.031	0.42	1.50	4.58	3.71	1.9	10.8	0.000

× Supercritical flow.

SUMMARY OF STORM DRAIN STRUCTURE QUANTITIES

NOTE:
The convey length from upstream to downstream inside box.
This length may also be used as Pay Item.
Using hydraulic length, from node center to node center, may result in profile error, and this length should not be used as Pay Item.

LINKS:

Type of Convey Structure	Material	Rise (ft)	Span (ft)	Number of Links of this type	Quantity (ft)
Circular	Concrete	4.0	0.0	10	862.95
Circular	Concrete	4.5	0.0	33	3456.51
Circular	Concrete	1.5	0.0	72	3899.79
Circular	Concrete	1.25	0.0	18	497.26
Circular	Concrete	3.5	0.0	6	784.36
Circular	Concrete	2.0	0.0	91	5592.18
Circular	Concrete	5.0	0.0	7	749.29
Circular	Concrete	1.75	0.0	4	1082.82
Circular	Concrete	6.0	0.0	4	801.99
Circular	Concrete	7.0	0.0	3	528.28
Circular	Concrete	3.0	0.0	13	842.19
Box	Concrete	3.0	4.0	8	1440.11
Box	Concrete	4.0	6.0	3	820.41
Box	Concrete	1.58	2.5	2	58.23
Circular	Concrete	1.0	0.0	1	214.57
Box	Concrete	4.0	5.0	1	36.0

NODES:

Type of Inlet Structure	Type of Grate	Inlet Grate Length (ft)	Grate Width (ft)	Grate Area (ft)	Grate Perimeter (ft)	Grate (ft)	Quantity (each)
Circular Manhole		0.0	0.0	0.0	0.0	0.0	115
Curb And Grate In Sag	Transverse	2.5	0.0	0.0	1.67	5.0	32
Curb In Sag		5.0	0.0	0.0	0.0	0.0	42
Curb In Sag		2.5	0.0	0.0	0.0	0.0	25
Curb And Grate In Sag	Transverse	5.0	0.0	0.0	3.34	7.5	30
Curb In Sag		10.0	0.0	0.0	0.0	0.0	8
Grate In Sag	Transverse	0.0	0.0	0.0	3.34	7.5	6
Conduit Junction		0.0	0.0	0.0	0.0	0.0	14
Junction Box		0.0	0.0	0.0	0.0	0.0	4
Grate In Sag	Transverse	0.0	0.0	0.0	1.67	5.0	1
Outlet		0.0	0.0	0.0	0.0	0.0	1

END

NORMAL TERMINATION OF HOUSTORM.

Warning Messages for current project:

Runoff Frequency of: 2 Years

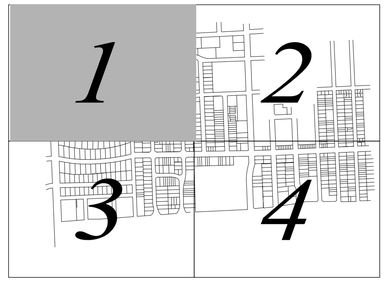
Discharge decreased downstream node Id= WEL1 Previous intensity used.
Discharge decreased downstream node Id= DEV1 Previous intensity used.
Discharge decreased downstream node Id= MIM2 Previous intensity used.
Discharge decreased downstream node Id= IND2 Previous intensity used.
Discharge decreased downstream node Id= WES3 Previous intensity used.
Discharge decreased downstream node Id= WES4 Previous intensity used.
Discharge decreased downstream node Id= WES7 Previous intensity used.
Discharge decreased downstream node Id= SHE15 Previous intensity used.
Discharge decreased downstream node Id= SHE14 Previous intensity used.
Discharge decreased downstream node Id= SHE13 Previous intensity used.
Discharge decreased downstream node Id= SHE12 Previous intensity used.
Discharge decreased downstream node Id= SHE11 Previous intensity used.
Discharge decreased downstream node Id= SHE10 Previous intensity used.
Discharge decreased downstream node Id= SHE9 Previous intensity used.
Discharge decreased downstream node Id= WEG5 Previous intensity used.
Discharge decreased downstream node Id= REBV2 Previous intensity used.
Discharge decreased downstream node Id= WES13 Previous intensity used.
Discharge decreased downstream node Id= WEG6 Previous intensity used.
Discharge decreased downstream node Id= KIR1 Previous intensity used.
Discharge decreased downstream node Id= WES12 Previous intensity used.
Decreasing conduit size @ downstream Run# 286
Discharge decreased downstream node Id= AS9 Previous intensity used.
Discharge decreased downstream node Id= AVA6 Previous intensity used.
Discharge decreased downstream node Id= AVA8 Previous intensity used.
Discharge decreased downstream node Id= AVA16 Previous intensity used.
Discharge decreased downstream node Id= AVA11 Previous intensity used.
Discharge decreased downstream node Id= WES11 Previous intensity used.
Discharge decreased downstream node Id= WES10 Previous intensity used.
Discharge decreased downstream node Id= WES9 Previous intensity used.
Discharge decreased downstream node Id= FAI6 Previous intensity used.
Discharge decreased downstream node Id= FAI8 Previous intensity used.
Discharge decreased downstream node Id= FAI9 Previous intensity used.
Discharge decreased downstream node Id= SHE8 Previous intensity used.
Discharge decreased downstream node Id= SHE7 Previous intensity used.
Computed right ponded width exceeds allowable width at inlet Id= A188
Computed left ponded width exceeds allowable width at inlet Id= A188
Computed right ponded width exceeds allowable width at inlet Id= A48
Computed left ponded width exceeds allowable width at inlet Id= A48
Computed right ponded width exceeds allowable width at inlet Id= A191
Computed left ponded width exceeds allowable width at inlet Id= A191
Run# 90 Insufficient capacity.
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 280
Run# 74 Insufficient capacity.
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 106
Run# 73 Insufficient capacity.
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 244
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 281
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 102
Run# 72 Insufficient capacity.
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 240
Run# 31 Insufficient capacity.
Run# 144 Insufficient capacity.
Run# 71 Insufficient capacity.
Run# 30 Insufficient capacity.
Run# 70 Insufficient capacity.
Run# 29 Insufficient capacity.
Run# 69 Insufficient capacity.
Run# 75 Insufficient capacity.
Run# 76 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI17 Run # 76
Run# 77 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI18 Run # 77
Upstream HGL exceeds critical elevation (Design) at node Id= A145 Run # 208
Upstream HGL exceeds critical elevation (Design) at node Id= A147 Run # 212
Run# 209 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= HUL1 Run # 209
Upstream HGL exceeds critical elevation (Design) at node Id= A148 Run # 210
Upstream HGL exceeds critical elevation (Design) at node Id= BRU1 Run # 211
Upstream HGL exceeds critical elevation (Design) at node Id= A154 Run # 213
Upstream HGL exceeds critical elevation (Design) at node Id= A155 Run # 214
Upstream HGL exceeds critical elevation (Design) at node Id= A149 Run # 215
Run# 215 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A156 Run # 216
Upstream HGL exceeds critical elevation (Design) at node Id= A159 Run # 217
Run# 78 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A146 Run # 237
Run# 28 Insufficient capacity.
Run# 58 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI14 Run # 58
Upstream HGL exceeds critical elevation (Design) at node Id= A100 Run # 176
Upstream HGL exceeds critical elevation (Design) at node Id= PER1 Run # 218
Upstream HGL exceeds critical elevation (Design) at node Id= A25 Run # 108
Upstream HGL exceeds critical elevation (Design) at node Id= A36 Run # 109
Run# 27 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= AVA8 Run # 27
Run# 57 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A99 Run # 175
Run# 26 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= AVA7 Run # 26
Upstream HGL exceeds critical elevation (Design) at node Id= A34 Run # 138
Run# 56 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI13 Run # 56
Run# 55 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A134 Run # 174
Upstream HGL exceeds critical elevation (Design) at node Id= A97 Run # 205
Upstream HGL exceeds critical elevation (Design) at node Id= A91 Run # 206
Upstream HGL exceeds critical elevation (Design) at node Id= A93 Run # 207
Upstream HGL exceeds critical elevation (Design) at node Id= A81 Run # 139
Upstream HGL exceeds critical elevation (Design) at node Id= A71 Run # 282
Run# 25 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= AVA6 Run # 25
Run# 54 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A92 Run # 172
Upstream HGL exceeds critical elevation (Design) at node Id= A133 Run # 173
Upstream HGL exceeds critical elevation (Design) at node Id= A69 Run # 24
Upstream HGL exceeds critical elevation (Design) at node Id= A33 Run # 137
Run# 53 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI12 Run # 53
Upstream HGL exceeds critical elevation (Design) at node Id= A90 Run # 171
Upstream HGL exceeds critical elevation (Design) at node Id= A84 Run # 203
Upstream HGL exceeds critical elevation (Design) at node Id= SHE14 Run # 64
Run# 23 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= AVA5 Run # 23
Upstream HGL exceeds critical elevation (Design) at node Id= A31 Run # 136
Run# 52 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A87 Run # 170
Upstream HGL exceeds critical elevation (Design) at node Id= SHE15 Run # 63
Upstream HGL exceeds critical elevation (Design) at node Id= WEG1 Run # 33
Upstream HGL exceeds critical elevation (Design) at node Id= A59 Run # 22
Run# 51 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI11 Run # 51
Upstream HGL exceeds critical elevation (Design) at node Id= A132 Run # 168
Upstream HGL exceeds critical elevation (Design) at node Id= A85 Run # 169
Upstream HGL exceeds critical elevation (Design) at node Id= A68 Run # 145
Upstream HGL exceeds critical elevation (Design) at node Id= A62 Run # 146
Upstream HGL exceeds critical elevation (Design) at node Id= WEG2 Run # 34
Upstream HGL exceeds critical elevation (Design) at node Id= DEV3 Run # 35
Run# 36 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= DEV2 Run # 36
Upstream HGL exceeds critical elevation (Design) at node Id= DEV1 Run # 37
Upstream HGL exceeds critical elevation (Design) at node Id= A64 Run # 147
Upstream HGL exceeds critical elevation (Design) at node Id= A70 Run # 148
Upstream HGL exceeds critical elevation (Design) at node Id= A74 Run # 149
Upstream HGL exceeds critical elevation (Design) at node Id= A72 Run # 150
Upstream HGL exceeds critical elevation (Design) at node Id= A73 Run # 151
Upstream HGL exceeds critical elevation (Design) at node Id= A83 Run # 152
Run# 21 Insufficient capacity.
Run# 50 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI10 Run # 50
Upstream HGL exceeds critical elevation (Design) at node Id= A86 Run # 166
Upstream HGL exceeds critical elevation (Design) at node Id= A131 Run # 167
Upstream HGL exceeds critical elevation (Design) at node Id= A60 Run # 135
Run# 20 Insufficient capacity.
Run# 49 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI9 Run # 49
Run# 19 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= A61 Run # 133
Upstream HGL exceeds critical elevation (Design) at node Id= A30 Run # 134
Run# 48 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI8 Run # 48
Upstream HGL exceeds critical elevation (Design) at node Id= A29 Run # 132
Run# 18 Insufficient capacity.
Run# 47 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI7 Run # 47
Upstream HGL exceeds critical elevation (Design) at node Id= A125 Run # 164
Upstream HGL exceeds critical elevation (Design) at node Id= A80 Run # 165
Upstream HGL exceeds critical elevation (Design) at node Id= A50 Run # 131
Run# 17 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= AVA4 Run # 17
Run# 46 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI6 Run # 46
Upstream HGL exceeds critical elevation (Design) at node Id= A28 Run # 9
Upstream HGL exceeds critical elevation (Design) at node Id= AVA3 Run # 16
Run# 45 Insufficient capacity.
Upstream HGL exceeds critical elevation (Design) at node Id= FAI5 Run # 45
Upstream HGL exceeds critical elevation (Design) at node Id= A78 Run # 162
Upstream HGL exceeds critical elevation (Design) at node Id= A123 Run # 163
Upstream HGL exceeds critical elevation (

0 50 100 200

N

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



OUTLET [CHILTON SYSTEM]

CHILTON

SAN FELIPE

KIRBY

ARGONNE

REVERE

SPANN

WELCH

BRAZORIA

MIMOSA

AVALON

DEVONSHIRE

SALISBURY

KINGSTON

DICKEY

WEST GAT

ELLA LEE

Property : 1019

Property : 1022

Property : 1229

Property : 1241

Property : 1150

Property : 1147

Property : 1092

Property : 1090

Property : 1151

Property : 1532

Property : 1330

Property : 1106

Property : 1093

Property : 1403

Property : 1413

Property : 1398

Property : 1311

MATCH LINE A–A (SEE SHEET 88)

MATCH LINE D–D (SEE SHEET 87)

LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- SHEET FLOW IN ROW
- XX / 0.0 — [SHEPHERD SYSTEM] LINK NAME (SHOWN AT UPSTREAM NODE) 2 YR ACCUMULATIVE FLOW [CFS]
- XX(0") / 0.0 — [CHILTON SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR ACCUMULATIVE FLOW [CFS]
- I.D. / 0.00 / 0.00 — DRAINAGE AREA NO. DRAINAGE AREA (AC) 2 YR RUNOFF (CFS)
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]

NOTE:

1. THE CITY'S RECORD OF DECISION FOR STORM WATER IMPROVEMENTS DATED FEBRUARY 27, 2017 AUTHORIZED THE DESIGN OF THE STORM SEWER SYSTEM AS RECOMMENDED IN THE BASE CASE SOLUTION OF THE HYDRAULIC REPORT FOR A 2-YEAR EVENT DESIGN/5-YEAR EVENT LEVEL OF SERVICE.

OTHON

OTHON, INC. TBPE NO. F-1471

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED DRAINAGE AREA MAP SHEET 1 OF 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **86** OF 391	

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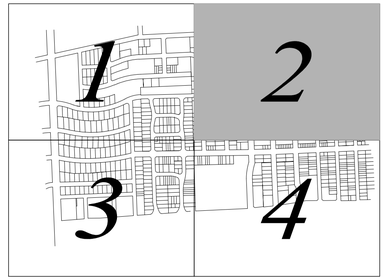
0 50 100 200

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- SHEET FLOW IN ROW
- XX(0") / 0.0 — [INDIANA SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR ACCUMULATIVE FLOW[CFS]
- XX / 0.0 — [SHEPHERD SYSTEM] LINK NAME [SHOWN AT UPSTREAM NODE] 2 YR ACCUMULATIVE FLOW [CFS]
- I.D. / 0.00 / 0.00 — DRAINAGE AREA NO. DRAINAGE AREA [AC] 2 YR RUNOFF [CFS]
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]

MATCH LINE D–D (SEE SHEET 86)

MATCH LINE B–B (SEE SHEET 89)

NOTE:
1. THE CITY'S RECORD OF DECISION FOR STORM WATER IMPROVEMENTS DATED FEBRUARY 27, 2017 AUTHORIZED THE DESIGN OF THE STORM SEWER SYSTEM AS RECOMMENDED IN THE BASE CASE SOLUTION OF THE HYDRAULIC REPORT FOR A 2–YEAR EVENT DESIGN/5–YEAR EVENT LEVEL OF SERVICE.

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STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — REGISTERED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED DRAINAGE AREA MAP SHEET 2 OF 4

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 100'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **87** OF 391	

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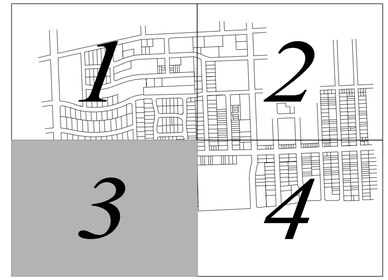
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- SHEET FLOW IN ROW
- [SHEPHERD SYSTEM] LINK NAME [SHOWN AT UPSTREAM NODE] / 2 YR ACCUMULATIVE FLOW [CFS] (XX / 0.0)
- DRAINAGE AREA NO. (I.D.) / DRAINAGE AREA [AC] (0.00) / 2 YR RUNOFF [CFS] (0.00)
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]

NOTE:
1. THE CITY'S RECORD OF DECISION FOR STORM WATER IMPROVEMENTS DATED FEBRUARY 27, 2017 AUTHORIZED THE DESIGN OF THE STORM SEWER SYSTEM AS RECOMMENDED IN THE BASE CASE SOLUTION OF THE HYDRAULIC REPORT FOR A 2–YEAR EVENT DESIGN/5–YEAR EVENT LEVEL OF SERVICE.

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED DRAINAGE AREA MAP
SHEET 3 OF 4

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **88** OF 391

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MATCH LINE B–B (SEE SHEET 87)

MATCH LINE C–C (SEE SHEET 88)

0 50 100 200

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



LEGEND

- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- SYSTEM OUTLET FLOW DIRECTION
- SHEET FLOW IN ROW
- [SHEPHERD SYSTEM] LINK NAME [SHOWN AT UPSTREAM NODE] 2 YR ACCUMULATIVE FLOW [CFS] (XX / 0.0)
- [FAIRVIEW SYSTEM] HOUSTORM RUN NO. (PIPE SIZE) 2 YR ACCUMULATIVE FLOW [CFS] (XX(0") / 0.0)
- DRAINAGE AREA NO. / DRAINAGE AREA [AC] / 2 YR RUNOFF [CFS] (I.D. / 0.00 / 0.00)
- DRAINAGE AREA [INDIANA SYSTEM]
- DRAINAGE AREA [FAIRVIEW SYSTEM]
- DRAINAGE AREA [CHILTON SYSTEM]

NOTE:
1. THE CITY'S RECORD OF DECISION FOR STORM WATER IMPROVEMENTS DATED FEBRUARY 27, 2017 AUTHORIZED THE DESIGN OF THE STORM SEWER SYSTEM AS RECOMMENDED IN THE BASE CASE SOLUTION OF THE HYDRAULIC REPORT FOR A 2–YEAR EVENT DESIGN/5–YEAR EVENT LEVEL OF SERVICE.

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TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — REGISTERED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PROPOSED DRAINAGE AREA MAP SHEET 4 OF 4

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1" = 100'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **89** OF 391

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HouStorm (City Of Houston STORM DRAIN DESIGN) Version 2.1, Update: Nov/01/2007
Run @ 4/25/2017 2:17:31 PM

PROJECT NAME : Untitled
JOB NUMBER :
PROJECT DESCRIPTION :
PROJECT File: P:\municipal\12104003\Documentation\Design\Calculations\Houstorm

DESIGN FREQUENCY : 2 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 2 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A211	0.65	2.51	26.76	26.76	3.29	0.000	5.368
A196	0.65	4.77	28.17	28.17	3.20	0.000	9.931
A171	0.65	1.76	26.05	26.05	3.34	0.000	3.817
A179	0.65	1.60	25.86	25.86	3.35	0.000	3.483
A180	0.65	0.35	23.31	23.31	3.53	0.000	0.802
A168	0.65	2.25	26.54	26.54	3.30	0.000	4.833
A177	0.65	1.32	25.50	25.50	3.37	0.000	2.894
A207	0.65	0.70	24.39	24.39	3.45	0.000	1.569
A166	0.65	2.16	26.45	26.45	3.31	0.000	4.647
A172	0.65	0.24	22.78	22.78	3.57	0.000	0.556
A173	0.65	1.88	26.18	26.18	3.33	0.000	4.066
A178	0.65	0.86	24.74	24.74	3.42	0.000	1.914
A150	0.65	1.41	25.62	25.62	3.36	0.000	3.084
A167	0.65	1.05	25.09	25.09	3.40	0.000	2.321
A174	0.65	0.69	24.37	24.37	3.45	0.000	1.548
A160	0.65	1.01	25.02	25.02	3.41	0.000	2.236

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim (ft)	Grate Area (sf)	Left-Slope Longi (%)	Left-Slope Transv (%)	Right-Slope Longi (%)	Right-Slope Transv (%)	n	Gutter DeprW (ft)	Gutter Head Allowed (ft)
A168	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A166	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A180	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A172	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A167	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A150	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A174	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A160	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A177	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A173	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A178	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A207	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A211	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A171	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A196	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A179	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Actual Head (ft)	Ponded Left (ft)	Width Right (ft)
A168	Curb	5.00	n/a	n/a	4.833	15.022	0.379	10.85	10.85
A166	Curb	5.00	n/a	n/a	4.647	15.022	0.370	10.70	10.70
A180	Curb	5.00	n/a	n/a	0.802	15.022	0.254	5.55	5.55
A172	Curb	5.00	n/a	n/a	0.556	15.022	0.252	4.85	4.85
A167	Curb	5.00	n/a	n/a	2.321	15.022	0.280	8.25	8.25
A150	Curb	5.00	n/a	n/a	3.084	15.022	0.303	9.20	9.20
A174	Curb	5.00	n/a	n/a	1.548	15.022	0.263	7.10	7.10
A160	Curb	5.00	n/a	n/a	2.236	15.022	0.278	8.15	8.15
A177	Curb	5.00	n/a	n/a	2.894	15.022	0.296	8.95	8.95
A173	Curb	5.00	n/a	n/a	4.066	15.022	0.342	10.20	10.20
A178	Combi	2.50	5.00	1.67	1.914	10.993	0.331	7.70	7.70
A207	Combi	2.50	5.00	1.67	1.569	10.993	0.305	7.10	7.10
A211	Curb	5.00	n/a	n/a	5.368	15.022	0.410	11.30	11.30
A171	Curb	5.00	n/a	n/a	3.817	15.022	0.331	9.95	9.95
A196	Curb	5.00	n/a	n/a	9.931	15.022	0.796	14.25	14.25
A179	Curb	5.00	n/a	n/a	3.483	15.022	0.317	9.60	9.60

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr.Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
A168	Curb	0.650	4.41	26.59	3.30		0.00	9.463
A166	Curb	0.650	2.16	26.45	3.31		0.00	4.647
A180	Curb	0.650	0.35	23.31	3.53		0.00	0.802
A172	Curb	0.650	0.24	22.78	3.57		0.00	0.556
A167	Curb	0.650	2.46	25.76	3.36		0.00	5.365
A150	Curb	0.650	1.41	25.62	3.36		0.00	3.084
A174	Curb	0.650	1.70	25.21	3.39		0.00	3.748
A160	Curb	0.650	1.01	25.02	3.41		0.00	2.236
A177	Curb	0.650	1.32	25.50	3.37		0.00	2.894
A173	Curb	0.650	1.88	26.18	3.33		0.00	4.066
A178	Combi	0.650	0.86	24.74	3.42		0.00	1.914
A207	Combi	0.650	0.70	24.39	3.45		0.00	1.569
FAI21	CrcMh	0.650	24.56	28.35	3.19		0.00	50.965
FAI20	CrcMh	0.650	13.92	26.79	3.29		0.00	29.754
FAI19	CrcMh	0.650	4.16	25.96	3.34		0.00	9.038
HAZ1	CrcMh	0.650	4.76	26.22	3.33		0.00	10.289
WESH2	CrcMh	0.650	1.56	25.03	3.40		0.00	3.452
WESH1	CrcMh	0.650	1.56	25.03	3.40		0.00	3.452
A211	Curb	0.650	4.27	26.76	3.29		0.00	9.132
A171	Curb	0.650	1.76	26.05	3.34		0.00	3.817
A196	Curb	0.650	6.37	28.17	3.20		0.00	13.262
A179	Curb	0.650	1.60	25.86	3.35		0.00	3.483
HAZ3	CrcMh	0.650	5.35	26.38	3.31		0.00	11.526
HAZ2	CrcMh	0.650	4.76	26.22	3.33		0.00	10.289
OUT	Outlt	0.650	24.56	28.35	3.19		0.00	50.965

Conveyance Configuration Data

Run #	Node US	Node I.D. DS	FlowLine Elev. US (ft)	FlowLine Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	FAI21	OUT	42.50	41.60	Cir 1	0.00	3.00	89.9	1.001	0.013
2	FAI20	FAI21	43.20	42.50	Cir 1	0.00	3.00	250.8	0.279	0.013
3	FAI19	FAI20	46.10	43.20	Cir 1	0.00	2.00	240.7	1.205	0.013
4	HAZ1	HAZ2	45.74	43.65	Cir 1	0.00	2.00	590.4	0.354	0.013
5	WESH1	HAZ1	46.48	45.72	Cir 1	0.00	2.00	26.2	2.906	0.013
6	WESH2	WESH1	47.35	47.13	Cir 1	0.00	1.50	21.8	1.008	0.013
7	A211	FAI21	46.20	46.10	Cir 1	0.00	2.00	47.5	0.210	0.013
8	A171	A211	46.25	46.20	Cir 1	0.00	2.00	26.0	0.192	0.013
9	A196	FAI21	46.19	46.10	Cir 1	0.00	2.00	44.8	0.201	0.013
10	A179	A196	46.24	46.19	Cir 1	0.00	2.00	26.0	0.192	0.013
11	A168	FAI20	44.49	44.40	Cir 1	0.00	2.00	43.9	0.205	0.013
12	A166	A168	44.54	44.49	Cir 1	0.00	2.00	26.0	0.192	0.013
13	A180	HAZ3	43.21	43.20	Cir 1	0.00	2.00	4.7	0.212	0.013
14	A172	HAZ3	43.23	43.20	Cir 1	0.00	2.00	14.7	0.204	0.013
15	A167	FAI19	46.73	46.65	Cir 1	0.00	2.00	38.7	0.207	0.013
16	A150	A167	46.81	46.73	Cir 1	0.00	2.00	27.5	0.291	0.013
17	A174	FAI19	46.74	46.65	Cir 1	0.00	2.00	43.4	0.207	0.013
18	A160	A174	46.80	46.74	Cir 1	0.00	2.00	30.1	0.199	0.013
19	A177	HAZ1	47.80	46.56	Cir 1	0.00	2.00	6.7	18.862	0.013
20	A173	HAZ1	47.89	45.84	Cir 1	0.00	2.00	24.5	8.400	0.013
21	A178	WESH2	46.62	46.62	Cir 1	0.00	1.50	9.0	0.011	0.013
22	A207	WESH2	47.54	47.54	Cir 1	0.00	1.50	34.2	0.003	0.013
23	HAZ2	HAZ3	43.59	43.53	Cir 1	0.00	2.00	33.4	0.179	0.013
24	HAZ3	FAI20	43.73	43.36	Cir 1	0.00	2.00	42.6	0.868	0.013

Conveyance Hydraulic Computations. Tailwater = 44.600 (ft)

Run #	Hyd. US (ft)	Gr. line DS (ft)	Crit. Elev US (ft)	Fr. Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1*	45.36	44.60	51.76	0.579	1.96	3.00	10.40	7.21	51.0	67.0	0.242
2	45.53	45.36	51.76	0.197	2.12	2.86	5.59	4.28	29.8	35.4	0.085
3*	47.20	45.53	51.53	0.158	0.83	2.00	7.28	2.88	9.0	24.9	0.026
4	47.10	45.88	51.14	0.205	1.31	2.00	4.72	3.27	10.3	13.5	0.050
5*	47.13	47.10	51.18	0.023	0.40	1.38	7.60	1.49	3.5	38.7	0.003
6*	47.99	47.13	50.78	0.107	0.59	0.59	5.34	5.34	3.5	10.6	0.004
7	48.14	48.10	51.15	0.162	1.46	2.00	3.72	2.91	9.1	10.4	0.013
8	48.18	48.14	51.15	0.028	0.86	1.94	2.95	1.23	3.8	10.0	0.000
9	48.28	48.10	51.29	0.341	2.00	2.00	4.22	4.22	13.3	10.2	0.028
10	48.32	48.28	51.29	0.023	0.82	2.00	2.88	1.11	3.5	10.0	0.000
11	45.95	45.53	50.80	0.173	1.52	1.52	3.70	3.70	9.5	10.3	0.021
12	45.98	45.95	50.80	0.042	0.96	1.46	3.11	1.89	4.6	10.0	0.000
13	45.81	45.80	51.40	0.001	0.38	2.00	1.97	0.26	0.8	10.5	0.000
14*	45.80	45.80	51.40	0.001	0.32	2.00	1.74	1.36	0.6	10.3	0.000
15	47.77	47.20	51.35	0.056	1.03	1.03	3.31	3.31	5.4	10.3	0.017
16	47.83	47.77	51.31	0.018	0.69	1.04	3.24	1.86	3.1	12.3	0.000
17	47.59	47.20	51.45	0.027	0.83	0.83	3.02	3.02	3.7	10.3	0.014
18	47.62	47.59	51.20	0.010	0.64	0.85	2.59	1.76	2.2	10.1	0.000
19*	48.04	47.10	50.39	0.016	0.24	0.54	13.92	4.24	2.9	98.7	0.000
20*	48.60	47.10	50.40	0.032	0.34	1.26	11.59	1.95	4.1	65.8	0.000
21	47.99	47.99	50.32	0.033	1.50	1.50	1.08	1.08	1.9	1.1	0.000
22	48.18	47.99	50.42	0.022	1.50	1.50	0.89	0.89	1.6	0.6	0.000
23	45.88	45.80	51.74	0.205	1.88	2.00	3.36	3.27	10.3	9.6	0.017
24*	45.80	45.53	51.72	0.257	1.05	2.00	6.86	5.75	11.5	21.2	0.154

* Supercritical flow.

SUMMARY OF STORM DRAIN STRUCTURE QUANTITIES

NOTE:
The convey length should be from upstream to downstream inside box.
This length may also be used as Pay Item.
Using hydraulic length, from node center to node center, may result in profile error,
and this length should not be used as Pay Item.

LINKS:

Type of Convey Structure	Material	Rise (ft)	Span (ft)	Number of Links of this type	Quantity (ft)
Circular	Concrete	3.0	0.0	2	340.72
Circular	Concrete	2.0	0.0	19	1337.82
Circular	Concrete	1.5	0.0	3	65.01

NODES:

Type of Inlet Structure	Type of Grate	Inlet Length (ft)	Grate Width (ft)	Grate Length (ft)	Grate Area (ft)	Grate Perimeter (ft)	Quantity (each)
Curb In Sag		5.0	0.0	0.0	0.0	0.0	14
Curb And Grate In Sag	Transverse	2.5	0.0	0.0	1.67	5.0	2
Circular Manhole		0.0	0.0	0.0	0.0	0.0	8
Outlet		0.0	0.0	0.0	0.0	0.0	1

END

NORMAL TERMINATION OF HOUSTORM.

Warning Messages for current project:

Runoff Frequency of: 2 Years
Discharge decreased downstream node Id= WESH1 Previous intensity used.
Discharge decreased downstream node Id= HAZ2 Previous intensity used.
Computed right ponded width exceeds allowable width at inlet Id= A196
Computed left ponded width exceeds allowable width at inlet Id= A196
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 7
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 9
Run# 9 Insufficient capacity.
Run# 23 Insufficient capacity.
Run# 21 Insufficient capacity.
Run# 22 Insufficient capacity.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 REGISTERED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED DRAINAGE CALCULATIONS
FAIRVIEW SYSTEM 2-YR

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 90 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\90-94_PROP-CAL-2YR.dwgFAIRVIEW 2YR May 22, 2026 - 10:15AM Jgarza

HouStorm (City Of Houston STORM DRAIN DESIGN) Version 2.1, Update: Nov/01/2007
Run @ 4/25/2017 2:23:29 PM

PROJECT NAME : NSSI_INDIANA St
JOB NUMBER :
PROJECT DESCRIPTION :
PROJECT File: P:\municipal\12104003\Documentation\Design\Calculations\Houstorm

DESIGN FREQUENCY : 2 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 2 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A162	0.65	1.30	25.47	25.47	3.37	0.000	2.852
A163	0.65	0.67	24.32	24.32	3.45	0.000	1.504
A164	0.65	0.18	22.39	22.39	3.60	0.000	0.421
A169	0.65	0.20	22.53	22.53	3.59	0.000	0.466
A209	0.65	0.61	24.17	24.17	3.46	0.000	1.374
A210	0.65	0.86	24.74	24.74	3.42	0.000	1.914
A170	0.65	0.42	23.58	23.58	3.51	0.000	0.958
A208	0.65	0.67	23.58	23.58	3.51	0.000	1.528
A212	0.65	1.17	25.28	25.28	3.39	0.000	2.576

Sag Inlets Configuration Data.

Inlet ID	Inlet Type	Length/ Perim (ft)	Grate Area (sf)	Left-Slope Longi (%)	Left-Slope Transv (%)	Right-Slope Longi (%)	Right-Slope Transv (%)	n	Gutter DeprW (ft)	Head Allowed (ft)
A210	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A163	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A212	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A170	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A209	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A169	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A162	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A164	Combi	2.50	1.67	0.50	2.00	0.50	2.00	0.014	1.50	1.50

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim (ft)	Grate Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Actual Head (ft)	Ponded Left (ft)	Width Right (ft)
A210	Combi	2.50	5.00	1.67	1.914	10.993	0.331	7.70	7.70
A163	Combi	2.50	5.00	1.67	1.504	10.993	0.300	7.00	7.00
A212	Combi	2.50	5.00	1.67	2.576	10.993	0.397	8.60	8.60
A170	Combi	2.50	5.00	1.67	0.958	10.993	0.270	5.90	5.90
A209	Combi	2.50	5.00	1.67	1.374	10.993	0.292	6.80	6.80
A169	Combi	2.50	5.00	1.67	0.466	10.993	0.255	4.50	4.50
A162	Combi	2.50	5.00	1.67	2.852	10.993	0.430	8.90	8.90
A164	Combi	2.50	5.00	1.67	0.421	10.993	0.254	4.35	4.35

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr.Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q cfs)	Additional Q in Node (cfs)	Total Disch. (cfs)
IND4	CrcMh	0.650	5.41	26.88	3.28		0.00	11.543
A210	Combi	0.650	0.86	24.74	3.42		0.00	1.914
A163	Combi	0.650	0.67	24.32	3.45		0.00	1.504
A212	Combi	0.650	1.17	25.28	3.39		0.00	2.576
A170	Combi	0.650	0.42	23.58	3.51		0.00	0.958
IND3	CrcMh	0.650	2.29	25.88	3.35		0.00	4.983
IND2	CrcMh	0.650	1.48	25.51	3.37		0.00	3.244
A209	Combi	0.650	0.61	24.17	3.46		0.00	1.374
A169	Combi	0.650	0.20	22.53	3.59		0.00	0.466
A162	Combi	0.650	1.30	25.47	3.37		0.00	2.852
A164	Combi	0.650	0.18	22.39	3.60		0.00	0.421
OUT	Outlt	0.650	5.41	26.88	3.28		0.00	11.543

Conveyance Configuration Data

Run #	Node I.D. US	Node I.D. DS	FlowLine Elev. US (ft)	FlowLine Elev. DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	IND4	OUT	44.25	44.15	Cir 1	0.00	2.00	50.0	0.200	0.013
2	IND3	IND4	45.20	44.55	Cir 1	0.00	2.00	222.8	0.292	0.013
3	IND2	IND3	45.33	45.20	Cir 1	0.00	2.00	63.2	0.206	0.013
4	A210	IND4	48.85	44.85	Cir 1	0.00	2.00	41.4	9.712	0.013
5	A163	IND4	48.34	44.85	Cir 1	0.00	2.00	48.1	7.269	0.013
6	A170	IND4	48.37	44.65	Cir 1	0.00	2.00	33.5	11.170	0.013
7	A212	IND4	47.74	45.59	Cir 1	0.00	2.00	22.5	9.608	0.013
8	A209	IND3	49.05	48.38	Cir 1	0.00	2.00	24.0	2.799	0.013
9	A169	IND3	48.49	47.77	Cir 1	0.00	2.00	8.3	8.676	0.013
10	A162	IND2	48.51	46.77	Cir 1	0.00	2.00	24.5	7.135	0.013
11	A164	IND2	48.77	47.77	Cir 1	0.00	2.00	8.7	11.557	0.013

Conveyance Hydraulic Computations. Tailwater = 46.150 (ft)

Run #	Hyd. US (ft)	Gr. line DS (ft)	Crit.Elev US (ft)	Fr. Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1	46.34	46.15	52.75	0.258	2.00	2.00	3.67	3.67	11.5	10.2	0.063
2	46.90	46.34	52.11	0.048	0.89	1.79	3.69	1.68	5.0	12.3	0.013
3	47.03	46.90	51.98	0.020	0.77	1.70	2.89	1.14	3.2	10.3	0.006
4*	49.33	46.34	51.79	0.007	0.23	1.49	9.74	0.76	1.9	70.8	0.000
5*	48.76	46.34	51.79	0.004	0.22	1.49	8.19	0.60	1.5	61.3	0.000
6*	48.71	46.34	51.77	0.002	0.16	1.69	8.30	0.34	1.0	75.9	0.000
7*	48.30	46.34	51.79	0.013	0.26	0.75	10.61	2.39	2.6	70.4	0.000
8*	50.38	50.38	51.65	0.004	0.26	2.00	5.71	3.18	1.4	38.0	0.000
9*	49.77	49.77	51.74	0.000	0.12	2.00	6.11	2.38	0.5	66.9	0.000
10*	48.81	47.03	51.61	0.016	0.30	0.30	9.85	9.85	2.9	60.7	0.000
11*	49.77	49.77	51.75	0.000	0.11	2.00	6.55	2.04	0.4	77.2	0.000

* Supercritical flow.

SUMMARY OF STORM DRAIN STRUCTURE QUANTITIES

NOTE:
The convey length should be from upstream to downstream inside box.
This length may also be used as Pay Item.
Using hydraulic length, from node center to node center, may result in profile error,
and this length should not be used as Pay Item.

LINKS:

Type of Convey Structure	Material	Rise (ft)	Span (ft)	Number of Links of this type	Quantity (ft)
Circular	Concrete	2.0	0.0	11	546.94

NODES:

Type of Inlet Structure	Type of Grate	Inlet Length (ft)	Grate Width (ft)	Grate Length (ft)	Grate Area (ft)	Grate Perimeter (ft)	Quantity (each)
Circular Manhole		0.0	0.0	0.0	0.0	0.0	3
Curb And Grate In Sag	Transverse	2.5	0.0	0.0	1.67	5.0	8
Outlet		0.0	0.0	0.0	0.0	0.0	1
END							

NORMAL TERMINATION OF HOUSTORM.

Warning Messages for current project:

Runoff Frequency of: 2 Years
Run# 1 Insufficient capacity.
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 8
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 9
HGL elevation below invert. Downstream HGL set to soffit elevation at Run# 11

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PROPOSED DRAINAGE CALCULATIONS
INDIANA SYSTEM 2-YR

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **91** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\90-94_PROP-CAL-2YR.dwgINDIANA 2YR May 22, 2026 - 10:15AM Jgarza

HouStorm (City Of Houston STORM DRAIN DESIGN) Version 2.1, Update: Nov/01/2007
Run @ 2/24/2020 4:41:06 PM

PROJECT NAME : NSSI
JOB NUMBER :
PROJECT DESCRIPTION :
PROJECT File: P:\municipal\12104003\Documentation\Design\Calculations\Houstorm

DESIGN FREQUENCY : 2 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR DESIGN FREQUENCY of: 2 Years

Runoff Computation for Design Frequency.

ID (acre)	C Value	Area (min)	Tc (min)	Tc Used (in/hr)	Intensity (cfs)	Supply Q (cfs)	Total Q
A142	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A143	0.65	1.51	25.75	25.75	3.36	0.000	3.294
A144	0.65	4.23	27.89	27.89	3.22	0.000	8.853
A19	0.65	0.56	24.03	24.03	3.47	0.000	1.265
A20	0.65	0.78	24.57	24.57	3.44	0.000	1.742
A21	0.65	0.27	22.95	22.95	3.55	0.000	0.624
A22	0.65	1.49	25.73	25.73	3.36	0.000	3.252
A23	0.65	1.18	25.30	25.30	3.39	0.000	2.597
A24	0.65	0.33	23.24	23.24	3.53	0.000	0.758
A25	0.65	0.79	24.59	24.59	3.44	0.000	1.764
A26	0.65	0.98	24.96	24.96	3.41	0.000	2.172
A27	0.65	0.93	24.87	24.87	3.42	0.000	2.065
A38	0.65	1.27	25.43	25.43	3.38	0.000	2.788
A39	0.65	0.91	24.84	24.84	3.42	0.000	2.022
A125	0.65	0.86	24.74	24.74	3.42	0.000	1.914
A126	0.65	0.54	23.97	23.97	3.48	0.000	1.221
A136	0.65	2.60	26.84	26.84	3.29	0.000	5.552
A137	0.65	0.77	24.55	24.55	3.44	0.000	1.721
A138	0.65	1.23	25.37	25.37	3.38	0.000	2.703
A140	0.65	8.29	29.51	29.51	3.12	0.000	16.838
A141	0.65	12.41	30.58	30.58	3.07	0.000	24.726
A40	0.65	0.90	24.82	24.82	3.42	0.000	2.000
A42	0.65	0.80	24.61	24.61	3.43	0.000	1.786
A43	0.65	0.42	23.58	23.58	3.51	0.000	0.958
A44	0.65	1.61	25.87	25.87	3.35	0.000	3.504
A45	0.65	0.81	24.64	24.64	3.43	0.000	1.807
A55	0.65	2.26	26.54	26.54	3.30	0.000	4.854
A56	0.65	2.36	26.63	26.63	3.30	0.000	5.060
A57	0.65	0.81	24.64	24.64	3.43	0.000	1.807
A58	0.65	1.53	25.78	25.78	3.35	0.000	3.336
A61	0.65	0.62	24.19	24.19	3.46	0.000	1.396
A62	0.65	0.64	24.22	24.22	3.46	0.000	1.417
A63	0.65	0.84	24.70	24.70	3.43	0.000	1.871
A73	0.65	0.77	24.55	24.55	3.44	0.000	1.721
A74	0.65	0.46	23.72	23.72	3.50	0.000	1.046
A75	0.65	0.14	22.07	22.07	3.62	0.000	0.330
A76	0.65	0.75	24.51	24.51	3.44	0.000	1.677
A78	0.65	0.99	24.98	24.98	3.41	0.000	2.193
A79	0.65	0.71	24.41	24.41	3.45	0.000	1.591
A80	0.65	0.72	24.44	24.44	3.45	0.000	1.613
A81	0.65	0.77	24.55	24.55	3.44	0.000	1.721
A91	0.65	0.97	24.95	24.95	3.41	0.000	2.150
A92	0.65	0.31	23.14	23.14	3.54	0.000	0.713
A93	0.65	0.30	23.09	23.09	3.54	0.000	0.691
A94	0.65	0.51	23.88	23.88	3.49	0.000	1.155
A95	0.65	0.65	24.37	24.37	3.45	0.000	1.548
A96	0.65	1.05	25.09	25.09	3.40	0.000	2.321
A97	0.65	1.13	25.22	25.22	3.39	0.000	2.491
A98	0.65	1.57	25.83	25.83	3.35	0.000	3.419
A99	0.65	0.28	22.99	22.99	3.55	0.000	0.646
A109	0.65	0.89	24.80	24.80	3.42	0.000	1.979
A110	0.65	0.68	24.34	24.34	3.45	0.000	1.526
A111	0.65	1.18	25.30	25.30	3.39	0.000	2.597
A112	0.65	1.12	25.20	25.20	3.39	0.000	2.470
A113	0.65	0.93	24.87	24.87	3.42	0.000	2.065
A114	0.65	1.33	25.52	25.52	3.37	0.000	2.915
A115	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A116	0.65	1.32	25.50	25.50	3.37	0.000	2.894
A117	0.65	0.87	24.76	24.76	3.42	0.000	1.936
A127	0.65	0.72	24.44	24.44	3.45	0.000	1.613
A33	0.65	0.72	24.44	24.44	3.45	0.000	1.613
A34	0.65	1.00	25.00	25.00	3.41	0.000	2.214
A35	0.65	1.04	25.07	25.07	3.40	0.000	2.300
A36	0.65	0.65	24.27	24.27	3.46	0.000	1.461
A46	0.65	1.26	25.42	25.42	3.38	0.000	2.767
A47	0.65	0.65	0.26	22.89	22.89	3.56	0.000	0.601
A48	0.65	2.57	26.81	26.81	3.29	0.000	5.491
A49	0.65	1.15	25.25	25.25	3.39	0.000	2.534
A50	0.65	1.22	25.36	25.36	3.38	0.000	2.682
A51	0.65	1.09	25.15	25.15	3.40	0.000	2.406
A52	0.65	1.06	25.11	25.11	3.40	0.000	2.342
A53	0.65	0.63	24.22	24.22	3.46	0.000	1.417
A54	0.65	0.55	24.00	24.00	3.48	0.000	1.243
A64	0.65	1.06	25.10	25.10	3.40	0.000	2.342
A65	0.65	0.80	24.61	24.61	3.43	0.000	1.786
A66	0.65	0.65	24.27	24.27	3.46	0.000	1.461
A67	0.65	0.80	24.61	24.61	3.43	0.000	1.786
A68	0.65	0.66	24.29	24.29	3.46	0.000	1.483
A7	0.65	1.18	25.30	25.30	3.39	0.000	2.597
A8	0.65	0.71	24.41	24.41	3.45	0.000	1.591
A9	0.65	0.63	24.22	24.22	3.46	0.000	1.417
A10	0.65	0.83	24.68	24.68	3.43	0.000	1.850
A11	0.65	1.42	25.64	25.64	3.36	0.000	3.104
A13	0.65	1.44	25.66	25.66	3.36	0.000	3.147
A69	0.65	0.59	24.11	24.11	3.47	0.000	1.330
A70	0.65	0.38	23.43	23.43	3.52	0.000	0.869
A71	0.65	0.60	24.14	24.14	3.47	0.000	1.352
A72	0.65	0.61	24.17	24.17	3.46	0.000	1.374
A82	0.65	0.95	24.91	24.91	3.41	0.000	2.107
A83	0.65	1.36	25.56	25.56	3.37	0.000	2.978
A84	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A85	0.65	0.58	24.09	24.09	3.47	0.000	1.308
A86	0.65	0.60	24.14	24.14	3.47	0.000	1.352
A87	0.65	0.11	21.78	21.78	3.65	0.000	0.261
A88	0.65	1.22	25.36	25.36	3.38	0.000	2.682
A89	0.65	1.79	26.08	26.08	3.33	0.000	3.879
A90	0.65	0.88	24.78	24.78	3.42	0.000	1.957
A100	0.65	0.40	23.49	23.49	3.51	0.000	0.914
A101	0.65	1.08	25.14	25.14	3.40	0.000	2.385
A102	0.65	0.52	23.91	23.91	3.48	0.000	1.177
A103	0.65	1.82	26.11	26.11	3.33	0.000	3.942
A104	0.65	2.10	26.40	26.40	3.31	0.000	4.523
A105	0.65	1.06	25.10	25.10	3.40	0.000	2.342
A106	0.65	0.55	24.00	24.00	3.48	0.000	1.243
A107	0.65	0.70	24.39	24.39	3.45	0.000	1.569
A207	0.65	0.70	24.39	24.39	3.45	0.000	1.569
A226	0.65	0.34	23.27	23.27	3.53	0.000	0.780
A230	0.65	1.19	25.31	25.31	3.39	0.000	2.619
A229	0.65	1.24	25.38	25.38	3.38	0.000	2.725
A228	0.65	0.68	24.35	24.35	3.45	0.000	1.526
A227	0.65	0.66	24.30	24.30	3.46	0.000	1.482
A197	0.65	0.43	23.62	23.62	3.50	0.000	0.980
A198	0.65	0.72	24.44	24.44	3.45	0.000	1.613
A200	0.65	2.72	26.93	26.93	3.28	0.000	5.798
A249	0.65	0.73	24.46	24.46	3.44	0.000	1.634
A250	0.65	0.50	23.85	23.85	3.49	0.000	1.134
A251	0.65	0.44	23.65	23.65	3.50	0.000	1.002
A252	0.65	0.76	24.53	24.53	3.44	0.000	1.699
A254	0.65	1.00	25.00	25.00	3.41	0.000	2.214
A255	0.65	0.77	24.55	24.55	3.44	0.000	1.721
A1	0.65	0.93	24.87	24.87	3.42	0.000	2.065
A2	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A3	0.65	0.64	24.24	24.24	3.46	0.000	1.439
A4	0.65	0.65	24.27	24.27	3.46	0.000	1.461
A5	0.65	0.54	23.97	23.97	3.48	0.000	1.221
A6	0.65	1.36	25.56	25.56	3.37	0.000	2.978
A108	0.65	0.35	23.31	23.31	3.53	0.000	0.802
A118	0.65	0.73	24.46	24.46	3.44	0.000	1.634
A119	0.65	0.78	24.57	24.57	3.44	0.000	1.742
A120	0.65	1.11	25.19	25.19	3.39	0.000	2.449
A121	0.65	0.46	23.72	23.72	3.50	0.000	1.046
A122	0.65	1.16	25.26	25.26	3.39	0.000	2.555
A123	0.65	0.55	24.00	24.00	3.48	0.000	1.243
A124	0.65	0.62	24.19	24.19	3.46	0.000	1.396
A159	Curb	5.00	0.00	0.34	2.00	2.39	2.00	0.014	1.50	1.50
A145	Curb	5.00	0.00	1.45	2.00	0.30	2.00	0.014	1.50	1.50
A147	Curb	5.00	0.00	1.02	2.00	0.30	2.00	0.014	1.50	1.50
A154	Curb	5.00	0.00	0.30	2.00	1.11	2.00	0.014	1.50	1.50
A128	Curb	5.00	0.00	0.59	2.00	2.33	2.00	0.014	1.50	1.50
A95	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A199	Curb	10.00	0.00	0.30	2.00	2.00	2.00	0.014	1.50	1.50
A124	Curb	5.00	0.00	1.80	2.00	0.40	2.00	0.014	1.50	1.50
A127	Curb	5.00	0.00	1.00	2.00	0.30	2.00	0.014	1.50	1.50
A119	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A78	Curb	5.00	0.00	0.30	2.00	0.34	2.00	0.014	1.50	1.50
A67	Curb	5.00	0.00	0.45	2.00	1.43	2.00	0.014	1.50	1.50
A155	Curb	5.00	0.00	0.30	2.00	1.79	2.00	0.014	1.50	1.50
A142	Combi	5.00	3.34	0.50	2.00	1.00	2.00	0.014	1.50	1.50
A72	Curb	5.00	0.00	0.49	2.00	1.03	2.00	0.014	1.50	1.50
A83	Curb	5.00	0.00	0.33	2.00	0.50	2.00	0.014	1.50	1.50
A76	Curb	5.00	0.00	0.42	2.00	2.39	2.00	0.014	1.50	1.50
A79	Curb	5.00	0.00	0.42	2.00	0.40	2.00	0.014	1.50	1.50
A65	Curb	5.00	0.00	0.52	2.00	0.52	2.00	0.014	1.50	1.50
A45	Curb	5.00	0.00	1.54	2.00	0.30	2.00	0.014	1.50	1.50
A183	Curb	5.00	0.00	1.12	2.00	0.30	2.00	0.014	1.50	1.50
A11	Curb	5.00	0.00	0.35	2.00	0.45	2.00	0.014	1.50	1.50
A80	Curb	5.00	0.00	0.63	2.00	1.48	2.00	0.014	1.50	1.50
A86	Curb	5.00	0.00	0.35	2.00	0.32	2.00	0.014	1.50	1.50
A131	Curb	5.00	0.00	1.39	2.00	0.32	2.00	0.014	1.50	1.50
A125	Curb	5.00	0.00	0.60	2.00	1.17	2.00	0.014	1.50	1.50
A138	Curb	5.00	0.00	0.59	2.00	1.32	2.00	0.014	1.50	1.50
A126	Curb	5.00	0.00	0.59	2.00	1.32	2.00	0.014	1.50	1.50
A123	Curb	5.00	0.00	1.05	2.00	0.30	2.00	0.014	1.50	1.50
A118	Curb	5.00	0.00	0.45	2.00	1.48	2.00	0.014	1.50	1.50
A54	Curb	5.00	0.00	0.35	2.00	0.30	2.00	0.014	1.50	1.50
A55	Curb	5.00	0.00	0.30	2.00	0.30	2.00	0.014	1.50	1.50
A58	Curb	5.00	0.00	0.30	2.00	0.31	2.00	0.014	1.50	1.50
A66	Curb	5.00	0.00	1.06	2.00	0.54	2.00	0.014	1.50	1.50
A112	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A113	Curb	5.00	0.00	1.42	2.00	0.35	2.00	0.014	1.50	1.50
A114	Curb	5.00	0.00	0.32	2.00	0.32	2.00	0.014	1.50	1.50
A115	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A116	Curb	5.00	0.00	1.00	2.00	1.00	2.00	0.014	1.50	1.50
A117	Curb	5.00	0.00	1.83	2.00	0.54	2.00	0.014	1.50	1.50
A120	Curb	5.00	0.00	0.64	2.00	1.40	2.00	0.014	1.50	1.50
A121	Curb	5.00	0.00	1.00	2.00	1.00	2.00	0.014	1.50	1.50
A191	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A192	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A101	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A102	Curb	2.50	0.00	0.50	2.00	0.30	2.00	0.014	1.50	1.50
A103	Curb	5.00	0.00	0.30	2.00	0.62	2.00	0.014	1.50	1.50
A104	Curb	5.00	0.00	0.30	2.00	0.30	2.00	0.014	1.50	1.50
A105	Curb	5.00	0.00	0.30	2.00	1.76	2.00	0.014	1.50	1.50
A106	Curb	5.00	0.00	1.23	2.00	0.30	2.00	0.014	1.50	1.50
A107	Curb	5.00	0.00	0.30	2.00	0.62	2.00	0.014	1.50	1.50
A109	Curb	5.00	0.00	0.31	2.00	0.50	2.00	0.014	1.50	1.50
A110	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A111	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A96	Grate	7.50	3.34	0.50	2.00	0.50	2.00	n/a	1.50	1.50
A100	Curb	5.00	0.00	0.32	2.00	0.46	2.00	0.014	1.50	1.50
A181	Curb	5.00	0.00	0.30	2.00	3.20	2.00	0.014	1.50	1.50
A184	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A132	Grate	7.50	3.34	0.50	2.00	0.50	2.00	n/a	1.50	1.50
A87	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A90	Curb	10.00	0.00	0.50	2.00	1.00	2.00	0.014	1.50	1.50
A92	Curb	5.00	0.00	0.40	2.00	0.54	2.00	0.014	1.50	1.50
A99	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A136	Curb	5.00	0.00	0.32	2.00	0.60	2.00	0.014	1.50	1.50
A97	Curb	10.00	0.00	2.08	2.00	0.66	2.00	0.014	1.50	1.50
A91	Curb	10.00	0.00	1.02	2.00	0.66	2.00	0.014	1.50	1.50
A98	Grate	7.50	3.34	0.50	2.00	0.50	2.00	n/a	1.50	1.50
A146	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A143	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A151	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A134	Curb	5.00	0.00	0.30	2.00	0.30	2.00	0.014	1.50	1.50
A230	Curb	5.00	0.00	0.30	2.00	0.52	2.00	0.014	1.50	1.50
A229	Curb	5.00	0.00	0.30	2.00	0.52	2.00	0.014	1.50	1.50
A228	Curb	5.00	0.00	0.30	2.00	0.32	2.00	0.014	1.50	1.50
A227	Curb	5.00	0.00	0.30	2.00	0.32	2.00	0.014	1.50	1.50
A249	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A250	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A251	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A252	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A52	Curb	5.00	0.00	1.18	2.00	0.50	2.00	0.014	1.50	1.50
A48	Curb	5.00	0.00	0.32	2.00	0.38	2.00	0.014	1.50	1.50
A56	Curb	5.00	0.00	0.32	2.00	0.38	2.00	0.014	1.50	1.50
A51	Curb	5.00	0.00	0.50	2.00	0.47	2.00	0.014	1.50	1.50
A57	Curb	5.00	0.00	0.50	2.00	1.79	2.00	0.014	1.50	1.50
A63	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A64	Curb	5.00	0.00	0.44	2.00	0.30	2.00	0.014	1.50	1.50
A74	Curb	5.00	0.00	1.38	2.00	0.48	2.00	0.014	1.50	1.50
A70	Curb	5.00	0.00	1.30	2.00	0.48	2.00	0.014	1.50	1.50
A73	Curb	5.00	0.00	0.48	2.00	0.30	2.00	0.014	1.50	1.50
A43	Combi	5.00	3.34	1.30	2.00	0.45	2.00	0.014	1.50	1.50
A46	Curb	5.00	0.00	0.40	2.00	0.50	2.00	0.014	1.50	1.50
A53	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A190	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A187	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A188	Combi	5.00	3.34	1.70	2.00	1.70	2.00	0.014	1.50	1.50
A189	Combi	5.00	3.34	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A47	Curb	5.00	0.00	0.50	2.00	0.50	2.00	0.014	1.50	1.50
A19	Curb	5.00	0.00	1.30	2.00	0.30	2.00	0.014	1.50	1.50
A78	Curb	5.00	n/a	n/a	2.193	15.022	0.277	8.90	8.70
A67	Curb	5.00	n/a	n/a	1.786	15.022	0.268	7.65	6.15
A155	Curb	5.00	n/a	n/a	4.689	15.022	0.372	11.85	8.45
A142	Combi	5.00	7.50	3.34	1.439	21.985	0.261	6.90	6.05
A72	Curb	5.00	n/a	n/a	1.374	15.022	0.260	6.80	5.90
A83	Curb	5.00	n/a	n/a	2.978	15.022	0.299	9.80	9.05
A76	Curb	5.00	n/a	n/a	1.677	15.022	0.266	7.55	5.45
A79	Curb	5.00	n/a	n/a	1.591	15.022	0.264	7.40	7.45
A65	Curb	5.00	n/a	n/a	1.786	15.022	0.268	7.50	7.50
A45	Curb	5.00	n/a	n/a	1.807	15.022	0.268	6.10	8.25
A183	Curb	5.00	n/a	n/a	1.265	15.022	0.259	5.65	7.25
A11	Curb	5.00	n/a	n/a	3.104	15.022	0.303	9.85	9.40
A80	Curb	5.00	n/a	n/a	1.613	15.022	0.264	6.95	5.85
A86	Curb	5.00	n/a	n/a	1.352	15.022	0.260	7.20	7.35
A131	Curb	5.00	n/a	n/a	2.636	15.022	0.288	7.15	9.40
A125	Curb	5.00	n/a	n/a	1.914	15.022	0.270	7.40	6.55
A138	Curb	5.00	n/a	n/a	2.703	15.022	0.290	8.75	8.75
A126	Curb	5.00	n/a	n/a	1.221	15.022	0.258	6.30	5.40
A123	Curb	5.00	n/a	n/a	1.243	15.022	0.259	5.70	7.20
A118	Curb	5.00	n/a	n/a	1.634	15.022	0.265	7.40	5.90
A54	Curb	5.00	n/a	n/a	1.243	15.022	0.259	7.00	7.20
A55	Curb	5.00	n/a	n/a	4.854	15.022	0.381	12.00	12.00
A58	Curb	5.00	n/a	n/a	3.336	15.022	0.312	10.40	10.35
A66	Curb	5.00	n/a	n/a	1.461	15.022	0.262	6.00	6.85
A112	Curb	5.00	n/a	n/a	2.470	15.022	0.284	8.45	8.45
A113	Curb	5.00	n/a	n/a	2.065	15.022	0.274	6.50	8.45
A115	Curb	5.00	n/a	n/a	2.915	15.022	0.297	9.70	9.90
A116	Curb	5.00	n/a	n/a	1.439	15.022	0.261	6.90	6.90
A117	Curb	5.00	n/a	n/a	2.894	15.022	0.296	7.85	7.85
A120	Curb	5.00	n/a	n/a	2.449	15.022	0.283	8.05	6.95
A121	Curb	5.00	n/a	n/a	1.046	15.022	0.256	5.35	5.35
A191	Curb	5.00	n/a	n/a	7.425	15.022	0.555	12.75	12.75
A192	Curb	5.00	n/a	n/a	6.228	15.022	0.465	11.95	11.95
A101	Curb	5.00	n/a	n/a	2.385	15.022	0.282	6.40	9.20
A102	Curb	2.50	n/a	n/a	1.177	7.511	0.281	6.40	7.05
A103	Curb	5.00	n/a	n/a	4.043	15.022	0.341	11.20	9.75
A104	Curb	5.00	n/a	n/a	4.523	15.022	0.363	11.65	11.65
A105	Curb	5.00	n/a	n/a	2.342	15.022	0.280	9.10	6.55
A106	Curb	5.00	n/a	n/a	1.243	15.022	0.259	5.50	7.20
A107	Curb	5.00	n/a	n/a	1.577	15.022	0.264	7.85	6.85
A109	Curb	5.00	n/a	n/a	1.979	15.022	0.272	8.40	8.40
A110	Curb	5.00	n/a	n/a	1.526	15.022	0.263	7.05	7.05
A111	Curb	5.00	n/a	n/a	2.597	15.022	0.287	8.60	8.60
A96	Grate	n/a	7.50	3.34	2.321	21.985	0.216	8.25	8.25
A100	Curb	5.00	n/a	n/a	0.914	15.022	0.255	6.30	5.90
A181	Curb	5.00	n/a	n/a	2.597	15.022	0.287	9.45	6.05
A184	Curb	5.00	n/a	n/a	0.444	15.022	0.251	4.45	5.45
A132	Grate	n/a	7.50	3.34	1.308	21.985	0.147	6.65	6.65
A87	Curb	5.00	n/a	n/a	0.261	15.022	0.250	3.65	3.65
A90	Curb	10.00	n/a	n/a	1.957	30.045	0.255	7.75	6.80
A92	Curb	5.00	n/a	n/a	0.713	15.022	0.253	5.55	6.20
A99	Curb	5.00	n/a	n/a	0.646	15.022	0.252	5.10	5.10
A136	Curb	5.00	n/a	n/a	5.552	15.022	0.421	12.45	11.05
A97	Curb	10.00	n/a	n/a	2.491	30.045	0.256	7.05	9.05
A91	Curb	10.00	n/a	n/a	2.150	30.045	0.256	7.05	7.60
A98	Grate	n

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76	47.65	47.15	52.11	0.183	3.00	3.00	4.05	4.05	28.7	21.4	0.077
77	49.66	47.65	52.55	0.311	2.00	2.00	4.03	4.03	12.7	9.4	0.051
208	48.08	48.07	51.38	0.024	0.84	1.14	2.83	1.90	3.5	9.7	0.000
212	48.10	48.07	51.53	0.026	0.84	1.14	2.93	1.96	3.6	10.0	0.000
209	48.30	47.65	51.67	0.174	1.67	1.67	3.38	3.38	9.5	9.4	0.035
210	49.71	49.66	52.04	0.080	1.17	2.00	3.36	2.05	6.4	10.0	0.013
211	49.74	49.72	51.38	0.023	0.85	2.00	2.73	1.10	3.5	9.3	0.000
213	48.31	48.30	51.52	0.044	1.00	1.38	3.07	2.07	4.8	9.7	0.000
214	48.32	48.30	51.51	0.043	0.98	1.38	3.05	2.03	4.7	9.7	0.000
215	49.75	49.71	51.63	0.023	0.80	2.00	2.91	1.10	3.4	10.1	0.000
216	49.72	49.71	51.88	0.018	0.79	2.00	2.63	0.96	3.0	9.3	0.000
344	51.13	51.09	52.29	0.020	0.81	2.00	2.68	1.02	3.2	9.3	0.003
345×	49.41	49.40	52.08	0.006	0.36	2.00	4.61	3.20	1.7	25.4	0.016
346	49.42	49.41	51.93	0.006	0.53	2.00	2.58	0.55	1.7	11.2	0.000
347	49.62	49.57	51.67	0.069	1.15	2.00	3.17	1.89	5.9	9.5	0.006
217	49.77	49.72	51.38	0.016	0.72	2.00	2.82	0.91	2.9	10.4	0.000
218	47.65	46.72	51.64	0.020	0.69	0.94	3.36	2.20	3.2	12.7	0.023
219	50.52	50.44	52.76	0.014	0.74	2.00	2.58	0.86	2.7	9.4	0.002
221	50.13	50.09	51.58	0.005	0.53	2.00	2.29	0.49	1.5	10.0	0.000
78×	47.08	46.80	51.83	0.425	1.49	4.50	27.99	10.17	128.7	546.0	0.161
119	50.48	50.47	52.61	0.015	0.61	2.00	3.40	0.89	2.8	13.7	0.000
120	50.52	50.48	52.67	0.004	0.49	2.00	2.24	0.43	1.4	10.2	0.000
7	50.35	50.13	52.25	0.058	1.08	2.00	3.16	1.74	5.5	9.7	0.000
6	50.35	50.20	52.76	0.026	1.49	3.00	3.09	1.53	10.8	22.0	0.004
121	50.12	50.09	52.12	0.003	0.49	2.00	2.03	0.39	1.2	9.2	0.000
122	50.24	50.20	51.90	0.006	0.55	2.00	2.45	0.55	1.7	10.4	0.000
8	50.09	50.04	52.28	0.101	2.41	3.00	3.48	3.00	21.2	21.7	0.042
9	50.04	50.02	52.63	0.101	2.41	3.00	3.48	3.00	21.2	21.8	0.014
123	50.02	49.99	51.73	0.013	0.74	2.00	2.47	0.83	2.6	9.0	0.000
124	50.00	49.99	51.76	0.009	0.69	2.00	2.27	0.69	2.2	8.6	0.000
10	49.99	49.87	51.98	0.146	3.00	3.00	3.62	3.62	25.6	21.1	0.061
125	49.90	49.87	52.13	0.013	0.71	2.00	2.60	0.83	2.6	9.6	0.000
11	49.87	49.34	52.37	0.174	3.00	3.00	3.95	3.95	27.9	22.1	0.073
129	49.36	49.34	51.04	0.012	0.70	2.00	2.57	0.81	2.5	9.6	0.000
12×	49.73	49.71	51.88	0.021	1.06	4.50	9.96	5.98	28.3	235.3	0.000
101	47.79	47.64	51.52	0.019	0.76	0.76	2.82	2.82	3.1	10.1	0.000
1	47.64	47.31	52.09	0.019	0.72	2.00	3.07	0.99	3.1	11.4	0.002
2	47.31	47.25	52.01	0.151	1.48	2.00	3.53	2.81	8.8	9.8	0.037
103	47.95	47.31	51.82	0.015	0.70	0.70	2.87	2.87	2.8	10.8	0.000
348	48.42	48.28	51.63	0.070	6.00	6.00	3.97	3.97	112.4	82.1	0.025
349	48.07	47.65	51.63	0.099	1.30	3.00	3.32	3.32	7.2	9.5	0.034
350	49.72	49.66	51.66	0.077	1.24	2.00	3.07	2.01	6.3	9.0	0.013
238	49.89	49.85	51.58	0.032	0.90	2.00	2.95	1.29	4.0	9.7	0.000
241	45.36	45.26	52.08	0.021	0.67	2.00	3.56	1.05	3.3	13.6	0.000
242	44.64	44.59	52.30	0.151	1.74	3.00	6.13	3.68	26.0	41.0	0.021
244	49.70	49.60	51.78	0.001	0.38	2.00	2.01	0.26	0.8	10.7	0.000
246×	48.74	48.74	51.54	0.004	0.22	2.00	7.89	3.02	1.4	59.2	0.000
243	44.74	44.64	51.74	0.151	2.03	3.00	5.10	3.68	26.0	32.6	0.063
79	50.67	50.64	51.35	0.051	1.88	3.00	3.26	2.14	15.1	21.3	0.007
80	50.64	50.61	51.45	0.069	2.02	3.00	3.49	2.49	17.6	22.4	0.010
81	50.61	50.58	51.37	0.069	1.97	3.00	3.58	2.49	17.6	23.0	0.010
82	50.58	50.40	51.47	0.020	1.35	2.00	4.25	1.47	7.6	40.7	0.003
83	50.40	50.35	51.48	0.026	1.50	3.00	3.35	1.67	20.1	40.2	0.004
84	50.35	50.30	51.53	0.070	1.90	3.00	4.31	2.73	32.7	47.6	0.012
85	50.30	50.21	51.59	0.070	2.11	3.00	3.88	2.73	32.7	41.3	0.012
86×	50.21	50.10	52.06	0.014	0.96	4.00	6.40	5.83	37.0	214.5	0.106
87	50.10	49.93	51.72	0.017	1.98	4.00	3.40	1.69	40.5	81.8	0.013
88	49.64	49.07	52.48	0.038	1.82	4.00	5.56	2.53	60.8	138.7	0.010
247	50.78	50.67	50.93	0.020	1.37	3.00	3.05	1.35	9.6	22.6	0.000
248×	50.67	50.67	50.70	0.006	0.38	2.00	4.21	3.14	1.7	22.4	0.000
250×	50.64	50.64	51.13	0.010	0.32	1.58	3.49	3.28	2.7	21.3	0.000
252×	50.40	50.40	50.84	0.018	0.56	2.00	4.20	3.17	3.1	17.7	0.000
254×	50.35	50.35	51.04	0.013	0.52	2.00	3.97	3.58	2.6	17.5	0.000
256×	50.10	50.10	51.47	0.002	0.17	2.00	8.02	2.77	1.0	69.6	0.000
257×	50.10	50.10	51.60	0.016	0.38	2.00	6.87	3.84	2.9	36.1	0.000
258	50.48	50.35	50.90	0.229	1.20	2.00	5.52	3.46	10.9	16.2	0.000
259	50.80	50.67	50.93	0.004	0.89	3.00	2.45	0.61	4.3	22.6	0.000
157×	50.20	49.52	52.32	0.010	0.43	2.00	4.64	0.74	2.3	22.7	0.000
260×	49.79	49.73	52.57	0.020	0.66	4.50	19.34	5.96	27.9	606.6	0.055
261×	50.11	49.79	52.51	0.038	1.51	4.50	6.46	6.13	27.9	93.2	0.175
262×	50.26	50.11	52.61	0.018	1.18	2.40	6.35	5.52	19.6	104.6	0.142
265	49.84	49.83	51.69	0.015	0.71	2.00	2.78	0.88	2.8	10.3	0.000
267	50.11	50.11	52.16	0.006	0.38	2.00	4.20	3.17	1.7	3.2	0.000
268	49.47	49.45	50.86	0.050	0.96	2.00	3.39	1.61	5.1	10.9	0.000
269	49.47	49.45	50.86	0.058	0.85	2.00	4.32	1.75	5.5	14.7	0.000
270×	50.26	50.26	51.77	0.008	0.26	1.80	8.93	3.39	2.1	60.2	0.000
127	49.73	49.71	51.48	0.044	0.44	2.00	9.31	4.28	4.8	45.2	0.000
272×	50.13	50.11	52.16	0.097	0.52	2.00	10.98	4.85	7.1	48.5	0.000
273	50.46	50.26	52.10	0.009	1.54	2.15	3.05	1.97	13.6	43.5	0.018
274×	50.48	50.46	51.55	0.107	0.79	1.76	6.43	4.93	7.4	43.5	0.000
275	50.50	50.46	51.54	0.075	1.19	1.84	3.19	2.06	6.2	9.4	0.000
276	49.69	49.68	51.68	0.003	0.47	2.00	2.18	0.40	1.2	10.2	0.000
277	49.71	49.68	51.54	0.011	0.66	2.00	2.64	0.76	2.4	10.2	0.000
278	47.09	47.02	51.50	0.018	1.48	3.00	3.53	1.42	12.6	36.9	0.000
279×	47.02	47.02	51.50	0.004	0.29	4.00	11.01	4.68	15.9	581.4	0.000
3	46.24	45.64	52.14	0.224	2.00	2.00	3.43	3.43	10.8	9.6	0.018
4×	42.95	42.86	52.86	0.036	1.10	3.00	5.45	5.20	12.7	44.9	0.084
106×	50.20	50.20	52.44	0.024	0.65	2.00	3.94	3.92	3.5	15.3	0.000
108×	48.25	47.65	51.69	0.006	0.30	0.66	6.03	1.95	1.8	37.0	0.000
109	47.69	47.65	51.60	0.004	0.46	0.61	2.65	1.80	1.5	12.5	0.000
110×	47.15	46.72	51.89	0.010	0.36	0.36	5.98	5.98	2.3	32.7	0.000
111×	46.72	46.72	51.79	0.008	0.33	0.78	5.87	3.34	2.0	33.8	0.000
297	49.83	49.59	52.05	0.001	0.95	4.00	2.24	0.40	5.1	41.8	0.001
112×	47.28	47.28	51.86	0.009	0.41	0.84	4.52	3.38	2.1	22.8	0.000
113×	47.28	47.28	51.76	0.014	0.46	0.82	4.99	3.60	2.7	23.7	0.000
114	50.92	50.89	51.26	0.001	0.37	2.00	1.89	0.24	0.8	10.2	0.000
115	50.86	50.84	51.14	0.004	0.51	2.00	2.29	0.47	1.5	10.2	0.000
61	48.87	48.66	52.87	0.208	2.00	2.00	3.30	3.30	10.4	5.9	0.017
162	48.58	48.56	51.24	0.009	0.63	1.92	2.57	0.71	2.2	10.2	0.000
163	48.64	48.56	51.23	0.003	0.47	2.00	2.21	0.40	1.2	10.3	0.000
189	49.42	49.39	50.87	0.005	0.54	2.00	2.30	0.51	1.6	9.8	0.000
190	48.97	48.82	52.30	0.000	0.25	2.00	1.42	0.10	0.3	9.6	0.000
193	49.28	48.87	51.17	0.208	2.00	2.00	3.30	3.30	10.4	3.8	0.034
194	49.45	49.40	51.62	0.148	1.51	2.00	3.44	2.78	8.7	9.6	0.036
195	49.57	49.45	52.11	0.069	1.00	2.00	3.79	1.89	5.9	0.2	0.006
196	49.70	49.62	51.58	0.069	1.14	2.00	3.23	1.89	5.9	9.7	0.017
197	49.90	49.86	51.57	0.014	0.68	2.00	2.86	0.86	2.7	10.8	0.000
198	49.80	49.70	51.28	0.014	0.72	2.00	2.65	0.86	2.7	9.8	0.003
199	49.73	49.70	51.17	0.003	0.47	2.00	2.16	0.39	1.2	10.1	0.000
200	49.48	49.45	51.47	0.004	0.51	2.00	2.21	0.44	1.4	9.9	0.000
201	49.46	49.45	51.48	0.005	0.51	2.00	2.57	0.51	1.6	11.5	0.000
202×	49.40	49.28	52.11	0.208	0.95	2.00	7.04	5.53	10.4	22.7	0.095
164	48.35	48.28	50.38	0.007	0.60	2.00	2.41	0.61	1.9	9.8	0.000
165	48.30	48.28	50.35	0.005	0.54	2.00	2.36	0.51	1.6	10.2	0.000
166	48.15	48.13	50.35	0.004	0.50	2.00	2.19	0.43	1.4	9.8	0.000
167	48.20	48.13	50.34	0.013	0.70	2.00	2.61	0.82	2.6	9.8	0.000
169	48.00	47.98	50.92	0.003	0.49	1.66	2.20	0.47	1.3	10.0	0.000
105	47.43	47.31	51.82	0.019	0.79	0.79	2.70	2.70	3.1	9.5	0.000
102×	47.25	46.24	52.23	0.151	0.33	2.00	26.32	2.81	8.8	152.3	0.012
131	48.86	48.84	50.90	0.014	0.68	2.00	2.85	0.85	2.7	10.8	0.000
33×	48.53	48.33	51.00	0.299	1.06	2.00	7.30	5.92	12.4	22.5	0.109
220	49.74	49.72	50.05	0.030	0.88	2.00	2.98	1.25	3.9	10.0	0.000
222×	49.93	49.93	52.31	0.012	0.52	2.00	3.82	3.54	2.4	16.9	0.000
223	50.11	50.09	51.66	0.004	0.48	2.00	2.51	0.46	1.4	11.6	0.000
224×	47.02	47.02	51.41	0.013	0.80	3.00	5.00	4.48	7.6	48.7	0.000
225×	47.02	47.02	51.41	0.019	0.89	3.00	5.30	4.74	9.3	48.7	0.000
227	49.72	49.64	50.20	0.164	1.57	2.00	3.48	2.93	9.2	9.6	0.027
228	49.73	49.72	50.05	0.005	0.53	2.00	2.33	0.50	1.6	10.1	0.000
229	51.09	50.76	51.87	0.053	1.04	2.00	3.16	1.67	5.2	9.8	0.009
230	51.21	51.13	51.98	0.012	0.69	2.00	2.58	0.79	2.5	9.7	0.002
231	51.11	51.09	51.68	0.008	0.61	2.00	2.57	0.66	2.1	10.4	0.000
232	51.23	51.21	51.76	0.012	0.62	2.00	3.00	0.79	2.5	12.0	0.000
233	51.17	51.13	52.27	0.001	0.38	2.00	1.90	0.26	0.8	10.0	0.000
234	50.80	50.76	51.49	0.008	0.59	2.00	2.57	0.63	2.0	10.6	0.000
235	50.78	50.76	51.49	0.016	0.63	2.00	3.45	0.93	2.9	13.7	0.000
236×	45.75	45.74	52.13	0.029	0.61	2.00	4.82	4.03	3.9	19.5	0.000
239×	50.15	50.15	51.15	0.023	0.61	2.00	4.23	3.88	3.4	17.0	0.000
240×	50.20	50.20	52.16	0.005	0.35	2.00	4.12	3.08	1.5	22.7	0.000
237	49.90	49.85	51.48	0.001	0.36	2.00	2.19	0.27	0.8	11.9	0.000
168	47.75	47.57	51.61	0.080	6.00	6.00	4.26	4.26	120.6	81.4	0.028
172	47.76	47.75	51.40	0.001	0.39	0.95	1.67	0.48	0.7	8.8	0.000
116	50.82	50.79	51.25	0.001	0.34	2.00	1.77	0.20	0.6	10.1	0.000
5	50.63	50.46	51.84	0.026	1.48	3.00	3.13	1.53	10.8	22.4	0.004
117	50.55	50.52	52.62	0.004	0.51	2.00	2.30	0.47	1.5	10.2	0.000
118	50.53	50.52	52.62	0.003	0.47	2.00	2.27	0.40	1.3	10.6	0.000
13	49.71	49.40	51.67	0.025	2.05	4.50	4.40	1.95	31.0	73.3	0.018
126	49.73	49.71	51.51	0.003	0.49	2.00	2.09	0.40	1.3	9.5	0.000
127	49.73	49.71	51.48	0.006	0.58	2.00	2.37	0.58	1.8	9.7	0.000
128	49.42	49.40	51.39	0.007	0.60	2.00	2.33	0.59	1.9	9.5	0.000
14	49.40	49.34	60.00	0.027	2.04	4.50	4.59	2.02	32.2	76.4	0.006
15	49.34	49.24	51.85	0.096	2.90	4.50	5.64	3.84	61.1	81.9	0.069
130	49.26	49.24	51.16	0.008	0.63	2.00	2.45	0.66	2.1	9.7	0.000
280	51.00	50.95	53.02	0.008	0.61	2.00	2.53	0.66	2.1	10.2	0.000
281	50.10	50.02	51.68	0.002	0.38	2.00	2.31	0.30	1.0	12.3	0.000
282	47.36	47.35	51.31	0.004	0.44	0.82	2.60	1.12	1.4	12.5	0.000

16	49.24	49.04	51.98	0.101	3.22	4.50	5.17	3.95	62.8	73.2	0.049
17	49.04	48.84	51.50	0.101	4.50	4.50	3.95	3.95	62.8	23.0	0.049
132	48.86	48.84	50.90	0.023	0.81	2.00	2.89	1.10	3.4	10.1	0.000
19	48.84	48.72	51.30	0.117	4.50	4.50	4.25	4.25	67.7	22.2	0.028
133	48.73	48.72	51.31	0.004	0.50	2.00	2.29	0.44	1.4	10.3	0.000
20×	48.72	48.33	51.53	0.120	2.39	4.50	7.98	7.89	68.5	124.4	0.097
23×	48.33	47.64	51.79	0.171	2.46	4.50	9.18	8.40	81.6	141.5	0.329
136	48.36	48.33	51.31	0.013	0.69	2.00	2.70	1.75	2.6	10.1	0.000
254×	47.64	47.25	52.87	0.171	2.25	4.50	5.00	5.27	5.13	81.6	4.4	0.011
26	47.25	46.98	51.64	0.189	4.50	4.50	5.39	5.39	85.8	32.4	0.136
27	46.98	46.57	51.86	0.189	4.50	4.50	5.39	5.39	85.8	78.7	0.045
28	46.57	45.67	52.02	0.234	4.50	4.50	6.00	6.00	95.5	35.2	0.168
30	45.67	44.79	52.77	0.266	4.50	4.50	6.41	6.41	101.9	54.9	0.191
32×	44.79	44.59	52.07	0.266	1.32	4.50	26.20	9.16	101.9	545.9	0.130
138	47.24	47.25	51.56	0.009	0.64	0.71	2.54	2.21	2.2	9.9	0.000
283	48.08	50.21	52.43	0.002	0.59	3.00	2.27	0.45	5.4	41.5	0.000
284	50.51	50.48	52.41	0.002	0.60	3.00	2.24	0.45	5.4	40.5	0.000
285	50.92	50.51	52.47	0.002	0.59	3.00	2.26	0.45	5.4	41.3	0.000
139×	47.35	47.35	51.26	0.006	0.18	2.00	12.23	3.14	1.7	102.6	0.000
140×	46.72	46.57	51.78	0.102	0.84	1.15	5.78	3.87	7.3	19.7	0.070
141×	47.28	46.57	51.84	0.044	0.72	0.72	4.72	4.72	4.8	17.5	0.104
143	45.74	45.67	52.00	0.102	1.27	2.00	3.46	2.31	7.2	10.0	0.000
144	49.65	49.63	52.17	0.006	0.54	2.00	2.58	0.57	1.8	11.0	0.000
145	48.53	48.53	50.87	0.004	0.50	2.00	2.39	0.47	1.5	10.7	0.000
146	48.56	48.53	50.88	0.004	0.51	2.00	2.26	0.45	1.4	10.1	0.000
34	48.81	48.53	51.96	0.188	1.33	2.00	4.45	3.14	9.9	12.7	0.046
35	48.88	48.81	51.25	0.111	1.32	2.00	3.46	2.43	7.6	9.9	0.028
36	49.20	49.09	50.72	0.069	1.14	2.00	3.20	1.90	6.0	9.6	0.017
343	47.35	47.25	51.28	0.018	0.68	2.00	3.24	0.97	3.1	12.3	0.001
37	49.24	49.20	51.29	0.017	0.76	1.98	2.72	0.95	3.0	9.8	0.003
147	48.84	48.81	51.46	0.011	0.65	1.93	2.62	0.75	2.3	10.2	0.000
148	48.88	48.88	51.12	0.001	0.40	2.00	1.93	0.28	0.9	9.8	0.000
149	48.91	48.88	51.12	0.002	0.44	2.00	2.02	0.33	1.0	9.7	0.000
150×	49.20	50.58	51.04	0.004	0.39	1.98	3.24	3.18	1.4	17.0	0.000
151	49.24	49.20	50.61	0.006	0.51	1.98	2.70	0.55	1.7	12.0	0.000
152	49.31	49.24	51.18	0.017	0.75	1.97	2.75	0.95	3.0	9.9	0.000
38	49.39	49.24	50.34	0.008	1.60	4.00	2.72	1.02	12.8	38.0	0.035
39	49.24	49.09	51.05	0.008	1.59	4.00	2.74	1.02	12.8	38.1	0.002
40	49.09	49.07	51.30	0.015	2.09	4.00	2.67	1.42	17.8	33.1	0.009
41	49.07	49.01	52.13	0.060	2.91	4.00	4.35	3.16	75.8	91.4	0.046
42	49.01	48.91	51.73	0.049	6.00	6.00	3.34	3.34	94.4	74.7	0.052
43	48.91	48.75	51.42	0.052	6.00	6.00	3.42	3.42	96.7	85.6	0.055
44	48.75	48.66	51.70	0.053	6.00	6.00	3.48	3.48	98.4	72.9	0.056
45	48.66	48.56	52.26	0.067	6.00	6.00	3.89	3.89	109.9	85.9	0.077
46	48.56	48.42	51.52	0.070	6.00	6.00	3.97	3.97	112.4	99.2	0.074
47	48.28	48.13	50.63	0.072	3.69	6.00	6.25	4.03	114.0	164.1	0.076
48	48.13	47.98	50.64	0.075	6.00	6.00	4.13	4.13	116.8	93.1	0.027
50	47.98	47.86	51.28	0.077	6.00	6.00	4.18	4.18	118.2	83.3	0.081
52	47.86	47.75	51.75	0.080	6.00	6.00	4.26	4.26	120.5	92.1	0.056
58	47.29	47.08	51.37	0.092	6.00	6.00	4.55	4.55	128.7	80.2	0.097
153	49.40	49.39	50.18	0.046	0.92	2.00	3.46	1.55	4.9	11.3	0.000
154	49.42	49.39	50.18	0.040	0.94	2.00	3.13	1.44	4.5	10.2	0.000
173	48.02	47.98	50.94	0.008	0.58	1.66	2.62	0.72	2.0	10.8	0.000
171×	47.87	47.86	51.74	0.022	0.56	2.00	4.72	3.87	3.4	20.0	0.000
203×	47.87	47.87	51.89	0.004	0.35	1.68	3.90	3.02	1.4	21.6	0.000
55	47.57	47.44	51.55	0.081	6.00	6.00	4.29	4.29	121.3	84.2	0.086
174	47.60	47.57	51.34	0.007	0.59	0.83	2.48	1.57	1.9	10.2	0.000
176	47.30	47.29	51.17	0.002	0.43	0.72	1.82	0.90	0.9	8.9	0.000
177	47.62	47.29	51.17	0.060	1.03	1.33	3.40	3.40	5.6	10.6	0.000
178	49.19	49.01	51.63	0.021	2.14	4.00	3.03	1.65	20.8	37.4	0.013
180	49.20	49.19	51.26	0.017	2.06	4.00	2.92	1.52	19.1	36.1	0.011
181	49.23	49.20	51.15	0.017	2.16	4.00	2.76	1.52	19.1	33.5	0.011
182	49.34	49.23	51.64	0.011	1.75	4.00	2.91	1.23	15.4	38.8	0.002
183	49.45	49.34	51.06	0.011	1.77	4.00	2.88	1.23	15.4	38.3	0.007
184	49.59	49.45	51.65	0.001	1.00	4.00	2.08	0.40	5.1	37.6	0.000
185	48.74	48.71	52.33	0.023	2.00	2.00	2.86	1.09	3.4	0.8	0.006

PROPOSED DRAINAGE AREA CALCUATIONS

XPSWMM-NODE TABLE
DESIGN FREQUENCY: 5 YEAR PROPOSED

Name	Area (ac)	Width (ft)	Slope	Imperviousness Percentage (%)	Total Rainfall (in)	Total Runoff Depth (in)	Ground Elevation (Spill Crest) (ft)	Invert Elevation (ft)	Max Water Elevation (ft)	Max Water Depth (ft)	Total Flow Through Node (cf)	Max Flow (cfs)	ROW Elevation (ft)
S28	0.87	140	0.16	45	4.278	2.695	52.34	47.27	52.168	4.898	39828.55	1.986	
S23	1.36	228	0.1	45	4.278	2.686	50.8	46.82	51.595	4.775	78616.62	3.096	
S69	0.21	71	0.18	45	4.278	2.721	51.76	49.26	51.784	2.524	4139.81	0.481	52.3
S71	1.46	132	0.26	45	4.278	2.679	52.33	48.05	51.646	3.596	28366.33	3.313	52.42
S73	0.54	85	0.24	45	4.278	2.702	51.76	49.26	51.683	2.423	10585.54	1.235	52.56
S87	0.58	107	0.17	45	4.278	2.701	53.41	47.67	51.647	3.977	11365.12	1.326	52.22
S90	0.87	138	0.3	45	4.278	2.706	50.68	48	51.346	3.346	7826.07	1.991	
S96	1.61	198	0.25	45	4.278	2.693	51.52	47.78	51.672	3.892	30313.09	3.673	52.39
S194	2.09	199	0.24	80	4.278	3.51	50.99	47.81	51.286	3.476	53192.46	5.152	
S191	2.79	166	0.1	45	4.278	2.609	50.77	47.76	52.421	4.661	53025.34	5.961	
S198	1.15	241	0.09	45	4.278	2.694	51.2	47.14	52.423	5.283	22838.39	2.624	
S197	2.93	201	0.2	45	4.278	2.653	51.68	47.5	52.416	4.916	55382.85	6.535	
S208	1.15	142	0.22	45	4.278	2.69	52.57	47.79	52.658	4.868	22384.56	2.622	
S67	0.46	101	0.1	45	4.278	2.698	52.42	47.85	51.733	3.883	13754.92	1.051	53.21
S61	0.97	118	0.16	45	4.278	2.944	52.04	47.21	52.128	4.918	21055.29	2.102	52.86
S91	0.44	69	0.09	45	4.278	2.68	51.97	49.45	51.645	2.195	8553.28	0.999	52.31
S121	0.31	77	0.21	45	4.278	2.715	50.79	47.3	51.155	3.855	1986.74	0.71	
S123	0.3	81	0.27	45	4.278	2.72	51.52	45.79	51.105	5.315	5919.86	0.687	52.65
93842	1.348	161	0.218	68.1	4.278	3.24	52.73	39.25	48.737	9.487	31682.25	3.242	53.1
S129	0.31	89	0.22	45	4.278	2.719	53.86	44.62	49.718	5.098	6110.37	0.71	53.11
S178	2.74	193	0.22	90	4.278	3.716	51.49	46.89	51.189	4.299	65753	6.885	51.74
S181	1.08	99	0.14	90	4.278	3.719	52.68	46.77	51.005	4.235	29119.48	2.714	51.74
S175	0.64	100	0.28	45	4.278	2.704	52.19	48.55	52.047	3.497	26244.22	1.464	52.62
S192	0.44	158	0.19	45	4.278	2.723	51.91	49.38	52	2.62	18045.01	1.008	52.64
S214	0.28	108	0.26	90	4.278	3.792	51.19	49.17	51.591	2.421	7085.97	0.704	
S26	0.93	110	0.13	45	4.278	2.674	51.37	46.23	51.57	5.34	32323.95	2.105	52.66
S22	1.53	181	0.23	45	4.278	2.689	50.92	46.78	51.299	4.519	68023.93	3.487	
S40	1.69	196	0.14	45	4.278	2.675	52.39	46.59	52.196	5.606	32797.88	3.828	52.13
S70	0.83	121	0.1	45	4.278	2.679	51.51	47.3	52.374	5.074	16263.26	1.883	52.3
S65	0.83	96	0.27	45	4.278	2.692	51.43	47.27	51.404	4.134	16206.25	1.893	52.15
S82	0.26	62	0.11	45	4.278	2.703	51.55	47.27	51.403	4.133	5096.02	0.595	
S88	0.54	119	0.2	45	4.278	2.71	51.27	47.67	51.653	3.983	10102.3	1.236	52.22
S93	0.83	136	0.22	45	4.278	2.702	51.86	47.11	51.663	4.553	16268.9	1.898	52.47
S122	0.52	168	0.25	45	4.278	2.724	52.06	46.69	51.224	4.534	10273.49	1.191	53.05
S112	0.38	73	0.26	45	4.278	2.71	51.94	40.7	48.912	8.212	7473.01	0.87	53.25
S98	0.93	120	0.22	45	4.278	2.692	52.27	44.59	50.331	5.741	18160.4	2.121	52.59
S115	0.78	137	0.19	45	4.278	2.702	52.97	44.73	50.271	5.541	15284.67	1.783	53.19
S111	0.69	108	0.26	45	4.278	2.703	52.99	40.33	48.912	8.582	13529.95	1.578	53.25
93763	0.805	136	0.753	79.2	4.278	3.533	53.15	39.17	48.657	9.487	20626.12	1.982	52.74
S176	1.99	164	0.16	45	4.278	2.658	52.98	48.76	52.13	3.37	87102.28	4.457	53.17
S182	2.55	166	0.14	45	4.278	2.634	52.17	49.36	52.152	2.792	48732.12	5.593	53.17
S174	2.13	141	0.14	45	4.278	2.636	51.21	46.41	49.895	3.485	40721.86	4.679	
S190	1.02	95	0.28	45	4.278	2.682	52.05	47.58	52.407	4.827	19981.58	2.318	
S211	1.09	117	0.26	79.1	4.278	3.497	52.1	48.04	51.172	3.132	27633.7	2.682	
S29	0.78	91	0.27	45	4.278	2.692	53.38	46.23	51.983	5.753	15230.69	1.779	52.66
S25	3.39	295	0.11	45	4.278	2.939	53.28	48.82	52.072	3.252	67282.89	6.526	52.13
S21	1.72	145	0.27	45	4.278	2.676	53.65	47.48	52.022	4.542	33382.14	3.897	
S38	0.84	154	0.16	45	4.278	2.7	51.7	47.68	51.866	4.186	16532.38	1.92	52.16
S76	0.33	66	0.28	45	4.278	2.713	52.67	50.2	51.599	1.399	6493.52	0.756	53.47
S74	0.71	128	0.29	45	4.278	2.71	51.33	48.83	52.183	3.353	13935.75	1.625	
S57	0.53	136	0.17	45	4.278	2.713	54.09	44.15	52.101	7.951	20632.38	1.213	53.29
S92	1.65	135	0.14	45	4.278	2.652	51.35	48.85	51.656	2.806	31771.83	3.68	52.31
S118	0.65	80	0.26	45	4.278	2.694	51.86	46.59	51.253	4.663	12699.95	1.483	53.05
S86	0.46	92	0.25	45	4.278	2.711	51.55	49.45	50.746	1.296	9045.65	1.053	
S130	0.43	128	0.3	45	4.278	2.724	53.85	44.12	49.643	5.523	8493.42	0.985	53.03
S135	0.41	69	0.14	45	4.278	2.694	52.67	45.6	50.449	4.849	8011.84	0.936	52.42
S196	0.61	111	0.14	45	4.278	2.697	53.26	50.46	52.026	1.566	11936.44	1.393	52.64
93776	2.608	226	0.176	76	4.278	3.403	53.3	43.39	48.008	4.618	58997.45	6.373	53.49
S221	1.37	124	0.09	45	4.278	2.643	51.97	47.8	52.62	4.82	26004.21	3.031	
S215	0.87	112	0.14	80	4.278	3.511	51.13	48.24	51.61	3.37	18624.63	2.145	51.06
S30	0.74	91	0.27	45	4.278	2.694	52.4	47.29	52.163	4.873	14470.96	1.689	
S52	0.69	166	0.13	45	4.278	2.706	53.19	47.5	51.875	4.375	13543.77	1.579	52.16
S66	0.28	60	0.09	45	4.278	2.695	52.05	47.86	51.546	3.686	5469.69	0.639	52.57
S58	0.52	87	0.21	45	4.278	2.702	53.61	44.89	52.103	7.213	10194.75	1.189	53.29
S63	0.43	92	0.12	45	4.278	2.7	51.87	40	51.355	11.355	8374.08	0.983	52.92
S62	2.75	248	0.1	45	4.278	2.647	52.05	47.16	52.061	4.901	63254.62	6.105	52.86
S78	0.8	97	0.15	45	4.278	2.68	52.04	49.05	51.693	2.643	15550.5	1.816	52.54
S89	0.9	181	0.13	45	4.278	2.7	51.21	48.7	51.4	2.7	17618.56	2.057	
S114	1.35	152	0.24	45	4.278	2.688	52.1	40.49	48.917	8.427	26320.03	3.075	53.25
S180	1.59	227	0.26	85	4.278	3.645	51.7	47.88	51.212	3.332	42027.65	3.96	
S184	1.59	112	0.29	45	4.278	2.667	51.43	46.31	49.886	3.576	31133.79	3.584	
S207	0.81	93	0.15	45	4.278	2.677	52.1	47.4	52.595	5.195	17077.41	1.836	
S218	1.59	108	0.09	70	4.278	3.222	51.69	48.38	51.614	3.234	37147.88	3.799	
S31	1.17	126	0.27	45	4.278	2.688	52.59	48.2	52.174	3.974	22820.82	2.666	
S42	1.089	111	0.136	66.7	4.278	3.188	51.69	47.44	52.032	4.592	25231.83	2.606	
S72	1.16	116	0.29	45	4.278	2.687	52.82	49.77	51.681	1.911	22608.88	2.641	52.56
S81	0.5	89	0.19	45	4.278	2.702	53.19	47.36	51.586	4.226	9800.03	1.143	
S84	0.58	94	0.25	45	4.278	2.704	51.8	44.66	51.307	6.647	11375.54	1.327	52.43
S77	0.79	97	0.14	45	4.278	2.678	51.32	49.05	51.706	2.656	14553.26	1.792	52.54
S120	0.46	82	0.2	45	4.278	2.703	51.46	47.3	51.325	4.025	9017.6	1.052	
S117	0.83	83	0.15	45	4.278	2.668	52.27	45.43	50.301	4.871	16068.8	1.873	53.19
S116	1.61	159	0.18	45	4.278	2.673	52.74	44.62	50.29	5.67	47286.74	3.643	53.19
S132	0.37	112	0.17	45	4.278	2.717	53.71	46.86	49.884	3.024	7291.67	0.847	53.07
S156	2.25	133	0.22	45	4.278	2.645	52.92	46.86	50.969	4.109	43152.56	4.985	52.42
S212	0.42	102	0.26	80	4.278	3.547	51.08	48.38	51.592	3.212	9615.88	1.036	
S27	1.15	129	0.29	45	4.278	2.692	52.58	45.93	51.984	6.054	22456.16	2.623	52.66
S18_S19_S43_S44_COMBINED	4.44	169	0.17	45	4.278	2.589	51.5	47.65	52.406	4.756	81517.35	9.265	
S51	0.84	106	0.21	45	4.278	2.69	52.08	47.3	52.172	4.872	16381.94	1.915	52.5
S68	0.64	139	0.25	45	4.278	2.713	52.47	50.2	51.595	1.395	12598.6	1.465	53.47
S33	0.89	138	0.27	45	4.278	2.704	53.66	44.33	52.107	7.777	29615.47	2.036	53.29
S32	0.62	130	0.14	45	4.278	2.703	53.29	44.83	52.109	7.279	12156.25	1.418	53.29
S95	0.5	81	0.13	45	4.278	2.69	51.55	47.3	52.045	4.745	9756.82	1.14	

Name	Area (ac)	Width (ft)	Slope	Imperviousness Percentage (%)	Total Rainfall (in)	Total Runoff Depth (in)	Ground Elevation (Spill Crest) (ft)	Invert Elevation (ft)	Max Water Elevation (ft)	Max Water Depth (ft)	Total Flow Through Node (cf)	Max Flow (cfs)	ROW Elevation (ft)
S131	1.22	103	0.22	45	4.278	2.67	52.44	44.59	49.814	5.224	23628.99	2.755	53.29
S177	0.63	104	0.28	90	4.278	3.768	51.93	46.75	50.962	4.212	17212.14	1.585	51.74
S183	0.7	141	0.11	45	4.278	2.696	52.96	49.23	52.058	2.828	13692.14	1.599	52.62
S195	1.5	127	0.21	45	4.278	2.669	52.26	48.5	52.05	3.55	29037.49	3.384	52.98
S173	1.48	111	0.25	45	4.278	2.666	51.54	46.36	49.885	3.525	32429.62	3.335	
S222	1.04	139	0.28	45	4.278	2.699	52.21	47.27	52.603	5.333	19973.32	2.376	
S24	2.93	274	0.09	45	4.278	2.646	51.13	48.61	51.922	3.312	49153.23	6.498	52.13
S20	1.05	94	0.26	45	4.278	2.678	52.61	47.61	52.008	4.398	20395.05	2.382	
S39	0.77	105	0.23	45	4.278	2.695	51.77	47.89	51.883	3.993	15081.08	1.758	52.16
S41	2.07	145	0.15	45	4.278	2.643	51.8	46.73	52.12	5.39	39181.43	4.579	52.13
S50	1.09	100	0.27	45	4.278	2.68	51.87	49.37	51.991	2.621	21221.68	2.475	52.5
S75	0.42	84	0.27	45	4.278	2.712	51.83	47.25	51.668	4.418	8256.2	0.962	
S80	0.57	99	0.29	45	4.278	2.709	51.47	47.36	51.587	4.227	11223.75	1.305	
S55	0.49	101	0.22	45	4.278	2.71	52.19	44.9	51.404	6.504	9631.24	1.122	52.98
S100	0.89	97	0.28	45	4.278	2.69	51.85	47.97	52.089	4.119	10422.33	2.029	52.86
S94	0.88	93	0.13	45	4.278	2.667	49.95	47.45	50.846	3.396	48926.19	1.984	
S124	0.33	80	0.23	45	4.278	2.715	52.67	45.41	51.065	5.655	6500.17	0.756	52.65
S128	1.54	128	0.23	45	4.278	2.943	53.04	44.94	49.887	4.947	32907.27	3.262	53.29
93840	0.141	46	0.754	68.1	4.278	3.284	52.52	39.36	48.657	9.297	3364.67	0.339	52.74
93841	0.727	126	1.113	68.1	4.278	3.276	52.73	39.13	48.658	9.528	17277.77	1.75	52.74
S157	0.4	77	0.2	45	4.278	2.706	53.28	46.48	50.568	4.088	7853.36	0.915	52.42
S193	1.33	115	0.3	45	4.278	2.68	51.86	48.25	52.04	3.79	56153.45	3.02	52.98
S158	1.43	104	0.09	45	4.278	2.624	52.99	45.57	49.492	3.922	27217.31	3.105	
S185	1.98	151	0.22	45	4.278	2.663	51.52	46.19	49.889	3.699	41991.59	4.452	
S217	1.74	109	0.27	80	4.278	3.489	51.31	48.12	51.606	3.486	36170.53	4.286	
S216	0.77	82	0.25	80	4.278	3.516	51.11	47.95	51.606	3.656	17857.19	1.898	51.06
S3	2.1	126	0.21	45	4.278	2.644	52.07	48.1	52.416	4.316	40307.39	4.65	51.71
S5	0.91	133	0.21	45	4.278	2.696	52.27	48.1	52.34	4.24	17803.28	2.078	51.71
S15	0.45	69	0.17	45	4.278	2.694	52.72	48.1	52.462	4.362	8787.93	1.027	51.71
S14	0.08	53	0.25	45	4.278	2.737	52.57	48.1	52.444	4.344	1586.98	0.183	51.71
S2	3.42	157	0.3	45	4.278	2.637	52.4	48.1	52.301	4.201	65419.94	7.522	52.42
S1	3.06	144	0.35	45	4.278	2.577	52.11	48.1	52.35	4.25	56877.21	3.37	52.42
S16	1.18	136	0.21	45	4.278	2.686	51.868	48.6	52.32	3.72	21199.35	2.686	52.42
S17	1.47	174	0.23	45	4.278	2.689	51.759	48.6	52.304	3.704	27272.88	3.35	52.42
S4	3.43	189	0.09	45	4.278	2.595	53.094	48.1	52.485	4.385	59335.59	7.209	51.71
S6	0.88	109	0.3	45	4.278	2.697	53.191	48.1	52.471	4.371	17211.08	2.01	51.71
S12	0.82	112	0.2	45	4.278	2.692	53.212	48.1	52.466	4.366	16008.66	1.871	51.71
S13	0.19	61	0.15	45	4.278	2.887	53.218	48.1	52.456	4.356	3981.64	0.3	51.71
S9	0.05	50	0.17	45	4.278	2.74	52.645	44.1	52.19	8.09	993.73	0.115	52.7
S10	0.8	116	0.2	45	4.278	2.695	52.684	43.8	52.218	8.418	15641.23	1.826	52.7
S11	0.82	95	0.29	45	4.278	2.693	52.685	43.8	52.218	8.418	16021.97	1.871	52.7
S7	0.08	66	0.28	45	4.278	2.741	52.645	44.1	52.184	8.084	1590.63	0.183	52.7
S36	1.16	131	0.22	45	4.278	2.686	53.266	41.5	51.512	10.012	22604.63	2.64	52.34
S37	1.09	151	0.22	45	4.278	2.695	52.568	41.5	51.512	10.012	21314.69	2.488	52.34
S53	0.38	154	0.16	45	4.278	2.724	53.293	41.5	51.509	10.009	7512.82	0.871	52.34
S54	0.31	67	0.16	45	4.278	2.706	52.962	0	51.404	51.404	5885.86	0.709	52.98
S64	0.14	52	0.23	45	4.278	2.726	52.581	40.1	51.355	11.255	2719.72	0.321	52.92
S83	0.5	89	0.25	45	4.278	2.707	52.741	40.1	51.355	11.255	9771.11	1.144	
S79	0.24	108	0.18	45	4.278	2.727	53.804	49	51.741	2.741	4749.04	0.55	53.21
S97	0.79	135	0.27	45	4.278	2.707	53.224	49.45	50.746	1.296	15512.49	1.808	52.56
S85	0.47	102	0.09	45	4.278	2.695	52.653	41.3	50.733	9.433	9194	1.073	52.76
S159	2.16	152	0.11	45	4.278	2.944	52.911	45.57	49.606	4.036	46166.78	4.819	
S160	0.83	166	0.11	45	4.278	2.696	52.651	36.6	48.931	12.331	16235.45	1.895	52.3
S163	0.67	83	0.27	45	4.278	2.695	52.892	36.6	48.924	12.324	13100.82	1.529	52.3
S162	0.26	62	0.15	45	4.278	2.708	53.56	36.6	48.913	12.313	5110.32	0.595	52.3
S161	0.76	131	0.22	45	4.278	2.704	52.74	36.6	48.927	12.327	14909.39	1.738	52.3
S56	1.24	125	0.28	45	4.278	2.686	54.07	42.7	51.939	9.239	24163.75	2.823	53.28
S35	1.56	160	0.24	45	4.278	2.683	53.667	42.7	51.941	9.241	30364.72	3.547	53.28
S34	0.35	71	0.3	45	4.278	2.714	54.112	42.7	51.936	9.236	6893.45	0.801	53.28
S125	0.35	77	0.21	45	4.278	2.711	52.568	46.69	51.238	4.548	6881.85	0.801	53.05
S126	0.62	77	0.28	45	4.278	2.696	52.568	46.69	51.224	4.534	12121.92	1.416	53.05
S119	0.08	39	0.09	45	4.278	2.721	52.568	46.59	51.259	4.669	1576.99	0.183	53.05
S127	1.08	109	0.24	45	4.278	2.682	53.54	45.41	51.071	5.661	21014.26	2.455	
S133	0.81	108	0.11	45	4.278	2.676	53.659	45.41	51.07	5.66	15725.32	1.836	52.65
S134	0.14	31	0.24	45	4.278	2.713	52.684	45.41	51.083	5.673	2755.07	0.321	52.63
S136	2.19	163	0.26	45	4.278	1.83	52.568	45.6	50.45	4.85	28958.89	1.377	52.42
S8	0.05	45	0.21	45	4.278	2.74	52.645	44.1	52.19	8.09	993.73	0.115	52.7
S213	0.36	118	0.2	90	4.278	3.785	51.432	48	51.592	3.592	9409.57	0.906	
Node442	1.26	80	0.3	90	4.278	3.72	51.911	46.45	52.083	5.633	35985.35	3.167	
Node443	1.7	80	0.3	90	4.278	3.696	51.937	46.66	52.039	5.379	45393.43	4.264	
Node445	1.44	80	0.3	90	4.278	3.71	51.764	0	51.98	51.98	34952.56	3.617	
Node446	0.44	80	0.3	90	4.278	3.773	52.368	47.32	51.964	4.644	12040.64	1.107	
Node448	0.47	80	0.3	90	4.278	3.77	52.345	47.2	51.972	4.772	12851.76	1.182	51.28
Node450	0.45	80	0.3	90	4.278	3.772	52.886	47.84	51.97	4.13	12306.55	1.132	51.28
Node451	1.07	80	0.3	90	4.278	3.731	52.275	46.54	51.985	5.445	28949.27	2.691	
Node452	1.12	80	0.3	90	4.278	3.728	51.923	46.53	52.163	5.633	31206.04	2.816	
Node454	1.14	80	0.3	90	4.278	3.727	52.033	46.81	51.934	5.124	30810.5	2.866	
Node456	0.6	80	0.3	90	4.278	3.761	53.701	46.52	51.933	5.413	16365.39	1.509	51.39
Node458	0.67	80	0.3	90	4.278	3.756	52.734	0	51.939	51.939	17819.36	1.685	50.73
Node459	0.5	80	0.3	90	4.278	3.768	51.885	49	52.075	3.075	13570.95	1.258	
Node460	0.35	80	0.3	90	4.278	3.78	52.447	47.4	51.955	4.555	9593.91	0.881	52.62
Node461	0.49	80	0.3	90	4.278	3.769	52.508	47.36	51.954	4.594	13392	1.233	52.62
Node462	0.24	80	0.3	90	4.278	3.79	52.925	48.6	52.033	3.433	6593.49	0.604	
Node463	1.38	80	0.3	90	4.278	3.713	52.477	47.42	52.05	4.63	37157.16	3.467	
Node470	1.86	80	0.3	90	4.278	3.688	52.463	47.29	52.23	4.94	49744.55	4.66	
Node471	1.62	80	0.3	90	4.278	3.7	52.975	47.29	52.229	4.939	43471.74	4.065	
Node482	1.55	80	0.3	90	4.278	3.704	52.11	47.72	51.548	3.828	41635.45	3.891	
Node483	1.38	80	0.3	90	4.278	3.713	51.685	48.3	51.553	3.253	37205.01	3.467	
Node484	0.62	80	0.3	90	4.278	3.759	52.013	46.47	51.503	5.033	33264.65	1.56	
Node485	0.6	80	0.3	90	4.278	3.761	52.947	47.72	51.505	3.785	16360.94	1.509	
Node486	1.12	80	0.3	90	4.278	3.728	51.986	46.15	51.013	4.863	30278.28	2.816	
Node488	1.36	80	0.3	90	4.278	3.714	52.059	46.12	51.012	4.892	36632.5	3.417	
Node489	0.67	80	0.3	90	4.278	3.756	51.995	45.97	50.959	4.989	18246.67	1.685	
Node490	0.21	80	0.3	90	4.278	3.794	51.957	44.43	50.724	6.294	5778.06	0.528	
Node492	0.09	80	0.3	90	4.278	3.809	51.682	44.3	50.719	6.419	8264.86	0.226	
Node496	0.15	80	0.3	90	4.278	3.8	51.394	44.5	50.712	6.212	4134.27	0.377	
Node497	0.1	80	0.3	90	4.278	3.807	51.583	46.89	50.763	3.873	2760.23	0.252	
Node498	0.05	80	0.3	90	4.278	3.816	51.574	46.76	50.761	4.001	4140.43	0.126	
Node499	0.49	80	0.3	90	4.278	3.769	52.353	46.75	50.692	3.942	13391.7	1.233	

Name	Area (ac)	Width (ft)	Slope	Imperviousness Percentage (%)	Total Rainfall (in)	Total Runoff Depth (in)	Ground Elevation (Spill Crest) (ft)	Invert Elevation (ft)	Max Water Elevation (ft)	Max Water Depth (ft)	Total Flow Through Node (cf)	Max Flow (cfs)	ROW Elevation (ft)
Node501	0.66	80	0.3	90	4.278	3.757	51.87	43.75	50.694	6.944	17976.69	1.66	
Node502	1	80	0.3	90	4.278	3.735	52.427	45.25	50.763	5.513	27085.95	2.515	
Node503	0.13	80	0.3	90	4.278	3.803	52.462	45.17	50.76	5.59	30669.62

PROPOSED DRAINAGE AREA CALCUATIONS

XPSWMM-LINK TABLE
DESIGN FREQUENCY: 5 YEAR PROPOSED

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Conduit Slope	Diameter (Height) (ft)	Bottom Width (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
97669.1	97669	97641	44.97	44.35	Cir.	2.02	4	0	0.013	38.601	51.909	51.906	4.85	0.5	1.851	204.35
97641.1	97641	97497	44.35	44.15	Cir.	0.1	4	0	0.013	45.231	51.906	51.91	3.58	0.2	2.011	44.65
96299.1	96299	96493	44.65	44.5	Cir.	0.26	4	0	0.013	21.768	51.848	51.858	1.72	0.15	1.373	68.35
97437.1	97437	97438	44.08	44.04	Cir.	0.02	4	0	0.013	121.105	52.174	51.693	9.59	1.25	3.308	21.55
98225.1	98225	97701	46.37	46.04	Cir.	0.18	3	0	0.013	16.965	51.626	51.667	3.58	0.35	1.317	28.37
94430.1	94430	94490	46.62	43.12	Cir.	0.67	2	0	0.013	12.965	52.083	52.12	4.63	3.47	1.295	18.56
95197.1	95197	95199	41.32	41.18	Cir.	0.07	4.5	0	0.013	86.46	51.036	50.733	5.41	0.39	2.724	51.74
98231.1	98231	98266	46.78	46.46	Cir.	0.19	3	0	0.013	8.374	51.628	51.672	2.24	0.29	0.911	29.26
97417.1	97417	97406	43.1	43	Cir.	0.14	5	0	0.013	138.082	51.257	51.327	7.79	0.1	3.365	136.03
97386.1	97386	97384	42.62	42.6	Cir.	0.33	6	0	0.013	142.813	51.22	51.216	6.8	0.02	3.24	244.59
95021.1	95021	95026	40.86	40.82	Cir.	0.11	4.5	0	0.013	89.964	50.326	50.265	5.63	0.08	2.78	64.92
95026.1	95026	95008	40.82	40.78	Cir.	0.02	4.5	0	0.013	94.029	50.265	49.715	5.88	0.59	2.845	24.33
93794.1	93794	93775	38.4	37.94	Cir.	0.17	2	0	0.013	12.989	48.656	47.809	4.04	0.87	1.296	9.24
94945.1	94945	93775	36.5	35.66	Cir.	0.22	7	0	0.013	327.823	48.908	47.809	8.48	1.13	4.769	281.7
96582.1	96582	96299	45.2	44.65	Cir.	0.25	4	0	0.013	16.22	51.837	51.848	1.38	0.55	1.179	52.22
96757.1	96757	97047	47.28	47.1	Cir.	0.19	2	0	0.013	9.104	51.596	51.619	3.56	0.2	1.076	9.95
95301.1	95301	95226	42.58	42.51	Cir.	0.21	2	0	0.013	14.984	51.403	51.355	4.7	0.14	1.394	10.31
95200.1	95200	95197	41.39	41.32	Cir.	0.06	4.5	0	0.013	86.375	51.209	51.036	5.4	0.22	2.722	48.31
98299.1	98299	98231	46.98	46.78	Cir.	0.17	3	0	0.013	8.421	51.651	51.628	2.6	0.2	0.914	27.2
97409.1	97409	97416	43.14	43.12	Cir.	0.14	5	0	0.013	137.58	51.35	51.27	7.43	0.09	3.358	61.19
97416.1	97416	97417	43.12	43.1	Cir.	0.17	5	0	0.013	137.788	51.27	51.257	7.58	0.07	3.361	68.87
93801.1	93801	93794	38.92	38.4	Cir.	0.94	2	0	0.013	8.88	48.734	48.656	3.79	0.47	1.063	21.95
95006.1	95006	94945	40.5	40.5	Cir.	0	4.5	0	0.013	102.209	49.64	48.908	6.39	0.79	2.97	6.22
95106.1	95106	95006	44.36	43.5	Cir.	2.03	1.5	0	0.013	6.922	49.806	49.64	7.59	0.86	1.018	14.95
97918.1	97918	97198	37.65	37.53	Cir.	0.85	5	0	0.013	55.434	50.467	50.409	2.82	0.12	2.088	59.57
97283.1	97283	97323	47.25	46.32	Cir.	0.4	2	0	0.013	20.132	52.021	50.817	6.37	1.82	1.61	14.29
99459.1	99459	99474	47.5	46.22	Cir.	0.24	1.5	0	0.013	13.756	51.584	51.092	7.74	3.81	1.373	7.84
99467.1	99467	99459	47.62	47.5	Cir.	0.27	2	0	0.013	12.849	51.586	51.584	4.07	0.15	1.289	11.65
95418.1	95418	95601	42.39	42	Cir.	0.12	4.5	0	0.013	38.538	52.071	51.983	2.41	0.37	1.785	67.25
98663.1	98663	98584	44.85	44.83	Cir.	0.09	3.5	0	0.013	17.866	52.007	52.007	3.18	0.03	1.29	30.84
98430.1	98430	97641	44.76	44.35	Cir.	0.15	3.5	0	0.013	26.168	51.993	51.906	2.7	0.4	1.574	39.15
97423.1	97423	97409	43.5	43.14	Cir.	0.13	5	0	0.013	136.106	51.52	51.35	7.31	0.39	3.339	125.17
95496.1	95496	95241	41.54	41.4	Cir.	0.04	4.5	0	0.013	68.718	51.78	51.509	4.29	0.4	2.414	40.33
95226.1	95226	95209	41.25	41.3	Cir.	-0.15	4.5	0	0.013	85.775	51.355	51.307	5.36	0.06	0.007	76.06
97393.1	97393	97386	42.82	42.62	Cir.	0.31	6	0	0.013	141.632	51.294	51.22	6.89	0.2	3.226	206.69
97325.1	97325	97327	41.6	41.4	Cir.	0.35	6	0	0.013	150.943	51.049	50.926	6.41	0.2	3.336	172.18
97327.1	97327	97198	41.4	41.52	Cir.	-0.07	4.5	0	0.013	152.1	50.926	50.409	9.36	0.89	0.022	53.76
99768.1	99768	99683	38	37.92	Cir.	-0.06	3.5	0	0.013	37.953	50.759	50.707	3.92	0.08	1.912	36.74
Link374	99483	99660A	44.35	43.99	Cir.	0	3.5	0	0.013	24.108	51.056	50.943	3.55	0.43	1.508	28.49
97198.1	97198	95591	37.53	36.81	Cir.	0.08	6	0	0.013	200.804	50.409	49.399	7.08	1.21	3.872	154.64
94907.1	94907	94938	46.2	44.05	Cir.	0.73	2	0	0.013	25.438	52.396	49.876	8.03	3.67	1.771	19.31
95601.1	95601	95496	42	41.54	Cir.	0.1	4.5	0	0.013	53.435	51.983	51.78	3.34	0.45	2.117	62.28
95305.1	95305	95332	44	43.67	Cir.	0.34	4.5	0	0.013	5.34	52.184	52.189	0.59	0.08	0.642	114.93
97497.1	97497	97484	44.15	44.13	Cir.	0.12	4	0	0.013	46.723	51.91	52.029	3.7	0.02	2.046	50.4
97438.1	97438	97434	44.04	44.01	Cir.	0.07	4	0	0.013	121.959	51.693	51.645	9.54	0.3	3.319	37.77
95813.1	95813	95301	47.05	46.7	Cir.	0.18	2	0	0.013	12.2	51.546	51.403	4.04	0.55	1.255	9.71
96562.1	96562	96578	48	47.45	Cir.	0.19	2	0	0.013	6.245	51.694	51.6	2.42	0.55	0.884	9.88
99455.1	99455	99467	47.65	47.62	Cir.	0.12	1.5	0	0.013	10.552	51.586	51.586	5.93	0.26	1.247	3.58
94880.1	94880	95601	47	46.34	Cir.	0.24	2	0	0.013	7.431	52.163	51.983	3.64	0.67	0.968	11.08
96584.1	96584	96757	47.35	47.25	Cir.	0.18	2	0	0.013	7.362	51.612	51.596	2.46	0.07	0.964	9.62
97427.1	97427	97423	43.75	43.5	Cir.	0.05	5	0	0.013	135.368	51.61	51.52	7.16	0.35	3.33	111.82
94137.1	94137	94722	43.5	43.14	Cir.	0.16	2	0	0.013	7.403	52.096	51.936	2.53	0.38	0.966	9
94722.1	94722	95496	42.58	42.29	Cir.	0.1	3	0	0.013	21.075	51.936	51.78	2.95	0.37	1.474	20.9
94938.1	94938	94945	44.05	43.8	Cir.	0.08	3	0	0.013	37.192	49.876	48.908	5.43	0.97	1.983	18.78
98584.1	98584	98430	44.83	44.76	Cir.	0.15	3.5	0	0.013	24.011	52.007	51.993	3.02	0.07	1.505	39.25
97434.1	97434	97427	44.04	43.75	Cir.	0.05	5	0	0.013	134.258	51.645	51.61	7.32	0.26	3.316	175.53
96578.1	96578	96584	47.45	47.35	Cir.	0.18	2	0	0.013	6.583	51.6	51.612	2.09	0.08	0.908	9.64
95308.1	95308	95199	44.7	44.6	Cir.	0.23	2	0	0.013	3.962	50.741	50.733	3.13	0.13	0.697	10.86
95199.1	95199	95187	41.18	41.02	Cir.	0.14	4.5	0	0.013	88.805	50.733	50.546	5.55	0.23	2.761	73.97
93818.1	93818	93801	39.5	39.02	Cir.	0.18	2	0	0.013	5.83	48.91	48.734	2.62	0.48	0.852	9.62
95008.1	95008	95006	40.78	40.5	Cir.	0.81	4.5	0	0.013	94.638	49.715	49.64	5.92	0.26	2.855	176.78
Link521	99683	Node506	37.92	37.91	Cir.	0	5	0	0.013	53.975	50.707	50.69	2.91	0.04	2.06	45.34
95332.1	95332	95411	43.67	42.4	Cir.	1.31	4.5	0	0.013	40.664	52.189	52.154	5.55	1.26	1.835	225.46
98681.1	98681	98663	44.85	44.85	Cir.	0	3.5	0	0.013	8.986	52.007	52.007	-0.94	0	0.903	3.18
Link518	97484	Node505	44.13	44.09	Cir.	0	3.5	0	0.013	47.993	52.029	52.197	4.96	0.03	2.162	53.78
96493.1	96493	97437	44.5	44.08	Cir.	0.25	4	0	0.013	21.862	51.858	52.174	1.73	0.38	1.376	52.01
97047.1	97047	97434	47.1	46.9	Cir.	0.18	2	0	0.013	8.955	51.619	51.644	3.77	0.29	1.067	9.46
94490.1	94490	94722	43.12	42.58	Cir.	0.26	2	0	0.013	13.127	52.12	51.936	4.12	0.69	1.303	11.47
95887.1	95887	95843	47.7	47.63	Cir.	0.19	2	0	0.013	5.094	51.649	51.647	1.8	0.07	0.795	9.83
95507.1	95507	95106	46.42	43.5	Cir.	2.04	1.5	0	0.013	1.395	49.874	49.806	2.43	0.69	0.442	14.99
97323.1	97323	97198	46.32	46.09	Cir.	0.32	2	0	0.013	20.001	50.817	50.409	6.35	0.56	1.606	12.84
97253.1	97253	97283	48	47.25	Cir.	0.2	2	0	0.013	10.801	51.99	52.021	3.42	0.72	1.177	11.46
93775.1	93775	92744	35.66	35	Cir.	0.26	7	0	0.013	342.036	47.809	46.806	8.85	1.01	4.87	275.06
95411.1	95411	95418	42.4	42.39	Cir.	0	4.5	0	0.013	40.507	52.154	52.071	2.53	0.17	1.831	10.77
97724.1	97724	97669	45.5	44.97	Cir.	0.28	4	0	0.013	38.54	51.894	51.909	3.06	0.46	1.85	74.76
97701.1	97701	97434	46.04	45.9	Cir.	0.18	3	0	0.013	16.833	51.667	51.644	3.83	0.19	1.311	28.1
98266.1	98266	98225	46.46	46.37	Cir.	0.19	3	0	0.013	13.8	51.672	51.626	2.87	0.09	1.181	29
95809.1	95809	95813	47.16	47.05	Cir.	0.19	2	0	0.013	11.406	51.586	51.546	3.79	0.15	1.212	9.75
95843.1	95843	95809	47.63	47.16	Cir.	0.18	2	0	0.013	9.41	51.647	51.586	2.98	0.45	1.095	9.66
97406.1	97406	97393	43	42.82	Cir.	0.31	6	0	0.013	139.808	51.327	51.294	6.8	0.2	3.204	178.77

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Conduit Slope	Diameter (Height) (ft)	Bottom Width (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
97384.1	97384	97325	42.6	41.6	Cir.	0.31	6	0	0.013	146.185	51.216	51.049	6.84	0.96	3.28	216.08
95187.1	95187	95021	41.02	40.86	Cir.	0.11	4.5	0	0.013	88.875	50.546	50.326	5.56	0.29	2.763	65.6
Link372	99660	99768A	43.98	43.84	Cir.	0	3.5	0	0.013	34.408	50.939	50.818	5.39	0.39	1.817	28.54
99474.1	99474	99483	44.45	44.35	Cir.	0.16	3.5	0	0.013	24.303	51.092	51.056	3.52	0.13	1.515	28.34
95591.1	95591	94945	36.81	36.5	Cir.	0.48	6	0	0.013	205.575	49.399	48.908	7.23	0.61	3.919	146.24
94871.1	94871	94907	46.56	46.2	Cir.	0.13	2	0	0.013	11.639	52.576	52.396	3.67	0.74	1.224	8.02
99385.1	99385	99467	47.3	46	Cir.	4.88	2	0	0.013	7.738	51.586	51.586	3.74	0.16	0.989	49.97
96294.1	96294	95353	44.4	44.1	Cir.	0.4	4	0	0.013	34.714	52.388	52.196	4.54	0.59	1.753	43.24
97571.1	97571	96294	45	44.4	Cir.	0.27	4	0	0.013	20.047	52.291	52.388	2.59	0.58	1.316	55.7
95353.1	95353	95332	44.1	44	Cir.	0.4	4	0	0.013	34.639	52.196	52.189	8.09	0.1	1.751	134.97
94868.1	S28	94880	47.27	47	Cir.	2.01	2	0	0.013	6.021	52.168	52.163	4.2	0.21	0.867	32.05
97729.1	S23	97724	46.82	45.8	Cir.	2.04	2	0	0.013	-28.823	51.696	51.894	-9.06	1.01	1.364	32.31
97333.1	S69	97438	49.26	46.46	Cir.	10.22	2	0	0.013	-3.811	51.82	51.693	5.37	2.79	0.567	72.31
98319.1	S71	98225	48.05	47.12	Cir.	1.53	2	0	0.013	4.18	51.659	51.626	5.32	0.93	0.717	27.98
98219.1	S73	98266	49.26	48.69	Cir.	3.71	2	0	0.013	2.042	51.684	51.672	6.01	0.57	0.495	43.58
95241.1	95241	95224	41.4	41.3	Cir.	0.09	4.5	0	0.013	71.862	51.509	51.404	4.49	0.14	2.472	60.33
95209.1	95209	95200	41.3	41.39	Cir.	-0.14	4.5	0	0.013	86.34	51.307	51.209	5.4	0.13	0.007	72.79
95768.1	S87	95843	47.67	47.63	Cir.	0.17	2	0	0.013	3.012	51.647	51.647	0.96	0.01	0.604	9.43
97500.1	S90	97409	48	47	Cir.	1.22	2	0	0.013	14.788	51.547	51.35	5.76	1	1.385	33.63
95943.1	S96	95887	47.78	47.7	Cir.	0.24	2	0	0.013	4.357	51.672	51.649	1.93	0.08	0.733	11.07
99383.1	S194	99474	47.81	47.2	Cir.	2.04	1.25	0	0.013	5.249	51.299	51.092	7.66	0.61	0.928	9.22
94994.1	S191	94907	47.76	46.7	Cir.	2.04	2	0	0.013	6.8	52.422	52.396	7.02	1.06	0.924	32.32
94850.1	S198	94907	47.14	46.7	Cir.	2.02	2	0	0.013	6.222	52.429	52.396	7.85	0.44	0.883	32.18
94991.1	S197	94907	47.5	46.7	Cir.	2.03	2	0	0.013	6.657	52.416	52.396	6.11	0.8	0.914	32.24
94975.1	S208	94871	47.79	46.81	Cir.	2.04	2	0	0.013	3.113	52.671	52.576	3.55	0.98	0.615	32.31
96271.1	S67	96584	47.85	47.35	Cir.	1	2	0	0.013	2.198	51.737	51.612	1.82	0.44	0.514	13.76
94383.1	S61	94430	47.21	46.62	Cir.	2.03	2	0	0.013	6.121	52.132	52.083	8.78	0.54	0.875	32.2
98259.1	S91	98299	49.45	49.18	Cir.	2.46	2	0	0.013	2.306	51.658	51.651	4.84	0.27	0.526	35.51
97489.1	S121	97393	47.3	47	Cir.	1.88	2	0	0.013	19.491	51.302	51.294	6.18	0.35	1.586	17.99
97479.1	97479	S121	47.5	47.3	Cir.	1.09	2	0	0.013	9.35	51.183	51.302	3.41	0.03	1.092	26.45
97450.1	S123	97325	45.79	45.07	Cir.	2.05	2	0	0.013	2.173	51.113	51.049	4.03	0.71	0.511	32.37
93842.1	93842	93801	39.25	38.92	Cir.	2.01	2	0	0.013	3.35	48.737	48.734	3.61	0.29	0.64	32.05
94943.1	S129	95008	44.62	44.02	Cir.	2.05	2	0	0.013	1.841	49.718	49.715	4.07	0.59	0.47	32.39
99785.1	S178	99660	46.89	46.02	Cir.	2.04	1.25	0	0.013	5.254	51.189	50.939	7.67	0.87	0.929	9.24
99558.1	S181	99660	46.77	46.02	Cir.	2.05	1.25	0	0.013	2.768	51.005	50.939	6.49	0.75	0.667	9.24
97167.1	S175	97283	48.55	47.75	Cir.	2.05	2	0	0.013	3.571	52.047	52.021	4.45	0.79	0.66	32.36
97102.1	S192	97253	49.38	48.34	Cir.	2.04	2	0	0.013	7.451	52	51.99	5.43	1.03	0.97	32.28
99640.1	S214	99459	49.17	48.25	Cir.	2.03	1.25	0	0.013	2.928	51.591	51.584	4.08	0.91	0.687	9.21
95441.1	S26	95601	46.23	45.65	Cir.	2.04	2	0	0.013	-27.456	52.11	51.983	-8.62	0.58	1.285	32.33
97783.1	S22	97724	46.78	45.8	Cir.	2.05	2	0	0.013	-28.228	52.123	51.894	-8.87	0.97	1.573	32.36
97461.1	S40	97484	46.59	46.38	Cir.	2.03	2	0	0.013	5.907	52.205	52.029	5.54	0.21	0.858	32.26
97533.1	S70	97438	47.3	47	Cir.	0.56	2	0	0.013	5.5	52.44	51.693	2.74	0.3	0.827	12.99
95304.1	S65	95301	47.27	46.7	Cir.	3.2	2	0	0.013	2.765	51.404	51.403	6.41	0.57	0.579	40.46
95306.1	S82	95301	47.27	46.7	Cir.	5.06	2	0	0.013	3.264	51.403	51.403	5.31	0.56	0.631	50.89
95894.1	S88	95843	47.67	47.63	Cir.	0.28	2	0	0.013	5.917	51.654	51.647	1.87	0.01	0.859	11.92
98422.1	S93	98299	47.11	46.98	Cir.	0.16	3	0	0.013	3.45	51.666	51.651	1.01	0.1	0.578	27.01
97460.1	S122	97384	46.69	46.25	Cir.	2.02	2	0	0.013	-2.361	51.227	51.216	4.81	0.44	0.511	32.17
93915.1	S112	93818	40.7	39.75	Cir.	2.04	2	0	0.013	-3.062	48.912	48.91	2.78	0.92	0.495	32.31
94960.1	S98	95021	44.59	44.02	Cir.	2.02	2	0	0.013	2.181	50.333	50.326	5.45	0.57	0.512	32.19
94954.1	S115	95026	44.73	44.02	Cir.	2.03	2	0	0.013	2.354	50.276	50.265	5.23	0.71	0.532	32.24
93778.1	S111	93818	40.33	39.75	Cir.	2.05	2	0	0.013	2.13	48.912	48.91	3.53	0.58	0.506	32.37
93763.1	93763	93794	39.17	38.9	Cir.	2.05	2	0	0.013	2.134	48.658	48.656	4.44	0.27	0.506	32.41
97482.1	S176	97283	48.76	47.75	Cir.	2.04	2	0	0.013	9.738	52.13	52.021	6.68	1.01	1.116	32.28
97477.1	S182	S176	49.36	48.76	Cir.	2.04	2	0	0.013	5.304	52.153	52.13	5.85	0.57	0.812	32.3
95029.1	S174	94938	46.41	45.55	Cir.	2.03	2	0	0.013	4.705	49.895	49.876	5.61	0.85	0.762	32.25
94856.1	S190	94907	47.58	46.7	Cir.	2.04	2	0	0.013	5.149	52.422	52.396	7.34	0.87	0.8	32.31
99384.1	S211	99474	48.04	47.2	Cir.	2.03	1.25	0	0.013	2.832	51.174	51.092	6.48	0.84	0.675	9.2
95330.1	S29	95601	46.23	45.65	Cir.	2.04	2	0	0.013	4.379	51.983	51.983	5.31	0.58	0.734	32.33
96509.1	S25	96582	48.82	48.32	Cir.	2.03	1.25	0	0.013	6.142	52.072	51.837	7.63	0.5	1.001	9.21
98480.1	S21	98430	47.48	47.01	Cir.	2.05	1.25	0	0.013	3.901	52.022	51.993	6.27	0.47	0.799	9.26
96262.1	S38	96299	47.68	47.08	Cir.	2.03	1.25	0	0.013	3.04	51.866	51.848	5.24	0.6	0.701	9.21
96759.1	S76	96757	50.2	49.8	Cir.	2.94	2	0	0.013	-1.305	51.61	51.596	4.78	0.4	0.386	38.79
97515.1	S74	97427	48.83	46	Cir.	10.55	2	0	0.013	8.824	52.243	51.61	7.73	2.81	1.059	73.49
94097.1	S57	94137	44.15	43.5	Cir.	2.02	2	0	0.013	4.957	52.101	52.096	3.64	0.54	0.783	32.18
98354.1	S92	98299	48.85	48.44	Cir.	2.18	2	0	0.013	5.486	51.681	51.651	6.75	0.41	0.826	33.42
97316.1	S118	97386	46.59	46.27	Cir.	2.02	2	0	0.013	3.452	51.253	51.22	5	0.32	0.649	32.19
95310.1	S86	95308	49.45	49	Cir.	1.92	2	0	0.013	1.787	50.749	50.741	4.59	0.45	0.462	31.36
94942.1	S130	95006	44.12	43.5	Cir.	2.05	2	0	0.013	1.998	49.643	49.64	4.51	0.62	0.49	32.38
97190.1	S135	97198	45.6	45.27	Cir.	2.04	1.25	0	0.013	1.348	50.449	50.409	4.71	0.33	0.458	9.23
97100.1	S196	S192	50.46	49.38	Cir.	2.03	2	0	0.013	2.201	52.027	52	4.63	1.05	0.514	32.23
93776.1	93776	93775	43.39	42.69	Cir.	2.05	1.25	0	0.013	6.27	48.008	47.809	7.68	0.7	1.01	9.24
94982.1	S221	94871	47.8	46.81	Cir.	2.03	2	0	0.013	6.483	52.624	52.576	4.64	0.99	0.901	32.27
99566.1	S215	99455	48.24	47.65	Cir.	2.03	1.5	0	0.013	2.731	51.61	51.586	2.89	0.22	0.626	14.98
94873.1	S30	94880	47.29	47	Cir.	2.06	2	0	0.013	3.404	52.163	52.163	3.61	0.13	0.645	32.45
96301.1	S52	96299	47.5	47.08	Cir.	2.02	1.25	0	0.013	2.25	51.924	51.848	4.96	0.42	0.599	9.18
95888.1	S66	95813	47.86	47.05	Cir.	3.49	2	0	0.013	-4.394	51.546	51.546	3.93	0.13	0.552	42.28
93981.1	S58	S57	44.89	44.15	Cir.	2.03	2	0	0.013	2.171	52.103	52.101	3.74	0.62	0.51	32.23
95147.1	S63	95226	40	39.7	Cir.	1.25	2	0	0.013	1.444	51.355	51.355	0.57	0	0.414	25.29
94435.1	S62	94430	47.16	46.62	Cir.	2.05	2	0	0

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Conduit Slope	Diameter (Height) (ft)	Bottom Width (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
95224.1	95224	95226	41.3	41.25	Cir.	0.11	4.5	0	0.013	72.768	51.404	51.355	4.55	0.08	2.488	63.88
95153.1	S84	95209	44.66	44.25	Cir.	2.03	2	0	0.013	1.61	51.307	51.307	4.56	0.41	0.437	32.2
96609.1	S77	96562	49.05	48.73	Cir.	2.03	2	0	0.013	-6.608	51.712	51.694	5.4	0.32	0.802	32.19
97292.1	S120	97393	47.3	47	Cir.	1.17	2	0	0.013	3.99	51.401	51.294	2.67	0.3	0.7	14.88
95091.1	S117	S116	45.43	44.62	Cir.	2.04	2	0	0.013	2.317	50.302	50.292	4.64	0.76	0.528	32.29
95096.1	S116	95026	44.62	44.02	Cir.	2.03	2	0	0.013	5.66	50.292	50.265	7.12	0.6	0.839	32.26
95505.1	S132	95507	46.86	46.8	Cir.	0.28	1.5	0	0.013	1.015	49.885	49.874	2.45	0.08	0.375	5.53
97410.1	S156	97198	46.86	45.27	Cir.	2.04	1.25	0	0.013	5.583	50.974	50.409	7.16	1.59	0.957	9.23
99420.1	S212	99459	48.38	48	Cir.	2.05	1.5	0	0.013	6.613	51.593	51.584	3.73	0.37	0.994	15.03
95373.1	S27	95601	45.93	45.65	Cir.	2.05	2	0	0.013	3.179	51.984	51.983	5.98	0.28	0.622	32.37
98718.1	S18_S19_S43_S44_COMBINED	98663	47.65	47.1	Cir.	2.04	1.25	0	0.013	9.409	52.4	52.007	7.84	0.55	1.164	9.23
97329.1	S51	97437	47.3	47	Cir.	0.92	2	0	0.013	2.966	52.172	52.174	3.13	0.3	0.6	17.18
96762.1	S68	96757	50.2	49.8	Cir.	3.41	2	0	0.013	2.039	51.602	51.596	6.19	0.4	0.495	41.76
94143.1	S33	94137	44.33	43.5	Cir.	2.03	2	0	0.013	4.598	52.107	52.096	4.07	0.73	0.753	32.26
94061.1	S32	S33	44.83	44.33	Cir.	2.02	2	0	0.013	2.615	52.109	52.107	3.85	0.4	0.563	32.12
97194.1	S95	97406	47.3	47	Cir.	1.32	2	0	0.013	11.56	52.141	51.327	3.56	0.3	1.22	16.67
95108.1	S131	95106	44.59	44.36	Cir.	2.05	1.5	0	0.013	2.778	49.814	49.806	4.44	0.17	0.632	15.05
99563.1	S177	99660	46.75	46.02	Cir.	2.04	1.25	0	0.013	1.814	50.962	50.939	5.61	0.73	0.535	9.22
97161.1	S183	S175	49.23	48.55	Cir.	2.03	2	0	0.013	1.755	52.058	52.047	4.5	0.65	0.458	32.26
97454.1	S195	S193	48.5	48.25	Cir.	2.03	2	0	0.013	3.485	52.05	52.054	2.59	0.23	0.652	16.03
94844.1	S173	94938	46.36	45.55	Cir.	2.04	2	0	0.013	5.983	49.886	49.876	7.68	0.8	0.864	32.32
94809.1	S222	94871	47.27	46.81	Cir.	2.05	2	0	0.013	5.271	52.607	52.576	3.27	0.46	0.809	32.37
96620.1	S24	96582	48.61	48.32	Cir.	2.07	1.25	0	0.013	6.762	51.932	51.837	7.7	0.29	1.044	9.29
98467.1	S20	98430	47.61	47.01	Cir.	2.03	1.25	0	0.013	2.424	52.01	51.993	5.36	0.6	0.622	9.21
96374.1	S39	96299	47.89	47.08	Cir.	2.05	1.25	0	0.013	2.932	51.883	51.848	5.08	0.81	0.688	9.24
97539.1	S41	97497	46.73	46.4	Cir.	2.04	2	0	0.013	7.657	52.594	51.91	5.76	0.33	0.983	32.34
97604.1	S50	97437	49.37	48.86	Cir.	0.84	2	0	0.013	4.341	52.197	52.174	4.33	0.51	0.731	20.77
97321.1	S75	97427	47.25	46.87	Cir.	1.37	2	0	0.013	3.74	51.674	51.61	3.82	0.38	0.676	26.46
95876.1	S80	95809	47.36	47.16	Cir.	1.11	2	0	0.013	3.639	51.605	51.586	2.17	0.1	0.667	23.84
95169.1	S55	95224	44.9	44.4	Cir.	2.03	2	0	0.013	1.657	51.404	51.404	4.43	0.49	0.444	32.24
94387.1	S100	S62	47.97	47.16	Cir.	2.03	2	0	0.013	6.413	52.138	52.066	5.63	0.58	0.896	32.27
97494.1	S94	97406	47.45	45.43	Cir.	8.12	2	0	0.013	-43.049	50.846	51.327	-13.55	2.02	1.297	64.46
97284.1	S124	97325	45.41	45.07	Cir.	2.03	2	0	0.013	1.754	51.065	51.049	4.1	0.34	0.458	32.21
Link429	S128	95106	44.94	43.5	Cir.	0	1.25	0	0.013	3.606	49.888	49.806	5.19	0.39	0.766	13.49
93840.1	93840	93794	39.36	38.9	Cir.	2.02	2	0	0.013	-3.221	48.657	48.656	3.36	0.44	0.5	32.19
93841.1	93841	93794	39.13	38.65	Cir.	2.02	2	0	0.013	2.964	48.658	48.656	3.43	0.48	0.599	32.19
97232.1	S157	97198	46.48	45.27	Cir.	2.03	1.25	0	0.013	2.383	50.573	50.409	4.64	1.21	0.617	9.21
97458.1	S193	97253	48.25	48	Cir.	2.04	2	0	0.013	6.596	52.054	51.99	4.92	0.25	0.909	15.56
95585.1	S158	95591	45.57	44.84	Cir.	2.02	1.25	0	0.013	3.334	49.504	49.399	6.28	0.73	0.736	9.19
94851.1	S185	94938	46.19	45.55	Cir.	2.03	2	0	0.013	5.856	49.889	49.876	7.81	0.64	0.855	32.25
99380.1	S217	99385	48.12	47.8	Cir.	2.07	1.5	0	0.013	4.266	51.607	51.586	4.55	0.33	0.791	15.1
99416.1	S216	99455	47.95	47.65	Cir.	2.05	1.5	0	0.013	4.171	51.606	51.586	2.98	0.1	0.782	15.06
96386.1	S3	96294	48.1	48	Cir.	2.03	2	0	0.013	5.293	52.426	52.388	3.71	0.13	0.811	11.63
96459.1	S5	96294	48.1	48	Cir.	2.04	2	0	0.013	4.226	52.388	52.388	2.66	0.14	0.721	9.25
96363.1	S15	96294	48.1	48	Cir.	2.04	2	0	0.013	1.68	52.463	52.388	2.17	0.13	0.447	9.84
96322.1	S14	96294	48.1	48	Cir.	2.04	2	0	0.013	-0.913	52.459	52.388	1.26	0.1	0.31	10.23
97592.1	S2	97571	48.1	48	Cir.	2.02	2	0	0.013	7.556	52.301	52.291	5.54	0.1	0.977	19.21
100261.1	S1	97571	48.1	48	Cir.	2.03	2	0	0.013	10.117	52.416	52.291	3.88	0.1	1.138	14.87
Link373	99768A	99768	38.67	38.59	Cir.	0	3.5	0	0.013	34.394	50.818	50.759	3.55	0.15	1.817	30
Link375	99660A	99660	43.99	43.98	Cir.	0	3.5	0	0.013	23.903	50.943	50.939	3.68	0.02	1.501	23.71
Link419	S16	97571	48.6	48.5	Cir.	2.03	2	0	0.013	7.335	52.336	52.291	3.56	0.1	0.962	14.87
Link418	S17	97571	48.6	48.5	Cir.	2.03	2	0	0.013	10.234	52.315	52.291	3.79	0.1	1.145	14.87
Link420	S4	96294	48.1	48	Cir.	2.03	2	0	0.013	5.834	52.485	52.388	3.96	0.13	0.853	11.63
Link421	S6	96294	48.1	48	Cir.	2.03	2	0	0.013	2.614	52.474	52.388	2.92	0.12	0.563	11.63
Link423	S12	96294	48.1	48	Cir.	2.04	2	0	0.013	2.54	52.466	52.388	2.68	0.13	0.554	10.23
Link422	S13	96294	48.1	48	Cir.	2.04	2	0	0.013	1.072	52.465	52.388	1.63	0.11	0.355	10.23
Link425	S9	95305	44.1	44	Cir.	0	2	0	0.013	1.39	52.194	52.184	1.01	0.09	0.407	16
Link426	S10	95332	43.8	43.67	Cir.	0	2	0	0.013	2.786	52.221	52.189	1.32	0.06	0.581	18.24
Link427	S11	95332	43.8	43.67	Cir.	0	2	0	0.013	2.859	52.221	52.189	1.34	0.06	0.588	18.24
Link424	S7	95305	44.1	44	Cir.	0	2	0	0.013	1.401	52.194	52.184	1.26	0.1	0.408	16
Link376	S36	95241	41.5	41.4	Cir.	0	2	0	0.013	3.058	51.512	51.509	0.95	0.08	0.609	14.6
Link377	S37	95241	41.5	41.4	Cir.	0	2	0	0.013	2.934	51.512	51.509	0.91	0.08	0.596	14.6
Link378	S53	95241	41.5	41.4	Cir.	0	2	0	0.013	1.365	51.509	51.509	0.52	0	0.403	14.6
Link379	S54	95224	41.4	41.3	Cir.	0	2	0	0.013	1.244	51.404	51.404	-1.64	0.08	0.384	14.31
Link380	S64	95226	40.1	40	Cir.	0	2	0	0.013	0.692	51.355	51.355	0.4	0	0.283	14.31
Link381	S83	95226	40.1	40	Cir.	0	2	0	0.013	1.584	51.355	51.355	0.54	0	0.434	14.31
Link386	S79	S67	49	47.85	Cir.	0	2	0	0.013	-4.191	51.746	51.737	3.31	0.59	0.401	54.25
Link385	S97	95308	49.45	49	Cir.	1.92	2	0	0.013	2.976	50.746	50.741	5.4	0.45	0.601	31.36
Link384	S85	95199	41.3	41.18	Cir.	0	2	0	0.013	1.616	50.734	50.733	0.61	0	0.438	15.67
Link391	S159	95591	45.57	44.84	Cir.	2.02	1.25	0	0.013	5.192	49.609	49.399	7.21	0.73	0.923	9.19
Link390	S160	94945	36.6	36.5	Cir.	0	1.25	0	0.013	2.043	48.931	48.908	1.58	0.02	0.569	4.09
Link389	S163	94945	36.6	36.5	Cir.	0	1.25	0	0.013	1.678	48.924	48.908	1.3	0.02	0.514	4.09
Link388	S162	94945	36.6	36.5	Cir.	0	1.25	0	0.013	1.115	48.913	48.908	0.87	0.01	0.415	4.09
Link387	S161	94945	36.6	36.5	Cir.	0	1.25	0	0.013	1.887	48.928	48.908	1.46	0.02	0.546	4.09
Link394	Node395	93801	39.25	38.92	Cir.	2.01	2	0	0.013	-0.433	48.734	48.734	1.32	0.05	0.026	32.05
Link396	S56	94722	42.7	42.58	Cir.	0	2	0	0.013	3.055	51.939	51.936	0.95	0.08	0.609	15.67
Link398	S35	94722	42.7	42.58	Cir.	0	2	0	0.013	3.743	51.941	51.936	1.17	0.1	0.676	15.67
Link395	S34	94722	42.7	42.58	Cir.	0	2	0	0.013	1.114	51.936	51.936	0.52	0	0.362	15.67
Link405	S125	97384	46.69	46.25	Cir.	2.02	2	0	0.013	-2.464	51.24	51.216	4.2	0.44	0.517	32.17
Link404	S126	97384	46.69	46.25	Cir.	2.02	2	0	0.013	2.623	51.249	51.216	4.93	0.44	0.564	32.17
Link403	S119	97386	46.59	46.27	Cir.	0	2	0	0.013	-2.749	51.262	51.22	2.66	0.32	0.529	31.99
Link406	S127	97325	45.41	45.07	Cir.	0	2	0	0.013	2.981	51.073	51.049	5.62	0.34	0.601	31.99
Link407	S133	97325	45.41	45.07	Cir.	0	2	0	0.013	2.422	51.072	51.049	5.11	0.34	0.54	31.99
Link408	S134	97325	45.41	45.07	Cir.	0	2	0	0.013	1.493	51.084	51.049	3.11	0.33	0.421	31.99
Link409	S136	97198	45.6	45.27	Cir.	2.04	1.25	0	0.013	1.88	50.45	50.409	5.42	0.33	0.545	9.23
Link428	S8	95305	44.1	44	Cir.	0	2	0	0.013	1.39	52.194	52.184	1.01	0.09	0.407	16
Link432	S213	99459	48	47.5	Cir.	2.03	1.25	0	0.013	2.047	51.593	51.584	2.06	0.2	0.57	6.79
Link436	Node425	Node426	46.55	46.23	Rect.	0	3	4	0.015	3.603	52.164	52.159	0.49	0.29	0.29	35.88
Link437	Node426	Node427	46.23	45.82	Rect.	0	3	4	0.015	18.926	52.159	52.047	1.87	0.4	0.885	35.76

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Conduit Slope	Diameter (Height) (ft)	Bottom Width (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
Link438	Node427	Node428	45.82	45.79	Rect.	0	3	4	0.015	25.282	52.047	52.033	2.1	0.03	1.074	35.11
Link439	Node428	Node429	45.79	45.51	Rect.	0	3	4	0.015	26.203	52.033	51.953	2.17	0.27	1.1	35.97
Link440	Node429	Node430	45.51	45.48	Rect.	0	4	6	0.015	68.605	51.953	51.954	3.04	0.03	1.595	83.52
Link441	Node430	Node431	45.48	45.17	Rect.	0	4	6	0.015	68.514	51.954	51.929	3.06	0.31	1.594	88.7
Link519	Node431	Node505	45.17	44.16	Rect.	0	4	6	0.015	71.591	51.929	52.197	3.04	0.97	1.641	119.95
Link444	Node433	Node434	46.36	46.23	Cir.	0	3	0	0.013	16.389	51.966	51.963	2.28	0.12	1.292	22.52
Link445	Node434	Node435	46.23	46.17	Cir.	0	3	0	0.013	36.192	51.963	51.967	5.11	0.17	1.955	21.45
Link446	Node435	Node436	46.17	46.12	Cir.	0	3	0	0.013	47.026	51.967	51.969	6.63	0.21	2.232	23.01
Link447	Node436	Node437	46.12	46.08	Cir.	0	3	0	0.013	46.599	51.969	51.967	6.57	0.16	2.222	22.88
Link448	Node437	Node438	46.08	45.86	Rect.	0	3	4	0.015	46.981	51.967	51.933	3.9	0.38	1.624	35.49
Link449	Node438	Node439	45.86	45.8	Rect.	0	3	4	0.015	57.583	51.933	51.934	4.78	0.16	1.86	34.8
Link450	Node439	Node440	45.8	45.74	Rect.	0	3	4	0.015	58.677	51.934	51.938	4.87	0.15	1.883	37.16
Link451	Node440	Node441	45.74	45.72	Rect.	0	3	4	0.015	55.858	51.938	51.937	4.64	0.06	1.822	33.1
Link452	Node441	Node429	45.72	45.51	Rect.	0	3	4	0.015	56.411	51.937	51.953	4.69	0.51	1.834	35.95
Link453	Node442	Node433	46.45	46.36	Cir.	0	2	0	0.013	9.483	52.197	51.966	3	0.08	1.1	16.46
Link454	Node443	Node444	46.66	46.58	Cir.	0	2.5	0	0.013	6.09	52.04	51.969	1.68	0.08	0.816	29
Link455	Node444	Node433	46.55	46.36	Cir.	0	2	0	0.013	12.97	51.969	51.966	4.09	0.17	1.295	15.04
Link456	Node445	Node444	0	46.55	Cir.	0	2.5	0	0.013	9.3	52.001	51.969	1.73	0.01	0.001	548.83
Link457	Node446	Node447	47.32	47.27	Cir.	0	2.5	0	0.013	3.435	51.964	51.964	2.59	0.05	0.607	27.65
Link458	Node447	Node434	47.27	47.1	Cir.	0	2.5	0	0.013	33.278	51.964	51.963	6.76	0.22	1.961	29.44
Link459	Node448	Node449	47.2	47.15	Cir.	0	2.5	0	0.013	6.168	51.973	51.972	2.53	0.05	0.821	29
Link460	Node449	Node435	47.15	46.99	Cir.	0	2	0	0.013	13.63	51.972	51.967	4.31	0.16	1.329	16
Link461	Node450	Node436	47.84	47.73	Cir.	0	2	0	0.013	-3.912	51.97	51.969	2.92	0.11	0.599	16
Link462	Node451	Node453	46.54	46.47	Cir.	0	2	0	0.013	2.926	51.985	51.982	2.02	0.05	0.595	17.28
Link464	Node452	Node453	46.53	46.47	Cir.	0	2	0	0.013	4.009	52.184	51.982	1.98	0.05	0.701	15.37
Link463	Node453	Node437	46.47	46.23	Cir.	0	2	0	0.013	6.873	51.982	51.967	3.2	0.24	0.929	16.9
Link465	Node454	Node455	46.81	46.78	Cir.	0	2	0	0.013	-5.15	51.934	51.934	3.22	0.03	0.692	16
Link466	Node455	Node438	46.78	46.63	Cir.	0	2	0	0.013	14.725	51.934	51.933	4.66	0.15	1.382	16
Link467	Node456	Node457	46.52	46.47	Cir.	0	2	0	0.013	5.567	51.933	51.933	2.65	0.05	0.832	17.88
Link468	Node457	Node439	46.47	46.32	Cir.	0	2	0	0.013	8.728	51.933	51.934	2.76	0.15	1.053	16
Link469	Node458	Node440	0	46.96	Cir.	0	2	0	0.013	5.265	51.939	51.938	1.55	0.02	0	355.65
Link470	Node459	Node441	49	48.85	Cir.	0	1	0	0.013	2.143	52.26	51.937	3.33	0.15	0.625	2.61
Link471	Node460	Node430	47.4	47.29	Cir.	0	2	0	0.013	2.812	51.956	51.954	2.74	0.11	0.584	16.37
Link472	Node461	Node430	47.36	47.29	Cir.	0	2	0	0.013	2.851	51.955	51.954	2.97	0.07	0.588	16
Link473	Node462	Node428	48.6	48.42	Cir.	0	2	0	0.013	1.717	52.033	52.033	2.41	0.18	0.452	15.78
Link479	Node463	Node427	47.42	47.35	Cir.	0	2	0	0.013	3.763	52.05	52.047	3.99	0.07	0.678	16.6
Link476	Node464	Node427	48.92	48.88	Cir.	0	2	0	0.013	4.419	52.051	52.047	2.65	0.09	0.738	7.44
Link475	Node465	Node464	48.93	48.92	Cir.	0	2.5	0	0.013	3.139	52.052	52.051	1.83	0.07	0.579	13.67
Link477	Node466	Node464	0	48.92	Cir.	0	2	0	0.013	0.894	52.052	52.051	-0.44	0.01	0.002	310.31
Link480	Node469	Node426	47.22	47	Cir.	0	2	0	0.013	9.028	52.225	52.159	4.83	0.22	1.072	16
Link481	Node470	Node469	47.29	47.22	Cir.	0	2	0	0.013	4.723	52.23	52.225	2.78	0.05	0.763	17.28
Link482	Node471	Node469	47.29	47.22	Cir.	0	2	0	0.013	4.155	52.229	52.225	2.53	0.05	0.715	17.28
Link485	Node472	Node426	47.2	47	Cir.	0	2	0	0.013	7.133	52.187	52.159	4.88	0.2	0.948	17.35
Link489	Node478	Node479	46.4	45.4	Cir.	0	2	0	0.013	11.036	51.499	50.956	4.96	1.01	1.191	14.34
Link490	Node479	Node480	44.9	44.06	Cir.	0	3	0	0.013	19.219	50.956	50.731	5.7	0.85	1.405	42.08
Link491	Node480	99683	44.06	43.92	Cir.	0	3	0	0.013	19.274	50.731	50.707	6.34	0.14	1.407	48.94
Link509	Node481	Node478	47.7	47.65	Cir.	0	2	0	0.013	7.667	51.547	51.499	4.14	0.14	0.984	7.63
Link508	Node482	Node481	47.72	47.7	Cir.	0	2.5	0	0.013	3.989	51.548	51.547	1.86	0.01	0.655	17.49
Link510	Node483	Node481	48.3	48.26	Cir.	0	1.91	0	0.013	3.57	51.553	51.547	3.57	0.07	0.669	8.95
Link512	Node484	Node478	46.47	46.4	Cir.	0	2	0	0.013	3.262	51.503	51.499	1.78	0.07	0.631	14.11
Link511	Node485	Node484	47.72	47.63	Cir.	0	2	0	0.013	1.607	51.505	51.503	2.99	0.09	0.437	14.15
Link504	Node486	Node487	46.15	46.08	Cir.	0	2	0	0.013	2.934	51.015	51.009	2.21	0.05	0.596	14.11
Link505	Node487	Node479	46.08	45.9	Cir.	0	2	0	0.013	6.595	51.009	50.956	4.5	0.19	0.909	14.47
Link506	Node488	Node487	46.12	46.08	Cir.	0	2	0	0.013	3.534	51.014	51.009	2.55	0.03	0.657	13.64
Link507	Node489	Node479	45.97	45.9	Cir.	0	2	0	0.013	1.791	50.959	50.956	3.09	0.08	0.463	14.11
Link495	Node490	Node491	44.43	44.37	Cir.	0	2	0	0.013	0.697	50.724	50.722	2.08	0.06	0.284	14.31
Link496	Node491	Node492	44.37	44.3	Cir.	0	2	0	0.013	0.943	50.722	50.719	1.96	0.06	0.333	14.52
Link501	Node492	Node493	44.3	44.18	Cir.	0	2	0	0.013	1.312	50.719	50.71	2.61	0.12	0.395	14.81
Link503	Node493	99683	41.52	41.5	Rect.	0	4	5	0.015	7.128	50.71	50.707	1.23	0.06	0.394	50.1
Link502	Node494	Node493	41.53	41.52	Cir.	0	5	0	0.013	-4.052	50.711	50.71	-0.5	0.01	0.467	59.75
Link498	Node495	Node494	41.54	41.53	Cir.	0	5	0	0.013	-1.458	50.711	50.711	-0.25	0	0.268	67.25
Link494	Node496	Node493	44.5	44.18	Cir.	0	2	0	0.013	0.829	50.712	50.71	3.42	0.32	0.312	31.99
Link492	Node497	Node498	46.89	46.76	Cir.	0	2	0	0.013	0.565	50.763	50.762	1.62	0.11	0.256	14.42
Link493	Node498	99768	46.76	46.6	Cir.	0	2	0	0.013	1.312	50.762	50.759	1.96	0.16	0.395	14.49
Link523	Node499	Node506	46.75	46.58	Cir.	0	2	0	0.013	1.49	50.692	50.69	4.63	0.17	0.421	29.5
Link524	Node501	Node506	43.75	43.5	Cir.	0	2	0	0.013	2.096	50.697	50.69	3.92	0.25	0.502	20.65
Link513	Node502	Node503	45.25	45.17	Cir.	0	2	0	0.013	2.598	50.763	50.76	3.88	0.09	0.561	16.52
Link514	Node503	99768	45.17	45.13	Cir.	0	2	0	0.013	2.974	50.76	50.759	4.53	0.04	0.6	20.23
Link520	Node505	97437	44.09	44.08	Cir.	0	4	0	0.013	110.058	52.197	52.174	8.73	0.25	3.17	21.91
Link522	Node506	97918	37.91	37.65	Cir.	0	5	0	0.013	55.504	50.69	50.467	2.82	0.26	2.09	60.24
Link525	Node507	Node425	47	46.55	Cir.	0	2	0	0.013	3.049	52.167	52.164	3.95	0.44	0.608	26.42
Link526	Node508	Node440	49	48.8	Cir.	0	1	0	0.013	2.193	52.099	51.938	3.22	0.21	0.633	2.49
Link528	Node509	Node439	46.27	46.04	Cir.	0	0.16	0	0.013	0.115	51.934	51.934	4.92	0	0.309	0.02
Link529	Node510	Node509	46.35	46.27	Cir.	0	0.16	0	0.013	0.089	51.835	51.934	3.7	0	0.235	0.01
Link527	Node511	Node509	46.32	46.27	Cir.	0	0.16	0	0.013	0.078	52.788	51.934	3.13	0	0.202	0.01
Link530	Node513	Node514	47.48

PROPOSED DRAINAGE AREA CALCUATIONS

XPSWMM–NODE TABLE
DESIGN FREQUENCY: 100 YEAR PROPOSED

Name	Area (ac)	Width (ft)	Slope	Impervious Percentage (%)	Total Rainfall (in)	Total Runoff Depth (in)	Ground Elevation (Spill Crest) (ft)	Invert Elevation (ft)	Max Water Elevation (ft)	Max Water Depth (ft)	Total Flow Through Node (cf)	Max Flow (cfs)	ROW Elevation (ft)
S28	0.87	140	0.16	45	8.711	6.731	52.34	47.27	53.108	5.838	62815.58	3.825	
S23	1.36	228	0.1	45	8.711	6.721	50.8	46.82	51.214	4.394	723591.03	5.979	
S69	0.21	71	0.18	45	8.711	6.76	51.76	49.26	52.333	3.073	449099.41	0.923	52.3
S71	1.46	132	0.26	45	8.711	6.713	52.33	48.05	52.819	4.769	45805.28	6.418	52.42
S73	0.54	85	0.24	45	8.711	6.739	51.76	49.26	52.56	3.3	153363.52	2.374	52.56
S87	0.58	107	0.17	45	8.711	6.738	53.41	47.67	52.733	5.063	28350.11	2.55	52.22
S90	0.87	138	0.3	45	8.711	6.744	50.68	48	51.589	3.589	592163.65	3.826	
S96	1.61	198	0.25	45	8.711	6.729	51.52	47.78	52.794	5.014	43570.03	7.079	52.39
S194	2.09	199	0.24	80	8.711	7.75	50.99	47.81	52.164	4.354	77557.8	9.519	
S191	2.79	166	0.1	45	8.711	6.632	50.77	47.76	53.009	5.249	93819.94	12.17	
S198	1.15	241	0.09	45	8.711	6.73	51.2	47.14	52.975	5.835	60358.27	5.056	
S197	2.93	201	0.2	45	8.711	6.683	51.68	47.5	52.983	5.483	99621.72	12.864	
S208	1.15	142	0.22	45	8.711	6.726	52.57	47.79	53.054	5.264	36807.09	5.056	
S67	0.46	101	0.1	45	8.711	6.734	52.42	47.85	52.543	4.693	34261.93	2.023	53.21
S61	0.97	118	0.16	45	8.711	7.025	52.04	47.21	52.275	5.065	637241.59	4.076	52.86
S91	0.44	69	0.09	45	8.711	6.714	51.97	49.45	52.307	2.857	457095.1	1.934	52.31
S121	0.31	77	0.21	45	8.711	6.753	50.79	47.3	51.239	3.939	663345.91	1.363	
S123	0.3	81	0.27	45	8.711	6.759	51.52	45.79	52.367	6.577	159144.86	1.319	52.65
93842	1.348	161	0.218	68.1	8.711	7.415	52.73	39.25	52.485	13.235	72489.93	6.067	53.1
S129	0.31	89	0.22	45	8.711	6.758	53.86	44.62	51.796	7.176	15175.79	1.363	53.11
S178	2.74	193	0.22	90	8.711	8.001	51.49	46.89	52.173	5.283	71939.56	12.601	51.74
S181	1.08	99	0.14	90	8.711	8.005	52.68	46.77	52.3	5.53	62676.15	4.967	51.74
S175	0.64	100	0.28	45	8.711	6.742	52.19	48.55	52.675	4.125	71297.21	2.814	52.62
S192	0.44	158	0.19	45	8.711	6.762	51.91	49.38	52.244	2.864	102603.01	1.935	52.64
S214	0.28	108	0.26	90	8.711	8.128	51.19	49.17	52.146	2.976	18182.21	1.288	
S26	0.93	110	0.13	45	8.711	6.708	51.37	46.23	52.175	5.945	629576.29	4.088	52.66
S22	1.53	181	0.23	45	8.711	6.725	50.92	46.78	52.818	6.038	75298.47	6.727	
S40	1.69	196	0.14	45	8.711	6.709	52.39	46.59	52.862	6.272	71900.74	7.428	52.13
S70	0.83	121	0.1	45	8.711	6.713	51.51	47.3	52.789	5.489	22595.91	3.649	52.3
S65	0.83	96	0.27	45	8.711	6.728	51.43	47.27	51.713	4.443	652973.63	3.649	52.15
S82	0.26	62	0.11	45	8.711	6.74	51.55	47.27	52.773	5.503	6966.69	1.143	
S88	0.54	119	0.2	45	8.711	6.748	51.27	47.67	52.741	5.071	22345.02	2.375	52.22
S93	0.83	136	0.22	45	8.711	6.739	51.86	47.11	52.57	5.46	170548.73	3.65	52.47
S122	0.52	168	0.25	45	8.711	6.763	52.06	46.69	52.713	6.023	17869.55	2.287	53.05
S112	0.38	73	0.26	45	8.711	6.748	51.94	40.7	52.759	12.059	21454.06	1.671	53.25
S98	0.93	120	0.22	45	8.711	6.728	52.27	44.59	52.283	7.693	45334.25	4.089	52.59
S115	0.78	137	0.19	45	8.711	6.739	52.97	44.73	52.262	7.532	38100.62	3.43	53.19
S111	0.69	108	0.26	45	8.711	6.74	52.99	40.33	52.741	12.411	33734.3	3.034	53.25
93763	0.805	136	0.753	79.2	8.711	7.793	53.15	39.17	52.298	13.128	45493.69	3.664	52.74
S176	1.99	164	0.16	45	8.711	6.689	52.98	48.76	52.745	3.985	167919.13	8.74	53.17
S182	2.55	166	0.14	45	8.711	6.662	52.17	49.36	52.759	3.399	91252.36	11.174	53.17
S174	2.13	141	0.14	45	8.711	6.663	51.21	46.41	52.805	6.395	104573.05	9.335	
S190	1.02	95	0.28	45	8.711	6.717	52.05	47.58	52.408	4.828	290512.16	4.484	
S211	1.09	117	0.26	79.1	8.711	7.737	52.1	48.04	52.222	4.182	52510.57	4.96	
S29	0.78	91	0.27	45	8.711	6.728	53.38	46.23	52.987	6.757	38063.56	3.43	52.66
S25	3.39	295	0.11	45	8.711	6.959	53.28	48.82	53.118	4.298	115872.89	12.792	52.13
S21	1.72	145	0.27	45	8.711	6.71	53.65	47.48	52.949	5.469	70127.37	7.56	
S38	0.84	154	0.16	45	8.711	6.737	51.7	47.68	52.189	4.509	124678.73	3.694	52.16
S76	0.33	66	0.28	45	8.711	6.751	52.67	50.2	52.607	2.407	16158.08	1.451	53.47
S74	0.71	128	0.29	45	8.711	6.748	51.33	48.83	52.75	3.92	29372.75	3.122	
S57	0.53	136	0.17	45	8.711	6.751	54.09	44.15	53.559	9.409	51375.31	2.331	53.29
S92	1.65	135	0.14	45	8.711	6.683	51.35	48.85	51.839	2.989	621748.09	7.244	52.31
S118	0.65	80	0.26	45	8.711	6.73	51.86	46.59	52.721	6.131	6998.47	2.858	53.05
S86	0.46	92	0.25	45	8.711	6.749	51.55	49.45	52.544	3.094	20481.97	2.023	
S130	0.43	128	0.3	45	8.711	6.763	53.85	44.12	51.74	7.62	21082.91	1.891	53.03
S135	0.41	69	0.14	45	8.711	6.73	52.67	45.6	52.03	6.43	20008.5	1.803	52.42
S196	0.61	111	0.14	45	8.711	6.734	53.26	50.46	52.246	1.786	29798.76	2.682	52.64
93776	2.608	226	0.176	76	8.711	7.613	53.3	43.39	50.277	6.887	100120.52	11.831	53.49
S221	1.37	124	0.09	45	8.711	6.672	51.97	47.8	53.055	5.255	43221.31	6.01	
S215	0.87	112	0.14	80	8.711	7.753	51.13	48.24	52.15	3.91	17455.01	3.962	51.06
S30	0.74	91	0.27	45	8.711	6.731	52.4	47.29	53.094	5.804	23440.39	3.254	
S52	0.69	166	0.13	45	8.711	6.744	53.19	47.5	53.246	5.746	33725.39	3.034	52.16
S66	0.28	60	0.09	45	8.711	6.731	52.05	47.86	52.769	4.909	8315.9	1.231	52.57
S58	0.52	87	0.21	45	8.711	6.739	53.61	44.89	53.565	8.675	25418.49	2.286	53.29
S63	0.43	92	0.12	45	8.711	6.737	51.87	40	52.061	12.061	326110.75	1.891	52.92
S62	2.75	248	0.1	45	8.711	6.677	52.05	47.16	53.247	6.087	111736.21	12.068	52.86
S78	0.8	97	0.15	45	8.711	6.714	52.04	49.05	52.13	3.08	35066.94	3.517	52.54
S89	0.9	181	0.13	45	8.711	6.736	51.21	48.7	52.762	4.062	28574.97	3.957	
S114	1.35	152	0.24	45	8.711	6.723	52.1	40.49	52.779	12.289	56361.59	5.935	53.25
S180	1.59	227	0.26	85	8.711	7.929	51.7	47.88	52.156	4.276	71363.1	7.277	
S184	1.59	112	0.29	45	8.711	6.7	51.43	46.31	52.799	6.489	83163.02	6.987	
S207	0.81	93	0.15	45	8.711	6.711	52.1	47.4	53.032	5.632	31845.81	3.561	
S218	1.59	108	0.09	70	8.711	7.38	51.69	48.38	52.156	3.776	29584.43	7.165	
S31	1.17	126	0.27	45	8.711	6.724	52.59	48.2	53.141	4.941	36299.21	5.144	
S42	1.089	111	0.136	66.7	8.711	7.346	51.69	47.44	52.85	5.41	36052.44	4.894	
S72	1.16	116	0.29	45	8.711	6.722	52.82	49.77	52.737	2.967	56251.03	5.1	52.56
S81	0.5	89	0.19	45	8.711	6.739	53.19	47.36	52.751	5.391	24444.59	2.199	
S84	0.58	94	0.25	45	8.711	6.741	51.8	44.66	52.507	7.847	27338.43	2.55	52.43
S77	0.79	97	0.14	45	8.711	6.713	51.32	49.05	51.975	2.925	267697.26	3.473	52.54
S120	0.46	82	0.2	45	8.711	6.74	51.46	47.3	52.724	5.424	22396.98	2.023	
S117	0.83	83	0.15	45	8.711	6.701	52.27	45.43	52.794	7.364	40026.79	3.647	53.19
S116	1.61	159	0.18	45	8.711	6.707	52.74	44.62	52.405	7.785	118885.57	7.076	53.19
S132	0.37	112	0.17	45	8.711	6.756	53.71	46.86	52.269	5.409	18122.82	1.627	53.07
S156	2.25	133	0.22	45	8.711	6.674	52.92	46.86	52.464	5.604	82560.64	9.872	52.42
S212	0.42	102	0.26	80	8.711	7.81	51.08	48.38	52.15	3.77	14896.38	1.913	
S27	1.15	129	0.29	45	8.711	6.728	52.58	45.93	52.987	7.057	56110.19	5.056	52.66
S18_S19_S43_S44_COMBINED	4.44	169	0.17	45	8.711	6.606	51.5	47.65	53.207	5.557	114664.84	19.261	
S51	0.84	106	0.21	45	8.711	6.726	52.08	47.3	52.849	5.549	32078.49	3.693	52.5
S68	0.64	139	0.25	45	8.711	6.752	52.47	50.2	52.625	2.425	30494.35	2.814	53.47
S33	0.89	138	0.27	45	8.711	6.741	53.66	44.33	53.564	9.234	71579.06	3.913	53.29
S32	0.62	130	0.14	45	8.711	6.74	53.29	44.83	53.59	8.76	28011.57	2.726	53.29
S95	0.5	81	0.13	45	8.711	6.726	51.55	47.3	52.728	5.428	22136.75	2.198	
S131	1.22	103	0.22	45	8.711	6.703	52.44	44.59	52.252	7.662	59249.61	5.362	53.29
S177	0.63	104	0.28	90	8.711	8.087	51.93	46.75	52.12	5.37	25127.74	2.898	51.74

Name	Area (ac)	Width (ft)	Slope	Impervious Percentage (%)	Total Rainfall (in)	Total Runoff Depth (in)	Ground Elevation (Spill Crest) (ft)	Invert Elevation (ft)	Max Water Elevation (ft)	Max Water Depth (ft)	Total Flow Through Node (cf)	Max Flow (cfs)	ROW Elevation (ft)
S183	0.7	141	0.11	45	8.711	6.733	52.96	49.23	52.681	3.451	34188.25	3.078	52.62
S195	1.5	127	0.21	45	8.711	6.702	52.26	48.5	52.606	4.106	66990.5	6.592	52.98
S173	1.48	111	0.25	45	8.711	6.699	51.54	46.36	52.799	6.439	77068.27	6.503	
S222	1.04	139	0.28	45	8.711	6.735	52.21	47.27	53.045	5.775	32710.62	4.573	
S24	2.93	274	0.09	45	8.711	6.675	51.13	48.61	53.013	4.403	45220.24	12.857	52.13
S20	1.05	94	0.26	45	8.711	6.712	52.61	47.61	52.853	5.243	28635	4.616	
S39	0.77	105	0.23	45	8.711	6.732	51.77	47.89	52.97	5.08	21219.03	3.386	52.16
S41	2.07	145	0.15	45	8.711	6.672	51.8	46.73	52.871	6.141	82914.77	9.081	52.13
S50	1.09	100	0.27	45	8.711	6.715	51.87	49.37	52.853	3.483	32005.96	4.792	52.5
S75	0.42	84	0.27	45	8.711	6.75	51.83	47.25	52.404	5.154	401181.23	1.847	
S80	0.57	99	0.29	45	8.711	6.746	51.47	47.36	51.753	4.393	667912.99	2.506	
S55	0.49	101	0.22	45	8.711	6.748	52.19	44.9	52.989	8.089	89090.3	2.155	52.98
S100	0.89	97	0.28	45	8.711	6.726	51.85	47.97	53.242	5.272	29735.72	3.913	52.86
S94	0.88	93	0.13	45	8.711	6.7	49.95	47.45	50.735	3.285	1042195.66	3.867	
S124	0.33	80	0.23	45	8.711	6.754	52.67	45.41	52.488	7.078	16161.05	1.451	52.65
S128	1.54	128	0.23	45	8.711	7.012	53.04	44.94	52.415	7.475	74666.58	6.338	53.29
93840	0.141	46	0.754	68.1	8.711	7.479	52.52	39.36	52.295	12.935	7645.86	0.635	52.74
93841	0.727	126	1.113	68.1	8.711	7.467	52.73	39.13	52.3	13.17	39368.39	3.272	52.74
S157	0.4	77	0.2	45	8.711	6.743	53.28	46.48	52.064	5.584	19561.11	1.759	52.42
S193	1.33	115	0.3	45	8.711	6.715	51.86	48.25	52.582	4.332	143285.61	5.847	52.98
S158	1.43	104	0.09	45	8.711	6.65	52.99	45.57	51.616	6.046	64314	6.256	
S185	1.98	151	0.22	45	8.711	6.696	51.52	46.19	52.8	6.61	101301.13	8.699	
S217	1.74	109	0.27	80	8.711	7.717	51.31	48.12	52.164	4.044	64051.33	7.924	
S216	0.77	82	0.25	80	8.711	7.761	51.11	47.95	52.157	4.207	25664.7	3.507	51.06
S3	2.1	126	0.21	45	8.711	6.674	52.07	48.1	53.017	4.917	71951.08	9.213	51.71
S5	0.91	133	0.21	45	8.711	6.733	52.27	48.1	53.019	4.919	44468.32	4.001	51.71
S15	0.45	69	0.17	45	8.711	6.73	52.72	48.1	52.982	4.882	19961.82	1.979	51.71
S14	0.08	53	0.25	45	8.711	6.777	52.57	48.1	52.978	4.878	3544	0.352	51.71
S2	3.42	157	0.3	45	8.711	6.665	52.4	48.1	52.921	4.821	145455.29	14.992	52.42
S1	3.06	144	0.35	45	8.711	5.948	52.11	48.1	52.539	4.439	381025.25	6.845	52.42
S16	1.18	136	0.21	45	8.711	6.721	51.868	48.6	52.277	3.677	536548.68	5.188	52.42
S17	1.47	174	0.23	45	8.711	6.725	51.759	48.6	52	3.4	579859.94	6.463	52.42
S4	3.43	189	0.09	45	8.711	6.614	53.094	48.1	52.995	4.895	106127.87	14.906	51.71
S6	0.88	109	0.3	45	8.711	6.733	53.191	48.1	52.978	4.878	42966.51	3.869	51.71
S12	0.82	112	0.2	45	8.711	6.728	53.212	48.1	52.978	4.878	40002.54	3.605	51.71
S13	0.19	61	0.15	45	8.711	6.764	53.218	48.1	52.977	4.877	9314.83	0.597	51.71
S9	0.05	50	0.17	45	8.711	6.78	52.645	44.1	52.984	8.884	2271.1	0.22	52.7
S10	0.8	116	0.2	45	8.711	6.731	52.684	43.8	53.01	9.21	31572.07	3.518	52.7
S11	0.82	95	0.29	45	8.711	6.729	52.685	43.8	53.011	9.211	35485.97	3.605	52.7
S7	0.08	66	0.28	45	8.711	6.781	52.645	44.1	52.984	8.884	3932.57	0.352	52.7
S36	1.16	131	0.22	45	8.711	6.721	53.266	41.5	52.855	11.355	56237.24	5.1	52.34
S37	1.09	151	0.22	45	8.711	6.731	52.568	41.5	52.759	11.259	53188.2	4.793	52.34
S53	0.38	154	0.16	45	8.711	6.763	53.293	41.5	52.841	11.341	18623.01	1.671	52.34
S54	0.31	67	0.16	45	8.711	6.744	52.962	0	52.878	52.878	15013.54	1.363	52.98
S64	0.14	52	0.23	45	8.711	6.765	52.581	40.1	52.658	12.558	6812.72	0.616	52.92
S83	0.5	89	0.25	45	8.711	6.745	52.741	40.1	52.658	12.558	24403.47	2.199	
S79	0.24	108	0.18	45	8.711	6.767	53.804	49	52.575	3.575	11778.79	1.055	53.21
S97	0.79	135	0.27	45	8.711	6.745	53.224	49.45	53.436	3.986	38891.69	3.474	52.56
S85	0.47	102	0.09	45	8.711	6.732	52.653	41.3	52.561	11.261	22932.96	2.067	52.76
S159	2.16	152	0.11	45	8.711	7.039	52.911	45.57	51.616	6.046	86703.93	9.314	
S160	0.83	166	0.11	45	8.711	6.732	52.651	36.6	51.145	14.545	40527.63	3.649	52.3
S163	0.67	83	0.27	45	8.711	6.731	52.892	36.6	51.121	14.521	32707.91	2.946	52.3
S162	0.26	62	0.15	45	8.711	6.746	53.56	36.6	51.082	14.482	12717.93	1.143	52.3
S161	0.76	131	0.22	45	8.711	6.741	52.74	36.6	51.134	14.534	37156.57	3.342	52.3
S56	1.24	125	0.28	45	8.711	6.721	54.07	42.7	53.158	10.458	58544.65	5.452	53.28
S35	1.56	160	0.24	45	8.711	6.718	53.667	42.7	53.15	10.45	66355.42	6.858	53.28
S34	0.35	71	0.3	45	8.711	6.752	54.112	42.7	53.137	10.437	17143.21	1.539	53.28
S125	0.35	77	0.21	45	8.711	6.749	52.568	46.69	52.694	6.004	17130.12	1.539	53.05
S126	0.62	77	0.28	45	8.711	6.732	52.568	46.69	52.695	6.005	30261.58	2.726	53.05
S119	0.08	39	0.09	45	8.711	6.76	52.568	46.59	52.694	6.104	3916.77	0.352	53.05
S127	1.08	109	0.24	45	8.711	6.717	53.54	45.41	52.492	7.082	52612.73	4.748	
S133	0.81	108	0.11	45	8.711	6.71	53.659	45.41	52.49	7.08	39418.69	3.56	52.65
S134	0.14	31	0.24	45	8.711	6.751	52.684	45.41	52.488	7.078	6850.9	0.616	52.63
S136	2.19	163	0.26	45	8.711	4.185	52.568	45.6	52.039	6.439	66200.79	2.858	52.42
S8	0.05	45	0.21	45	8.711	6.78	52.645	44.1	52.767	8.667	144021.48	0.22	52.7
S213	0.36	118	0.2	90	8.711	8.116	51.432	48	52.146	4.146	10441.2	1.656	
Node442	1.26	80	0.3	90	8.711	8.007	51.911	46.45	52.708	6.258	43819.72	5.795	
Node443	1.7	80	0.3	90	8.711	7.969	51.937	46.66	52.688	6.028	83963.1	7.815	
Node445	1.44	80	0.3	90	8.711	7.991	51.764	0	52.69	52.69	69687.85	6.622	
Node446	0.44	80	0.3	90	8.711	8.095	52.368	47.32	52.682	5.362	23744.05	2.024	
Node448	0.47	80	0.3	90	8.711	8.091	52.345	47.2	52.681	5.481	25269.61	2.162	51.28
Node450	0.45	80	0.3	90	8.711	8.094	52.886	47.84	52.678	4.838	26405.19	2.07	51.28
Node451	1.07	80	0.3	90	8.711	8.025	52.275	46.54	52.693	6.153	53688.11	4.921	
Node452	1.12	80	0.3	90	8.711	8.02	51.923	46.53	52.694	6.164	54938.49	5.151	
Node454	1.14	80	0.3	90	8.711	8.018	52.033	46.81	52.743	5.933	57133.51	5.243	
Node456	0.6	80	0.3	90	8.711	8.075	53.701	46.52	52.731	6.211	35126.68	2.76	51.39
Node458	0.67	80	0.3	90	8.711	8.066	52.734	0	52.827	52.827	38543.4	3.082	50.73
Node459	0.5	80	0.3	90	8.711	8.087	51.885	49	52.737	3.737	17237.84	2.3	
Node460	0.35	80	0.3	90	8.711	8.108	52.447	47.4	52.785	5.385	13493.52	1.61	52.62
Node461	0.49	80	0.3	90	8.711	8.088	52.508	47.36	52.792	5.432	24298.06	2.254	52.62
Node462	0.24	80	0.3	90	8.711	8.125	52.925	48.6	52.796	4.196	14134.22	1.104	
Node463	1.38	80	0.3	90	8.711	7.996	52.477	47.42	52.818	5.398	72088.43	6.346	
Node466	0.25	80	0.3	90	8.711	8.124	52.547	0	52.901	52.901	16169.22	1.15	
Node467	0.22	80	0.3	90	8.711	8.129	52.879	48.95	52.799	3.849	12985.86	1.012	
Node468	0.3	80	0.3	90	8.711	8.115	53.02	48.96	52.799	3.839	17683.97	1.38	
Node470	1.86	80	0.3	90	8.711	7.956	52.463	47.29	52.91	5.62	81438.26	8.549	
Node471	1.62	80	0.3	90	8.711	7.975	52.975	47.29	52.837	5.547	93709.77	7.448	
Node474	0.45	80	0.3	90	8.711	8.094	52.695	47.33	52.971	5.641	19824.34	2.07	
Node475	0.78	80	0.3	90	8.711	8.054	53.374	47.33	52.838	5.508	45549.24	3.588	
Node476	0.8	80	0.3	90	8.711	8.052	52.895	48.85	52.817	3.967	46694.67	3.679	
Node477	0.46	80	0.3	90	8.711	8.092	52.773	48.7	52.974	4.274	38437.3	2.116	
Node482	1.55	80	0.3	90	8.711	7.981	52.11	47.72	52.673	4.953	77781.41	7.127	
Node483	1.38	80	0.3	90	8.711	7.996	51.685	48.3	52.689	4.389	60693.31	6.346	
Node484	0.62	80	0.3	90	8.711	8.072	52.013	46.47	52.651	6.181	56076.96	2.852	
Node485	0.6	80	0.3	90	8.711	8.075	52.947	47.72	52.645	4.925	35017.73	2.76	
Node486	1.12	80	0.3	90	8.711	8.02	51.986	46.15	52.599	6.449	59830.25	5.151	
Node488	1.36	80	0.3	90	8.711	7.998	52.059	46.12	52.607	6.487	68918.13	6.254	
Node489	0.67	80	0.3	90	8.711	8.066	51.995	45.97	52.586	6.616	38085.86	3.082	
Node490	0.21	80	0.3	90	8.711	8.131	51.957	44.43	52.143	7.713	12348.9	0.966	

Name	Area (ac)	Width (ft)	Slope	Impervious Percentage (%)	Total Rainfall (in)	Total Runoff Depth (in)	Ground Elevation (Spill Crest) (ft)	Invert Elevation (ft)	Max Water Elevation (ft)	Max Water Depth (ft)	Total Flow Through Node (cf)	Max Flow (cfs)	ROW Elevation (ft)
Node492	0.09	80	0.3	90	8.711	8.156	51.682	44.3	52.083	7.783	110493.37	0

PROPOSED DRAINAGE AREA CALCUATIONS

XPSWMM-LINK TABLE
DESIGN FREQUENCY: 100 YEAR PROPOSED

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Length (ft)	Conduit Slope	Bottom Width (ft)	Diameter (Height) (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Depth (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
97669.1	97669	97641	44.97	44.35	Cir.	30.634	2.02	0	4	0.013	41.534	52.838	52.838	8.488	5.19	0.44	1.925	204.35
97641.1	97641	97497	44.35	44.15	Cir.	206.97	0.1	0	4	0.013	49.747	52.838	52.814	8.664	3.94	0.25	2.114	44.65
96299.1	96299	96493	44.65	44.5	Cir.	66.244	0.26	0	4	0.013	31.15	52.958	52.944	8.444	2.46	0.15	1.655	68.35
97437.1	97437	97438	44.08	44.04	Cir.	177.801	0.02	0	4	0.013	120.444	52.804	52.743	8.724	9.55	1.24	3.3	21.55
98225.1	98225	97701	46.37	46.04	Cir.	182.426	0.18	0	3	0.013	24.062	52.749	52.745	6.705	4.36	0.38	1.58	28.37
94430.1	94430	94490	46.62	43.12	Cir.	520.14	0.67	0	2	0.013	19.03	53.207	53.159	10.039	5.99	3.6	1.568	18.56
95197.1	95197	95199	41.32	41.18	Cir.	202.201	0.07	0	4.5	0.013	88.668	52.659	52.531	11.351	5.53	0.4	2.759	51.74
98231.1	98231	98266	46.78	46.46	Cir.	166.267	0.19	0	3	0.013	-27.374	52.736	52.733	6.273	-3.84	0.28	1.147	29.26
97417.1	97417	97406	43.1	43	Cir.	36.655	0.14	0	5	0.013	137.934	52.724	52.717	9.717	7.69	0.1	3.363	136.03
97386.1	97386	97384	42.62	42.6	Cir.	5.996	0.33	0	6	0.013	137.442	52.694	52.694	10.094	6.77	0.03	3.176	244.59
95021.1	95021	95026	40.86	40.82	Cir.	36.697	0.11	0	4.5	0.013	91.258	52.3	52.26	11.44	5.7	0.08	2.801	64.92
95026.1	95026	95008	40.82	40.78	Cir.	261.363	0.02	0	4.5	0.013	92.759	52.26	51.795	11.44	5.79	0.57	2.825	24.33
93794.1	93794	93775	38.4	37.94	Cir.	275.881	0.17	0	2	0.013	22.51	52.295	50.084	13.895	6.93	2.56	1.69	9.24
94945.1	94945	93775	36.5	35.66	Cir.	432	0.22	0	7	0.013	351.317	51.074	50.084	14.574	9.08	1.29	4.937	281.7
96582.1	96582	96299	45.2	44.65	Cir.	416.144	0.25	0	4	0.013	22.433	52.975	52.958	8.308	1.78	0.54	1.394	52.22
96757.1	96757	97047	47.28	47.1	Cir.	93.043	0.19	0	2	0.013	11.386	52.607	52.702	5.602	4.25	0.25	1.211	9.95
95301.1	95301	95226	42.58	42.51	Cir.	33.689	0.21	0	2	0.013	26.474	52.769	52.658	10.189	8.22	0.44	1.793	10.31
95200.1	95200	95197	41.39	41.32	Cir.	116.003	0.06	0	4.5	0.013	88.429	52.696	52.659	11.339	5.52	0.23	2.755	48.31
98299.1	98299	98231	46.98	46.78	Cir.	120.295	0.17	0	3	0.013	-31.485	52.692	52.736	5.956	-4.29	0.25	1.095	27.2
97409.1	97409	97416	43.14	43.12	Cir.	36.236	0.14	0	5	0.013	132.287	52.725	52.725	9.605	7.24	0.09	3.291	61.19
97416.1	97416	97417	43.12	43.1	Cir.	28.6	0.17	0	5	0.013	132.32	52.725	52.724	9.624	7.47	0.07	3.291	68.87
93801.1	93801	93794	38.92	38.4	Cir.	55.236	0.94	0	2	0.013	15.589	52.475	52.295	13.895	4.79	0.49	1.423	21.95
95006.1	95006	94945	40.5	40.5	Cir.	295.566	0	0	4.5	0.013	97.565	51.738	51.074	11.238	6.09	0.72	2.9	6.22
95106.1	95106	95006	44.36	43.5	Cir.	42.437	2.03	0	1.5	0.013	11.918	52.228	51.738	8.238	8.12	0.86	1.31	14.95
97918.1	97918	97198	37.65	37.53	Cir.	229.4	0.85	0	5	0.013	112.297	52.032	52.018	14.488	5.67	0.42	3.023	59.57
97283.1	97283	97323	47.25	46.32	Cir.	232.96	0.4	0	2	0.013	25.349	52.65	52.167	5.847	7.98	2.86	1.769	14.29
99459.1	99459	99474	47.5	46.22	Cir.	229.826	0.24	0	1.5	0.013	14.747	52.144	52.139	5.919	8.28	4.36	1.395	7.84
99467.1	99467	99459	47.62	47.5	Cir.	45.211	0.27	0	2	0.013	11.143	52.144	52.144	4.644	3.54	0.26	1.197	11.65
95418.1	95418	95601	42.39	42	Cir.	333.446	0.12	0	4.5	0.013	46.723	52.989	52.986	10.986	2.92	0.35	1.974	67.25
98663.1	98663	98584	44.85	44.83	Cir.	21.288	0.09	0	3.5	0.013	-22.527	52.837	52.837	8.007	-2.32	0.03	1.385	30.84
98430.1	98430	97641	44.76	44.35	Cir.	270.829	0.15	0	3.5	0.013	25.429	52.839	52.838	8.488	2.63	0.4	1.552	39.15
97423.1	97423	97409	43.5	43.14	Cir.	155.869	0.13	0	5	0.013	130.363	52.728	52.725	9.585	7.13	0.37	3.266	125.17
95496.1	95496	95241	41.54	41.4	Cir.	332.912	0.04	0	4.5	0.013	68.636	52.98	52.982	11.582	4.28	0.4	2.413	40.33
95226.1	95226	95209	41.25	41.3	Cir.	33.422	-0.15	0	4.5	0.013	139.47	52.658	52.992	11.742	8.69	0.16	0.046	76.06
97393.1	97393	97386	42.82	42.62	Cir.	83.971	0.31	0	6	0.013	138.007	52.707	52.694	10.074	6.86	0.2	3.183	206.69
97325.1	97325	97327	41.6	41.4	Cir.	121.001	0.35	0	6	0.013	147.306	52.488	52.446	11.046	6.32	0.19	3.293	172.18
97327.1	97327	97198	41.4	41.52	Cir.	160.556	-0.07	0	4.5	0.013	146.78	52.446	52.018	10.926	9	0.85	0.152	53.76
99768.1	99768	99683	38	37.92	Cir.	60	-0.06	0	3.5	0.013	51.119	52.077	52.081	14.161	5.23	0.15	2.235	36.74
Link374	99483	99660A	44.35	43.99	Cir.	449	0	0	3.5	0.013	42.99	52.127	52.101	8.111	4.44	0.81	2.041	28.49
97198.1	97198	95591	37.53	36.81	Cir.	540	0.08	0	6	0.013	236.132	52.018	51.41	14.6	8.31	1.66	4.206	154.64
94907.1	94907	94938	46.2	44.05	Cir.	295.046	0.73	0	2	0.013	26.48	52.965	52.785	8.735	8.35	3.96	1.793	19.31
95601.1	95601	95496	42	41.54	Cir.	458.659	0.1	0	4.5	0.013	52.421	52.986	52.98	11.44	3.27	0.44	2.095	62.28
95305.1	95305	95332	44	43.67	Cir.	96.618	0.34	0	4.5	0.013	-14.767	52.984	52.988	9.318	-0.92	0.09	0.964	114.93
97497.1	97497	97484	44.15	44.13	Cir.	16.243	0.12	0	4	0.013	50.567	52.814	52.806	8.676	4.01	0.02	2.132	50.4
97438.1	97438	97434	44.04	44.01	Cir.	43.402	0.07	0	4	0.013	120.798	52.743	52.74	8.73	9.59	0.31	3.305	37.77
95813.1	95813	95301	47.05	46.7	Cir.	190.097	0.18	0	2	0.013	16.187	52.76	52.769	6.069	5.12	0.96	1.45	9.71
96562.1	96562	96578	48	47.45	Cir.	288.445	0.19	0	2	0.013	-12.258	52.206	52.358	4.908	-3.87	0.83	1.046	9.88
99455.1	99455	99467	47.65	47.62	Cir.	25.878	0.12	0	1.5	0.013	11.567	52.144	52.144	4.524	6.5	0.31	1.294	3.58
94880.1	94880	95601	47	46.34	Cir.	275.01	0.24	0	2	0.013	13.957	53.068	52.986	6.646	4.42	1.03	1.345	11.08
96584.1	96584	96757	47.35	47.25	Cir.	55.265	0.18	0	2	0.013	-11.026	52.517	52.607	5.357	-3.47	0.13	1.109	9.62
97427.1	97427	97423	43.75	43.5	Cir.	135.61	0.05	0	5	0.013	130.007	52.732	52.728	9.228	7.01	0.31	3.262	111.82
94137.1	94137	94722	43.5	43.14	Cir.	227.63	0.16	0	2	0.013	12.896	53.546	53.138	10.046	4.05	0.72	1.292	9
94722.1	94722	95496	42.58	42.29	Cir.	295.427	0.1	0	3	0.013	28.904	53.138	52.98	10.69	4.05	0.54	1.739	20.9
94938.1	94938	94945	44.05	43.8	Cir.	315.414	0.08	0	3	0.013	55.574	52.785	51.074	8.735	7.77	2.14	2.417	18.78
98584.1	98584	98430	44.83	44.76	Cir.	45.988	0.15	0	3.5	0.013	24.002	52.837	52.839	8.079	2.48	0.07	1.505	39.25
97434.1	97434	97427	44.04	43.75	Cir.	63.845	0.05	0	5	0.013	129.261	52.74	52.732	8.982	7.25	0.25	3.252	175.53
96578.1	96578	96584	47.45	47.35	Cir.	55.093	0.18	0	2	0.013	-12.253	52.358	52.517	5.167	-3.86	0.16	1.05	9.64
95308.1	95308	95199	44.7	44.6	Cir.	43.43	0.23	0	2	0.013	18.118	52.518	52.531	7.931	5.68	0.27	1.532	10.86
95199.1	95199	95187	41.18	41.02	Cir.	113.094	0.14	0	4.5	0.013	91.9	52.531	52.391	11.371	5.73	0.24	2.811	73.97
93818.1	93818	93801	39.5	39.02	Cir.	265.348	0.18	0	2	0.013	12.398	52.739	52.475	13.455	3.81	0.74	1.265	9.62
95008.1	95008	95006	40.78	40.5	Cir.	34.647	0.81	0	4.5	0.013	93.033	51.795	51.738	11.238	5.92	0.28	2.829	176.78
Link521	99683	Node506	37.92	37.91	Cir.	33	0	0	5	0.013	116.882	52.081	52.079	14.169	5.89	0.07	3.086	45.34
95332.1	95332	95411	43.67	42.4	Cir.	96.618	1.31	0	4.5	0.013	46.366	52.988	52.989	10.589	6.39	1.25	1.966	225.46
98681.1	98681	98663	44.85	44.85	Cir.	7.021	0	0	3.5	0.013	9.836	52.837	52.837	7.987	1.02	0	0.947	3.18
Link518	97484	Node505	44.13	44.09	Cir.	14	0	0	3.5	0.013	51.481	52.806	52.806	8.716	5.32	0.04	2.243	53.78
96493.1	96493	97437	44.5	44.08	Cir.	320.323	0.25	0	4	0.013	30.281	52.944	52.804	8.724	2.39	0.37	1.631	52.01
97047.1	97047	97434	47.1	46.9	Cir.	114.271	0.18	0	2	0.013	11.118	52.702	52.74	5.84	4.54	0.36	1.196	9.46
94490.1	94490	94722	43.12	42.58	Cir.	209.952	0.26	0	2	0.013	19.116	53.159	53.138	10.558	6.02	1.47	1.572	11.47
95887.1	95887	95843	47.7	47.63	Cir.	37.062	0.19	0	2	0.013	5.134	52.731	52.732	5.102	1.94	0.07	0.798	9.83
95507.1	95507	95106	46.42	43.5	Cir.	143.43	2.04	0	1.5	0.013	3.891	52.263	52.228	8.728	3.53	1.09	0.754	14.99
97323.1	97323	97198	46.32	46.09	Cir.	71.42	0.32	0	2	0.013	25.294	52.167	52.018	5.928	7.87	0.81	1.768	12.84
97253.1	97253	97283	48	47.25	Cir.	292.359	0.2	0	2	0.013	10.82	52.481	52.65	5.4	3.42	0.66	1.179	11.46
93775.1	93775	92744	35.66	35	Cir.	356	0.26	0	7	0.013	355.545	50.084	49.124	14.424	9.2	1.09	4.967	275.06
95411.1	95411	95418	42.4	42.39	Cir.	333.446	0	0	4.5	0.013	46.613	52.989	52.989	10.599	2.91	0.18	1.972	10.77
97724.1	97724	97669	45.5	44.97	Cir.	195.667	0.28	0	4	0.013	41.531	52.796	52.838	7.868	3.3	0.48	1.925	74.76
97701.1	97701	97434	46.04	45.9	Cir.	78.877	0.18	0	3	0.013	24.077	52.745	52.74	6.84	4.69	0.21	1.581	28.1
98266.1	98266	98225	46.46	46.37	Cir.	47.61	0.19	0	3	0.013	-26.513	52.733	52.749	6.379	-3.74	0.09	1.217	29
95809.1	95809	95813	47.16	47.05	Cir.	59.213	0.19	0	2	0.013	16.506	52.75	52.76	5.71	5.21	0.31	1.464	9.75
95843.1	95843	95809	47.63	47.16	Cir.	257.819	0.18	0	2	0.013	13.545	52.732	52.75	5.59	4.29	0.91	1.324	9.66
97406.1	97406	97393	43	42.82	Cir.	101.025	0.31	0	6	0.013	138.731	52.717	52.707	9.887	6.79	0.2	3.191	178.77

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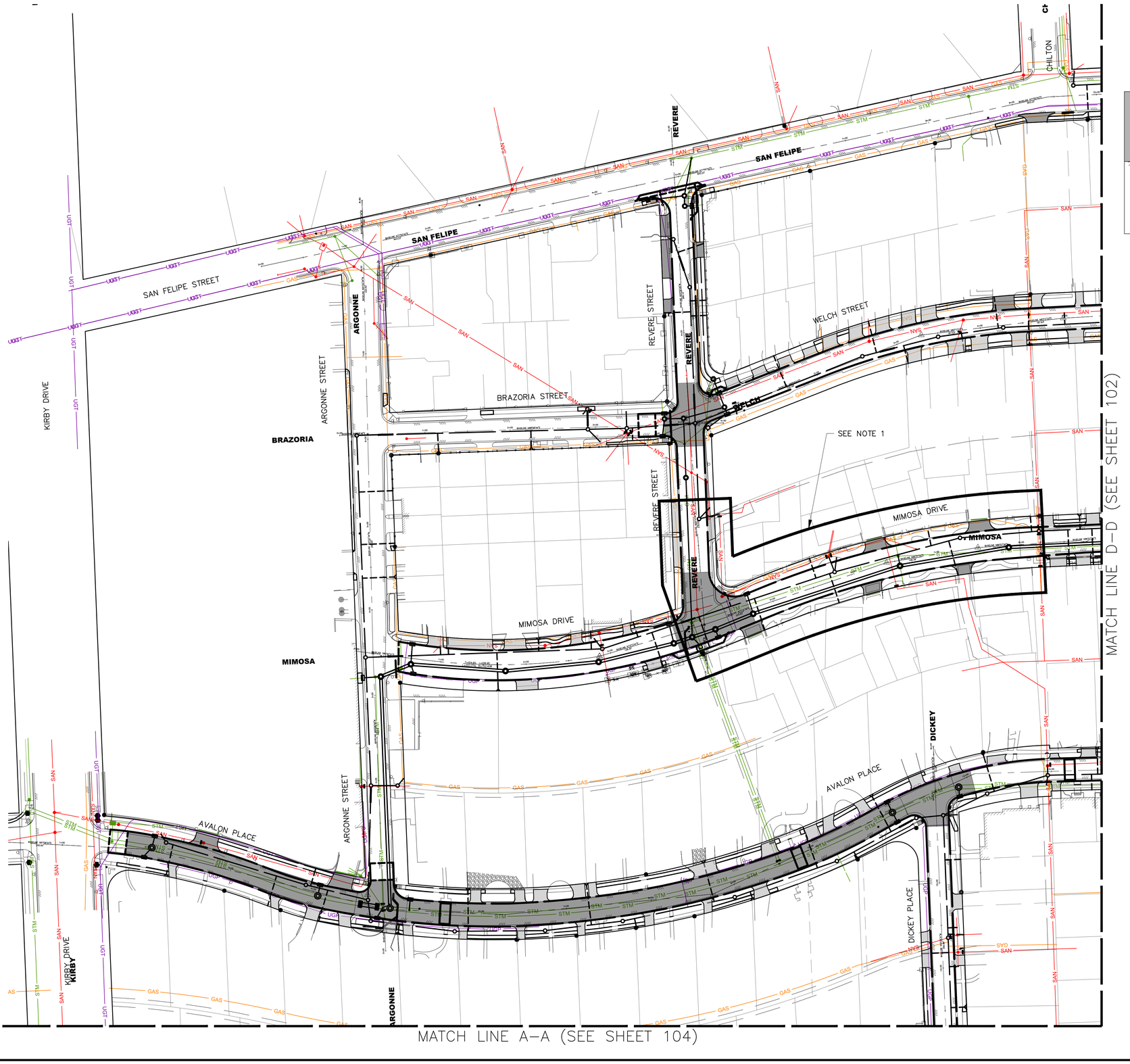
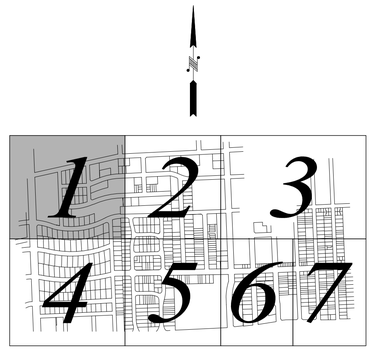
97384.1	97384	97325	42.6	41.6	Cir.	384.141	0.31	0	6	0.013	141.113	52.694	52.488	10.888	6.84	0.94	3.22	216.08
95187.1	95187	95021	41.02	40.86	Cir.	143.764	0.11	0	4.5	0.013	91.761	52.391	52.3	11.44	5.73	0.31	2.809	65.6
Link372	99660	99768A	43.98	43.84	Cir.	174	0	0	3.5	0.013	48.406	52.102	52.107	8.267	5.69	0.42	2.172	28.54
99474.1	99474	99483	44.45	44.35	Cir.	126	0.16	0	3.5	0.013	43.556	52.139	52.127	7.777	4.5	0.23	2.055	28.34
95591.1	95591	94945	36.81	36.5	Cir.	260	0.48	0	6	0.013	238.011	51.41	51.074	14.6	8.38	0.81	4.223	146.24
94871.1	94871	94907	46.56	46.2	Cir.	286.653	0.13	0	2	0.013	12.745	52.988	52.965	6.765	4.01	0.89	1.284	8.02
99385.1	99385	99467	47.3	46	Cir.	26.648	4.88	0	2	0.013	8.507	52.145	52.144	6.144	3.69	0.16	1.039	49.97
96294.1	96294	95353	44.4	44.1	Cir.	331.013	0.4	0	4	0.013	44.721	52.976	52.988	8.888	5.19	0.65	1.999	43.24
97571.1	97571	96294	45	44.4	Cir.	399.034	0.27	0	4	0.013	37.101	52.896	52.976	8.576	2.94	0.56	1.813	55.7
95353.1	95353	95332	44.1	44	Cir.	11.326	0.4	0	4	0.013	44.135	52.988	52.988	8.988	8.88	0.1	1.986	134.97
94868.1	S28	94880	47.27	47	Cir.	13.454	2.01	0	2	0.013	10.565	53.115	53.068	6.068	4.33	0.27	1.164	32.05
97729.1	S23	97724	46.82	45.8	Cir.	50.01	2.04	0	2	0.013	-42.312	51.657	52.796	6.996	-13.27	1.7	1.339	32.31
97333.1	S69	97438	49.26	46.46	Cir.	27.403	10.22	0	2	0.013	-38.42	52.518	52.743	6.283	-12.08	2.75	1.406	72.31
98319.1	S71	98225	48.05	47.12	Cir.	60.796	1.53	0	2	0.013	10.266	52.822	52.749	5.629	5.7	0.92	1.146	27.98
98219.1	S73	98266	49.26	48.69	Cir.	15.358	3.71	0	2	0.013	-23.984	52.56	52.733	4.043	-7.59	0.57	0.854	43.58
95241.1	95241	95224	41.4	41.3	Cir.	106.243	0.09	0	4.5	0.013	69.858	52.982	52.767	11.582	4.36	0.13	2.435	60.33
95209.1	95209	95200	41.3	41.39	Cir.	65.69	-0.14	0	4.5	0.013	88.523	52.992	52.696	11.602	5.52	0.13	0.047	72.79
95768.1	S87	95843	47.67	47.63	Cir.	23.024	0.17	0	2	0.013	2.583	52.733	52.732	5.102	0.81	0.04	0.56	9.43
97500.1	S90	97409	48	47	Cir.	45.263	1.22	0	2	0.013	-44.174	51.676	52.725	5.725	-13.91	1.69	1.411	33.63
95943.1	S96	95887	47.78	47.7	Cir.	33.431	0.24	0	2	0.013	5.049	52.797	52.731	5.031	2.21	0.08	0.791	11.07
99383.1	S194	99474	47.81	47.2	Cir.	29.925	2.04	0	1.25	0.013	6.346	52.164	52.139	4.939	7.67	0.61	1.015	9.22
94994.1	S191	94907	47.76	46.7	Cir.	51.948	2.04	0	2	0.013	7.132	53.009	52.965	6.265	6.44	1.06	0.948	32.32
94850.1	S198	94907	47.14	46.7	Cir.	21.745	2.02	0	2	0.013	6.448	52.975	52.965	6.265	7.92	0.44	0.899	32.18
94991.1	S197	94907	47.5	46.7	Cir.	39.392	2.03	0	2	0.013	6.259	52.983	52.965	6.265	5.89	0.8	0.885	32.24
94975.1	S208	94871	47.79	46.81	Cir.	48.033	2.04	0	2	0.013	4.458	53.058	52.988	6.178	3.94	0.97	0.741	32.31
96271.1	S67	96584	47.85	47.35	Cir.	135.146	1	0	2	0.013	6.282	52.555	52.517	5.167	2.11	0.49	0.887	13.76
94383.1	S61	94430	47.21	46.62	Cir.	29.122	2.03	0	2	0.013	-40.976	52.275	53.207	6.587	-12.86	0.93	0.945	32.2
98259.1	S91	98299	49.45	49.18	Cir.	10.956	2.46	0	2	0.013	-43.004	52.307	52.692	3.512	-13.63	0.39	1.092	35.51
97489.1	S121	97393	47.3	47	Cir.	47.424	1.88	0	2	0.013	-42.333	51.648	52.707	5.707	-13.33	1.62	1.539	17.99
97479.1	97479	S121	47.5	47.3	Cir.	14.635	1.09	0	2	0.013	9.266	51.294	51.648	4.348	2.93	0.02	1.086	26.45
97450.1	S123	97325	45.79	45.07	Cir.	35.16	2.05	0	2	0.013	-24.288	52.483	52.488	7.418	-7.6	0.72	0.996	32.37
93842.1	93842	93801	39.25	38.92	Cir.	16.444	2.01	0	2	0.013	6.081	52.485	52.475	13.555	3.91	0.3	0.872	32.05
94943.1	S129	95008	44.62	44.02	Cir.	29.274	2.05	0	2	0.013	-5.898	51.797	51.795	7.775	4.94	0.6	0.637	32.39
99785.1	S178	99660	46.89	46.02	Cir.	42.562	2.04	0	1.25	0.013	5.211	52.177	52.102	6.082	7.68	0.87	0.925	9.24
99558.1	S181	99660	46.77	46.02	Cir.	36.674	2.05	0	1.25	0.013	5.216	52.301	52.102	6.082	7.23	0.75	0.925	9.24
97167.1	S175	97283	48.55	47.75	Cir.	39.101	2.05	0	2	0.013	6.022	52.675	52.65	4.9	7.81	0.8	0.867	32.36
97102.1	S192	97253	49.38	48.34	Cir.	51.079	2.04	0	2	0.013	-15.447	52.244	52.481	4.141	5.1	1.04	1.044	32.28
99640.1	S214	99459	49.17	48.25	Cir.	45.279	2.03	0	1.25	0.013	3.42	52.146	52.144	3.894	6.06	0.92	0.746	9.21
95441.1	S26	95601	46.23	45.65	Cir.	28.399	2.04	0	2	0.013	-49.147	52.233	52.986	7.336	-15.39	1.3	1.383	32.33
97783.1	S22	97724	46.78	45.8	Cir.	47.904	2.05	0	2	0.013	22.504	52.818	52.796	6.996	8.22	0.97	1.69	32.36
97461.1	S40	97484	46.59	46.38	Cir.	10.329	2.03	0	2	0.013	9.659	53.167	52.806	6.577	6.37	0.21	1.111	32.26
97533.1	S70	97438	47.3	47	Cir.	91.001	0.56	0	2	0.013	11.301	52.791	52.743	5.743	3.57	0.3	1.206	12.99
95304.1	S65	95301	47.27	46.7	Cir.	17.818	3.2	0	2	0.013	-55.711	51.713	52.769	6.069	-17.52	1.05	0.884	40.46
95306.1	S82	95301	47.27	46.7	Cir.	11.264	5.06	0	2	0.013	-7.874	52.773	52.769	6.069	6.31	0.57	0.892	50.89
95894.1	S88	95843	47.67	47.63	Cir.	14.407	0.28	0	2	0.013	6.641	52.742	52.732	5.102	5.3	0.04	0.913	11.92
98422.1	S93	98299	47.11	46.98	Cir.	79.261	0.16	0	3	0.013	-26.186	52.58	52.692	5.712	-3.68	0.12	0.756	27.01
97460.1	S122	97384	46.69	46.25	Cir.	21.765	2.02	0	2	0.013	-9.703	53	52.694	6.444	5.82	0.44	0.979	32.17
93915.1	S112	93818	40.7	39.75	Cir.	46.569	2.04	0	2	0.013	5.939	52.76	52.739	12.989	4.55	0.95	0.861	32.31
94960.1	S98	95021	44.59	44.02	Cir.	28.15	2.02	0	2	0.013	5.092	52.558	52.3	8.28	6.4	0.56	0.795	32.19
94954.1	S115	95026	44.73	44.02	Cir.	34.954	2.03	0	2	0.013	4.627	52.267	52.26	8.24	6.21	0.7	0.755	32.24
93778.1	S111	93818	40.33	39.75	Cir.	28.321	2.05	0	2	0.013	3.704	52.742	52.739	12.989	3.74	0.58	0.673	32.37
93763.1	93763	93794	39.17	38.9	Cir.	13.153	2.05	0	2	0.013	3.677	52.298	52.295	13.395	3.75	0.27	0.67	32.41
97482.1	S176	97283	48.76	47.75	Cir.	49.601	2.04	0	2	0.013	10.247	52.745	52.65	4.9	6.85	1.01	1.145	32.28
97477.1	S182	S176	49.36	48.76	Cir.	29.434	2.04	0	2	0.013	5.177	52.759	52.745	3.985	5.84	0.57	0.802	32.3
95029.1	S174	94938	46.41	45.55	Cir.	42.325	2.03	0	2	0.013	6.826	52.805	52.785	7.235	6.01	0.86	0.926	32.25
94856.1	S190	94907	47.58	46.7	Cir.	43.152	2.04	0	2	0.013	-27.424	52.409	52.965	6.265	-8.62	0.88	0.819	32.31
99384.1	S211	99474	48.04	47.2	Cir.	41.437	2.03	0	1.25	0.013	5.01	52.251	52.139	4.939	7.49	0.84	0.907	9.2
95330.1	S29	95601	46.23	45.65	Cir.	28.399	2.04	0	2	0.013	7.755	52.987	52.986	7.336	6.16	0.58	0.99	32.33
96509.1	S25	96582	48.82	48.32	Cir.	24.597	2.03	0	1.25	0.013	5.219	53.118	52.975	4.655	6.59	0.5	0.926	9.21
98480.1	S21	98430	47.48	47.01	Cir.	22.891	2.05	0	1.25	0.013	5.115	52.949	52.839	5.829	7.44	0.47	0.916	9.26
96262.1	S38	96299	47.68	47.08	Cir.	29.512	2.03	0	1.25	0.013	-10.932	52.209	52.958	5.878	-8.

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Length (ft)	Conduit Slope	Bottom Width (ft)	Diameter (Height) (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Depth (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
95224.1	95224	95226	41.3	41.25	Cir.	47.386	0.11	0	4.5	0.013	100.873	52.767	52.658	11.467	6.28	0.12	2.95	63.88
95153.1	S84	95209	44.66	44.25	Cir.	20.236	2.03	0	2	0.013	9.306	52.718	52.992	8.742	5.52	0.41	1.089	32.2
96609.1	S77	96562	49.05	48.73	Cir.	15.801	2.03	0	2	0.013	-25.355	51.975	52.206	3.476	-8.04	0.32	0.947	32.19
97292.1	S120	97393	47.3	47	Cir.	69.306	1.17	0	2	0.013	10.121	52.728	52.707	5.707	3.2	0.3	1.138	14.88
95091.1	S117	S116	45.43	44.62	Cir.	39.746	2.04	0	2	0.013	-5.94	52.932	52.414	7.794	5.23	0.76	0.821	32.29
95096.1	S116	95026	44.62	44.02	Cir.	29.507	2.03	0	2	0.013	12.146	52.414	52.26	8.24	8.28	0.6	1.252	32.26
95505.1	S132	95507	46.86	46.8	Cir.	21.659	0.28	0	1.5	0.013	2.188	52.269	52.263	5.463	2.96	0.08	0.558	5.53
97410.1	S156	97198	46.86	45.27	Cir.	77.927	2.04	0	1.25	0.013	5.615	52.464	52.018	6.748	7.67	1.59	0.959	9.23
99420.1	S212	99459	48.38	48	Cir.	18.56	2.05	0	1.5	0.013	3.867	52.151	52.144	4.144	5.77	0.38	0.751	15.03
95373.1	S27	95601	45.93	45.65	Cir.	13.678	2.05	0	2	0.013	9.197	52.987	52.986	7.336	6.94	0.28	1.082	32.37
98718.1	S18_S19_S43_S44_COMBINED	98663	47.65	47.1	Cir.	26.924	2.04	0	1.25	0.013	11.454	53.207	52.837	5.737	9.16	0.82	1.315	9.23
97329.1	S51	97437	47.3	47	Cir.	51.994	0.92	0	2	0.013	10.277	53.284	52.804	5.984	3.83	0.3	1.147	17.18
96762.1	S68	96757	50.2	49.8	Cir.	11.739	3.41	0	2	0.013	4.74	52.626	52.607	2.807	7.44	0.4	0.765	41.76
94143.1	S33	94137	44.33	43.5	Cir.	40.812	2.03	0	2	0.013	7.115	53.565	53.546	10.046	4.35	0.8	0.946	32.26
94061.1	S32	S33	44.83	44.33	Cir.	24.8	2.02	0	2	0.013	3.544	53.602	53.565	9.235	4.12	0.41	0.658	32.12
97194.1	S95	97406	47.3	47	Cir.	55.262	1.32	0	2	0.013	-11.164	52.729	52.717	5.717	-3.53	0.3	0.944	16.67
95108.1	S131	95106	44.59	44.36	Cir.	11.207	2.05	0	1.5	0.013	5.214	52.252	52.228	7.868	5.56	0.18	0.879	15.05
99563.1	S177	99660	46.75	46.02	Cir.	35.843	2.04	0	1.25	0.013	3.416	52.124	52.102	6.082	6.52	0.73	0.745	9.22
97161.1	S183	S175	49.23	48.55	Cir.	33.43	2.03	0	2	0.013	3.148	52.681	52.675	4.125	4.7	0.65	0.619	32.26
97454.1	S195	S193	48.5	48.25	Cir.	49.807	2.03	0	2	0.013	5.137	52.606	52.582	4.332	2.51	0.23	0.799	16.03
94844.1	S173	94938	46.36	45.55	Cir.	39.688	2.04	0	2	0.013	5.986	52.799	52.785	7.235	7.66	0.81	0.865	32.32
94809.1	S222	94871	47.27	46.81	Cir.	22.468	2.05	0	2	0.013	5.166	53.049	52.988	6.178	3.22	0.46	0.801	32.37
96620.1	S24	96582	48.61	48.32	Cir.	14.036	2.07	0	1.25	0.013	5.6	53.013	52.975	4.655	7.7	0.29	0.958	9.29
98467.1	S20	98430	47.61	47.01	Cir.	29.548	2.03	0	1.25	0.013	4.51	52.853	52.839	5.829	6.44	0.6	0.86	9.21
96374.1	S39	96299	47.89	47.08	Cir.	39.56	2.05	0	1.25	0.013	-5.593	52.97	52.958	5.878	6.24	0.81	0.748	9.24
97539.1	S41	97497	46.73	46.4	Cir.	16.152	2.04	0	2	0.013	7.87	52.873	52.814	6.414	6.49	0.33	0.997	32.34
97604.1	S50	97437	49.37	48.86	Cir.	60.531	0.84	0	2	0.013	10.731	52.854	52.804	3.944	5	0.51	1.173	20.77
97321.1	S75	97427	47.25	46.87	Cir.	27.786	1.37	0	2	0.013	-37.289	52.753	52.732	5.862	-11.73	0.74	1.403	26.46
95876.1	S80	95809	47.36	47.16	Cir.	18.005	1.11	0	2	0.013	-53.788	51.753	52.75	5.59	-16.93	1	0.655	23.84
95169.1	S55	95224	44.9	44.4	Cir.	24.613	2.03	0	2	0.013	-21.233	52.989	52.767	8.367	-6.63	0.5	1.139	32.24
94387.1	S100	S62	47.97	47.16	Cir.	39.812	2.03	0	2	0.013	8.587	53.243	53.249	6.089	6.38	0.75	1.044	32.27
97494.1	S94	97406	47.45	45.43	Cir.	24.881	8.12	0	2	0.013	-71.644	50.828	52.717	7.287	-22.46	2.42	1.31	64.46
97284.1	S124	97325	45.41	45.07	Cir.	16.773	2.03	0	2	0.013	3.017	52.488	52.488	7.418	4.95	0.34	0.605	32.21
Link429	S128	95106	44.94	43.5	Cir.	33	0	0	1.25	0.013	5.882	52.416	52.228	8.728	5.86	0.42	0.981	13.49
93840.1	93840	93794	39.36	38.9	Cir.	22.72	2.02	0	2	0.013	1.253	52.295	52.295	13.395	1.92	0.46	0.385	32.19
93841.1	93841	93794	39.13	38.65	Cir.	23.713	2.02	0	2	0.013	3.288	52.3	52.295	13.645	3.13	0.48	0.633	32.19
97232.1	S157	97198	46.48	45.27	Cir.	59.516	2.03	0	1.25	0.013	3.226	52.064	52.018	6.748	5.48	1.2	0.723	9.21
97458.1	S193	97253	48.25	48	Cir.	52.819	2.04	0	2	0.013	10.239	52.582	52.481	4.481	4.85	0.25	1.145	15.56
95585.1	S158	95591	45.57	44.84	Cir.	36.06	2.02	0	1.25	0.013	5.103	51.617	51.41	6.57	7.03	0.73	0.915	9.19
94851.1	S185	94938	46.19	45.55	Cir.	31.492	2.03	0	2	0.013	7.43	52.8	52.785	7.235	7.8	0.64	0.968	32.25
99380.1	S217	99385	48.12	47.8	Cir.	15.483	2.07	0	1.5	0.013	5.036	52.164	52.145	4.345	4.46	0.33	0.863	15.1
99416.1	S216	99455	47.95	47.65	Cir.	14.601	2.05	0	1.5	0.013	5.128	52.157	52.144	4.494	2.98	0.15	0.871	15.06
96386.1	S3	96294	48.1	48	Cir.	37.862	2.03	0	2	0.013	6.886	53.017	52.976	4.976	3.96	0.13	0.93	11.63
96459.1	S5	96294	48.1	48	Cir.	59.768	2.04	0	2	0.013	6.424	53.033	52.976	4.976	3.21	0.15	0.897	9.25
96363.1	S15	96294	48.1	48	Cir.	52.872	2.04	0	2	0.013	-4.503	52.982	52.976	4.976	2.6	0.13	0.68	9.84
96322.1	S14	96294	48.1	48	Cir.	48.9	2.04	0	2	0.013	-6.944	52.978	52.976	4.976	-3	0.11	0.527	10.23
97592.1	S2	97571	48.1	48	Cir.	13.864	2.02	0	2	0.013	13.185	52.921	52.896	4.896	6.18	0.1	1.306	19.21
100261.1	S1	97571	48.1	48	Cir.	23.139	2.03	0	2	0.013	-34.74	52.58	52.896	4.896	-10.96	0.54	1.301	14.87
Link373	99768A	99768	38.67	38.59	Cir.	90	0	0	3.5	0.013	48.929	52.107	52.077	13.487	5.01	0.21	2.184	30
Link375	99660A	99660	43.99	43.98	Cir.	18	0	0	3.5	0.013	42.224	52.101	52.102	8.122	4.68	0.03	2.022	23.71
Link419	S16	97571	48.6	48.5	Cir.	23.139	2.03	0	2	0.013	-41.647	52.278	52.896	4.396	-13.16	0.77	1.352	14.87
Link418	S17	97571	48.6	48.5	Cir.	23.139	2.03	0	2	0.013	-44.809	52	52.896	4.396	-14.16	0.89	1.296	14.87
Link420	S4	96294	48.1	48	Cir.	37.862	2.03	0	2	0.013	6.85	52.995	52.976	4.976	3.96	0.13	0.927	11.63
Link421	S6	96294	48.1	48	Cir.	37.862	2.03	0	2	0.013	5.506	52.978	52.976	4.976	3.49	0.13	0.827	11.63
Link423	S12	96294	48.1	48	Cir.	48.9	2.04	0	2	0.013	4.541	52.978	52.976	4.976	3.22	0.14	0.748	10.23
Link422	S13	96294	48.1	48	Cir.	48.9	2.04	0	2	0.013	-7.372	52.977	52.976	4.976	-3.17	0.1	0.44	10.23
Link425	S9	95305	44.1	44	Cir.	20	0	0	2	0.013	-2.477	52.984	52.984	8.984	-0.77	0.05	0.48	16
Link426	S10	95332	43.8	43.67	Cir.	20	0	0	2	0.013	4.415	53.01	52.988	9.318	1.39	0.13	0.737	18.24
Link427	S11	95332	43.8	43.67	Cir.	20	0	0	2	0.013	4.469	53.011	52.988	9.318	1.41	0.13	0.742	18.24
Link424	S7	95305	44.1	44	Cir.	20	0	0	2	0.013	-2.338	52.984	52.984	8.984	0.84	0.07	0.481	16
Link376	S36	95241	41.5	41.4	Cir.	24	0	0	2	0.013	6.939	52.95	52.982	11.582	2.15	0.1	0.934	14.6
Link377	S37	95241	41.5	41.4	Cir.	24	0	0	2	0.013	6.141	52.759	52.982	11.582	1.9	0.1	0.877	14.6
Link378	S53	95241	41.5	41.4	Cir.	24	0	0	2	0.013	5.613	52.851	52.982	11.582	1.74	0.07	0.836	14.6
Link379	S54	95224	41.4	41.3	Cir.	25	0	0	2	0.013	-3.323	52.897	52.767	11.497	-1.95	0.08	0.57	14.31
Link380	S64	95226	40.1	40	Cir.	25	0	0	2	0.013	-6.528	52.783	52.658	12.683	-2.01	0.02	0.693	14.31
Link381	S83	95226	40.1	40	Cir.	25	0	0	2	0.013	-5.932	52.813	52.658	12.713	-1.83	0.02	0.791	14.31
Link386	S79	S67	49	47.85	Cir.	20	0	0	2	0.013	-4.796	52.626	52.556	4.706	4.14	0.55	0.601	54.25
Link385	S97	95308	49.45	49	Cir.	23.414	1.92	0	2	0.013	17.208	53.587	52.518	4.137	6.82	0.45	1.494	31.36
Link384	S85	95199	41.3	41.18	Cir.	25	0	0	2	0.013	11.563	52.561	52.531	11.351	3.6	0.09	1.22	15.67
Link391	S159	95591	45.57	44.84	Cir.	36.06	2.02	0	1.25	0.013	5.292	51.617	51.41	6.57	6.28	0.73	0.932	9.19
Link390	S160	94945	36.6	36.5	Cir.	25	0	0	1.25	0.013	3.932	51.145	51.074	14.574	3.03	0.1	0.802	4.09
Link389	S163	94945	36.6	36.5	Cir.	25	0	0	1.25	0.013	3.287	51.121	51.074	14.574	2.53	0.1	0.73	4.09
Link388	S162	94945	36.6	36.5	Cir.	25	0	0	1.25	0.013	-2.811	51.082	51.074	14.574	-2.17	0.04	0.445	4.09
Link387	S161	94945	36.6	36.5	Cir.	25	0	0	1.25	0.013	3.734	51.134	51.074	14.574	2.87	0.1	0.78	4.09
Link394	Node395	93801	39.25	38.92	Cir.	16.444	2.01	0	2	0.013	0.941	52.474	52.475	13.555	1.18	0	0.333	32.05
Link396	S56	94722	42.7	42.58	Cir.	25	0	0	2	0.013	5.606	53.166	53.138	10.558	1.75	0.12	0.835	15.67
Link398	S35	94722	42.7	42.58	Cir.	25	0	0	2	0.013	5.933	53.163	53.138	10.558	1.85	0.12	0.861	15.67
Link395	S34	94722	42.7	42.58	Cir.	25	0	0	2	0.013	2.489	53.138	53.138	10.558	0.78	0	0.548	15.67
Link405	S125	97384	46.69	46.25	Cir.	21.765	2.02	0	2	0.013	4.827	52.694	52.694	6.444	5.06	0.44	0.772	32.17
Link404	S126	97384	46.69	46.25	Cir.	21.765	2.02	0	2	0.013	5.251	52.695	52.694	6.444	5.86	0.44	0.808	32.17
Link403	S119	97386	46.59	46.27	Cir.	16	0	0	2	0.013	-5.923	52.694	52.694	6.424	3.25	0.31	0.631	31.99
Link406	S127	97325	45.41	45.07	Cir.	17	0	0	2	0.013	5.119	52.492	52.488	7.418	6.63	0.34	0.797	31.99
Link407	S133	97325	45.41	45.07	Cir.	17	0	0	2	0.013	4.021	52.49	52.488	7.418	6.01	0.34	0.702	31.99
Link408	S134	97325	45.41	45.07	Cir.	17	0	0	2	0.013	3.14	52.488	52.488	7.418	3.75	0.34	0.618	31.99
Link409	S136	97198	45.6	45.27	Cir.	16.162	2.04	0	1.25	0.013	7.052	52.039	52.018	6.748	6.34	0.33	1.062	9.23
Link428	S8	95305	44.1	44	Cir.	20	0	0	2	0.013	-24.004	52.81	52.984	8.984	-7.48	0.22	0.48	16
Link432	S213	99459	48	47.5	Cir.	45.279	2.03	0	1.25	0.013	2.122	52.147	52.144	4.644	1.89	0.36	0.581	6.79
Link436	Node425	Node426	46.55	46.23	Rect.	286	0	4	3	0.015	12.181	52.814	52.813	6.583	1.01	0.17	0.659	35.88
Link437	Node426	Node427	46.23	45.82	Rect.	369	0	4	3	0.015	30.561	52.813	52.799	6.979	2.53	0.4	1.219	35.76

Name	Upstream Node Name	Downstream Node Name	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	Shape	Length (ft)	Conduit Slope	Bottom Width (ft)	Diameter (Height) (ft)	Roughness	Max Flow (cfs)	Maximum Water Elevation (US) (ft)	Maximum Water Elevation (DS) (ft)	Max Depth (ft)	Max Velocity (ft/s)	Peak Friction Loss (ft)	Critical Depth (ft)	Design Full Flow (cfs)
Link438	Node427	Node428	45.82	45.79	Rect.	28	0	4	3	0.015	41.786	52.799	52.796	7.006	3.46	0.04	1.501	35.11
Link439	Node428	Node429	45.79	45.51	Rect.	249	0	4	3	0.015	43.031	52.796	52.781	7.271	3.57	0.4	1.531	35.97
Link440	Node429	Node430	45.51	45.48	Rect.	31	0	6	4	0.015	77.557	52.781	52.782	7.302	3.32	0.04	1.731	83.52
Link441	Node430	Node431	45.48	45.17	Rect.	284	0	6	4	0.015	78.381	52.782	52.797	7.627	3.28	0.31	1.743	88.7
Link519	Node431	Node505	45.17	44.16	Rect.	506	0	6	4	0.015	80.708	52.797	52.806	8.646	3.36	0.96	1.777	119.95
Link444	Node433	Node434	46.36	46.23	Cir.	114	0	0	3	0.013	17.921	52.669	52.677	6.447	2.52	0.12	1.354	22.52
Link445	Node434	Node435	46.23	46.17	Cir.	58	0	0	3	0.013	39.839	52.677	52.677	6.507	5.62	0.21	2.054	21.45
Link446	Node435	Node436	46.17	46.12	Cir.	42	0	0	3	0.013	44.555	52.677	52.678	6.558	6.28	0.19	2.174	23.01
Link447	Node436	Node437	46.12	46.08	Cir.	34	0	0	3	0.013	47.128	52.678	52.679	6.599	6.65	0.17	2.235	22.88
Link448	Node437	Node438	46.08	45.86	Rect.	201	0	4	3	0.015	57.291	52.679	52.729	6.869	4.76	0.57	1.853	35.49
Link449	Node438	Node439	45.86	45.8	Rect.	57	0	4	3	0.015	62.848	52.729	52.73	6.93	5.22	0.19	1.971	34.8
Link450	Node439	Node440	45.8	45.74	Rect.	50	0	4	3	0.015	65.317	52.73	52.73	6.99	5.42	0.18	2.023	37.16
Link451	Node440	Node441	45.74	45.72	Rect.	21	0	4	3	0.015	66.32	52.73	52.73	7.01	5.51	0.08	2.044	33.1
Link452	Node441	Node429	45.72	45.51	Rect.	187	0	4	3	0.015	67.476	52.73	52.781	7.271	5.6	0.73	2.067	35.95
Link453	Node442	Node433	46.45	46.36	Cir.	17	0	0	2	0.013	5.541	52.71	52.669	6.309	1.74	0.09	0.83	16.46
Link454	Node443	Node444	46.66	46.58	Cir.	16	0	0	2.5	0.013	7.311	52.688	52.67	6.09	1.6	0.08	0.897	29
Link455	Node444	Node433	46.55	46.36	Cir.	43	0	0	2	0.013	12.709	52.67	52.669	6.309	4.01	0.16	1.282	15.04
Link456	Node445	Node444	0	46.55	Cir.	26	0	0	2.5	0.013	6.659	52.69	52.67	52.67	1.22	0.01	0	548.83
Link457	Node446	Node447	47.32	47.27	Cir.	11	0	0	2.5	0.013	6.738	52.682	52.678	5.408	2.73	0.05	0.859	27.65
Link458	Node447	Node434	47.27	47.1	Cir.	33	0	0	2.5	0.013	29.526	52.678	52.677	5.577	6	0.17	1.851	29.44
Link459	Node448	Node449	47.2	47.15	Cir.	10	0	0	2.5	0.013	4.916	52.681	52.677	5.527	2.59	0.05	0.73	29
Link460	Node449	Node435	47.15	46.99	Cir.	32	0	0	2	0.013	16.078	52.677	52.677	5.687	5.09	0.16	1.445	16
Link461	Node450	Node436	47.84	47.73	Cir.	22	0	0	2	0.013	-4.145	52.678	52.678	4.948	3.33	0.11	0.543	16
Link462	Node451	Node453	46.54	46.47	Cir.	12	0	0	2	0.013	4.954	52.693	52.683	6.213	1.84	0.05	0.783	17.28
Link464	Node452	Node453	46.53	46.47	Cir.	13	0	0	2	0.013	5.121	52.694	52.683	6.213	1.79	0.05	0.797	15.37
Link463	Node453	Node437	46.47	46.23	Cir.	43	0	0	2	0.013	10.643	52.683	52.679	6.449	3.36	0.24	1.168	16.9
Link465	Node454	Node455	46.81	46.78	Cir.	6	0	0	2	0.013	5.091	52.743	52.731	5.951	3.16	0.03	0.795	16
Link466	Node455	Node438	46.78	46.63	Cir.	30	0	0	2	0.013	13.718	52.731	52.729	6.099	4.34	0.15	1.333	16
Link467	Node456	Node457	46.52	46.47	Cir.	8	0	0	2	0.013	4.765	52.731	52.73	6.26	2.23	0.05	0.767	17.88
Link468	Node457	Node439	46.47	46.32	Cir.	30	0	0	2	0.013	9.934	52.73	52.73	6.41	3.14	0.15	1.127	16
Link469	Node458	Node440	0	46.96	Cir.	19	0	0	2	0.013	6.619	52.835	52.73	52.73	1.85	0.01	0.693	355.65
Link470	Node459	Node441	49	48.85	Cir.	28	0	0	1	0.013	2.61	52.737	52.73	3.88	3.93	0.17	0.692	2.61
Link471	Node460	Node430	47.4	47.29	Cir.	21	0	0	2	0.013	3.837	52.785	52.782	5.492	3.18	0.11	0.685	16.37
Link472	Node461	Node430	47.36	47.29	Cir.	14	0	0	2	0.013	4.019	52.792	52.782	5.492	3.4	0.07	0.702	16
Link473	Node462	Node428	48.6	48.42	Cir.	37	0	0	2	0.013	3.158	52.796	52.796	4.376	2.88	0.18	0.62	15.78
Link479	Node463	Node427	47.42	47.35	Cir.	13	0	0	2	0.013	6.854	52.818	52.799	5.449	4.37	0.07	0.928	16.6
Link476	Node464	Node427	48.92	48.88	Cir.	37	0	0	2	0.013	-11.59	52.799	52.799	3.919	-3.84	0.1	0.902	7.44
Link475	Node465	Node464	48.93	48.92	Cir.	9	0	0	2.5	0.013	8.662	52.799	52.799	3.879	-2.82	0.08	0.979	13.67
Link477	Node466	Node464	0	48.92	Cir.	26	0	0	2	0.013	8.642	53.012	52.799	52.799	-2.77	0.1	0.001	310.31
Link474	Node467	Node465	48.95	48.93	Cir.	14	0	0	2.5	0.013	5.34	52.858	52.799	3.908	1.73	0.02	0.761	15.5
Link478	Node468	Node465	48.96	48.93	Cir.	24	0	0	2.5	0.013	4.367	52.849	52.799	3.889	1.13	0.04	0.687	14.5
Link480	Node469	Node426	47.22	47	Cir.	44	0	0	2	0.013	14.614	52.814	52.813	5.813	5.24	0.22	1.377	16
Link481	Node470	Node469	47.29	47.22	Cir.	12	0	0	2	0.013	11.18	52.913	52.814	5.623	14.97	0.05	1.199	17.28
Link482	Node471	Node469	47.29	47.22	Cir.	12	0	0	2	0.013	7.448	52.837	52.814	5.594	2.88	0.05	0.969	17.28
Link485	Node472	Node426	47.2	47	Cir.	34	0	0	2	0.013	15.976	52.815	52.813	5.813	5.48	0.2	1.441	17.35
Link484	Node473	Node472	47.25	47.2	Cir.	9	0	0	2	0.013	8.18	52.818	52.815	5.615	2.87	0.04	1.018	16.86
Link483	Node474	Node473	47.33	47.25	Cir.	17	0	0	2	0.013	3.862	53.019	52.818	5.689	1.29	0.06	0.688	15.52
Link488	Node475	Node473	47.33	47.25	Cir.	17	0	0	2	0.013	4.391	52.85	52.818	5.568	1.94	0.06	0.735	15.52
Link487	Node476	Node472	48.85	48.68	Cir.	34	0	0	2	0.013	4.72	52.817	52.815	4.135	4.02	0.17	0.763	16
Link486	Node477	Node472	48.7	48.54	Cir.	32	0	0	2	0.013	5.516	53.026	52.815	4.326	3.49	0.16	0.828	16
Link489	Node478	Node479	46.4	45.4	Cir.	249	0	0	2	0.013	29.734	52.645	52.578	7.178	9.33	4.18	1.854	14.34
Link490	Node479	Node480	44.9	44.06	Cir.	211	0	0	3	0.013	64.841	52.578	52.12	8.06	9.1	1.96	2.579	42.08
Link491	Node480	99683	44.06	43.92	Cir.	26	0	0	3	0.013	69.862	52.12	52.081	8.161	9.82	0.28	2.653	48.94
Link509	Node481	Node478	47.7	47.65	Cir.	44	0	0	2	0.013	26.156	52.652	52.645	4.995	8.28	0.58	1.786	7.63
Link508	Node482	Node481	47.72	47.7	Cir.	11	0	0	2.5	0.013	7.969	52.673	52.652	4.953	2.13	0.02	0.937	17.49
Link510	Node483	Node481	48.3	48.26	Cir.	20	0	0	1.91	0.013	13.08	52.692	52.652	4.392	5.4	0.08	1.318	8.95
Link512	Node484	Node478	46.47	46.4	Cir.	18	0	0	2	0.013	8.622	52.651	52.645	6.245	2.73	0.07	1.047	14.11
Link511	Node485	Node484	47.72	47.63	Cir.	23	0	0	2	0.013	7.626	52.645	52.651	5.021	3.5	0





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK
- STREET INTERSECTION AND SIDEWALK PAVERS (THIS SHEET ONLY)

NOTE

1. CONTRACTOR TO COORDINATE WITH HOA REPRESENTATIVE MR.WADE KILPATRICK, 713/850–1822, wkilpatrick@pdg.net ON SALVAGING BRICK PAVERS IN ROADWAY AND DRIVEWAY. PAVERS THAT ARE REMOVED FOR PROPOSED STREET AND DRIVEWAY CONSTRUCTION. BRICK PAVER SIDEWALKS IN THIS AREA ARE TO BE LEFT IN PLACE. (THIS SHEET ONLY)
2. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN – SHEET 1 OF 7

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=60'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **101** OF 391	

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MATCH LINE D–D (SEE SHEET 101)

MATCH LINE E–E (SEE SHEET 103)

MATCH LINE B–B (SEE SHEET 105)



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK

NOTE

1. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

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TEL: (713) 270-5700
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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN – SHEET 2 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=60'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **102** OF 391

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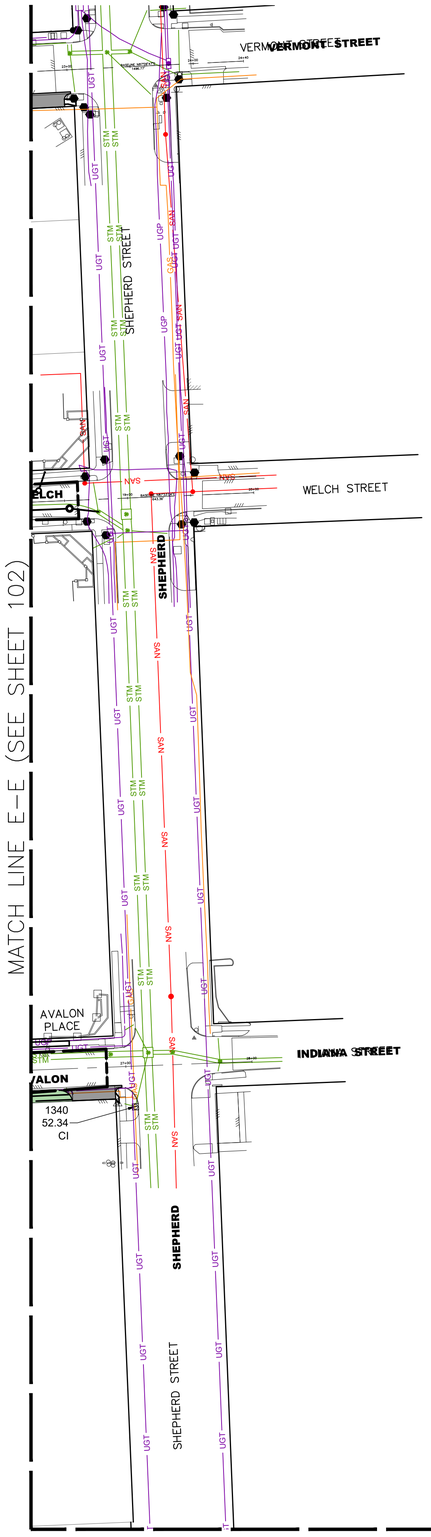



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK

NOTE

1. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN – SHEET 3 OF 7

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=60'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **103** OF 391	

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MATCH LINE A–A (SEE SHEET 101)

MATCH LINE F–F (SEE SHEET 105)



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK

NOTE

1. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

OTHON

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN –
SHEET 4 OF 7

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=60'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **104** OF 391	

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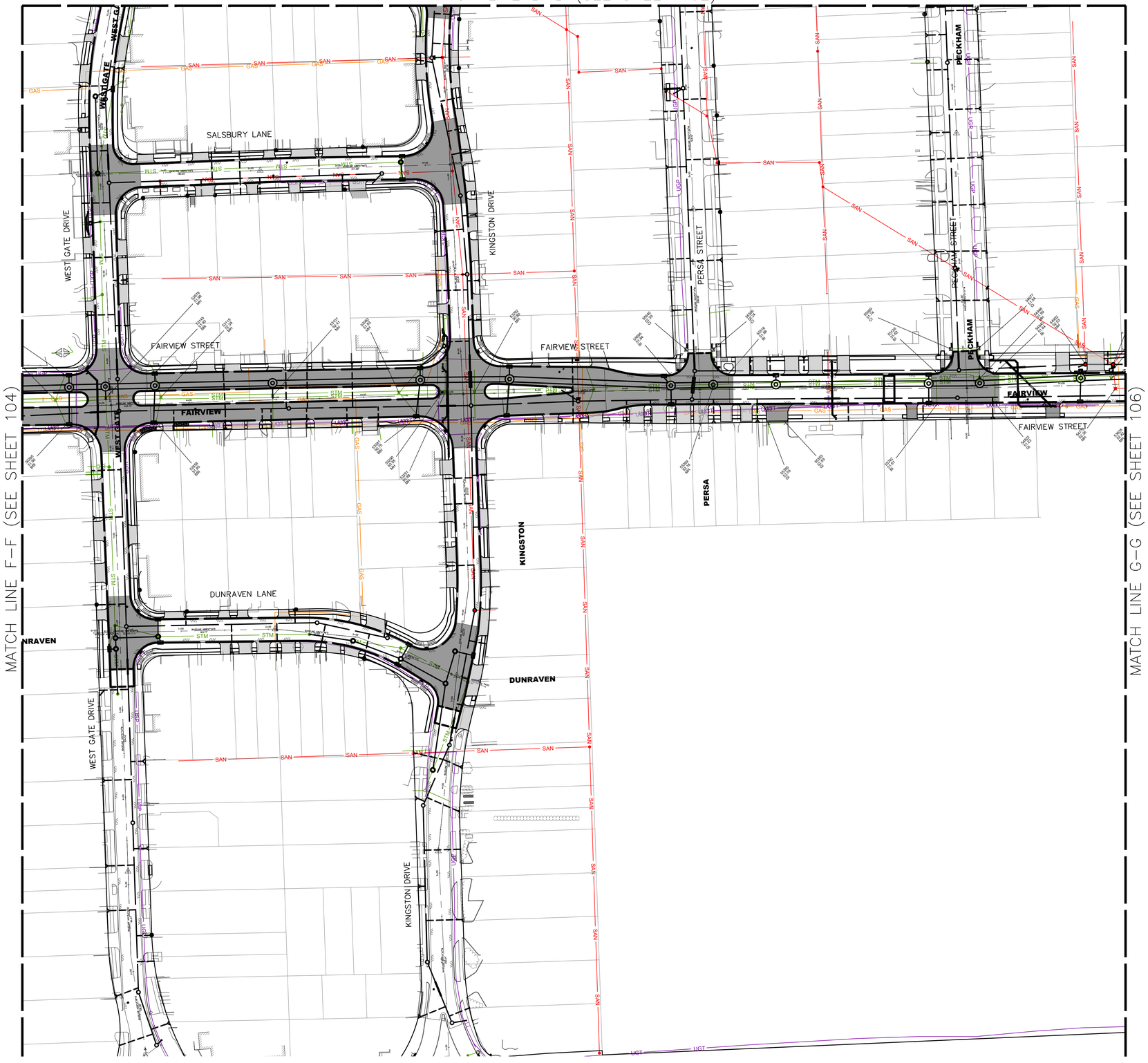
MATCH LINE B–B (SEE SHEET 102)

MATCH LINE F–F (SEE SHEET 104)

MATCH LINE G–G (SEE SHEET 106)





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK

NOTE

1. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN – SHEET 5 OF 7

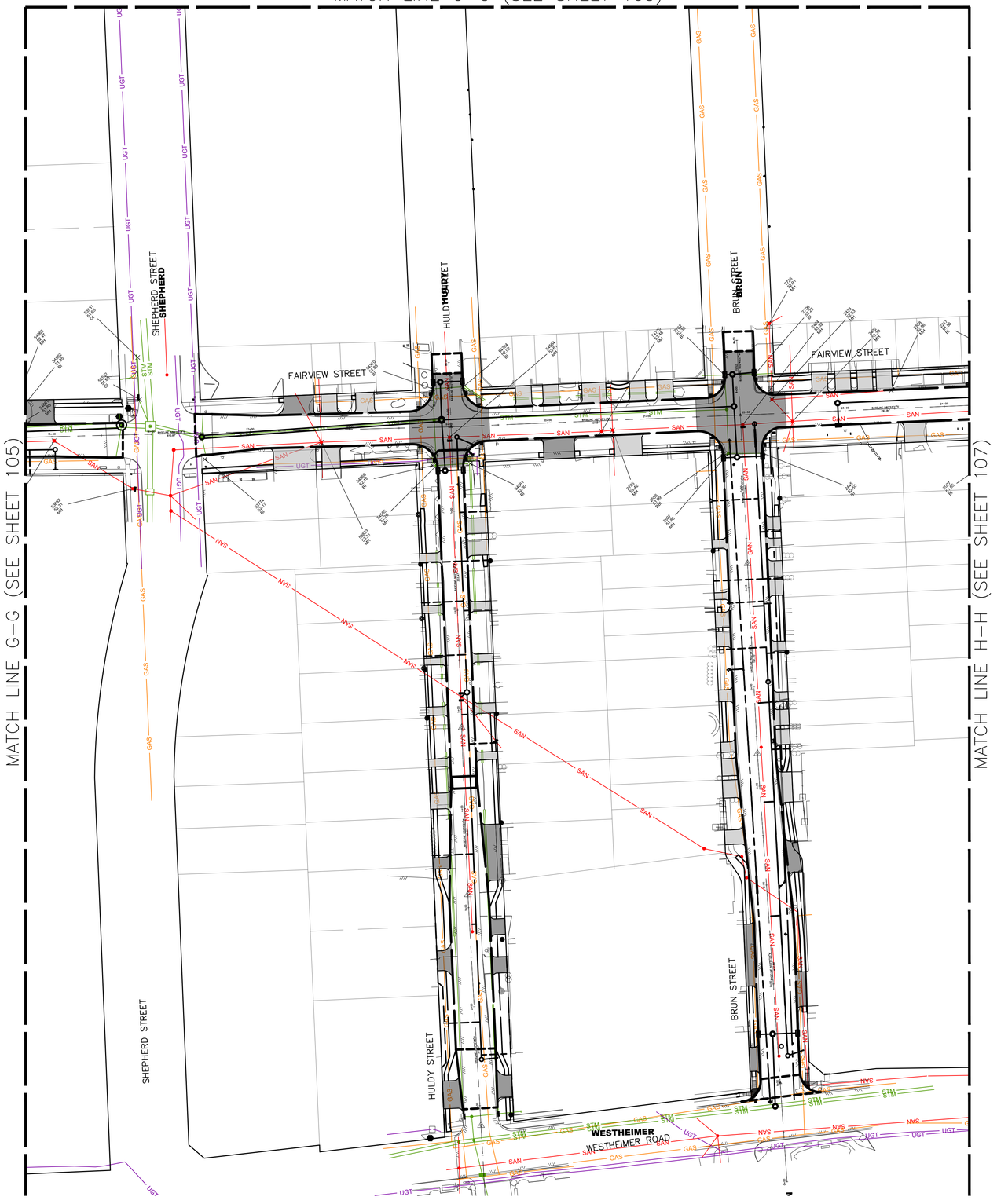
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=60'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **105** OF 391

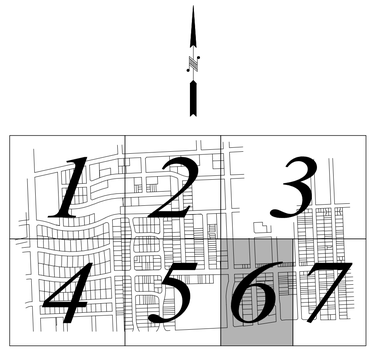
C:\pw_working\othon-pw-01\jason.garza\dms22437\100-106_DEMO_PLAN.dwg\layout5 May 22 , 2026 - 11:19AM Jgarza

MATCH LINE C–C (SEE SHEET 103)

MATCH LINE G–G (SEE SHEET 105)

MATCH LINE H–H (SEE SHEET 107)





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK

NOTE

1. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

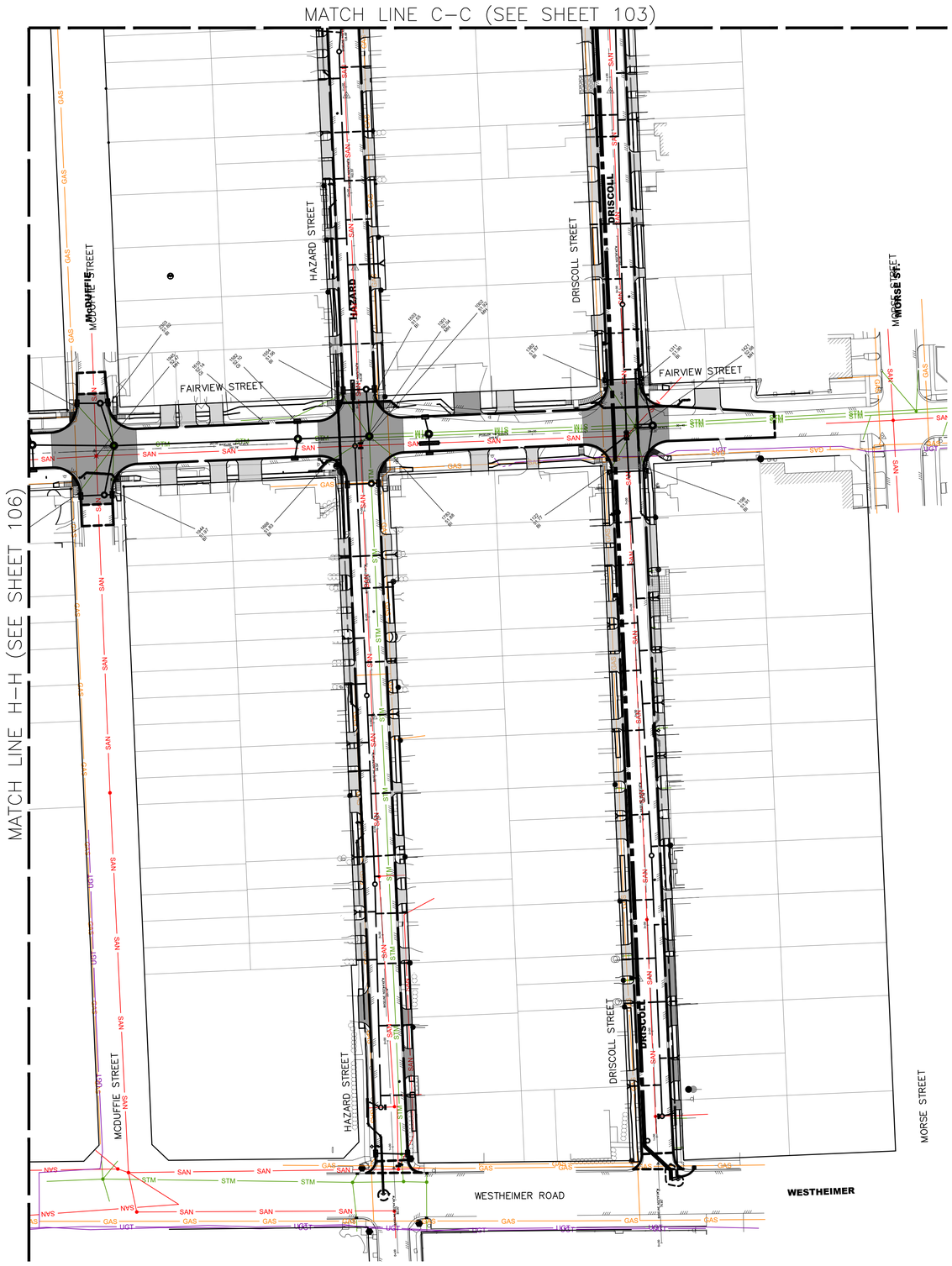
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

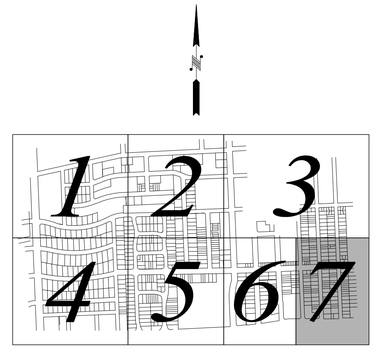
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN – SHEET 6 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=60'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **106** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22437\100-106_DEMO_PLAN.dwgLayout6 May 22 , 2026 – 11:21AM jgarza





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REMOVAL

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- DRIVEWAY
- SIDEWALK

NOTE

1. ALL OTHER BRICK PAVERS WITHIN REMOVAL AREA OF ROADWAY, DRIVEWAY AND SIDEWALK TO BE DISPOSED BY CONTRACTOR.

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FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DEMOLITION PLAN – SHEET 7 OF 7

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=60'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **107** OF 391	

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0 10 20 40

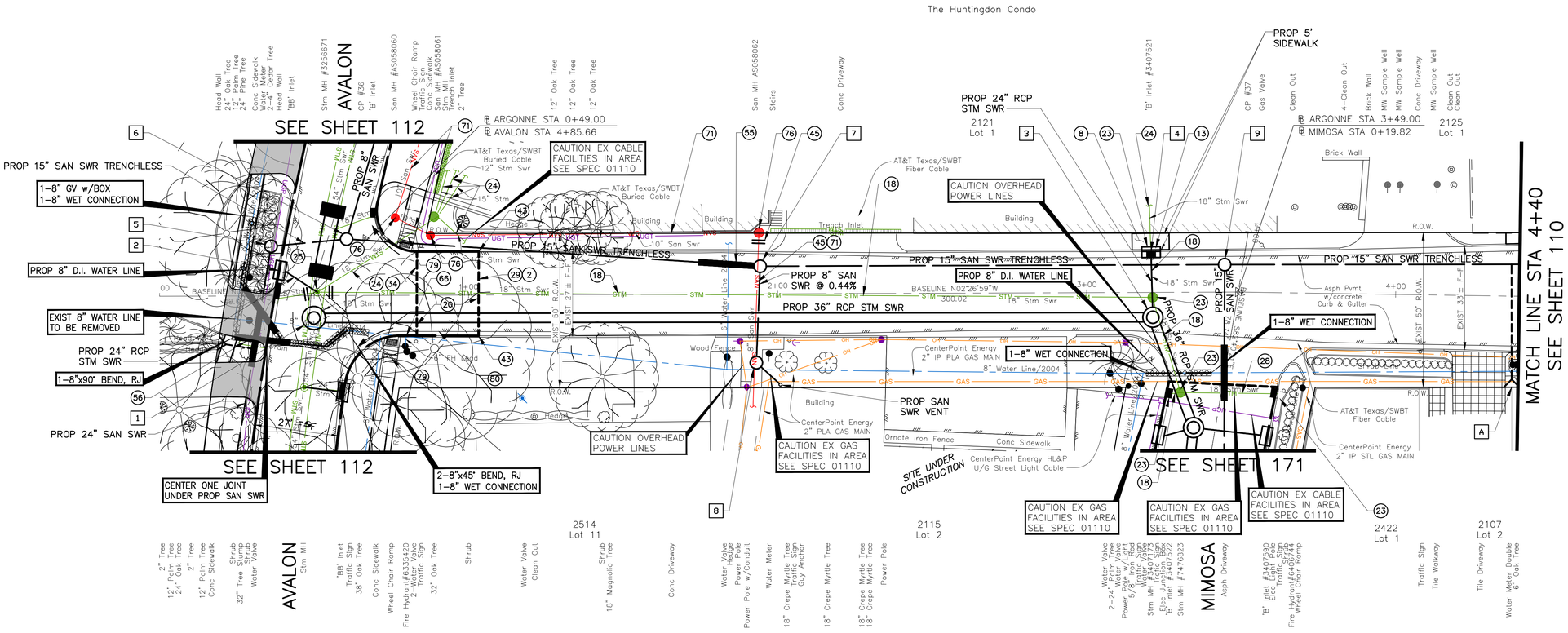
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-36, SET MAG NAIL AT
STA 0+66.58, 18.52' LT
EL. 51.71

CP-37, SET MAG NAIL AT
STA 3+49.00
EL. 52.80



STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-AVA2A	"E"	0+49.89	7.22' RT	51.31
2	BB-A49	"BB"	0+38.77	8.29' LT	51.54
3	MH-ARG1	"C"	3+21.39	8.04' RT	52.37 MATCH
4	BB-A181	"BB"	3+20.89	13.28' LT	52.63 MATCH

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-E3	SAN	0+36.12	16.03' LT	52.84	SEALED
6	MH-N1	SAN	0+60.58	18.27' LT	51.84	SEALED
7	MH-N2	SAN	1+94.37	8.96' LT	52.30	SEALED
8	MH-N3	SAN	1+93.03	22.22' RT	53.24	SEALED, VENTED AND CORROSION RESISTANT
9	MH-N4	SAN	3+44.66	8.90' LT	52.24	SEALED

(SEE SHEET 109 FOR PROFILE)

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+37.97	29.42' RT	44.84

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

ARGONNE PLAN
STA 0+00 TO STA 4+40

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **108** OF 391	

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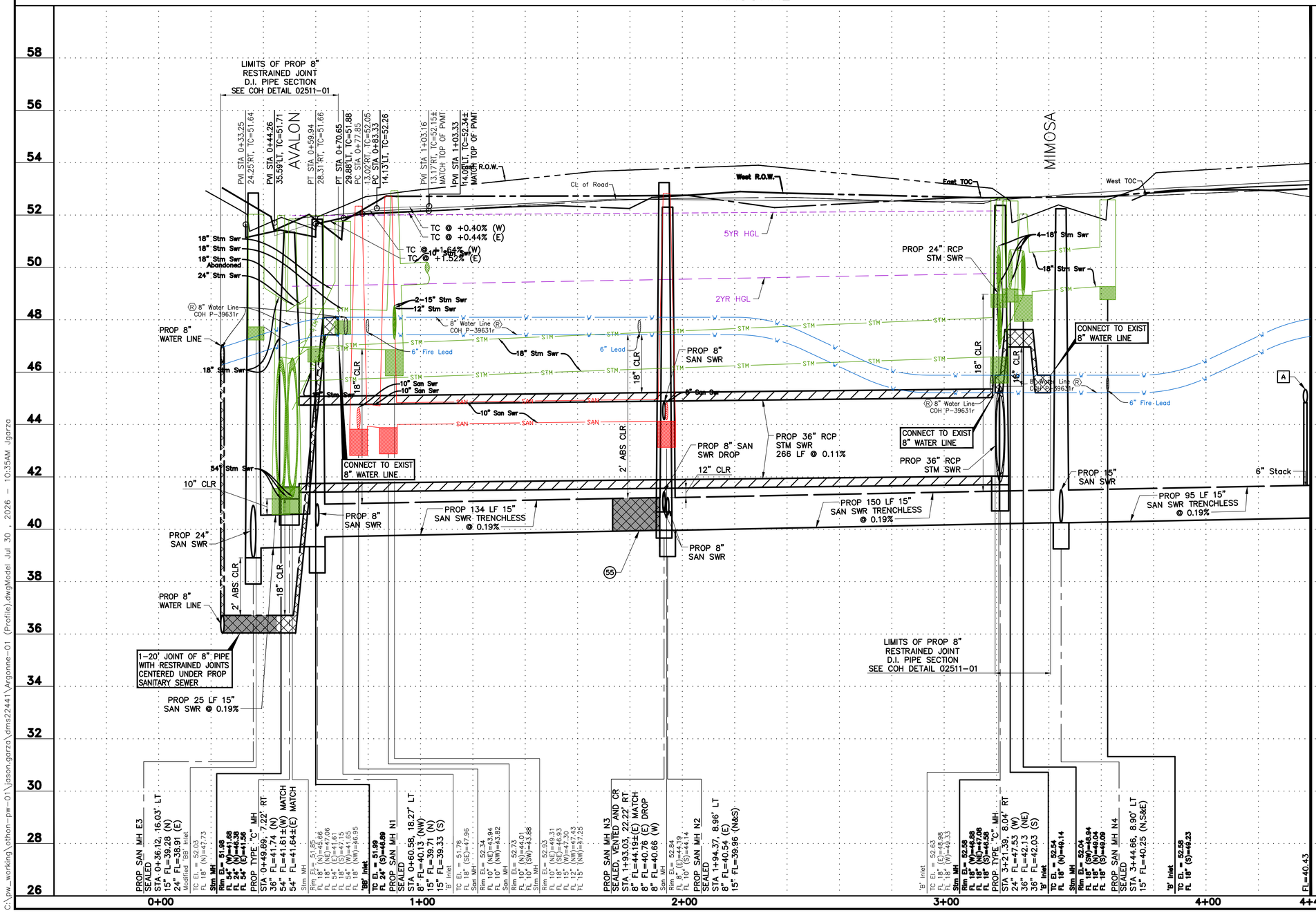
0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

(SEE SHEET 108 FOR PLAN)

ARGONNE



TBM:

CP-36, SET MAG NAIL AT
STA 0+66.58, 18.52' LT
EL. 51.71

CP-37, SET MAG NAIL AT
STA 3+49.00
EL. 52.80

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

ARGONNE PROFILE
STA 0+00 TO STA 4+40

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 109 OF 391	

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6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+77.42	28.80' RT	45.15
B	5+39.01	27.83' RT	45.27

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

℄ ARGONNE STA 6+5.52
℄ BRAZORIA STA 0+33.00

SEE SHEET 108
MATCH LINE STA 4+40

SEE SHEET 188

℄ ARGONNE STA 8+29.34
℄ SAN FELIPE STA 1+22.05

SEE SHEET 120

SEE SHEET 188

BRAZORIA

SAN FELIPE

ARGONNE

Head Wall, Conc Driveway, Head Wall, Traffic Sign, CP #38, Water Valve, Traffic Sign, Fire Dept. Connection, Fire Dept. Connection Traffic Sign, Conc Driveway, Conc Driveway, Conc Driveway, Conc Driveway, Traffic Sign, 'B' Inlet #3407495, Stm MH, Conc Sidewalk, San MH #AS069095, San MH #AS069096, Stm MH #3407161, 'B' Inlet #3407493, Ornate Iron Fence

2001 Lot 21A

2001 Lot 21

Parking Lot

CAUTION OVERHEAD POWER LINES

SIDEWALK TO REMAIN

PROP 15" SAN SWR TRENCHLESS

PROP 15" SAN SWR TRENCHLESS

PROP 5' SIDEWALK (TYP)

PROP 4' SIDEWALK

CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110

Overhang, R.O.W., Conc Sidewalk, Asph. Pvmt. w/concrete Curb & Gutter, Ornate Iron Fence, Hedge, 6" Fire Hydrant Lead, CenterPoint Energy 2" IP PLA GAS MAIN, CenterPoint Energy 2" IP STL GAS MAIN, AT&T Texas/SWBT Fiber Cable, Exist 8" Water Line 2004, Exist 12" Water Line 2004, Exist 36"± F-F, Exist 50' R.O.W., 6" San Swr, 18" Stm Swr, 2-24" San Swrs, 12" Stm Swr, 24" San Swr, 15" Stm Swr, 18" Stm Swr, 2-24" San Swrs, 6" San Swr, 24" San Swr, 24" San Swr, 24" San Swr, 12" Water Line COH P-39631r, 8" Water Line COH P-39631r, 8" Water Line COH P-39631r

BASELINE N01°22'34"W 256.50'

BASELINE N01°22'34"W 222.62'

BASELINE N01°22'34"W 517.84'

BASELINE N01°22'34"W 943.73'

2105 Lot 3

2423 Lot 1

2007 Lot 7

2421 Lot 1

Meyers First PAR R/P Block 1

Meyers First 4th PAR R/P Block 1

Hedge, 6" Oak Tree, Tile Driveway, Hedge, Tile Driveway, Power Pole, 2"± Shrub, 5/8" Iron Rod, Power Pole w/Transformer, Water Meter, Gas Meter, 4" Oak Tree, Ornate Iron Fence, Brick Driveway, Conc Walkway, Brick Driveway, Water Meter, Yard Light, 4" Oak Tree, Power Pole, Water Meter, Guy Anchor, 2" Iron Pipe, Fire Hydrant, Water Valve, Power Pole, Gas Line Marker, Yard Light, 4" Oak Tree, MH# 7832700, Traffic Sign, Water Valve, Chain Link Fence, Wheel Chair Ramp, Conc Sidewalk, Water Valve, Water Meter, Hedge, 2"± Shrub, Ornate Iron Fence, 2x2 Column, 3" Oak Tree, 3" Oak Tree, 2x2 Column, Conc Sidewalk, 2x2 Column, 3" Oak Tree, Power Pole, 3" Oak Tree, 3" Oak Tree, 2x2 Column, Power Pole, San MH, 'B' Inlet #3407494 2.5x2.5 Column, 2.5x2.5 Column, Ornate Iron Fence, CP #560, Conc Sidewalk, 12" Oak Tree, 12" Oak Tree, 12" Oak Tree, Ornate Iron Fence

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1 MH-N5	SAN	6+04.71	12.93' LT	53.46 MATCH	SEALED

East TOC, CL of Road, East R.O.W., West R.O.W., West TOC, East EOP, 8" Water Line COH P-39631r, 8" Tire Lead, 8" Water Line COH P-39631r, 6" Stack, 6" Stack, PROP 165 LF 15" SAN SWR TRENCHLESS @ 0.19%, PROP 15" SAN SWR, PROP SAN MH N5 SEALED STA 6+04.71, 12.93' LT 15" FL=40.74 (E&S), FL=40.43, 8" Water Line COH P-39631r, 12" Water Line COH P-39631r, 6" San Swr, 12" Stm Swr, 10" Stm Swr, 15" Stm Swr, 18" Stm Swr, 24" San Swr, 24" San Swr, 24" San Swr, 24" San Swr

San MH Rim El.= 53.25 FL 48" (N)=49.49 FL 6" (SE)=50.05

'B' Inlet TC El.= 53.05 FL 18" (E)=50.95 FL 6" (W)=50.05(Roof Drain)

Stm MH Rim El.= 52.83 FL 18" (W)=49.93 FL 15" (W)=47.03

'B' Inlet TC El.= 53.04 FL 18" (W)=49.53

San MH Rim El.= 53.25 FL 24" (SW)=45.83 FL 24" (NW)=45.93 FL 24" (NE)=45.75 FL 24" (SE)=45.88

Stm MH Rim El.= 53.44 FL 24" (NW)=46.14 FL 24" (NE)=45.64 FL 24" (S)= Unable to Invert "Box"

Stm MH Rim El.= 53.07 FL 18" (SW)=48.72 FL 18" (NE)=48.82 FL 18" (SE)=48.75 FL 12" (S)=48.77

'B' Inlet TC El.= 53.02 FL 18" (SW)=48.57

54 52 50 48 46 44 42 40 38 36

4+40 5+00 6+00 7+00 8+00

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-38, SET MAG NAIL AT
STA 6+5.52
EL. 54.02

CP-500, AT
STA 8+7.43, 17.06' RT
EL. 52.89

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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TEL: (713) 270-5700
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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

ARGONNE
STA 4+40 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **110** OF 391	

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6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
	2+28.67	25.34' RT	48.09	DUCTILE IRON
	2+52.59	29.63' RT	48.45	DUCTILE IRON
	3+96.52	27.22' LT	46.68	DUCTILE IRON

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
MH-E1	SAN	2+19.00	12.86' LT	51.64	SEALED AND VENTED
MH-E2	SAN	3+90.00	5.15' LT	51.54	SEALED

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
MH-AVA1	"E"	2+04.34	3.06' LT	51.67
BB-A45	"BB"	1+96.24	9.78' RT	51.98
BB-A183	"BB"	2+04.34	17.39' LT	52.01

The Huntingdon Condo 3rd Amend to the 4th Amend

KIRBY

CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110

CAUTION OVERHEAD POWER LINES

PROP SAN SWR VENT

2121 Lot 21A

PROP 6" CONC PVMT w/6" CURB

PROP 8" SAN SWR

PROP 4' SIDEWALK (TYP)

2615 Lot 46 | 2611 Lot 45 | 2607 Lot 44 | 2603 Lot 43

MATCH LINE STA 4+00 SEE SHEET 112

0 10 20 40

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

AVALON

Avalon Place, Section 6
Block L

PROP TYPE "E" MH STA 2+04.34, 3.06' LT 24" FL=46.91 (N) 24" FL=46.91 (S) 54" FL=42.04±(W) MATCH 54" FL=42.03±(E) MATCH

PROP SAN MH E1 SEALED AND VENTED STA 2+19.00, 12.86' LT 8" FL=41.37 (SE)

PROP SAN MH E2 SEALED STA 3+90.00, 5.15' LT 8" FL=40.62 (NW&SE) FL=40.59

PVI STA 1+53.82 6.31'RT, TC=52.25± MATCH TOP OF PVMT PVI STA 1+55.22 20.87'LT, TC=52.30± MATCH TOP OF PVMT

PVI STA 1+93.22 9.41'RT, TC=51.98 PVI STA 1+99.22 10.14'RT, TC=51.98 PVI STA 2+01.34 7.24'LT, TC=52.01 PVI STA 2+07.34 17.55'LT, TC=52.01

PVI STA 2+99.48 9.16'RT, TC=52.25 PVI STA 2+99.48 17.88'LT, TC=52.25

TC @ −0.64% (N)

TC @ −0.68%(S)

TC @ +0.30% (N&S)

TC @ −0.30% (N&S)

5YR HGL

2YR HGL

PROP 24" RCP STM SWR

PROP 171 LF 8" SAN SWR @ 0.44%

PROP 10 LF 8" SAN SWR @ 0.44%

6" Stack

MATCH LINE STA 4+00 SEE SHEET 113

0+00 1+00 2+00 3+00 4+00

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-35, SET 'X' CUT AT STA 0+58.82, 25.82' LT EL. 52.39

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown. (Gas service lines are not shown.) This signature not to be used for conflict verification. Signature valid for six months.

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APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

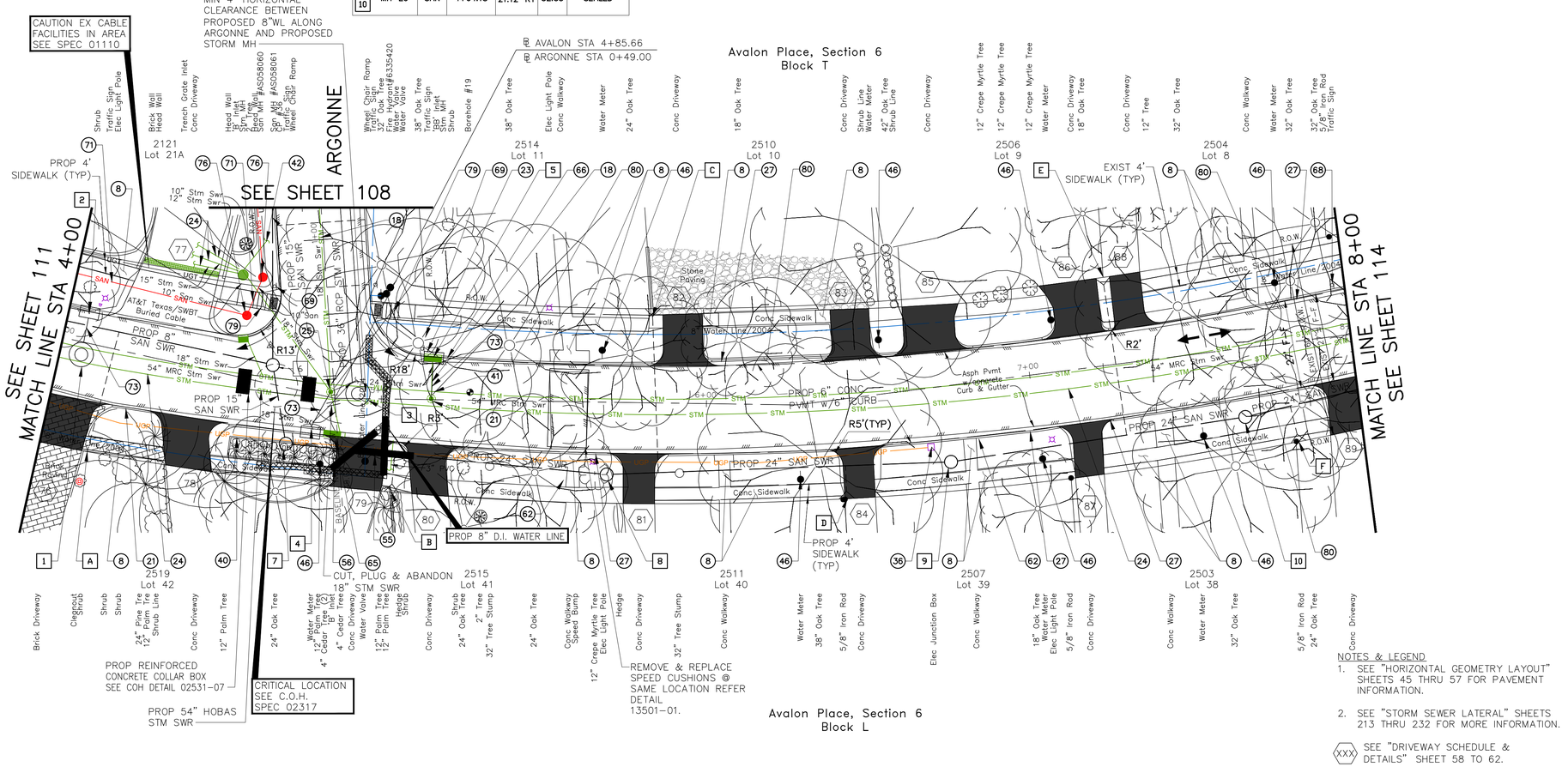
AVALON
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 111 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Avalon-01.dwgModel Jul 20, 2026 - 11:19AM Jgarza

0 10 20 40

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-N1	SAN	4+64.83	5.84' LT	51.84	SEALED
7	MH-E3	SAN	4+74.00	16.94' RT	52.84	SEALED
8	MH-E4	SAN	5+69.61	22.24' RT	52.71	SEALED
9	MH-E5	SAN	6+72.63	23.39' RT	52.52	SEALED
10	MH-E6	SAN	4+64.18	21.12' RT	52.55	SEALED



6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	4+14.93	32.60' RT	48.34	DUCTILE IRON
B	5+03.44	28.59' RT	46.57	
C	5+82.93	29.08' LT	46.70	DUCTILE IRON
D	6+39.38	30.59' RT	46.55	
E	7+26.04	27.20' LT	46.48	DUCTILE IRON
F	7+79.56	30.74' RT	46.41	

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-AVAC1	"E"	4+06.65	3.88' RT	51.67
2	BB-A182	"BB"	4+06.27	9.56' LT	51.89
3	MH-AVA2A	"E"	4+92.78	1.51' LT	51.34
4	BB-A49	"BB"	4+80.66	12.18' RT	51.54
5	BB-A27	"BB"	5+15.92	13.15' LT	51.66

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

AVALON

(SEE SHEET 113 FOR PROFILE)

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-36, SET MAG NAIL AT
STA 4+62.88, 11.52' LT
EL. 51.71

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON PLAN
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **112** OF 391	

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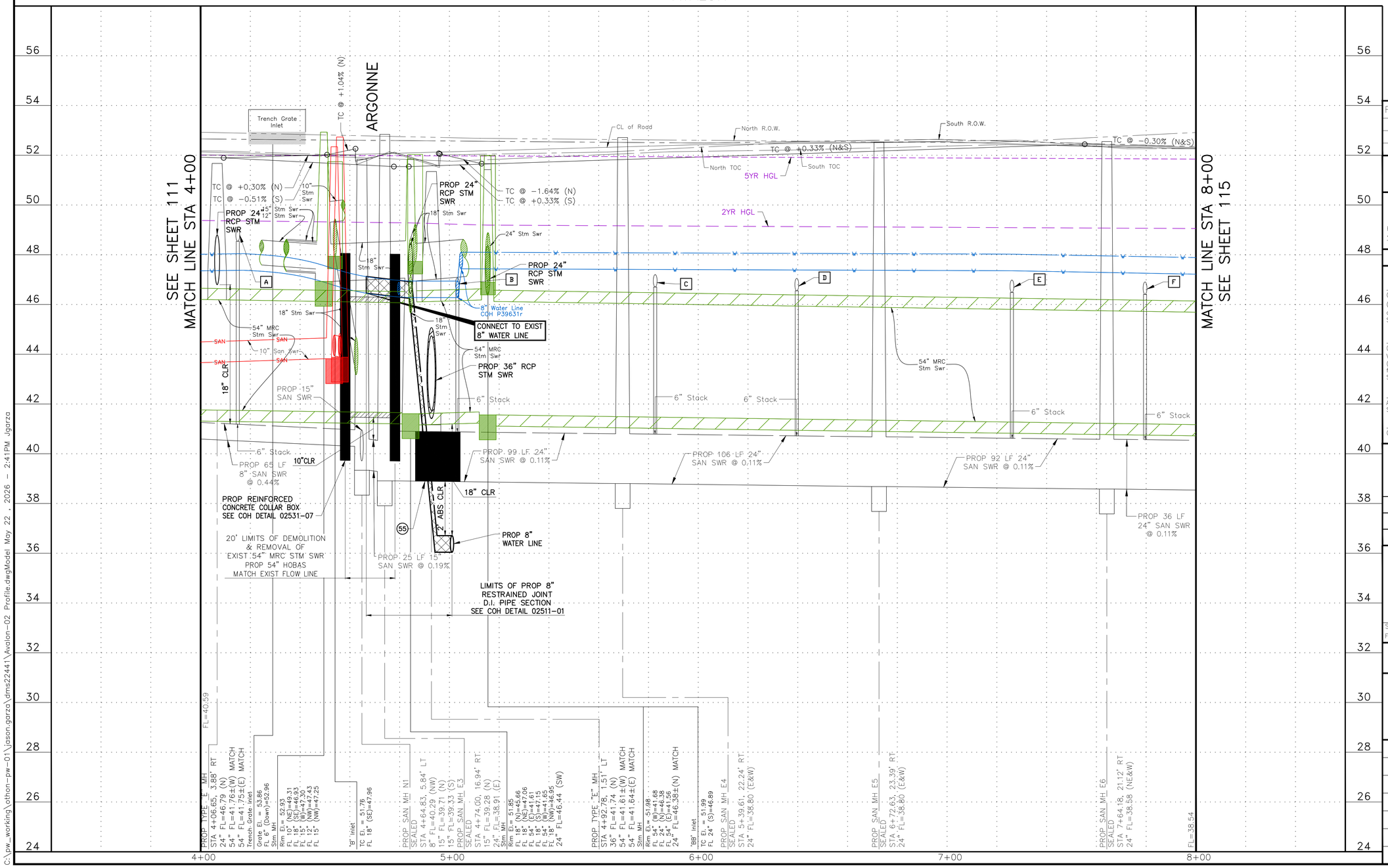
(SEE SHEET 112 FOR PLAN)

AVALON

ARGONNE

SEE SHEET 111
MATCH LINE STA 4+00

MATCH LINE STA 8+00
SEE SHEET 115



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-36, SET MAG NAIL AT
STA 4+62.88, 11.52' LT
EL. 51.71

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON PROFILE
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **113** OF 391	

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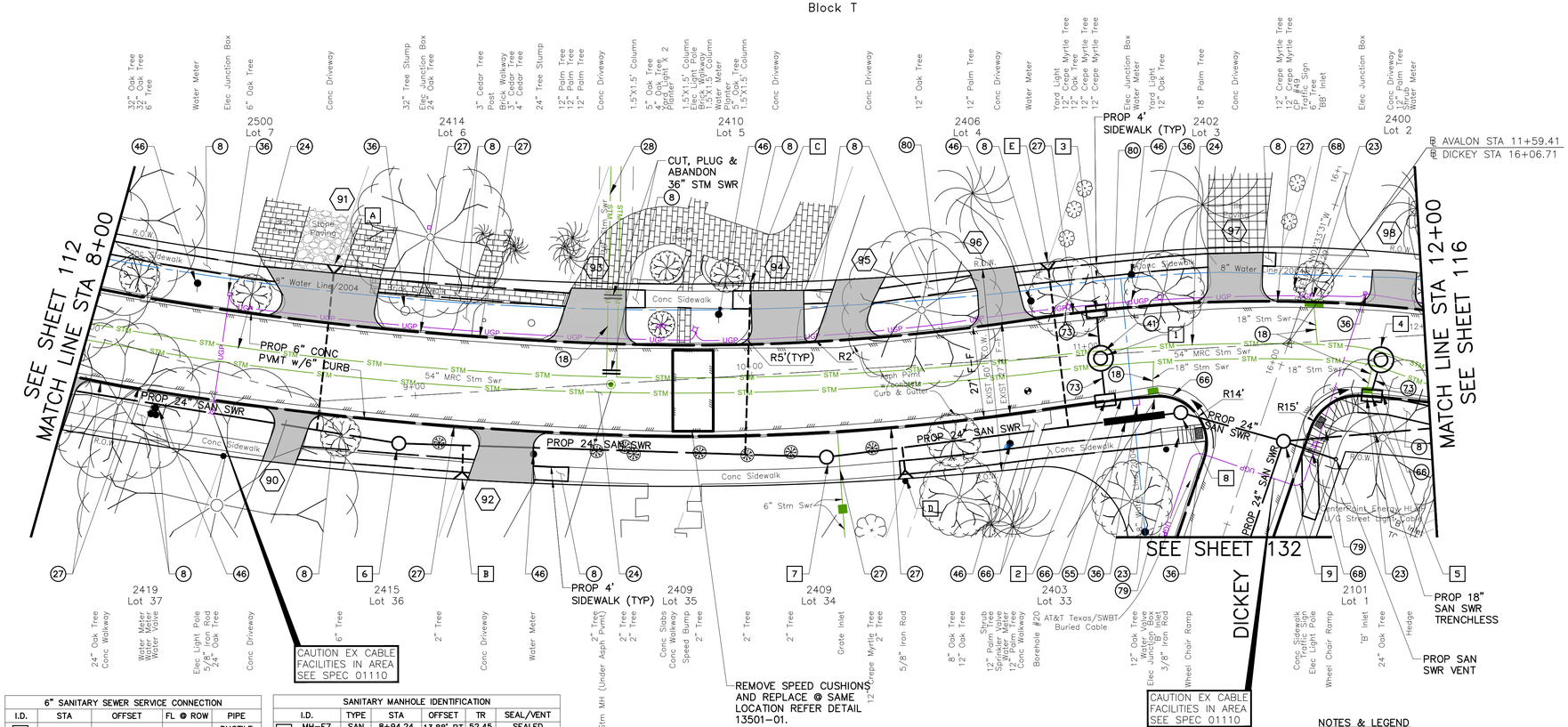
STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-AVAC2	"E"	11+03.55	1.14' RT	51.30
2	BB-A50	"BB"	11+04.23	13.92' RT	51.40
3	BB-A29	"BB"	11+03.10	13.05' LT	51.40
4	MH-AVAC4	"E"	11+86.56	6.58' RT	51.53
5	BB-A61	"BB"	11+83.17	17.28' RT	51.81

Avalon Place, Section 6
Block T



6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	8+78.42	40.20' LT	46.27	DUCTILE IRON
B	9+12.32	25.69' RT	46.03	
C	10+01.28	27.40' LT	46.13	DUCTILE IRON
D	10+43.85	33.32' RT	46.27	
E	10+89.56	28.19' LT	46.12	DUCTILE IRON

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-E7	SAN	8+94.24	13.88' RT	52.45	SEALED
7	MH-E8	SAN	10+20.65	25.55' RT	52.44	SEALED
8	MH-E9	SAN	11+26.34	18.64' RT	51.85	SEALED
9	MH-P8	SAN	11+56.24	28.96' RT	51.36	SEALED AND VENTED

Avalon Place, Section 6
Block L

AVALON

(SEE SHEET 115 FOR PROFILE)

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES:

PERFORM VIDEO INSPECTION PRIOR TO ABANDON GULY IF NO CONNECTIONS TO PIPE ARE IDENTIFIED.

TBM:

CP-49, SET MAG NAIL AT
STA 11+59.41
EL. 51.56

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON PLAN
STA 8+00 TO STA 12+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **114** OF 391	

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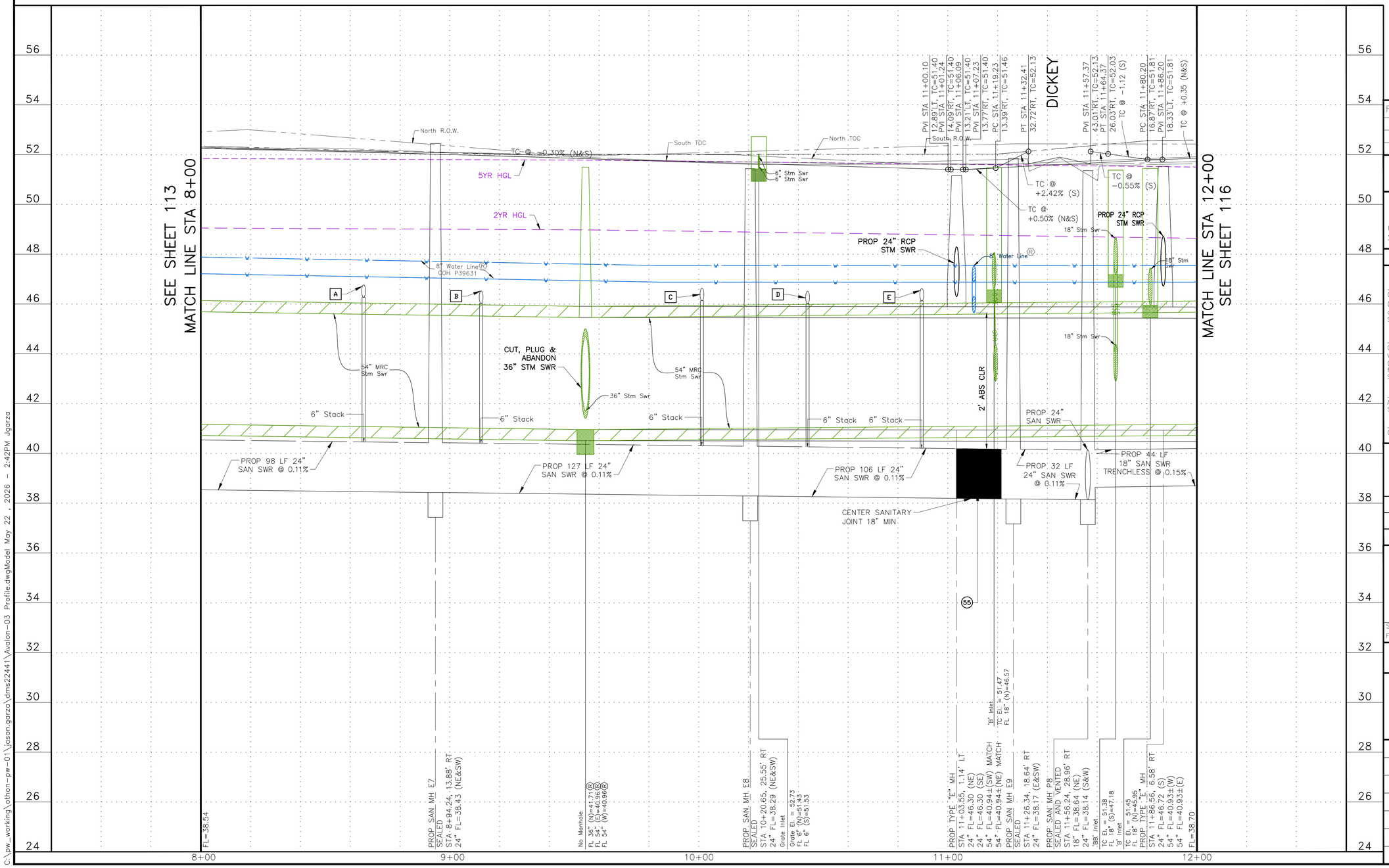
(SEE SHEET 114 FOR PLAN)

AVALON



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-49, SET MAG NAIL AT
STA 11+59.41
EL. 51.56

REV.	DATE	DESCRIPTION	BY

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON PROFILE
STA 8+00 TO STA 12+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **115** OF 391	

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SANITARY MANHOLE IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-E10	SAN	12+24.04	23.79' RT	52.14	SEALED
3	MH-E11	SAN	12+95.69	4.38' RT	51.97	SEALED, VENTED AND CORROSION RESISTANT
4	MH-E12	SAN	14+29.70	5.52' RT	51.90	SEALED

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	BB-A31	"BB"	14+33.88	14.63' LT	51.81

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	12+20.22	24.08' LT	46.11
B	13+46.68	31.47' RT	46.70
C	13+54.51	25.85' LT	46.05
D	14+11.13	25.87' LT	45.86
E	15+11.05	25.83' LT	46.16
F	15+43.24	23.54' RT	46.50

Avalon Place, Section 6
Block T

℄ AVALON STA 14+30.84
℄ WESTGATE STA 16+16.34

CAUTION OVERHEAD POWER LINES

SEE SHEET 114 MATCH LINE STA 12+00

MATCH LINE STA 16+00 SEE SHEET 117

SEE SHEET 212

PROP 18" SAN SWR TRENCHLESS

PROP SAN SWR VENT

PROP 8" @ 0.44%

PROP 12" SAN SWR

PROP 6" CONC PVMT w/6" CURB

DUCTILE IRON PIPE

PROP 8" SAN SWR

PROP 24" RCP STM SWR

PROP 4' SIDEWALK (TYP)

PROP MIN 4' SIDEWALK (TYP)

PROP 4' SIDEWALK (TYP)

REMOVE & REPLACE SPEED CUSHIONS @ SAME LOCATION REFER DETAIL 13501-01.

CenterPoint Energy 6" IP STL GAS MAIN

AT&T Texas/SWBT Buried Cable

CRITICAL LOCATION SEE C.O.H. SPEC 02317

CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110

Avalon Place, Section 6
Block M

AVALON WESTGATE

2400 Lot 2 | 2312 Lot 1 | 2308 Lot 41 | 2306 Lot 40A | 2304 Lot 40 | 2302 Lot 39 | 2226 Lot 38 | 2224 Lot 37 | 2220 Lot 36

2101 Lot 1 | 2307 Lot 42 | 2305 Lot 42 | 2221 Lot 141 | 2219 Lot 140

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
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(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

PROP SAN MH E10
SEALED
STA 12+24.04, 23.79' RT
12" FL=39.23 (E)
18" FL=38.73 (W)

PROP SAN MH E11
SEALED, VENTED AND CR
STA 12+95.69, 4.38' RT
8" FL=45.91±(S) MATCH
8" FL=44.63±(N) MATCH
8" FL=39.74 (N&S) DROP
8" FL=39.74 (E)
12" FL=39.41 (W)

PROP SAN MH E12
SEALED
STA 14+29.70, 5.52' RT
8" FL=40.24 (E&W)

PROP 13 LF 18" SAN SWR @ 0.15% TRENCHLESS

PROP 71 LF 12" SAN SWR @ 0.26% (PRESSURE RATED)

PROP 131 LF 8" SAN SWR @ 0.44%

PROP 170 LF 8" SAN SWR @ 0.44%

PROP 8" SAN SWR DROP

5YR HGL

2YR HGL

TC @ +0.35% (N&S)

TC @ -0.35% (N&S)

TC @ -1.17% (S)

TC @ -0.30% (N)

TC @ +1.27% (S)

TC @ +0.48% (N)

TC @ +0.31% (N&S)

SEE SHEET 115 MATCH LINE STA 12+00

MATCH LINE STA 16+00

12+00 13+00 14+00 15+00 16+00

54 52 50 48 46 44 42 40 38 36

FL=38.70 FL=41.01

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-29, SET MAG NAIL W/SHINNER AT
STA 14+30.84
EL. 52.01

REV.	DATE	DESCRIPTION	BY

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MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
AVALON
STA 12+00 TO STA 16+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 116 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Avalon-04.dwgModel Jul 20, 2026 - 2:21PM Jgarza

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	16+11.05	25.82' LT	46.41
B	16+43.24	23.69' RT	46.55
C	16+76.55	25.82' LT	46.56
D	17+37.15	23.84' RT	46.81
E	17+60.97	25.81' LT	46.32
F	18+62.05	24.72' LT	46.15
G	19+17.58	27.55' RT	46.42
H	19+18.51	22.37' LT	46.34
I	19+62.23	20.56' LT	46.50

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	BB-A34	"BB"	18+46.48	13.54' LT	52.06

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-E13	SAN	16+31.35	5.92' RT	52.11	SEALED
3	MH-E14	SAN	19+25.37	10.12' RT	51.99	SEALED
4	MH-E15	SAN	19+71.84	1.40' LT	52.13	SEALED, VENTED AND CORROSION RESISTANT

SEE SHEET 116
MATCH LINE STA 16+00

MATCH LINE STA 20+00
SEE SHEET 118

SEE SHEET 166

CAUTION OVERHEAD POWER LINES

CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
CRITICAL LOCATION SEE C.O.H. SPEC 02317

REMOVE & REPLACE SPEED CUSHIONS @ SAME LOCATION REFER DETAIL 13501-01.

PROP 4' SIDEWALK (TYP)

PROP 8" SAN SWR

PROP 24" RCP STM SWR

PROP 6" CONC PVMT w/6" CURB

DUCTILE IRON PIPE

CenterPoint Energy 6" IP STL GAS MAIN

PROP SAN SWR VENT

AVALON

KINGSTON

℄ AVALON STA 18+35.30
℄ KINGSTON STA 16+10.92

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

MATCH LINE STA 16+00

MATCH LINE STA 20+00

PROP 32 LF 8" SAN SWR @ 0.44%

PROP 294 LF 8" SAN SWR @ 0.44%

PROP 47 LF 8" SAN SWR @ 0.44%

PROP 6" SAN SWR

PROP 6" SAN SWR DROP

2' ABS CLR

18" CLR

5YR HGL

2YR HGL

PROP 24" RCP STM SWR

PROP SAN SWR E13 SEALED STA 16+31.35, 5.92' RT 8" FL=41.14 (W&E)

PROP SAN SWR E14 SEALED STA 19+25.37, 10.12' RT 8" FL=42.43 (W&NE)

PROP SAN SWR E15 SEALED, VENTED AND CR STA 19+71.84, 1.40' LT 6" FL=46.40±(S) MATCH 6" FL=42.82 (S) DROP 8" FL=42.65 (SW)

16+00 17+00 18+00 19+00 20+00

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES:

AT SAN. MH 4 KEEP EXISTING 6" SANITARY SEWER IN OPERATION. DO NOT PLUG NEW MH IN ORDER TO VENT EXISTING LINE.

TBM:

CP-28, SET MAG NAIL W/SHINNER AT
STA 18+35.30
EL. 52.20

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
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Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

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AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON
STA 16+00 TO STA 20+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **117** OF 391	

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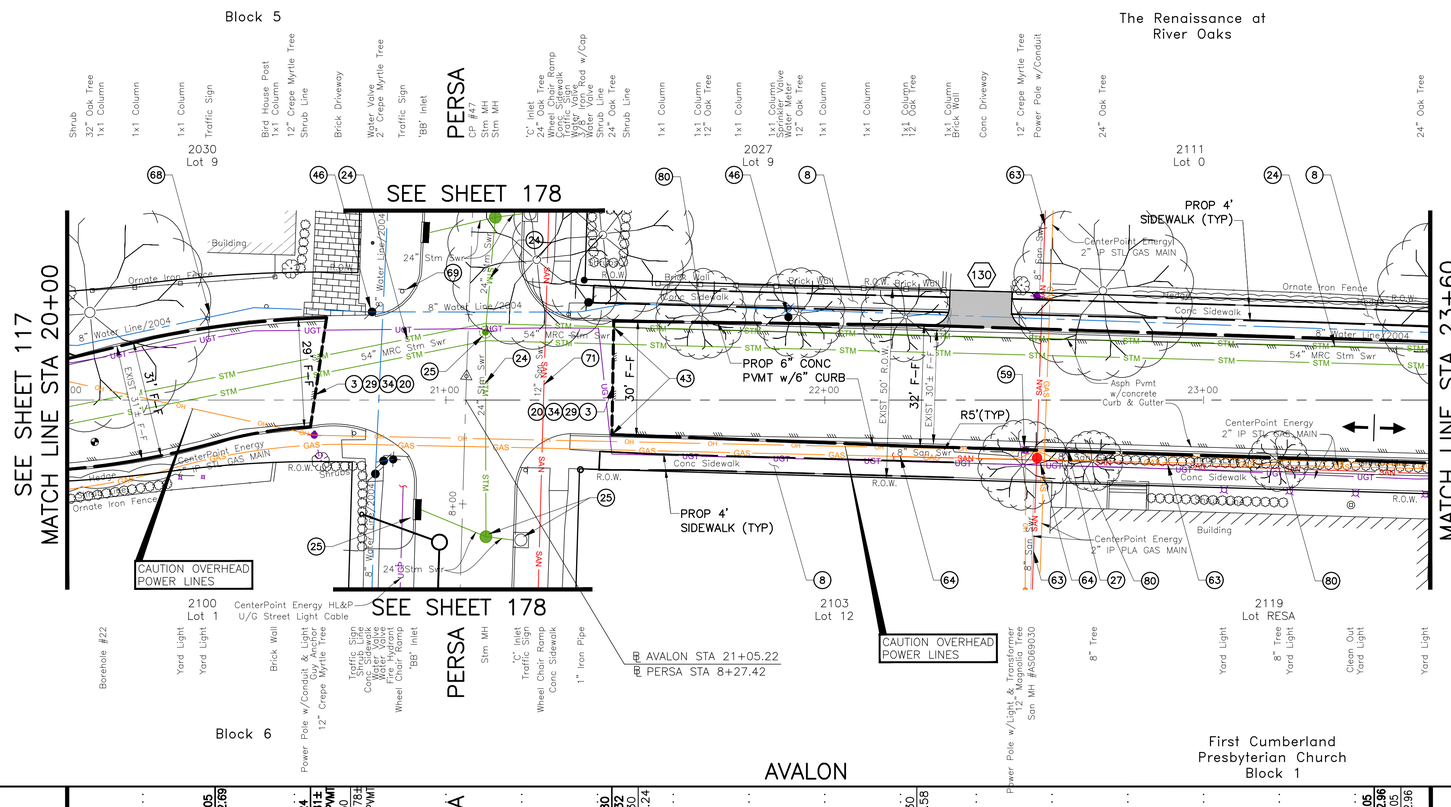

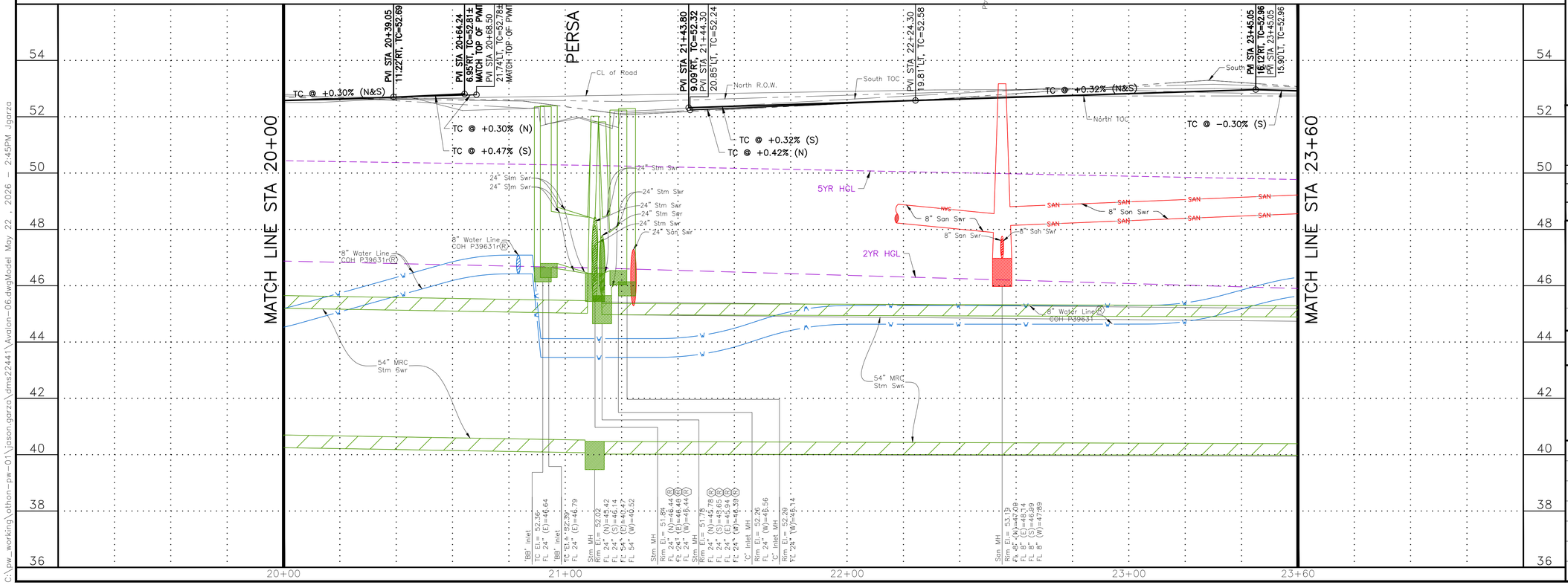

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-47, SET 'X' CUT AT STA 21+5.41, 6.29' LT EL. 52.28

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON
STA 20+00 TO STA 23+60

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **118** OF 391	

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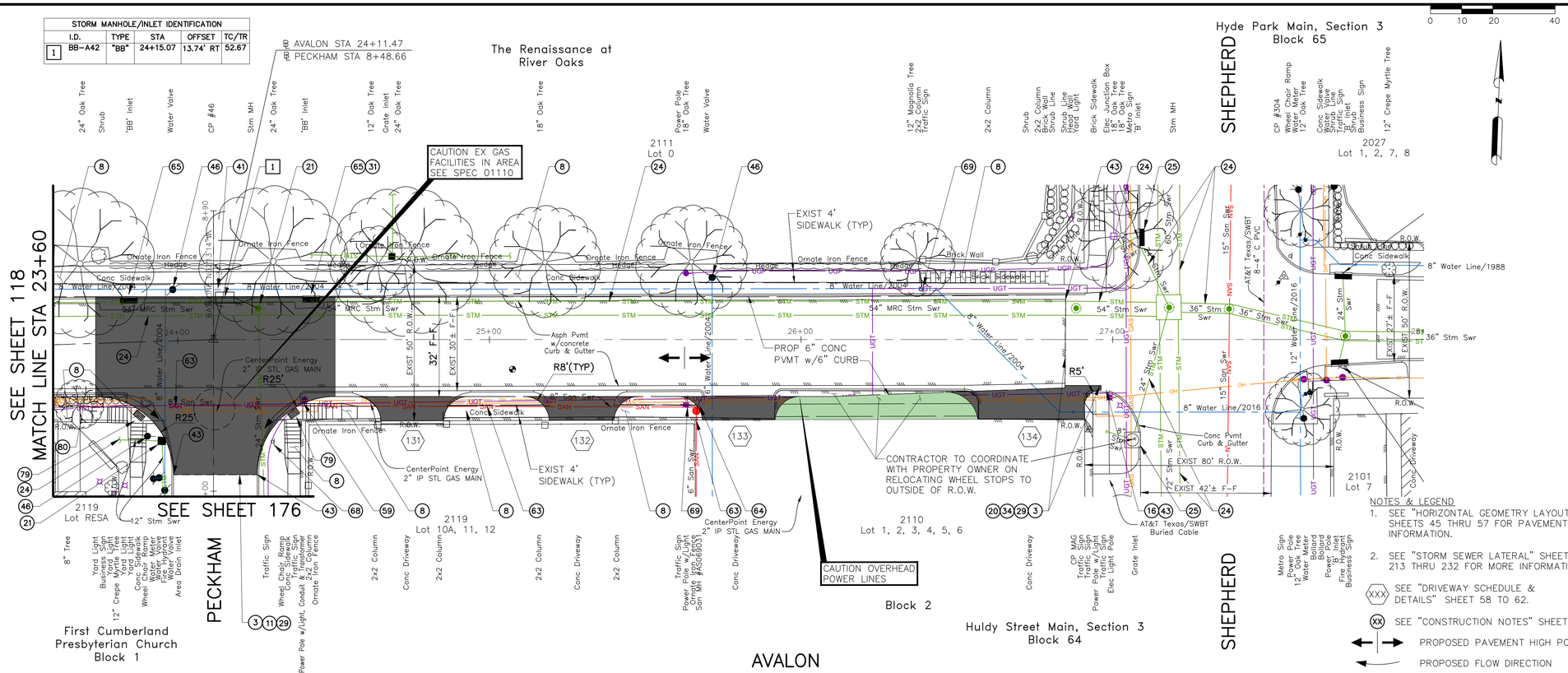
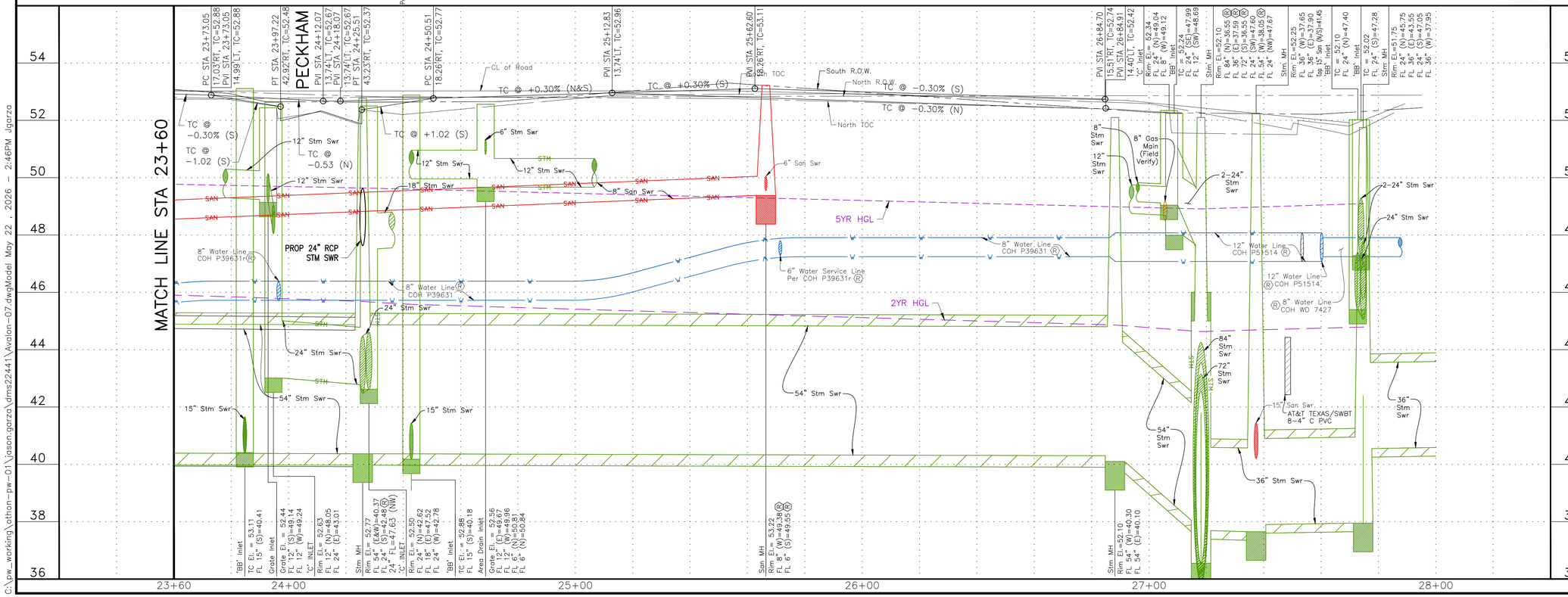
STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 BB-A42	"BB"	24+15.07	13.74' RT	52.67





BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-46, SET MAG NAIL W/SHINNER AT
STA 24+11.47
EL. 53.17

CP-304, AT
STA 27+54.91, 20.35' LT
EL. 0.00

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

AVALON
STA 23+60 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **119** OF 391	

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SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-N5	SAN	0+20.07	0.70' RT	53.46	SEALED
6	MH-B1	SAN	2+91.05	2.31' RT	53.48	SEALED, VENTED AND CORROSION RESISTANT
7	MH-B2	SAN	2+91.19	21.41' LT	53.68	SEALED AND VENTED

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
8	MH-B3	SAN	3+36.59	2.58' RT	53.38	SEALED, VEMTED AND CORROSION RESISTANT
9	MH-O2	SAN	4+16.92	0.73' LT	53.08	SEALED

STORM MANHOLE/INLET IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-REV3	"C"	3+79.18	3.70' LT	52.76	
2	BB-A17	"BB"	3+66.52	13.34' RT	53.17	
3	BB-A3	"BB"	3+79.12	13.70' LT	53.11	
4	MH-REV2	"C"	4+03.50	6.86' LT	53.17	

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL
A	1+15.47	24.89' RT	48.20
B	2+24.06	24.08' RT	47.72
C	3+43.07	15.75' RT	47.44

SEE SHEET 110

SEE SHEET 184

SEE SHEET 203

ARGONNE

REVERE

WELCH

Argonne Street PAR R/P Block 1

Brazoria Manor Block 1

Meyers First PAR R/P Block 1

Argonne Street Landing Block 1

Brazoria Manor, Section 2 Block 1

BRAZORIA/WELCH

PROP SAN SWR VENT

PROP 5' SIDEWALK (TYP)

CAUTION ABANDONED 8" WATER LINE NOT SHOWN

PROP 15" SAN SWR TRENCHLESS

PROP 8" SAN SWR @ 0.44%

PROP 4' SIDEWALK

PROP 3' SIDEWALK

PROP 6" WATER LINE

CAUTION OVERHEAD POWER LINES

CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110

MIN 4' HORIZONTAL CLEARANCE BETWEEN PROPOSED 6"WL ALONG REVERE ST AND PROP STORM MH

MIN 4' HORIZONTAL CLEARANCE BETWEEN PROPOSED 8"WL OFFSET ALONG WELCH ST

PROP 24" RCP STM SWR

PROP 15" SAN SWR

PROP 8" SAN SWR

SITE UNDER CONSTRUCTION

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES

1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:

CP-38, MAG NAIL AT STA 0+33, EL. 54.02

CP-40, MAG NAIL AT STA 4+10.22, EL. 53.72

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · REGISTERED PROFESSIONAL ENGINEER · 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

BRAZORIA/WELCH
STA 0+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 120 OF 391	

PROP SAN MH N5
SEALED AND VENTED
STA 0+20.07, 0.70' RT
15" FL=40.74 (E&S)

PROP SAN MH B1
SEALED, VENTED AND CR
STA 2+91.05, 2.31' RT
8" FL=45.51 (N)
8" FL=41.83 (N) DROP
15" FL=41.25 (W&E)

PROP SAN MH B3
SEALED, VENTED AND CR
STA 3+36.59, 2.58' RT
8" FL=45.52 (S)
8" FL=41.92 (S) DROP
15" FL=41.34 (W&E)

PROP SAN MH B2
SEALED AND VENTED
STA 2+91.19, 21.41' LT
21" FL=45.74±(NW) MATCH
8" FL=45.60 (S)

PROP TYPE "C" MH
STA 3+81.17, 6.95' LT
24" FL=48.33 (N)
24" FL=48.33 (S)
24" FL=48.33 (E)

PROP SAN MH O2
SEALED
STA 4+16.92, 0.73' LT
8" FL= 42.67 (N&S)
15" FL=41.49 (E&W)

PROP TYPE "C" MH
STA 4+03.50, 6.86' LT
24" FL=48.30 (NE)
24" FL=48.30 (NW)
24" FL=48.30 (S).

PROP. 6" SERVICE RECONNECT

PROP 271 LF 15" SAN SWR TRENCHLESS @ 0.19%

PROP 46 LF 15" SAN SWR TRENCHLESS @ 0.19%

PROP 80 LF 15" SAN SWR TRENCHLESS @ 0.19%

PROP 8" SAN SWR DROP

PROP 24" RCP STM SWR 18 LF @ 0.18%

CUT, PLUG & ABANDON 21" SAN SWR

CUT, PLUG & ABANDON 12" SAN SWR

PROP 6" WATER LINE

PROP 15"SAN SWR SEE SHEET 203

MIN 2' VERTICAL CLEARANCE BETWEEN PROPOSED 6"WL LONG REVERE ST & PROP 24" STORM ALONG BRAZORIA

6" Stack

2' ABS CLR

18" CLR

0+00 1+00 2+00 3+00 4+00 4+50

36 38 40 42 44 46 48 50 52 54

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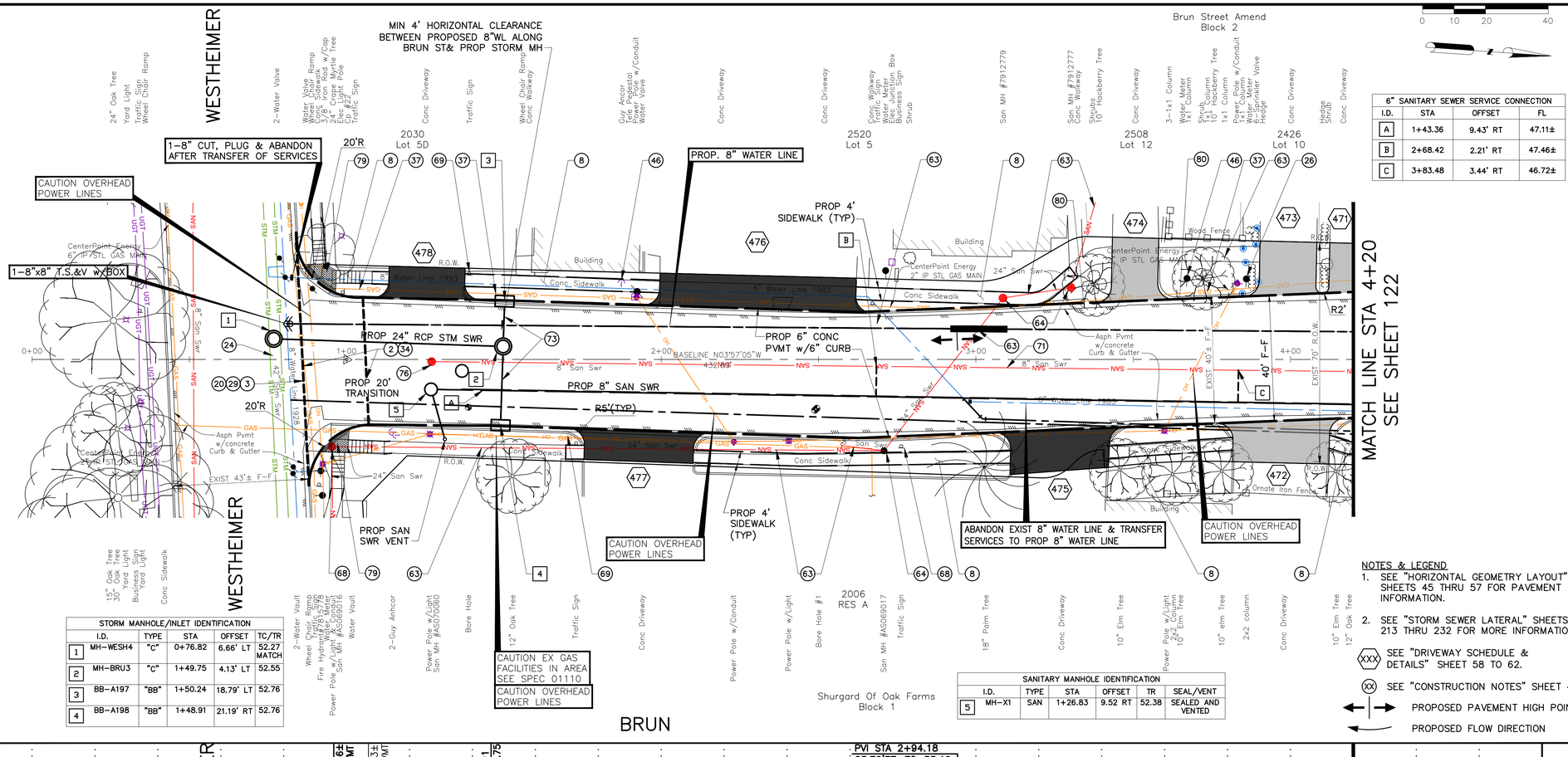

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-WESH4	"C"	0+76.82	6.66' LT	52.27 MATCH
2	MH-BRU3	"C"	1+49.75	4.13' LT	52.55
3	BB-A197	"BB"	1+50.24	18.79' LT	52.76
4	BB-A198	"BB"	1+48.91	21.19' RT	52.76

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-X1	SAN	1+26.83	9.52 RT	52.38	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL
A	1+43.36	9.43' RT	47.11±
B	2+68.42	2.21' RT	47.46±
C	3+83.48	3.44' RT	46.72±

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-22, MAG NAIL
STA 1+00,
EL. 52.68

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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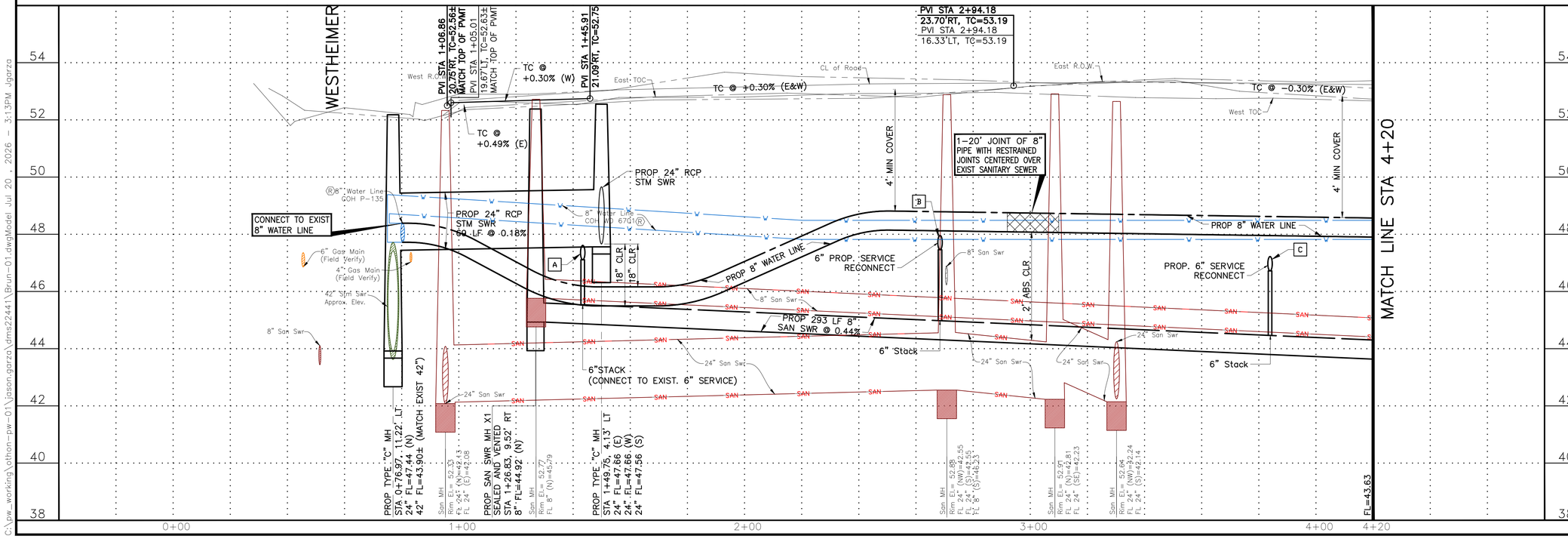
CABLE COMPANY



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FB No. P-5723

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MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

BRUN
STA 0+00 TO STA 4+20

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **121** OF 391	

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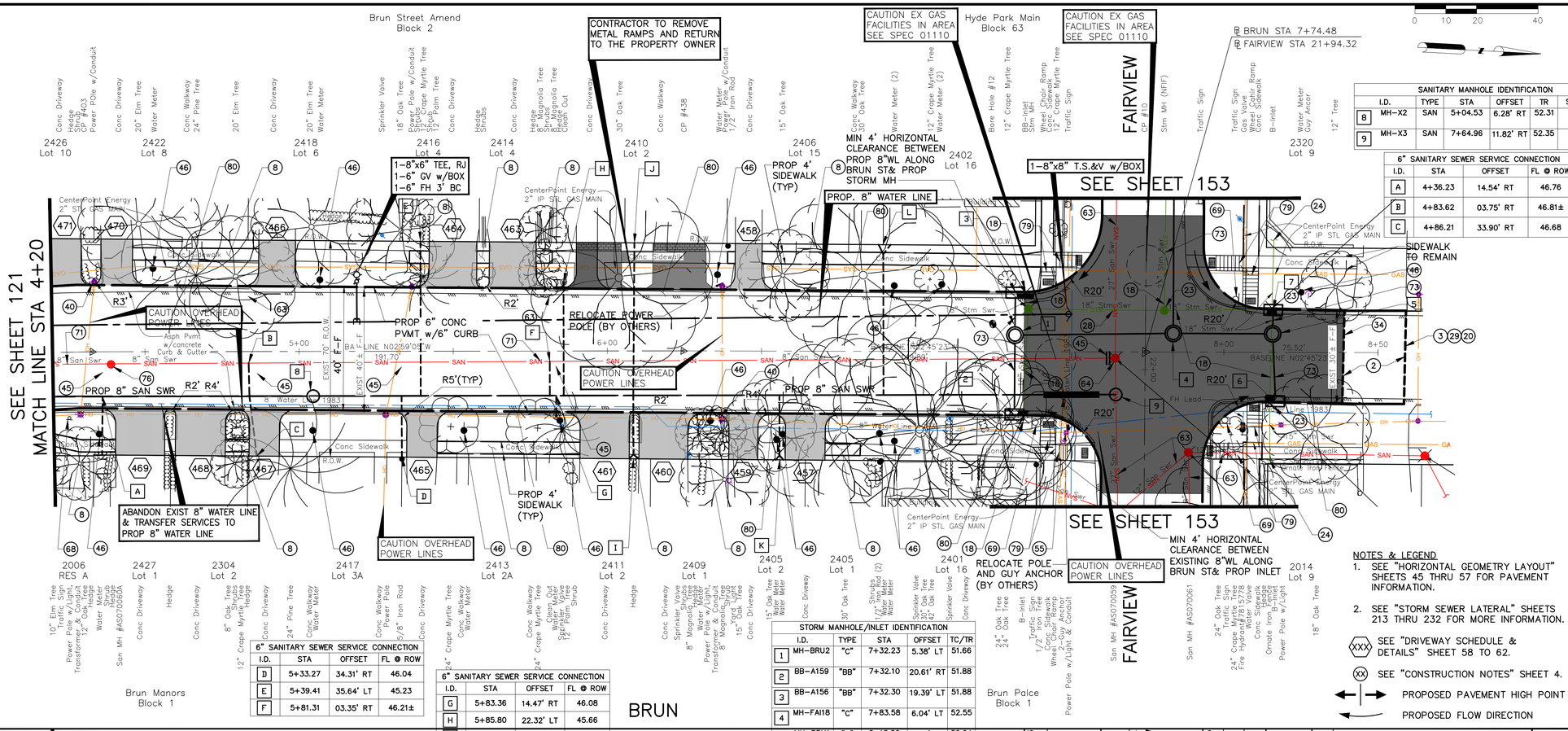


6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
D	5+33.27	34.31' RT	46.04
E	5+39.41	35.64' LT	45.23
F	5+81.31	03.35' RT	46.21±

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
G	5+83.36	14.47' RT	46.08
H	5+85.80	22.32' LT	45.66
I	6+08.40	34.96' RT	46.52
J	6+08.82	35.04' LT	45.13
K	6+55.87	35.25' RT	46.65
L	6+89.40	34.59' LT	45.01

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 MH-BRU2	"C"	7+32.23	5.38' LT	51.66
2 BB-A159	"BB"	7+32.10	20.61' RT	51.88
3 BB-A156	"BB"	7+32.30	19.39' LT	51.88
4 MH-FAI18	"C"	7+83.58	6.04' LT	52.55
5 MH-BRU1	"C"	8+15.82	5.99' LT	52.04
6 BB-A149	"BB"	8+16.66	16.08' RT	52.13
7 BB-A148	"BB"	8+16.00	13.98' LT	52.38

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
8 MH-X2	SAN	5+04.53	6.28' RT	52.31	SEALED
9 MH-X3	SAN	7+64.96	11.82' RT	52.35	SEALED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+36.23	14.54' RT	46.76
B	4+83.62	03.75' RT	46.81±
C	4+86.21	33.90' RT	46.68

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

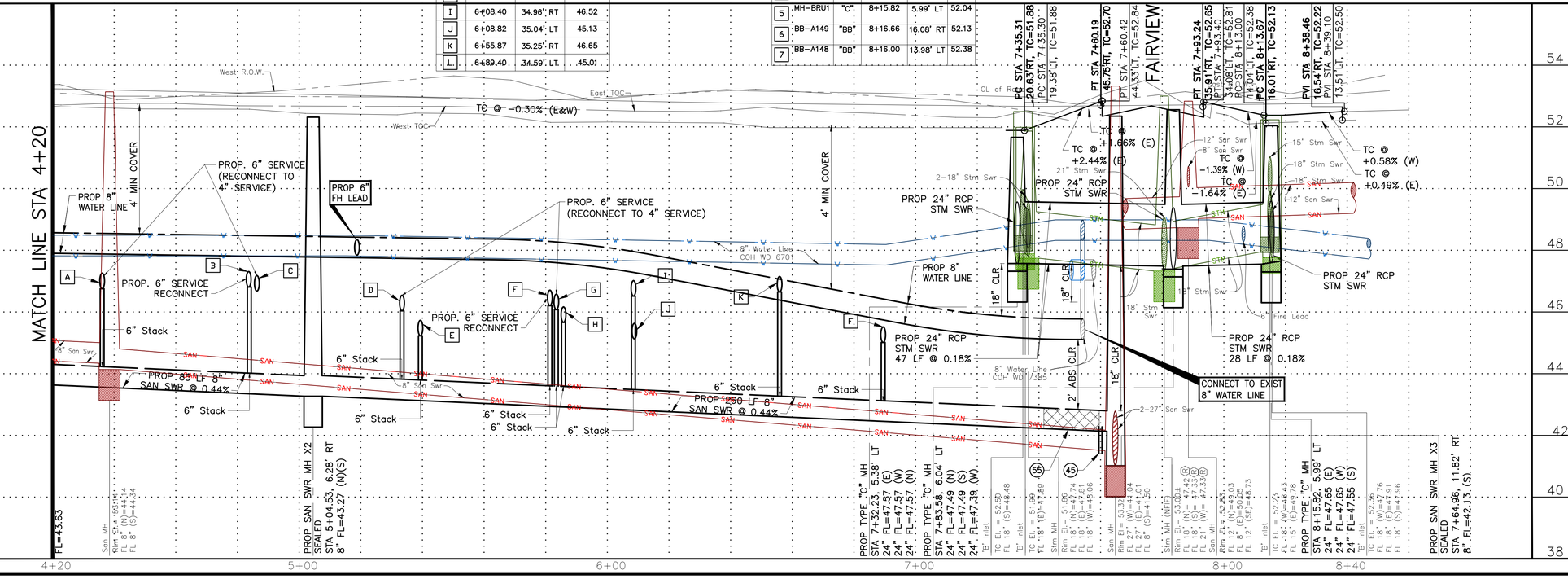
CP-403, MAG NAIL
STA 4+32.89,
EL. 53.23

CP-438, MAG NAIL
STA 6+24.58,
EL. 52.82

CP-10, MAG NAIL
STA 7+74.48,
EL. 53.45

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
XX SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
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APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

BRUN
STA 4+20 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 122 OF 391	

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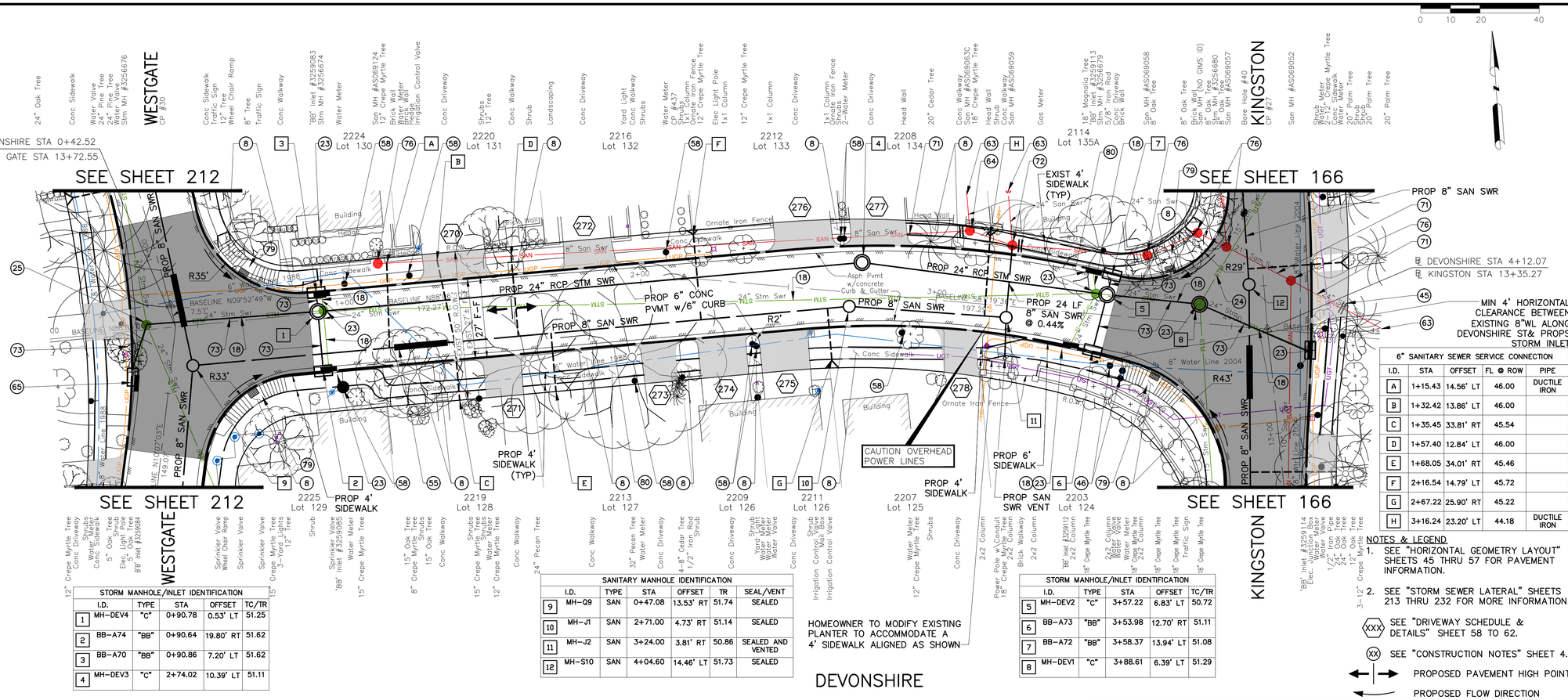


STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-DEV4	"C"	0+90.78	0.53' LT	51.25
2	BB-A74	"BB"	0+90.64	19.80' RT	51.62
3	BB-A70	"BB"	0+90.86	7.20' LT	51.62
4	MH-DEV3	"C"	2+74.02	10.39' LT	51.11

SANITARY MANHOLE IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
9	MH-Q9	SAN	0+47.08	13.53' RT	51.74	SEALED
10	MH-J1	SAN	2+71.00	4.73' RT	51.14	SEALED
11	MH-J2	SAN	3+24.00	3.81' RT	50.86	SEALED AND VENTED
12	MH-S10	SAN	4+04.60	14.46' LT	51.73	SEALED

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
5	MH-DEV2	"C"	3+57.22	6.83' LT	50.72
6	BB-A73	"BB"	3+53.98	12.70' RT	51.11
7	BB-A72	"BB"	3+58.37	13.94' LT	51.08
8	MH-DEV1	"C"	3+88.61	6.39' LT	51.29

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+15.43	14.56' LT	46.00	DUCTILE IRON
B	1+32.42	13.86' LT	46.00	
C	1+35.45	33.81' RT	45.54	
D	1+57.40	12.84' LT	46.00	
E	1+68.05	34.01' RT	45.46	
F	2+16.54	14.79' LT	45.72	
G	2+67.22	25.90' RT	45.22	
H	3+16.24	23.20' LT	44.18	DUCTILE IRON

NOTES & LEGEND

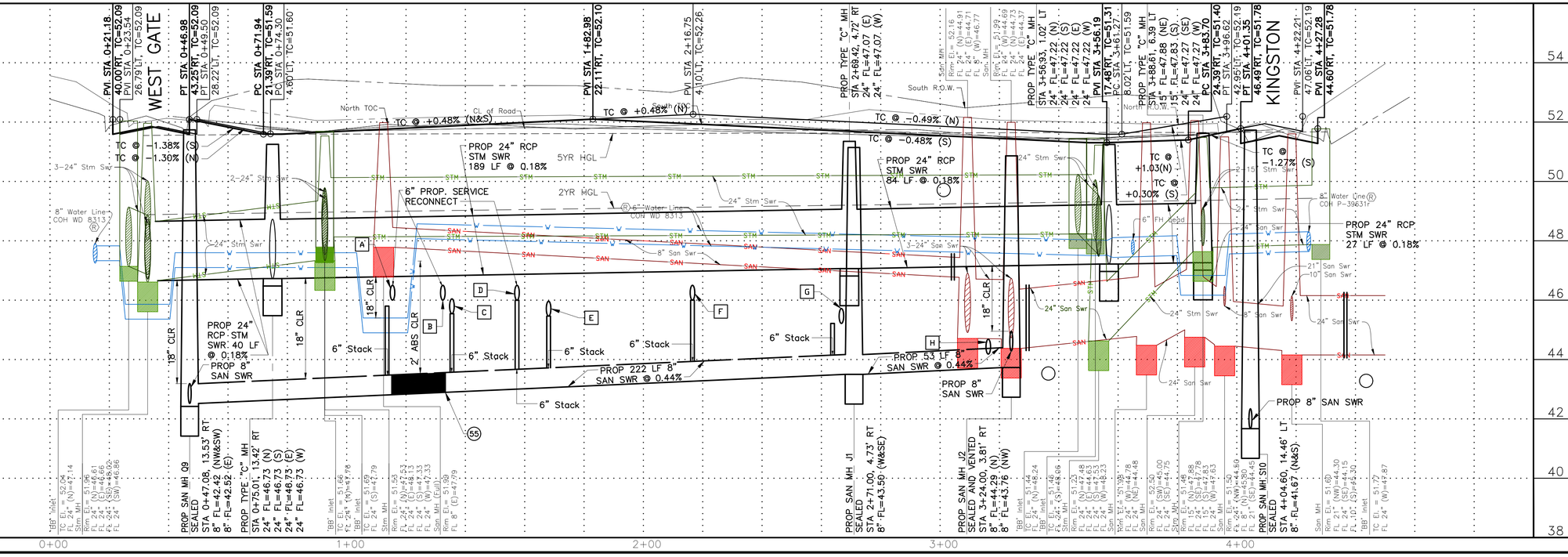
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES

1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:

CP-437, MAG NAIL AT STA 2+14.77 EL. 51.63

CP-30, MAG NAIL W/SHINER AT STA 0+41.47, 7.50 LT EL. 52.13

CP-27, MAG NAIL W/SHINER AT STA 4+12.07 EL. 51.74

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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CABLE COMPANY

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DEVONSHIRE
STA 0+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **123** OF 391	

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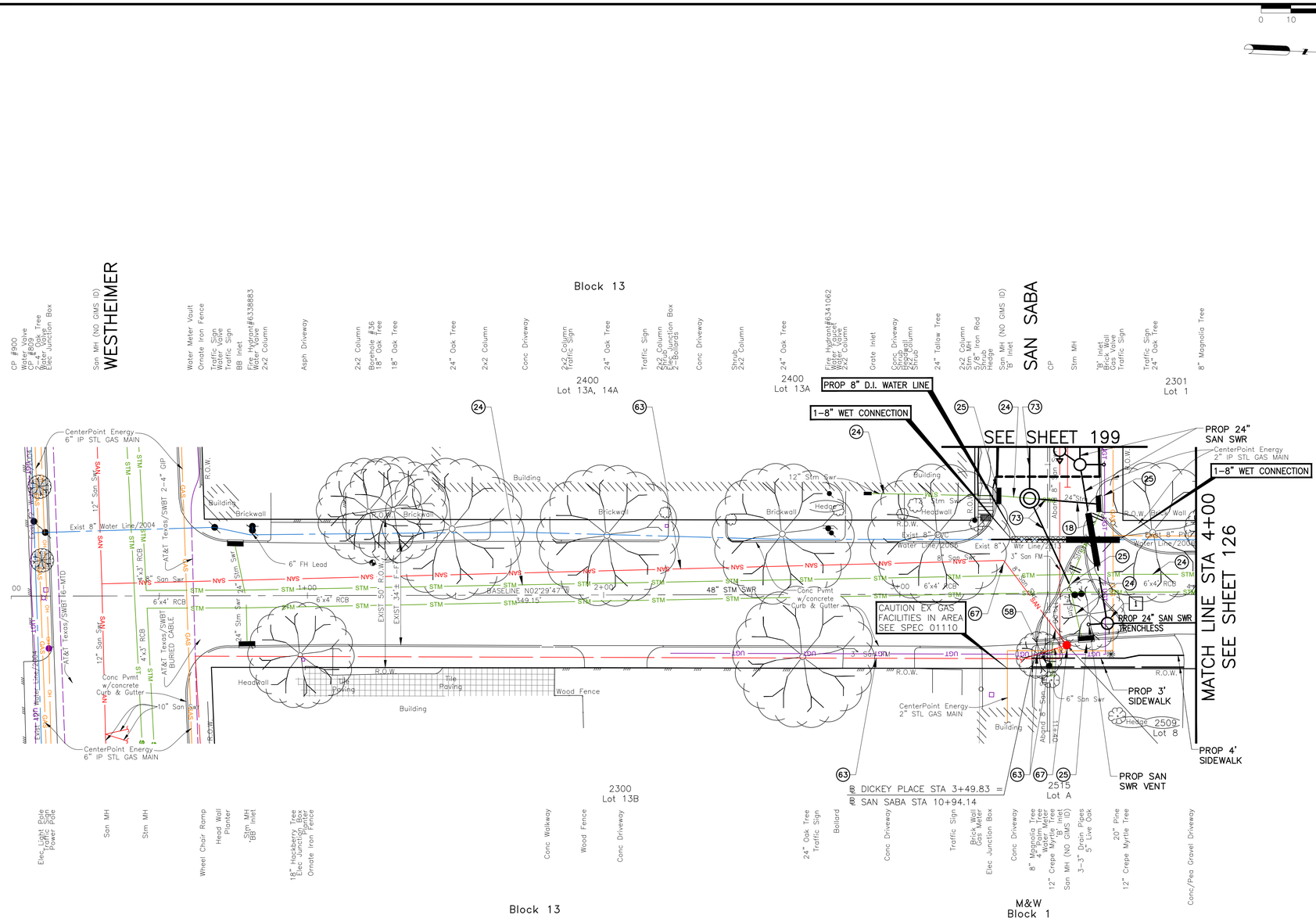

DICKEY PLACE

(SEE SHEET 125 FOR PROFILE)

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1 MH-P1	SAN	3+70.09	10.06' RT	51.40	SEALED AND VENTED

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-809, SET MAG NAIL AT
STA 0+9.23, 8.53' LT
EL. 52.43

CP-900, SET MAG NAIL AT
STA 0+00
EL. 52.72

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PLAN STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **124** OF 391	

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0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP–809, SET MAG NAIL AT
STA 0+9.23, 8.53' LT
EL. 52.43

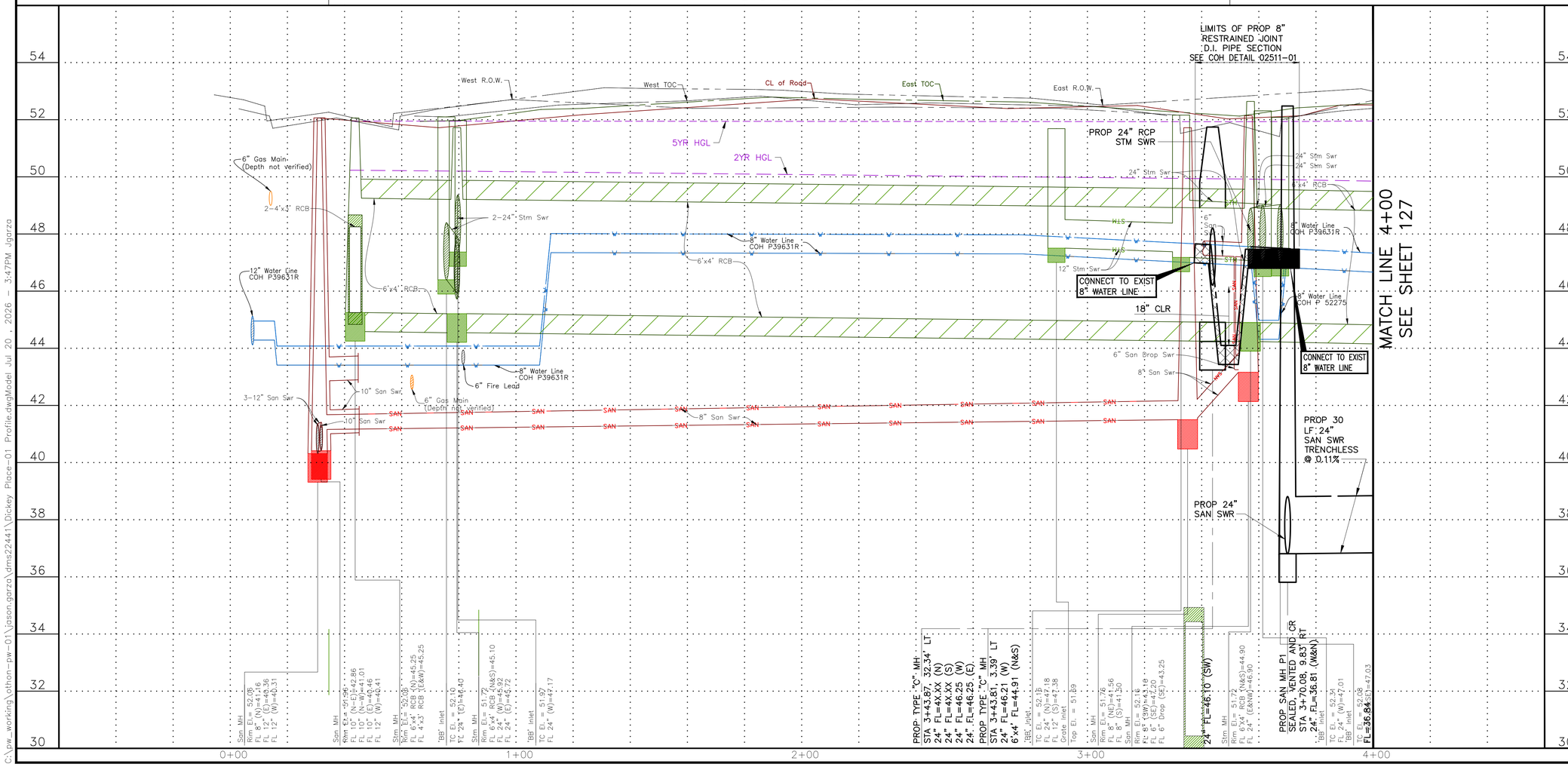
CP–900, SET MAG NAIL AT
STA 0+00
EL. 52.72

(SEE SHEET 124 FOR PLAN)

WESTHEIMER

SAN SABA

DICKEY PLACE



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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Date:

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CABLE COMPANY

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CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PROFILE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **125** OF 391	

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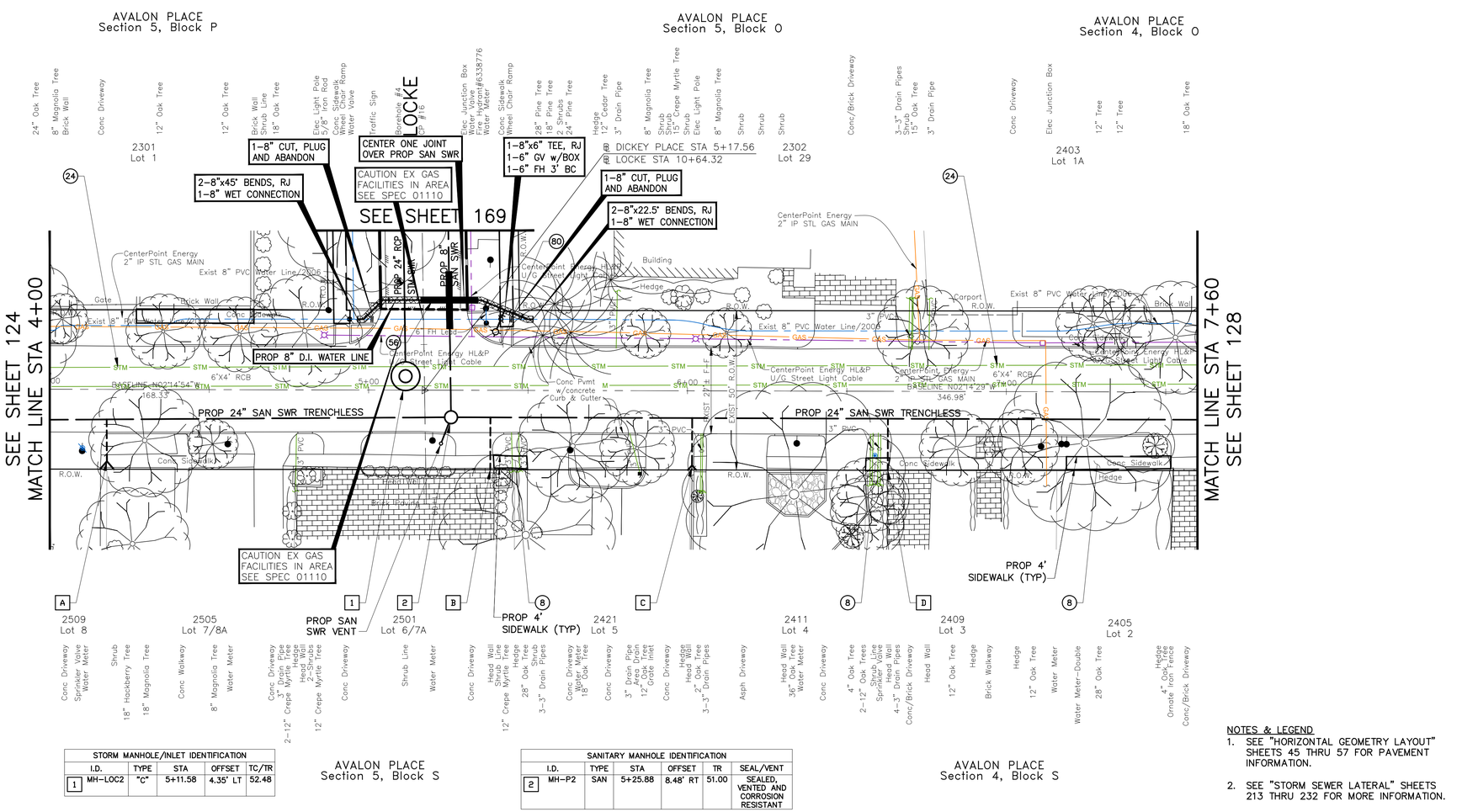

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 MH–LOC2	"C"	5+11.58	4.35' LT	52.48

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2 MH–P2	SAN	5+25.88	8.48' RT	51.00	SEALED, VENTED AND CORROSION RESISTANT

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+17.98	22.53' RT	45.66
B	5+38.21	24.90' RT	45.66
C	6+01.50	23.93' RT	45.66
D	6+74.76	24.76' RT	45.66

DICKEY PLACE

(SEE SHEET 127 FOR PROFILE)

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP–16, SET MAG NAIL AT
STA 5+17.56
EL. 52.59

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713–223–4567.

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AMANI ENGINEERING, INC.
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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC. FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PLAN
STA 4+00 TO STA 7+60

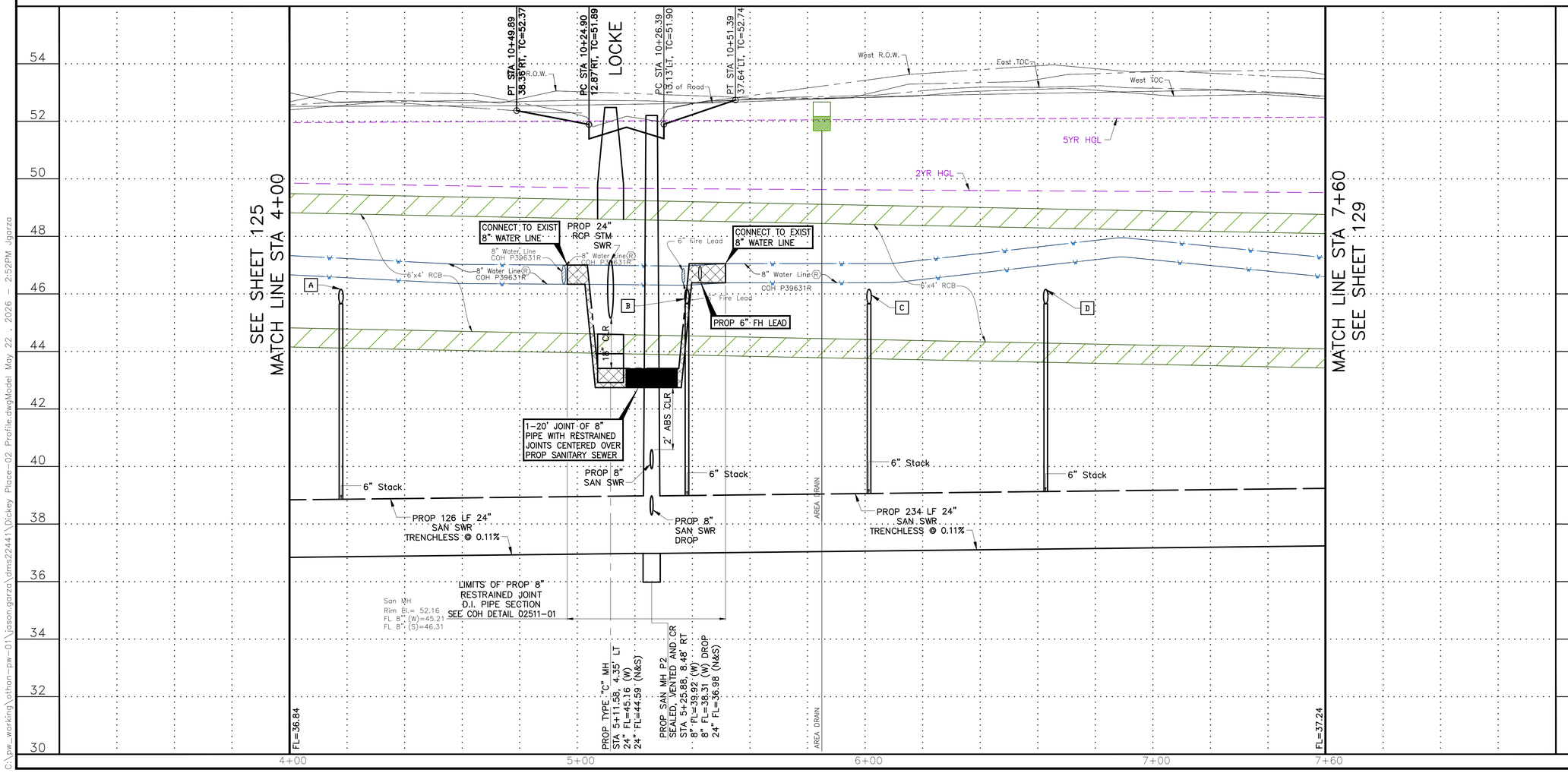
WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **126** OF 391	

C:\pw_working\othon–pw–01\jason.garza\dms22441\Dickey Place–02 Plan.dwgModel May 22 , 2026 – 2:52PM Jgarza

0 10 20 40

(SEE SHEET 126 FOR PLAN)

DICKEY PLACE



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-16, SET MAG NAIL AT
STA 5+17.56
EL. 52.59

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

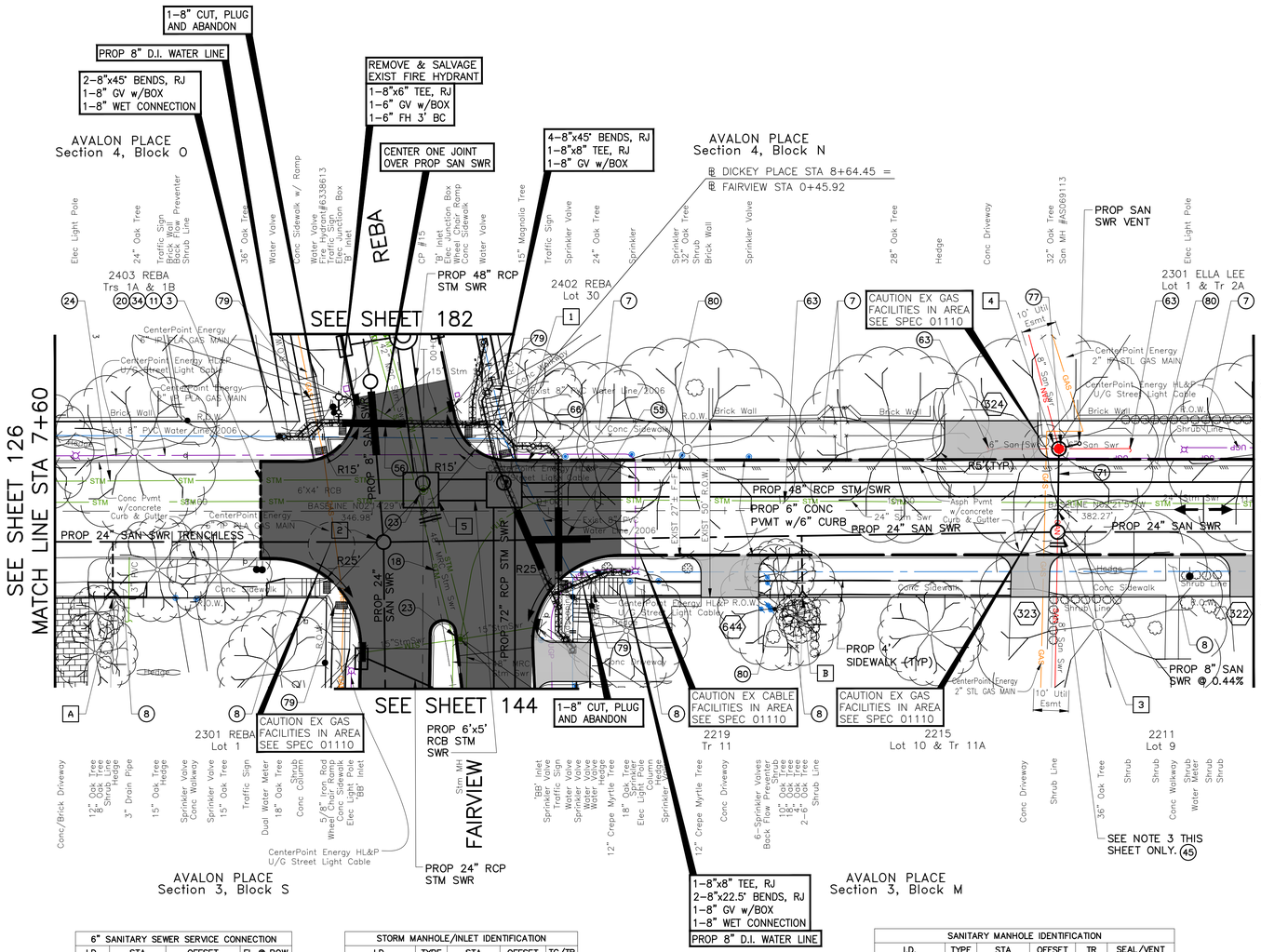
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PROFILE
STA 4+00 TO STA 7+60

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **127** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Dickey Place-02 Profile.dwgModel May 22 , 2026 - 2:52PM Jgarza


1-8" CUT, PLUG AND ABANDON
PROP 8" D.I. WATER LINE
2-8"x45° BENDS, RJ
1-8" GV w/BOX
1-8" WET CONNECTION
REMOVE & SALVAGE EXIST FIRE HYDRANT
1-8"x6" TEE, RJ
1-6" GV w/BOX
1-6" FH 3' BC
CENTER ONE JOINT OVER PROP SAN SWR
4-8"x45° BENDS, RJ
1-8"x8" TEE, RJ
1-8" GV w/BOX
AVALON PLACE Section 4, Block O
AVALON PLACE Section 4, Block N
DICKEY PLACE STA 8+64.45 = FAIRVIEW STA 0+45.92
REBA
FAIRVIEW
PROP 48" RCP STM SWR
PROP SAN SWR VENT
2403 REBA Trs 1A & 1B
2402 REBA Lot 30
2301 ELLA LEE Lot 1 & Tr 2A
SEE SHEET 182
SEE SHEET 126
MATCH LINE STA 7+60
MATCH LINE STA 11+00
SEE SHEET 130
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
PROP 24" SAN SWR TRENCHLESS
PROP 8" SAN SWR
PROP 24" RCP STM SWR
PROP 72" RCP STM SWR
PROP 48" RCP STM SWR
PROP 6" CONC PVMT w/6" CURB
PROP 24" SAN SWR
PROP 4' SIDEWALK (TYP)
PROP 8" SAN SWR @ 0.44%
SEE SHEET 144
PROP 6'x5' RCB STM SWR
PROP 24" RCP STM SWR
1-8" CUT, PLUG AND ABANDON
1-8"x8" TEE, RJ
2-8"x22.5° BENDS, RJ
1-8" GV w/BOX
1-8" WET CONNECTION
PROP 8" D.I. WATER LINE
2301 REBA Lot 1
2219 Tr 11
2215 Lot 10 & Tr 11A
2211 Lot 9
AVALON PLACE Section 3, Block S
AVALON PLACE Section 3, Block M
SEE NOTE 3 THIS SHEET ONLY. (45)
CenterPoint Energy 6" HP&L & 4" P&LA GAS MAIN
CenterPoint Energy HL&P U/G Street Light Cable
CenterPoint Energy 2" STL GAS MAIN
Elec Light Pole
24" Oak Tree
Traffic Sign
Brick Wall
Shrub Line
Water Valve
Conc Sidewalk w/ Ramp
Fire Hydrant
Elec Junction Box
Conc Sidewalk
15" Magnolia Tree
Sprinkler Valve
Sprinkler
Conc Driveway
Hedge
Conc Walkway
Conc Curb
Drain Pipe
Dual Water Meter
Iron Rod
Wheelchair Ramp
Elec Light Pole
Sprinkler Valve
Back Flow Preventer
Crepe Myrtle Tree
Elec Light Pole
Conc Driveway
Shrub Line
Shrub
Water Meter
Conc Driveway
Conc Walkway
Shrub Line
Shrub
Shrub
Shrub

0 10 20 40

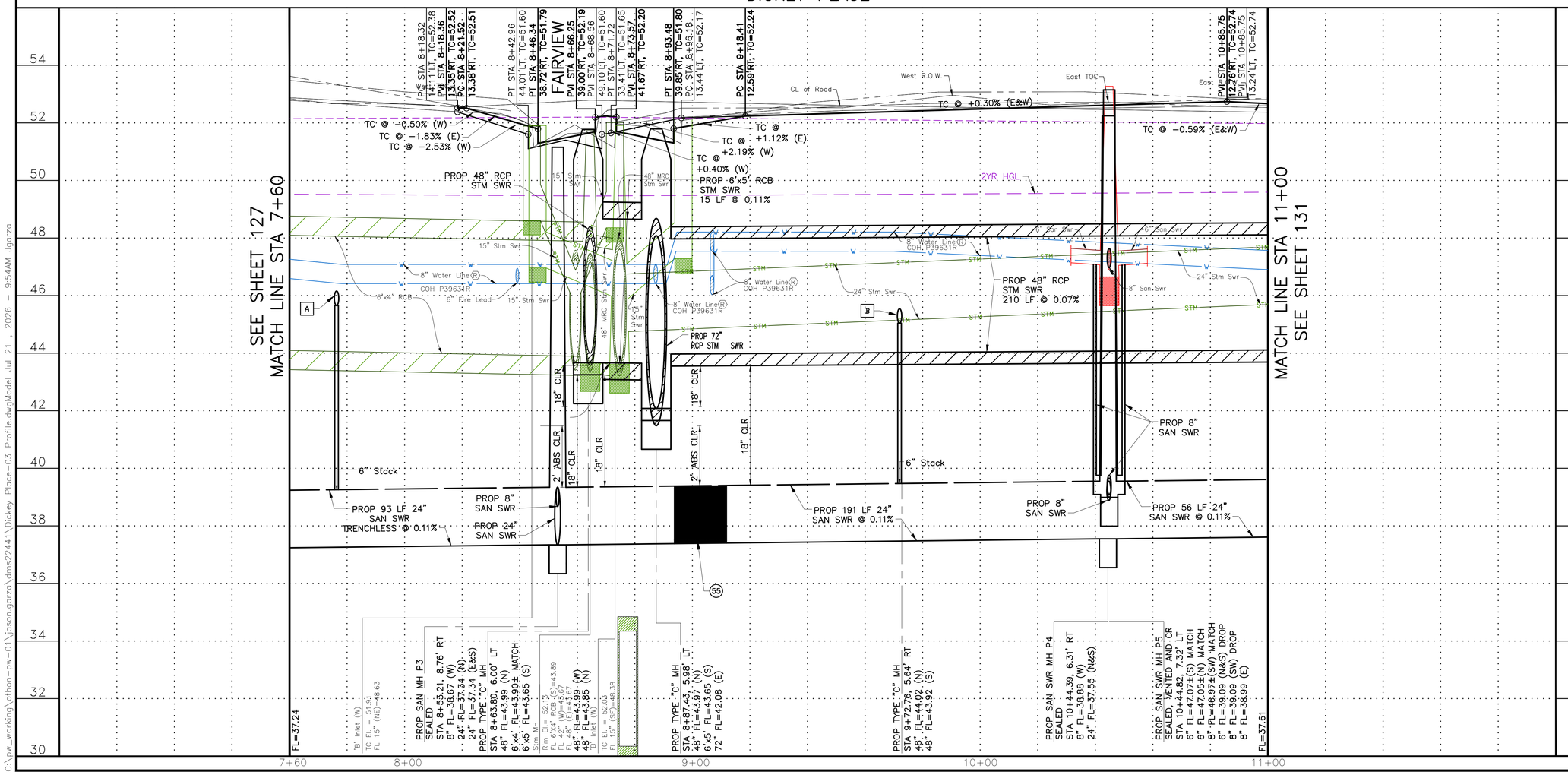
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP–15, SET MAG NAIL AT
STA 8+64.45
EL. 52.80

(SEE SHEET 128 FOR PLAN)

DICKEY PLACE



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713–223–4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713–207–2222

NOTICE:

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

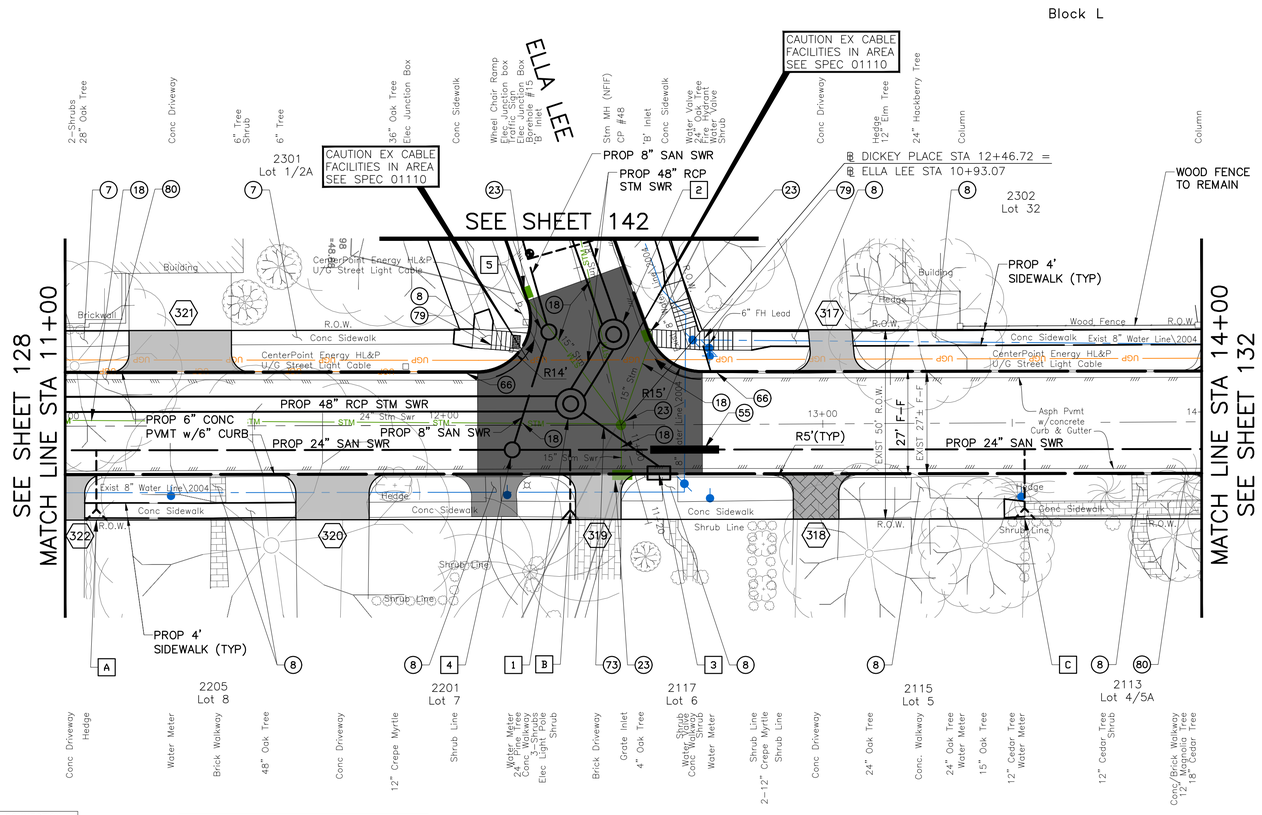
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PROFILE
STA 7+60 TO STA 11+00

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **129** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Dickey Place-03 Profile.dwgModel Jul 21 , 2026 – 9:54AM Jgarza



6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	11+08.19	24.78' RT	44.36
B	12+33.23	24.94' RT	44.20
C	13+53.18	25.39' RT	46.13

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-DIC1	"C"	12+33.45	5.62' LT	51.63
2	MH-ELL6	"C"	12+44.84	23.92' LT	51.26
3	BB-A63	"BB"	12+56.65	12.97' RT	51.75

SANITARY MANHOLE IDENTIFICATION						
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT	
4	MH-P6	SAN	12+18.00	6.49' RT	51.71	SEALED
5	MH-F7	SAN	12+27.75	24.60' LT	51.61	SEALED

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

DICKEY PLACE

(SEE SHEET 131 FOR PROFILE)

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-48, SET MAG NAIL AT
STA 12+46.72
EL. 51.98

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Date:

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CABLE COMPANY

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PLAN
STA 11+00 TO STA 14+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **130** OF 391	

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0 10 20 40

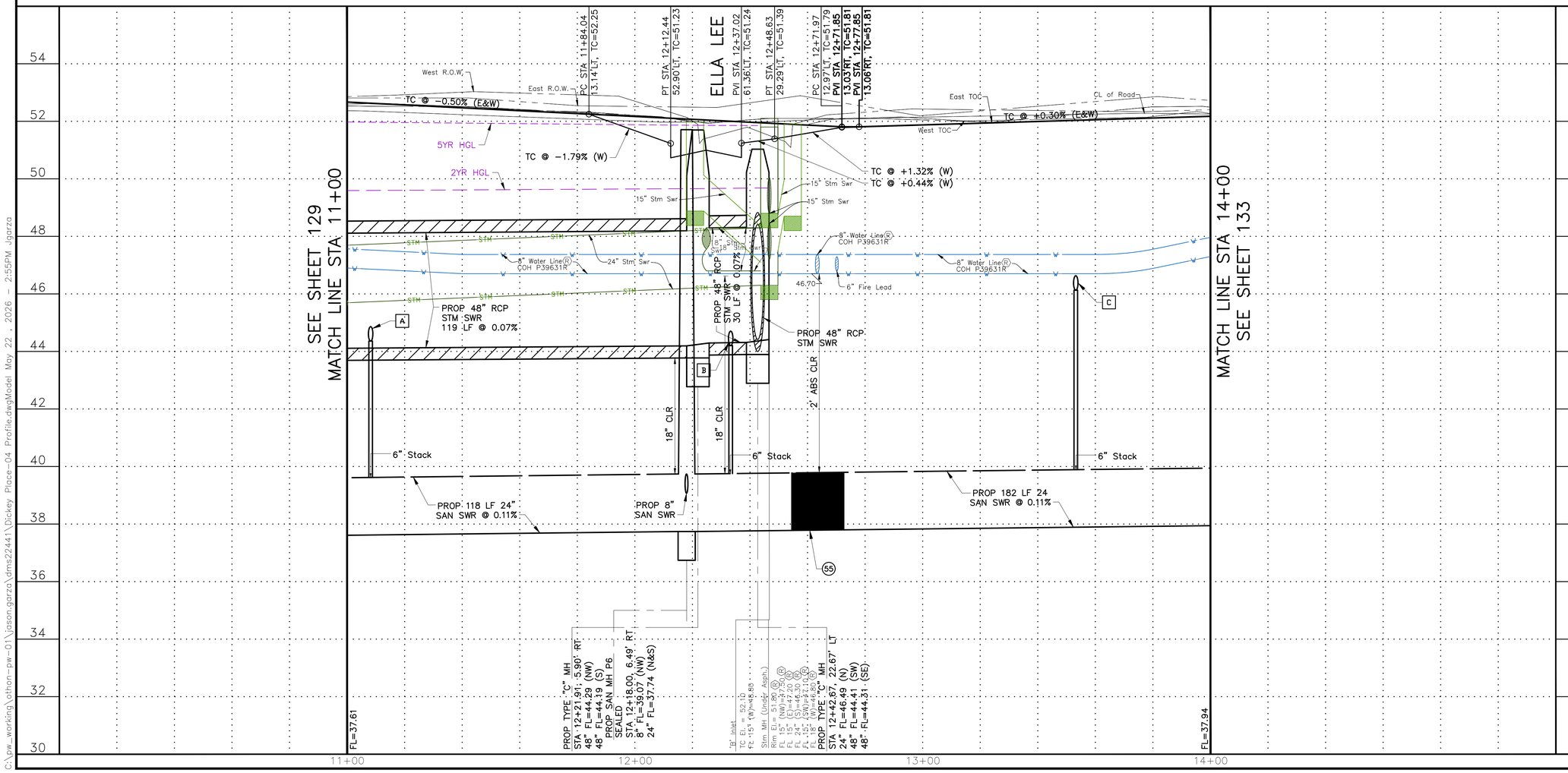
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-48, SET MAG NAIL AT
STA 12+46.72
EL. 51.98

(SEE SHEET 130 FOR PLAN)

DICKEY PLACE



REV.	DATE	DESCRIPTION	BY

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Date:

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CABLE COMPANY

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11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PROFILE
STA 11+00 TO STA 14+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **131** OF 391	

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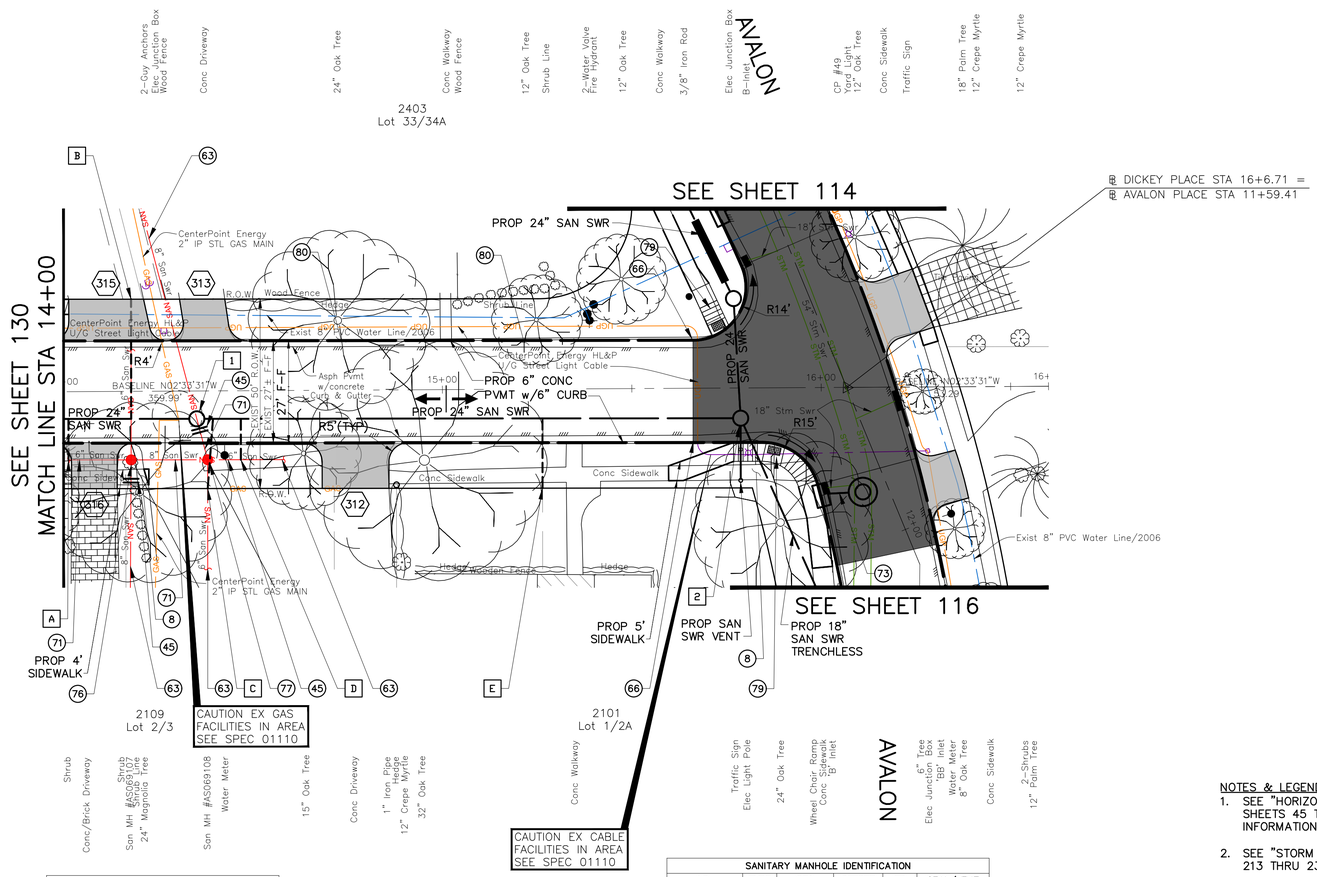

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	14+01.19	18.02' RT	45.72
B	14+17.94	24.32' LT	45.72
C	14+37.90	25.76' RT	45.72
D	14+46.96	18.20' RT	45.72
E	15+26.29	26.15' RT	46.04

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-P7	SAN	14+35.13	7.35' RT	52.12	SEALED
2	MH-P8	SAN	15+78.69	7.98' RT	51.09	SEALED AND VENTED

DICKEY PLACE

(SEE SHEET 133 FOR PROFILE)

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-49, SET MAG NAIL AT
STA 16+6.71
EL. 51.56

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PLAN
STA 14+00 TO END

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **132** OF 391

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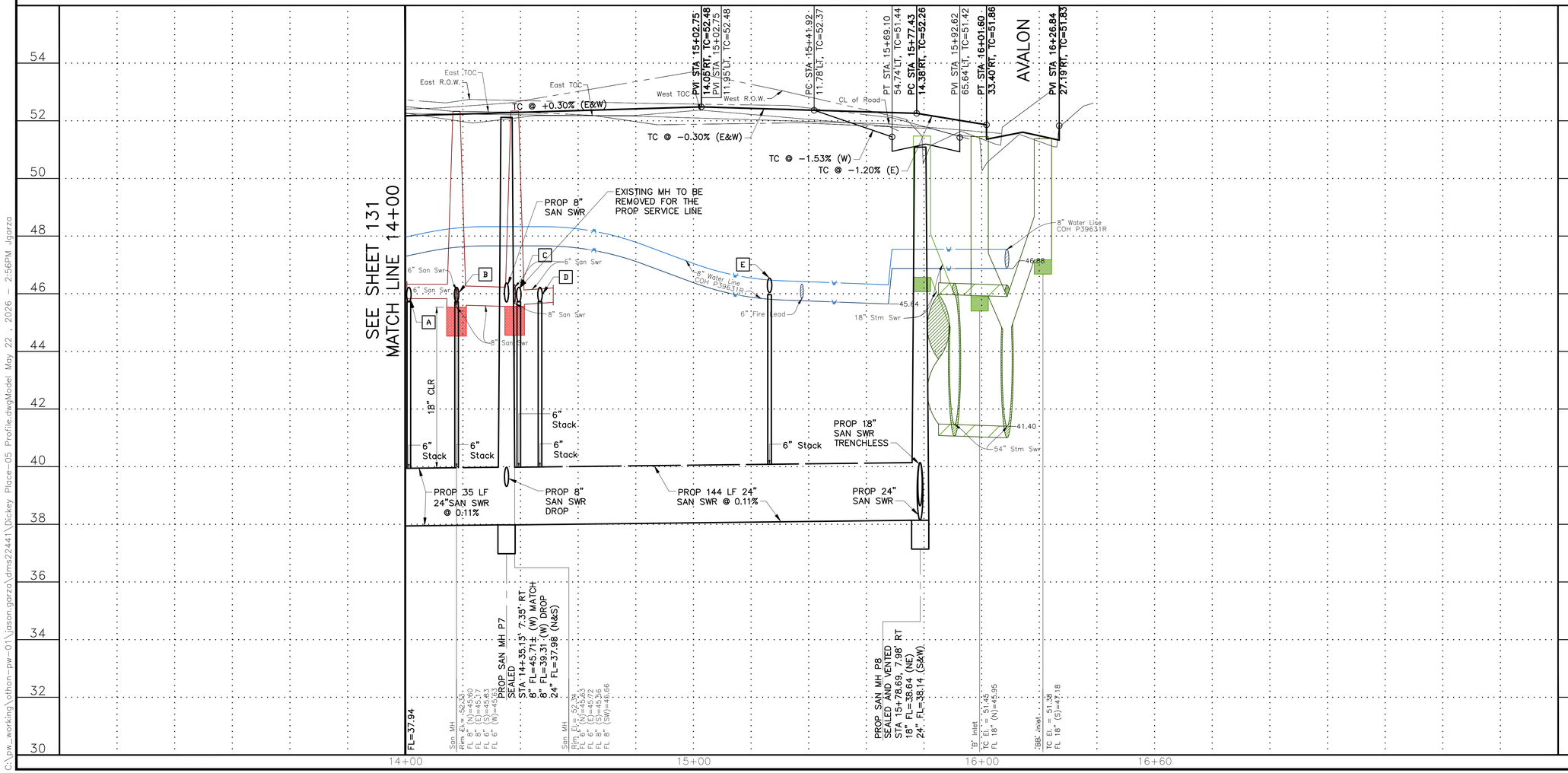
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-49, SET MAG NAIL AT
STA 16+6.71
EL. 51.56

(SEE SHEET 132 FOR PLAN)

DICKEY PLACE



REV.	DATE	DESCRIPTION	BY

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DICKEY PLACE PROFILE
STA 14+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **133** OF 391	

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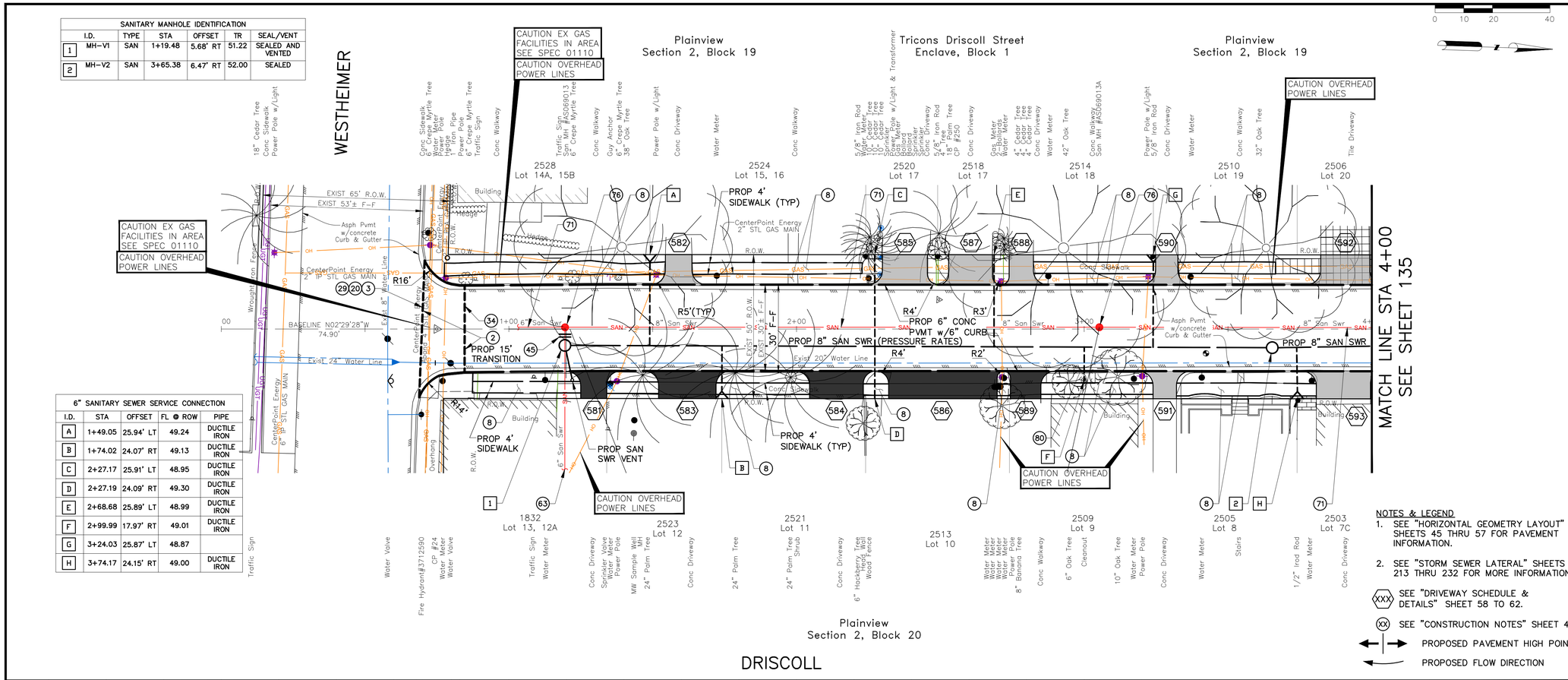
SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-V1	SAN	1+19.48	5.68' RT	51.22	SEALED AND VENTED
2	MH-V2	SAN	3+65.38	6.47' RT	52.00	SEALED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+49.05	25.94' LT	49.24	DUCTILE IRON
B	1+74.02	24.07' RT	49.13	DUCTILE IRON
C	2+27.17	25.91' LT	48.95	DUCTILE IRON
D	2+27.19	24.09' RT	49.30	DUCTILE IRON
E	2+68.68	25.89' LT	48.99	DUCTILE IRON
F	2+99.99	17.97' RT	49.01	DUCTILE IRON
G	3+24.03	25.87' LT	48.87	
H	3+74.17	24.15' RT	49.00	DUCTILE IRON



0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:

CP-24, SET MAG NAIL W/SHINER AT
STA 0+74.90
EL. 51.42

CP-250, SET MAG NAIL AT
STA 2+49.44, 10.21' LT
EL. 52.04

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

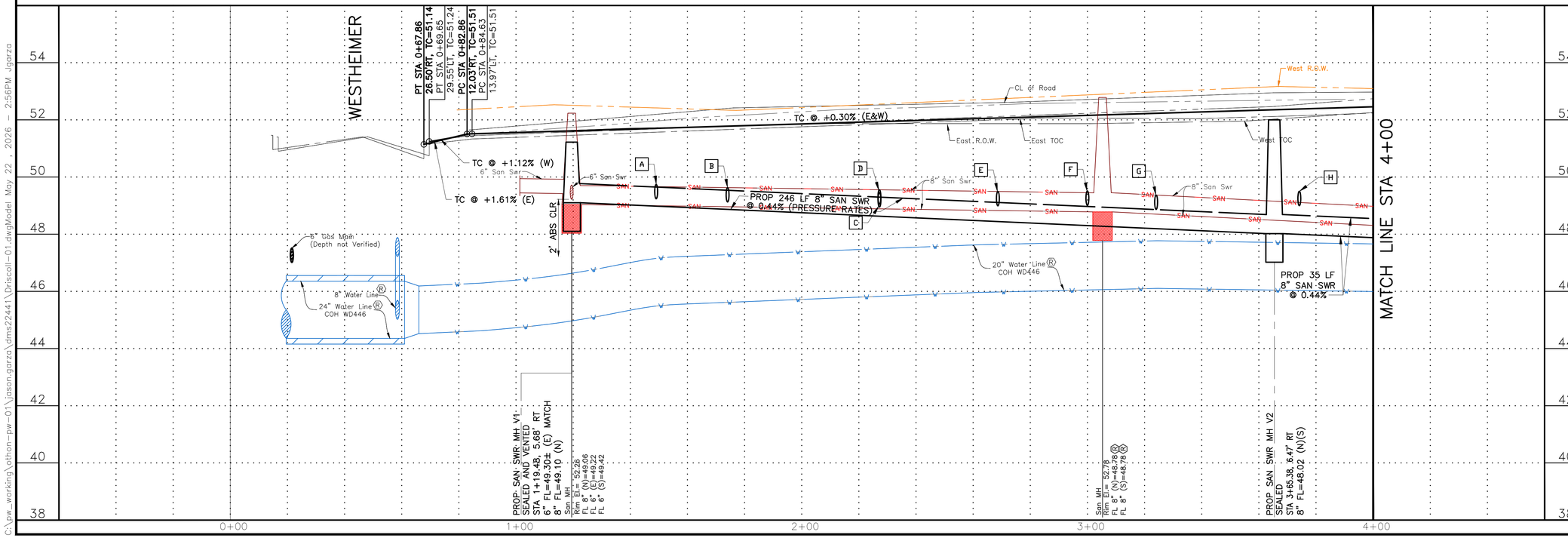
(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

DRISCOLL



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRISCOLL
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **134** OF 391	

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6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	4+04.05	25.76' LT	49.05	
B	4+59.03	24.19' RT	48.84	DUCTILE IRON
C	4+83.62	25.72' LT	48.41	
D	5+09.34	24.30' RT	48.58	DUCTILE IRON
E	5+39.90	25.78' LT	48.11	
F	5+59.34	24.31' RT	48.32	DUCTILE IRON
G	5+84.34	25.68' LT	47.93	
H	6+08.37	24.33' RT	48.00	DUCTILE IRON
I	6+39.75	25.66' LT	47.66	
J	6+80.01	25.64' LT	47.48	
K	6+84.34	24.36' RT	48.01	DUCTILE IRON

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
L	8+23.74	16.32' RT	47.51

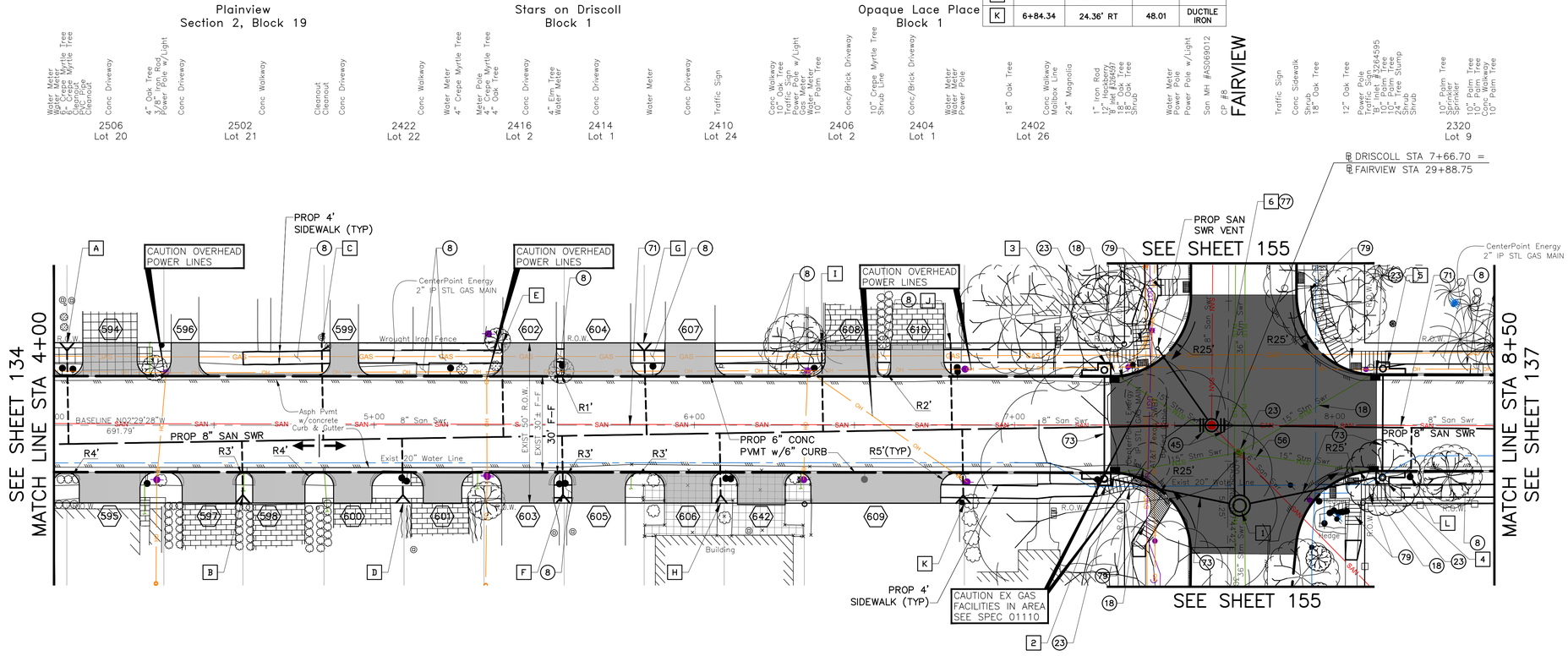
0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-8, SET MAG NAIL
STA 7+66.70
EL. 52.73



STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-FAI21	"C"	7+70.22	25.10' RT	52.59
2	C1-A196	"C1"	7+28.03	14.80' RT	51.79
3	C1-A179	"C1"	7+28.04	15.20' LT	51.79
4	C1-A211	"C1"	8+14.86	14.48' RT	51.49
5	C1-A171	"C1"	8+15.09	15.52' LT	51.49

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-V3	SAN	7+61.55	0.01' RT	52.29	SEALED, VENTED AND CORROSION RESISTANT

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRISCOLL PLAN
STA 4+00 TO STA 8+50

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **135** OF 391	

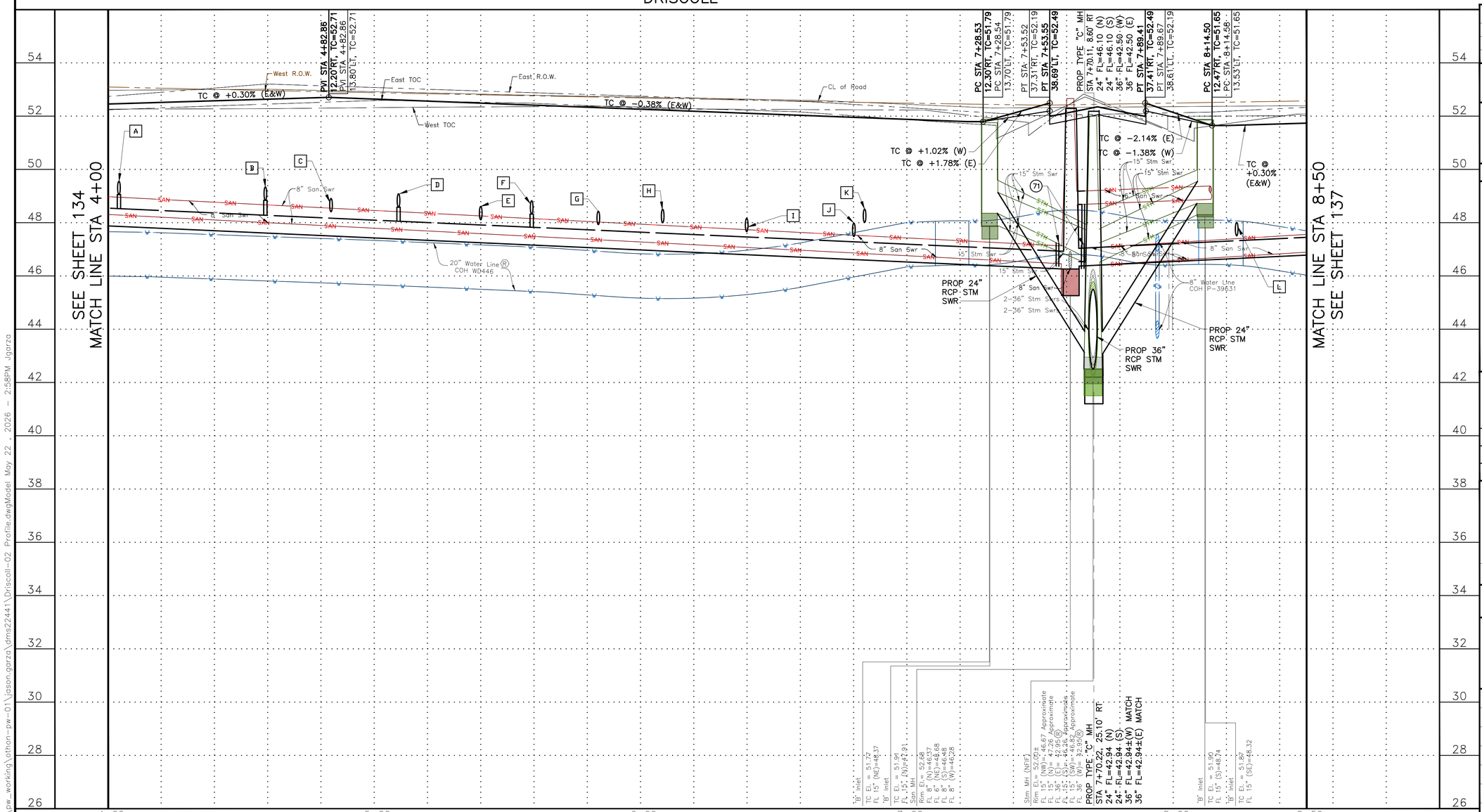
C:\pw_working\othon-pw-01\jason.garza\dms224411\Driscoll-02 Plan.dwgModel Jul 21 , 2026 - 11:06AM jgarza

0 10 20 40

(SEE SHEET 135 FOR PLAN)

DRISCOLL

FAIRVIEW



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-8, SET MAG NAIL
STA 7+66.70
EL. 52.73

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

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Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

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Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

DRISCOLL PROFILE
STA 4+00 TO STA 8+50

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **136** OF 391	

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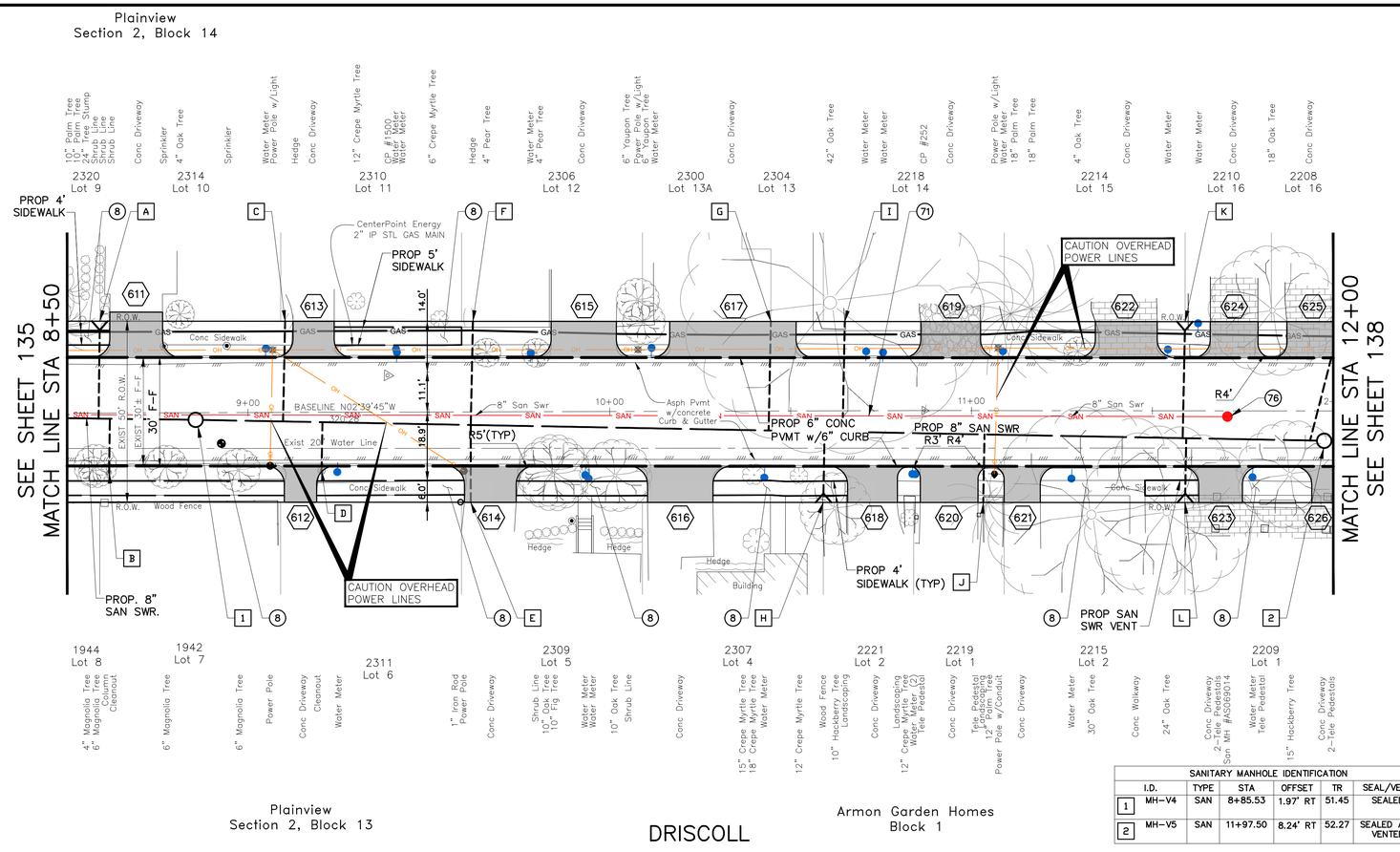

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	8+59.12	25.38' LT	47.58	
B	8+61.57	16.45' RT	47.74	
C	9+10.34	25.20' LT	47.80	
D	9+20.30	16.08' RT	48.08	
E	9+61.50	24.97' RT	48.41	DUCTILE IRON
F	9+62.25	25.02' LT	48.03	
G	10+44.61	24.74' LT	48.41	
H	10+58.95	25.31' RT	49.01	DUCTILE IRON
I	10+65.06	24.67' LT	48.42	
J	11+03.31	25.42' RT	49.15	DUCTILE IRON
K	11+59.01	24.64' LT	48.94	
L	11+59.06	25.36' RT	49.40	DUCTILE IRON

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-V4	SAN	8+85.53	1.97' RT	51.45	SEALED
2	MH-V5	SAN	11+97.50	8.24' RT	52.27	SEALED AND VENTED

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES

1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:

CP-1500, SET MAG NAIL AT
STA 9+38.60, 10.15' LT.
EL. 52.19

CP-252, SET MAG NAIL AT
STA 10+86.98
EL. 52.99

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

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Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
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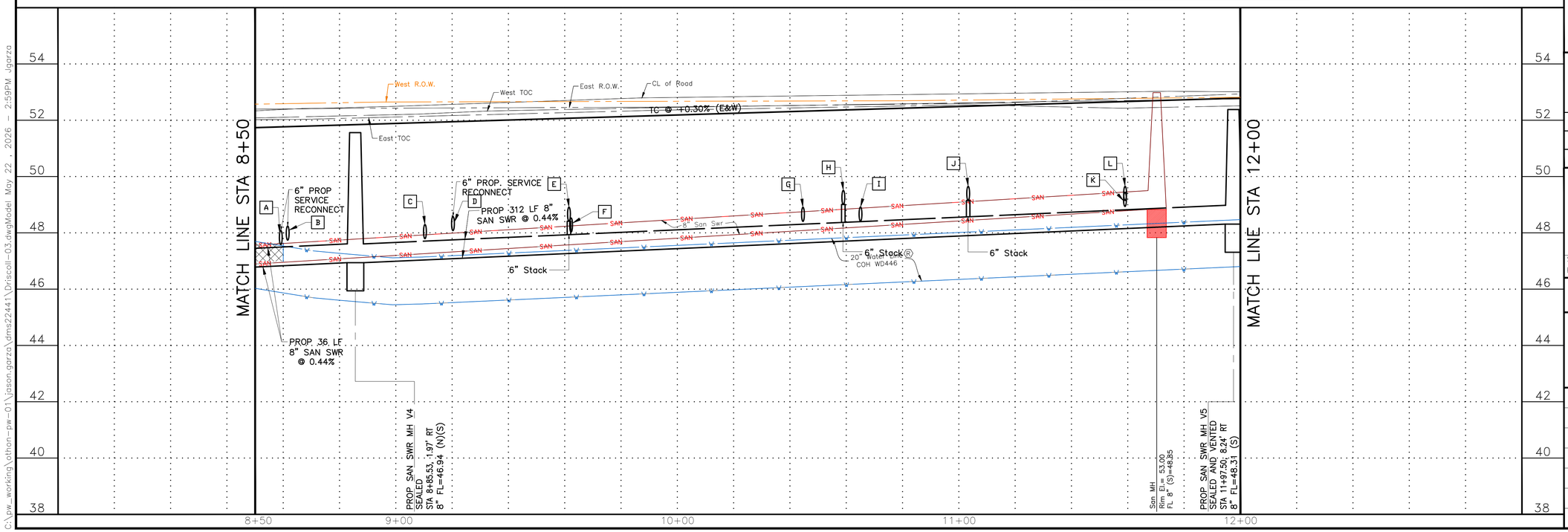
Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY



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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRISCOLL
STA 8+50 TO STA 12+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **137** OF 391	

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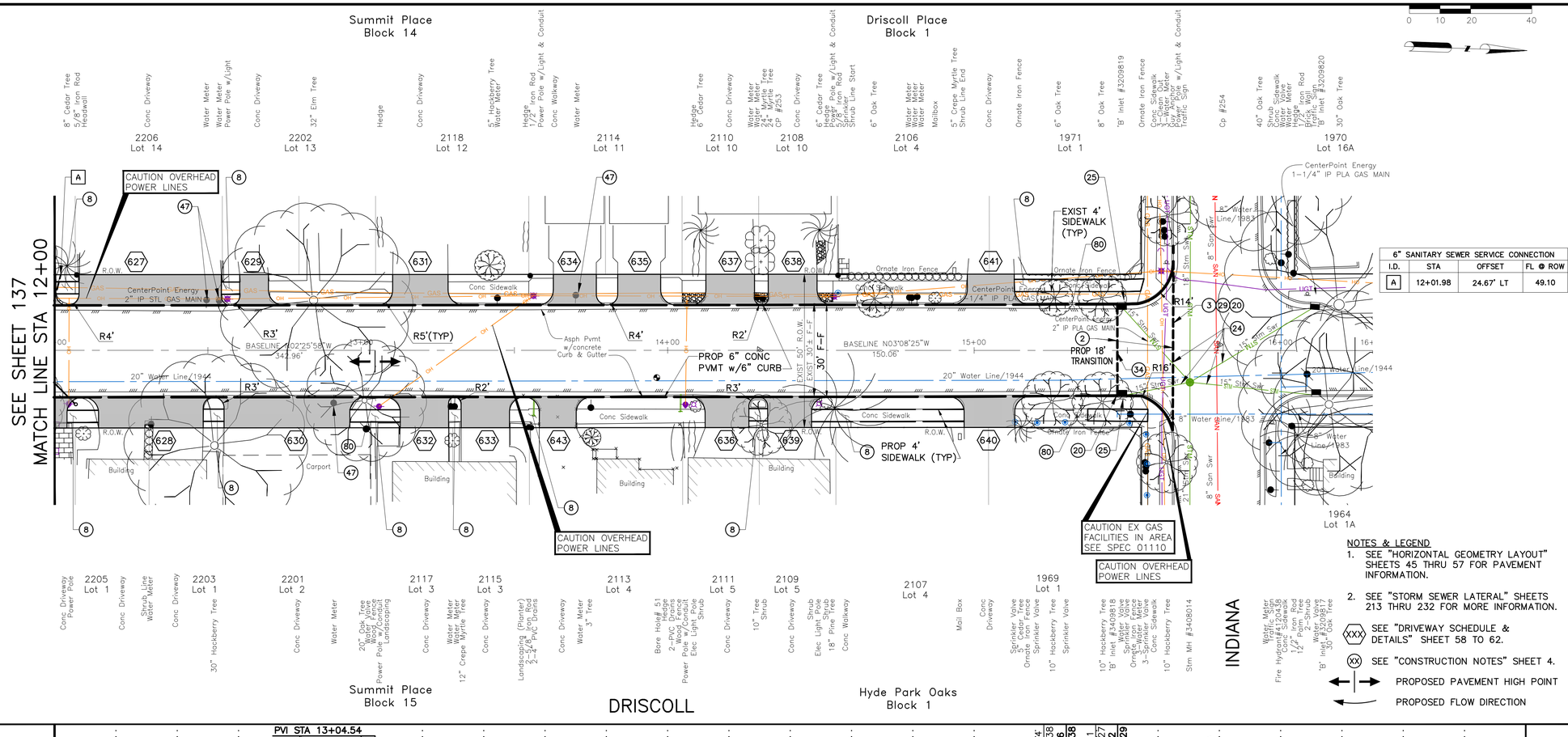


6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	12+01.98	24.67' LT	49.10

NOTES & LEGEND

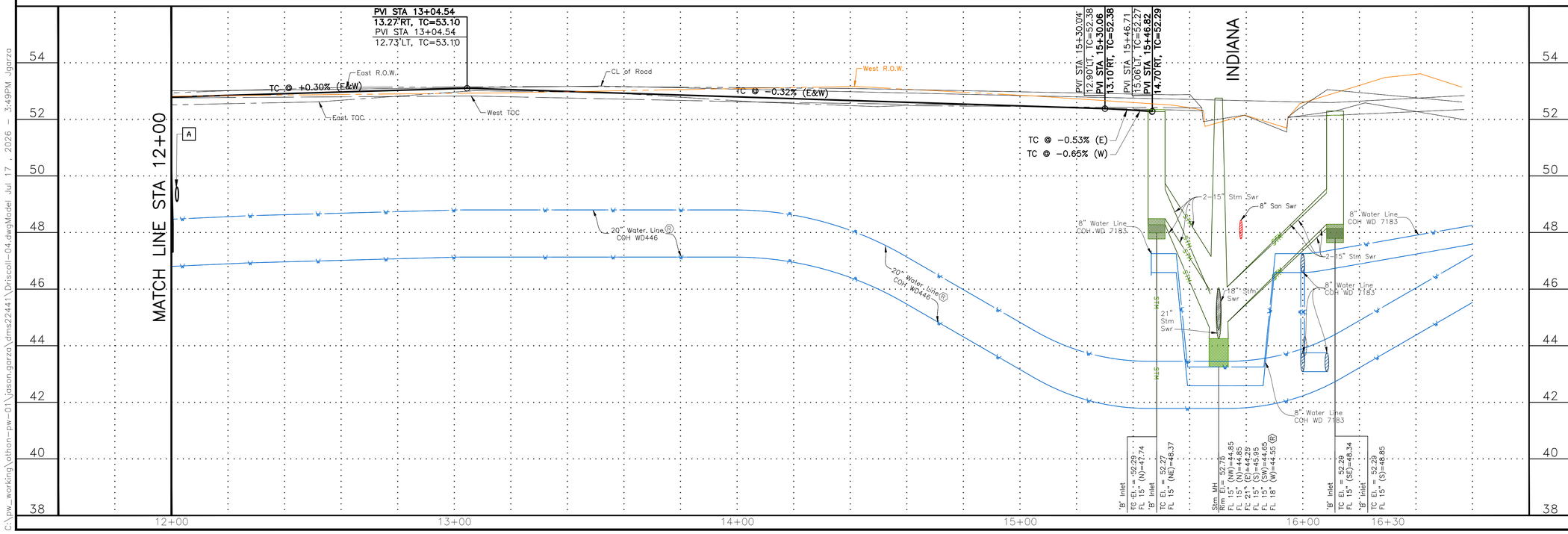
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-253, SET MAG NAIL AT STA 14+29.94 EL. 53.05

CP-254, SET MAG NAIL AT STA 15+80.00, 1.90' LT EL. 52.66

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification.) Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DRISCOLL
STA 12+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **138** OF 391	

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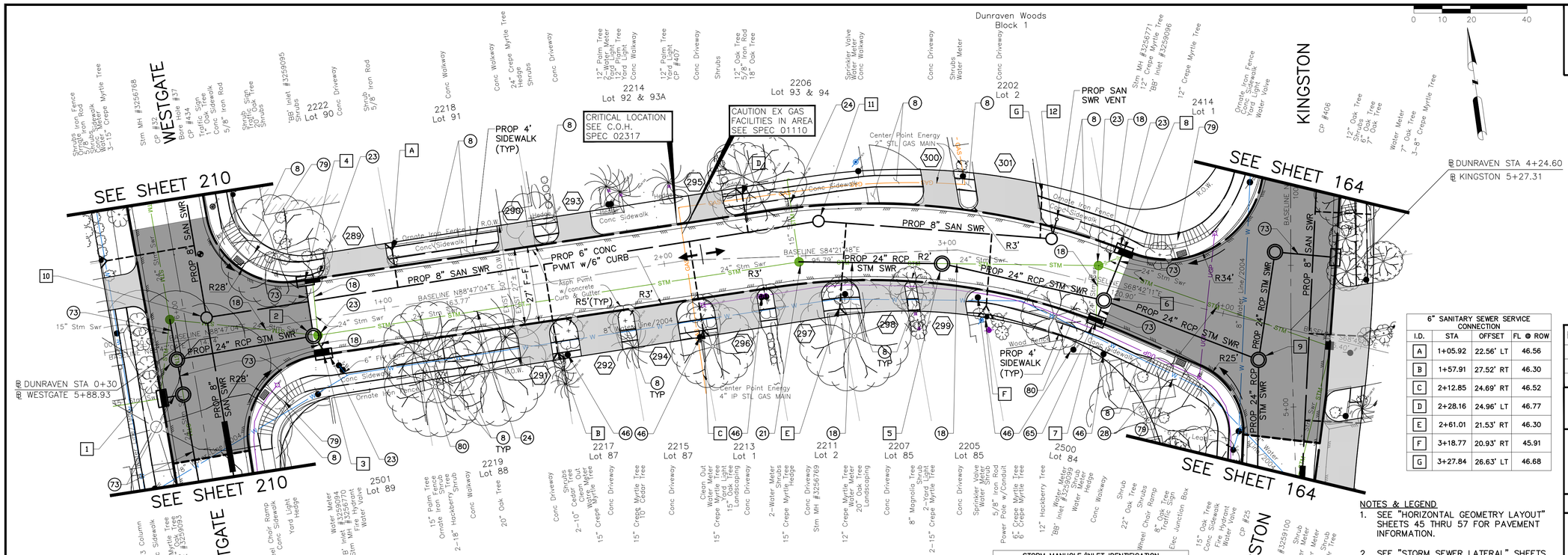


STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-WEG7A	"C"	0+24.85	6.33' RT	52.22
2	MH-DUN3	"C"	0+73.71	5.70' RT	51.62
3	BB-A127	"BB"	0+76.26	12.78' RT	51.98
4	BB-A124	"BB"	0+73.90	14.24' LT	51.97

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
10 MH-Q4	SAN	0+37.50	6.67' LT	52.22	SEALED
11 MH-M1	SAN	2+55.00	12.03' LT	51.86	SEALED
12 MH-M2	SAN	3+35.00	11.50' LT	51.46	SEALED AND VENTED

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
5	MH-DUN2A	"C"	2+98.00	4.65' RT	51.67
6	MH-DUN1	"C"	3+58.03	5.36' RT	51.37
7	BB-A128	"BB"	3+57.06	13.07' RT	51.70
8	BB-A126	"BB"	3+60.78	13.68' LT	51.67
9	MH-DUN4	"C"	4+16.00	13.01' RT	51.78

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	1+05.92	22.56' LT	46.56
B	1+57.91	27.52' RT	46.30
C	2+12.85	24.69' RT	46.52
D	2+28.16	24.96' LT	46.77
E	2+61.01	21.53' RT	46.30
F	3+18.77	20.93' RT	45.91
G	3+27.84	26.63' LT	46.68

NOTES & LEGEND

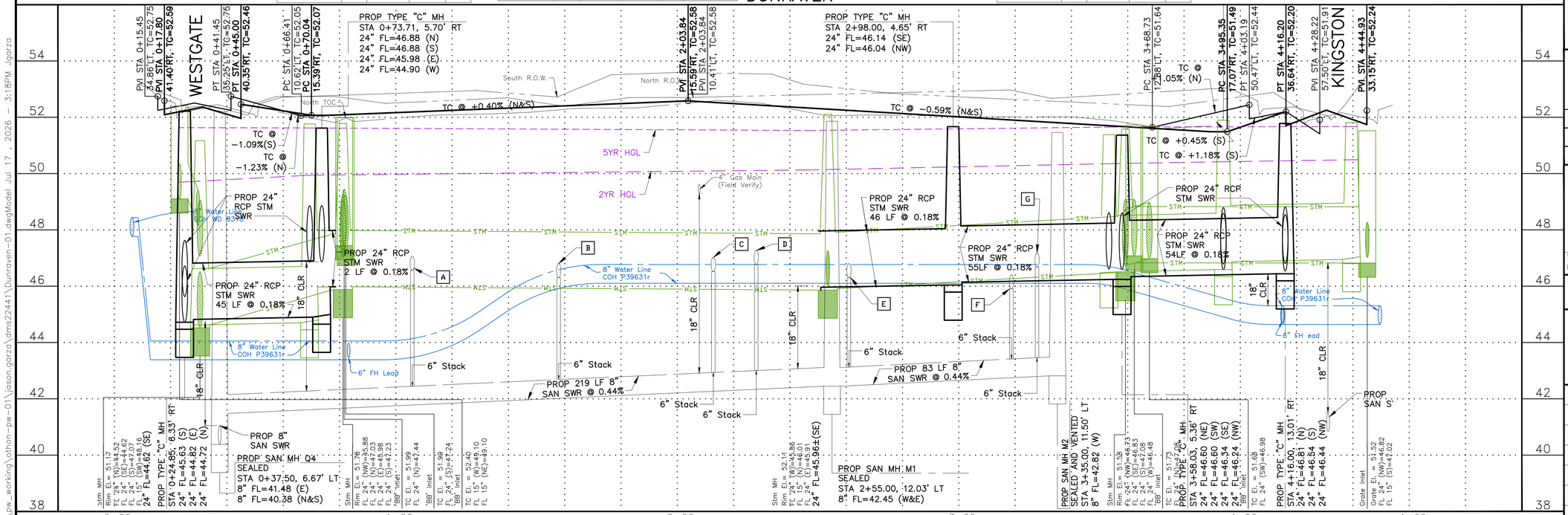
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-32, SET MAG NAIL W/SHINNER AT
STA 0+30, 30.54' LT
EL. 51.31

CP-434, SET MAG NAIL
STA 0+44.14
EL. 52.07

CP-407, SET MAG NAIL
STA 2+7.85
EL. 52.46

CP-25, SET MAG NAIL W/SHINNER AT
STA 4+18.67
EL. 52.29

CP-406, SET MAG NAIL
STA 4+24.60
EL. 52.28

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC. FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

DUNRAVEN
STA 0+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **139** OF 391	

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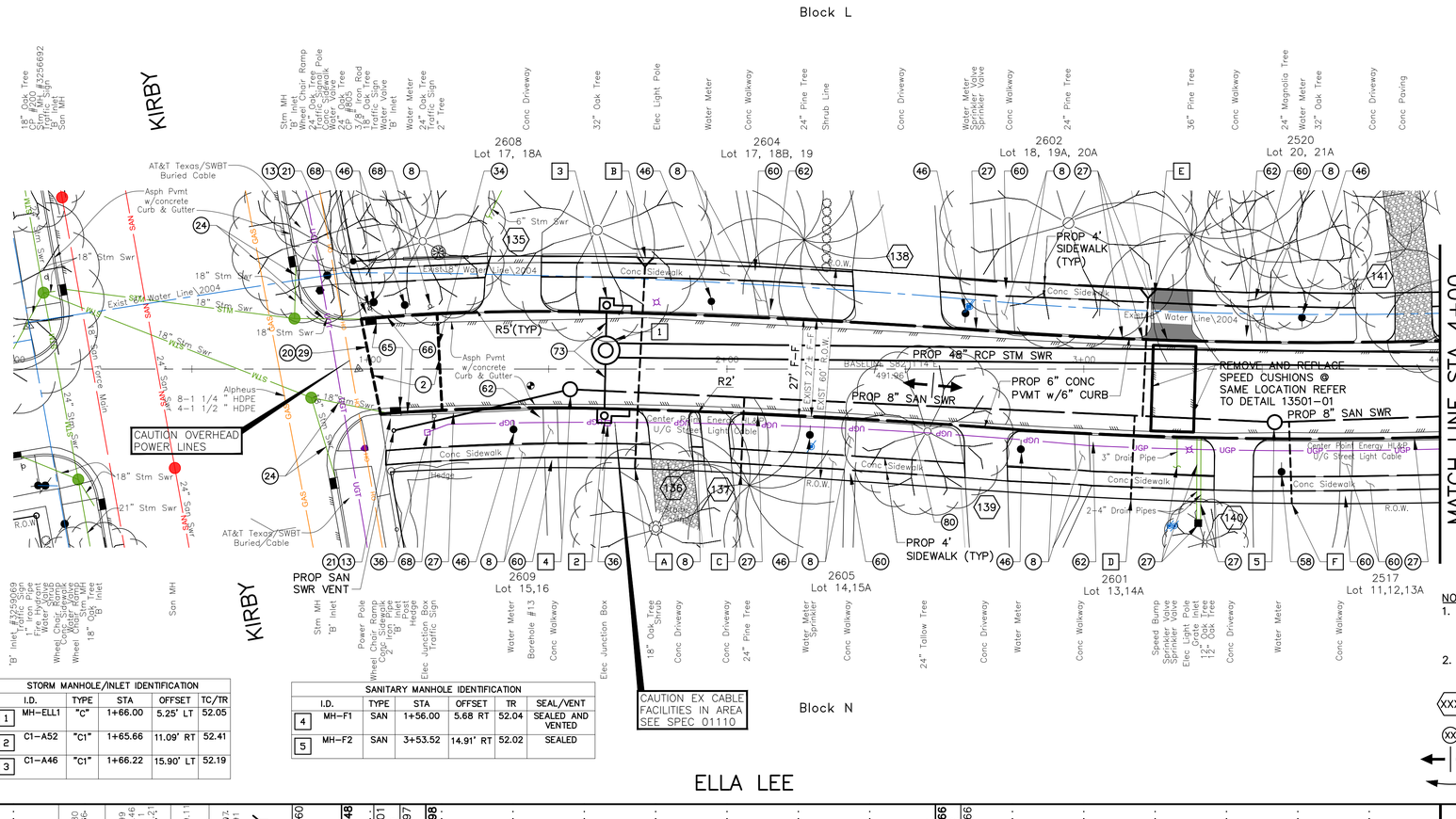

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-ELL1	"C"	1+66.00	5.25' LT	52.05
2	C1-A52	"C1"	1+65.66	11.09' RT	52.41
3	C1-A46	"C1"	1+66.22	15.90' LT	52.19

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
4	MH-F1	SAN	1+56.00	5.68 RT	52.04	SEALED AND VENTED
5	MH-F2	SAN	3+53.52	14.91' RT	52.02	SEALED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+74.19	27.92' RT	46.79	
B	1+77.24	31.23' LT	44.09	DUCTILE IRON
C	2+3.85	29.20' RT	46.88	
D	3+13.17	36.45' RT	46.78	
E	3+18.13	22.35' LT	43.41	DUCTILE IRON
F	3+58.31	37.67' RT	46.57	

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
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(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

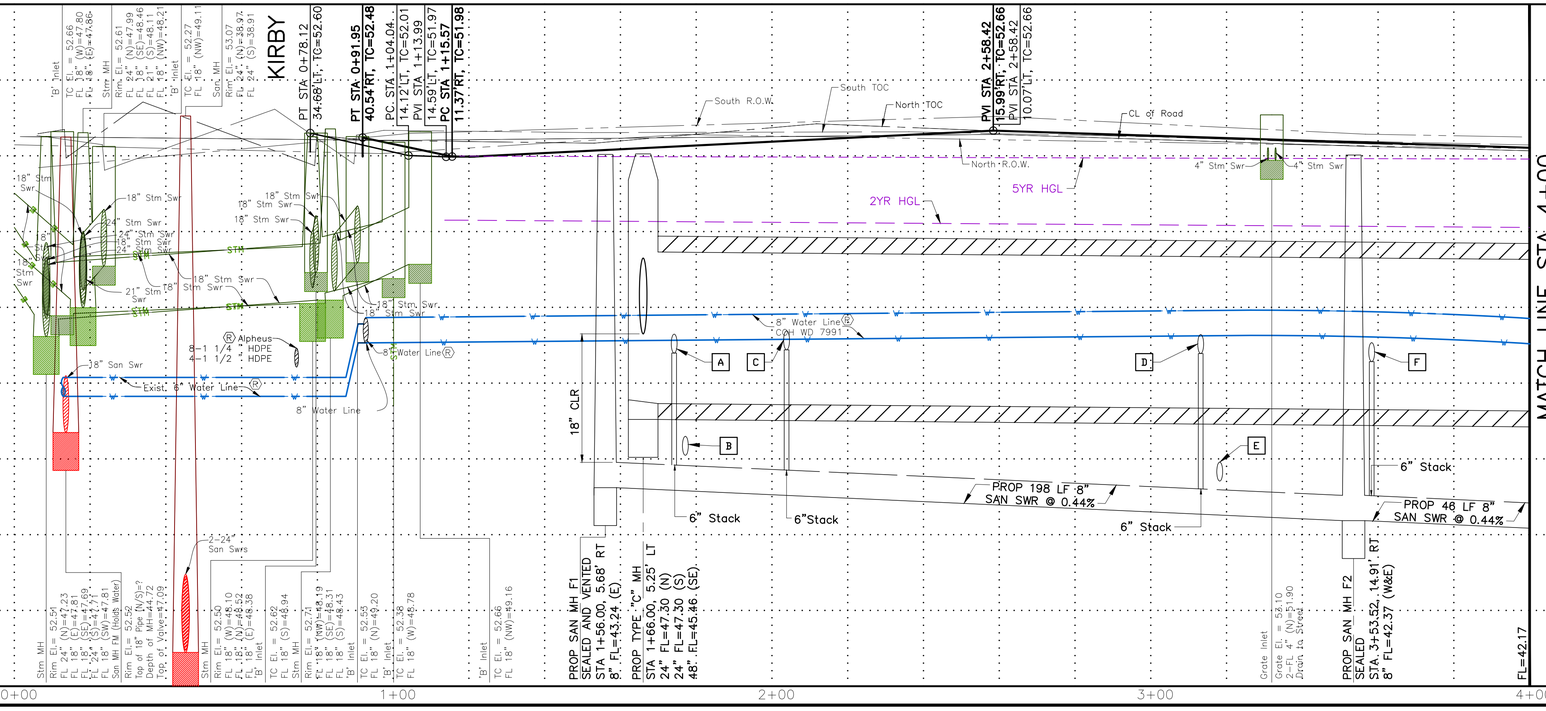
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GE012A)

TBM:

CP-200, SET MAG NAIL W/SHINNER AT STA 0+4.09, 12.19' LT
EL. 52.66

CP-805, SET MAG NAIL W/SHINNER AT STA 0+96.70
EL. 52.46



OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723
07/29/2026

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
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Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

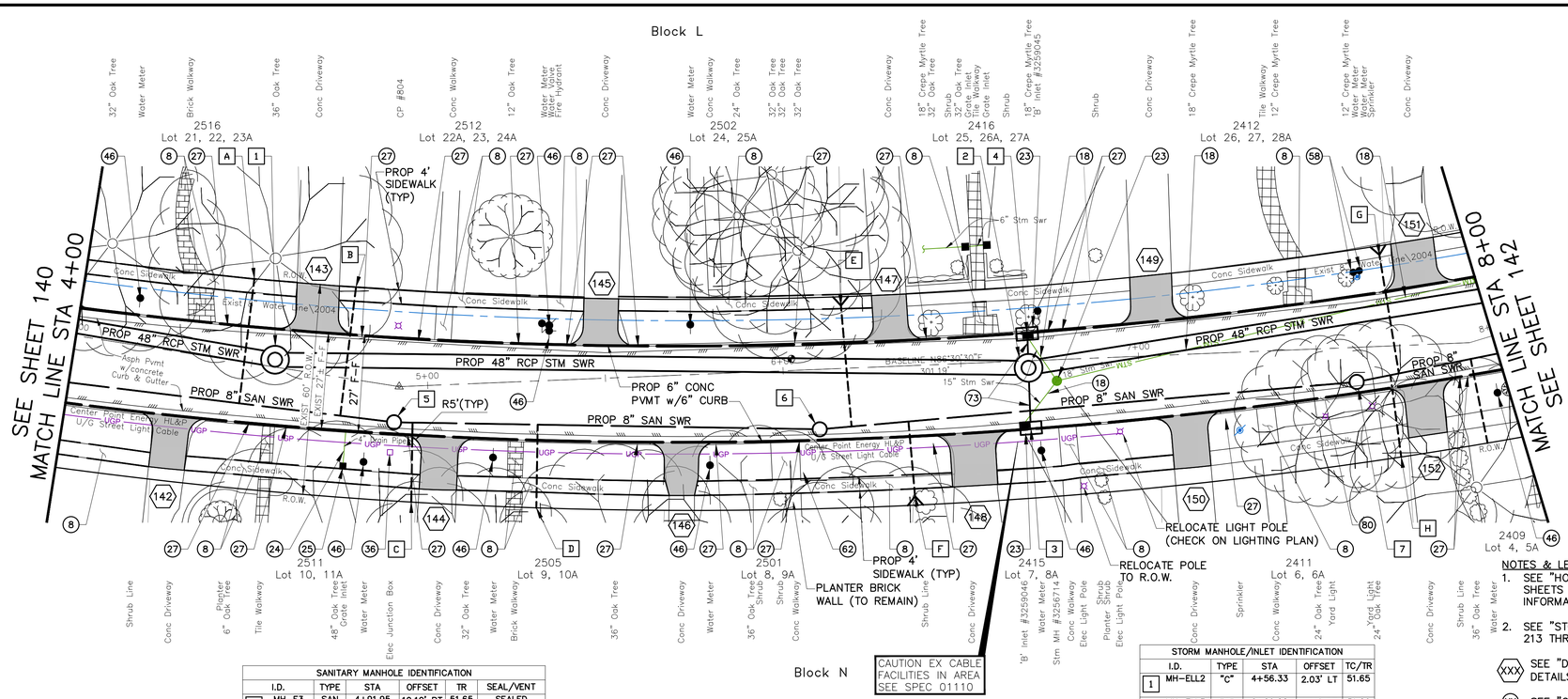
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

ELLA LEE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **140** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Ella Lee-01.dwgModel Jul 21 2026 - 2:37PM Jgarza



SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-F3	SAN	4+91.95	10.10' RT	51.65	SEALED
6	MH-F4	SAN	6+09.62	16.83' RT	51.27	SEALED
7	MH-F5	SAN	7+61.00	9.71' RT	51.55	SEALED

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-ELL2	"C"	4+56.33	2.03' LT	51.65
2	MH-ELL3	"C"	6+69.00	1.99' RT	51.06
3	BB-A56	"BB"	6+68.98	19.16' RT	51.36
4	BB-A48	"BB"	6+68.98	7.86' LT	51.36

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	4+47.04	23.62' LT	42.80	DUCTILE IRON
B	4+75.63	25.68' LT	42.69	DUCTILE IRON
C	4+94.03	32.54' RT	46.40	
D	5+29.10	35.61' LT	46.06	
E	6+16.88	20.15' LT	42.59	DUCTILE IRON
F	6+35.75	39.22' RT	45.85	
G	7+68.53	28.19' LT	42.39	DUCTILE IRON
H	7+72.66	31.30' LT	46.48	

CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-804, SET MAG NAIL AT
STA 4+90.84
EL. 51.86

NOTES & LEGEND

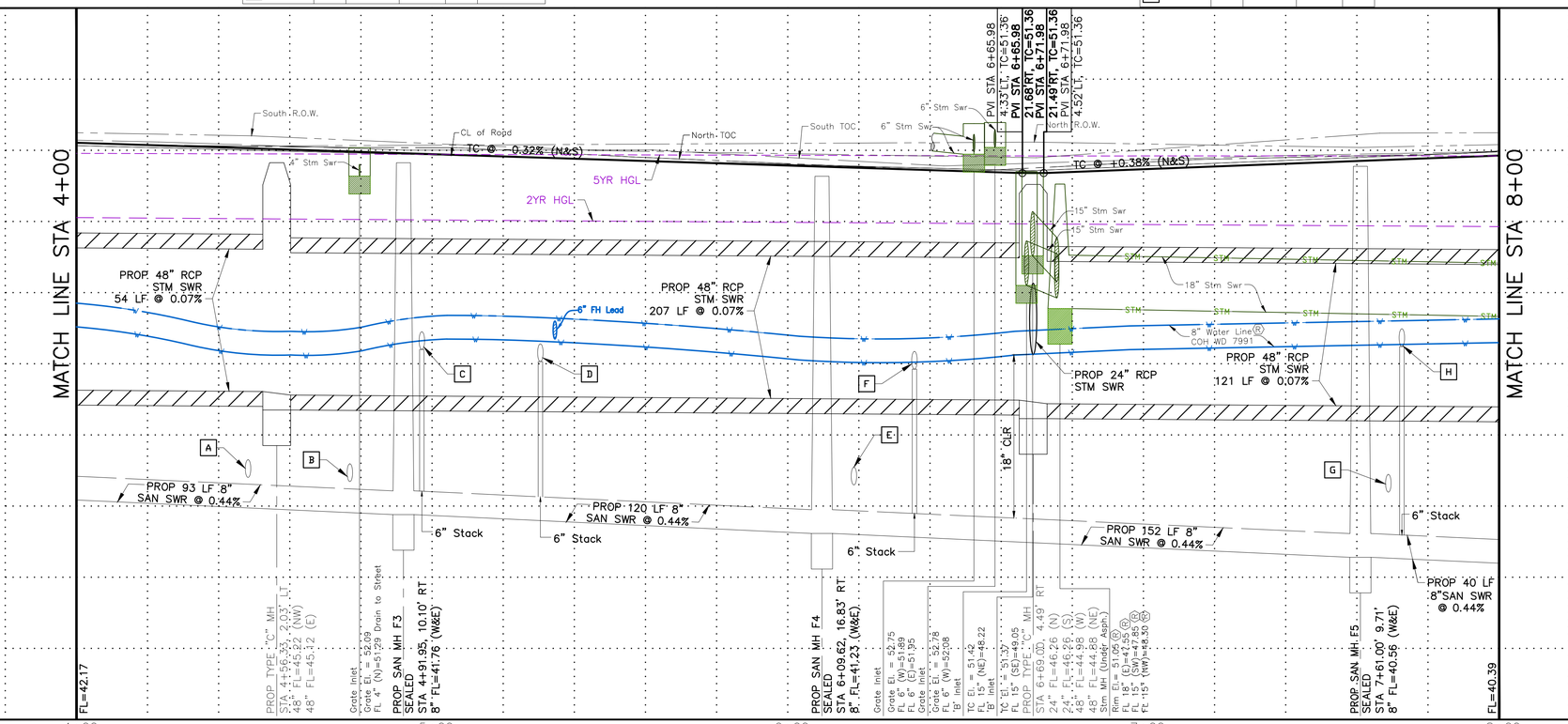
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

ELLA LEE
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **141** OF 391	

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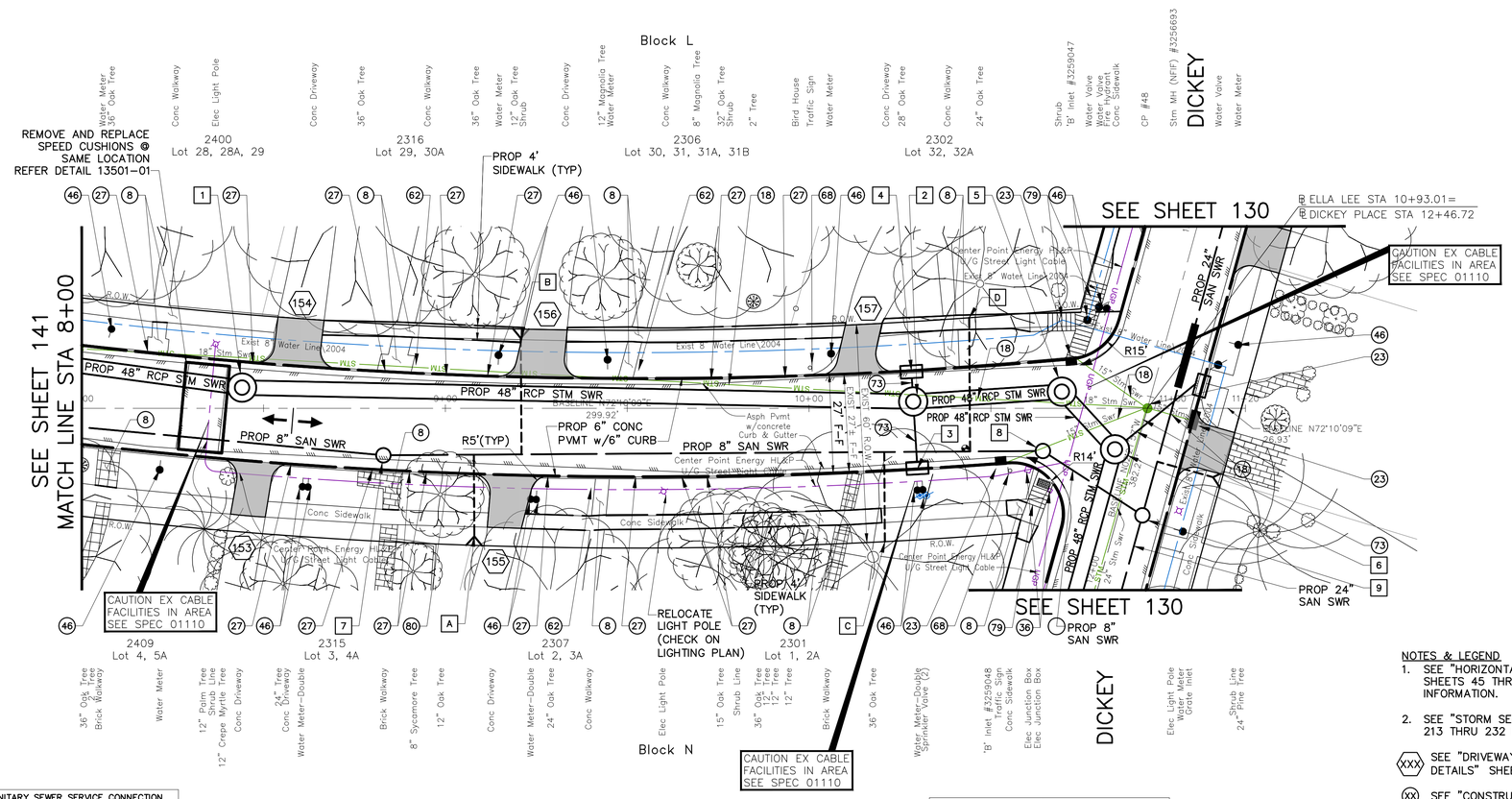
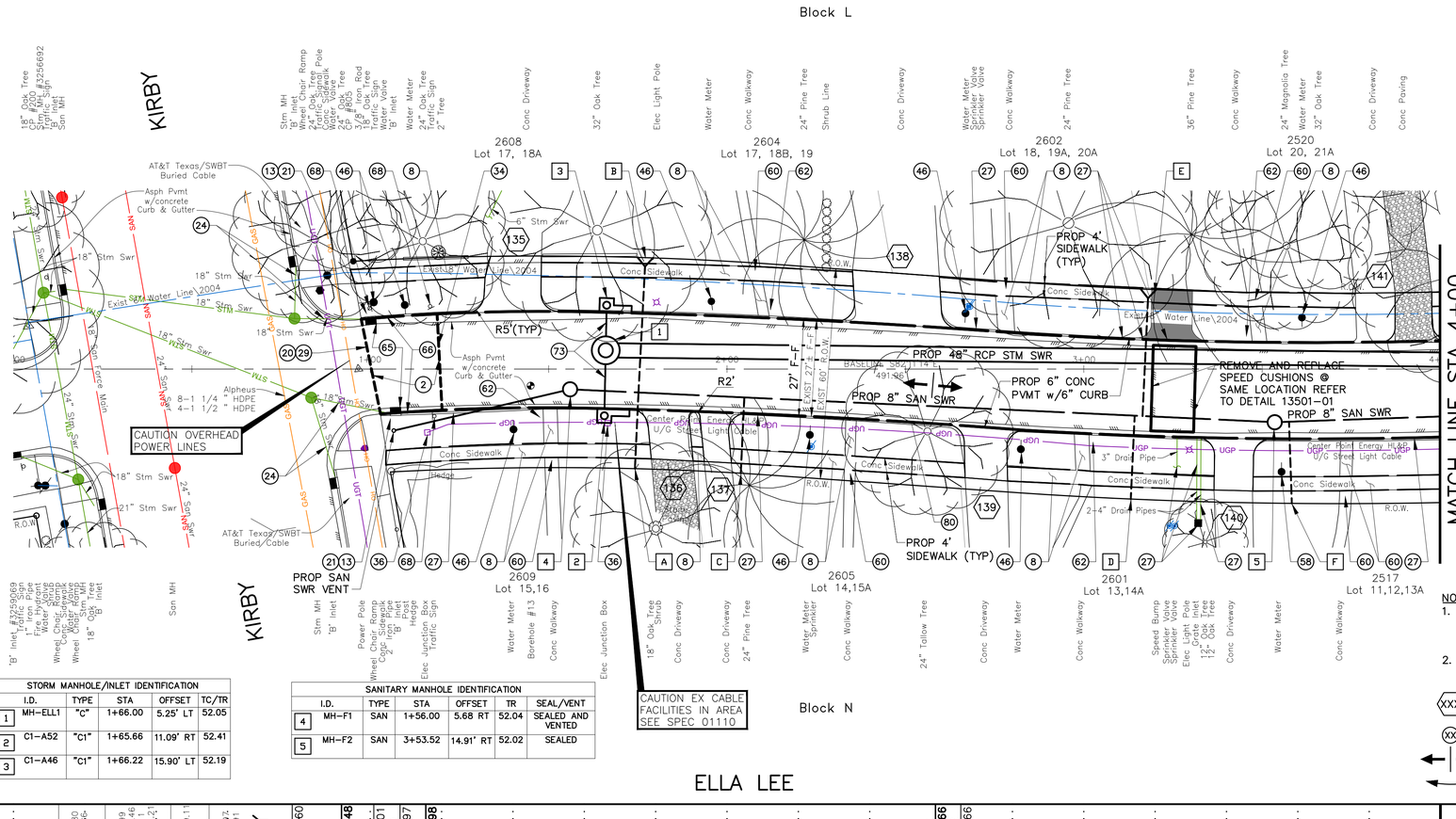

Block L
2400
Lot 28, 28A, 29
2316
Lot 29, 30A
2306
Lot 30, 31, 31A, 31B
2302
Lot 32, 32A
DICKEY
REMOVE AND REPLACE SPEED CUSHIONS @ SAME LOCATION REFER DETAIL 13501-01
PROP 4' SIDEWALK (TYP)
SEE SHEET 141
MATCH LINE STA 8+00
SEE SHEET 130
R ELLA LEE STA 10+93.01=
R DICKEY PLACE STA 12+46.72
CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110
PROP 48" RCP STM SWR
PROP 8" SAN SWR
PROP 6" CONC PVMT w/6" CURB
PROP 8" SAN SWR
PROP 48" RCP STM SWR
PROP 48" RCP STM SWR
PROP 48" RCP STM SWR
PROP 48" RCP STM SWR
PROP 24" SAN SWR
PROP 8" SAN SWR
R5'(TYP)
R15'
R14'
Asph Pvmt w/concrete Curb & Gutter
Conc Sidewalk
Center Point Energy HLKP U/G Street Light Cable
Exist 8" Water Line\2004
Exist 18" Stm Swr
Exist 24" Stm Swr
Exist 15" Stm Swr
Exist 8" San Swr
Exist 12" Water Line
Exist 6" Water Line
Exist 4" Gas Line
Exist 8" Gas Line
Exist Fire Hydrant
Exist Gas Valve
Exist Gas Meter
Exist Electric Manhole
Exist Electric Box
Exist Electric Pedestal
Exist Telephone Pedestal
Exist Telephone Manhole
Exist Telephone Box
Exist Light Pole
Exist Guy Anchor
Exist Guy Pole
Exist Sign
Exist Mailbox
Exist Cable Box
Exist Cable Pedestal
Exist Cable Manhole
Exist Cable Riser
Exist Cable Vault



STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-ELL1	"C"	1+66.00	5.25' LT	52.05
2	C1-A52	"C1"	1+65.66	11.09' RT	52.41
3	C1-A46	"C1"	1+66.22	15.90' LT	52.19

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
4	MH-F1	SAN	1+56.00	5.68 RT	52.04	SEALED AND VENTED
5	MH-F2	SAN	3+53.52	14.91' RT	52.02	SEALED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+74.19	27.92' RT	46.79	
B	1+77.24	31.23' LT	44.09	DUCTILE IRON
C	2+3.85	29.20' RT	46.88	
D	3+13.17	36.45' RT	46.78	
E	3+18.13	22.35' LT	43.41	DUCTILE IRON
F	3+58.31	37.67' RT	46.57	

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

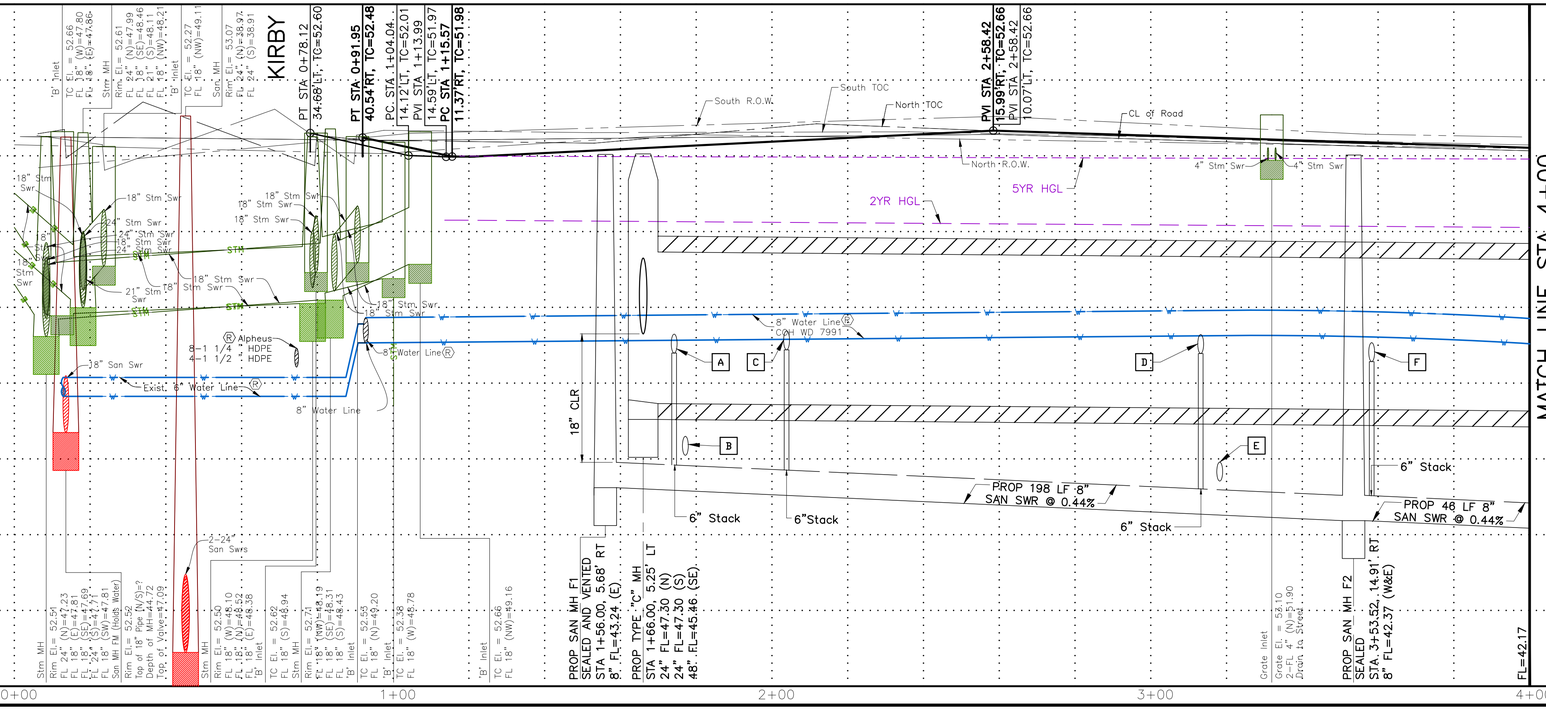
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GE012A)

TBM:

CP-200, SET MAG NAIL W/SHINNER AT STA 0+4.09, 12.19' LT
EL. 52.66

CP-805, SET MAG NAIL W/SHINNER AT STA 0+96.70
EL. 52.46



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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723
07/29/2026

REV.	DATE	DESCRIPTION	BY

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CABLE COMPANY

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

ELLA LEE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **140** OF 391	

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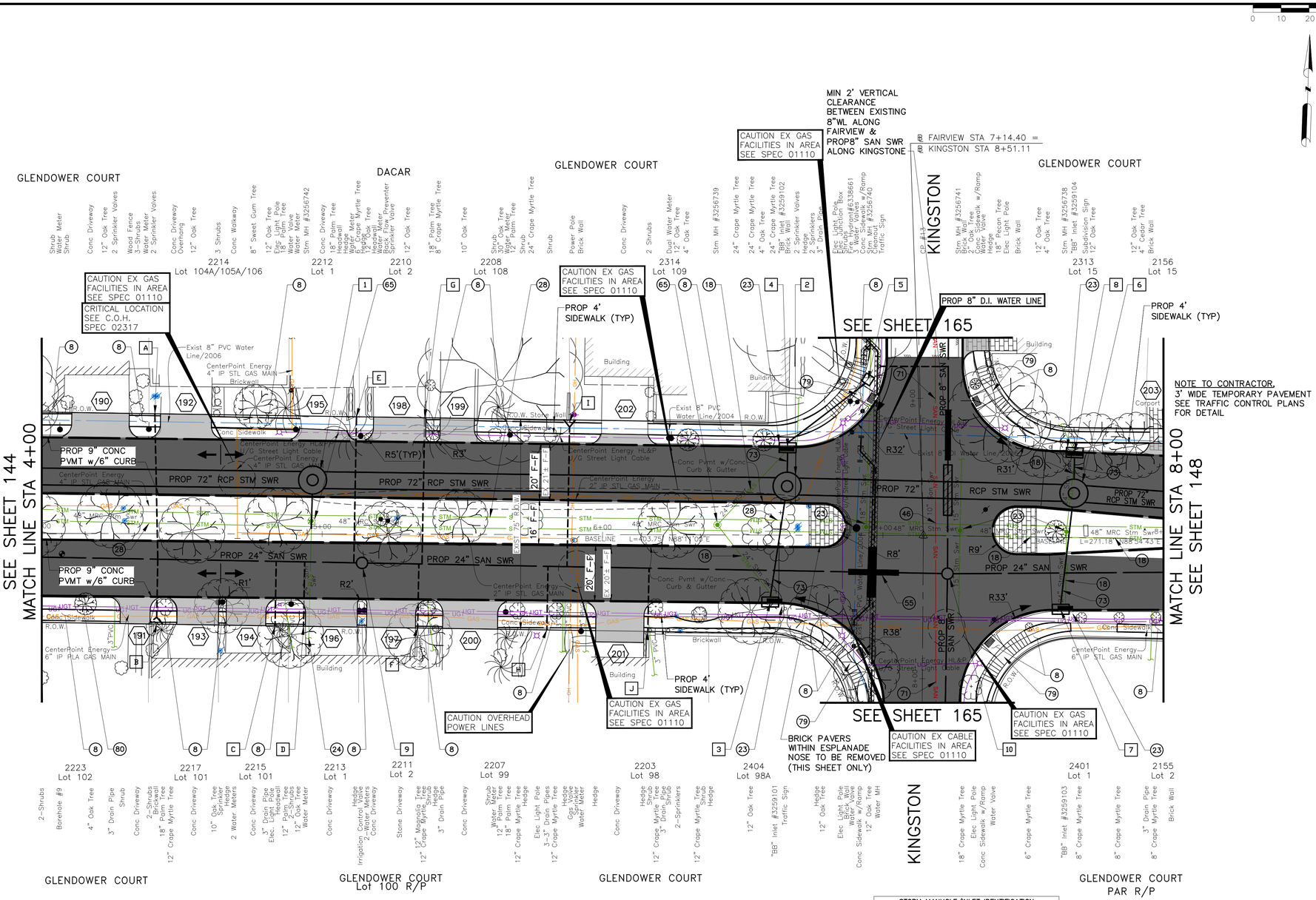

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL	PIPE
A	4+40.24	42.77' LT	40.75	DUCTILE IRON
B	4+41.03	32.24' RT	47.59	
C	4+83.27	32.77' RT	47.40	
D	4+93.42	32.90' RT	47.40	
E	5+12.14	41.86' LT	40.75	DUCTILE IRON
F	5+34.14	33.40' RT	47.40	
G	5+36.48	41.56' LT	40.19	DUCTILE IRON
H	5+80.21	33.99' RT	47.40	
I	5+88.15	40.91' LT	40.17	DUCTILE IRON
J	6+16.24	34.45' RT	47.40	

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
9 MH-L2	SAN	5+14.25	10.26' RT	51.50	SEALED
10 MH-S6	SAN	7+23.23	13.50' RT	51.23	SEALED

FAIRVIEW

(SEE SHEET 147 FOR PROFILE)

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-FAI6A	"C"	4+96.54	19.27' LT	51.65
2	MH-FAI7	"C"	6+65.79	17.43' LT	50.79
3	BB-A125	"BB"	6+59.86	24.12' RT	51.04
4	BB-A80	"BB"	6+65.94	31.43' LT	51.01
5	JB	"A"	6+94.55	55.60' LT	51.20
6	MH-FAI8	"C"	7+67.90	15.86' LT	50.64
7	BB-A131	"BB"	7+63.80	25.85' RT	50.84
8	BB-A86	"BB"	7+67.95	30.57' LT	50.85

NOTES & LEGEND

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(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-13, CUT 'X' IN CONC AT
STA 7+14.40
EL. 50.88

REV.	DATE	DESCRIPTION	BY

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LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PLAN
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=5' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **146** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Fairview-02 Plan.dwgModel Jul 22 , 2026 - 11:06AM Jgarza

0 10 20 40

(SEE SHEET 144 FOR PLAN)

FAIRVIEW

DICKEY

WESTGATE

SEE SHEET 183

MATCH LINE STA 4+00
SEE SHEET 147

PC STA 0+01.99
21.66 RT, TC=51.60

PC STA 0+12.46
7.07 LT, TC=51.65

PT STA 0+31.98
46.18 RT, TC=52.38

PT STA 0+32.30
31.65 LT, TC=52.17

PT STA 0+58.19
54.03 LT, TC=52.24

PT STA 0+59.46
42.88 RT, TC=52.51

PC STA 0+84.71
17.97 RT, TC=51.79

PC STA 0+85.60
26.2% @ 0.00% (W)
26.2% @ 0.00% (W)

PM STA 1+78.98
18.95 RT, TC=52.27

PM STA 1+78.98
36.74 LT, TC=52.27

PC STA 2+66.98
35.63 LT, TC=51.90

PC STA 2+68.01
20.40 RT, TC=51.90

PT STA 2+97.47
65.66 LT, TC=52.48

PT STA 2+97.52
50.38 RT, TC=52.59

PT STA 3+23.23
64.23 LT, TC=52.48

PT STA 3+23.72
51.77 RT, TC=52.59

PC STA 3+52.85
34.38 LT, TC=51.55

PC STA 3+54.09
21.64 RT, TC=52.09

PVI STA 3+58.97
34.30 LT, TC=51.54

MIN 2' VERTICAL CLEARANCE BETWEEN EXISTING 8"WL ALONG FAIRVIEW& PROP8" SAN SWR ALONG WESTGATE

North R.O.W.

South R.O.W.

South TGC

North TOC

EXP. HGL

2YR HGL

TC @ +2.53% (S)
TC @ +2.19% (N)

TC @ +0.54% (S)
TC @ +0.54% (N)

TC @ -0.45% (N&S)

TC @ +1.08% (S)
TC @ +1.26% (N)

TC @ -1.52% (N)
PROP 24" RCP STM SWR

TC @ -1.48% (S)

TC @ +0.30% (N&S)

CONNECT TO EXIST 8" WATER LINE

PROP 6'x5' RCB STM SWR

PROP 24" RCP STM SWR

PROP 48" RCP STM SWR

PROP 72" RCP STM SWR 57 LF @ 0.04%

CONNECT TO EXIST 8" WATER LINE

PROP 72" RCP STM SWR 148 LF @ 0.04%

PROP 24" RCP STM SWR

PROP 72" RCP STM SWR 34 LF @ 0.04%

PROP 72" RCP STM SWR 49 LF @ 0.04%

PROP 72" RCP STM SWR 35 LF @ 0.04%

PROP: 48" RCP: STM SWR 38 LF @ 0.07%

PROP 8" SAN SWR

PROP 8" WATER LINE

PROP 8" SAN SWR DROP

PROP 24" SAN SWR

PROP 117 LF 24" SAN SWR @ 0.11%

PROP 148 LF 24" SAN SWR @ 0.11%

PROP 80 LF 24" SAN SWR @ 0.11%

1-20' JOINT OF 8" PIPE WITH RESTRAINED JOINTS CENTERED OVER PROP SANITARY SEWER

LIMITS OF PROP 8" RESTRAINED JOINT D.I. PIPE SECTION SEE COH DETAIL 02511-01

2' ABS CLR

18" CLR

6" Stack

6" Gas Line (Depth not Verified)

4" Gas Line (Depth not Verified)

8" Water Line COH P39631

8" Water Line COH P39631

8" Water Line COH P39631

8" Water Line COH P39631

15" Stm Swr

24" Stm Swr

48" MRC Stm Swr

6'x4' RCB Stm Swr

6" Stm Swr

46.03

47.11

'B' Inlet (S)
TC El.= 51.95
FL 15" (NE)=46.63

'B' Inlet (N)
TC El.= 52.05
FL 15" (SE)=48.38
Stm MH
Rim El.= 52.12
FL 6'X4' RCB (S)=43.89
FL 6'X4' RCB (N)=43.89
FL 15" (SE)=46.38

PROP TYPE "C" MH
STA 0+39.81, 22.94' LT
48" FL=43.97 (N)
6'x5' FL=43.65 (S),
72" FL=42.08 (E)

PROP TYPE "C" MH
STA 0+39.92, 0.98' RT
48" FL=43.99 (N)
6'x4' FL=43.90± MATCH
6'x5' FL=43.65 (S)

PROP SAN MH P3
SEALED
STA 0+54.72, 11.21' RT
8" FL=38.67 (W)
24" FL=37.34 (N)
24" FL=37.34 (S&E)

'BB' Inlet (N)
TC El.= 52.15
FL 15" (S)=42.79
Stm MH
Rim El.= 51.93
FL 15" (N)=45.88
FL 48" (E)=43.78
FL 48" (S)=43.67
FL 42" (SW)=43.61
FL 24" (W)=49.75
'BB' Inlet (S)
TC El.= 51.95
FL 15" (N)=46.98

PROP TYPE "C" MH
STA 1+07.39, 23.24' LT
24" FL=46.41 (N&SW)
72" FL=42.06 (W)
72" FL=42.01 (E)

PROP SAN MH L1
SEALED, VENTED AND CR
STA 1+71.65, 9.46' RT
8" FL=42.75±(S) MATCH
8" FL=38.80 (S) DROP
24" FL=37.47 (E&W)

Stm MH
Rim El.= 52.87
FL 24" (NE)=46.67
FL 48" (E)=43.52
FL 48" (W)=43.67
FL 48" (S)=43.97
'BB' Inlet (S)
TC El.= 51.90
FL 15" (N)=47.60
'BB' Inlet (N)
TC El.= 51.90
FL 24" (S)=44.10

PROP TYPE "C" MH
STA 2+63.50, 21.96' LT
24" FL=46.30 (N)
24" FL=45.21 (S)
72" FL=41.95 (W)
72" FL=41.90 (E)

Stm MH
Rim El.= 51.98
FL 24" (N)=43.63
FL 24" (S)=43.33
FL 48" (E)=43.23
FL 48" (W)=43.08

PROP TYPE "C" MH
STA 3+05.04, 21.36' LT
24" FL=43.80±(N) MATCH
24" FL=44.31 (S)
24" FL=41.89 (W)
72" FL=41.84 (E)

PROP SAN MH Q5
SEALED
STA 3+19.65, 7.17' RT
8" FL=39.29 (S)
8" FL=38.96 (N)
24" FL=37.63 (W&E)

PROP TYPE "C" MH
STA 3+61.80, 20.73' LT
24" FL=46.17 (N)
24" FL=45.31 (S)
72" FL=41.82 (W)
72" FL=41.77 (E)

'BB' Inlet (N)
TC El.= 51.93
FL 6" (NW)=49.93
FL 24" (S)=47.33
'BB' Inlet (S)
TC El.= 51.85
FL 24" (N)=46.75
Stm MH
Rim El.= 52.36
FL 24" (N)=46.18
FL 24" (S)=44.68
FL 48" (E)=43.38
FL 48" (W)=43.28

FL=37.72

0+00 1+00 2+00 3+00 4+00

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-15, SET MAG NAIL AT
STA 0+45.90
EL. 52.80

CP-14, CUT 'X' IN CONC AT
STA 3+10.65
EL. 51.84

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL LAND SURVEYOR
07/29/2026

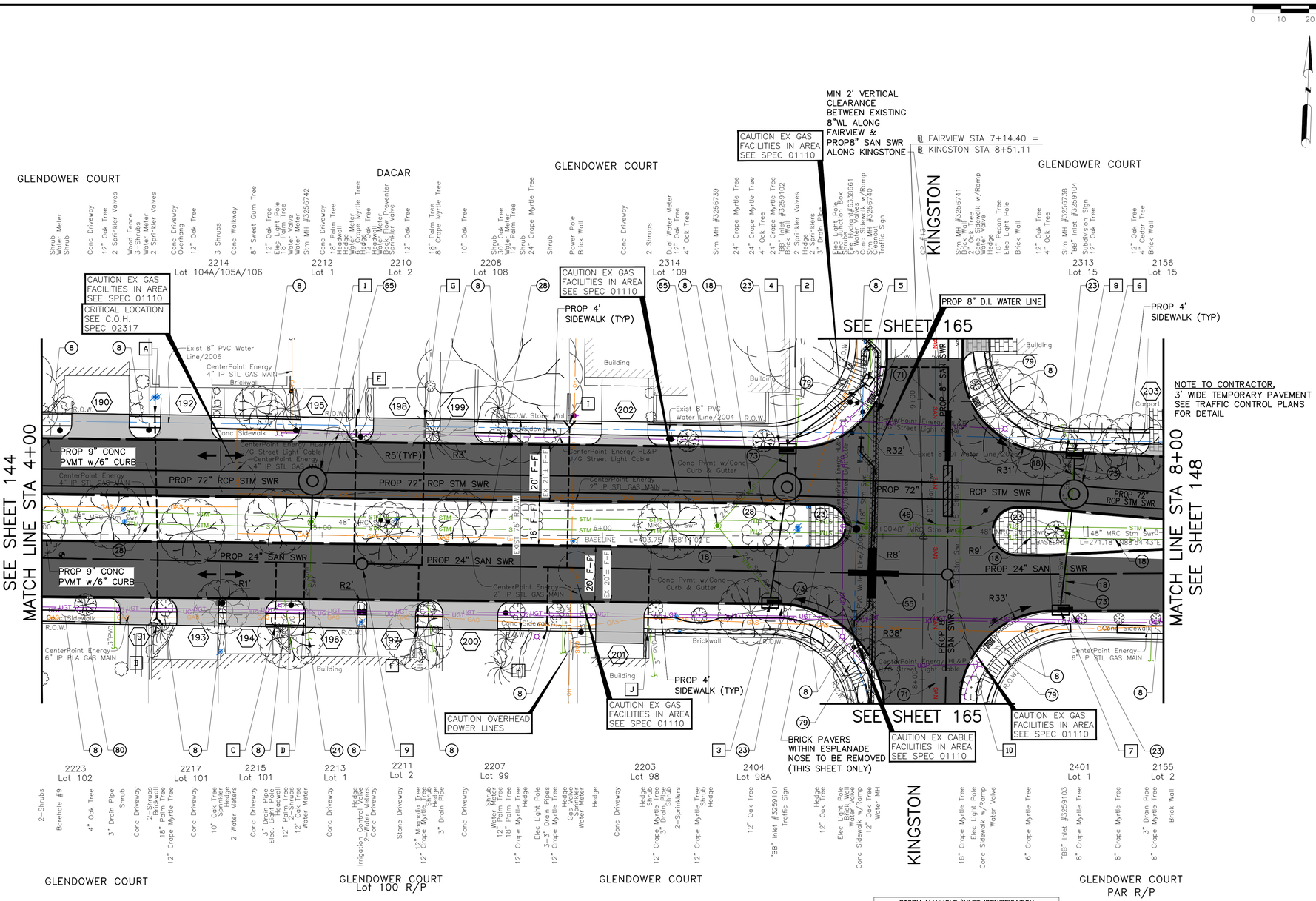
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PROFILE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **145** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms222441\Fairview-01 Profile.dwgModel Jul 22, 2026 - 10:42AM Jgarza



6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL	PIPE
A	4+40.24	42.77' LT	40.75	DUCTILE IRON
B	4+41.03	32.24' RT	47.59	
C	4+83.27	32.77' RT	47.40	
D	4+93.42	32.90' RT	47.40	
E	5+12.14	41.86' LT	40.75	DUCTILE IRON
F	5+34.14	33.40' RT	47.40	
G	5+36.48	41.56' LT	40.19	DUCTILE IRON
H	5+80.21	33.99' RT	47.40	
I	5+88.15	40.91' LT	40.17	DUCTILE IRON
J	6+16.24	34.45' RT	47.40	

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
9 MH-L2	SAN	5+14.25	10.26' RT	51.50	SEALED
10 MH-S6	SAN	7+23.23	13.50' RT	51.23	SEALED

FAIRVIEW

(SEE SHEET 147 FOR PROFILE)

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 MH-FAI6A	"C"	4+96.54	19.27' LT	51.65
2 MH-FAI7	"C"	6+65.79	17.43' LT	50.79
3 BB-A125	"BB"	6+59.86	24.12' RT	51.04
4 BB-A80	"BB"	6+65.94	31.43' LT	51.01
5 JB	"A"	6+94.55	55.60' LT	51.20
6 MH-FAI8	"C"	7+67.90	15.86' LT	50.64
7 BB-A131	"BB"	7+63.80	25.85' RT	50.84
8 BB-A86	"BB"	7+67.95	30.57' LT	50.85

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-13, CUT 'X' IN CONC AT STA 7+14.40 EL. 50.88

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PLAN STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=5' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **146** OF 391	

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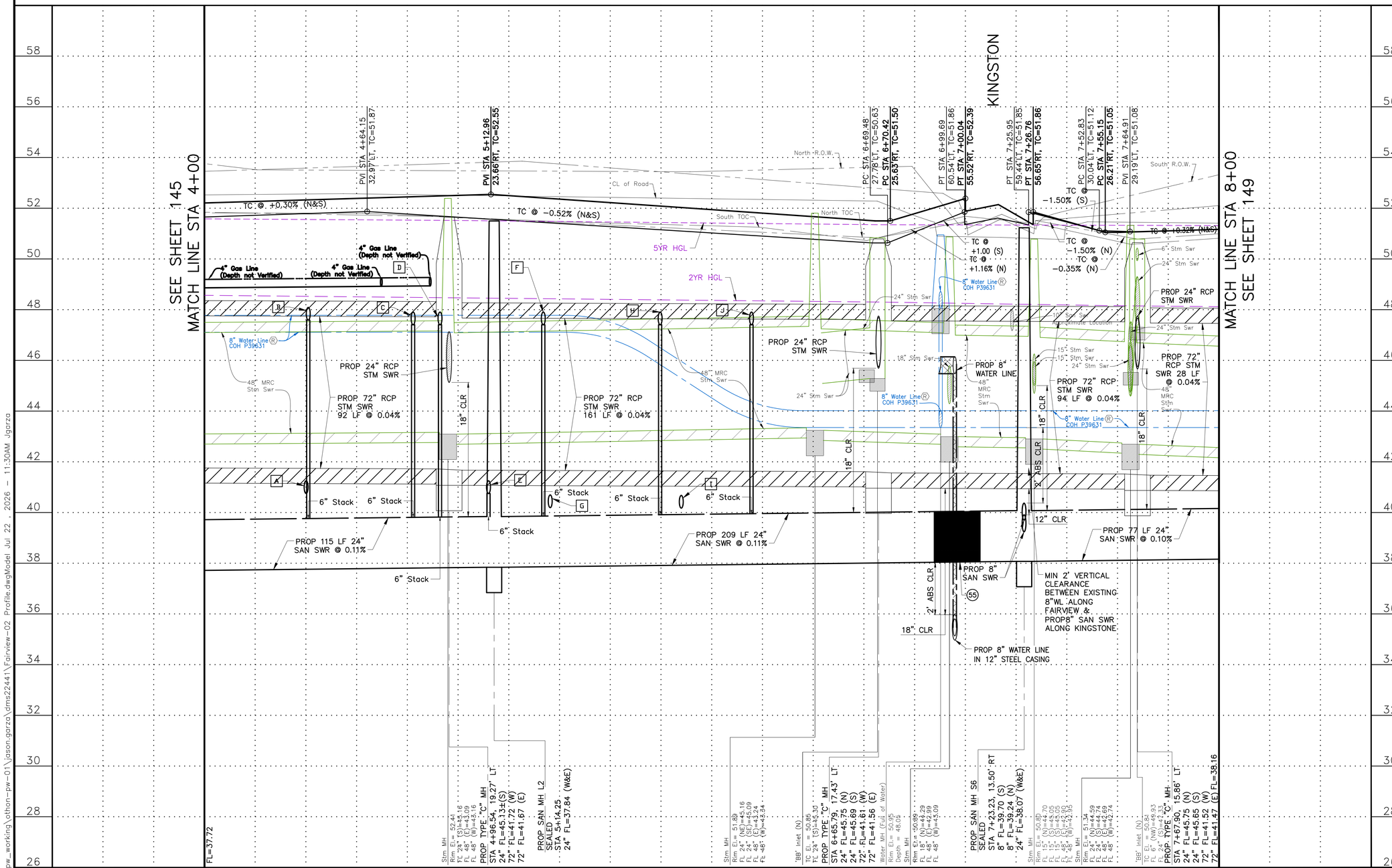
(SEE SHEET 146 FOR PLAN)

FAIRVIEW

KINGSTON

SEE SHEET 145
MATCH LINE STA 4+00

MATCH LINE STA 8+00
SEE SHEET 149



0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP–13, CUT 'X' IN CONC AT
STA 7+14.40
EL. 50.88

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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VERIFICATION OF PRIVATE UTILITY LINES

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CABLE COMPANY

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575 N. DAIRY ASHFORD DR., STE. 180 Houston, TX 77079 PH: 713 973 8555

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AMANI ENGINEERING, INC.
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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PROFILE
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=5' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **147** OF 391	

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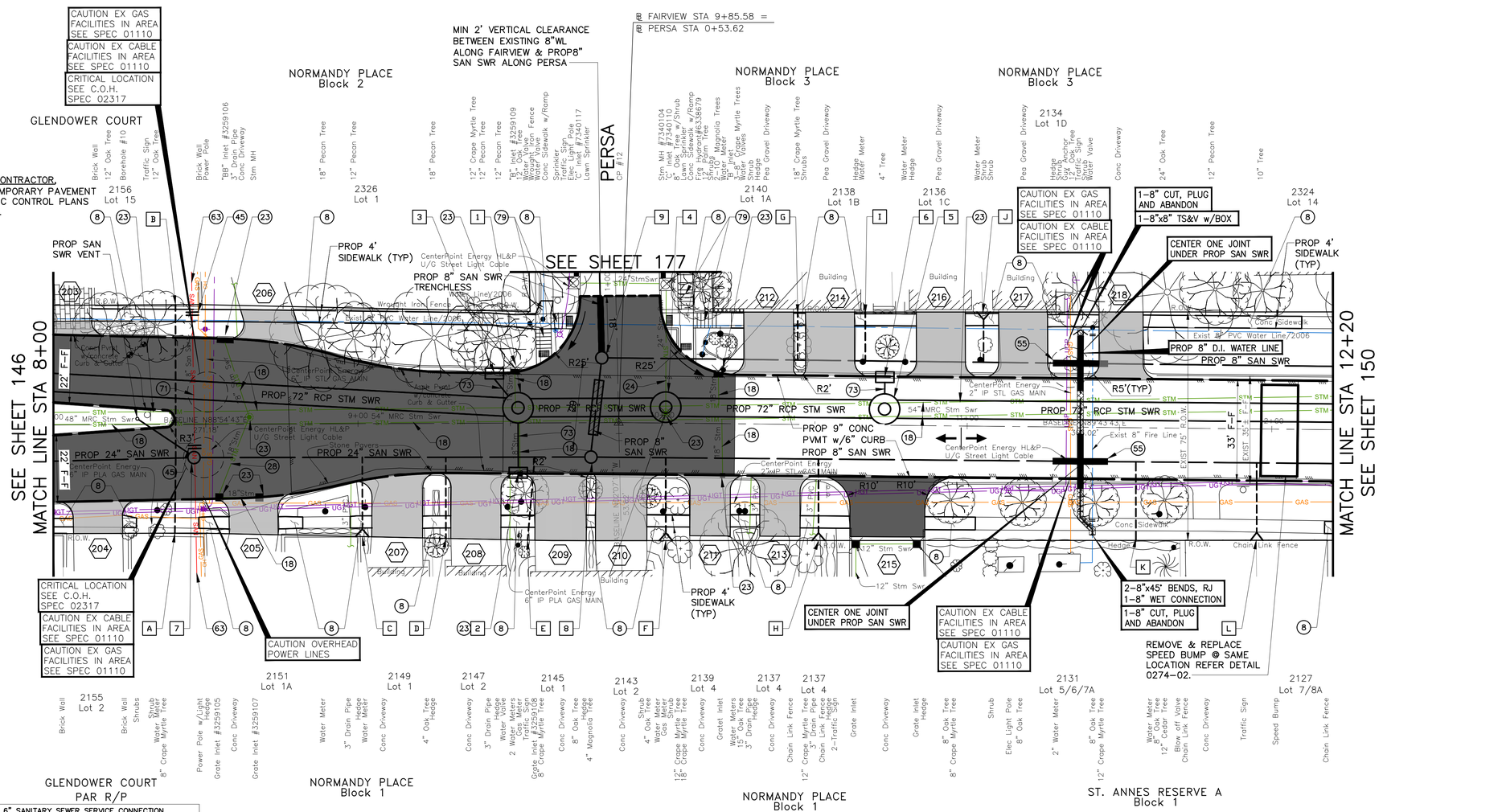
0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-12, SET MAG NAIL AT
STA 9+85.53
EL. 52.33



(SEE SHEET 149 FOR PROFILE)

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL	PIPE
A	8+39.72	35.67' RT	45.00	
B	8+40.25	39.31' LT	40.61	DUCTILE IRON
C	9+01.26	36.15' RT	47.08	
D	9+28.70	36.45' RT	46.87	
E	9+55.51	38.45' RT	46.64	
F	10+01.44	38.59' RT	46.62	
G	10+44.00	36.38' LT	48.13	DUCTILE IRON
H	10+51.57	38.07' RT	46.68	
I	10+66.19	36.53' LT	48.16	DUCTILE IRON
J	11+04.75	37.05' LT	48.18	DUCTILE IRON
K	11+55.76	36.25' RT	46.62	
L	11+95.44	36.58' RT	46.57	

SANITARY MANHOLE IDENTIFICATION						
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT	
7	MH-L3	SAN	8+46.10	10.88' RT	50.87	SEALED, VENTED AND CORROSION RESISTANT
8	MH-T1	SAN	9+76.43	11.27' RT	51.12	SEALED
9	MH-T2	SAN	9+80.12	21.31' LT	51.52	SEALED

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-FAI10	"C"	9+52.56	5.01' LT	51.28
2	BB-A133	"BB"	9+52.53	16.57' RT	51.44
3	BB-A85	"BB"	9+44.85	16.51' LT	51.42
4	MH-FAI11	"C"	10+00.98	5.23' LT	51.75
5	MH-FAI11A	"C"	10+72.82	5.31' LT	51.61
6	BB-A92	"BB"	10+72.81	16.05' LT	51.90

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 REGISTERED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC. FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PLAN
STA 8+00 TO STA 12+20

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **148** OF 391	

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(SEE SHEET 148 FOR PLAN)

FAIRVIEW

SEE SHEET 147
MATCH LINE STA 8+00

MATCH LINE STA 12+20
SEE SHEET 151

PVI STA 9+47.45
18.10' RT, TC=51.59
PC STA 9+47.86
17.90' LT, TC=51.59

PT STA 9+73.08
41.52' LT, TC=52.14

PROP SAN MH T2
SEALED
STA 9+80.12, 21.31' LT
8" FL=40.14' (N)
8" FL=40.11' (E)
8" FL=39.16' (S)

PERSA

PT STA 9+98.96
41.20' LT, TC=52.09

PC STA 10+23.88
17.65' LT, TC=51.71

PVI STA 11+27.32
18.61' LT, TC=52.13
PVI STA 11+27.32
17.39' RT, TC=52.13

South R.O.W.
South TOC
TC @ +0.32% (N&S)
North TOC
18" Stm Swr
6" Gas Line
(Depth not Verified)
TC @ +0.40% (N)
TC @ +0.54% (S)
12" Stm Swr
42" Stm Swr
TC @ -1.00% (N)
TC @ +1.00% (N)
North R.O.W.
TC @ +0.54% (N&S)
TC @ -0.30% (N&S)
CL of Road
South TOC
5YR HGL
2YR HGL
CONNECT TO EXIST
8" WATER LINE

PROP 24" RCP
STM SWR
PROP 24"
RCP STM
SWR

8" San Swr
Approximate Location
48" MRC
Stm Swr
54" MRC
Stm Swr
8" Water Line
COH P39631
PROP 72" RCP
STM SWR
149 LF @ 0.04%
PROP 8"
SAN SWR
18" CLR
PROP 72" RCP
STM SWR
40 LF @ 0.04%
18" CLR
2" ABS CLR
18" Stm Swr
Approximate Location
45.28
PROP 72" RCP
STM SWR
64 LF @ 0.04%
PROP 8"
WATER LINE
8" Water Line
COH P39631
8" Water Line
COH P42676
PROP 72" RCP
STM SWR
167 LF @ .04%
6" Stack(S)
6" Stack(S)
6" Stack
6" Stack
6" Stack
6" Stack
6" Stack(N)
6" Stack(N)
6" Stack(N)
PROP 46 LF 24"
SAN SWR @ 0.10%
PROP 130 LF 24"
SAN SWR @ 0.11%
12" CLR
PROP 8"
SAN SWR
PROP 8"
SAN SWR
DROP
PROP 240 LF 8"
SAN SWR @ 0.44%
2' ABS CLR
18" CLR
PROP 243 LF 8"
SAN SWR @ 0.44%
PROP 8"
WATER LINE
CONNECT TO EXIST
8" WATER LINE
MIN 2' VERTICAL
CLEARANCE
BETWEEN EXISTING
8"WL ALONG
FAIRVIEW & PROP8"
SAN SWR ALONG
PERSA
LIMITS OF PROP 8"
RESTRAINED JOINT
D.I. PIPE SECTION
SEE COH DETAIL 02511-01

FL=38.16
PROP SAN MH L3
SEALED, VENTED AND CR
STA 8+46.10, 10.88' RT
8" FL=46.08±(S) MATCH
8" FL=39.54 (S) DROP
24" FL=38.21 (W&E)

Grate Inlet
Top El. = 50.59
FL 18" (N)=47.49
FL 18" (S)=47.44
36" dia MH

TC El. = 51.24
FL 18" (S)=47.04
Stm MH
Rim El. = 51.46
FL 18" (W)=45.76
FL 18" (S)=46.06
FL 54" (E)=42.21
FL 54" (W)=42.31
Grate Inlet
Top El. = 50.86
FL 18" (W)=48.91

'B' Inlet
TC El. = 51.84
FL 18" (S)=47.84
PROP TYPE "C" MH
STA 9+52.56, 5.01' LT
24" FL=45.75 (N)
24" FL=45.75 (S)
24" FL=41.40 (W)
72" FL=41.35 (E)

PROP SAN MH T1
SEALED
STA 9+76.43, 11.27' RT
8" FL=39.68 (E)
8" FL=39.02 (N)
24" FL=38.35 (W)

Grate Inlet
Top El. = 51.43
FL 18" (N)=48.43
'C' Inlet
TC El. = 52.28
FL 24" (E)=48.47

'C' Inlet
TC El. = 52.24
FL 24" (W)=48.19
FL 24" (S)=48.14
Stm MH
Rim El. = 52.18
FL 12" (N)=45.83
FL 54" (E)=42.13
FL 54" (W)=42.23
PROP TYPE "C" MH
STA 10+00.98, 5.23' LT
24" FL=45.86±(N) MATCH
72" FL=41.33 (W)
72" FL=41.28 (E)

'B' Inlet (N)
TC El. = 51.88
FL 18" (S)=48.23
Grate Inlet
Top El. = 51.22
FL 18" (N)=48.12
Grate Inlet
Top El. = 52.53
FL 12" (S)=49.63
FL 12" (E)=49.73
PROP TYPE "C" MH
STA 10+72.82, 5.31' LT
24" FL=45.60
72" FL=41.25 (W)
72" FL=41.20 (E)

Grate Inlet
Top El. = 52.59
FL 12" (W)=49.99

8" FL=40.74(S) 8" FL=41.19(N)

8+00 9+00 10+00 11+00 12+00 12+20

58 56 54 52 50 48 46 44 42 40 38 36 34 32 30 28 26

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-12, SET MAG NAIL AT
STA 9+85.53
EL. 52.33

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL LAND SURVEYOR
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PROFILE
STA 8+00 TO STA 12+20

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **149** OF 391	

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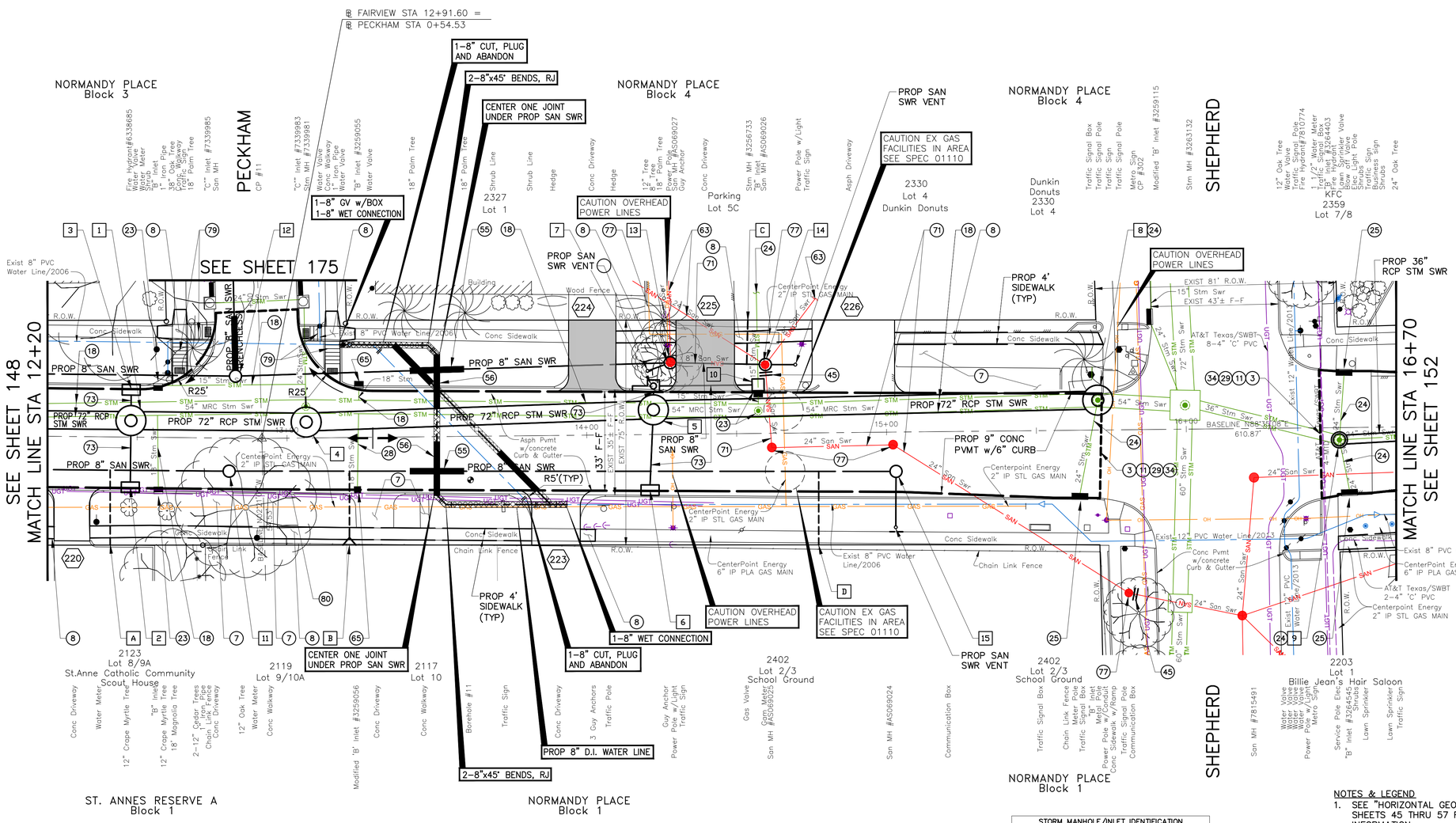
℄ FAIRVIEW STA 12+91.60 =
℄ PECKHAM STA 0+54.53
1-8" CUT, PLUG AND ABANDON
2-8"x45° BENDS, RJ
CENTER ONE JOINT UNDER PROP SAN SWR
PROP SAN SWR VENT
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
CAUTION OVERHEAD POWER LINES
1-8" GV w/BOX
1-8" WET CONNECTION
NORMANDY PLACE Block 3
NORMANDY PLACE Block 4
NORMANDY PLACE Block 4
PECKHAM
SHEPHERD
2327 Lot 1
Parking Lot 5C
2330 Lot 4 Dunkin Donuts
Dunkin Donuts 2330 Lot 4
KFC 2359 Lot 7/8
SEE SHEET 175
Exist 8" PVC Water Line/2006
PROP 8" SAN SWR
PROP 72" RCP STM SWR
PROP 4' SIDEWALK (TYP)
PROP 36" RCP STM SWR
PROP 9" CONC PVMT w/6" CURB
PROP 8" D.I. WATER LINE
1-8" WET CONNECTION
CAUTION OVERHEAD POWER LINES
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
2-8"x45° BENDS, RJ
CENTER ONE JOINT UNDER PROP SAN SWR
PROP SAN SWR VENT
2123 Lot 8/9A St.Anne Catholic Community Scout House
2119 Lot 9/10A
2117 Lot 10
2402 Lot 2/3 School Ground
2203 Lot 1 Billie Jean's Hair Saloon
ST. ANNES RESERVE A Block 1
NORMANDY PLACE Block 1
NORMANDY PLACE Block 1
SEE SHEET 148 MATCH LINE STA 12+20
SEE SHEET 152 MATCH LINE STA 16+70
BASELINE N88°35'56"E 610.87'
CenterPoint Energy 2" IP STL GAS MAIN
CenterPoint Energy 6" IP PLA GAS MAIN
AT&T Texas/SWBT 8-4" "C" PVC
Exist 12" PVC Water Line/2013
Exist 8" PVC Water Line/2006
Exist 81' R.O.W.
Exist 43'± F-F
Exist 75' R.O.W.
Exist 133' F-F
Asph Pvmt w/concrete Curb & Gutter
Conc Sidewalk
Chain Link Fence
Building
Wood Fence
R.O.W.
Borehole #11
Traffic Sign
Traffic Signal Pole
Traffic Signal Box
Power Pole w/Light
Guy Anchor
Gas Valve
Gas Meter
Communication Box
Power Pole w/Conduit
Conc Sidewalk w/Ramp
Service Pole Elec.
Metro Sign
Lawn Sprinkler
Shrubs
Bollards
Hedge
Shrub Line
Conc Driveway
Asph Driveway
Water Meter
Water Valve
Conc Walkway
Fire Hydrant
Light Pole
Meter Pole
Guy Anchor
Curb Inlet
Drop Inlet
Iron Pipe
Oak Tree
Palm Tree
Crape Myrtle Tree
Magnolia Tree
Cedar Trees
Modified "B" Inlet #3259056
Modified "B" Inlet #3259055
Modified "B" Inlet #3259059
Modified "B" Inlet #3261132
Modified "B" Inlet #3259115
"B" Inlet #3264403
"B" Inlet #3264545
"C" Inlet #7339983
"C" Inlet #7339985
"C" Inlet #7339981
Stm MH #3256733
Stm MH #3256726
Stm MH #AS069026
Stm MH #AS069027
San MH #AS069024
San MH #7815491
Fire Hydrant#6358685
Fire Hydrant#7810774
Traffic Signal Box
Traffic Signal Pole
Traffic Sign
Metro Sign CP #302
Blow off Valve
Bollards
Shrubs
Traffic Sign
Bus Stop Sign
24" Oak Tree
12" Oak Tree
12" Crape Myrtle Tree
18" Magnolia Tree
2-12" Cedar Trees
Chain Link Fence
Conc Driveway
Conc Walkway
Water Meter
Water Valve
Conc Walkway
Fire Hydrant
Light Pole
Traffic Sign
Traffic Signal Pole
Metro Sign CP #11
18" Palm Tree
Shrub Line
Hedge
Conc Driveway
Asph Driveway
Power Pole w/Light
Traffic Sign
Parking
Lot 5C
Dunkin Donuts 2330 Lot 4
Traffic Signal Box
Traffic Signal Pole
Traffic Sign
Traffic Signal Pole
Metro Sign CP #302
Modified "B" Inlet #3259115
Stm MH #3263132
SHEPHERD
12" Oak Tree
Water Valve
Traffic Signal Pole
Fire Hydrant#7810774
1-1/2" Water Meter
"B" Inlet #3264403
Fire Hydrant
Blow off Valve
Bollards
Shrubs
Traffic Sign
Bus Stop Sign
Shrubs
24" Oak Tree
KFC 2359 Lot 7/8
Billie Jean's Hair Saloon
Water Valve
Water Valve
Water Valve
Power Pole w/Light
Metro Sign
Service Pole Elec.
"B" Inlet #3264545
Shrubs
Lawn Sprinkler
Lawn Sprinkler
Traffic Sign
San MH #7815491
Exist 12" Water Line/2013
Exist 8" PVC Water Line/2006
CenterPoint Energy 6" IP PLA GAS MAIN
AT&T Texas/SWBT 2-4" "C" PVC
Centerpoint Energy 2" IP STL GAS MAIN
Conc Pvmt w/concrete Curb & Gutter
Exist 12" Water Line/2013
Exist 8" PVC Water Line/2006
Exist 12" PVC Water Line/2013
Exist 8" PVC Water Line/2006
Exist 133' F-F
Exist 75' R.O.W.
Exist 81' R.O.W.
Exist 43'± F-F
151' Stm Swr
Conc Sidewalk
Chain Link Fence
Building
Wood Fence
R.O.W.
Borehole #11
Traffic Sign
Traffic Signal Box
Traffic Signal Pole
Traffic Signal Box
Power Pole w/Light
Guy Anchor
Gas Valve
Gas Meter
Communication Box
Power Pole w/Conduit
Conc Sidewalk w/Ramp
Traffic Signal Pole
Communication Box
Service Pole Elec.
Metro Sign
Lawn Sprinkler
Lawn Sprinkler
Traffic Sign
Water Meter
Water Valve
Water Valve
Water Valve
Power Pole w/Light
Metro Sign
Shrubs
Bollards
Hedge
Shrub Line
Conc Driveway
Asph Driveway
Water Meter
Water Valve
Conc Walkway
Fire Hydrant
Light Pole
Meter Pole
Guy Anchor
Curb Inlet
Drop Inlet
Iron Pipe
Oak Tree
Palm Tree
Crape Myrtle Tree
Magnolia Tree
Cedar Trees
Modified "B" Inlet #3259056
Modified "B" Inlet #3259059
Modified "B" Inlet #3261132
Modified "B" Inlet #3259115
"B" Inlet #3264403
"B" Inlet #3264545
"C" Inlet #7339983
"C" Inlet #7339985
"C" Inlet #7339981
Stm MH #3256733
Stm MH #3256726
Stm MH #AS069026
Stm MH #AS069027
San MH #AS069024
San MH #7815491
Fire Hydrant#6358685
Fire Hydrant#7810774

0 10 20 40

(SEE SHEET 150 FOR PLAN)

FAIRVIEW

PECKHAM

SHEPHERD

SEE SHEET 149
MATCH LINE STA 12+20

MATCH LINE STA 16+70
SEE SHEET 152

PROP TYPE "C" MH
STA 12+47.87, 5.50' LT
24" FL=45.47 (N)
24" FL=45.47 (S)
24" FL=41.12 (W)
72" FL=41.07 (E)
'B' Inlet (N)
TC El. = 51.62
FL 15" (E)=48.27
'B' Inlet (S)
TC El. = 51.62
FL 18" (N)=47.41
'C' Inlet
TC El. = 51.74
FL 24" (E)=46.84

PROP SAN MH L4
SEALED
STA 12+80.80, 11.03' RT
8" FL=40.99 (E&W)

'C' Inlet
TC El. = 51.54
FL 24" (S)=46.52
FL 24" (W)=46.59
Strm MH
Rim El.= 56.96
FL 24" (N)=46.59
FL 54" (E)=41.84
FL 54" (W)=41.99

PROP TYPE "C" MH
STA 13+06.44, 5.30' LT
24" FL=45.36±(N)
24" FL=41.05 (W)
72" FL=41.00 (E)

'Top' El.= 51.82
FL 8" (N)=48.35
'B' Inlet
TC El. = 51.64
FL 18" (S)=47.94

PROP 63 LF 8" SAN SWR @ 0.44%

PROP 61 LF 8" SAN SWR @ 0.44%

8" FL=40.74(S) 8" FL=41.19(N)

LIMITS OF PROP 8" RESTRAINED JOINT D.I. PIPE SECTION SEE COH DETAIL 02511-01

PROP TYPE "C" MH
STA 14+22.30, 8.24' LT
24" FL=45.30 (N)
24" FL=45.30 (S)
72" FL=40.96 (W)
72" FL=40.91 (E)
'B' Inlet
TC El. = 51.85
FL 15" (S)=48.40
Strm MH
Rim El.= 56.96
FL 24" (N)=46.59
FL 54" (E)=41.84
FL 54" (W)=41.99

PROP 32 LF 8" SAN SWR @ 0.44%

San MH
Rim El.= 52.03
FL 8" (N)=46.28
FL 8" (E)=46.18

PROP 222 LF 8" SAN SWR @ 0.44%

San MH
Rim El.= 52.36
FL 24" (N)=42.66
FL 24" (E)=42.61

PROP SAN MH L5
SEALED AND VENTED
STA 15+03.04, 13.11' RT
8" FL=41.97 (W)

San MH
Rim El.= 52.42
FL 24" (SE)=43.07
FL 24" (W)=43.22

PROP TYPE "C" MH
STA 15+70.59, 9.98' LT
24" FL=46.73±(S) MATCH
72" FL=40.85 (W)
54" FL=40.80±(E) MATCH
Modified 'BB' Inlet
TOP El.= 55.65
FL 5" (N)=48.93
FL 24" (SE)=48.24
Strm MH
Rim El.= 52.03
FL 24" (N)=46.83
FL 24" (NW)=46.23
FL 24" (W)=46.59
FL 54" (S)=39.98
FL 54" (E)=39.65
San MH
Rim El.= 52.44
FL 24" (NW)=42.20
FL 24" (E)=42.15
Strm MH
Rim El.= 52.20
FL 36" (NW)=30.88
FL 24" (S)=44.29
FL 24" (E)=43.29
FL 24" (N)=46.46
36" FL=40.98 (E)
'BB' Inlet
TC El. = 51.96
FL 24" (S)=47.88
FL 24" (NW)=48.52

'BB' Inlet
TC El. = 52.24
FL 24" (N)=47.94
Strm MH
Rim El.= 51.83
FL 54" (E)=41.02
FL 54" (W)=41.19

PROP 72" RCP STM SWR 108 LF @ 0.04%

PROP 145 LF 8" SAN SWR @ 0.44%

PROP 72" RCP STM SWR 51 LF @ 0.04%

PROP 72" RCP STM SWR 24 LF @ 0.04%

PROP 72" RCP STM SWR 140 LF @ 0.04%

PROP 36" RCP STM SWR 17 LF @ 0.10%

PROP 24" RCP STM SWR

PROP 24" RCP STM SWR

PROP 8" SAN SWR

PROP 8" SAN SWR

PROP 24" SAN SWR

PROP 8" SAN SWR DROP 6" Stack(N)

6" Stack (S)

6" Stack (S)

6" Stack(S)

5YR HGL

2YR HGL

PC STA 12+54.05
19.77' LT, TC=51.77
PVI STA 12+54.38
16.23'RT, TC=51.77

TC @ -1.00% (N)

PT STA 12+75.82
40.64' LT, TC=51.44

PROP SAN MH L1
SEALED
STA 12+82.60, 20.68' LT
8" FL=41.45 (N,E&W)

PT STA 13+03.97
41.09' LT, TC=51.28

PC STA 13+25.72
19.75' LT, TC=51.98

PVI STA 14+14.15
18.60' LT, TC=52.24
PVI STA 14+14.15
17.20 RT, TC=52.24

PROP SAN MH L6
SEALED, VENTED AND CR
STA 14+28.09, 23.88' LT
8" FL=46.28± (N) MATCH
8" FL=42.19' (N) DROP
8" FL=42.09' (E&W)

PROP SAN MH L7
SEALED, VENTED AND CR
STA 14+59.79, 22.96' LT
8" FL=49.12±' (NE) MATCH
24" FL=43.27±' (NW) MATCH
8" FL=42.33' (NE) DROP
8" FL=42.23' (W)

PC STA 15+63.27
17.20'LT, TC=51.75
PC STA 15+64.95
18.82'RT, TC=51.74

PT STA 15+88.53
42.80'LT, TC=52.15
PT STA 15+89.68
43.40'RT, TC=52.41

PT STA 16+31.08
42.09'LT, TC=52.18
PT STA 16+32.33
43.81'RT, TC=52.56

PC STA 16+56.15
17.34'LT, TC=51.78
PC STA 16+57.26
18.65'RT, TC=51.79

TC @ -0.30% (N&S)

TC @ +0.30% (S)

TC @ -0.45% (N&S)

TC @ +2.05% (N)

TC @ +0.41% (S)

TC @ +0.31% (N)

South R.O.W.

North R.O.W.

CL of Road

South TOC

North TOC

18" Stm Swr

15" Stm Swr

24" Stm Swr

8" Water Line
COH P39631

18" Stm Swr Approximate Location

54" RCP Stm Swr

8" San Swr

15" Stm Swr

8" Gas Line (Depth not Verified)

24" Stm Swr

AT&T Texas/SWBT R 8-4" 'C' PVC

Stm Junction Box
54" Stm Swr
72" Stm Swr
36" Stm Swr

2" Water Line COH P3-51314

AT&T Texas/SWBT 4-MTD

60" Stm Swr

54" Stm Swr

36" Stm Swr

36 Stm Swr

24" San Swr

18" CLR

2' ABS CLR

47.69

45.69

55

1

D

C

B

A

12+20 13+00 14+00 15+00 16+00 16+70

58 56 54 52 50 48 46 44 42 40 38 36 34 32 30 28 26

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BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-11, SET MAG NAIL AT
STA 12+91.57
EL. 52.36

CP-302, CUT 'X' IN CONC AT
STA 15+82.42, 19.15' LT
EL. 52.15

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities - not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

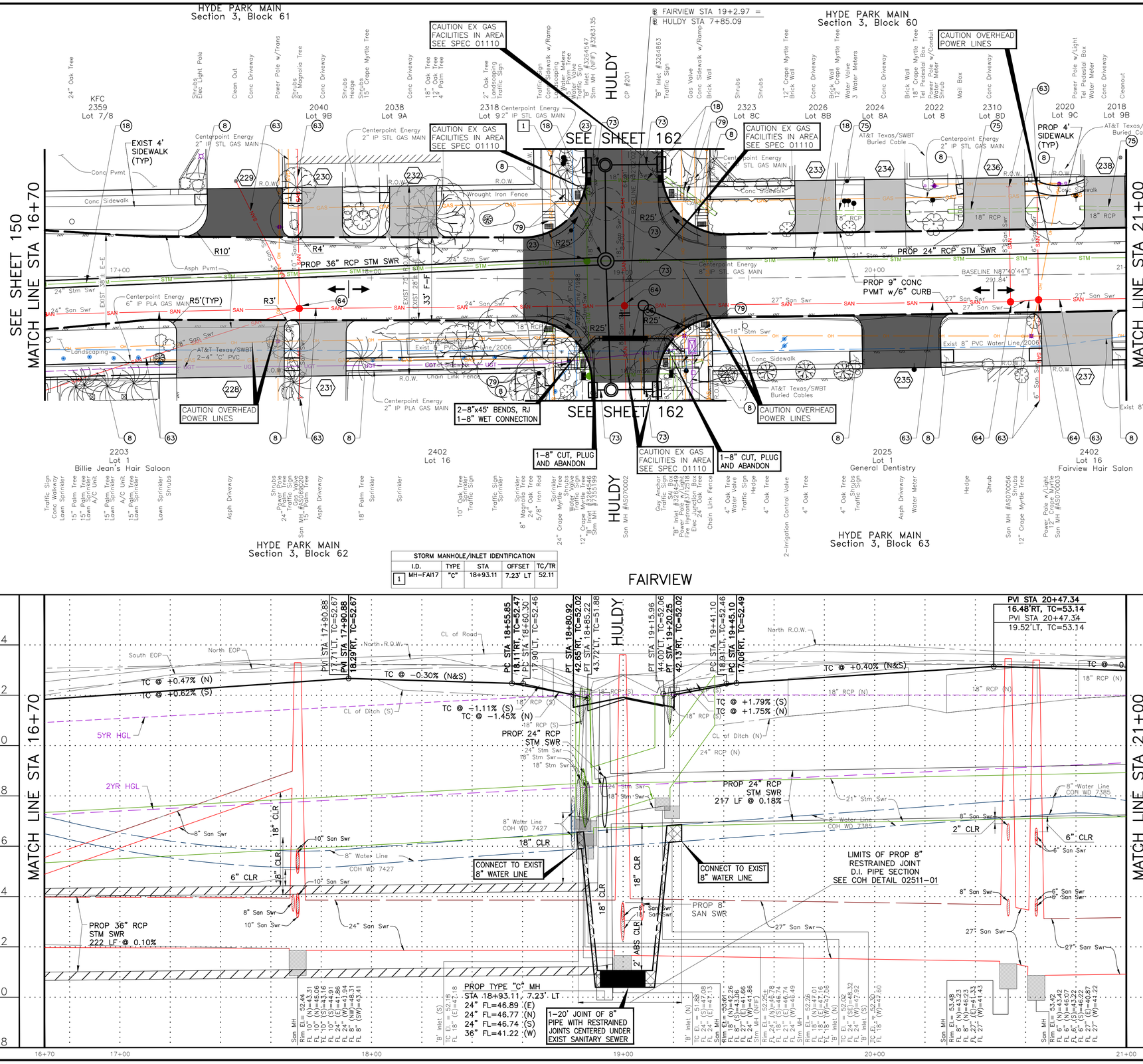
STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PROFILE
STA 12+20 TO STA 16+70

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=5' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 151 OF 391	



0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-201, SET MAG NAIL W/SHINNER AT STA 19+2.48
EL. 53.66

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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Date:

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Signature valid for six months.

Date:

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CABLE COMPANY

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW
STA 16+70 TO STA 21+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **152** OF 391	

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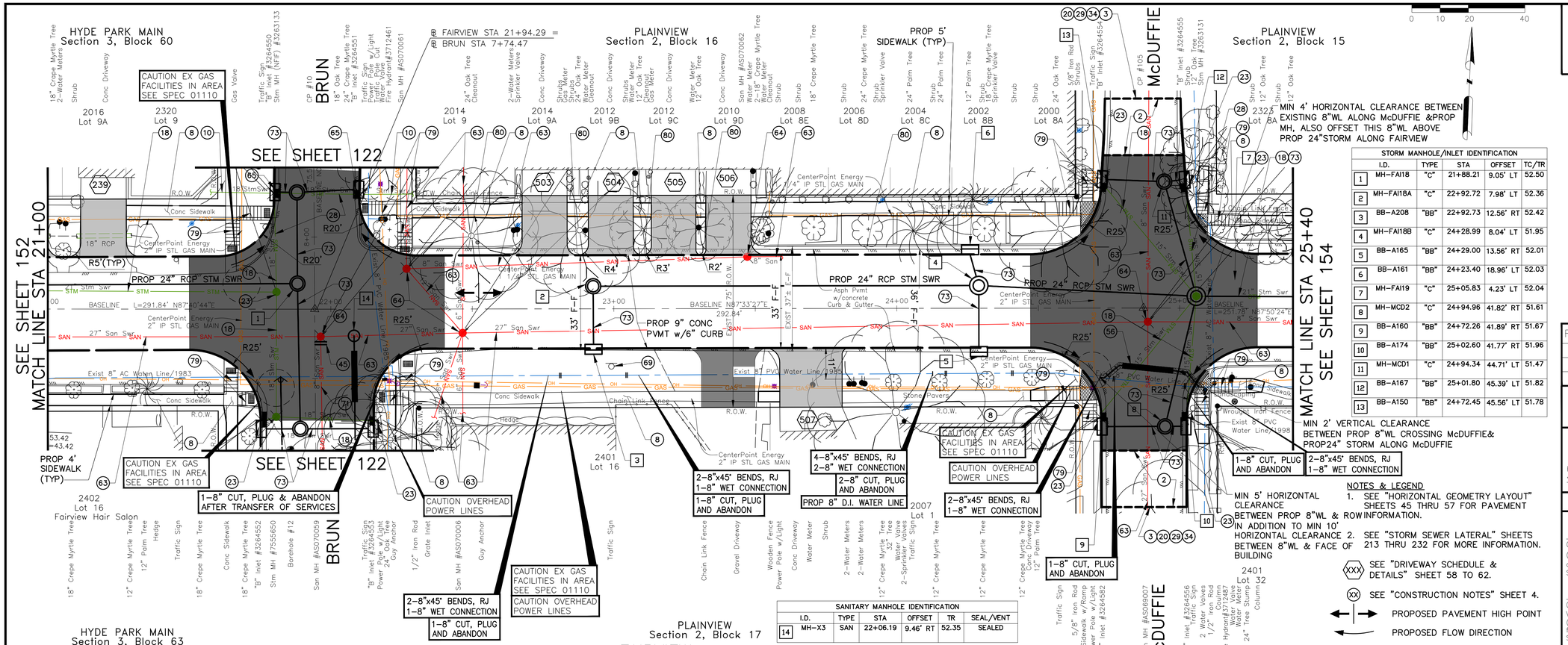

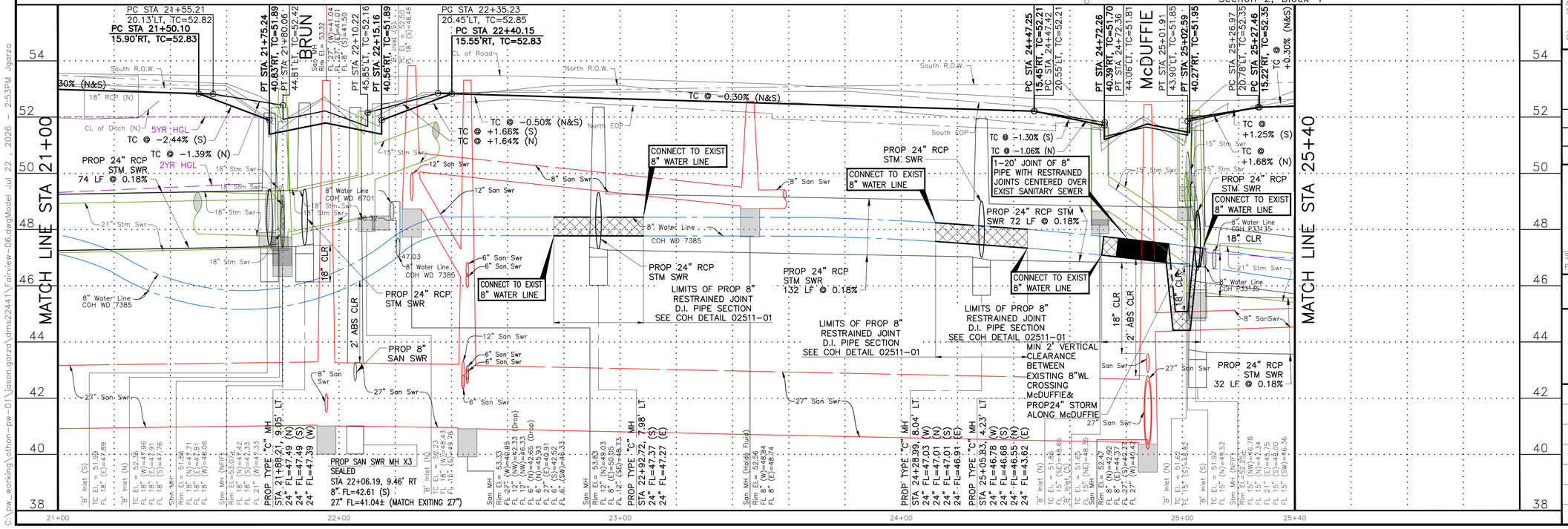

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-10, SET MAG NAIL AT
STA 21+94.28
EL. 53.45

CP-105, SET MAG NAIL w/SHINNER
STA 24+87.12
EL. 52.55

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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Date:
Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Date:
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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW
STA 21+00 TO STA 25+40

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 153 OF 391	

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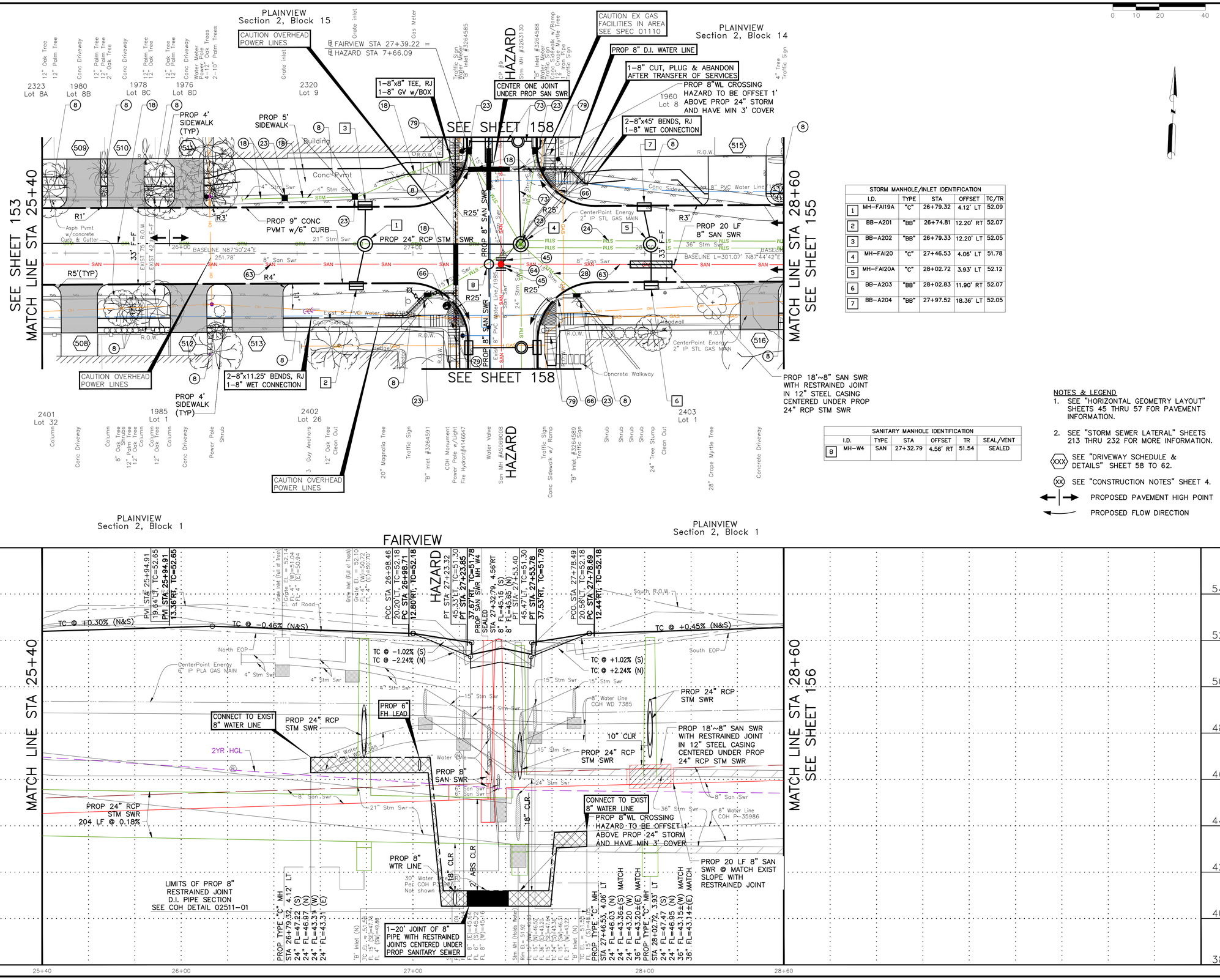
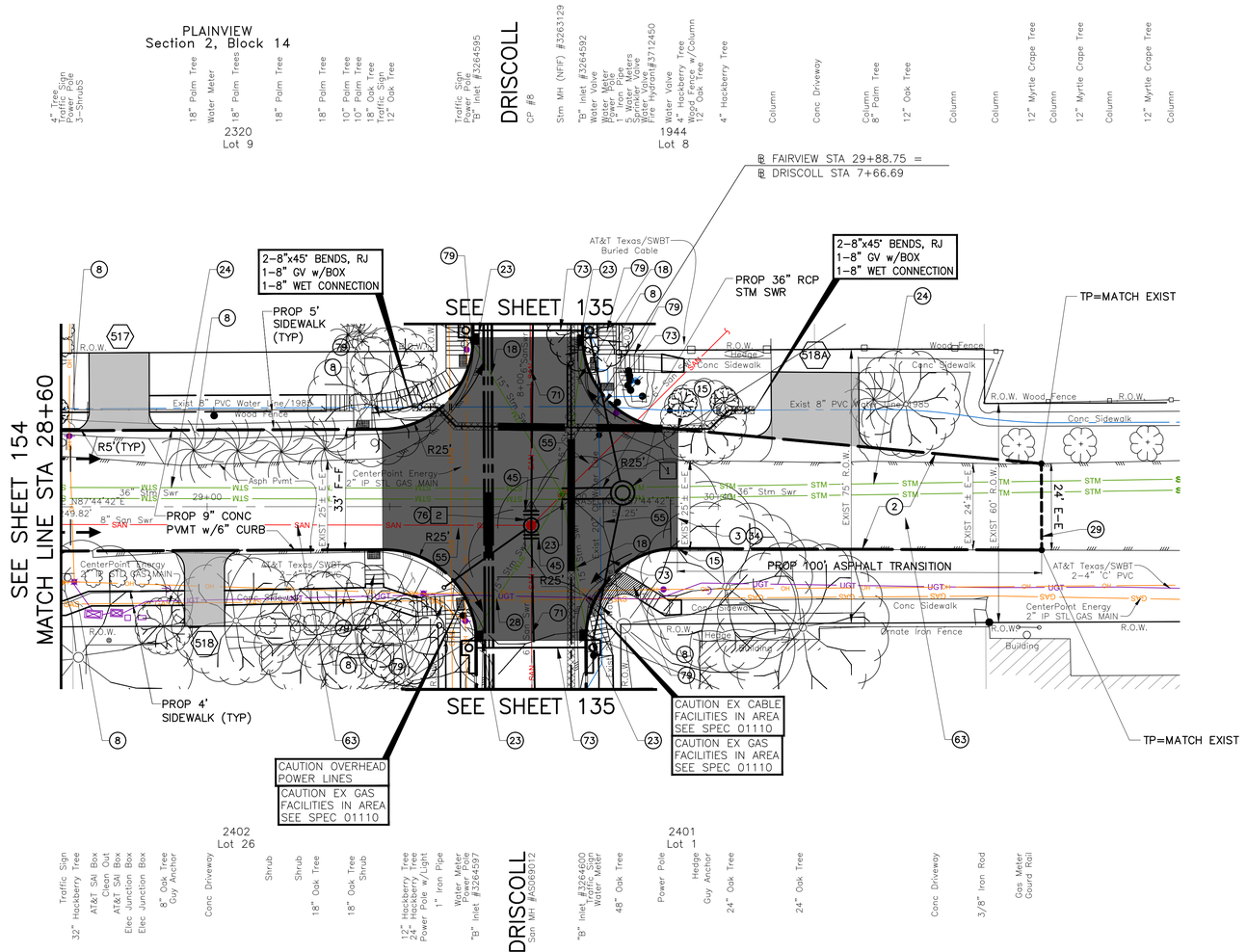

PLAINVIEW
Section 2, Block 15
PLAINVIEW
Section 2, Block 14
CAUTION OVERHEAD POWER LINES
FAIRVIEW STA 27+39.22 =
HAZARD STA 7+66.09
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
PROP 8" D.I. WATER LINE
1-8"x8" TEE, RJ
1-8" GV w/BOX
CENTER ONE JOINT UNDER PROP SAN SWR
1-8" CUT, PLUG & ABANDON AFTER TRANSFER OF SERVICES
PROP 8"WL CROSSING HAZARD TO BE OFFSET 1' ABOVE PROP 24" STORM AND HAVE MIN 3' COVER
2-8"x45° BENDS, RJ
1-8" WET CONNECTION
SEE SHEET 158
SEE SHEET 153
MATCH LINE STA 25+40
MATCH LINE STA 28+60
SEE SHEET 155
PROP 4' SIDEWALK (TYP)
PROP 5' SIDEWALK
PROP 9" CONC PVMT w/6" CURB
PROP 24" RCP STM SWR
PROP 20 LF 8" SAN SWR
PROP 18'~8" SAN SWR WITH RESTRAINED JOINT IN 12" STEEL CASING CENTERED UNDER PROP 24" RCP STM SWR
2-8"x11.25° BENDS, RJ
1-8" WET CONNECTION
CAUTION OVERHEAD POWER LINES
CAUTION OVERHEAD POWER LINES
2323 Lot 8A
1980 Lot 8B
1978 Lot 8C
1976 Lot 8D
2320 Lot 9
1960 Lot 8
2401 Lot 32
1985 Lot 1
2402 Lot 26
2403 Lot 1
Building
Conc Pvmt
Asph Pvmt w/concrete Curb & Gutter
Conc Sidewalk
Concrete Walkway
CenterPoint Energy 2" IP STL GAS MAIN
CenterPoint Energy 6" IP STL GAS MAIN
Exist 8" PVC Water Line/1985
Exist 8" PVC Water Line/1985
Exist 8" PVC Water Line/1985



SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-V3	SAN	29+88.79	5.15' RT	52.29	SEALED, VENTED AND CORROSION RESISTANT

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-FAI21	"C"	30+13.83	3.70' LT	52.59

(SEE SHEET 156 FOR PROFILE)

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-8, SET MAG NAIL AT
STA 29+88.71
EL. 52.73

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW
STA 28+60 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **155** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Fairview-08 Plan.dwgModel Jul 22 , 2026 - 3:07PM Jgarza

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

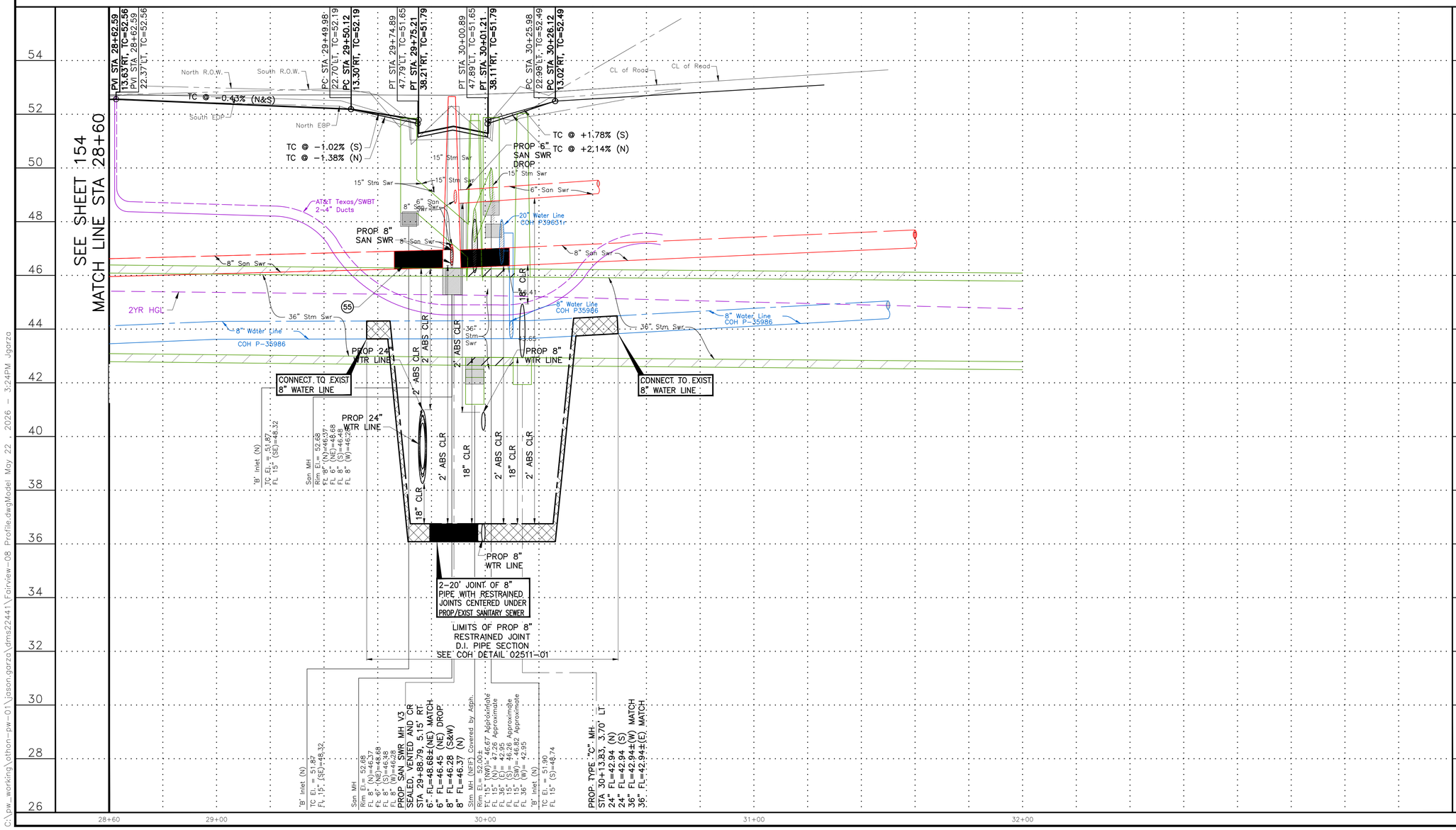
TBM:

CP-8, SET MAG NAIL AT
STA 29+88.71
EL. 52.73

(SEE SHEET 155 FOR PLAN)

DRISCOLL

FAIRVIEW



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

FAIRVIEW PROFILE
STA 28+60 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **156** OF 391	

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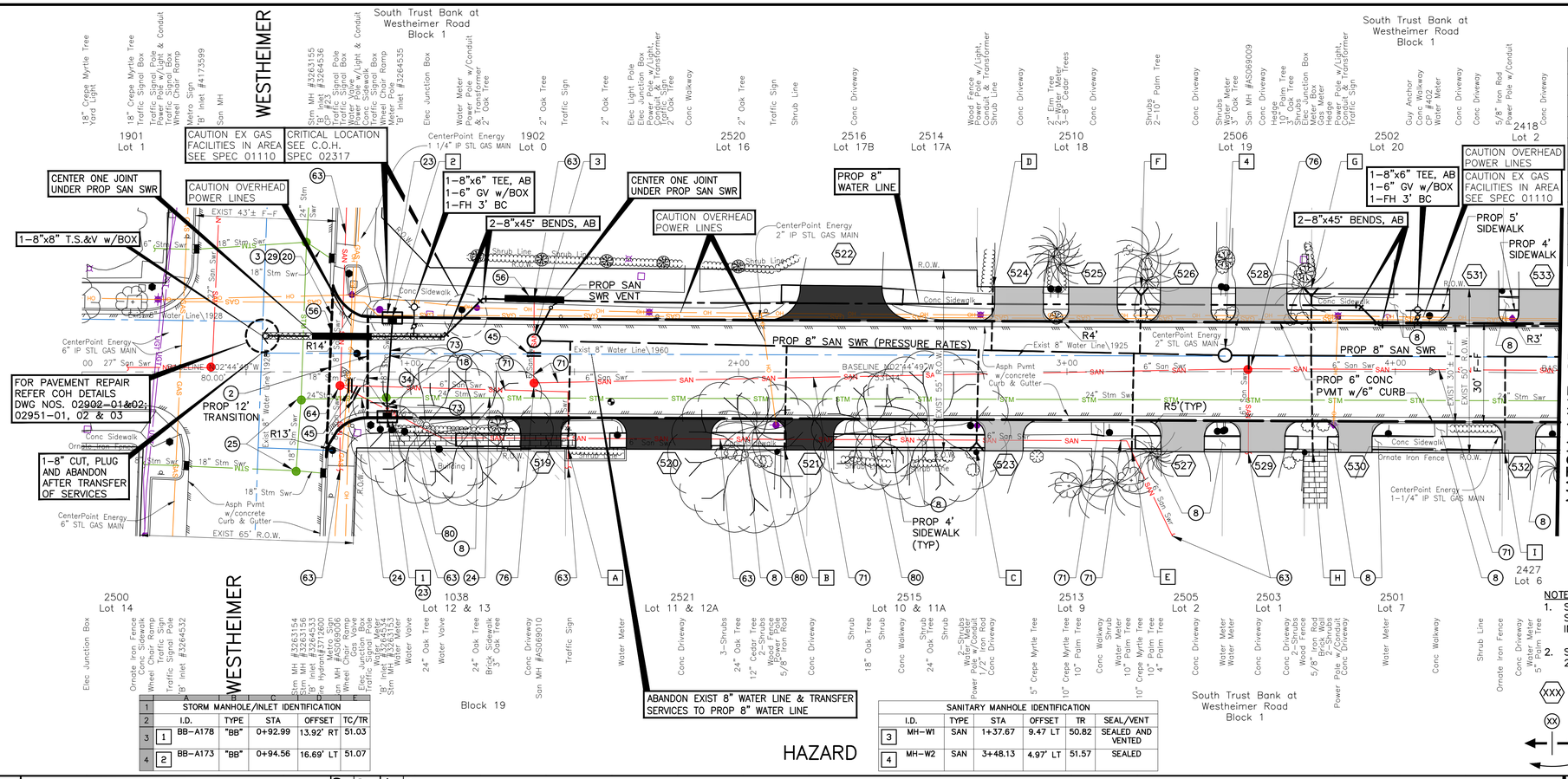


6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+48.06	23.49' RT	48.75	DUCTILE IRON
B	2+13.96	23.81' RT	48.46	
C	2+72.38	24.09' RT	48.27	
D	2+77.47	25.88' LT	48.16	DUCTILE IRON
E	3+19.72	24.32' RT	48.27	
F	3+22.63	25.66' LT	47.98	DUCTILE IRON
G	3+74.45	25.41' LT	47.75	DUCTILE IRON
H	3+74.85	24.59' RT	47.83	
I	4+33.66	24.57' RT	47.48	

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	BB-A178	"BB"	0+92.99	13.92' RT	51.03
2	BB-A173	"BB"	0+94.56	16.69' LT	51.07

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
MH-W1	SAN	1+37.67	9.47 LT	50.82	SEALED AND VENTED
MH-W2	SAN	3+48.13	4.97' LT	51.57	SEALED

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

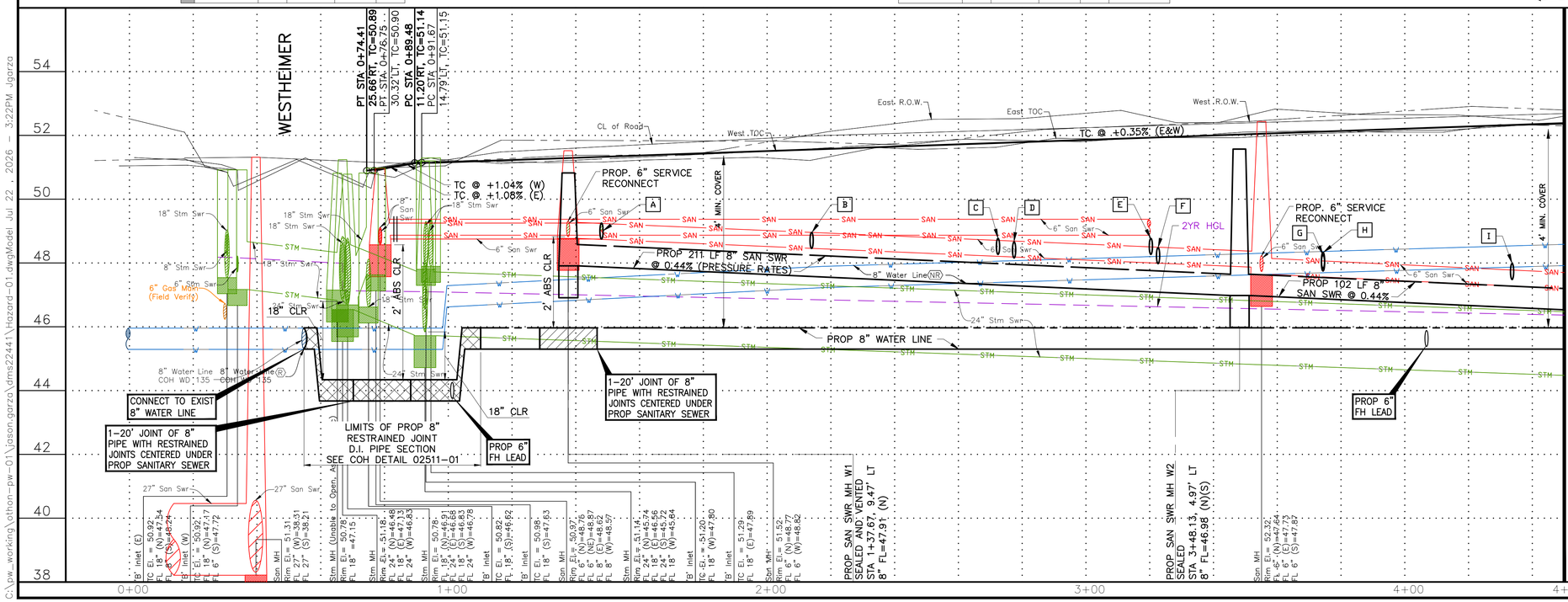
(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

HAZARD



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-23, SET MAG NAIL W/SHINNER AT STA 0+80.00
EL. 51.14

CP-402, SET MAG NAIL AT STA 4+11.14
EL. 52.55

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

HAZARD

STA 0+00 TO STA 4+50

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 157 OF 391	

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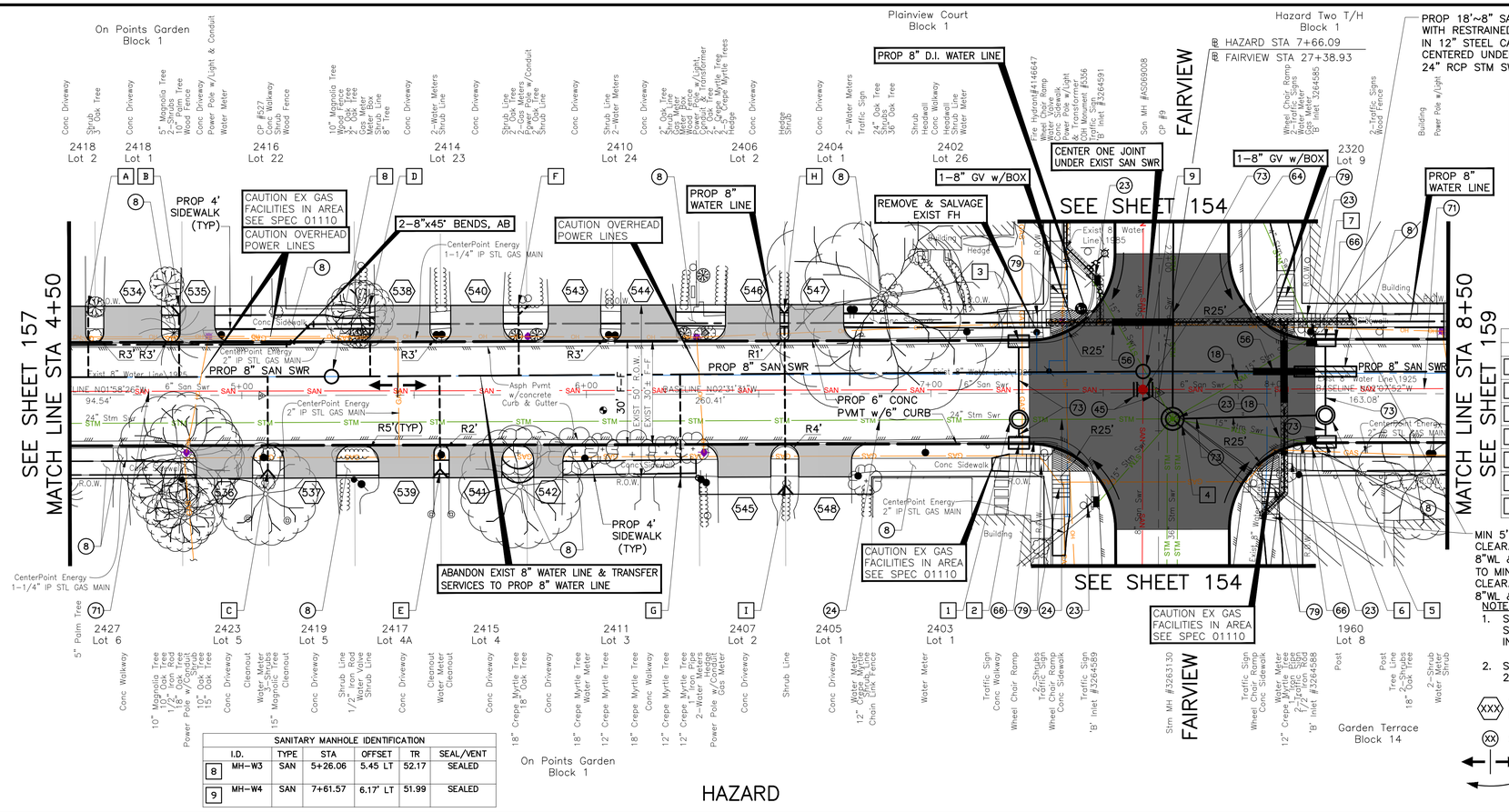
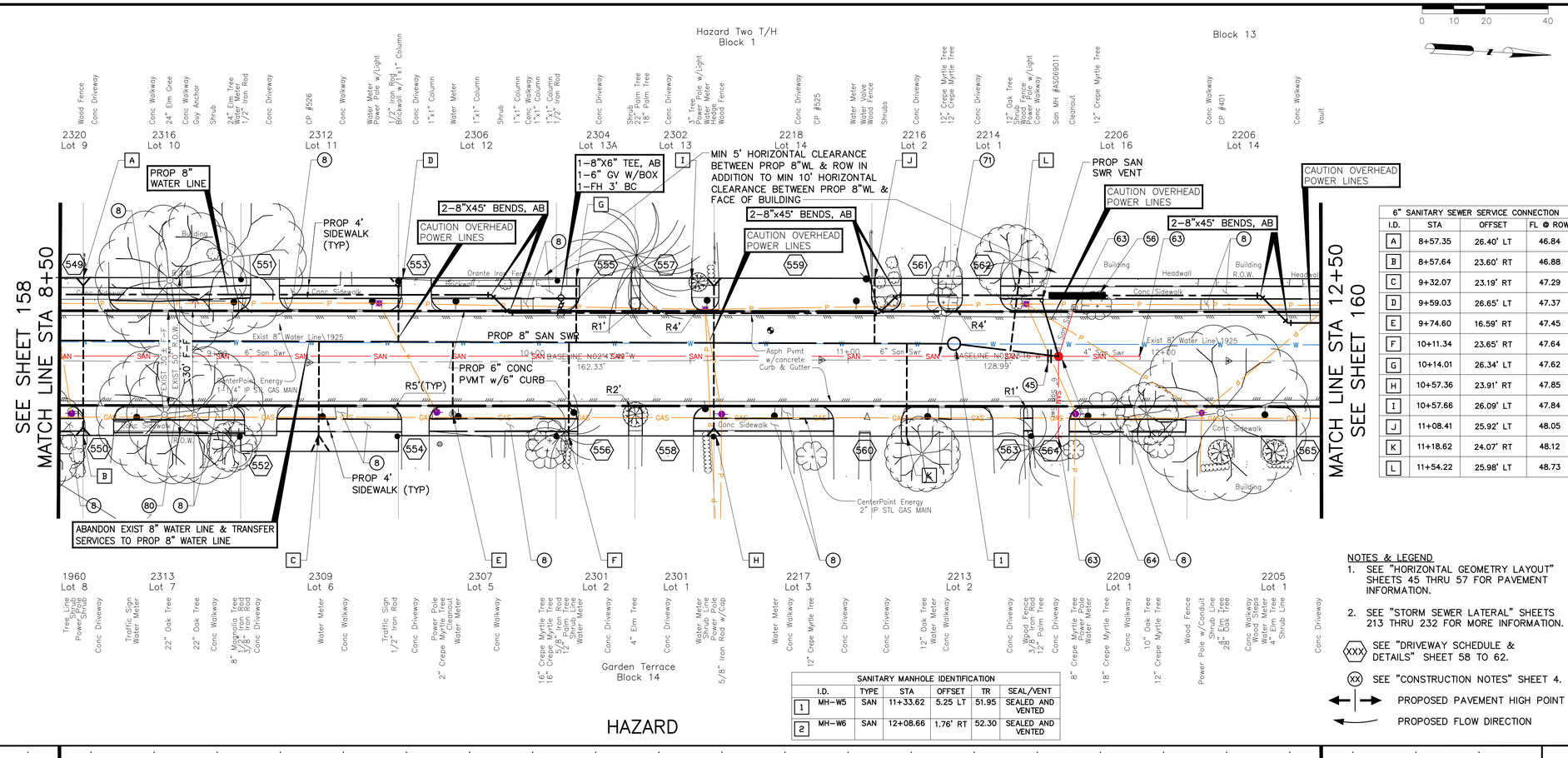

On Points Garden Block 1
Plainview Court Block 1
Hazard Two T/H Block 1
Garden Terrace Block 14
FAIRVIEW
SEE SHEET 157
MATCH LINE STA 4+50
SEE SHEET 159
MATCH LINE STA 8+50
SEE SHEET 154
PROP 8" D.I. WATER LINE
PROP 18'~8" SAN SWR WITH RESTRAINED JOINT IN 12" STEEL CASING CENTERED UNDER PROP 24" RCP STM SWR
HAZARD STA 7+66.09
FAIRVIEW STA 27+38.93
CENTER ONE JOINT UNDER EXIST SAN SWR
1-8" GV w/BOX
PROP 8" WATER LINE
REMOVE & SALVAGE EXIST FH
PROP 4' SIDEWALK (TYP)
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
CAUTION OVERHEAD POWER LINES
2-8"x45° BENDS, AB
PROP 8" SAN SWR
PROP 6" CONC PVMT w/6" CURB
ABANDON EXIST 8" WATER LINE & TRANSFER SERVICES TO PROP 8" WATER LINE
MIN 5' HORIZONTAL CLEARANCE BETWEEN PROP 8"WL & ROW IN ADDITION TO MIN 10' HORIZONTAL CLEARANCE BETWEEN PROP 8"WL & FACE OF BUILDING
NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.
XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
XX SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION
CenterPoint Energy 1-1/4" IP STL GAS MAIN
CenterPoint Energy 2" IP STL GAS MAIN
6" Water Line
8" Water Line
6" San Swr
8" San Swr
24" Stm Swr
Exist 8" Water Line\1585
Exist 8" Water Line\1925
Exist 8" Water Line\1586
Exist 8" Water Line\1587
Exist 8" Water Line\1588
Exist 8" Water Line\1589
Exist 8" Water Line\1590
Exist 8" Water Line\1591
Exist 8" Water Line\1592
Exist 8" Water Line\1593
Exist 8" Water Line\1594
Exist 8" Water Line\1595
Exist 8" Water



6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	8+57.35	26.40' LT	46.84
B	8+57.64	23.60' RT	46.88
C	9+32.07	23.19' RT	47.29
D	9+59.03	26.65' LT	47.37
E	9+74.60	16.59' RT	47.45
F	10+11.34	23.65' RT	47.64
G	10+14.01	26.34' LT	47.62
H	10+57.36	23.91' RT	47.85
I	10+57.66	26.09' LT	47.84
J	11+08.41	25.92' LT	48.05
K	11+18.62	24.07' RT	48.12
L	11+54.22	25.98' LT	48.73

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-W5	SAN	11+33.62	5.25 LT	51.95	SEALED AND VENTED
2	MH-W6	SAN	12+08.66	1.76' RT	52.30	SEALED AND VENTED

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
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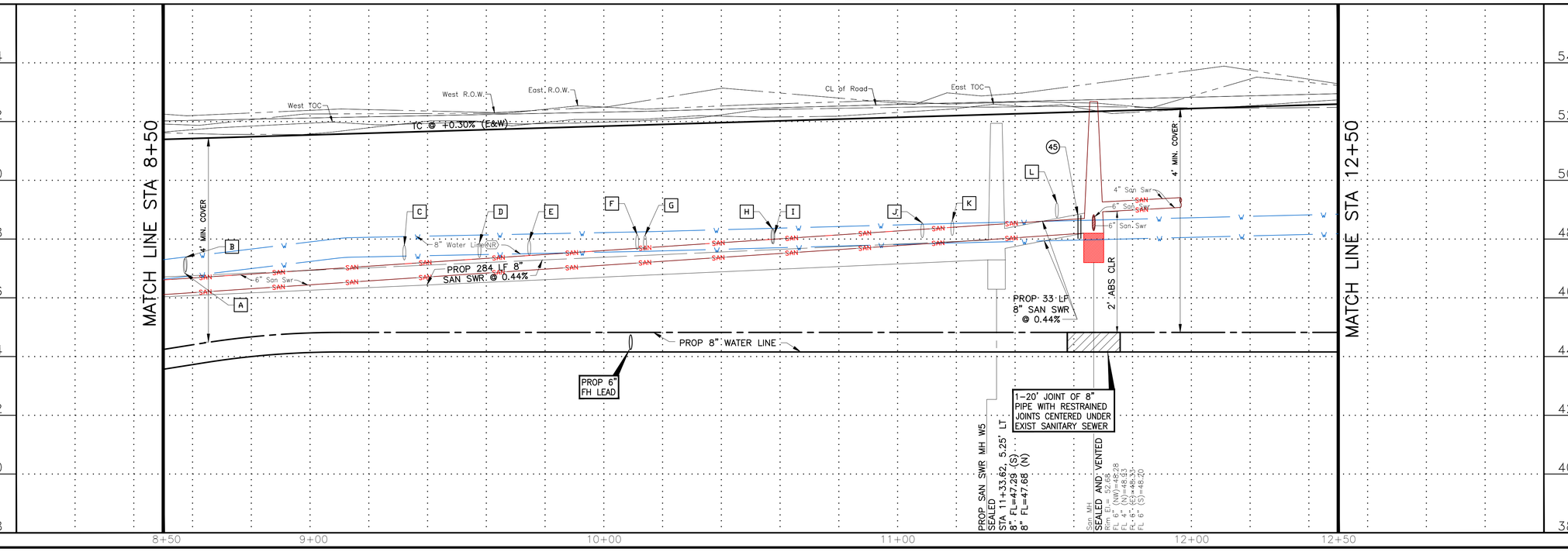
(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-526, SET MAG NAIL AT
STA 9+29.17
EL. 52.22

CP-525, SET MAG NAIL AT
STA 10+91.51
EL. 52.56

CP-401, SET MAG NAIL AT
STA 12+20.50
EL. 52.95

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

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FB No. P-5723

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

HAZARD
STA 8+50 TO STA 12+50

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **159** OF 391	

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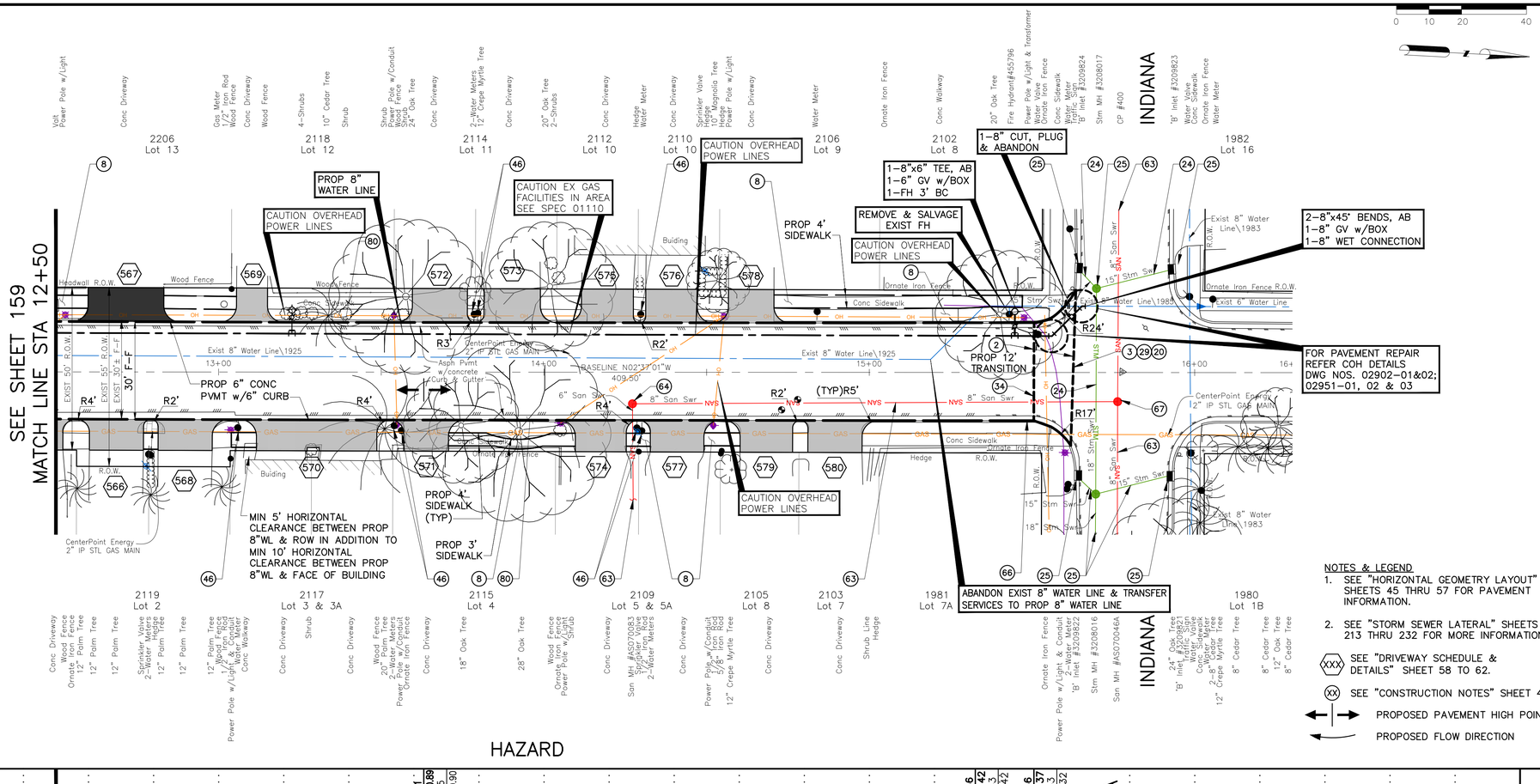

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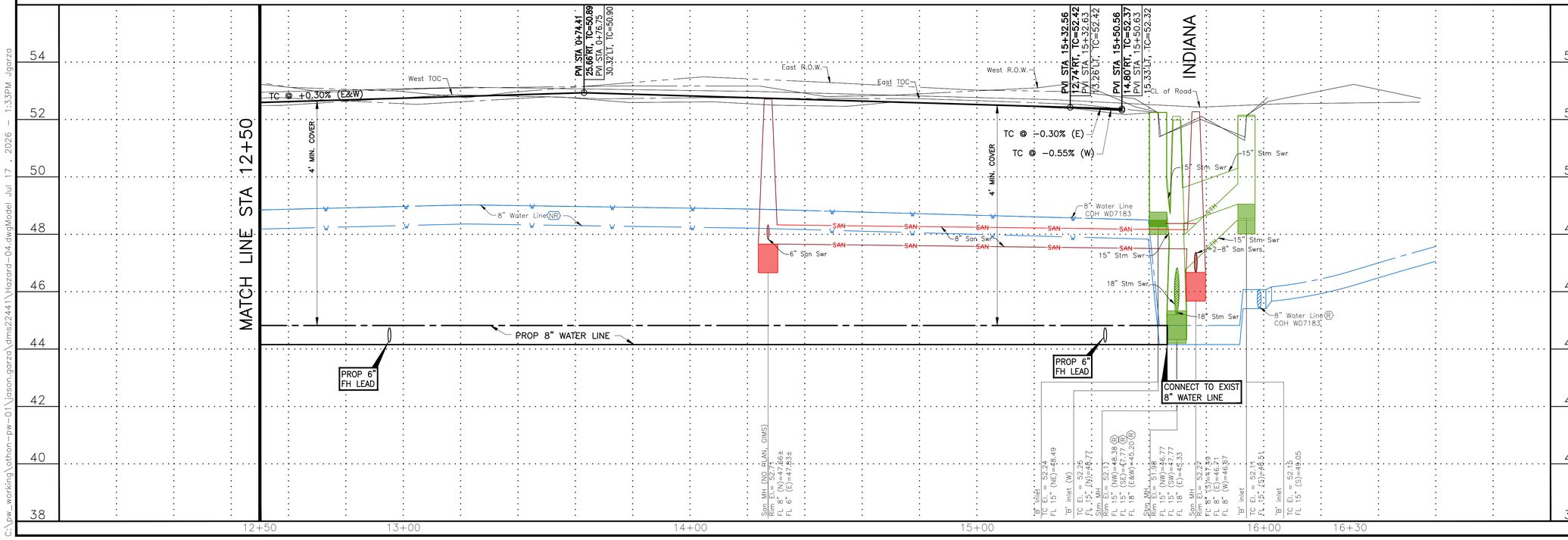
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-400, SET MAG NAIL AT
STA 15+77.70, 0.21' LT
EL. 52.27

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

HAZARD
STA 12+50 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **160** OF 391	

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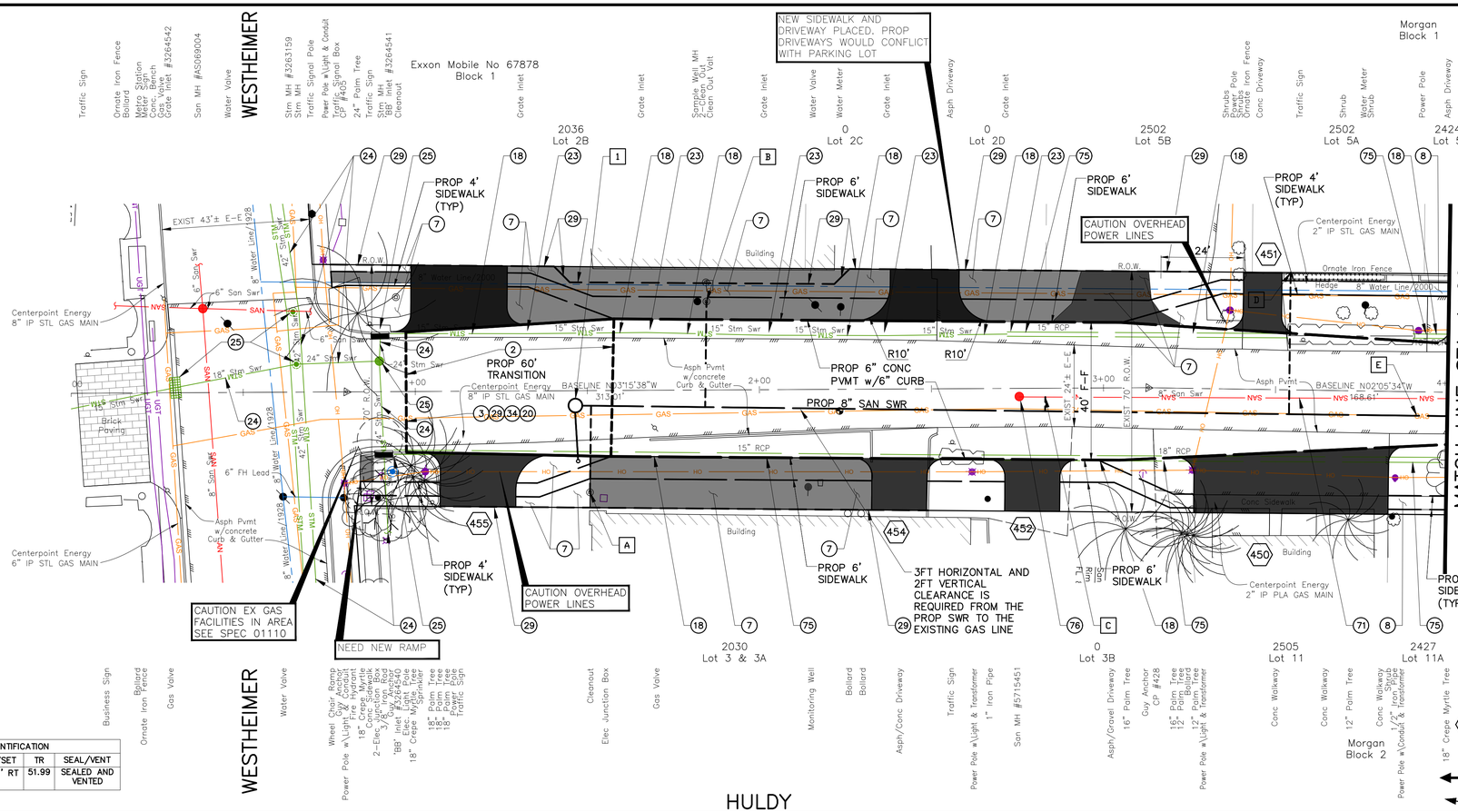

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1 MH-Y1	SAN	1+46.51	4.31' RT	51.99	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+50.62	29.56' RT	47.36	
B	1+84.75	25.75' LT	46.63	DUCTILE IRON
C	2+83.07	02.56' RT	48.00	
D	3+53.88	34.09' LT	46.60	DUCTILE IRON
E	3+91.16	06.96' RT	47.45	

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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TBM:

CP-405, SET MAG NAIL AT
STA 0+80.00
EL. 51.61

CP-428, SET MAG NAIL AT
STA 3+13.01
EL. 53.43

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

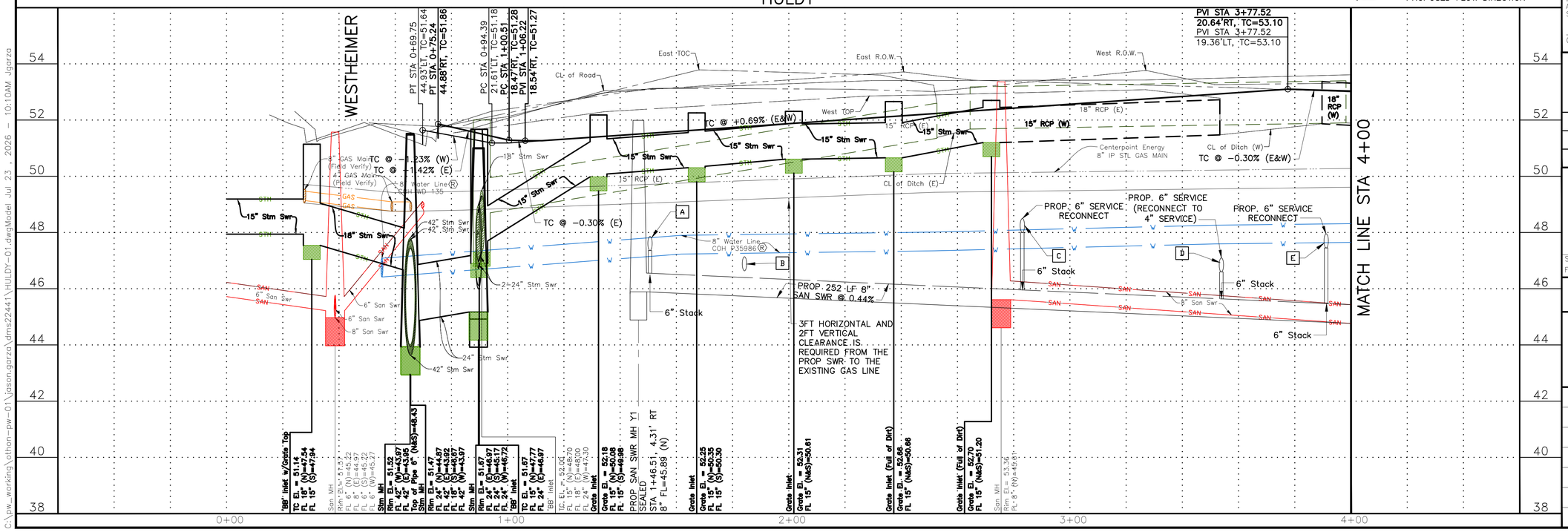
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

HULDY



OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

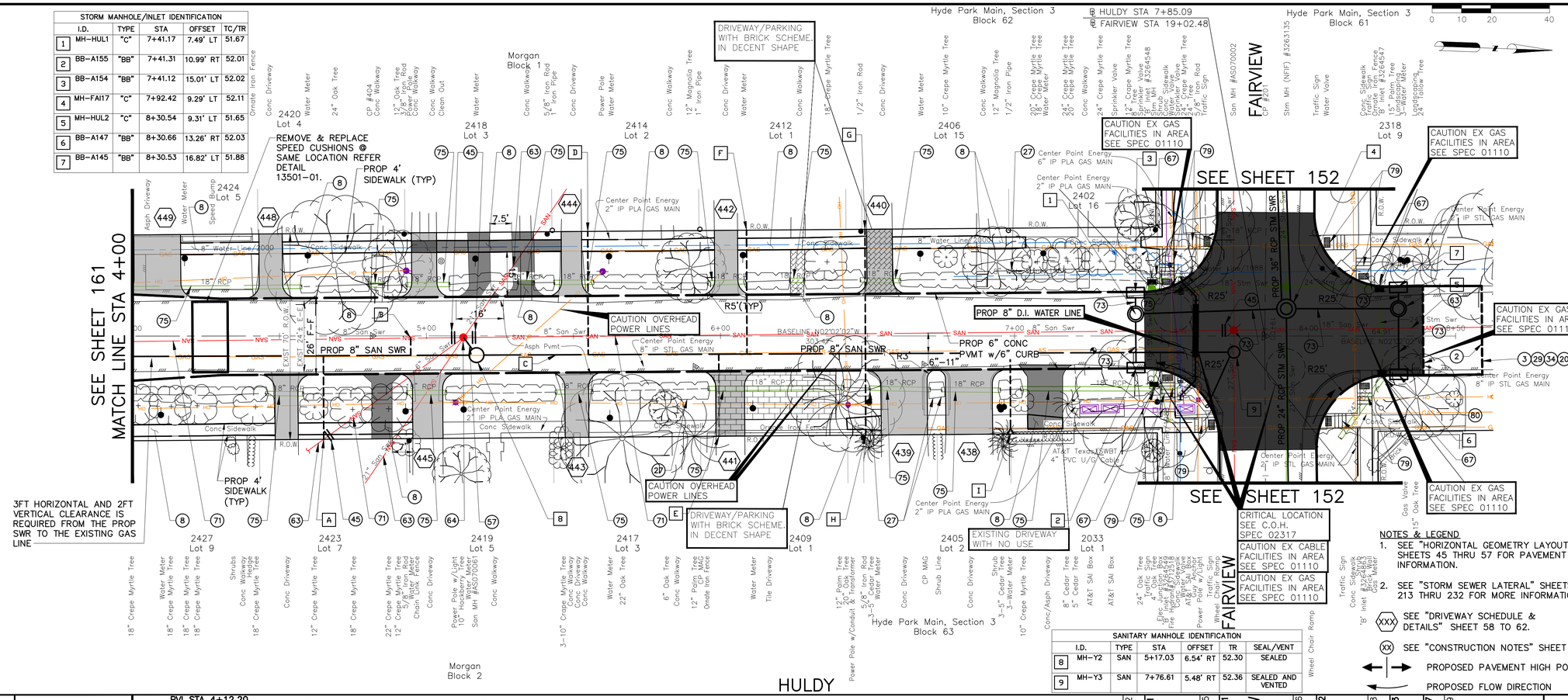
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

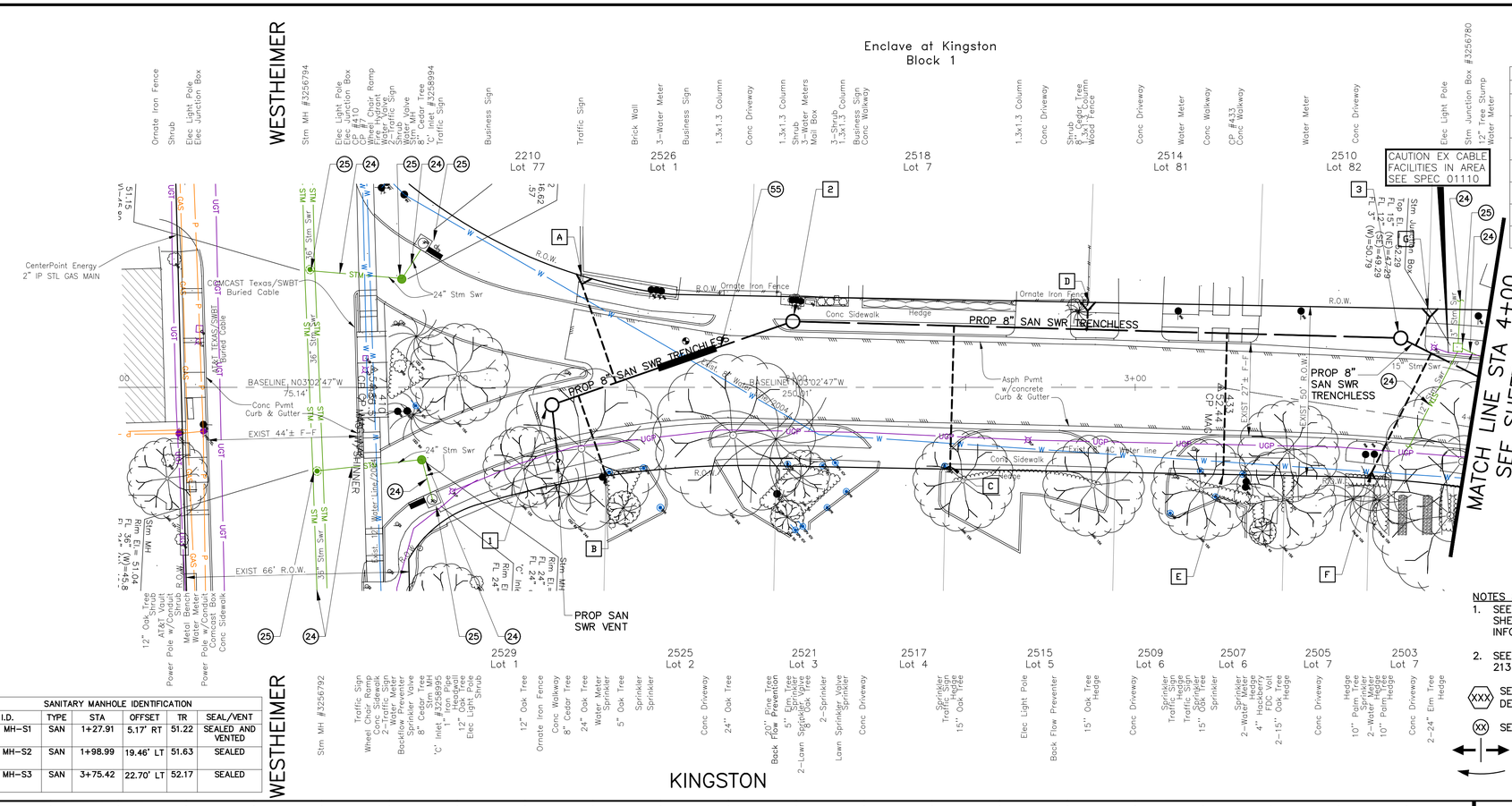
HULDY
STA 0+00 TO STA 4+00

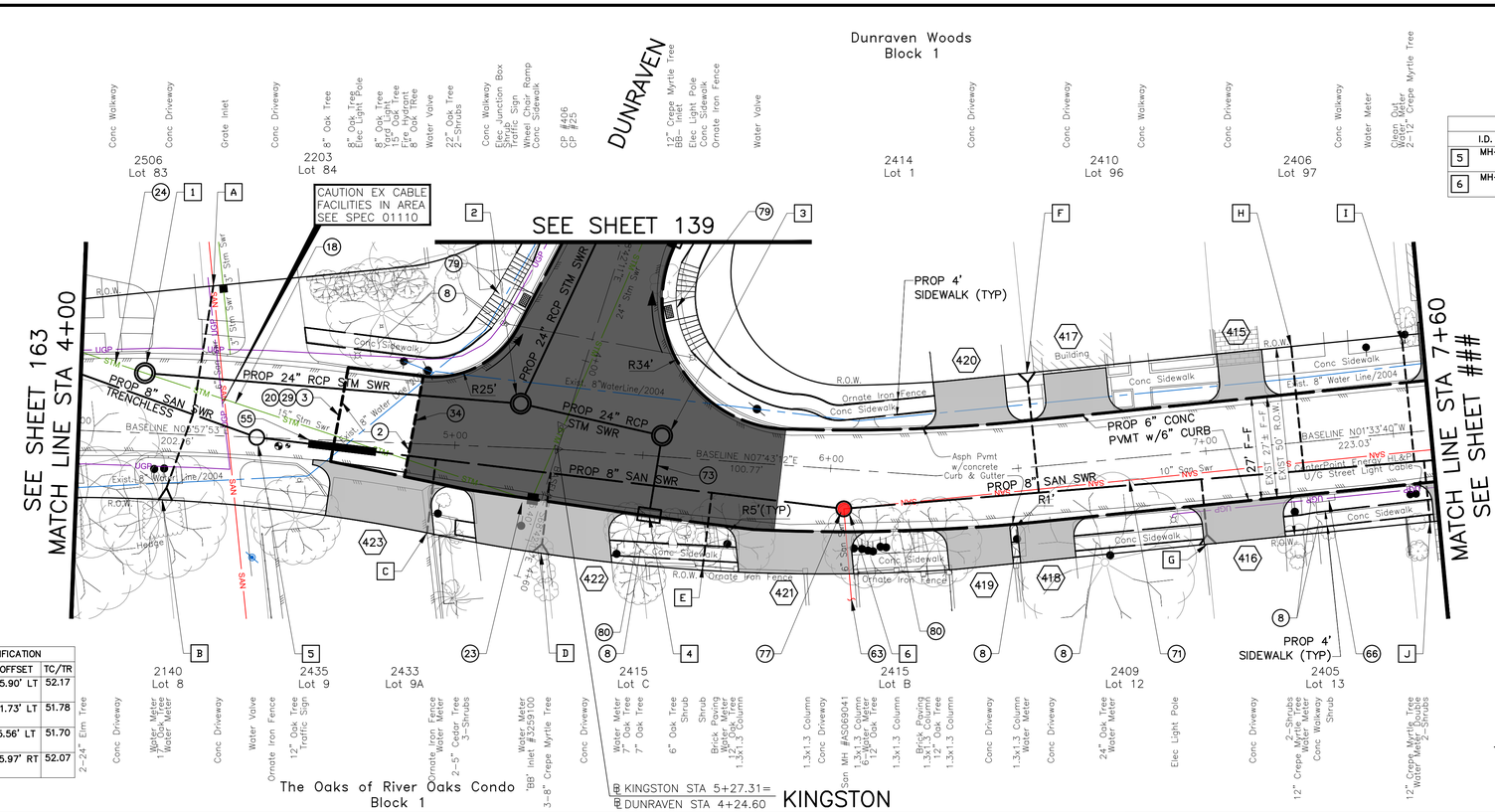
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 161 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\HULDY-01.dwgModel Jul 23, 2026 - 10:10AM Jgarza

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-HUL1	"C"	7+41.17	7.49' LT	51.67
2	BB-A155	"BB"	7+41.31	10.99' RT	52.01
3	BB-A154	"BB"	7+41.12	15.01' LT	52.02
4	MH-FAI17	"C"	7+92.42	9.29' LT	52.11
5	MH-HUL2	"C"	8+30.54	9.31' LT	51.65
6	BB-A147	"BB"	8+30.66	13.26' RT	52.03
7	BB-A145	"BB"	8+30.53	16.82' LT	51.88


Hyde Park Main, Section 3
Block 62
HULDY STA 7+85.09
FAIRVIEW STA 19+02.48
Hyde Park Main, Section 3
Block 61
DRIVEWAY/PARKING WITH BRICK SCHEME IN DECENT SHAPE
Morgan
Block 1
2420 Lot 4
2418 Lot 3
2414 Lot 2
2412 Lot 1
2406 Lot 15
2402 Lot 16
2318 Lot 9
2424 Lot 5
REMOVE & REPLACE SPEED CUSHIONS @ SAME LOCATION REFER DETAIL 13501-01.
PROP 4' SIDEWALK (TYP)
SEE SHEET 161
MATCH LINE STA 4+00
SEE SHEET 152
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
Center Point Energy 6" IP PLA GAS MAIN
Center Point Energy 2" IP PLA GAS MAIN
Center Point Energy 8" IP STL GAS MAIN
CAUTION OVERHEAD POWER LINES
PROP 8" SAN SWR
PROP 8" D.I. WATER LINE
PROP 6" CONC PVMT w/6" CURB
R5' (TYP)
R3'
6"-11"
R25'
26' F-F
EXIST 70' R.O.W.
EXIST 24'± E-E
7.5'
16'
BASELINE N02°02'02"W
30.00'
6+00
7+00
5+00
8+00
8+50
PROP 24" RCP STM SWR
PROP 36" RCP STM SWR
CRITICAL LOCATION SEE C.O.H. SPEC 02317
CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
EXISTING DRIVEWAY WITH NO USE
DRIVEWAY/PARKING WITH BRICK SCHEME IN DECENT SHAPE
3FT HORIZONTAL AND 2FT VERTICAL CLEARANCE IS REQUIRED FROM THE PROP SWR TO THE EXISTING GAS LINE
2427 Lot 9
2423 Lot 7
2419 Lot 5
2417 Lot 3
2409 Lot 1
2405 Lot 2
2033 Lot 1
Hyde Park Main, Section 3
Block 63
Morgan
Block 2
FAIRVIEW
AT&T Texas/SWBT 4" PVC U/G Cable
Asph Driveway
Water Meter
Speed Bump
Conc Sidewalk
Conc Driveway
Conc Walkway
Ornate Iron Fence
Asph Pvmt
Shrub Line
Power Pole
Power Pole w/Light
Power Pole w/Transformer
Power Pole w/Conduit & Transformer
Traffic Sign
Water Valve
Gas Valve
Gas Meter
Sprinkler Valve
Landscaping
Chain Link Fence
Wheel Chair Ramp
Crape Myrtle Tree
Oak Tree
Cedar Tree
Palm Tree
Magnolia Tree
Iron Rod
Iron Pipe
Tilia Tree
Pistache Tree
Elec Junction Box
Elec Pull Box
AT&T SAI Box
Comm Junction Box
Comm Pull Box
Stm MH (NFI) #32635135
San MH #AS070002
San MH #AS070061
CP #404
CP #201
'B' Inlet #3264548
'B' Inlet #3264547
'B' Inlet #3264543
'B' Inlet #3264544
'B' Inlet #3264545
'B' Inlet #3264546
Stm Swr
San Swr
Water Line
Gas Line
Fiber Optic
Overhead Elec
Underground Elec
Underground Comm
Overhead Comm
Fence
Curb
Edge of Pvmt
Top of Bank
Bottom of Bank
Ditch
Flow Line
Inlet
Manhole
Box
Meter
Valve
Sign
Tree
Bush
Shrub
Bollard
Light
Pole
Guy Wire
Anchor
Mailbox
Bench
Trash Can
Fire Hydrant
Sprinkler Head
Landscape Area
Concrete
Asphalt
Brick
Gravel
Grass
Dirt
Rock
Water
Building
Fence
Gate
Wall
Steps
Ramp
Curb Cut
Crosswalk
Stop Bar
Lane Line
Center Line
Edge Line
Arrow
Text
Dimension
Leader
Hatch
Boundary
Easement
Right-of-Way
Property Line
Block
Lot
Subdivision
Survey
Benchmark
Control Point
Monument
Reference
Coordinate
Grid
Scale
North
South
East
West
Northeast
Northwest
Southeast
Southwest
Clockwise
Counterclockwise
Horizontal
Vertical
Diagonal
Parallel
Perpendicular
Tangent
Radius
Arc
Chord
Angle
Degree
Minute
Second
Foot
Inch
Meter
Centimeter
Millimeter
Kilometer
Mile
Yard
Acre
Square Foot
Square Meter
Square Yard
Square Mile
Cubic Foot
Cubic Meter
Cubic Yard
Gallon
Liter
Pound
Kilogram
Ton
Second
Minute
Hour
Day
Week
Month
Year
Century
Millennium
Temperature
Pressure
Velocity
Acceleration
Force
Energy
Power
Frequency
Wavelength
Amplitude
Period
Phase
Voltage
Current
Resistance
Capacitance
Inductance
Impedance
Conductance
Susceptance
Admittance
Reactance
Resonance
Bandwidth
Quality Factor
Damping Ratio
Natural Frequency
Damped Frequency
Critical Damping
Overdamped
Underdamped
Undamped
Step Response
Impulse Response
Frequency Response
Transfer Function
State Space
Controllability
Observability
Stability
Routh-Hurwitz
Nyquist
Bode
Root Locus
PID Controller
Lead Compensator
Lag Compensator
Lead-Lag Compensator
Feedback
Feedforward
Open Loop
Closed Loop
Sensitivity
Robustness
Disturbance Rejection
Noise Rejection
Tracking
Regulation
Servo
Regulator
Observer
Kalman Filter
Luenberger Observer
Separation Principle
Certainty Equivalence
Optimal Control
Linear Quadratic Regulator
Linear Quadratic Gaussian
Model Predictive Control
Dynamic Programming
Bellman Equation
Hamilton-Jacobi-Bellman
Pontryagin Minimum Principle
Calculus of Variations
Euler-Lagrange Equation
Boundary Value Problem
Initial Value Problem
Shooting Method
Finite Difference
Finite Element
Finite Volume
Spectral Method
Collocation
Galerkin
Ritz
Rayleigh-Ritz
Weighted Residual
Method of Lines
Runge-Kutta
Adams-Bashforth
Adams-Moulton
Backward Differentiation Formula
Predictor-Corrector
Multistep
Single Step
Explicit
Implicit
Stiff
Non-stiff
Adaptive
Fixed Step
Variable Step
Error Control
Local Truncation Error
Global Error
Order of Accuracy
Consistency
Convergence
Stability
Lax Equivalence Theorem
Courant-Friedrichs-Lewy
Von Neumann Stability
Matrix Stability
Eigenvalue
Eigenvector
Spectral Radius
Condition Number
Singular Value
Singular Value Decomposition
QR Decomposition
LU Decomposition
Cholesky Decomposition
Gaussian Elimination
Pivoting
Partial Pivoting
Complete Pivoting
Iterative Method
Jacobi
Gauss-Seidel
Successive Over-Relaxation
Conjugate Gradient
Preconditioning
Multigrid
Domain Decomposition
Parallel Computing
Message Passing
Shared Memory
Distributed Memory
GPU Computing
CUDA
OpenMP
MPI
Hybrid Parallel
Load Balancing
Scalability
Strong Scaling
Weak Scaling
Amdahl's Law
Gustafson's Law
Efficiency
Speedup
Wall Clock Time
CPU Time
Profiling
Debugging
Version Control
Git
Repository
Commit
Branch
Merge
Pull Request
Code Review
Continuous Integration
Continuous Deployment
Unit Test
Integration Test
System Test
Regression Test
Test Coverage
Mock
Fixture
Assertion
Exception
Error Handling
Logging
Documentation
Docstring
Comment
Style Guide
Linting
Formatting
Refactoring
Design Pattern
Object-Oriented
Functional
Procedural
Declarative
Imperative
Interpreted
Compiled
Just-In-Time
Ahead-Of-Time
Bytecode
Virtual Machine
Garbage Collection
Memory Management
Pointer
Reference
Value
Type System
Static Typing
Dynamic Typing
Strong Typing
Weak Typing
Duck Typing
Generic
Template
Interface
Abstract Class
Inheritance
Polymorphism
Encapsulation
Abstraction
Composition
Aggregation
Association
Dependency
Coupling
Cohesion
Modularity
Separation of Concerns
Single Responsibility
Open-Closed
Liskov Substitution
Interface Segregation
Dependency Inversion
SOLID
DRY
KISS
YAGNI
Law of Demeter
Tell Don't Ask
Command Query Separation
Idempotent
Pure Function
Side Effect
Referential Transparency
Higher-Order Function
Closure
Currying
Partial Application
Map
Filter
Reduce
Fold
Scan
Zip
Unzip
Flatten
Group By
Sort
Search
Binary Search
Hash Table
Hash Function
Collision
Open Addressing
Chaining
Linear Probing
Quadratic Probing
Double Hashing
Load Factor
Rehashing
Tree
Binary Tree
Binary Search Tree
AVL Tree
Red-Black Tree
B-Tree
B+ Tree
Trie
Suffix Tree
Suffix Array
Heap
Priority Queue
Graph
Directed Graph
Undirected Graph
Weighted Graph
Adjacency List
Adjacency Matrix
Incidence Matrix
Breadth-First Search
Depth-First Search
Dijkstra's Algorithm
Bellman-Ford
Floyd-Warshall
A* Search
Minimum Spanning Tree
Kruskal's Algorithm
Prim's Algorithm
Topological Sort
Strongly Connected Components
Tarjan's Algorithm
Kosaraju's Algorithm
Max Flow
Min Cut
Ford-Fulkerson
Edmonds-Karp
Push-Relabel
Bipartite Matching
Hungarian Algorithm
Traveling Salesman
Vehicle Routing
Knapsack
Bin Packing
Scheduling
Job Shop
Flow Shop
Open Shop
Gantt Chart
Critical Path
PERT
CPM
Resource Leveling
Crashing
Fast Tracking
Earned Value
Schedule Variance
Cost Variance
Performance Index
Estimate at Completion
Estimate to Complete
Variance at Completion
Work Breakdown Structure
Organizational Breakdown Structure
Responsibility Assignment Matrix
RACI
Stakeholder
Communication Plan
Risk Register
Risk Probability
Risk Impact
Risk Matrix
Risk Response
Avoid
Mitigate
Transfer
Accept
Contingency
Management Reserve
Change Control
Configuration Management
Baseline
Scope Creep
Gold Plating
Requirements
Functional Requirement
Non-Functional Requirement
Use Case
User Story
Acceptance Criteria
Definition of Done
Definition of Ready
Backlog
Sprint
Iteration
Release
Increment
Velocity
Burndown Chart
Burnup Chart
Cumulative Flow Diagram
Kanban
Scrum
Daily Standup
Sprint Planning
Sprint Review
Sprint Retrospective
Product Owner
Scrum Master
Development Team
Agile
Waterfall
Hybrid
Lean
Six Sigma
DMAIC
DMADV
Kaizen
Poka-Yoke
Value Stream Mapping
Root Cause Analysis
Fishbone Diagram
5 Whys
Pareto Chart
Histogram
Control Chart
Process Capability
Cp
Cpk
Pp
Ppk
Sigma Level
Defect
Defect Density
Mean Time Between Failures
Mean Time To Repair
Availability
Reliability
Maintainability
Failure Mode and Effects Analysis
Fault Tree Analysis
Event Tree Analysis
Hazard Analysis
Safety Integrity Level
Functional Safety
IEC 61508
ISO 26262
DO-178C
DO-254
ARP4754
ARP4761
MIL-STD-882
Software Assurance
Formal Verification
Model Checking
Theorem Proving
Abstract Interpretation
Static Analysis
Dynamic Analysis
Fuzzing
Penetration Testing
Vulnerability
Buffer Overflow
Stack Overflow
Heap Overflow
Integer Overflow
Format String
SQL Injection
Cross-Site Scripting
Cross-Site Request Forgery
Authentication
Authorization
Encryption
Symmetric Encryption
Asymmetric Encryption
Public Key
Private Key
Certificate
Certificate Authority
Transport Layer Security
Secure Sockets Layer
Hash
Digital Signature
Message Authentication Code
Key Exchange
Diffie-Hellman
Elliptic Curve
RSA
AES
DES
Triple DES
Blowfish
Twofish
Serpent
Camellia
ChaCha20
Poly1305
Galois/Counter Mode
Cipher Block Chaining
Electronic Codebook
Counter Mode
Initialization Vector
Padding
PKCS
X.509
OAuth
OpenID
SAML
JSON Web Token
Kerberos
LDAP
Active Directory
Single Sign-On
Multi-Factor Authentication
Biometric
Smart Card
Hardware Security Module
Trusted Platform Module
Secure Boot
Code Signing
Supply Chain Security
Software Bill of Materials
Dependency Management
Package Manager
Container
Docker
Kubernetes
Orchestration
Microservice
Monolith
Service Mesh
API Gateway
REST
GraphQL
gRPC
WebSocket
HTTP
HTTPS
TCP
UDP
IP
DNS
DHCP
NAT
Firewall
Load Balancer
Reverse Proxy
Content Delivery Network
Edge Computing
Serverless
Function as a Service
Platform as a Service
Infrastructure as a Service
Software as a Service
Cloud Native
Twelve-Factor App
Observability
Metrics
Logs
Traces
Prometheus
Grafana
Elasticsearch
Kibana
Logstash
Fluentd
Jaeger
Zipkin
OpenTelemetry
Service Level Indicator
Service Level Objective
Service Level Agreement
Error Budget
Incident Response
On-Call
Runbook
Postmortem
Blameless
Chaos Engineering
Game Day
Disaster Recovery
Business Continuity
Recovery Point Objective
Recovery Time Objective
Backup
Restore
Snapshot
Replication
Sharding
Partitioning
Consistent Hashing
Quorum
Consensus
Paxos
Raft
Two-Phase Commit
Three-Phase Commit
Saga
Event Sourcing
CQRS
Eventual Consistency
Strong Consistency
CAP Theorem
ACID
BASE
Transaction
Isolation Level
Serializable
Repeatable Read
Read Committed
Read Uncommitted
Deadlock
Lock
Optimistic Locking
Pessimistic Locking
Multi-Version Concurrency Control
Write-Ahead Log
Checkpoint
Recovery
Normalization
Denormalization
Schema
Migration
Index
Clustered Index
Non-Clustered Index
Covering Index
Query Plan
Query Optimizer
Cost Model
Cardinality
Selectivity
Histogram
Statistics
Vacuum
Compaction
Tombstone
Time-To-Live
Key-Value Store
Document Store
Column Store
Graph Database
Time Series Database
Relational Database
NoSQL
NewSQL
Data Warehouse
Data Lake
Data Mart
ETL
ELT
Data Pipeline
Batch Processing
Stream Processing
Apache Kafka
Apache Spark
Apache Flink
Apache Beam
Apache Airflow
Apache Hadoop
Apache Hive
Apache Pig
Apache HBase
Apache Cassandra
Apache Druid
Apache Pinot
Apache Iceberg
Apache Parquet
Apache Avro
Apache ORC
Apache Arrow
Machine Learning
Supervised Learning
Unsupervised Learning
Reinforcement Learning
Deep Learning
Neural Network
Convolutional Neural Network
Recurrent Neural Network
Transformer
Attention
Gradient Descent
Backpropagation
Loss Function
Activation Function
Regularization
Dropout
Batch Normalization
Transfer Learning
Fine-Tuning
Embedding
Tokenization
Natural Language Processing
Computer Vision
Object Detection
Image Segmentation
Generative Model
Diffusion Model
Large Language Model
Prompt Engineering
Retrieval-Augmented Generation
Vector Database
Semantic Search
Recommendation System
Collaborative Filtering
Content-Based Filtering
Matrix Factorization
Cold Start
Exploration-Exploitation
Multi-Armed Bandit
Contextual Bandit
Thompson Sampling
Upper Confidence Bound
Epsilon-Greedy
Reward
Policy
Value Function
Q-Learning
Deep Q-Network
Policy Gradient
Actor-Critic
Proximal Policy Optimization
Trust Region Policy Optimization
Monte Carlo Tree Search
AlphaGo
AlphaZero
Self-Play
Curriculum Learning
Imitation Learning
Inverse Reinforcement Learning
Multi-Agent
Cooperative
Competitive
Mixed-Motive
Nash Equilibrium
Pareto Optimal
Mechanism Design
Auction
Vickrey Auction
First-Price Auction
Second-Price Auction
Combinatorial Auction
Prediction Market
Forecasting
Time Series Forecasting
ARIMA
Exponential Smoothing
Holt-Winters
Prophet
State Space Model
Kalman Filter
Particle Filter
Hidden Markov Model
Viterbi Algorithm
Baum-Welch
Forward-Backward
Conditional Random Field
Sequence Labeling
Named Entity Recognition
Part-of-Speech Tagging
Dependency Parsing
Constituency Parsing
Machine Translation
Sequence-to-Sequence
Attention Mechanism
Beam Search
Greedy Decoding
Sampling
Temperature
Top-k Sampling
Top-p Sampling
Perplexity
BLEU
ROUGE
METEOR
Word Error Rate
Character Error Rate
Speech Recognition
Text-to-Speech
Voice Activity Detection
Speaker Diarization
Speaker Verification
Speaker Identification
Audio Classification
Music Information Retrieval
Optical Character Recognition
Handwriting Recognition
Document Layout Analysis
Table Extraction
Form Understanding
Image Classification
Image Captioning
Visual Question Answering
Video Understanding
Action Recognition
Pose Estimation
Face Detection
Face Recognition
Facial Landmark
Emotion Recognition
Gesture Recognition
Eye Tracking
Augmented Reality
Virtual Reality
Mixed Reality
Simultaneous Localization and Mapping
Visual Odometry
Structure from Motion
Stereo Vision
Depth Estimation
Point Cloud
Mesh
Voxel
Signed Distance Function
Neural Radiance Field
3D Reconstruction
Photogrammetry
LiDAR
Sensor Fusion
Autonomous Vehicle
Advanced Driver Assistance System
Lane Detection
Traffic Sign Recognition
Pedestrian Detection
Collision Avoidance
Adaptive Cruise Control
Parking Assistance
Driver Monitoring
Vehicle-to-Everything
Dedicated Short Range Communications
Cellular V2X
5G
Millimeter Wave
Beamforming
Massive MIMO
Network Slicing
Edge Computing
Multi-Access Edge Computing
Internet of Things
Digital Twin
Smart City
Smart Grid
Smart Meter
Advanced Metering Infrastructure
Demand Response
Time-of-Use Pricing
Renewable Energy
Solar Photovoltaic
Wind Turbine
Battery Storage
Microgrid
Islanding
Power Flow
Optimal Power Flow
Unit Commitment
Economic Dispatch
Load Forecasting
Contingency Analysis
Transient Stability
Voltage Stability
Frequency Stability
Protection Relay
Circuit Breaker
Transformer
Substation
Transmission Line
Distribution Line
Underground Cable
Overhead Line
Conductor
Insulator
Tower
Pole
Right-of-Way
Easement
Permit
Environmental Impact Assessment
Stakeholder Engagement
Public Hearing
Zoning
Land Use
Eminent Domain
Condemnation
Appraisal
Title Search
Survey
Boundary Survey
Topographic Survey
As-Built
Construction Staking
Grading
Excavation
Backfill
Compaction
Proctor Test
Soil Classification
Geotechnical Investigation
Foundation
Shallow Foundation
Deep Foundation
Pile
Caisson
Retaining Wall
Slope Stability
Erosion Control
Sediment Control
Stormwater Management
Detention Pond
Retention Pond
Bioswale
Permeable Pavement
Green Infrastructure
Low Impact Development
Best Management Practice
Total Maximum Daily Load
National Pollutant Discharge Elimination System
Clean Water Act
Safe Drinking Water Act
Resource Conservation and Recovery Act
Comprehensive Environmental Response, Compensation, and Liability Act
Superfund
Brownfield
Hazardous Waste
Solid Waste
Recycling
Composting
Landfill
Incineration
Air Quality
Emission
Greenhouse Gas
Carbon Footprint
Carbon Offset
Carbon Capture
Climate Change
Sea Level Rise
Flood Plain
Flood Insurance
Hurricane
Tornado
Earthquake
Seismic Design
Wind Load
Snow Load
Live Load
Dead Load
Load Combination
Factor of Safety
Allowable Stress
Ultimate Strength
Yield Strength
Modulus of Elasticity
Poisson's Ratio
Shear Modulus
Bulk Modulus
Stress
Strain
Hooke's Law
Beam
Column
Slab
Truss
Frame
Moment
Shear
Deflection
Buckling
Fatigue
Creep
Corrosion
Concrete
Reinforced Concrete
Prestressed Concrete
Steel
Structural Steel
Rebar
Timber
Masonry
Composite
Aluminum
Glass
Asphalt
Pavement
Subgrade
Base Course
Surface Course
Curb
Gutter
Sidewalk
Crosswalk
Traffic Signal
Traffic Sign
Pavement Marking
Lane
Shoulder
Median
Intersection
Roundabout
Interchange
Ramp
Bridge
Culvert
Tunnel
Viaduct
Overpass
Underpass
Toll Road
Parking Lot
Parking Garage
Transit
Bus Rapid Transit
Light Rail
Heavy Rail
Commuter Rail
Subway
Ferry
Airport
Runway
Taxiway
Apron
Terminal
Air Traffic Control
Navigation
Global Positioning System
Inertial Navigation System
Geographic Information System
Coordinate Reference System
Datum
Projection
Universal Transverse Mercator
State Plane
Latitude
Longitude
Elevation
Orthometric Height
Ellipsoidal Height
Geoid
Vertical Datum
Horizontal Datum
North American Datum 1983
World Geodetic System 1984
North American Vertical Datum 1988
National Geodetic Survey
United States Geological Survey
Digital Elevation Model
Digital Terrain Model
Raster
Vector
Shapefile
GeoJSON
KML
GeoTIFF
LiDAR Point Cloud
Orthophoto
Satellite Imagery
Remote Sensing
Multispectral
Hyperspectral
Synthetic Aperture Radar
Normalized Difference Vegetation Index
Land Cover
Land Use Land Cover
Impervious Surface
Watershed
Drainage Basin
Stream Gauge
Discharge
Hydrograph
Rainfall-Runoff
Curve Number
Time of Concentration
Rational Method
Manning's Equation
Hydraulic Grade Line
Energy Grade Line
Open Channel Flow
Pipe Flow
Culvert Hydraulics
Weir
Orifice
Spillway
Reservoir Routing
Muskingum Routing
Unit Hydrograph
Synthetic Storm
Design Storm
Intensity-Duration-Frequency
Probable Maximum Precipitation
Probable Maximum Flood
Dam Safety
Levee
Floodwall
Coastal Engineering
Wave Height
Tide
Storm Surge
Littoral Drift
Jetty
Breakwater
Seawall
Revetment
Beach Nourishment
Dredging
Navigation Channel
Port
Harbor
Marina
Offshore Platform
Subsea Pipeline
Riser
Blowout Preventer
Drilling Rig
Wellbore
Casing
Cementing
Mud Logging
Well Log
Reservoir
Porosity
Permeability
Saturation
Hydrocarbon
Crude Oil
Natural Gas
Liquefied Natural Gas
Refinery
Petrochemical
Pipeline
Compressor Station
Pump Station
Custody Transfer
Metering
Flow Meter
Pressure Transmitter
Temperature Transmitter
Level Transmitter
Control Valve
Safety Valve
Relief Valve
Pressure Vessel
Heat Exchanger
Distillation Column
Reactor
Separator
Boiler
Steam Turbine
Gas Turbine
Combined Cycle
Cogeneration
Process Flow Diagram
Piping and Instrumentation Diagram
Process Control
Distributed Control System
Programmable Logic Controller
Supervisory Control and Data Acquisition
Human-Machine Interface
Alarm Management
Safety Instrumented System
Hazard and Operability Study
Layer of Protection Analysis
Quantitative Risk Assessment
Consequence Analysis
Dispersion Modeling
Fire and Explosion
Blast Wave
Thermal Radiation
Toxic Release
Emergency Response
Incident Command System
Evacuation
Shelter in Place
Personal Protective Equipment
Self-Contained Breathing Apparatus
Confined Space
Lockout Tagout
Permit to Work
Job Safety Analysis
Toolbox Talk
Near Miss
Lost Time Injury
Total Recordable Incident Rate
Occupational Safety and Health Administration
National Fire Protection Association
American Petroleum Institute
American Society of Mechanical Engineers
American Society for Testing and Materials
International Organization for Standardization
International Electrotechnical Commission
Institute of Electrical and Electronics Engineers
Association for Computing Machinery
American Society of Civil Engineers
American Concrete Institute
American Institute of Steel Construction
American Welding Society
American National Standards Institute
National Institute of Standards and Technology
National Aeronautics and Space Administration
European Space Agency
Global Navigation Satellite System
GPS
GLONASS
Galileo
BeiDou
Quasi-Zenith Satellite System
Satellite Constellation
Orbit
Geostationary Orbit
Low Earth Orbit
Medium Earth Orbit
Polar Orbit
Sun-Synchronous Orbit
Ground Station
Telemetry
Telecommand
Attitude Control
Reaction Wheel
Star Tracker
Solar Panel
Battery
Thermal Control
Radiation Hardening
Single Event Upset
Total Ionizing Dose
Displacement Damage
Launch Vehicle
Payload
Mission Control
Spacecraft
Satellite
Probe
Lander
Rover
Crewed Mission
Uncrewed Mission
Space Station
International Space Station
Extravehicular Activity
Life Support
Environmental Control
Spacesuit
Microgravity
Zero Gravity
Reentry
Heat Shield
Parachute
Splashdown
Recovery
Artemis
Apollo
Gemini
Mercury
Space Shuttle
Commercial Crew
Commercial Cargo
Private Spaceflight
Suborbital
Orbital
Lunar
Mars
Asteroid
Comet
Kuiper Belt
Oort Cloud
Interplanetary
Interstellar
Heliosphere
Solar Wind
Coronal Mass Ejection
Solar Flare
Sunspot
Solar Cycle
Space Weather
Magnetosphere
Ionosphere
Thermosphere
Mesosphere
Stratosphere
Troposphere
Atmosphere
Exosphere
Van Allen Belt
Aurora
Meteor
Meteorite
Micrometeoroid
Orbital Debris
Kessler Syndrome
Space Situational Awareness
Conjunction Assessment
Collision Avoidance Maneuver
Graveyard Orbit
Deorbit
Active Debris Removal
Space Traffic Management
Space Law
Outer Space Treaty
Liability Convention
Registration Convention
Moon Agreement
Artemis Accords
Space Resources
In-Situ Resource Utilization
Lunar Regolith
Water Ice
Helium-3
Rare Earth Elements
Asteroid Mining
Space Tourism
Space Habitat
Generation Ship
Interstellar Travel
Breakthrough Propulsion
Solar Sail
Ion Propulsion
Nuclear Thermal Propulsion
Nuclear Electric Propulsion
Fusion Propulsion
Antimatter Propulsion
Warp Drive
Wormhole
Alcubierre Drive
Negative Energy
Exotic Matter
Casimir Effect
Quantum Vacuum
Zero-Point Energy
Dark Energy
Dark Matter
Cosmological Constant
Hubble Constant
Redshift
Blueshift
Doppler Effect
Gravitational Lensing
Gravitational Wave
Black Hole
Event Horizon
Singularity
Hawking Radiation
Penrose Process
Ergosphere
Accretion Disk
Quasar
Active Galactic Nucleus
Supermassive Black Hole
Stellar Black Hole
Neutron Star
Pulsar
Magnetar
White Dwarf
Supernova
Nebula
Star Formation
Main Sequence
Red Giant
Blue Giant
Hypergiant
Brown Dwarf
Exoplanet
Habitable Zone
Biosignature
Technosignature
Fermi Paradox
Drake Equation
Search for Extraterrestrial Intelligence
Astrobiology
Extremophile
Panspermia
Abiogenesis
Primordial Soup
Miller-Urey Experiment
RNA World
Last Universal Common Ancestor
Endosymbiosis
Mitochondria
Chloroplast
Photosynthesis
Cellular Respiration
Krebs Cycle
Electron Transport Chain
Glycolysis
Fermentation
Anaerobic
Aerobic
Metabolism
Catabolism
Anabolism
Enzyme
Substrate
Active Site
Allosteric Regulation
Competitive Inhibition
Noncompetitive Inhibition
Michaelis-Menten
Lineweaver-Burk
Turnover Number
Catalytic Efficiency
Cofactor
Coenzyme
Vitamin
Mineral
Electrolyte
Osmosis
Diffusion
Active Transport
Facilitated Diffusion
Membrane Potential
Action Potential
Resting Potential
Depolarization
Repolarization
Hyperpolarization
Refractory Period
Synapse
Neurotransmitter
Receptor
Agonist
Antagonist
Second Messenger
G-Protein Coupled Receptor
Ion Channel
Voltage-Gated
Ligand-Gated
Mechanically-Gated
Sodium-Potassium Pump
Calcium Signaling
Cell Cycle
Mitosis
Meiosis
Prophase
Metaphase
Anaphase
Telophase
Cytokinesis
Interphase
G1 Phase
S Phase
G2 Phase
Checkpoint
Cyclin
Cyclin-Dependent Kinase
Tumor Suppressor
Oncogene
Apoptosis
Necrosis
Autophagy
Senescence
Telomere
Telomerase
Stem Cell
Pluripotent
Multipotent
Induced Pluripotent Stem Cell
Differentiation
Dedifferentiation
Transdifferentiation
Tissue Engineering
Scaffold
Bioreactor
Organoid
Microfluidics
Lab-on-a-Chip
Point-of-Care
Biosensor
Electrochemical Sensor
Optical Sensor
Piezoelectric Sensor
Surface Plasmon Resonance
Enzyme-Linked Immunosorbent Assay
Polymerase Chain Reaction
Quantitative PCR
Reverse Transcription PCR
Loop-Mediated Isothermal Amplification
Gel Electrophoresis
Capillary Electrophoresis
Western Blot
Southern Blot
Northern Blot
Immunohistochemistry
Flow Cytometry
Fluorescence-Activated Cell Sorting
Magnetic-Activated Cell Sorting
Mass Spectrometry
Matrix-Assisted Laser Desorption/Ionization
Electrospray Ionization
Time-of-Flight
Quadrupole
Ion Trap
Orbitrap
Fourier Transform Ion Cyclone Resonance
Tandem Mass Spectrometry
Liquid Chromatography
High-Performance Liquid Chromatography
Ultra-Performance Liquid Chromatography
Gas Chromatography
Size-Exclusion Chromatography
Ion-Exchange Chromatography
Affinity Chromatography
Reversed-Phase Chromatography
Normal-Phase Chromatography
Hydrophilic Interaction Chromatography
Supercritical Fluid Chromatography
Nuclear Magnetic Resonance
Proton NMR
Carbon-13 NMR
Two-Dimensional NMR
Nuclear Overhauser Effect
Chemical Shift
Coupling Constant
Relaxation
T1 Relaxation
T2 Relaxation
Magnetic Resonance Imaging
Functional MRI
Diffusion Tensor Imaging
Magnetic Resonance Spectroscopy
Computed Tomography
Positron Emission Tomography
Single-Photon Emission Computed Tomography
Ultrasound
Doppler Ultrasound
Elastography
Photoacoustic Imaging
Optical Coherence Tomography
Confocal Microscopy
Two-Photon Microscopy
Light Sheet Microscopy
Super-Resolution Microscopy
Stimulated Emission Depletion
Stochastic Optical Reconstruction Microscopy
Photoactivated Localization Microscopy
Fluorescence Resonance Energy Transfer
Fluorescence Recovery After Photobleaching
Förster Resonance Energy Transfer
Bioluminescence
Chemiluminescence
Electrochemiluminescence
Quantum Dot
Fluorophore
Green Fluorescent Protein
Optogenetics
Chemogenetics
Designer Receptors Exclusively Activated by Designer Drugs
Clustered Regularly Interspaced Short Palindromic Repeats
CRISPR-Cas9
Base Editing
Prime Editing
Gene Therapy
Viral Vector
Adeno-Associated Virus
Lentivirus
Retrovirus
Adenovirus
Herpes Simplex Virus
Oncolytic Virus
Vaccine
Messenger RNA Vaccine
Lipid Nanoparticle
Antibody
Monoclonal Antibody
Polyclonal Antibody
Antibody-Drug Conjugate
Bispecific Antibody
Nanobody
Aptamer
Peptide
Protein Engineering
Directed Evolution
Phage Display
Yeast Display
Ribosome Display
Combinatorial Library
High-Throughput Screening
Hit-to-Lead
Lead Optimization
Structure-Activity Relationship
Quantitative Structure-Activity Relationship
Pharmacophore
Molecular Docking
Molecular Dynamics
Free Energy Perturbation
Thermodynamic Integration
Umbrella Sampling
Metadynamics
Coarse-Grained Model
All-Atom Model
Force Field
Amber
CHARMM
OPLS
GROMOS
Implicit Solvent
Explicit Solvent
Periodic Boundary Condition
Particle Mesh Ewald
Verlet Integration
Leap-Frog Integration
Velocity Verlet
Nose-Hoover Thermostat
Berendsen Thermostat
Langevin Thermostat
Andersen Thermostat
Parrinello-Rahman Barostat
Berendsen Barostat
Monte Carlo Simulation
Metropolis Criterion
Gibbs Sampling
Markov Chain Monte Carlo
Hamiltonian Monte Carlo
No-U-Turn Sampler
Variational Inference
Evidence Lower Bound
Mean-Field Approximation
Expectation-Maximization
Maximum Likelihood Estimation
Maximum A Posteriori
Bayesian Inference
Prior Distribution
Posterior Distribution
Likelihood Function
Conjugate Prior
Bayes Factor
Model Selection
Akaike Information Criterion
Bayesian Information Criterion
Cross-Validation
Leave-One-Out Cross-Validation
K-Fold Cross-Validation
Bootstrap
Jackknife
Permutation Test
Hypothesis Testing
Null Hypothesis
Alternative Hypothesis
p-Value
Significance Level
Type I Error
Type II Error
Power
Effect Size
Confidence Interval
Credible Interval
Prediction Interval
Tolerance Interval
Analysis of Variance
Multivariate Analysis of Variance
Repeated Measures
Mixed Effects Model
Generalized Linear Model
Logistic Regression
Poisson Regression
Negative Binomial Regression
Survival Analysis
Kaplan-Meier Estimator
Cox Proportional Hazards
Log-Rank Test
Censoring
Hazard Function
Survival Function
Competing Risks
Frailty Model
Accelerated Failure Time
Parametric Survival Model
Nonparametric Survival Model
Semiparametric Survival Model
Time-Dependent Covariate
Landmark Analysis
Joint Model
Longitudinal Data
Panel Data
Fixed Effects
Random Effects
Hausman Test
Breusch-Pagan Test
Durbin-Watson Statistic
Autocorrelation
Partial Autocorrelation
Cross-Correlation
Granger Causality
Vector Autoregression
Cointegration
Error Correction Model
Unit Root Test
Augmented Dickey-Fuller
Phillips-Perron
KPSS Test
Structural Break
Chow Test
Quandt Likelihood Ratio
Regime Switching
Threshold Autoregression
Smooth Transition Autoregression
Markov Switching
Volatility
ARCH
GARCH
EGARCH
GJR-GARCH
Stochastic Volatility
Realized Volatility
Implied Volatility
Volatility Smile
Volatility Surface
Option Pricing
Black-Scholes
Binomial Option Pricing
Monte Carlo Option Pricing
Finite Difference Option Pricing
American Option
European Option
Asian Option
Barrier Option
Lookback Option
Digital Option
Exotic Option
Greeks
Delta
Gamma
Vega
Theta
Rho
Vanna
Volga
Charm
Speed
Color
Ultima
Zomma
Hedging
Delta Hedging
Gamma Hedging
Vega Hedging
Dynamic Hedging
Static Hedging
Portfolio Optimization
Mean-Variance Optimization
Efficient Frontier
Capital Asset Pricing Model
Arbitrage Pricing Theory
Fama-French Three-Factor Model
Carhart Four-Factor Model
Factor Investing
Smart Beta
Risk Parity
Minimum Variance
Maximum Diversification
Equal Weight
Black-Litterman
Kelly Criterion
Sharpe Ratio
Sortino Ratio
Information Ratio
Treynor Ratio
Jensen's Alpha
Tracking Error
Active Share
Value at Risk
Conditional Value at Risk
Expected Shortfall
Stress Testing
Scenario Analysis
Backtesting
Walk-Forward Analysis
Out-of-Sample Testing
Overfitting
Underfitting
Bias-Variance Tradeoff
Regularization
L1 Regularization
L2 Regularization
Elastic Net
Lasso
Ridge Regression
Early Stopping
Dropout
Data Augmentation
Ensemble Method
Bagging
Boosting
Random Forest
Gradient Boosting
XGBoost
LightGBM
CatBoost
AdaBoost
Stacking
Blending
Model Interpretability
Feature Importance
Permutation Importance
Partial Dependence Plot
Individual Conditional Expectation
SHAP
LIME
Counterfactual Explanation
Anchors
Saliency Map
Grad-CAM
Integrated Gradients
Attention Visualization
Model Card
Datasheet for Datasets
Fairness
Demographic Parity
Equalized Odds
Equal Opportunity
Calibration
Disparate Impact
Adversarial Debiasing
Reweighing
Prejudice Remover
Differential Privacy
Federated Learning
Secure Multi-Party Computation
Homomor


Enclave at Kingston
Block 1
WESTHEIMER
KINGSTON
Stm MH #3256794
Elec Light Pole
Elec Junction Box
CP #410
Ornate Iron Fence
Shrub
Wheel Chair Ramp
Conc Sidewalk
Traffic Sign
Water Meter
Water Hydrant
Water Valve
31" Cedar Tree
"C" Inlet #3258994
Business Sign
Brick Wall
3-Water Meter
1.3x1.3 Column
Conc Driveway
3-Water Meters
Main Box
3-Shrub
Conc Walkway
Wood Fence
Shrub Cedar Tree
Stm Junction Box #3256780
12" Tree Stump
2210 Lot 77
2526 Lot 1
2518 Lot 7
2514 Lot 81
2510 Lot 82
2529 Lot 1
2525 Lot 2
2521 Lot 3
2517 Lot 4
2515 Lot 5
2509 Lot 6
2507 Lot 6
2505 Lot 7
2503 Lot 7
CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110
CenterPoint Energy 2" IP STL GAS MAIN
COMCAST Texas/SWBT Buried Cable
AT&T TEXAS/SWBT Buried Cable
BASELINE, N03°02'47"W 75.14'
BASELINE, N03°02'47"W 250.01'
Conc Pvmt Curb & Gutter
EXIST 44'± F-F
EXIST 66' R.O.W.
24" Stm Swr
36" Stm Swr
3-36" Stm Swr
2-24" Stm Swr
15" Stm Swr
Stm MH Rim El=51.04 FL 36" (W)=45.58
Stm MH Rim El=50.96 FL 36" (W)=46.06 FL 24" (N)=46.76 FL 36" (E)=46.16
Stm MH Rim El=50.53 FL 24" (N)=45.63 FL 24" (S)=45.53
"C" Inlet Rim El=50.69 FL 24" (SW)=46.99
Stm MH Rim El=50.24 FL 24" (N)=45.74 FL 24" (S)=45.64
PROP 8" SAN SWR TRENCHLESS
PROP SAN SWR VENT
Asph Pvmt w/concrete Curb & Gutter
Existing AC Water line
PROP 8" SAN SWR TRENCHLESS
EXIST 27'± F-F
EXIST 46' R.O.W.
CP #433
MATCH LINE STA 4+00 SEE SHEET 164
R.O.W.
Ornate Iron Fence
Hedge
Conc Sidewalk
Conc Walkway
Water Meter
Conc Driveway
Elec Light Pole
Stm Junction Box
Water Meter
Shrub
Tree
Sign
Ramp
Bench
Fence
Sprinkler
Valve
Meter
Hedge
Pole
Volt
Box
Trash Can
Mailbox
Flag Pole
Planter
Pipe
Headwall
Inlet
Oak Tree
Pine Tree
Elm Tree
Palm Tree
Hackberry
Crape Myrtle
Yaupon
Holly
Juniper
Bush
Lawn Sprinkler
Back Flow Preventer
FDC Volt
Elec Box
Elec Pedestal
Elec Transformer
Gas Meter
Gas Valve
Gas Box
Gas Pedestal
Gas Marker
Telephone Pedestal
Telephone Box
Telephone Manhole
Telephone Marker
Cable TV Box
Cable TV Pedestal
Cable TV Marker
Cable TV Manhole
Fiber Optic Box
Fiber Optic Marker
Fiber Optic Manhole
Communication Box
Communication Pedestal
Communication Marker
Communication Manhole
Irrigation Valve
Irrigation Box
Irrigation Marker
Irrigation Manhole
Irrigation Pedestal



STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH	"C"	4+17.00	15.90' LT	52.17
2	MH-DUN4	"C"	5+17.04	11.73' LT	51.78
3	MH-DUN5	"C"	5+54.72	5.56' LT	51.70
4	BB-A138	"B"	5+52.78	15.97' RT	52.07

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-S4	SAN	4+47.34	0.01' LT	52.26	SEALED
6	MH-S5	SAN	6+04.23	10.45' RT	52.09	SEALED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	4+22.92	17.53' RT	43.43	DUCTILE IRON
B	4+26.23	40.54' LT	45.75	DUCTILE IRON
C	4+42.30	18.14' RT	46.27	
D	4+93.52	23.53' RT	46.34	
E	5+67.95	28.26' RT	46.52	
F	6+54.56	25.00' LT	46.84	DUCTILE IRON
G	6+98.05	24.66' RT	45.75	
H	7+25.14	25.56' LT	43.57	DUCTILE IRON
I	7+54.63	24.08' LT	47.29	DUCTILE IRON
J	7+57.58	24.18' RT	45.96	

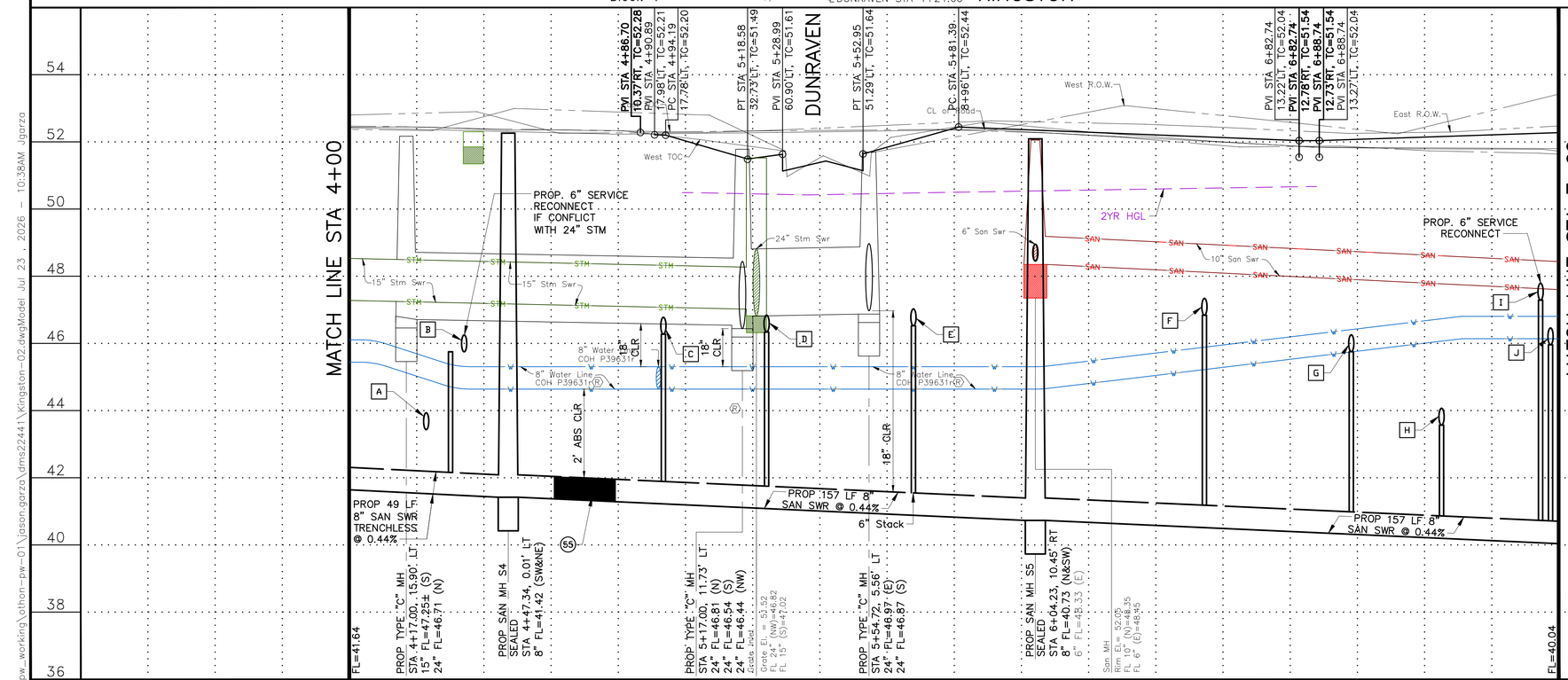
NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-406, SET MAG NAIL AT
STA 5+27.31
EL. 52.28

CP-25, SET MAG NAIL W/SHINER AT
STA 5+27.90, 5.95' LT
EL. 52.29

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

KINGSTON
STA 4+00 TO STA 7+60

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **164** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Kingston-02.dwgModel Jul 23, 2026 - 10:36AM Jgarza

0 10 20 40

BENCHMARK:

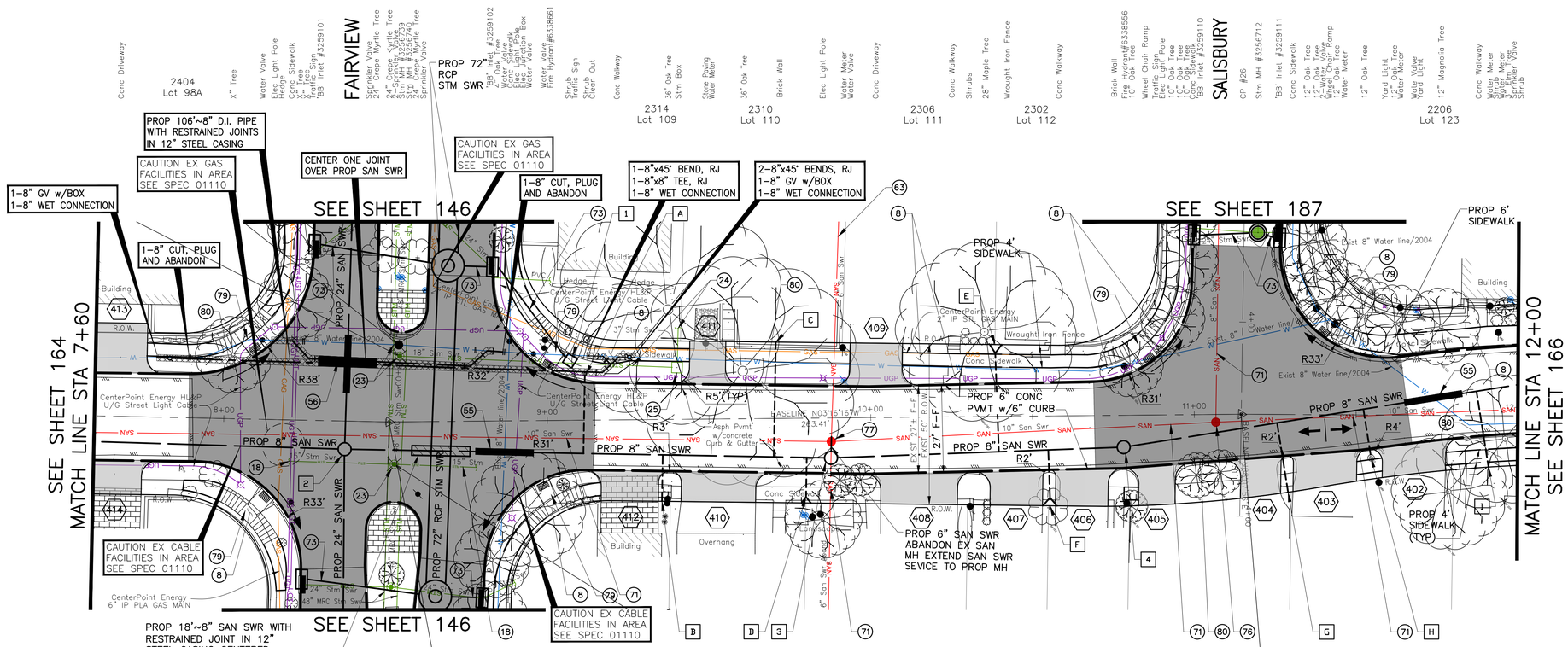
CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES:
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-13, SET X-CUT AT
STA 8+51.10
EL. 50.88

CP-26, SET MAG NAIL
W/SHINNER AT
STA 11+14.51
EL. 52.02

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	JB	"JB"	9+07.19	18.44' LT	51.20



SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-S6	SAN	8+37.53	8.71' RT	51.23	SEALED
3	MH-S7	SAN	9+87.59	12.35' RT	51.42	SEALED
4	MH-S8	SAN	10+78.07	9.85' RT	51.72	SEALED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	9+12.00	14.06' LT	47.63
B	9+35.21	25.31' RT	46.59
C	9+70.85	23.61' LT	43.64
D	9+79.71	26.37' RT	46.36
E	10+38.57	21.46' LT	43.64
F	10+54.69	27.75' RT	47.08
G	11+29.13	24.04' RT	46.28
H	11+54.56	12.26' RT	46.57
I	11+54.72	13.25' RT	45.14

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:
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VERIFICATION OF PRIVATE UTILITY LINES

Date:
Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:
APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
KINGSTON PLAN
STA 7+60 TO STA 12+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **165** OF 391	

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0 10 20 40

(SEE SHEET 165 FOR PLAN)

KINGSTON

MATCH LINE STA 7+60

MATCH LINE STA 12+00

PC STA 7+94.35
11.89' RT, TC=51.86
PC STA 7+95.52
14.12' LT, TC=52.39

PT STA 8+24.56
40.52' RT, TC=51.05
PT STA 8+25.28
43.68' LT, TC=51.50

PVI STA 8+44.59
40.69' RT, TC=51.45
PVI STA 8+45.28
43.72' LT, TC=51.10

PVI STA 8+59.45
38.77' RT, TC=51.52
PVI STA 8+62.64
45.07' LT, TC=51.03

FAIRVIEW

PT STA 8+79.66
39.53' RT, TC=51.12
PT STA 8+82.63
44.31' LT, TC=50.63

PC STA 9+10.09
12.79' RT, TC=51.85
PC STA 9+11.99
13.17' LT, TC=51.86

PC STA 10+75.93
9.91' LT, TC=52.35

PVI STA 10+98.31
15.27' RT, TC=52.42
PVI STA 11+00.43
34.34' LT, TC=51.43
PVI STA 11+01.04
49.66' LT, TC=51.37

SALISBURY

PT STA 11+26.30
49.24' LT, TC=51.37

PC STA 11+60.02
19.23' LT, TC=52.22

West R.O.W.
West TOC
East R.O.W.
East TOC
City of Rock

TC @ -0.37% (E&W)
TC @ -1.00% (W)
TC @ -1.50% (E)
TC @ +0.30% (E&W)
TC @ +1.16% (W)
TC @ +1.50% (E)
TC @ -1.00% (W)
TC @ -0.40% (W)
TC @ +1.12% (W)
TC @ -0.33% (E&W)

6" Gas Main (Field Verify)
CONNECT TO EXIST 8" WATER LINE
10" San Swr
8" Water Line COH P39631r.
4-48" Stm Swr
24" Stm Swr
6" Stm Swr
18" Stm Swr
6" Fire Lead
8" Water Line COH P39631r
15" Stm Swr
PROP 72" RCP STM SWR
PROP 8" SERVICE RECONNECT
CONNECT TO EXIST 8" WATER LINE
PROP 8" WATER LINE
6" San Swr Aband.
6" San Swr
PROP 6" SAN SWR
8" San Swr
3-24" Stm Swr
8" Water Line COH P39631r
6" Water Line COH P39631r
10" San Swr
PROP. 6" SERVICE RECONNECT
18" CLR
2' ABS CLR
12" CLR

PROP 78 LF 8" SAN SWR @ 0.44%
PROP 150 LF 8" SAN SWR @ 0.44%
PROP 91 LF 8" SAN SWR @ 0.44%
PROP 122 LF 8" SAN SWR @ 0.44%
PROP 6" SAN SWR DROP
PROP 24" SAN SWR
PROP 18"~8" SAN SWR WITH RESTRAINED JOINT IN 12" STEEL CASING CENTERED UNDER PROP 72" RCP STM SWR
PROP 106'~8" D.I. PIPE WITH RESTRAINED JOINTS IN 12" STEEL CASING
LIMITS OF PROP 8" RESTRAINED JOINT D.I. PIPE SECTION SEE COH DETAIL 02511-01
1-20' JOINT OF 8" PIPE WITH RESTRAINED JOINTS CENTERED UNDER PROP SANITARY SEWER

FL=40.04

'BB' Inlet
TC El.= 50.60
FL 24" (N)=45.55

'BB' Inlet
TC El.= 50.75
FL 24" (NW)=45.65

PROP SAN MH S6
SEALED
STA 8+37.53, 8.71' RT
8" FL=39.70 (S)
8" FL=39.24 (N)
24" FL=38.07 (W&E)

Stm MH
Rim El.= 51.33
FL 24" (N)=44.58
FL 24" (S)=44.74
FL48"(E)=42.69
FL48"(W)=42.74

Stm MH
Rim El.= 50.86
FL15"(N)=44.79
FL15"(S)=45.05
FL48"(E)=42.96
FL48"(W)=42.96

Water MH
Rim El.= 50.95
Surveyed Depth=4.05

'BB' Inlet
TC El.= 50.81
FL 6" (NW)=49.33
FL24"(S)=47.35

'BB' Inlet
TC El.= 50.85
FL24"(S)=45.30

Stm Junction Box
Top El.= 51.54
FL 18"(S)=43.89
FL 18"(W)=43.84

PROP SAN MH S7
SEALED
STA 9+67.59, 12.35' RT
FL=46.81± (W), MATCH
6" FL=40.07 (N)
6" FL=40.07 (W) DROP
8" FL=39.90 (S)

San MH
Rim El.= 51.70
FL 10"(N)=46.20
FL 10"(E)=46.20 Abandt
FL 10"(S)=46.50
FL 6"

PROP SAN MH S8
SEALED
STA 10+78.07, 9.85' RT
8" FL=40.47 (N&S)

FL=41.01

'BB' Inlet
TC El.= 51.47
FL 24" (N)=47.33

San MH
Rim El.= 51.92
FL 10"(N)=45.72
FL 10"(S)=45.82
FL 8"(W)=46.01

Stm MH
Rim El.= 51.36
FL 24" (W)=46.03
FL 24" (N)=46.04
FL 24" (S)=47.03

'BB' Inlet
TC El.= 51.64
FL 24" (S)=46.04

7+60 8+00 9+00 10+00 11+00 12+00

60 58 56 54 52 50 48 46 44 42 40 38 36 34 32 30 28 26

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BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES:
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-13, SET X-CUT AT
STA 8+51.10
EL. 50.88

CP-26, SET MAG NAIL
W/SHINNER AT
STA 11+14.51
EL. 52.02

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
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APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

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11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN CONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

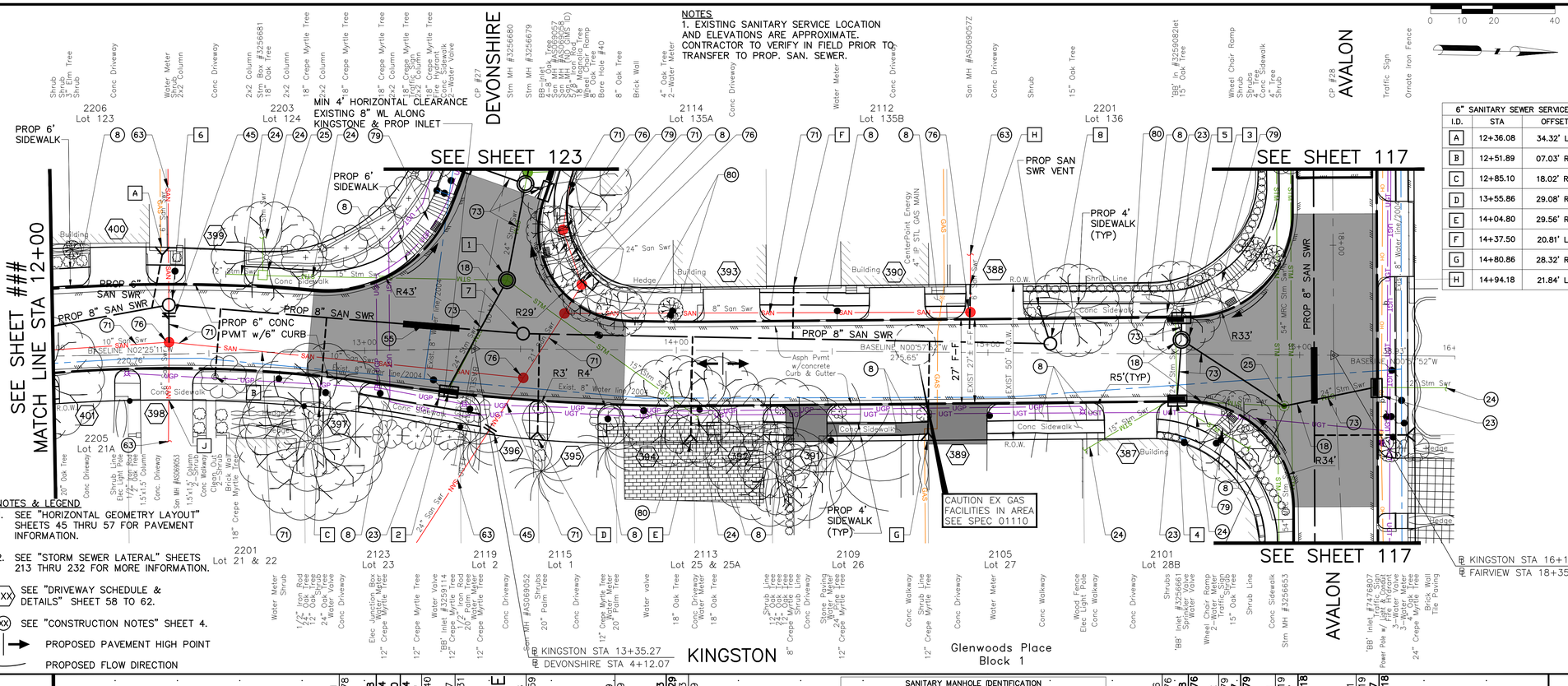
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

KINGSTON PROFILE
STA 7+60 TO STA 12+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO.**165A** OF 391	



6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	12+36.08	34.32' LT	46.65
B	12+51.89	07.03' RT	45.14
C	12+85.10	18.02' RT	45.14
D	13+55.86	29.08' RT	43.84
E	14+04.80	29.56' RT	44.20
F	14+37.50	20.81' LT	47.11
G	14+80.86	28.32' RT	43.94
H	14+94.18	21.84' LT	46.55

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-DEV1	"C"	13+45.49	22.06' LT	51.29
2	BB-A83	"BB"	13+26.66	13.87' RT	51.68
3	MH-AVA7A	"C"	15+62.09	4.56' LT	51.28
4	BB-A81	"BB"	15+60.90	15.21' RT	51.63
5	BB-A71	"BB"	15+61.97	11.81' LT	51.63

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-27, SET MAG NAIL W/SHINER AT STA 13+35.27 EL. 51.74

CP-28, SET MAG NAIL W/SHINER AT STA 16+10.92 EL. 52.20

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 REGISTERED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

KINGSTON
STA 12+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 166 OF 391	

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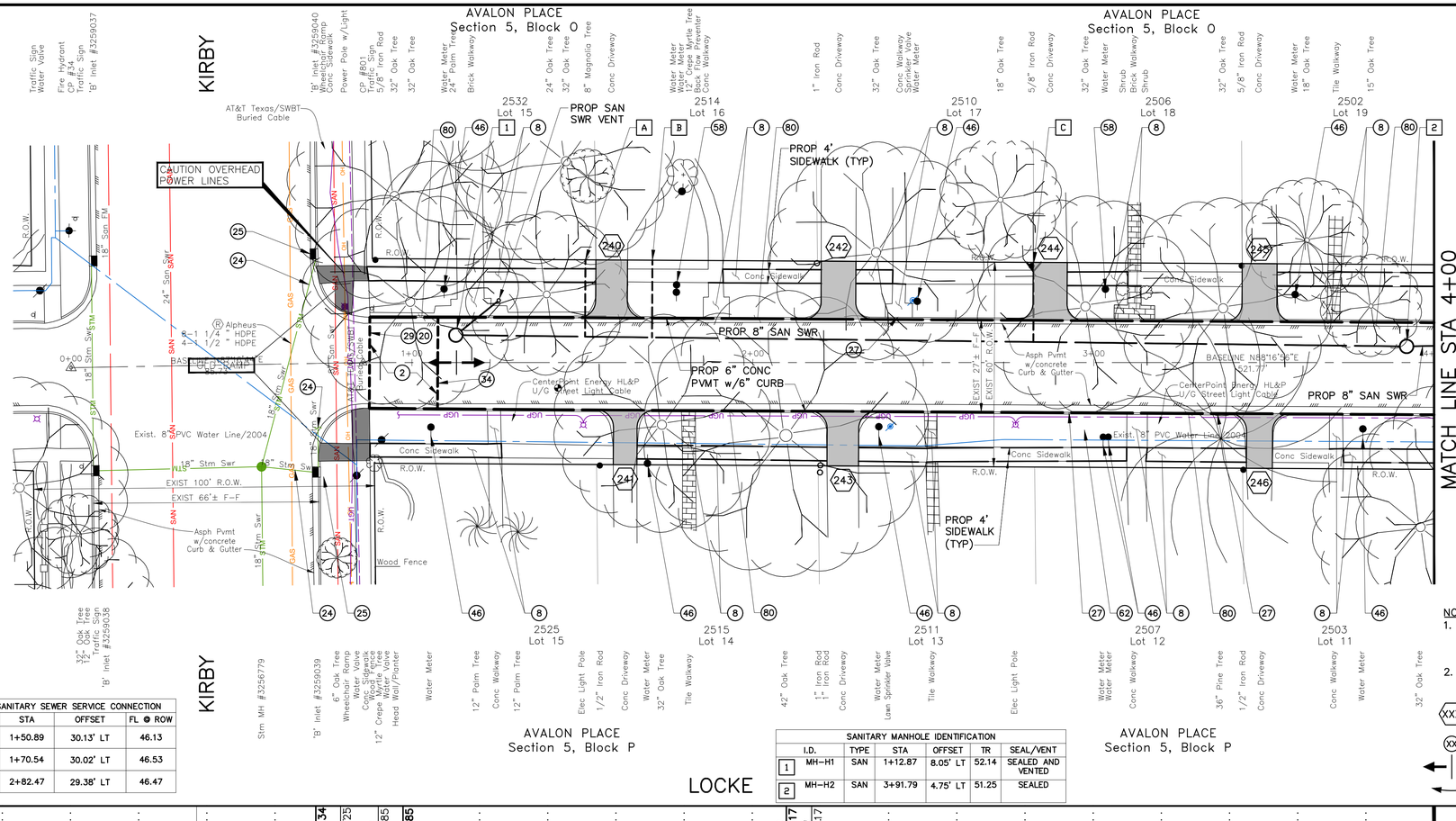


6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	1+50.89	30.13' LT	46.13
B	1+70.54	30.02' LT	46.53
C	2+82.47	29.38' LT	46.47

SANITARY MANHOLE IDENTIFICATION						
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-H1	SAN	1+12.87	8.05' LT	52.14	SEALED AND VENTED
2	MH-H2	SAN	3+91.79	4.75' LT	51.25	SEALED

NOTES & LEGEND

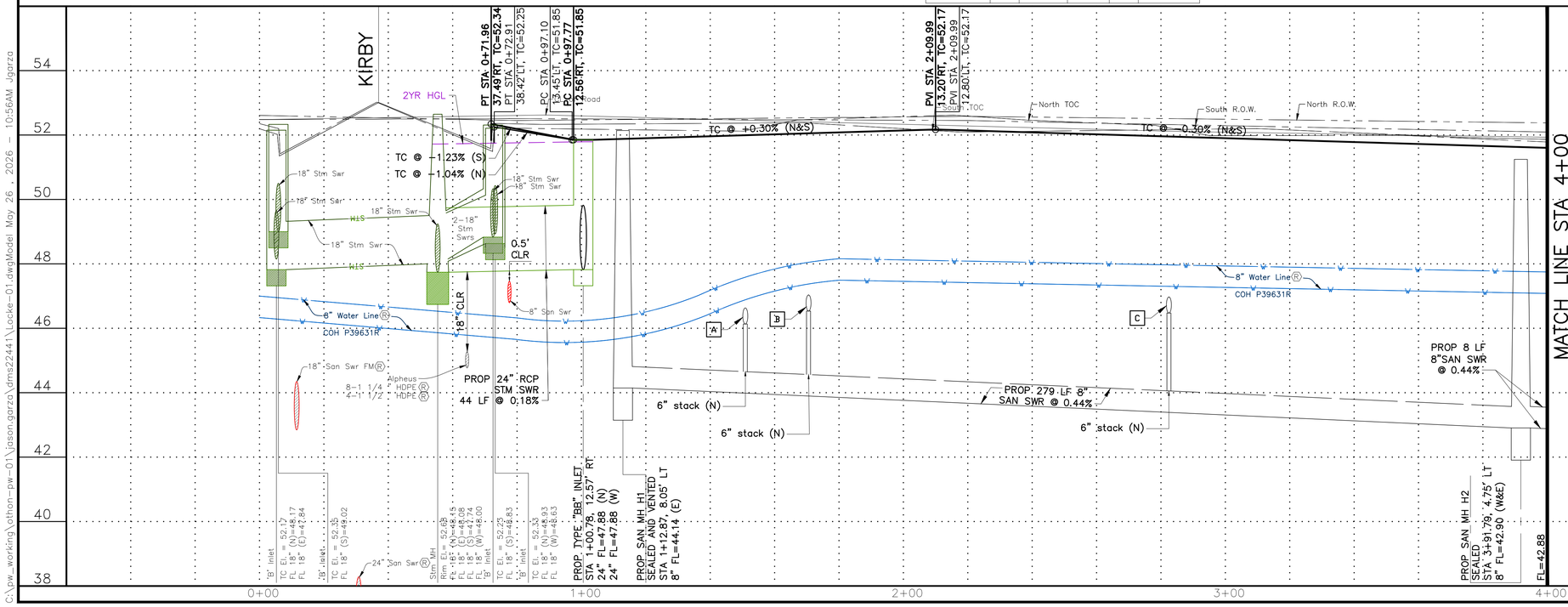
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-34, SET MAG NAIL W/SHINER AT STA 0+00
EL. 52.50

CP-801, SET MAG NAIL AT STA 0+85.67
EL. 52.66

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Date:

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8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

LOCKE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **167** OF 391	

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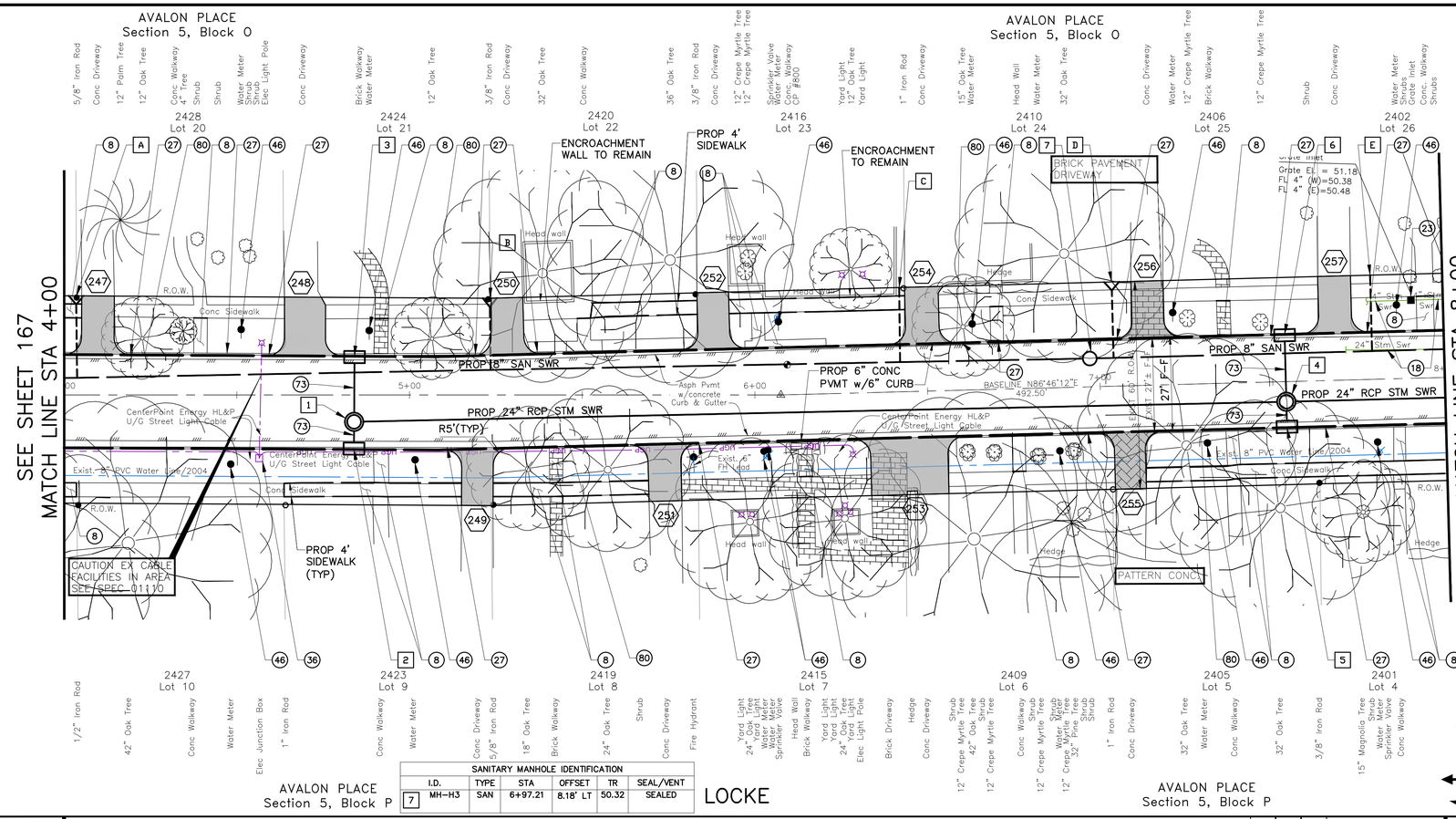


SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
7	MH-H3	SAN	6+97.21	8.18' LT	50.32	SEALED

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-LOC3	"C"	4+83.95	7.78' RT	51.01
2	BB-A255	"BB"	4+83.91	15.78' RT	51.35
3	BB-A254	"BB"	4+84.06	11.22' LT	51.35

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
4	MH-LOC1	"C"	7+53.78	5.83' RT	50.20
5	BB-A107	"BB"	7+53.78	13.33' RT	50.55
6	BB-A103	"BB"	7+53.78	13.67' LT	50.55

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+03.57	28.93' LT	46.47
B	5+23.30	27.99' LT	45.59
C	6+42.58	30.19' LT	45.32
D	7+04.11	30.18' LT	45.41
E	7+78.98	30.17' LT	45.56

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

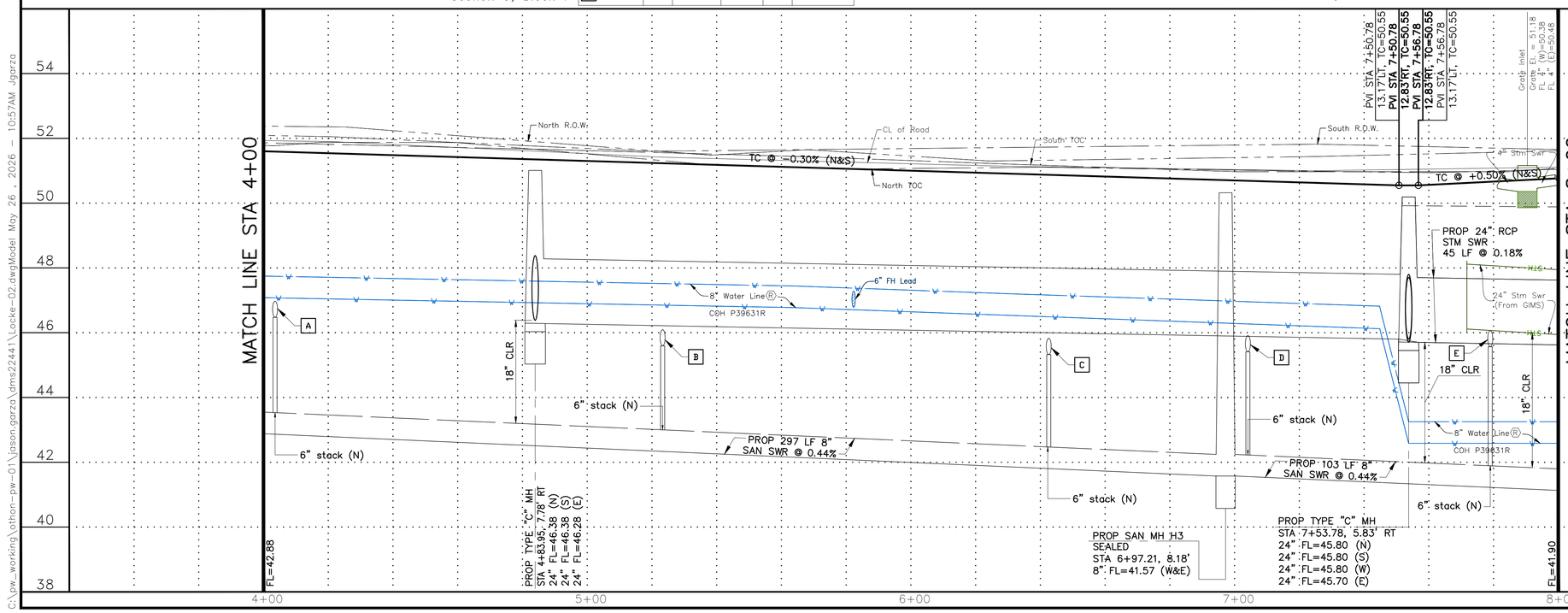
PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-800, SET MAG NAIL AT STA 6+7.50
EL. 51.22



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

LOCKE
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 168 OF 391	

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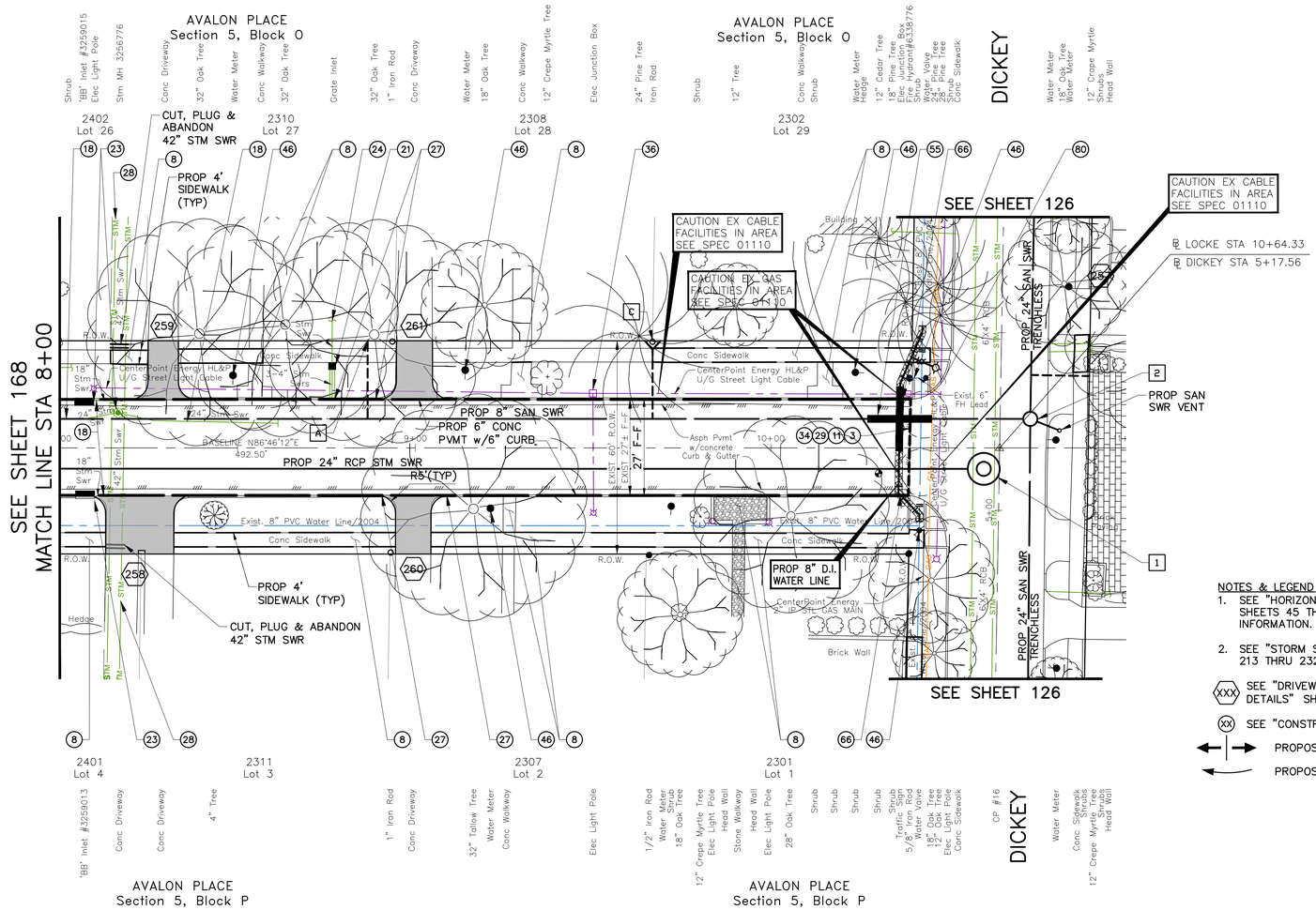

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-16, SET MAG NAIL AT
STA 10+64.33, 0.08' RT.
EL. 52.59

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	8+87.74	30.15' LT	45.82
B	9+66.72	30.14' LT	45.95

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-LOC2	"C"	10+59.87	5.90' RT	52.48

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-P2	SAN	10+72.95	8.18' LT	52.36	SEALED, VENTED AND CORROSION RESISTANT

LOCKE

(SEE SHEET 170 FOR PROFILE)

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Date:

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APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

LOCKE PLAN
STA 8+00 TO END

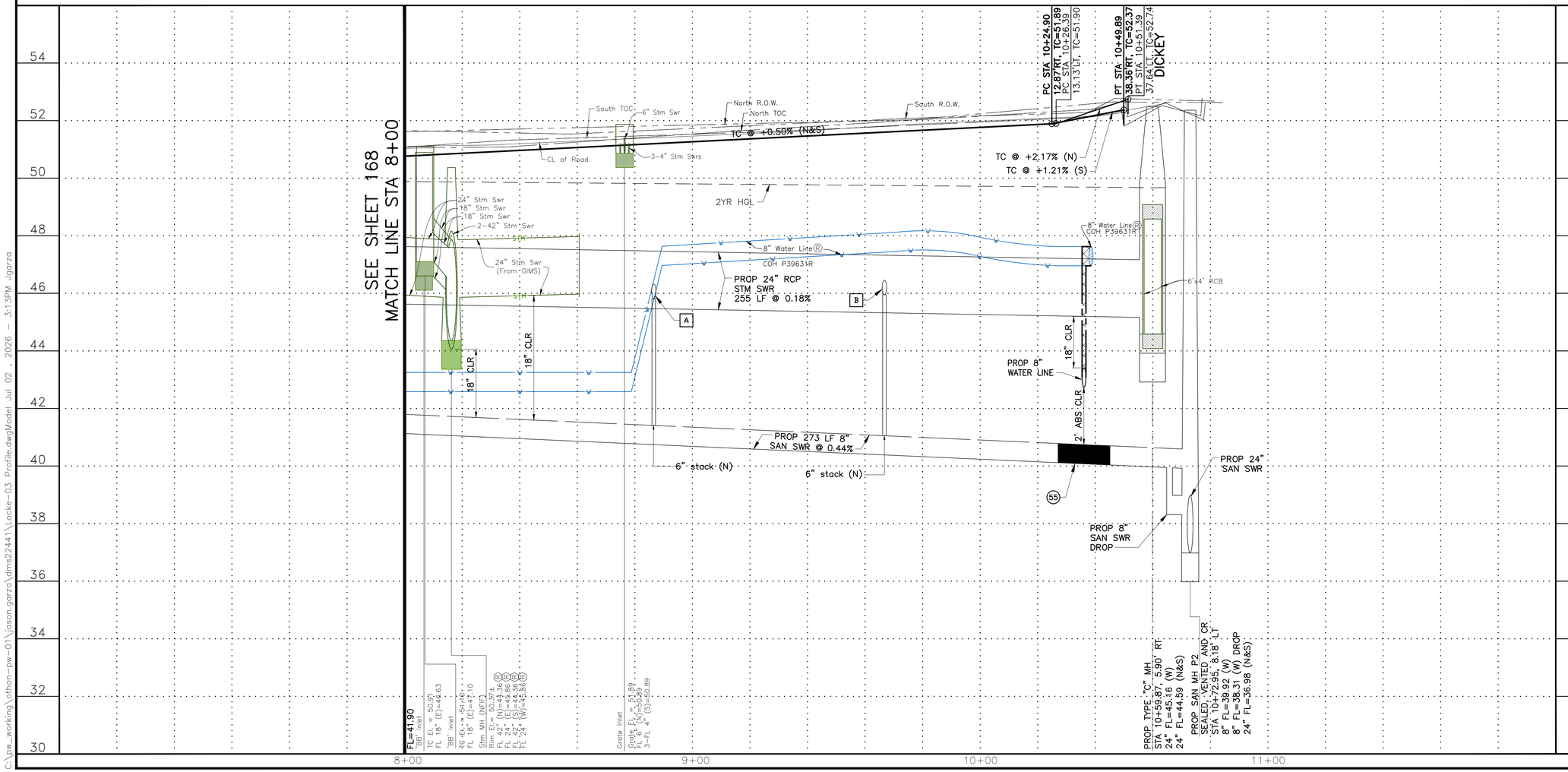
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **169** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Locke-03 Plan.dwgModel May 26, 2026 - 10:58AM Jgarza

0 10 20 40

(SEE SHEET 169 FOR PLAN)

LOCKE



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-16, SET MAG NAIL AT
STA 10+64.33, 0.08' RT.
EL. 52.59

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

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FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

LOCKE PROFILE
STA 8+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **170** OF 391	

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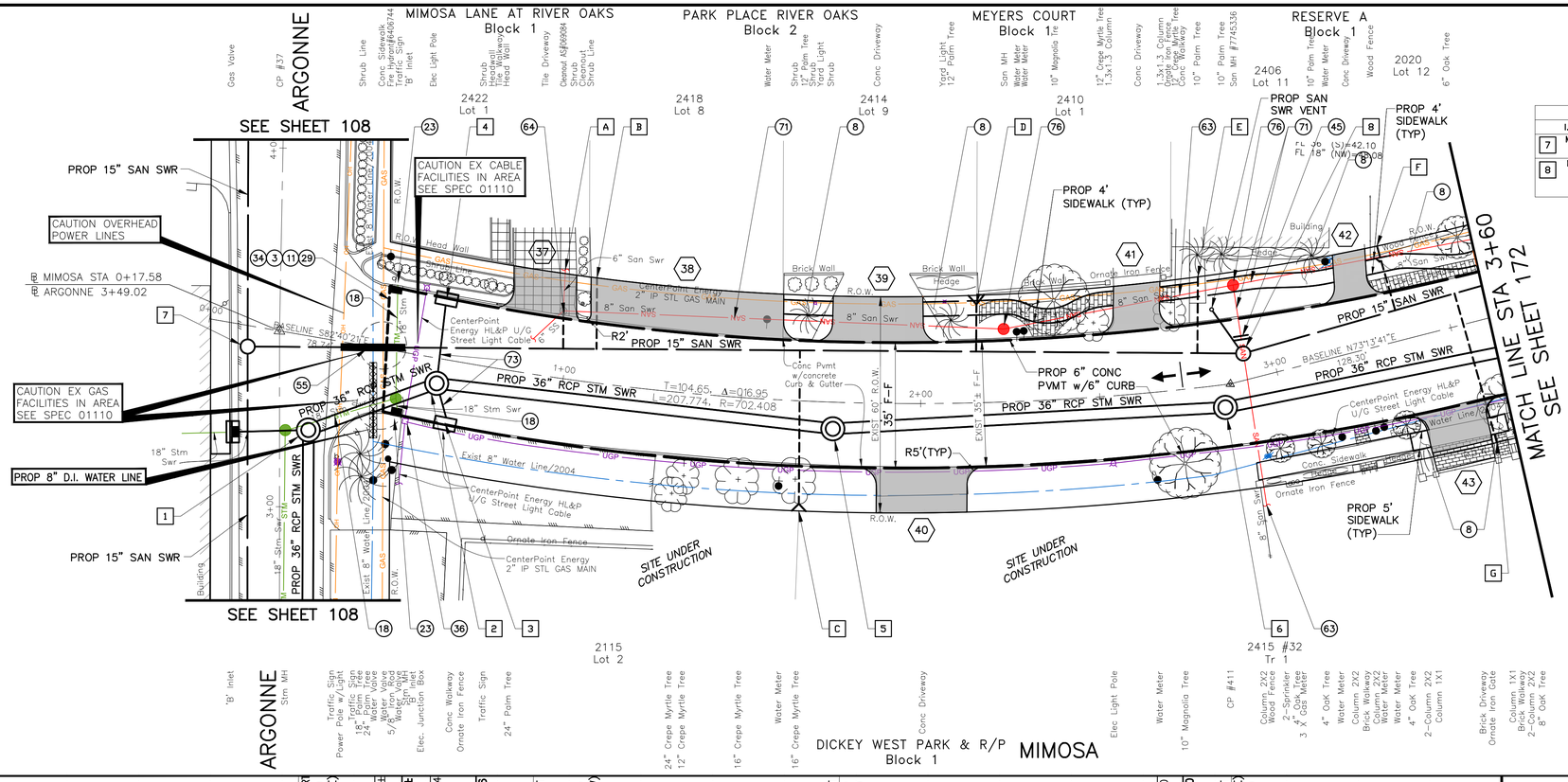


0 10 20 40

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
7	MH-N4	SAN	0+11.78	5.81' RT	MATCH 52.24	SEALED
8	MH-D1	SAN	2+92.14	7.34' LT	52.62	SEALED, VENTED AND CORROSION RESISTANT

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-ARG1	"C"	0+32.43	25.86' RT	MATCH 52.58
2	MH-MIM4	"C"	0+65.47	6.69' RT	51.99
3	BB-A26	"BB"	0+69.65	17.91' RT	52.26
4	BB-A16	"BB"	0+64.28	16.92' LT	52.24
5	MH-MIM5A	"C"	1+75.75	7.41' RT	52.35
6	MH-MIM5	"C"	2+84.42	6.33' RT	52.67

NOTES & LEGEND

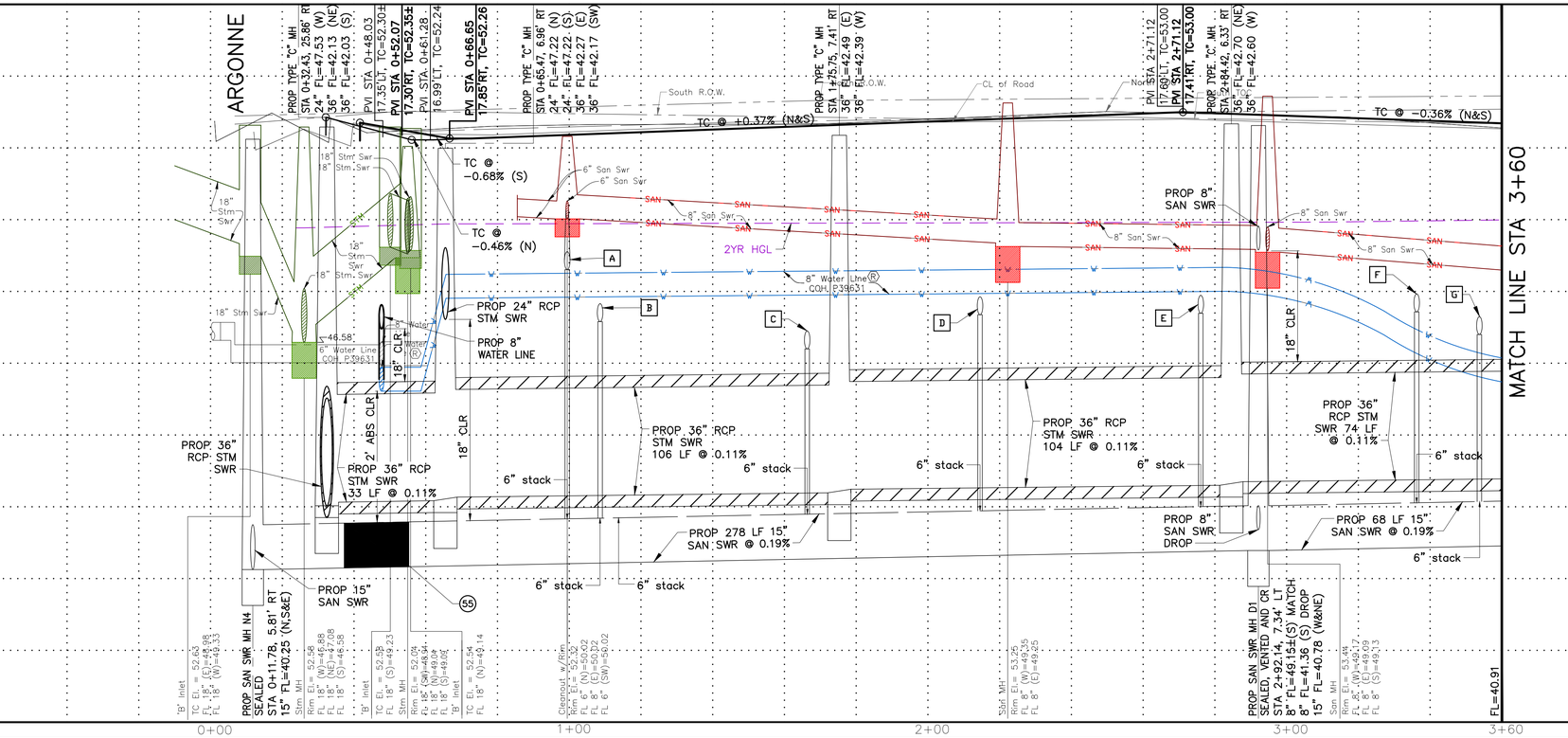
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	0+96.30	29.07' LT	48.61	
B	1+56.64	29.12' LT	47.16	
C	1+67.38	30.68' RT	46.40	DUCTILE IRON
D	2+16.43	29.67' LT	47.35	
E	2+81.06	30.73' LT	47.39	
F	3+35.67	27.13' LT	47.43	
G	3+54.52	34.21' RT	46.80	DUCTILE IRON

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP−37, SET MAG NAIL AT
STA 0+17.58
EL. 52.80

CP−411, SET MAG NAIL AT
STA 2+86.55
EL. 52.84

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713−207−2222

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FB No. P−5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

MIMOSA

STA 0+00 TO STA 3+60

WBS NUMBER	
WBS. NO. R−002011−0089−4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 171 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Mimosa-01.dwgModel May 26, 2026 - 10:59AM Jgarza

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	4+79.89	29.58' RT	47.01	DUCTILE IRON
B	5+56.46	33.72' LT	44.90	
C	5+77.71	27.17' RT	47.08	DUCTILE IRON
D	6+94.51	28.41' LT	45.00	
E	7+20.60	28.04' RT	47.19	DUCTILE IRON

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-MIM3	"C"	3+74.31	10.65' RT	52.31
2	BB-A18	"BB"	3+75.41	13.29' LT	52.63
3	MH-MIM3A	"C"	3+97.05	9.91' RT	52.23
4	JB	"A"	4+02.94	23.54' RT	52.45
5	MH-MIM3B	"C"	4+25.33	9.34' RT	51.97
6	BB-A28	"BB"	4+25.69	19.52' RT	52.27
7	MH-MIM9	"C"	4+73.13	6.39' RT	52.11
8	BB-A20	"BB"	4+73.51	18.35' LT	52.41

SANITARY MANHOLE IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
11	MH-D2	SAN	5+79.25	9.30' LT	52.40	SEALED, VENTED AND CORROSION RESISTANT
12	MH-D3	SAN	7+30.03	14.61' LT	52.61	SEALED

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
9	MH-MIM2	"C"	6+55.33	6.35' RT	52.65
10	MH-MIM2A	"C"	7+85.00	2.22' RT	52.48

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-41, SET MAG NAIL AT
STA 4+14.81
EL. 52.55

CP-412, SET MAG NAIL AT
STA 6+40.44
EL. 52.98

CP-432, CUT 'X' IN CONC AT
STA 7+48.83
EL. 52.71

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

MIMOSA
STA 3+60 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 172 OF 391	

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STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH–MIM6	"C"	9+76.62	5.40' RT	51.84
2	BB–A229	"BB"	9+76.62	15.73' RT	52.17
3	BB–A230	"BB"	9+76.62	16.27' LT	52.17
4	MH–MIM6A	"C"	11+16.90	6.15' RT	51.43
5	BB–A21	"BB"	11+16.69	16.23' LT	51.75
6	MH–MIM1	"C"	11+55.68	5.75' RT	51.34
7	BB–A32	"BB"	11+55.56	15.75' RT	51.64
8	MH–MIM7	"C"	11+87.68	5.88' RT	51.45
9	BB–A24	"BB"	11+87.77	16.12' LT	51.76

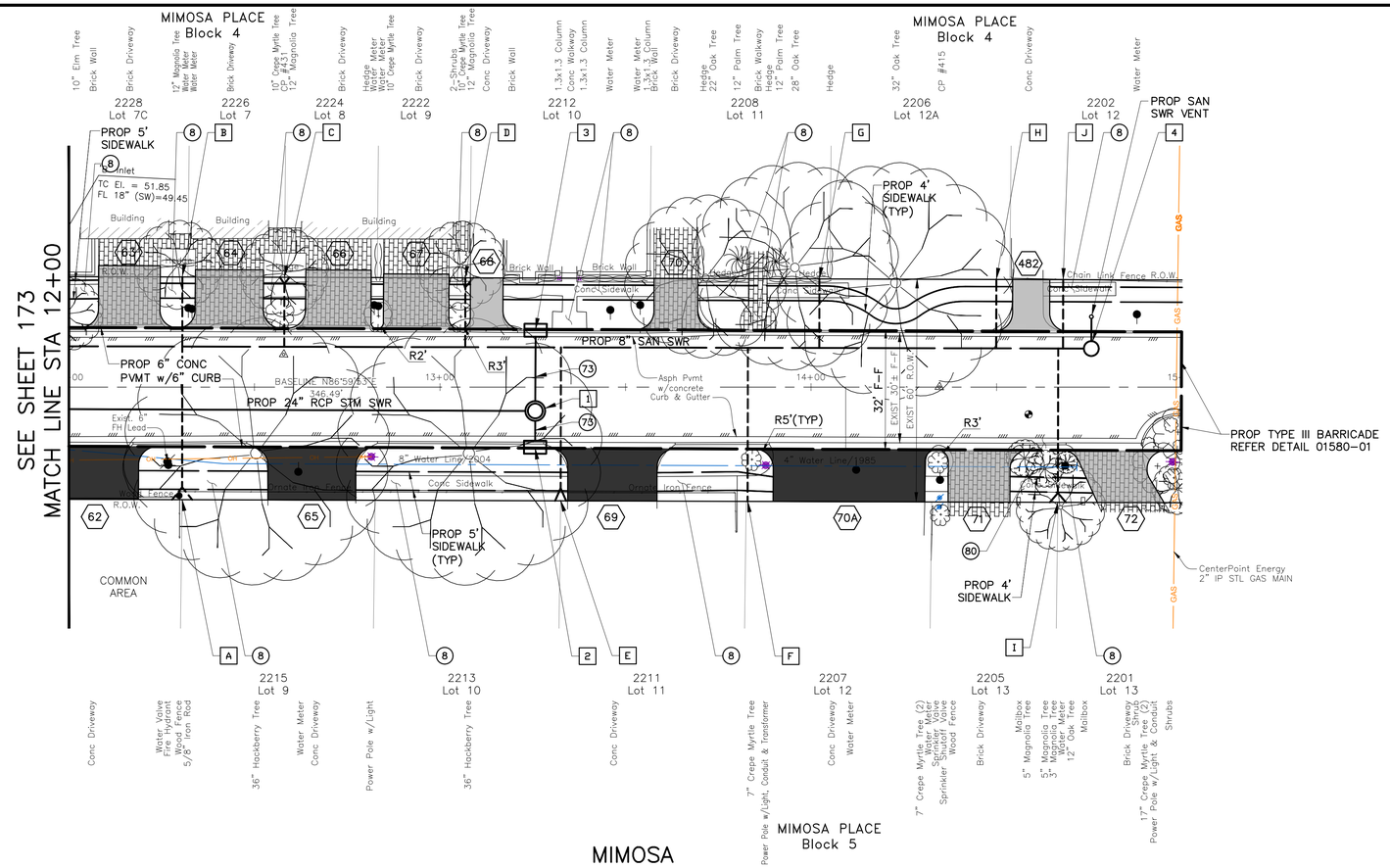
6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	8+54.50	28.56' RT	47.42	DUCTILE IRON
B	8+70.22	31.16' LT	46.70	
C	8+82.65	29.08' RT	47.46	DUCTILE IRON
D	8+99.99	30.61' LT	46.66	
E	9+15.10	29.67' RT	47.49	DUCTILE IRON
F	9+71.08	30.25' RT	47.51	DUCTILE IRON
G	10+22.79	29.73' LT	46.49	
H	10+37.99	30.27' RT	45.12	DUCTILE IRON
I	10+74.63	29.76' LT	46.41	
J	11+81.20	30.17' RT	45.55	DUCTILE IRON

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
10	MH–D4	SAN	8+21.54	14.40' LT	52.19	SEALED, VENTED AND CORROSION RESISTANT
11	MH–D5	SAN	10+86.11	10.93' LT	51.59	SEALED

MIMOSA PLACE Block 3 · MIMOSA PLACE Block 4 · SPANN · SEE SHEET 201 · SEE SHEET 172 MATCH LINE STA 8+00 · MATCH LINE STA 12+00 SEE SHEET 174 · MIMOSA PLACE Block 1 · VERMONT PLACE Block 1 · MIMOSA · MIMOSA T/H CONDO

0 10 20 40

CAUTION OVERHEAD POWER LINES · PROP 8" SAN SWR · PROP SAN SWR VENT · PROP 4' SIDEWALK (TYP) · PROP 5' SIDEWALK · PROP 6" CONC PVMT w/6" CURB · PROP 8" SAN SWR · PROP 36" RCP STM SWR · PROP 24" RCP STM SWR · R5'(TYP) · R4' · R3' · R2' · R15' · 1–8" CUT, PLUG AND ABANDON · 2–8"x45° BENDS, RJ 1–8" WET CONNECTION · 2–8"x8" TEE, RJ 1–8" GV w/BOX · PROP 8" D.I. WATER LINE · CRITICAL LOCATION SEE C.O.H. SPEC 02317 · CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110 · CenterPoint Energy 6" IP STL GAS MAIN · CenterPoint Energy 2" IP PLA GAS MAIN · 8" Water Line/2004 · 18" Storm Swr · 8" San Swr · 8" Water Line/2003 · 8" Water Line/2007 · 8" Water Line/2008 · 8" Water Line/2009 · 8" Water Line/2010 · 8" Water Line/2011 · 8" Water Line/2012 · 8" Water Line/2013 · 8" Water Line/2014 · 8" Water Line/2015 · 8" Water Line/2016 · 8" Water



STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-MIM8	"C"	13+25.68	6.43' RT	51.97
2	BB-A228	"BB"	13+25.64	16.43' RT	52.25
3	BB-A227	"BB"	13+25.77	15.57' LT	52.25

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
4	MH-D6	SAN	14+75.52	10.39' LT	52.42	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	12+30.52	30.32' RT	45.69	DUCTILE IRON
B	12+30.59	29.67' LT	46.45	
C	12+58.07	29.59' LT	46.51	
D	13+06.85	29.48' LT	46.76	
E	13+32.52	30.63' RT	46.50	DUCTILE IRON
F	13+82.90	30.78' RT	46.51	DUCTILE IRON
G	14+02.25	29.15' LT	46.99	
H	14+49.94	29.01' LT	46.92	
I	14+66.52	31.04' RT	46.69	DUCTILE IRON
J	14+67.94	28.95' LT	46.89	

NOTES & LEGEND

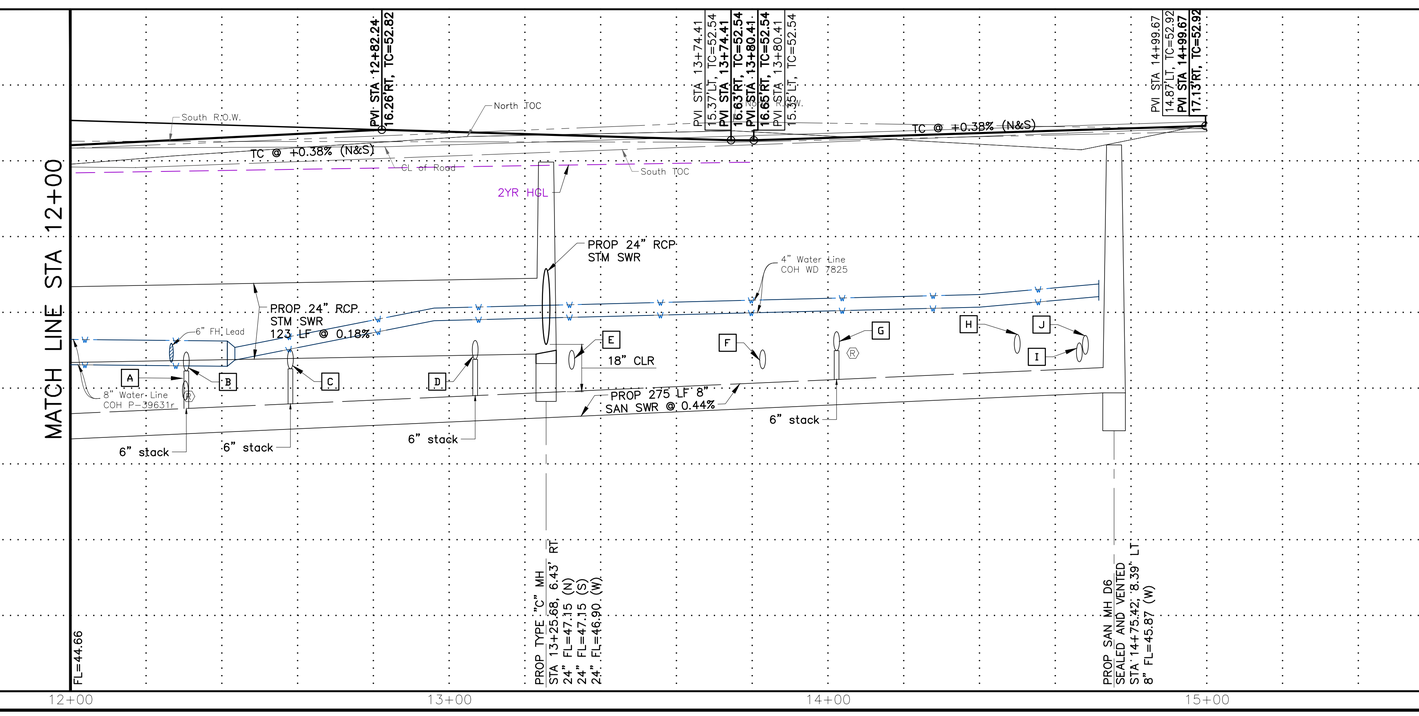
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

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TBM:

CP-415, SET MAG NAIL AT
STA 14+34.59
EL. 52.71

CP-431, SET MAG NAIL AT
STA 12+57.89, 8.80' LT
EL. 52.05

REV.	DATE	DESCRIPTION	BY

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

MIMOSA
STA 12+00 TO END

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VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **174** OF 391	

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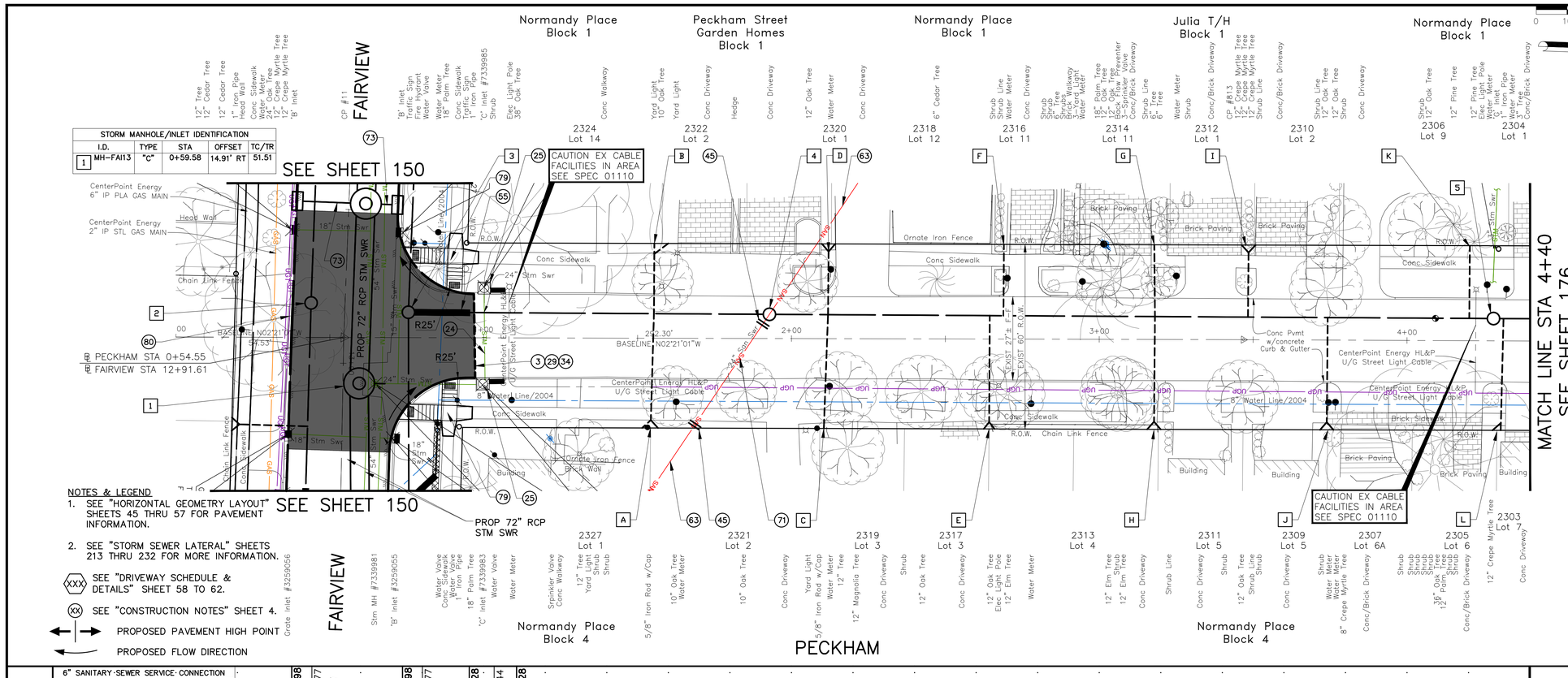

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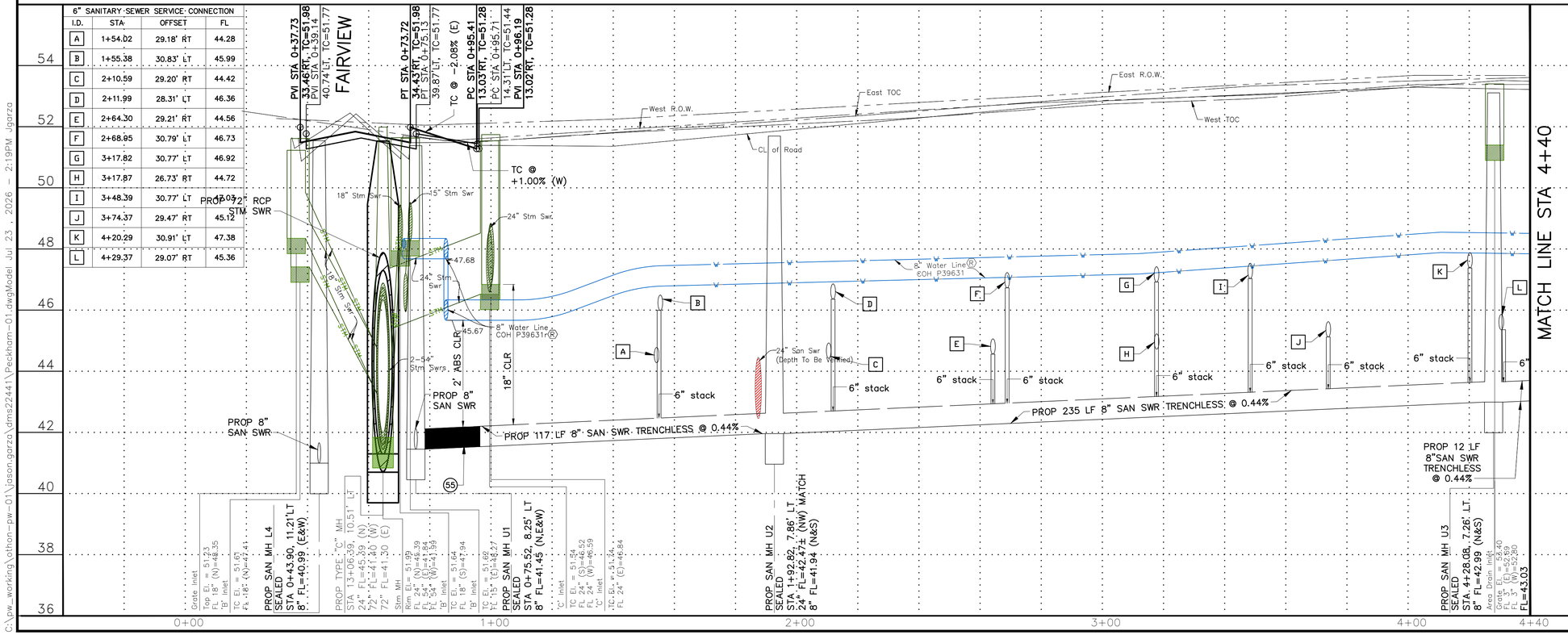
PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-FAI13	"C"	0+59.58	14.91' RT	51.51

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-L4	SAN	0+43.90	11.21' LT	51.55	SEALED
3	MH-U1	SAN	0+75.52	8.25' LT	51.38	SEALED
4	MH-U2	SAN	1+92.82	7.86' LT	51.64	SEALED
5	MH-U3	SAN	4+28.08	7.26' LT	53.11	SEALED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL
A	1+54.02	29.18' RT	44.28
B	1+55.38	30.83' LT	45.99
C	2+10.59	29.20' RT	44.42
D	2+11.99	28.31' LT	46.36
E	2+64.30	29.21' RT	44.56
F	2+68.95	30.79' LT	46.73
G	3+17.82	30.77' LT	46.92
H	3+17.87	26.73' RT	44.72
I	3+48.39	30.77' LT	47.03
J	3+74.37	29.47' RT	45.12
K	4+20.29	30.91' LT	47.38
L	4+29.37	29.07' RT	45.36



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-11, SET MAG NAIL
STA 0+54.55
EL. 52.36

CP-813, SET MAG NAIL
STA 3+46.83
EL. 53.13

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

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Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
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Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PECKHAM
STA 0+00 TO STA 4+40

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 175 OF 391	

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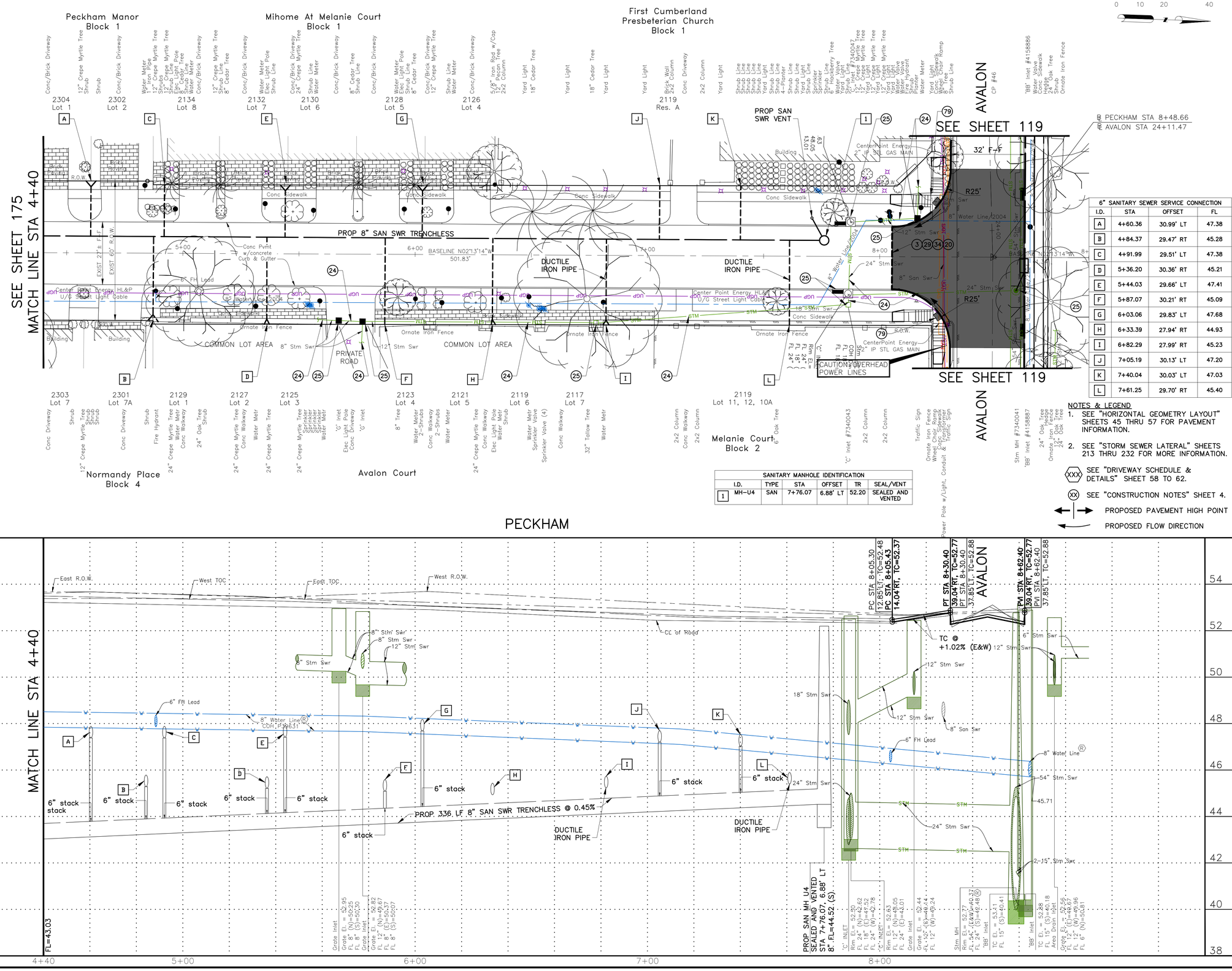

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-U4	SAN	7+76.07	6.88' LT	52.20	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL
A	4+60.36	30.99' LT	47.38
B	4+84.37	29.47' RT	45.28
C	4+91.99	29.51' LT	47.38
D	5+36.20	30.36' RT	45.21
E	5+44.03	29.66' LT	47.41
F	5+87.07	30.21' RT	45.09
G	6+03.06	29.83' LT	47.68
H	6+33.39	27.94' RT	44.93
I	6+82.29	27.99' RT	45.23
J	7+05.19	30.13' LT	47.20
K	7+40.04	30.03' LT	47.03
L	7+61.25	29.70' RT	45.40

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

PECKHAM

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-46, SET MAG NAIL WITH SHINNER AT STA 8+48.66
EL. 53.17

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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Date:

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PECKHAM
STA 4+40 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 176 OF 391	

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STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 MH-FAI11	"C"	0+58.34	15.55' RT	51.75

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
I	4+26.79	29.33' LT	44.51

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	1+45.30	28.51' LT	43.42
B	2+00.89	31.25' RT	46.63
C	2+03.98	28.79' LT	43.61
D	2+59.41	30.84' RT	46.98
E	3+09.56	29.16' LT	43.88
F	3+16.77	30.65' RT	47.19
G	3+73.21	29.28' LT	43.88
H	3+86.07	19.51' RT	47.29

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2 MH-T1	SAN	0+42.51	9.36' LT	51.12	SEALED
3 MH-T2	SAN	0+75.02	5.08' LT	51.52	SEALED
4 MH-T3	SAN	3+99.18	5.95' LT	53.20 MATCH	SEALED, VENTED AND CORROSION RESISTANT

Normandy Place Block 2

Normandy Place Block 3

PERSA STA 0+53.62
FAIRVIEW STA 9+85.57

SEE SHEET 148

SEE SHEET 148

MATCH LINE STA 4+50
SEE SHEET 178

PROP 8" SAN SWR TRENCHLESS

PROP 23 LF 8" SAN SWR @ 0.44% (TIE TO MH#3865049) TRENCHLESS

PROP 4' SIDEWALK

PROP SAN SWR VENT

PROP 72" RCP STM SWR

PROP 18'~8" SAN SWR - WITH RESTRAINED JOINT IN 12" STEEL CASING CENTERED UNDER PROP 72" RCP STM SWR BY BORE AND JACK

PROP 8" SAN SWR

PROP 8" SAN SWR TRENCHLESS

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-12, SET MAG NAIL AT
STA 0+53.62
EL. 52.33

CP-812, SET MAG NAIL AT
STA 2+60.21
EL. 52.71

CP-811, SET MAG NAIL AT
STA 4+23.31
EL. 53.34

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PERSA
STA 0+00 TO STA 4+50

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 177 OF 391	

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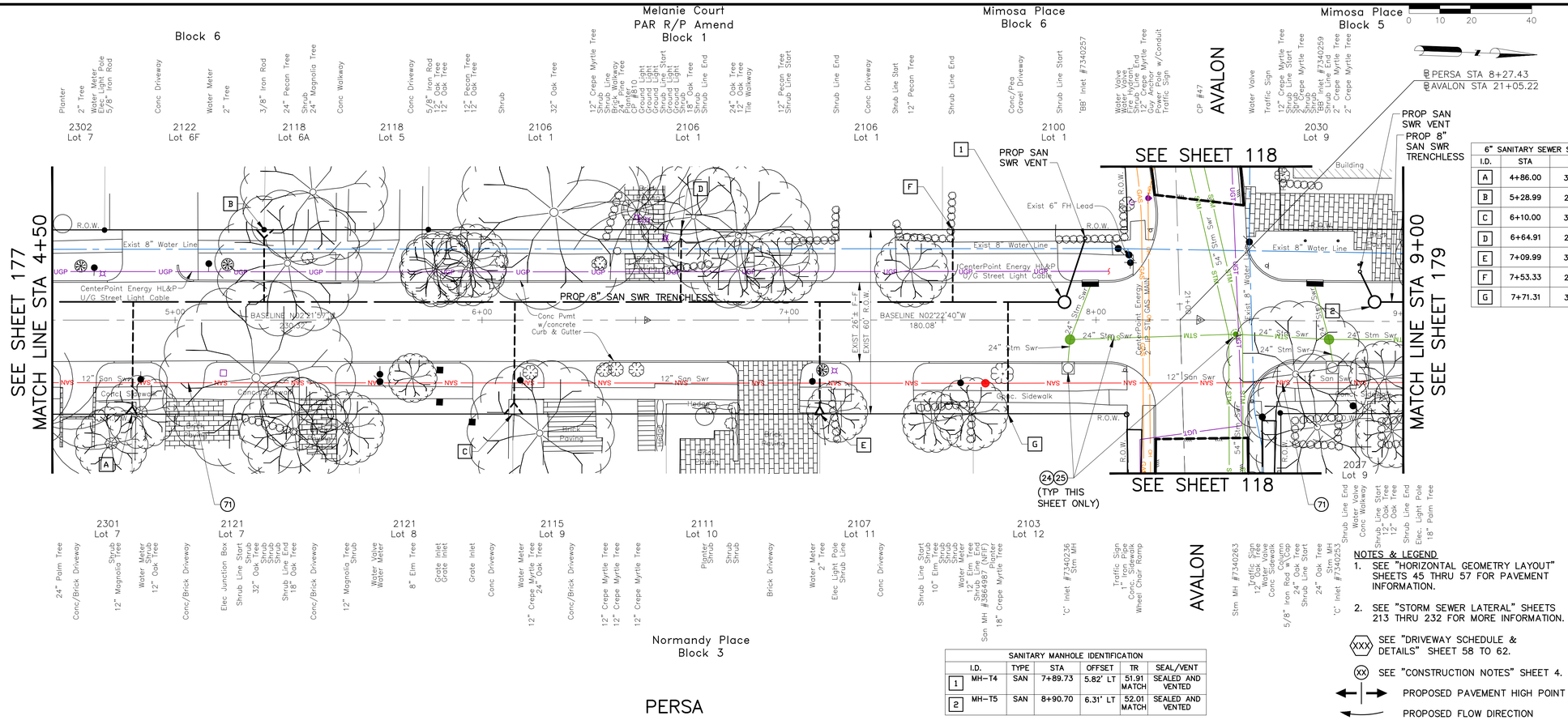

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+86.00	30.62' RT	44.50
B	5+28.99	29.42' LT	44.50
C	6+10.00	30.57' RT	44.75
D	6+64.91	29.44' LT	44.61
E	7+09.99	30.58' RT	44.88
F	7+53.33	29.39' LT	44.42
G	7+71.31	30.61' RT	45.05

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-T4	SAN	7+89.73	5.82' LT	51.91 MATCH	SEALED AND VENTED
2	MH-T5	SAN	8+90.70	6.31' LT	52.01 MATCH	SEALED AND VENTED

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

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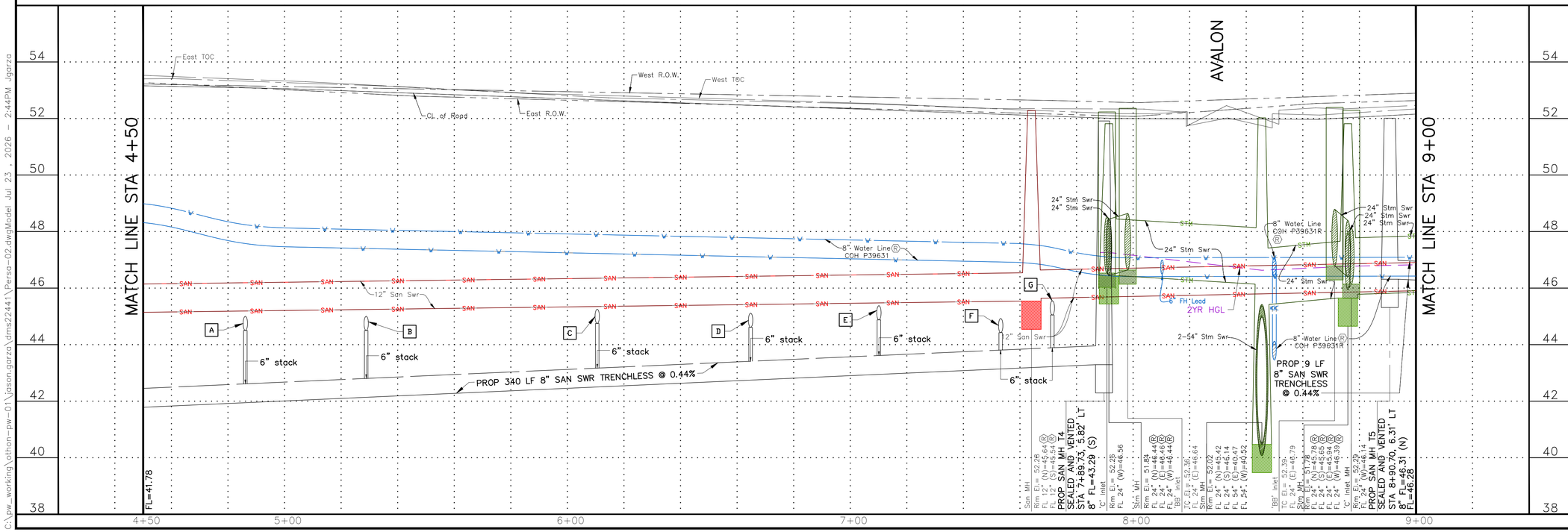
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

PERSA



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-810, SET MAG NAIL AT STA 6+53.63 EL. 52.58

CP-47, CUT 'X' IN CONC AT STA 8+33.71 EL. 52.28

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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CABLE COMPANY

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PERSA
STA 4+50 TO STA 9+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **178** OF 391	

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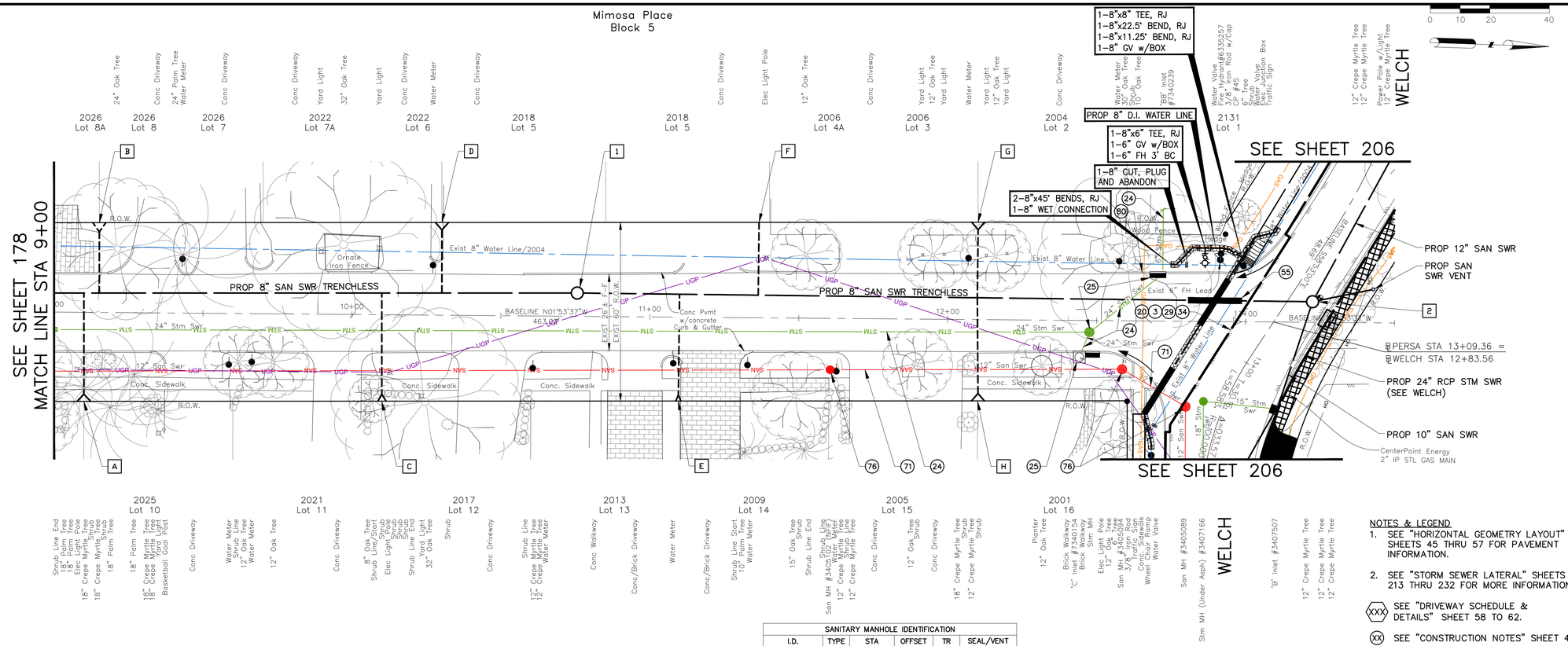
Mimosa Place
Block 5



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-45, SET MAG NAIL W/SHINNER AT
STA 12+96.73
EL. 52.59

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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CABLE COMPANY

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

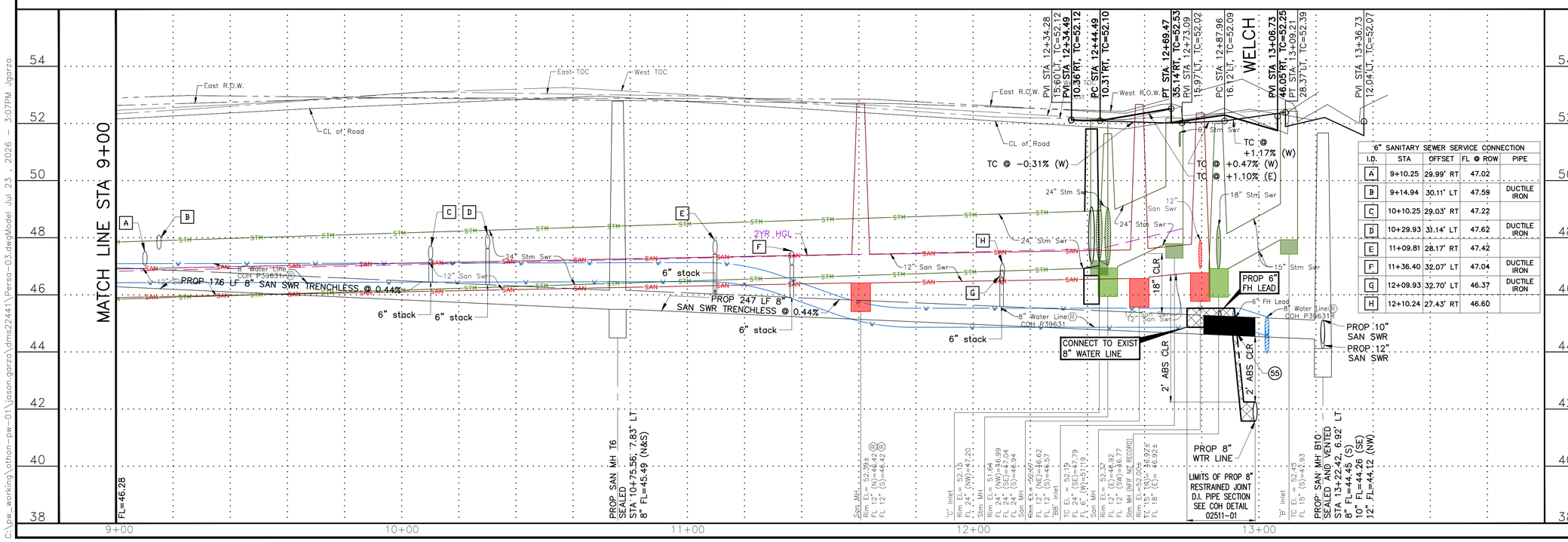
PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

SANITARY MANHOLE IDENTIFICATION

	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-T6	SAN	10+75.56	7.83' LT	52.78 MATCH	SEALED
2	MH-B10	SAN	13+22.42	6.92' LT	51.67	SEALED AND VENTED

PERSA



"6" SANITARY SEWER SERVICE CONNECTION

I.D.	STA	OFFSET	FL @ ROW	PIPE
A	9+10.25	29.99' RT	47.02	
B	9+14.94	30.11' LT	47.59	DUCTILE IRON
C	10+10.25	29.03' RT	47.22	
D	10+29.93	33.14' LT	47.62	DUCTILE IRON
E	11+09.81	28.17' RT	47.42	
F	11+36.40	32.07' LT	47.04	DUCTILE IRON
G	12+09.93	32.70' LT	46.37	DUCTILE IRON
H	12+10.24	27.43' RT	46.60	

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PERSA
STA 9+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 179 OF 391	

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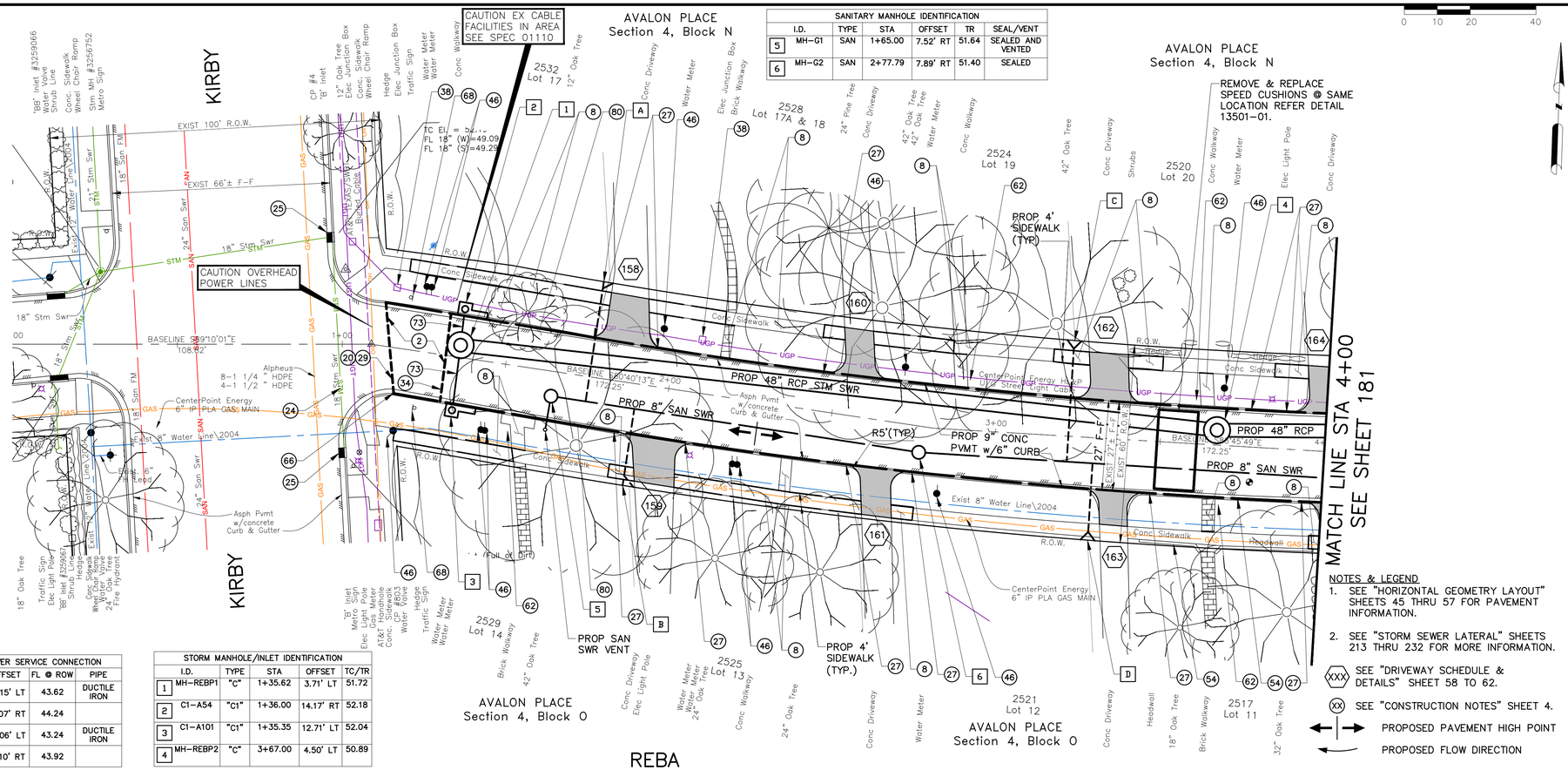

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-G1	SAN	1+65.00	7.52' RT	51.64	SEALED AND VENTED
6	MH-G2	SAN	2+77.79	7.89' RT	51.40	SEALED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+75.74	29.15' LT	43.62	DUCTILE IRON
B	1+90.48	31.07' RT	44.24	
C	3+22.36	29.06' LT	43.24	DUCTILE IRON
D	3+29.82	31.10' RT	43.92	

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR	
1	MH-REBP1	"C"	1+35.62	3.71' LT	51.72
2	C1-A54	"C1"	1+36.00	14.17' RT	52.18
3	C1-A101	"C1"	1+35.35	12.71' LT	52.04
4	MH-REBP2	"C"	3+67.00	4.50' LT	50.89

NOTES & LEGEND

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2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

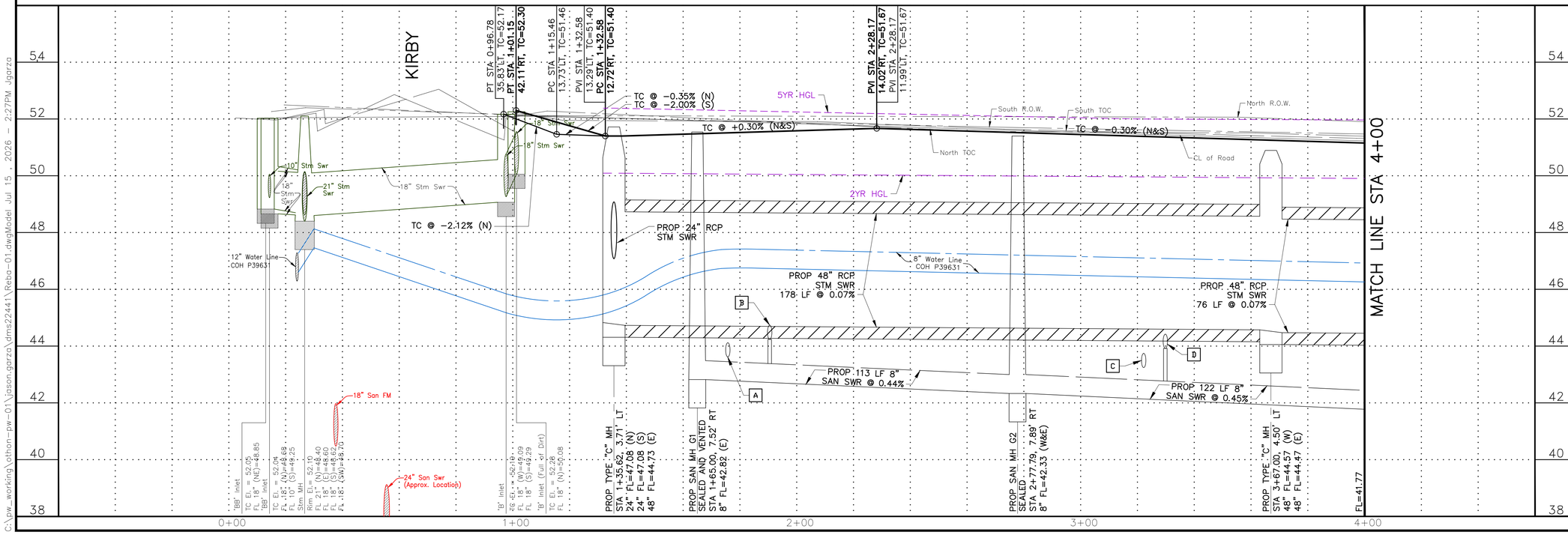
(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

REBA



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-4, SET 5/8" IRON ROD W/CAP
STA 1+1.03, 22.71' LT.
EL. 52.24

CP-803, SET MAG NAIL
STA 1+8.82
EL. 52.14

REV.	DATE	DESCRIPTION	BY

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CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

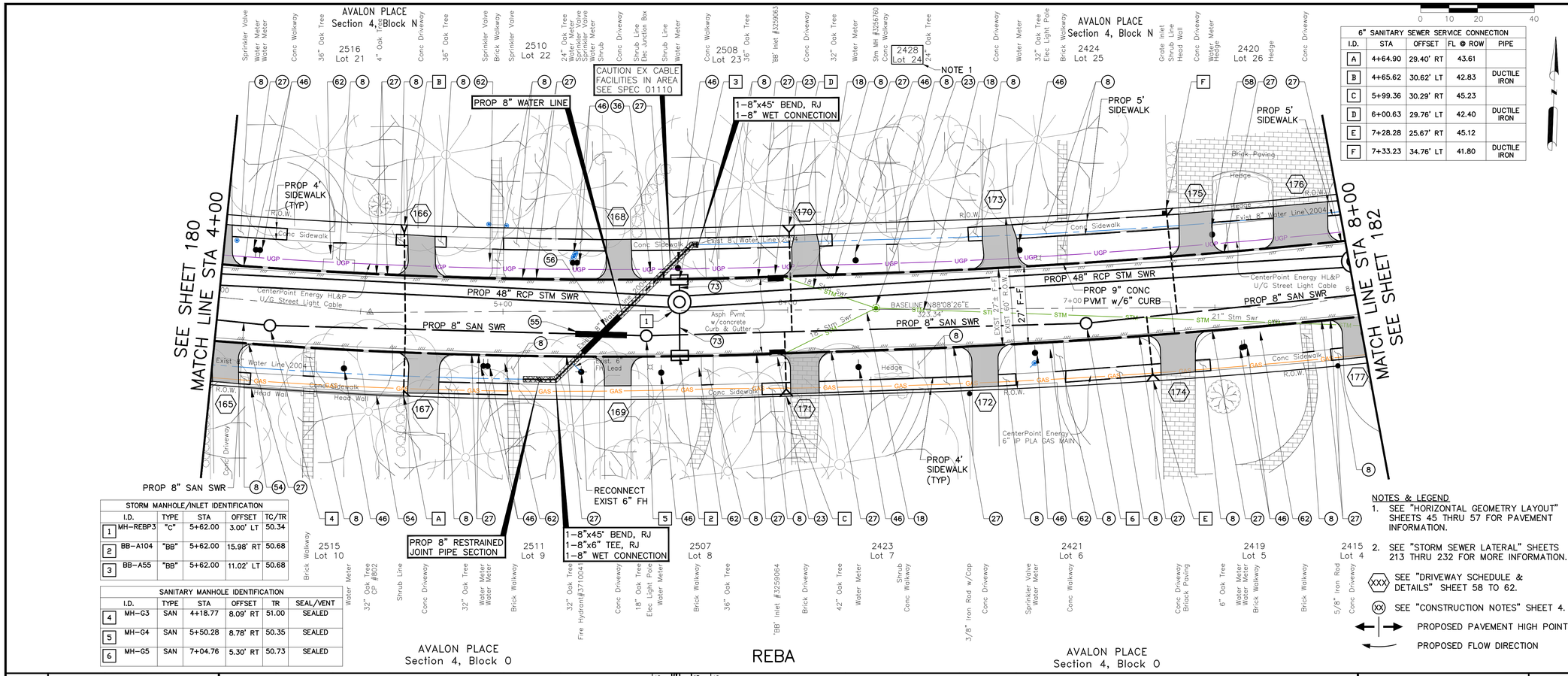
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

REBA
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **180** OF 391	

C:\pw_working\othon_pw_01\jason.garza\dms22441\Reba_01.dwgModel Jul 15, 2026 - 2:27PM jgarza



6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	4+64.90	29.40' RT	43.61	
B	4+65.62	30.62' LT	42.83	DUCTILE IRON
C	5+99.36	30.29' RT	45.23	
D	6+00.63	29.76' LT	42.40	DUCTILE IRON
E	7+28.28	25.67' RT	45.12	
F	7+33.23	34.76' LT	41.80	DUCTILE IRON

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-REBP3	"C"	5+62.00	3.00' LT	50.34
2	BB-A104	"BB"	5+62.00	15.98' RT	50.68
3	BB-A55	"BB"	5+62.00	11.02' LT	50.68

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
4	MH-G3	SAN	4+18.77	8.09' RT	51.00	SEALED
5	MH-G4	SAN	5+50.28	8.78' RT	50.35	SEALED
6	MH-G5	SAN	7+04.76	5.30' RT	50.73	SEALED

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

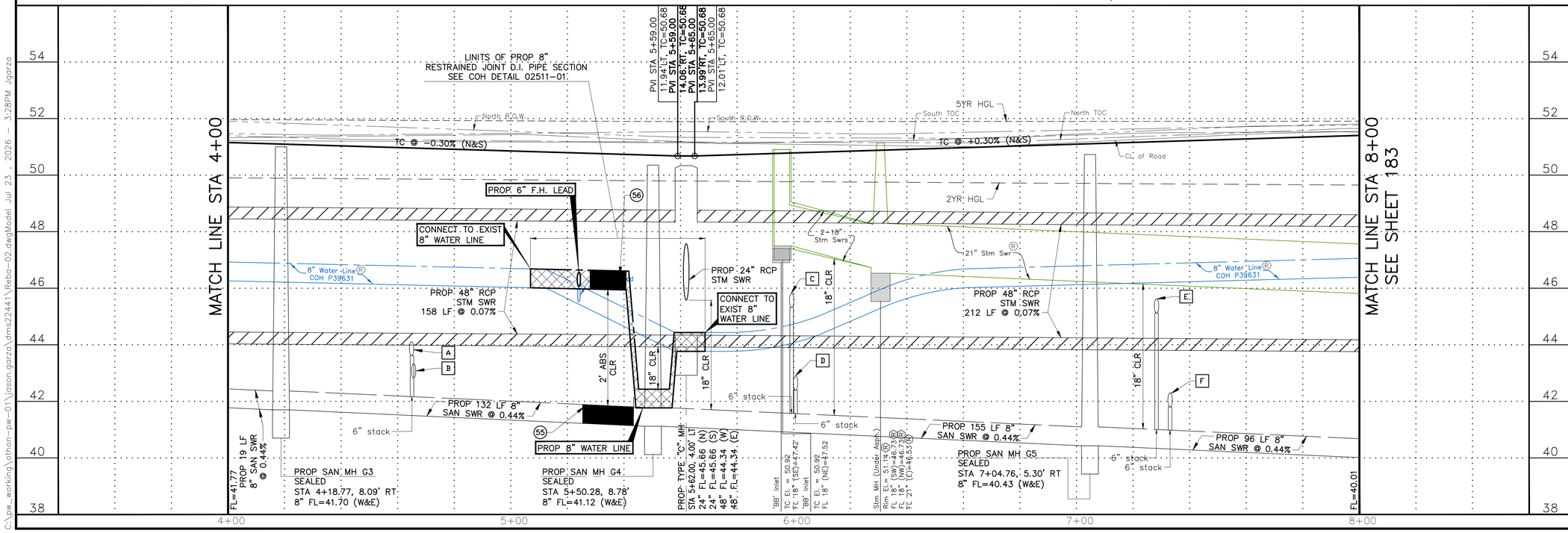
PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTE:
1. 2428 REBA DRIVE UNDER CONSTRUCTION AT TIME OF SURVEY. IF SIDEWALK IS 5' WIDE THEN CONTRACTOR TO KEEP IT AND MATCH EXISTING GRADES TO PROPOSED SIDEWALK.

TBM:
CP-802, SET MAG NAIL
STA 4+53.33
EL. 51.23



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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AMANI ENGINEERING, INC.
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TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

REBA
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **181** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Reba-02.dwgModel Jul 23, 2026 - 3:28PM jgarza

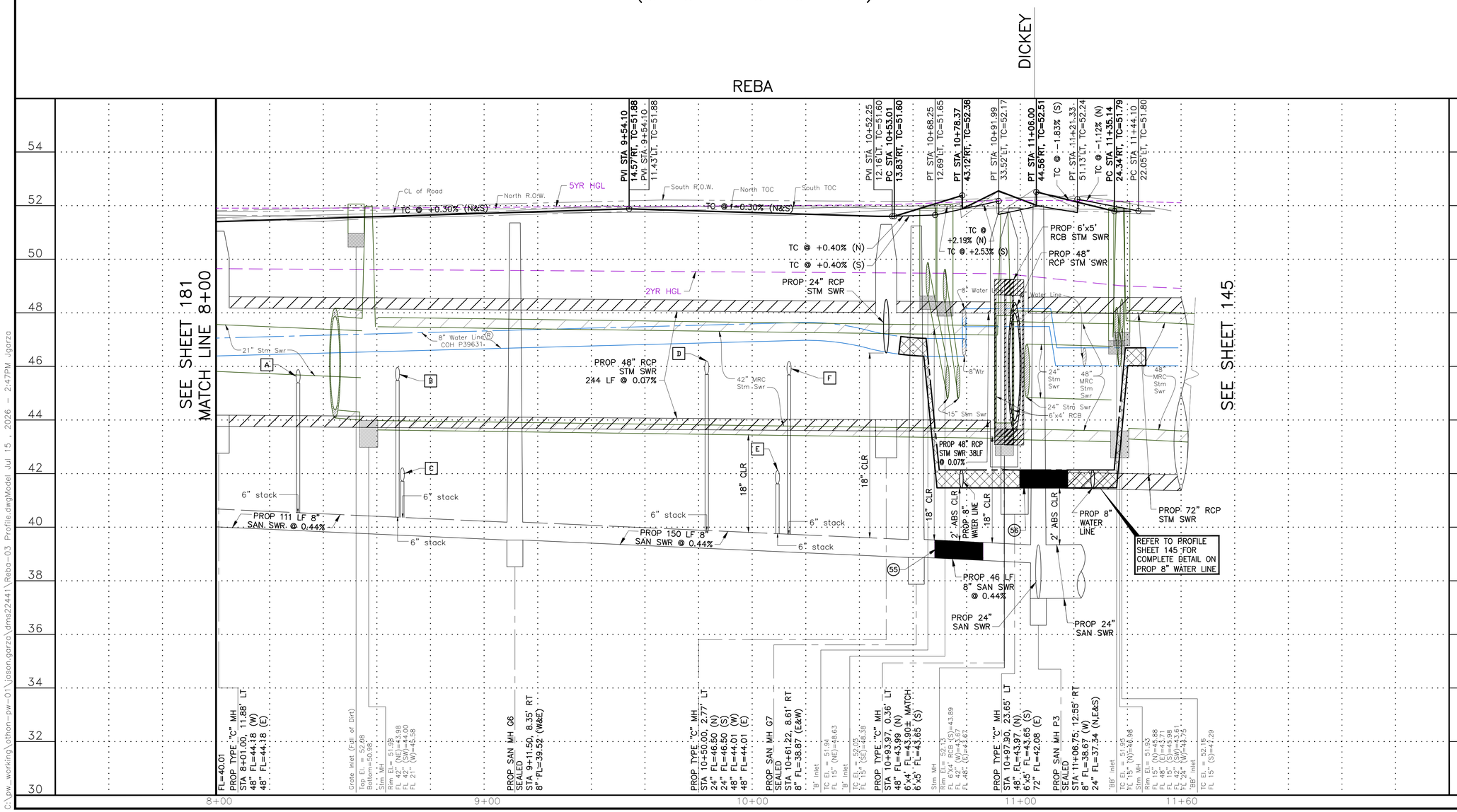
0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-15, SET MAG NAIL AT
STA 11+00
EL. 52.80

(SEE SHEET 182 FOR PLAN)



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

REBA/FAIRVIEW PROFILE
STA 8+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **183** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Reba-03 Profile.dwgModel Jul 15 , 2026 - 2:47PM Jgarza

0 10 20 40

BENCHMARK:

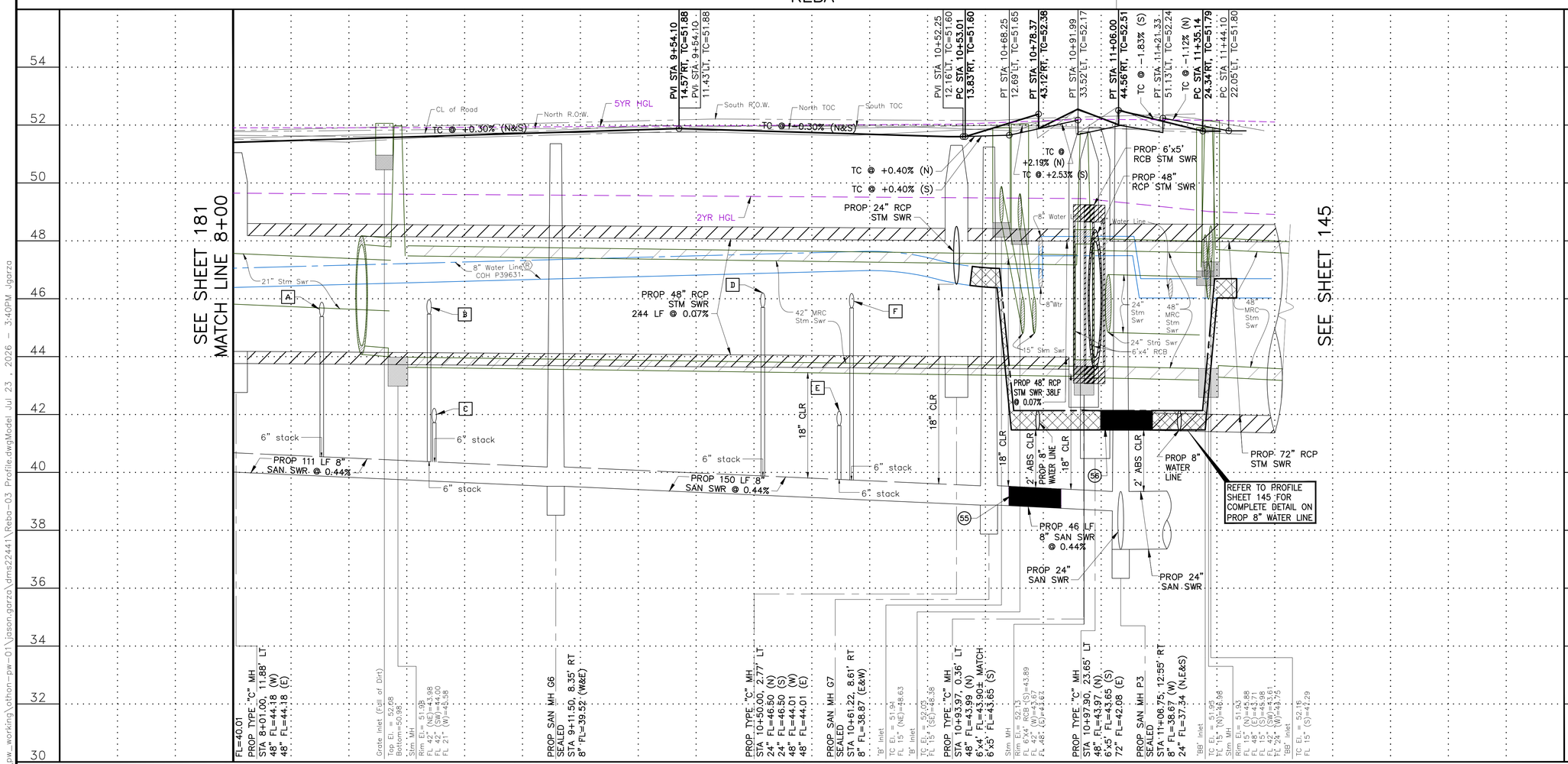
CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-15, SET MAG NAIL AT
STA 11+00
EL. 52.80

(SEE SHEET 182 FOR PLAN)

REBA

DICKEY



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

REBA/FAIRVIEW PROFILE
STA 8+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **183** OF 391	

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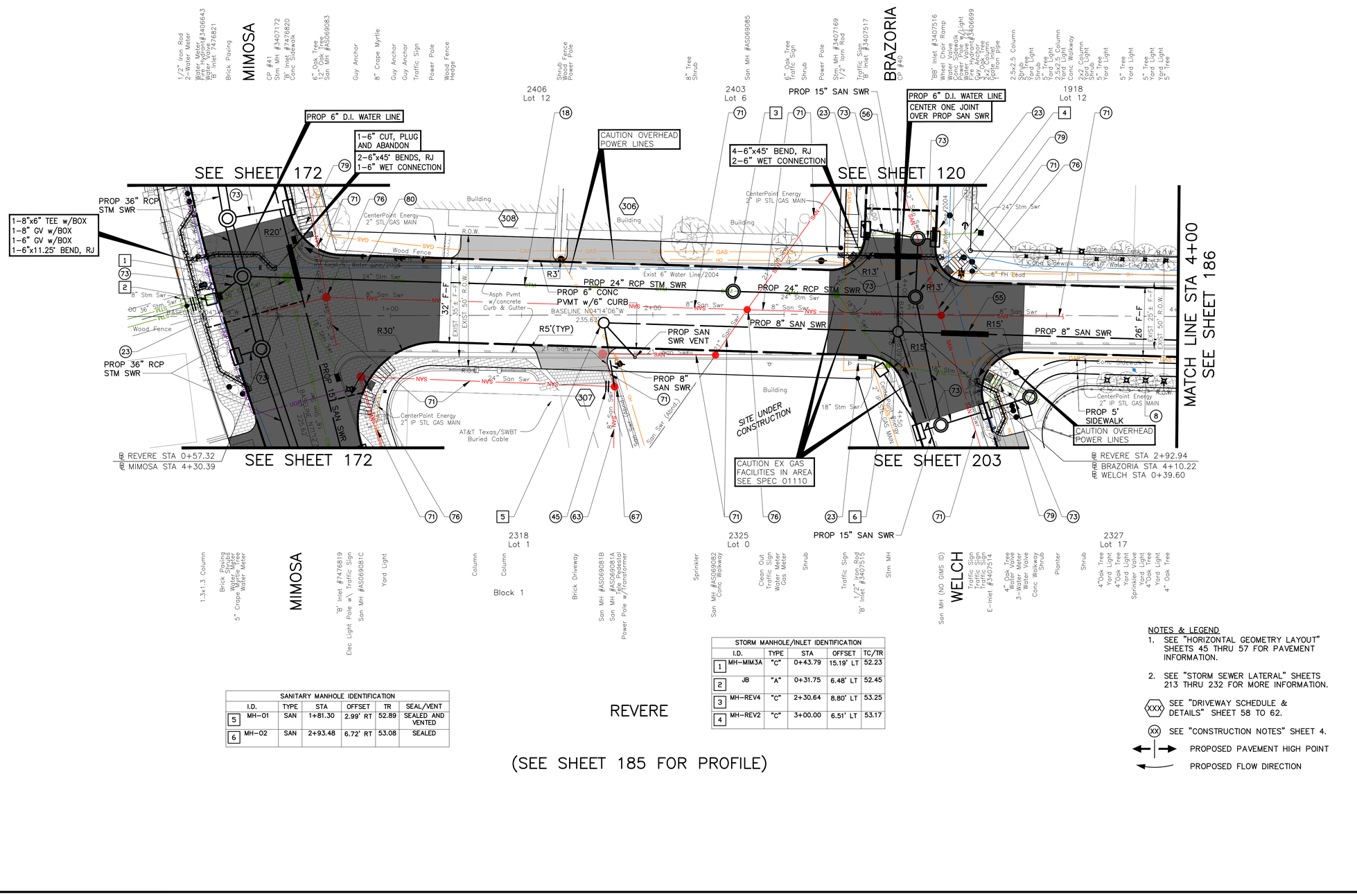
MIMOSA
BRAZORIA
WELCH
REVERE
PROP 6" D.I. WATER LINE
1-6" CUT, PLUG AND ABANDON
2-6"x45' BENDS, RJ
1-6" WET CONNECTION
CAUTION OVERHEAD POWER LINES
4-6"x45' BEND, RJ
2-6" WET CONNECTION
PROP 6" D.I. WATER LINE
CENTER ONE JOINT OVER PROP SAN SWR
SEE SHEET 172
SEE SHEET 120
SEE SHEET 172
SEE SHEET 203
MATCH LINE STA 4+00
SEE SHEET 186
PROP 36" RCP STM SWR
1-8"x6" TEE w/BOX
1-8" GV w/BOX
1-6" GV w/BOX
1-6"x11.25' BEND, RJ
PROP 15" SAN SWR
PROP 24" RCP STM SWR
PROP 6" CONC PVMT w/6" CURB
PROP 8" SAN SWR
PROP SAN SWR VENT
PROP 8" SAN SWR
PROP 5' SIDEWALK
CAUTION OVERHEAD POWER LINES
SITE UNDER CONSTRUCTION
CAUTION EX GAS FACILITIES IN AREA SEE SPEC 01110
2406 Lot 12
2403 Lot 6
1918 Lot 12
2318 Lot 1
2325 Lot 0
2327 Lot 17
Block 1
R20'
R30'
R3'
R5'(TYP)
R13'
R15'
32' F-F
26' F-F
EXIST 35'± F-F
EXIST 50' R.O.W.
EXIST 25'± F-F
CenterPoint Energy 2" IP STL GAS MAIN
AT&T Texas/SWBT Buried Cable
Exist 6" Water Line/2004
Asph Pvmt w/concrete Curb & Gutter
Wood Fence
Brick Paving
Conc Sidewalk
Building
Shrub
Yard Light
Traffic Sign
Power Pole
Guy Anchor
Crape Myrtle
Oak Tree
Water Meter
Water Valve
Fire Hydrant
Conc Walkway
Column
Planter
Sprinkler
Clean Out
Gas Meter
Stm MH
Brick Driveway
Elec Light Pole w\ Traffic Sign
Power Pole w/Transformer
Conc Curb Inlet
Iron Rod
Wheel Chair Ramp
Valve
Light
Meter
Inlet
Tree
Column
Light
Oak Tree
Light
Valve
Meter
Valve
Walkway
Shrub
Planter
Shrub
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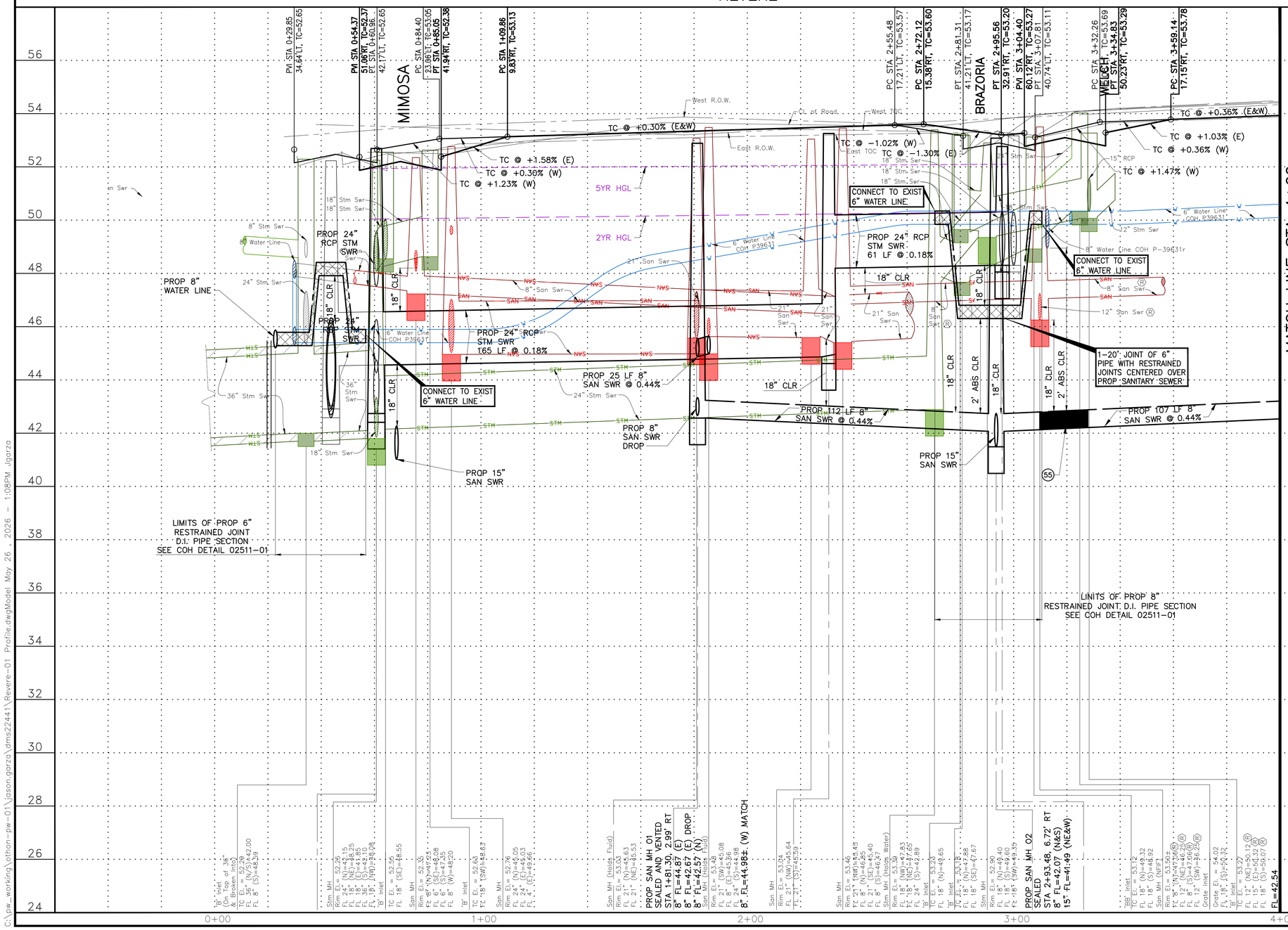
0 10 20 40

(SEE SHEET 184 FOR PLAN)

REVERE



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BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-40, SET MAG NAIL AT
STA 2+92.94
EL. 53.72

CP-41, SET MAG NAIL AT
STA 0+57.31
EL. 52.55

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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CABLE COMPANY

OTHON

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11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

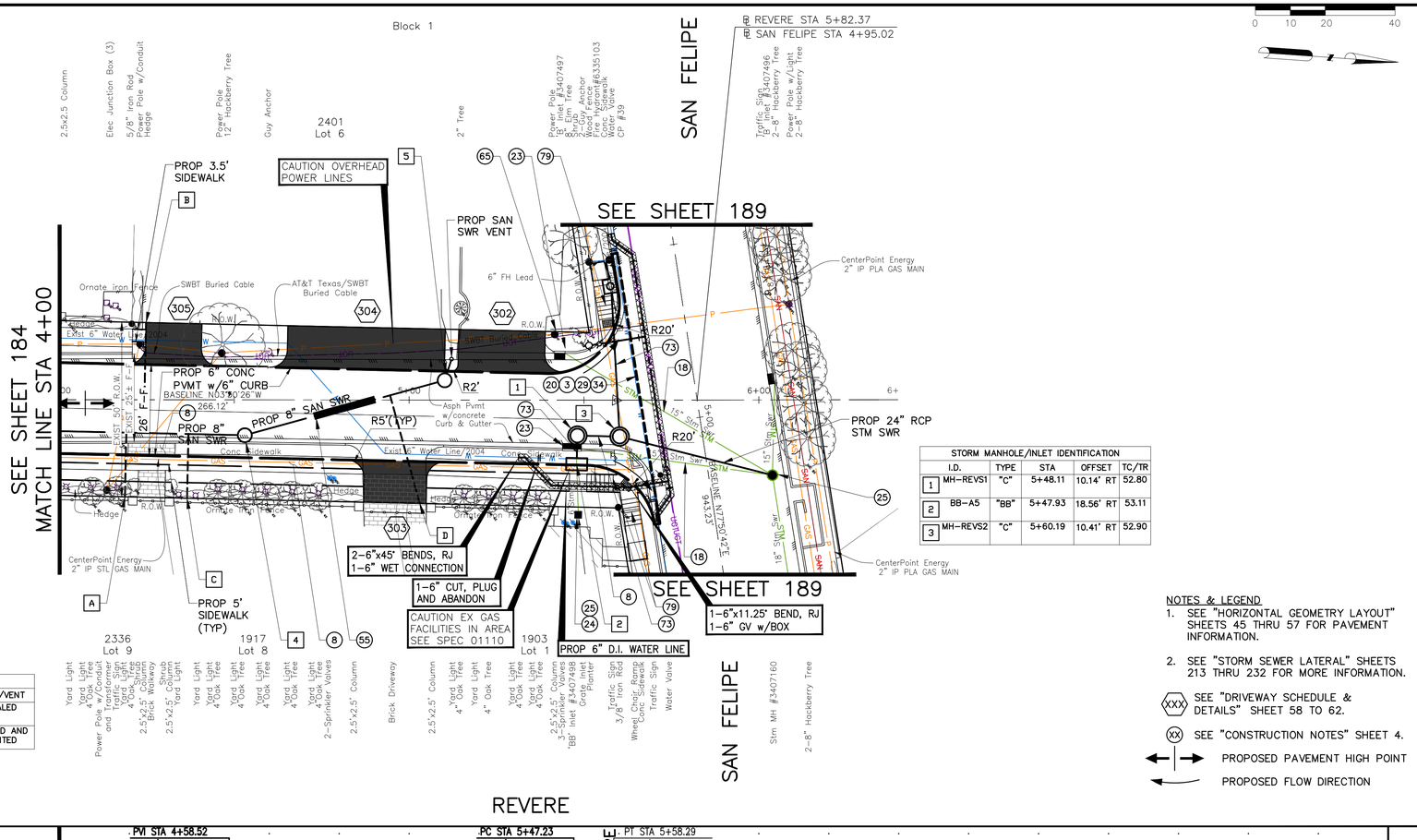
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

REVERE PROFILE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **185** OF 391	



6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+18.76	27.75' RT	47.94
B	4+24.76	22.09' LT	47.72
C	4+36.52	28.13' RT	48.50
D	5+03.06	29.58' RT	45.20

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
4	MH-03	SAN	4+53.02	10.11' RT	53.32	SEALED
5	MH-04	SAN	5+10.17	5.64' LT	53.20	SEALED AND VENTED

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-REVS1	"C"	5+48.11	10.14' RT	52.80
2	BB-A5	"BB"	5+47.93	18.56' RT	53.11
3	MH-REVS2	"C"	5+60.19	10.41' RT	52.90

NOTES & LEGEND

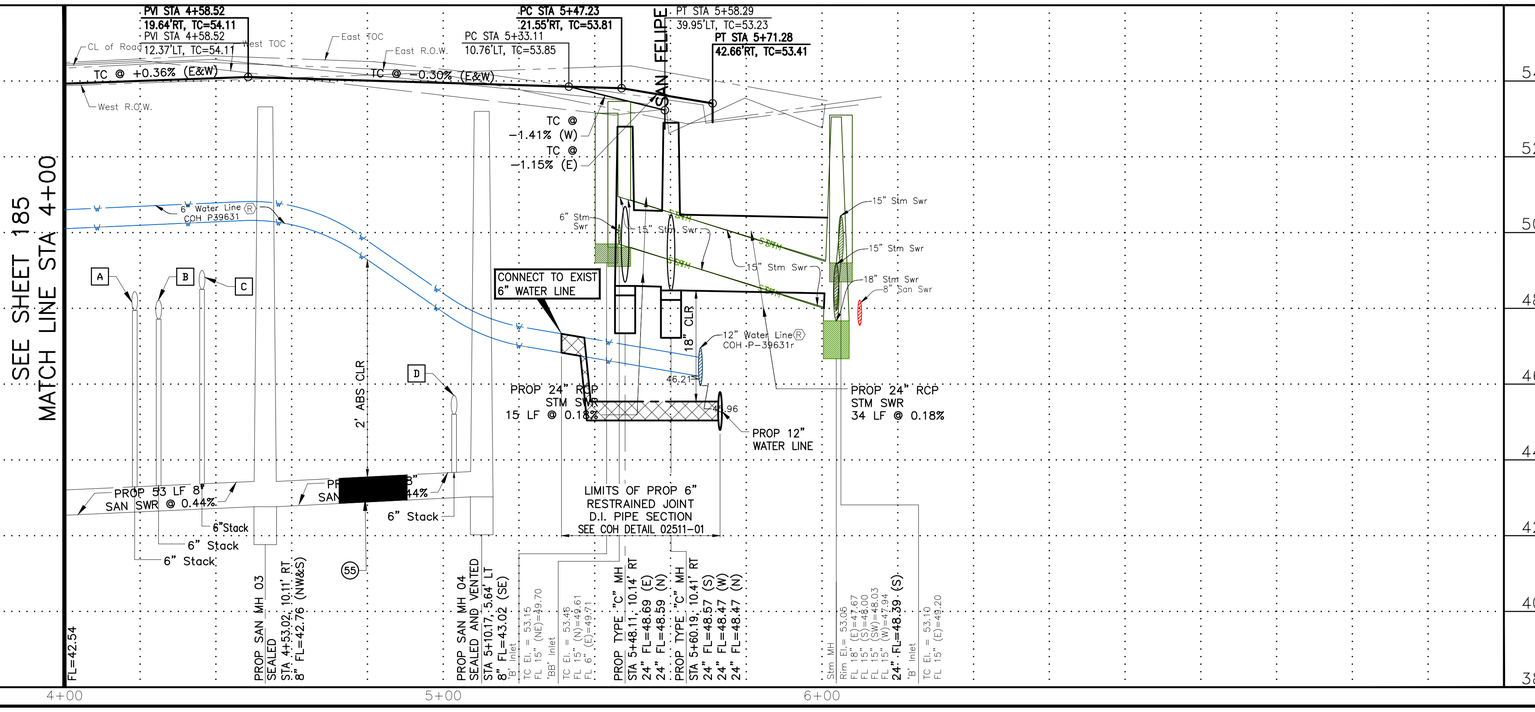
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-39 AT
STA 5+59.07
EL. 53.27

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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STATE OF TEXAS
MAUREEN GONZALEZ
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LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

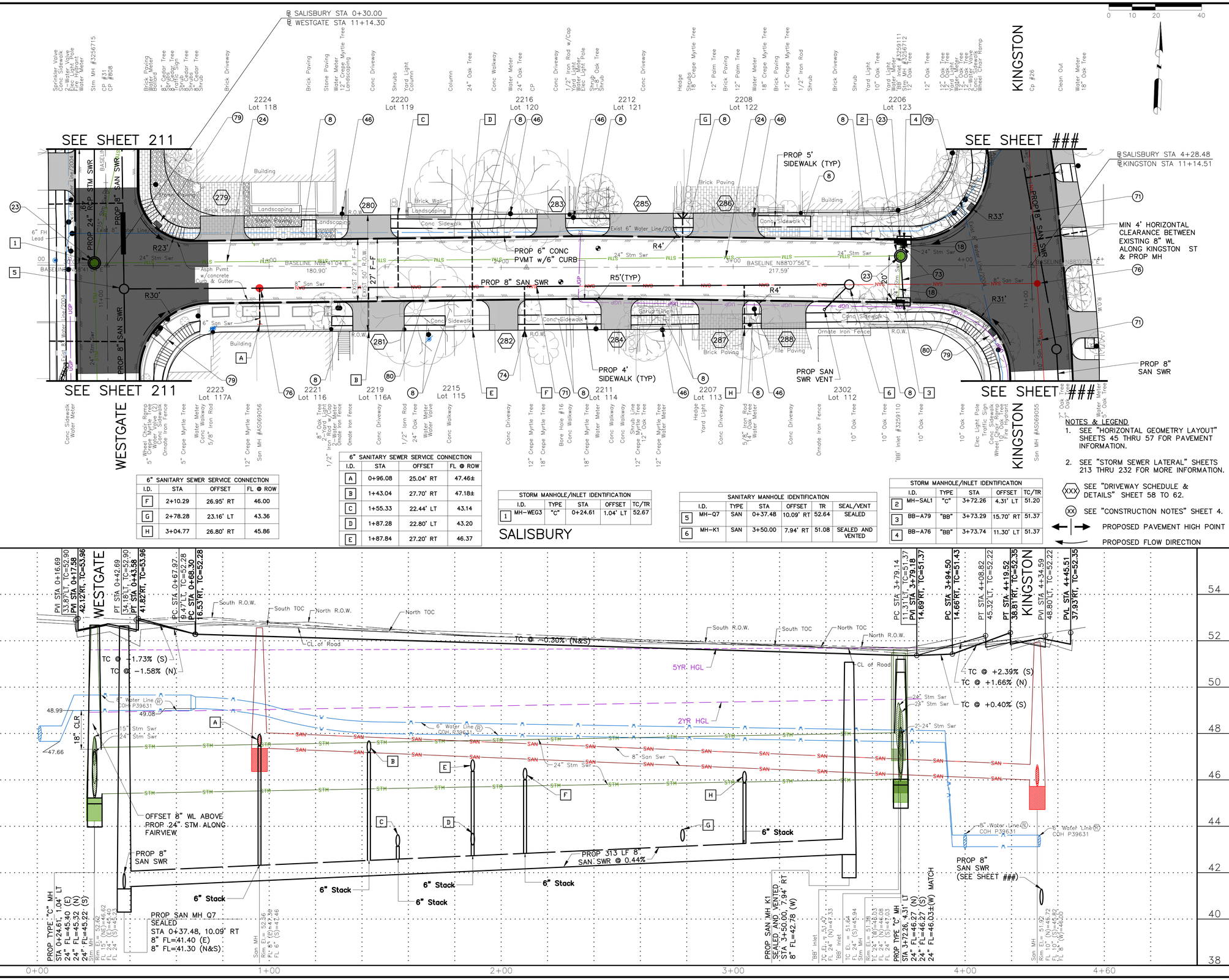
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

REVERE
STA 4+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **186** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Revere-02.dwgModel May 27, 2026 - 10:17AM Jgarza



6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	0+96.08	25.04' RT	47.46±
B	1+43.04	27.70' RT	47.18±
C	1+55.33	22.44' LT	43.14
D	1+87.28	22.80' LT	43.20
E	1+87.84	27.20' LT	46.37

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
F	2+10.29	26.95' RT	46.00
G	2+78.28	23.16' LT	43.36
H	3+04.77	26.80' RT	45.86

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-WEG3	"C"	0+24.61	1.04' LT	52.67

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-Q7	SAN	0+37.48	10.09' RT	52.64	SEALED
6	MH-K1	SAN	3+50.00	7.94' RT	51.08	SEALED AND VENTED

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
2	MH-SAL1	"C"	3+72.26	4.31' LT	51.20
3	BB-A79	"BB"	3+73.29	15.70' RT	51.37
4	BB-A76	"BB"	3+73.74	11.30' LT	51.37

NOTES & LEGEND

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(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-26, SET MAG NAIL W/SHINNER AT STA 4+28.48 EL. 52.02

CP-31, SET MAG NAIL W/SHINNER AT STA 0+30, 31.93 LT EL. 52.71

CP-808, SET MAG NAIL AT STA 0+30, EL. 52.75

NOTES

1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown. (Gas service lines are not shown.) This signature not to be used for conflict verification. Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities – not to be used for conflict verification.) Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PUBLIC SURVEYOR
07/29/2026

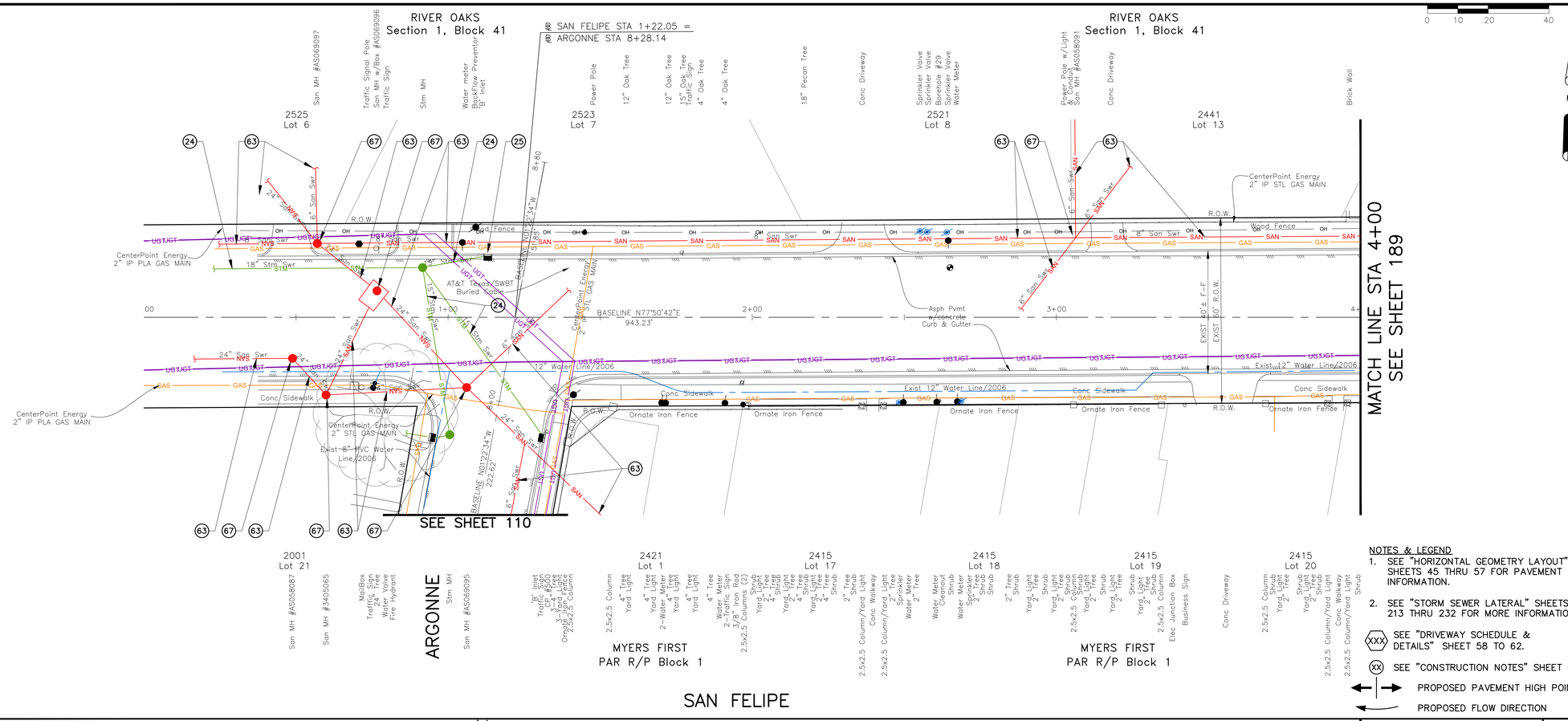
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

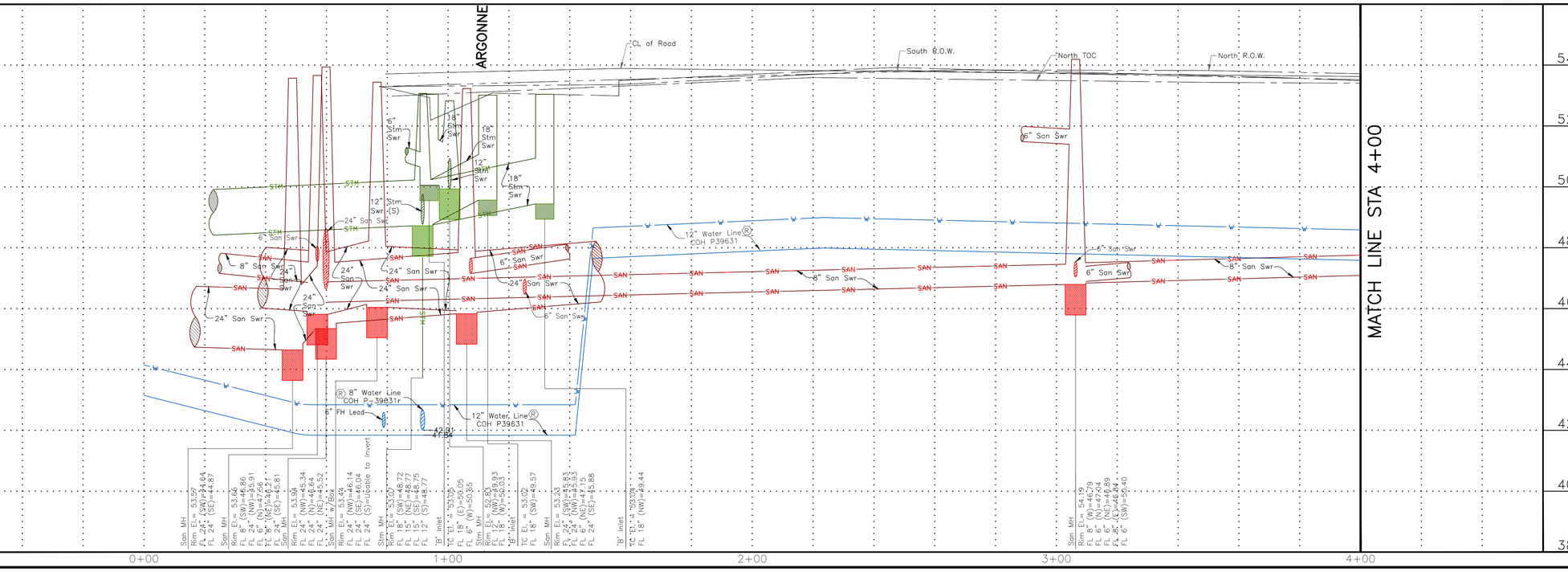
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SALISBURY
STA 0+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **187** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Salisbury-01.dwgModel Jul 24, 2026 - 9:50AM Jgarza





NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-500,
STA 1+34.94, 23.54' RT.
EL. 52.89

REV.	DATE	DESCRIPTION	BY

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **188** OF 391	

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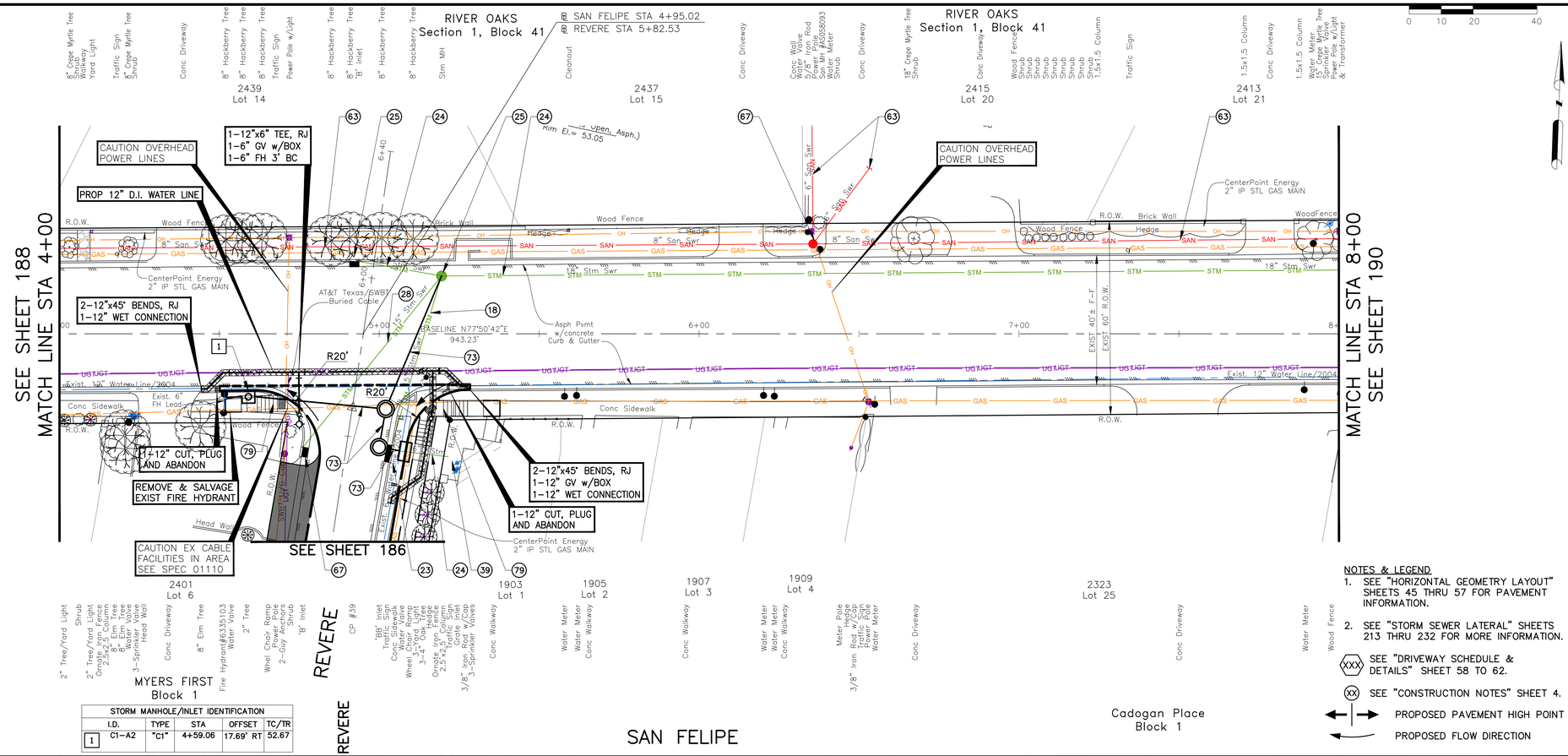
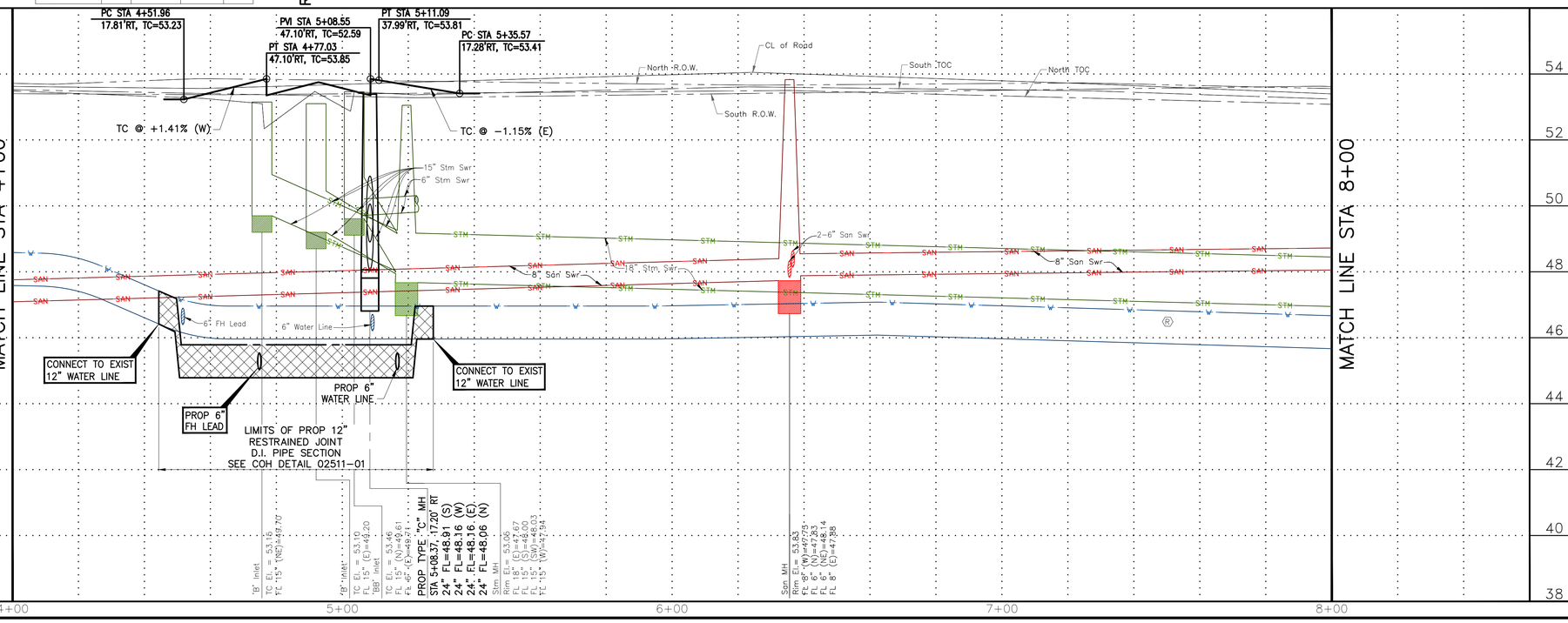


STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 C1-A2	"C1"	4+59.06	17.69' RT	52.67



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-39
STA 4+91.57, 23.05' RT.
EL. 53.27

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.
(XX) SEE "CONSTRUCTION NOTES" SHEET 4.
PROPOSED PAVEMENT HIGH POINT
PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TBPE REG NO: F-4528

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 4+00 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 189 OF 391	

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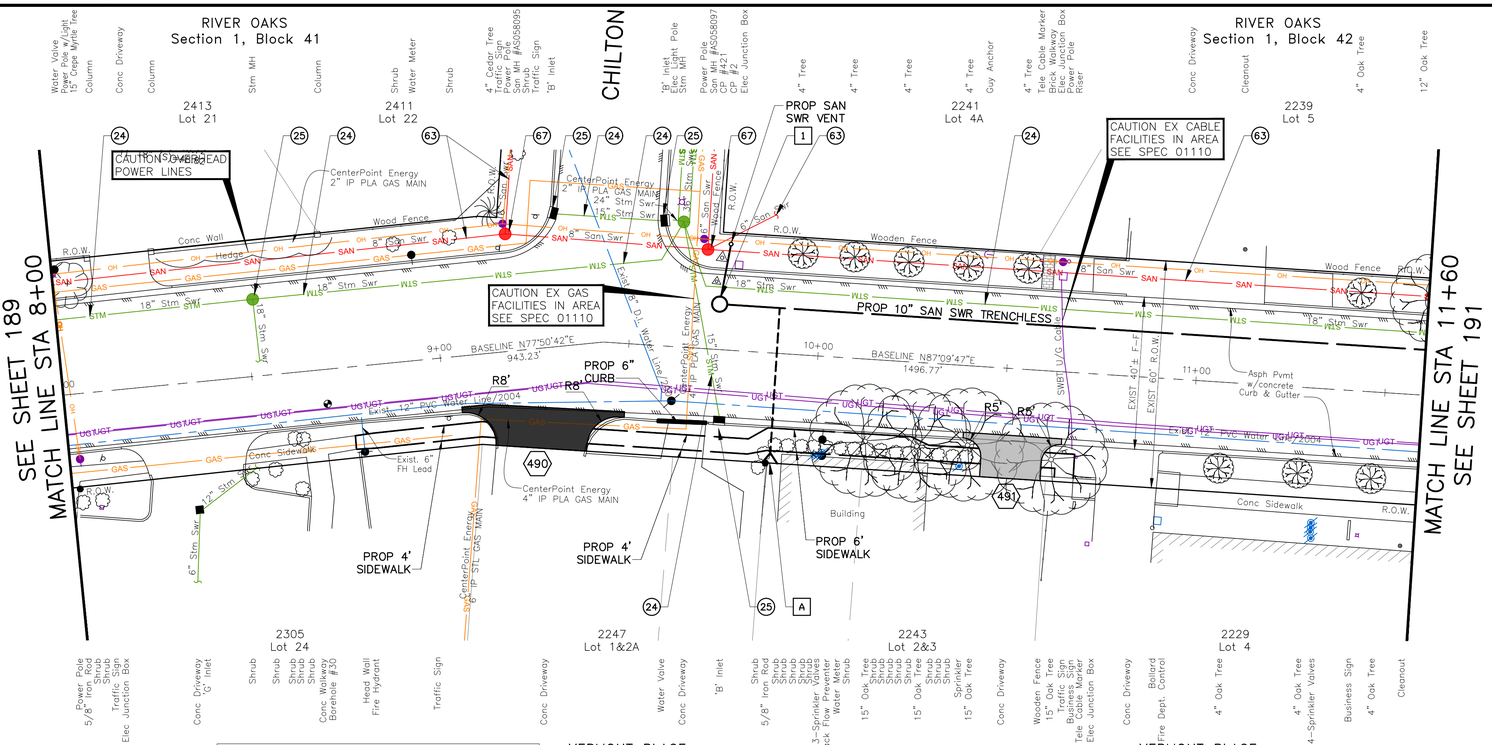


SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-A1	SAN	9+73.23	11.98' LT	52.31	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	9+89.12	29.02' RT	47.02	DUCTILE IRON

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

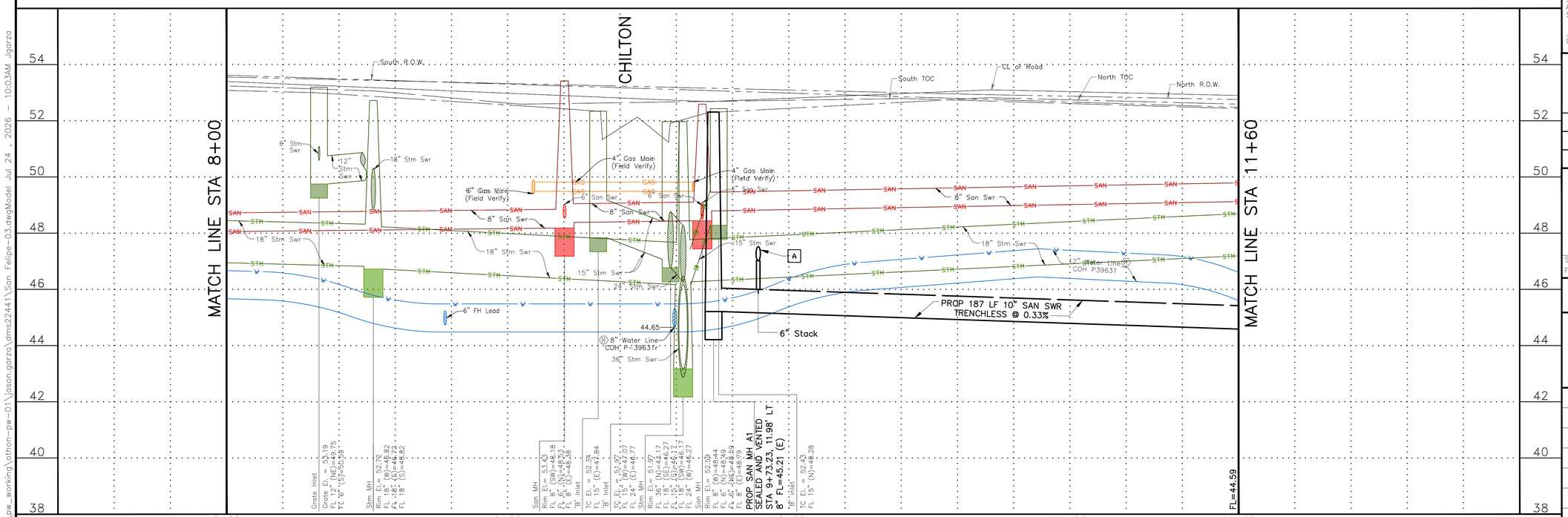
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-421, SET MAG NAIL AT STA 9+72.07, 17.91' LT. EL. 52.09

SAN FELIPE



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REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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CABLE COMPANY

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TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

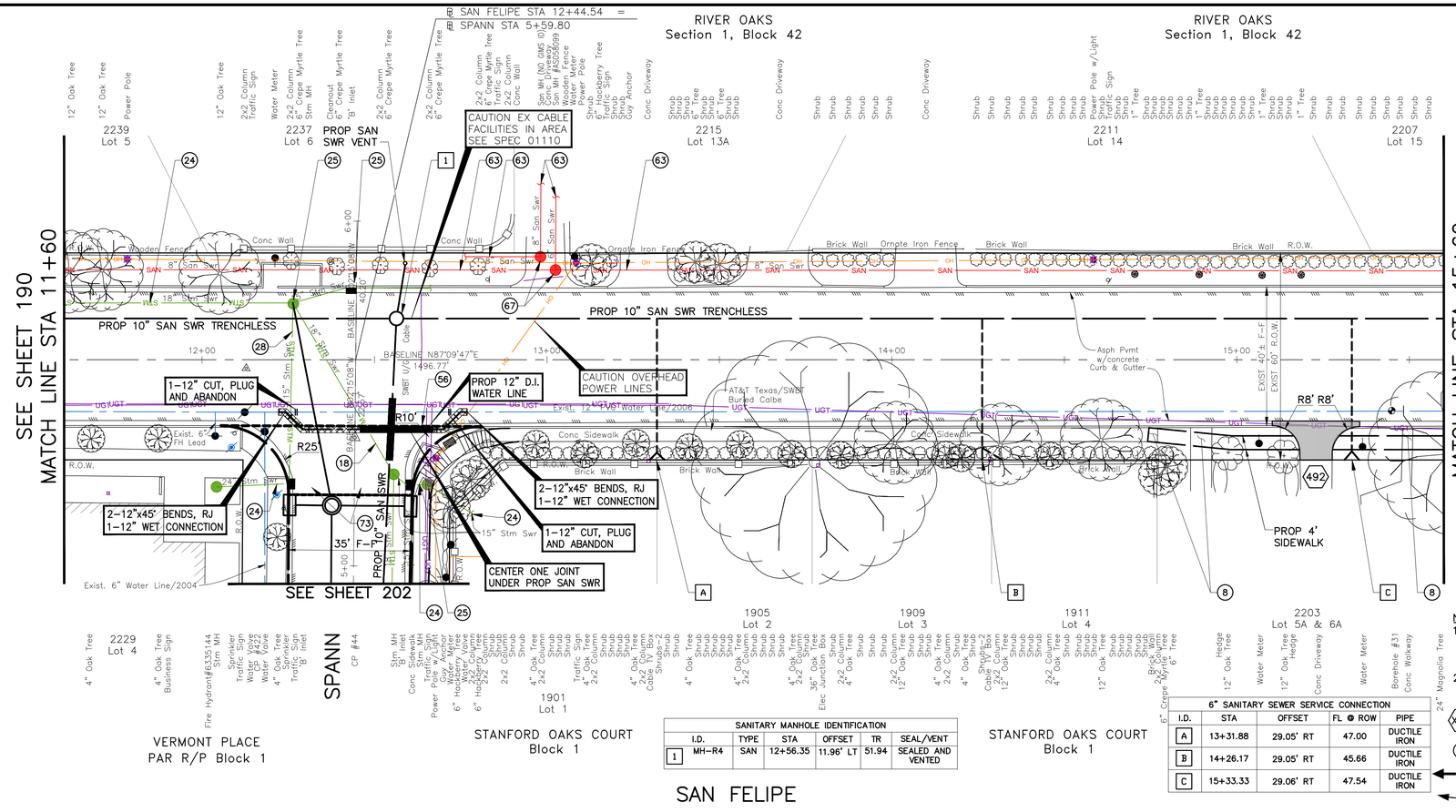
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 8+00 TO STA 11+60

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **190** OF 391	



SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1 MH-R4	SAN	12+56.35	11.96' LT	51.94	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	13+31.88	29.05' RT	47.00	DUCTILE IRON
B	14+26.17	29.05' RT	45.66	DUCTILE IRON
C	15+33.33	29.06' RT	47.54	DUCTILE IRON

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
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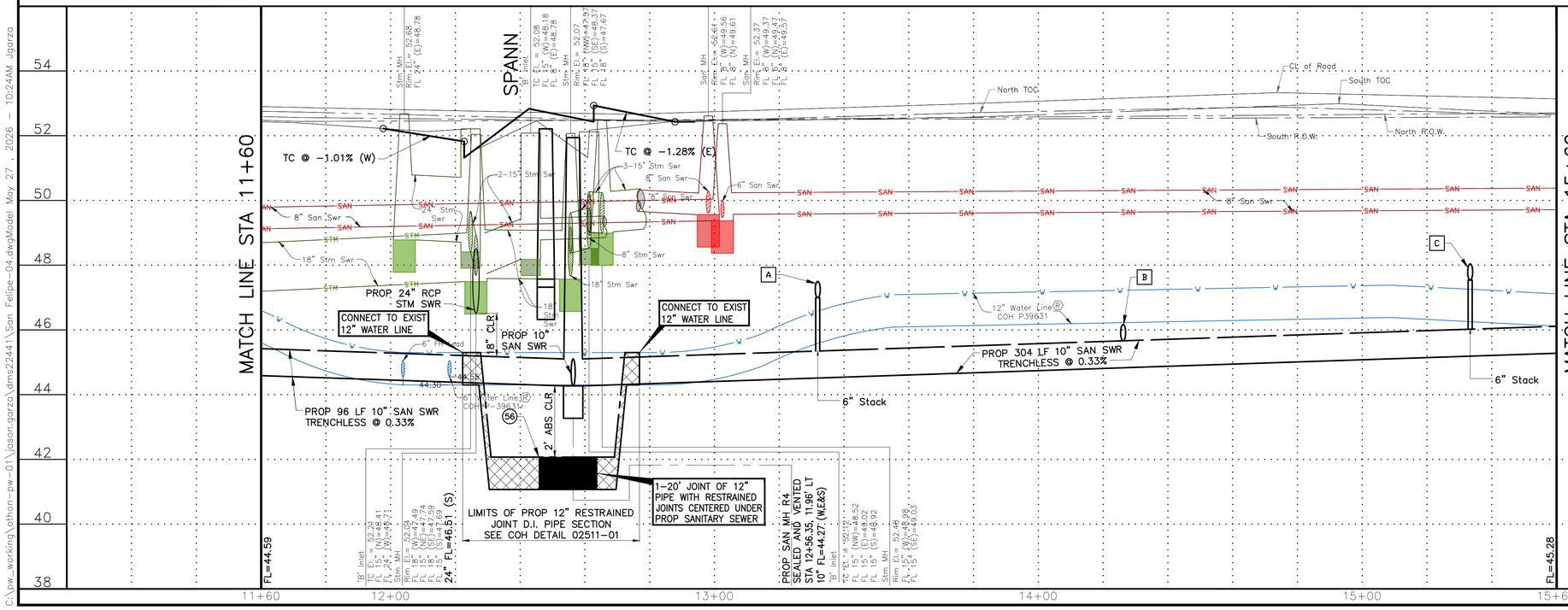
(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-44, SET MAG NAIL W/SHINER AT STA 12+44.31, 22.57' RT. EL. 52.35

CP-422, SET MAG NAIL AT STA 12+12.80, 2.49' RT. EL. 52.65

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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TBPE REG NO: F-4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 11+60 TO STA 15+60

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **191** OF 391	

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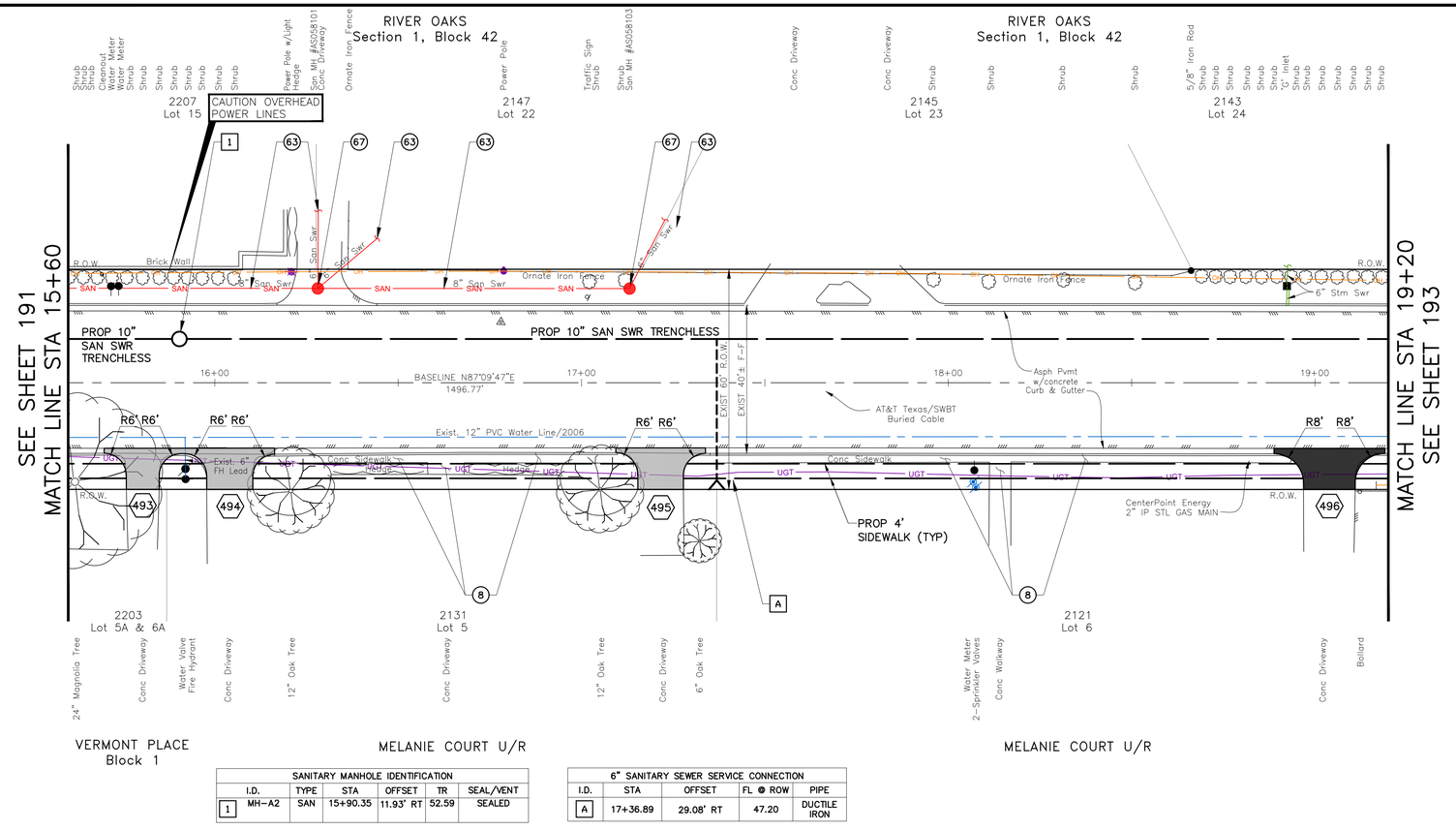
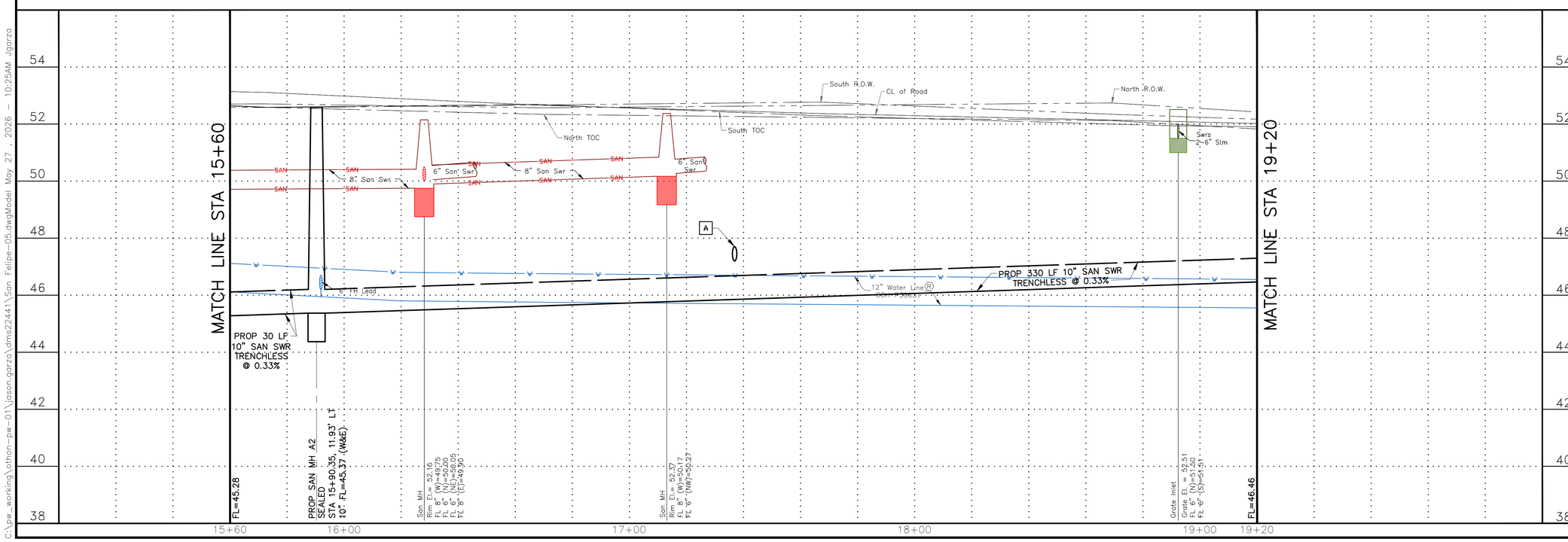


SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-A2	SAN	15+90.35	11.93' RT	52.59	SEALED

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	17+36.89	29.08' RT	47.20	DUCTILE IRON

SAN FELIPE



NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-425, SET MAG NAIL W/SHINER AT STA 16+78.43, 16.59' LT. EL. 52.26

REV.	DATE	DESCRIPTION	BY

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 15+60 TO STA 19+20

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **192** OF 391	

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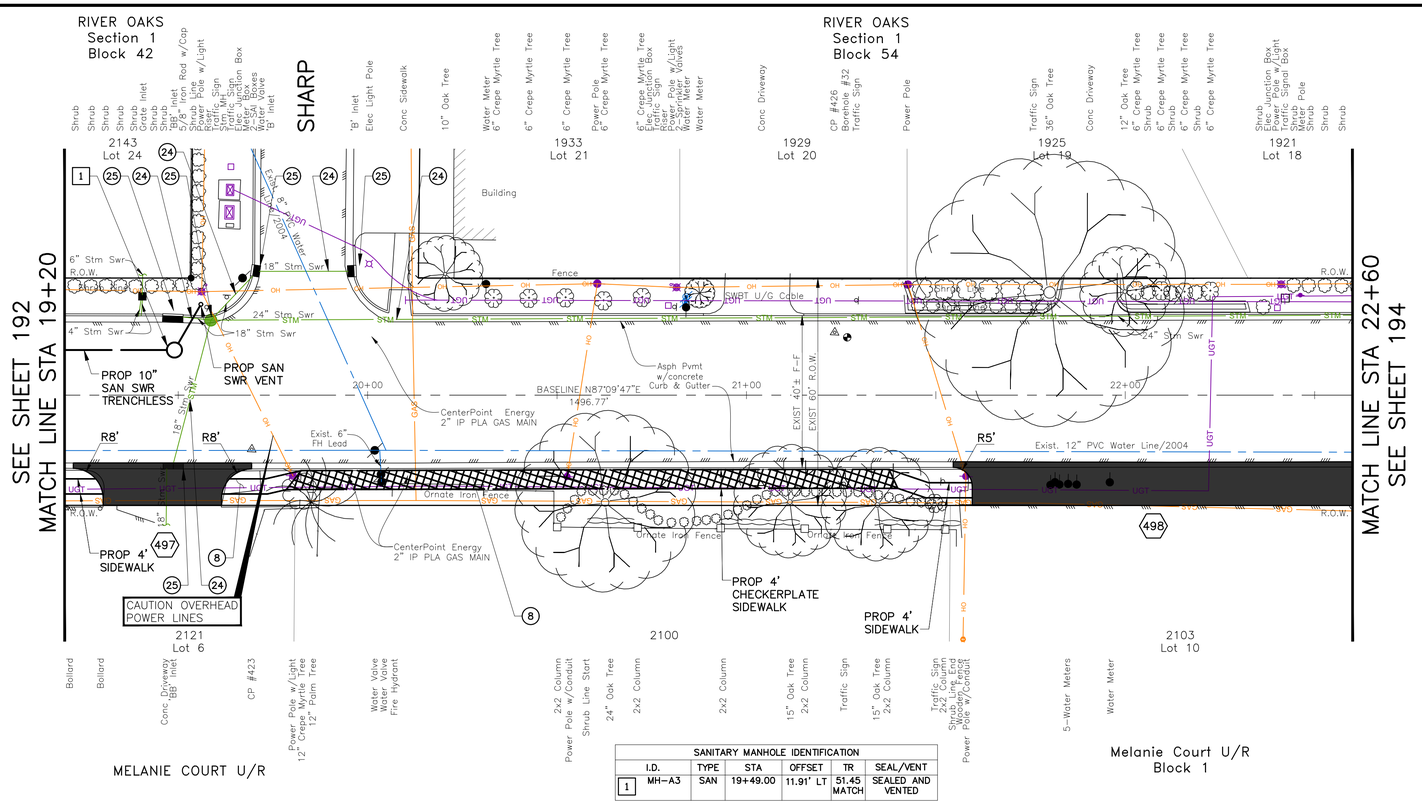

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-A3	SAN	19+49.00	11.91' LT	51.45 MATCH	SEALED AND VENTED

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-423, SET MAG NAIL AT
STA 19+69.41, 14.31' RT.
EL. 51.62

CP-426, SET MAG NAIL AT
STA 21+23.29, 16.55' LT.
EL. 52.21

NOTES & LEGEND

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PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

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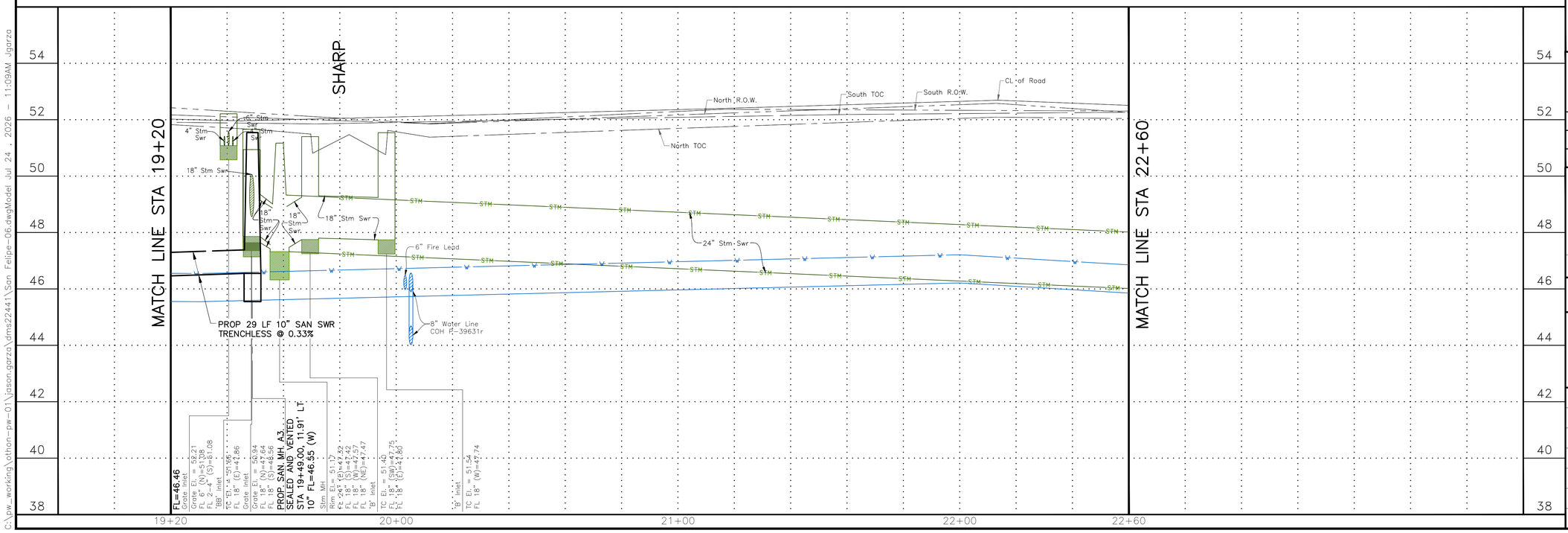
CABLE COMPANY

SAN FELIPE



WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **193** OF 391

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 19+20 TO STA 22+60

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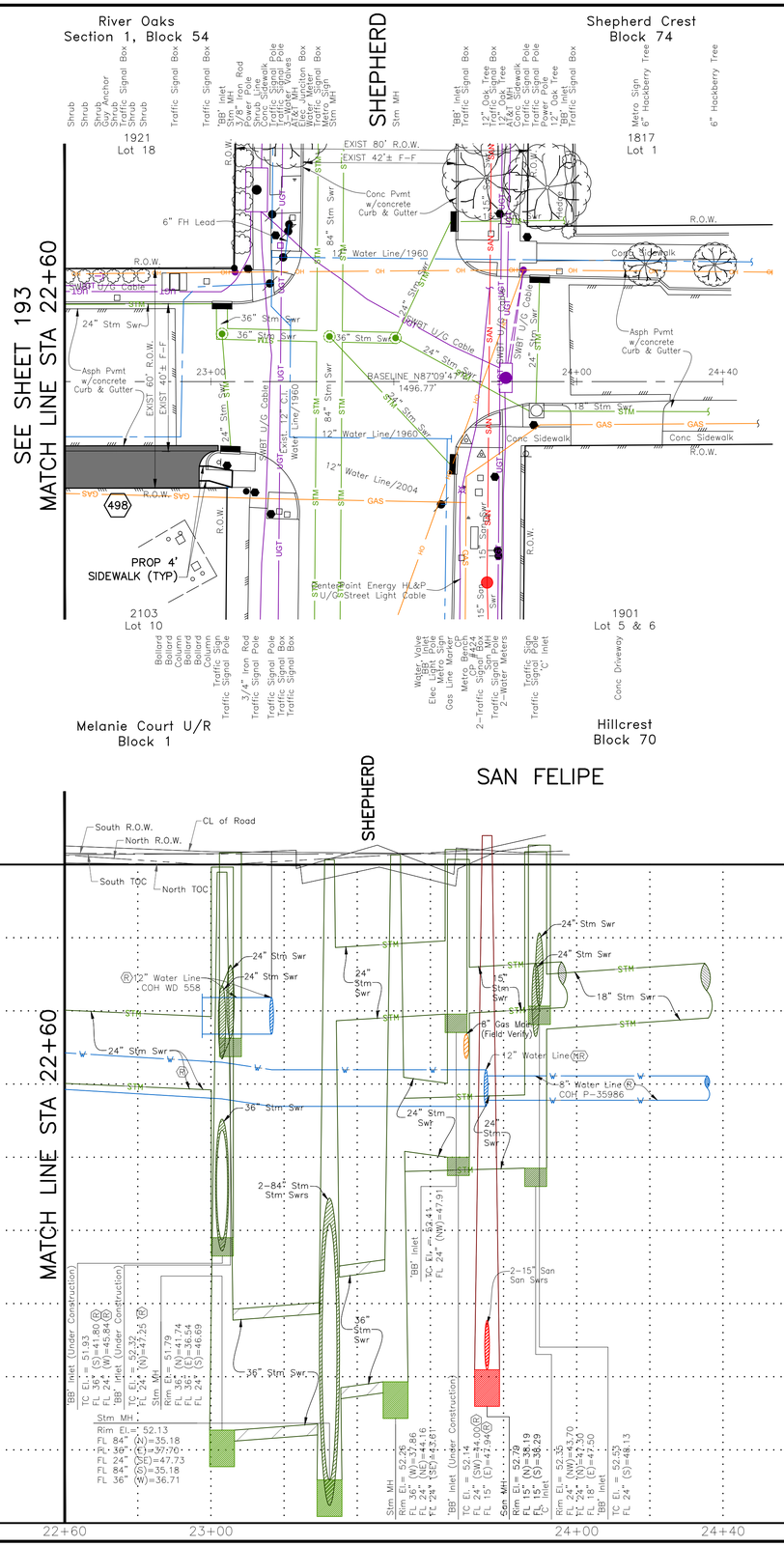

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-424, SET CUT 'X' IN CONC AT STA 23+73.94, 19.94' RT. EL. 52.42

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN FELIPE
STA 22+60 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **194** OF 391	

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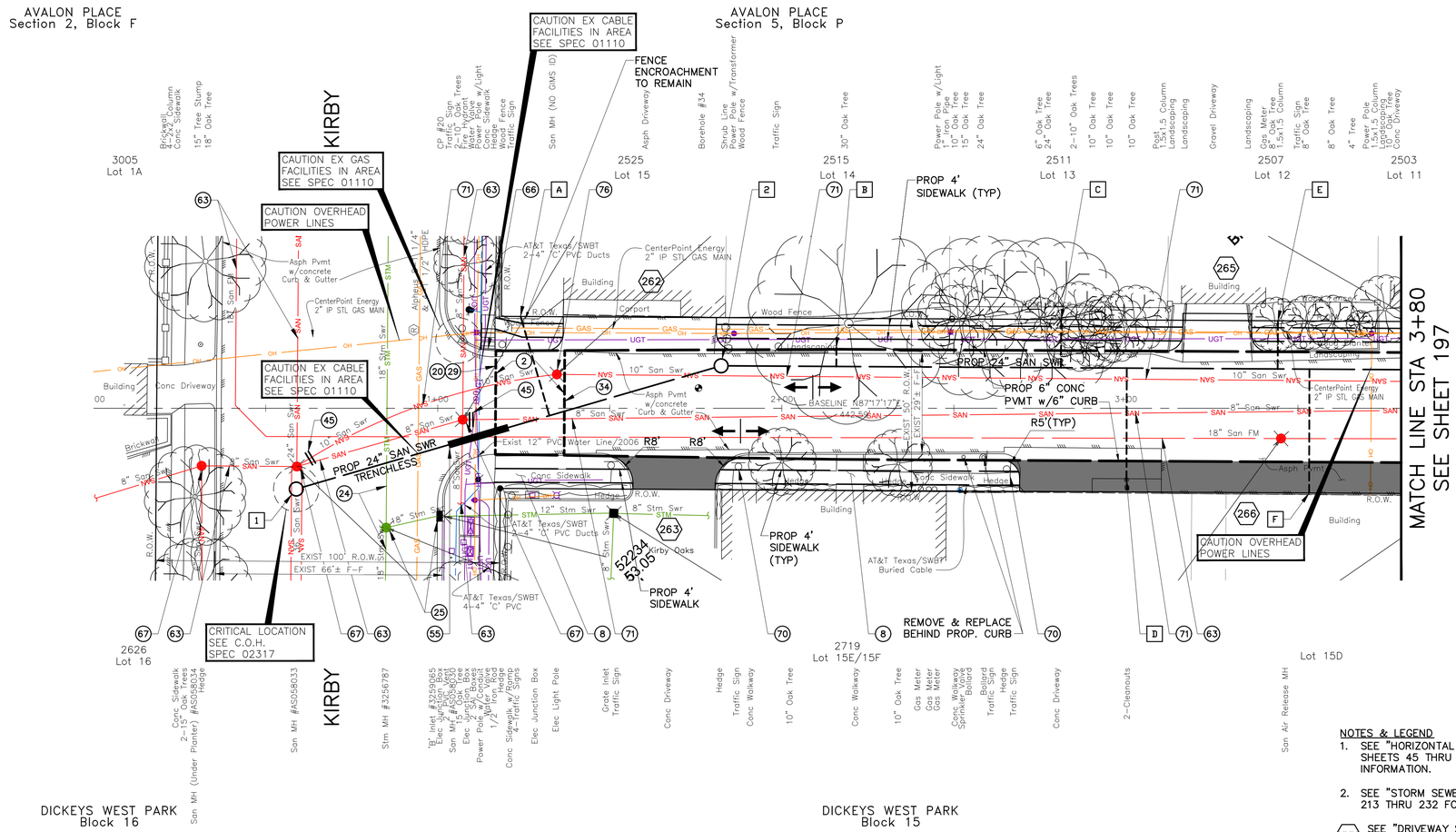

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-20, SET MAG NAIL AT
STA 1+07.29, 19.97' LT
EL. 53.37

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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Date:

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CABLE COMPANY

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	1+24.09	26.68' LT	47.51
B	2+15.85	17.60' LT	47.55
C	2+81.19	25.78' LT	47.63
D	3+00.17	20.79' RT	47.65
E	3+44.19	25.42' LT	47.51
F	3+53.25	24.63' RT	47.80

SANITARY MANHOLE IDENTIFICATION						
I.D.		TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-11	SAN	0+58.88	23.47' RT	53.23 MATCH	SEALED
2	MH-12	SAN	1+82.36	12.35' LT	52.94	SEALED

SAN SABA

(SEE SHEET 196 FOR PROFILE)

OTHON

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN SABA PLAN
STA 0+00 TO STA 3+80

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **195** OF 391	

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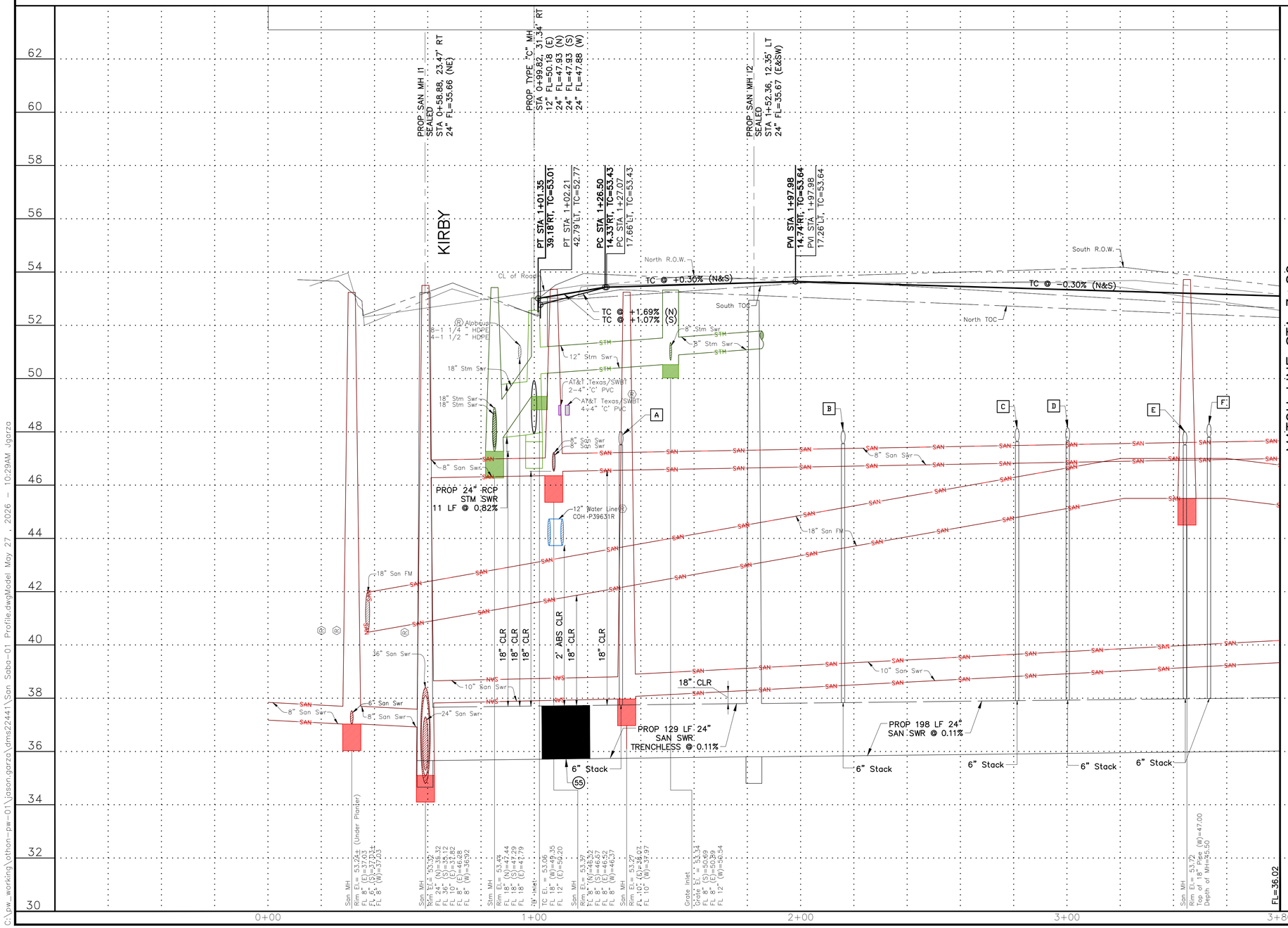
(SEE SHEET 195 FOR PLAN)

SAN SABA



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-20, SET MAG NAIL AT
STA 1+07.29, 19.97' LT
EL. 53.37

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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VERIFICATION OF PRIVATE UTILITY LINES

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CABLE COMPANY

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11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 • TEL 713 975 8555

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN SABA PROILE
STA 0+00 TO STA 3+80

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **196** OF 391	

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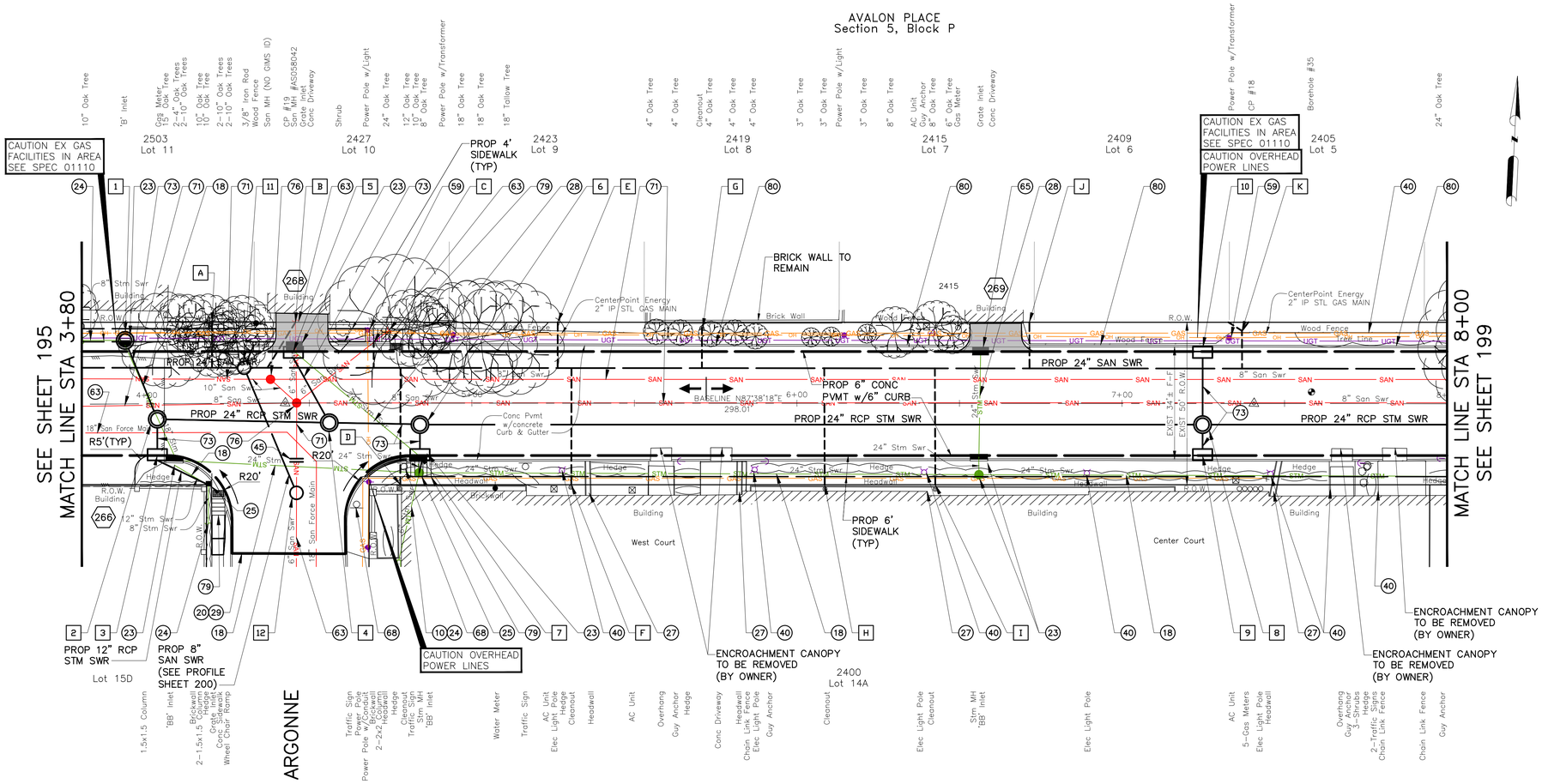

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH	"C"	3+93.44	19.55' LT	52.45
2	MH-SAB1	"C"	4+03.20	4.75' RT	51.98
3	BB-A112	"BB"	4+03.14	38.98' RT	52.26
4	MH-SAB1A	"C"	4+56.14	6.05' RT	52.29
5	BB-A108	"BB"	4+45.08	15.86' RT	52.04
6	MH-SAB2	"C"	4+84.04	6.62' LT	51.87
7	BB-A113	"BB"	4+84.03	16.12' RT	52.18
8	MH-SAB3	"C"	7+24.80	6.53' RT	51.68
9	BB-A114	"BB"	7+24.80	16.03' RT	51.99
10	BB-A109	"BB"	7+24.80	15.97' RT	51.99

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
11	MH-I3	SAN	4+30.00	10.93' LT	51.71	SEALED, VENTED AND CORROSION RESISTANT
12	MH-I5	SAN	4+46.07	27.63' RT	52.39	SEALED, VENTED AND CORROSION RESISTANT

SAN SABA

(SEE SHEET 198 FOR PROFILE)

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+20.19	24.99' LT	46.47
B	4+50.85	24.86' LT	46.36
C	4+69.79	18.67' LT	48.10±
D	4+78.01	25.12' RT	45.87
E	5+26.40	24.89' LT	46.97
F	5+30.60	25.10' RT	45.21
G	5+70.78	23.14' LT	46.93
H	6+08.55	25.07' RT	45.07
I	6+42.58	25.06' RT	45.01
J	6+71.49	24.95' LT	46.53
K	7+36.88	24.98' LT	46.55

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-19, SET MAG NAIL AT STA 4+42.57 EL. 52.11

CP-18, CUT 'X' IN CONC AT STA 7+40.58 EL. 52.65

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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CABLE COMPANY

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN SABA PLAN
STA 3+80 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **197** OF 391	

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(SEE SHEET 197 FOR PLAN)

SAN SABA

ARGONNE

SEE SHEET 196
MATCH LINE STA 3+80

MATCH LINE STA 8+00
SEE SHEET 200

PROP TYPE "C" MH
STA 4+03.20, 4.75' RT
24" FL=48.09 (N)
24" FL=48.09 (S)
24" FL=48.09 (E)

PROP SAN MH I3
SEALED, VENTED AND CR
STA 4+30.00, 10.93' LT
8" FL=42.28 (SE)
8" FL=37.40 (SE) DROP
24" FL=36.07 (E&W)

PROP TYPE "C" MH
STA 4+56.14, 6.05' RT
24" FL=48.00 (W)
24" FL=48.00 (NW)
24" FL=47.90 (E)

PROP TYPE "C" MH
STA 4+84.03, 6.62' RT
24" FL=47.86 (W)
24" FL=47.67 (S)
24" FL=47.29 (E)

PROP TYPE "C" MH
STA 7+24.80, 6.53' RT
24" FL=46.89 (N)
24" FL=46.89 (S)
24" FL=46.85 (W)
24" FL=46.85 (E)

PC STA 4+06.14
15.93' RT, TC=53.02
PC STA 4+06.14
16.07' LT, TC=53.02
PT STA 4+26.02
35.98' RT, TC=52.67

PT STA 4+61.04
36.38' RT, TC=52.63

PC STA 4+81.03
16.12' RT, TC=52.18

PVI STA 5+71.97
16.09' RT, TC=52.48

PVI STA 7+21.80
15.97' LT, TC=51.99
PVI STA 7+21.80
16.03' RT, TC=51.99
PVI STA 7+27.80
16.02' RT, TC=51.99
PVI STA 7+27.80
15.98' LT, TC=51.99

TC @ -1.12% (S)

PROP 12" RCP STM SWR
7 LF @ 3.00%

TC @ -1.42% (S)

TC @ -0.33% (N)

TC @ +0.35% (S)

South R.O.W.

South TOE

TC @ -0.33% (N&S)

North TOE

CL of Road

TC @ +0.30% (N&S)

PROP 24" RCP
STM SWR
236 LF @ 0.18%

PROP 24" RCP
STM SWR
55 LF @ 0.18%

PROP 24" RCP
STM SWR
46 LF @ 0.20%

PROP 24" RCP
STM SWR
73 LF @ 0.18%

PROP 8"
SAN SWR

PROP. 6"
SERVICE
RECONNECT

6"STACK (CONNECT TO
EXIST. 6" SERVICE)

PROP 50 LF 24"
SAN SWR @ 0.11%

PROP 8"
SAN SWR
DROP

PROP 370 LF 24"
SAN SWR @ 0.11%

6" CLR

18" CLR

6" Stack

'B' Inlet
TC El. = 52.84
FL 18" (S)=49.74
FL 8" (W)=51.09

'BB' Inlet
TC El. = 52.50
FL 18" (NW)=49.15
FL 18" (S)=49.40
FL 12" (SW)=49.40

Grate Inlet
Top El. = 52.88
FL 12" (NW)=50.48
FL 8" (S)=50.68

San MH
Rim El.= 52.26
FL 8" (E)=39.97
FL 10" (SE)=46.07
FL 10" (S)=39.22
FL 10" (W)=39.62

Grate Inlet
Top El. = 51.29
T.C. 24" (SE)=46.89

San MH
Rim El.= 52.26
FL 8" (E)=47.11
FL 6" (NE)=46.94
FL 8" (E)=47.11
FL 8" (S)=47.14
FL 10" (W)=46.94

'BB' Inlet
TC El. = 52.25
FL 24" (NW)=38.50
FL 24" (S)=48.35

Stm MH
Rim El.= 52.67
FL 24" (N)=48.57
FL 24" (E)=48.22
FL 24" (S)=48.22
FL 24" (W)=48.52

Modified 'BB' Inlet
TC El. = 52.42
FL 24" (N)=48.12
FL 24" (S)=48.07

Stm MH
Rim El.= 52.86
FL 24" (N)=47.93
FL 24" (E)=47.85
FL 24" (W)=48.05

Grate Inlet
Top El. = 51.71
FL 24" (S)=48.81

FL=36.02

FL=36.48

3+80 4+00 5+00 6+00 7+00 8+00

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-19, SET MAG NAIL AT
STA 4+42.57
EL. 52.11

CP-18, CUT 'X' IN CONC AT
STA 7+40.58
EL. 52.65

REV.	DATE	DESCRIPTION	BY

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STATE OF TEXAS
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143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

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FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SAN SABA PROFILE
STA 3+80 TO STA 8+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **198** OF 391	

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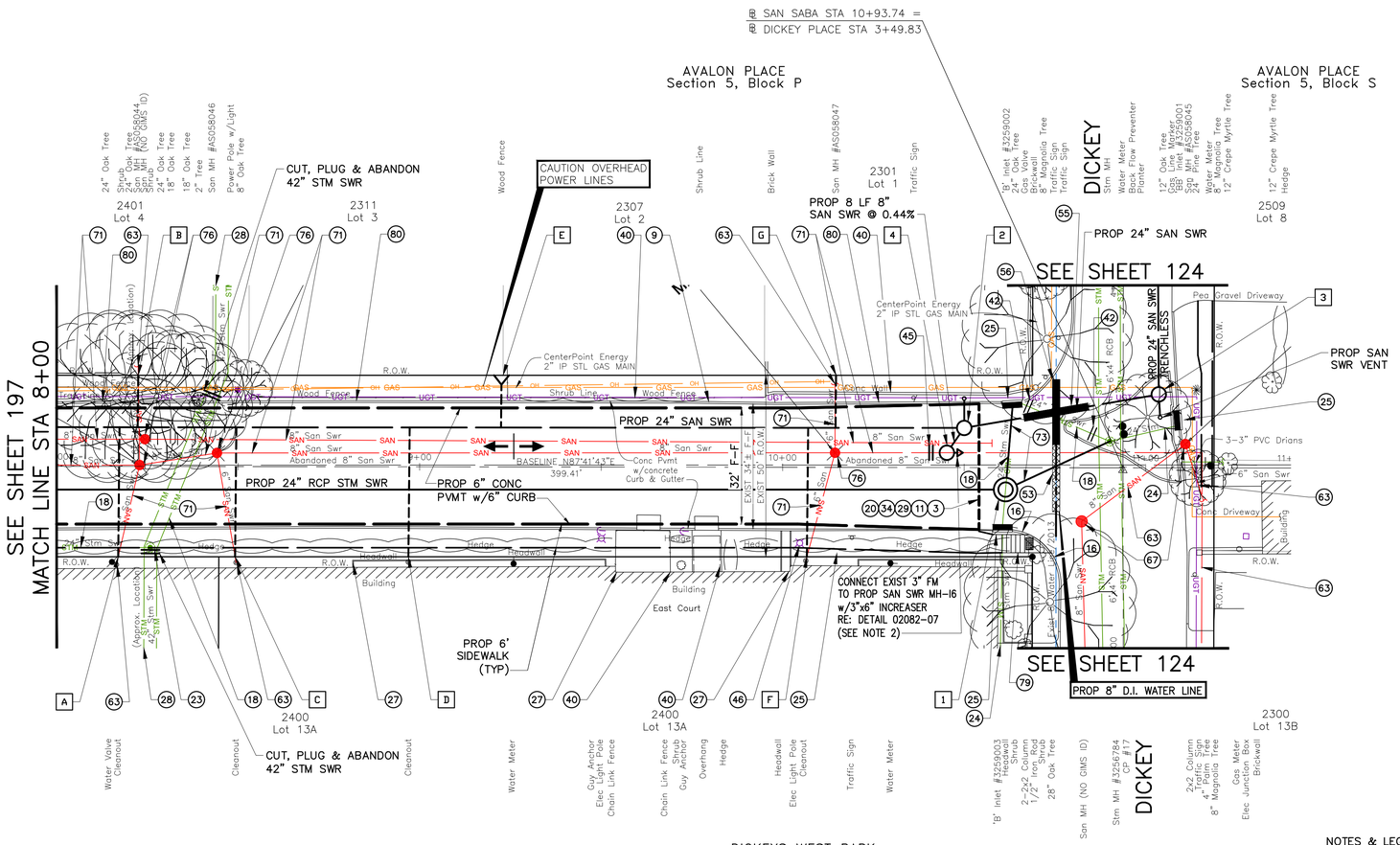

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	8+16.99	24.91' RT	44.69
B	8+22.44	25.03' LT	48.05±
C	8+49.19	24.87' RT	44.63
D	8+96.94	24.80' RT	44.55
E	9+22.52	25.24' LT	46.61
F	10+06.71	24.67' RT	43.84
G	10+14.67	25.36' LT	46.64

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2	MH-I4	SAN	10+50.00	10.91' LT	51.85	SEALED
3	MH-P1	SAN	11+03.59	20.24' LT	52.50	SEALED, VENTED AND CORROSION RESISTANT
4	MH-I6	SAN FM DISCHARGE RE: DTL 02082-07	10+45.00	4.08' LT	51.92	SEALED AND CORROSION RESISTANT

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-SAB4	"C"	10+61.42	6.07' RT	51.87± MATCH EX

DICKEYS WEST PARK
Block 13

SAN SABA

(SEE SHEET 200 FOR PROFILE)

NOTE:

CONTRACTOR TO VERIFY EXISTING 3" SANITARY FM DEPTH AT STATION 10+45.00 AND ADJUST PROPOSED MANHOLE I6 ACCORDING TO COH DETAIL 02082-07.

NOTES & LEGEND
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-17, CUT 'X' IN CONC AT STA 10+94.12, 0.68' RT EL. 52.35

NOTES & LEGEND
1. EXISTING 42" MRC WAS ABANDON BETWEEN WESTHEIMER & SAN SABA. 42" MRC SHOULD BE VIDEO INSPECTED AND THEN GROUTED BETWEEN NORTH ROW OF SAN SABA TO LOCKE LN.
2. CONTRACTOR TO VERIFY EXISTING 3" SANITARY FM DEPTH AT STATION 10+45.00 AND ADJUST PROPOSED MANHOLE I6 ACCORDING TO COH DETAIL 02082-07.

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SAN SABA PLAN
STA 8+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **199** OF 391	

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0 10 20 40

(SEE SHEET 199 FOR PLAN)

(SEE SHEET 197 FOR PLAN)

SAN SABA

SAN SABA @ ARGONNE

DICKEY

SAN SABA

SEE SHEET 198 MATCH LINE STA 8+00

PROP SAN MH I6 FORCE MAIN DISCHARGE SEALED AND CR STA 10+45.66, 4.08' LT 6" FL=49.40± (E) EXIST FM 8" FL=48.72± (NE)

PROP SAN MH I4 SEALED STA 10+50.00, 10.91' LT 8" FL=48.86± (SW) 8" FL=38.08 (SW) DROP 24" FL=36.75 (E&W)

PROP TYPE "C" MH STA 10+61.42, 6.07' RT 24" FL=4X.XX (N) 24" FL=4X.XX (S) 24" FL=46.25 (W) 24" FL=46.25 (E)

PROP TYPE "C" MH STA 10+90.07, 6.03' RT 24" FL=46.21 (W) 6" FL=44.81 (N&S) PROP SAN MH P11 SEALED, VENTED AND CR STA 11+03.59, 20.24' LT 24" FL=36.81 (N&W)

PROP SAN MH I3 SEALED, VENTED AND CR STA 4+30.00, 10.93' LT 8" FL=42.28 (SE) 8" FL=37.40 (SE) DROP 24" FL=36.07 (E&W)

PROP SAN MH I5 SEALED, VENTED AND CR STA 4+46.07, 27.63' RT 6" FL=47.33± (S) MATCH 6" FL=42.61 (S) DROP 8" FL=42.44 (NW)

PVI STA 9+26.13 15.78' RT, TC=52.58 PVI STA 9+26.13 16.24' LT, TC=52.58

PVI STA 10+03.82 16.35' LT, TC=52.35

PC STA 10+53.82 17.56' LT, TC=52.11 PC STA 10+53.82 17.08' RT, TC=52.20

PROP 24" RCP STM. SWR 33 LF @ 0.18%

TC @ -0.48% (N) TC @ -0.30% (S)

TC @ +0.30% (N&S)

TC @ -0.30% (N&S)

Cl of Road

North R.O.W.

South R.O.W.

South TOC

North TOC

6"STACK (CONNECT TO EXIST. 6" SERVICE)

PROP 6" SAN SWR w/3"x6" INCREASER

PROP 8" SAN SWR

PROP 24" RCP STM SWR

PROP 24" RCP STM SWR 259 LF @ 0.18%

6"STACK. (CONNECT TO EXIST. 6" SERVICE)

PROP. 6" SERVICE RECONNECT

PROP. 6" SERVICE RECONNECT

PROP 8" SAN SWR DROP

PROP 250 LF 24" SAN SWR @ 0.11%

PROP 54 LF 24" SAN SWR @ 0.11%

PROP 24" SAN SWR

PROP 24" RCP STM SWR

TO BE ABANDONED

TO BE CUT, PLUG AND ABANDONED

TO BE ABANDONED

TO REMAIN

TO BE ABANDONED

PROP 6" SAN SWR DROP

PROP 42 LF 8" SAN SWR @ 0.44%

PROP 8" SAN SWR DROP

PROP 24" SAN SWR

6" Stack

FL=36.48

18" CLR

2' ABS CLR

8" Water Line COH P 52631R

8" Water Line COH P 52275

6"x4' RCB

6" San Drop Swr

42" Strm Swr

24" Stm Swr

12" Stm Swr

3" San FM

18" San FM

10" Swr

44.90

Sam MH Rim El.= 52.84 Rim 6" (N)=48.24 FL 6" (N)=48.19 FL 8" (E)=Plug & Abandon FL 8" (E)=44.08 FL 8" (W)=47.94

Sam MH Rim El.= 52.62 FL 8" (E)=43.52 FL 8" (E)=41.92 (Drop) FL 8" (W)=41.90

Sam MH Rim El.= 52.45 Rim 42" (N)=44.16± (R) FL 42" (S)=44.16± (R) FL 24" (W)=47.42± (R)

Sam MH Rim El.=52.45 FL 8" (E)=48.21 FL 8" (S)=48.41 FL 8" (SW)=48.20

Sam MH Rim El.= 52.47 Rim 6" (N)=48.97 FL 6" (S)=48.57 FL 8" (W)=48.57

BB' Inlet TC El.= 52.15 FL 24" (N)=47.18 FL 12" (S)=47.38

BB' Inlet TC El.= 52.08 FL 24" (S&SE)=47.03

Sam MH Rim El.= 51.76 FL 8" (NW)=41.56 FL 8" (S)=41.60

Stm MH Rim El.= 51.72 FL 6'x4' RCB (N&S)=44.90 FL 24" (SW)=45.90

BB' Inlet TC El.= 52.31 FL 24" (W)=47.01

Sam MH Rim El.= 52.15 Rim 6" (SE)=47.16 FL 6" (SW)=47.20 FL 6" Drop (SE)=43.25

8+00 9+00 10+00 11+00

62 60 58 56 54 52 50 48 46 44 42 40 38 36 34 32 30

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES

1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:

CP-17, CUT 'X' IN CONC AT STA 10+94.12, 0.68' RT EL. 52.35

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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Date:

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Date:

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CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

11111 Wilcrest Green Dr. Suite 128, Houston, TX 77042 TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 REGISTERED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SAN SABA PROFILE STA 8+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **200** OF 391	

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SPANN STA 0+40.00
MIMOSA STA 11+69.09

SPANN STA 3+1.86
WELCH STA 7+92.10

0 10 20 40

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	1+15.60	30.96' LT	47.38	DUCTILE IRON
B	1+16.00	29.04' RT	47.38	
C	1+40.36	28.97' RT	47.38	
D	1+64.47	31.11' LT	47.56	DUCTILE IRON
E	1+68.02	20.98' RT	48.00±	

SANITARY MANHOLE IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
4	MH-R1	SAN	1+12.21	5.95' RT	51.96	SEALED AND VENTED
5	MH-R2	SAN	1+80.67	6.00' RT	52.20	SEALED, VENTED AND CORROSION RESISTANT
6	MH-B8	SAN	2+93.60	6.09' RT	51.73	SEALED AND VENTED

STORM MANHOLE/INLET IDENTIFICATION					
I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-MIM1	"C"	0+34.28	2.24' RT	51.34
2	BB-A32	"BB"	0+24.28	2.25' RT	51.64
3	MH-SPA2	"C"	3+05.98	6.47' LT	51.90

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-42, SET MAG NAIL W/SHINNER AT STA 0+40
EL. 52.28

CP-43, SET MAG NAIL W/SHINNER AT STA 3+1.86
EL. 52.82

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SPANN
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **201** OF 391	

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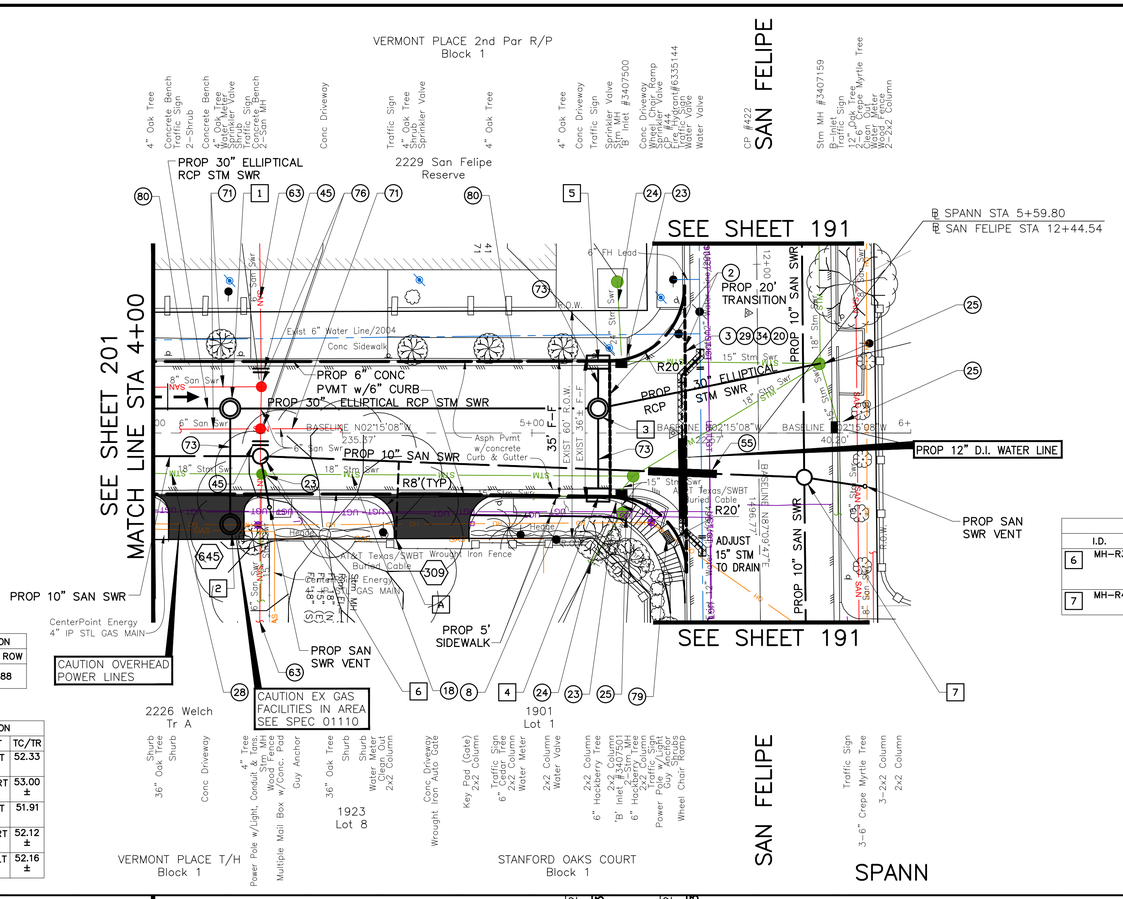


6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+64.08	27.88' RT	46.88

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-SPA2	"C"	4+20.34	6.46' LT	52.33
2	MH	"C"	4+20.33	24.08' RT	53.00 ±
3	MH-SPA4	"C"	5+17.48	6.45' LT	51.91
4	BB-A9	"BB"	5+17.48	16.63' RT	52.12 ±
5	BB-A8	"BB"	5+17.48	18.95' LT	52.16 ±

SANITARY MANHOLE IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-R3	SAN	4+28.32	6.11' RT	52.24	SEALED, VENTED AND CORROSION RESISTANT
7	MH-R4	SAN	5+71.90	13.96' RT	51.94	SEALED AND VENTED

NOTES & LEGEND

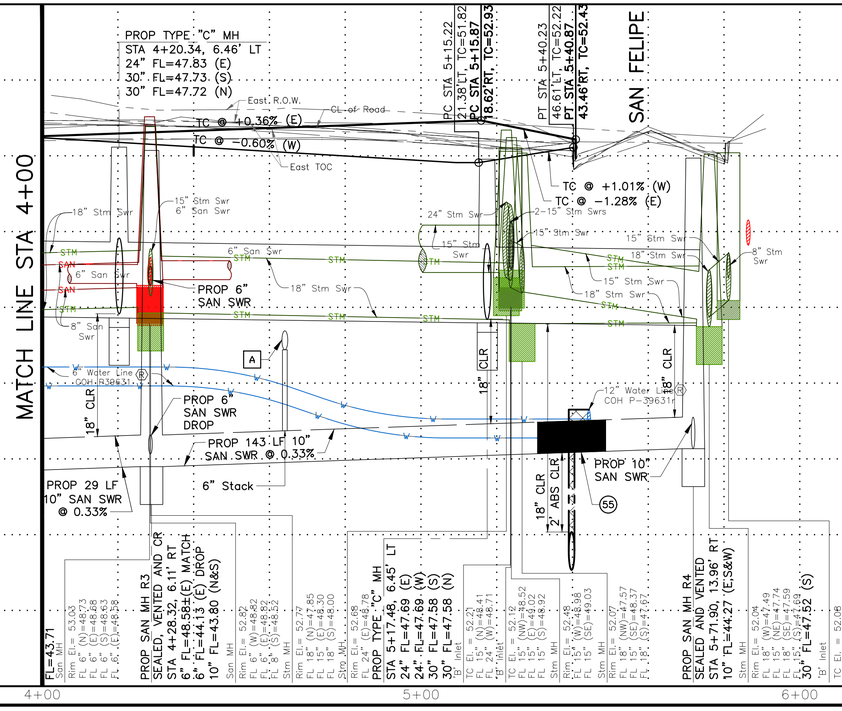
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-44, SET MAG NAIL W/SHINNER AT
STA 5+37.23
EL. 52.35

CP-422, SET MAG NAIL AT
STA 12+12.89
EL. 52.65, 31.72 LT

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SPANN
STA 4+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 202 OF 391	

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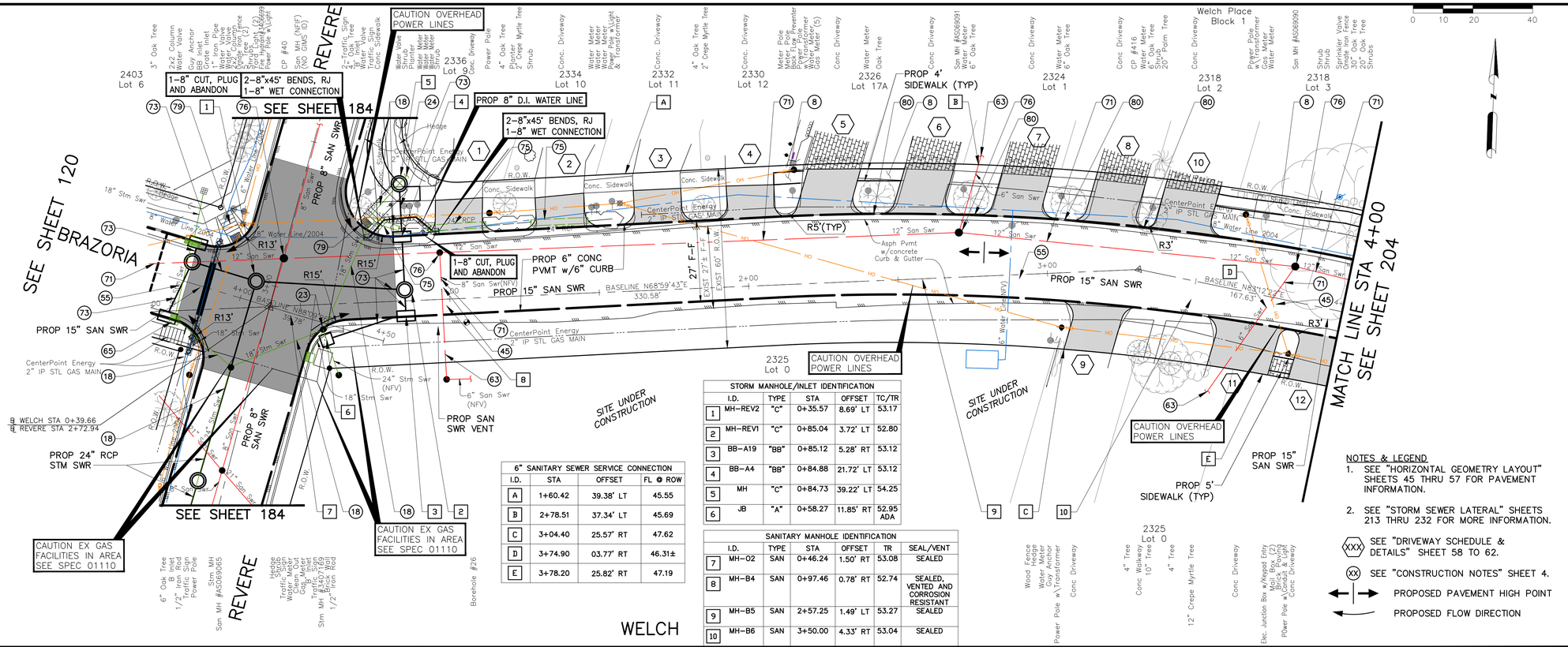

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	1+60.42	39.38' LT	45.55
B	2+78.51	37.34' LT	45.69
C	3+04.40	25.57' RT	47.62
D	3+74.90	03.77' RT	46.31±
E	3+78.20	25.82' RT	47.19

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-REV2	"C"	0+35.57	8.69' LT	53.17
2	MH-REV1	"C"	0+85.04	3.72' LT	52.80
3	BB-A19	"BB"	0+85.12	5.28' RT	53.12
4	BB-A4	"BB"	0+84.88	21.72' LT	53.12
5	MH	"C"	0+84.73	39.22' LT	54.25
6	JB	"A"	0+58.27	11.85' RT	52.95 ADA

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
7	MH-02	SAN	0+46.24	1.50' RT	53.08	SEALED
8	MH-B4	SAN	0+97.46	0.78' RT	52.74	SEALED, VENTED AND CORROSION RESISTANT
9	MH-B5	SAN	2+57.25	1.49' LT	53.27	SEALED
10	MH-B6	SAN	3+50.00	4.33' RT	53.04	SEALED

NOTES & LEGEND
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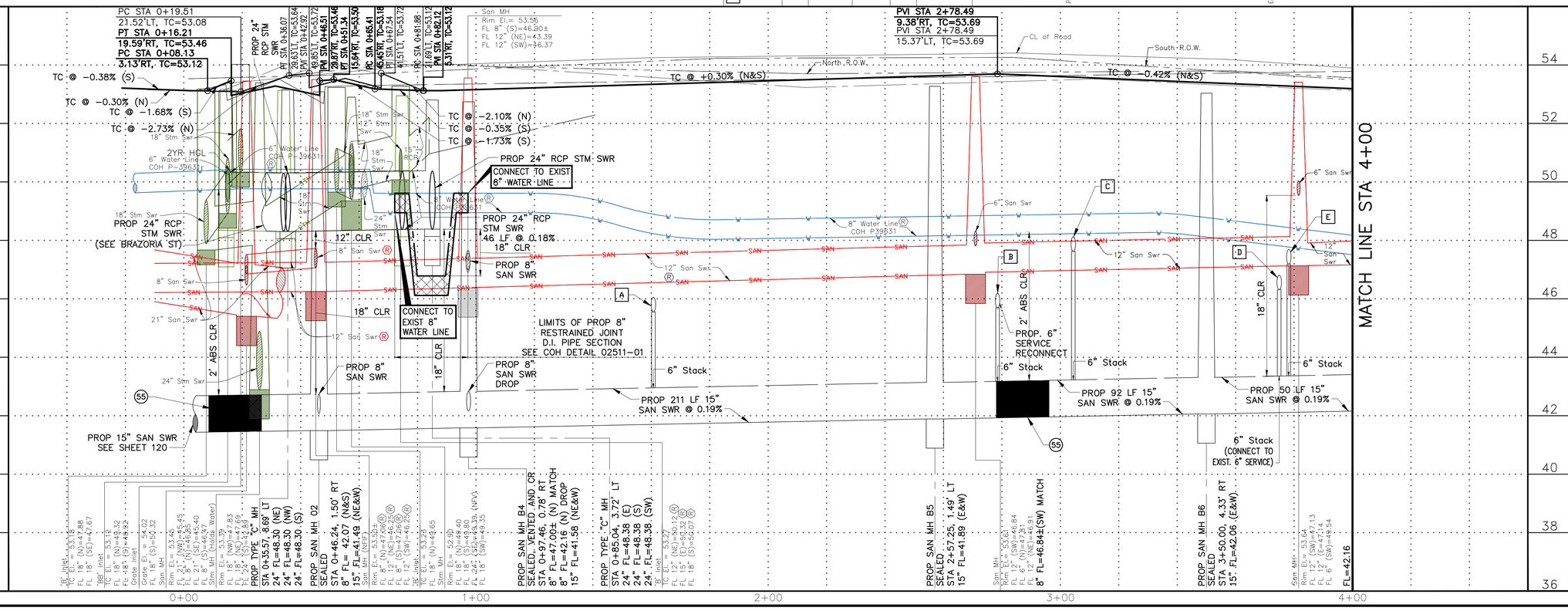
XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TBM:
CP-40, SET MAG NAIL AT
STA 0+39.66
EL. 53.72

CP-416, SET MAG NAIL AT
STA 3+30.58
EL. 54.33

REV.	DATE	DESCRIPTION	BY

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WELCH
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 203 OF 391	

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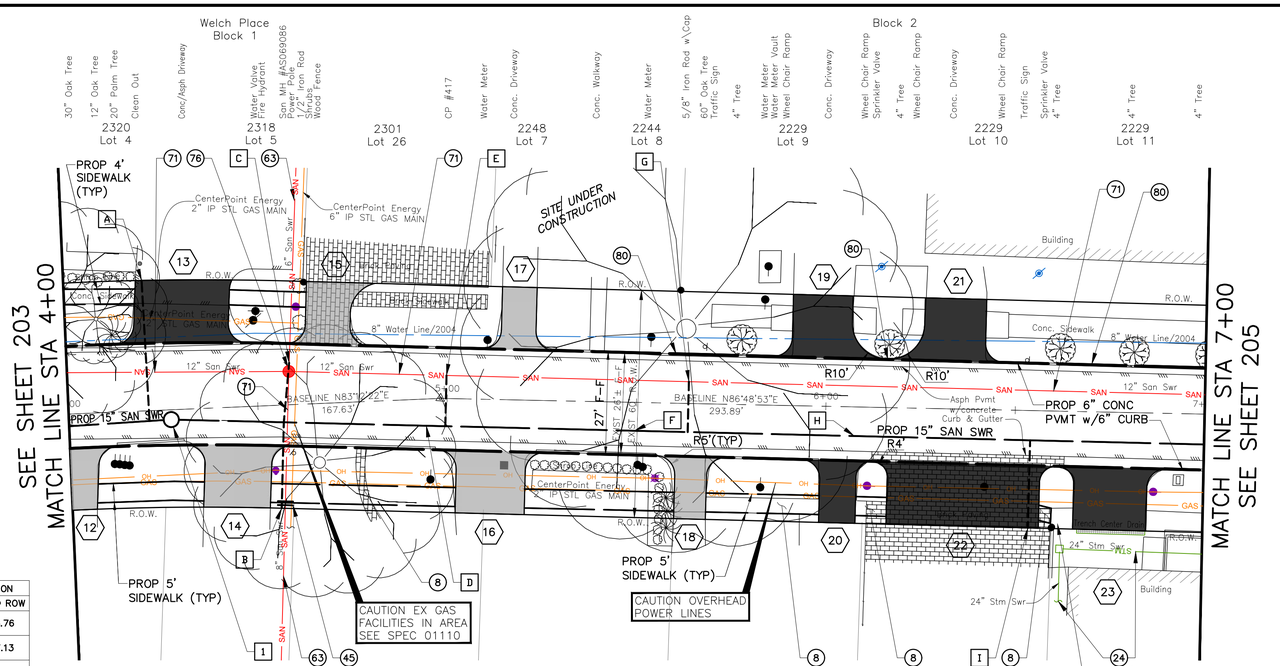


6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	4+20.72	34.44' LT	44.76
B	4+55.15	27.18' RT	47.13
C	4+59.29	16.12' LT	47.35±
D	4+94.20	07.06' RT	46.99
E	4+99.71	06.08' LT	47.30
F	5+49.63	07.49' RT	47.01
G	5+63.71	05.77' LT	47.24
H	6+07.63	07.69' RT	46.59
I	6+53.95	31.00' RT	46.21

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-B7	SAN	4+27.00	2.59' RT	52.72	SEALED

MIN 4" HORIZONTAL CLEARANCE IS REQUIRED BETWEEN THE STM INLET 25 AT STATION 7+00 TO THE PROP SWR LINE

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

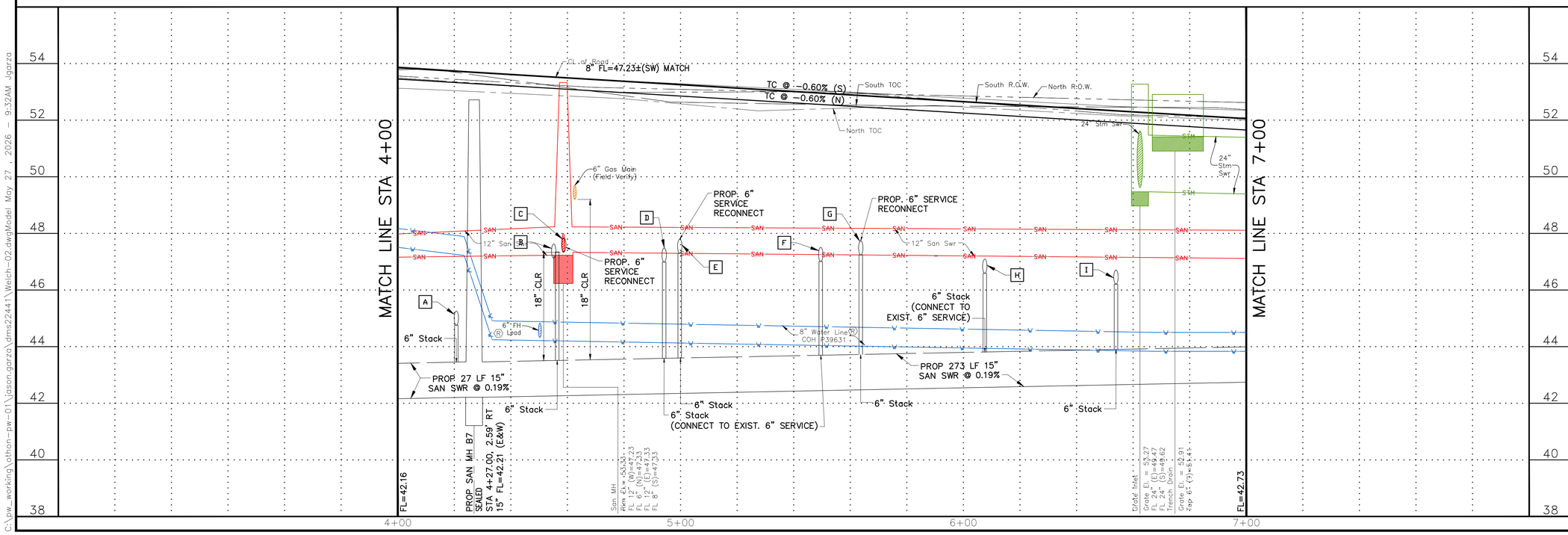
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:
CP-417, SET MAG NAIL AT
STA 4+98.21
EL. 53.19

WELCH



REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

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CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WELCH
STA 4+00 TO STA 7+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **204** OF 391	

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STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-SPA3	"C"	7+55.50	4.39' LT	51.37
2	BB-A22	"BB"	7+54.78	15.08' RT	51.73
3	BB-A6	"BB"	7+55.55	11.92' LT	51.73
4	MH-SPA2	"C"	7+85.70	4.22' RT	51.90
5	MH-SPA1	"C"	8+25.77	4.24' LT	51.29
6	BB-A23	"BB"	8+25.89	15.06' RT	51.63
7	BB-A10	"BB"	8+26.48	11.95' LT	51.63

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
8	MH-B8	SAN	7+21.37	8.08' RT	51.49	SEALED, VENTED AND CORROSION RESISTANT
9	MH-B9	SAN	7+98.14	8.30' RT	51.73	SEALED AND VENTED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	8+46.43	7.63' RT	47.75
B	8+58.50	21.93' LT	47.47
C	8+79.36	25.30' LT	47.13
D	9+00.53	31.38' RT	46.50
E	9+18.70	5.72' LT	47.44
F	9+61.05	5.86' LT	47.44
G	9+67.94	26.50' LT	47.44
H	10+5.05	6.01' LT	46.46
I	10+29.72	5.09' RT	47.50
J	10+50.70	6.17' LT	47.20
K	10+50.83	31.07' RT	44.85
L	10+92.47	13.69' LT	47.44

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

NOTES
1. EXISTING SANITARY SERVICE LOCATION AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD PRIOR TO TRANSFER TO PROP. SAN. SEWER.

TBM:

CP-43, SET MAG NAIL W/SHINNER AT
STA 7+92.10
EL. 52.82

CP-427, SET 60D AT
STA 9+78.41, 19.34' RT
EL. 53.13

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
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Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

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AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WELCH
STA 7+00 TO STA 11+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 205 OF 391	

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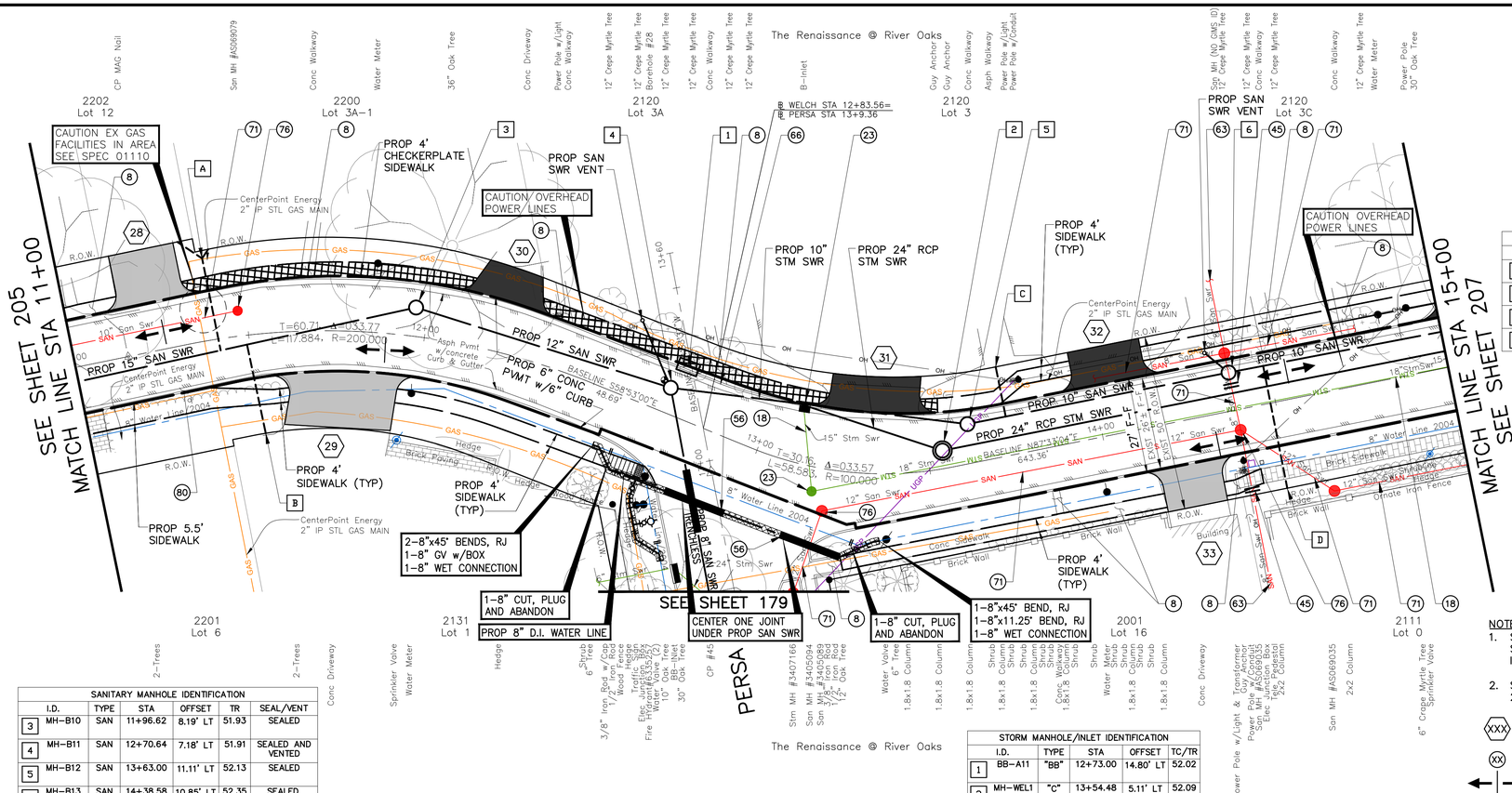

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	11+40.24	25.50' LT	46.74	
B	11+52.05	28.25' RT	45.03	DUCTILE IRON
C	13+74.09	25.46' LT	46.93	
D	14+48.45	24.62' RT	47.20	DUCTILE IRON

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
3	MH-B10	SAN	11+96.62	8.19' LT	51.93	SEALED
4	MH-B11	SAN	12+70.64	7.18' LT	51.91	SEALED AND VENTED
5	MH-B12	SAN	13+63.00	11.11' LT	52.13	SEALED
6	MH-B13	SAN	14+38.58	10.85' LT	52.35	SEALED, VENTED AND CORROSION RESISTANT

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	BB-A11	"BB"	12+73.00	14.80' LT	52.02
2	MH-WEL1	"C"	13+54.48	5.11' LT	52.09

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-45, SET MAG NAIL W/SHINNER AT STA 12+96.73, 10.55' RT EL. 52.59

CP-418, SET MAG NAIL AT STA 11+15.32, EL. 53.08

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown. (Gas service lines are not shown.) This signature not to be used for conflict verification. Signature valid for six months.

Date:

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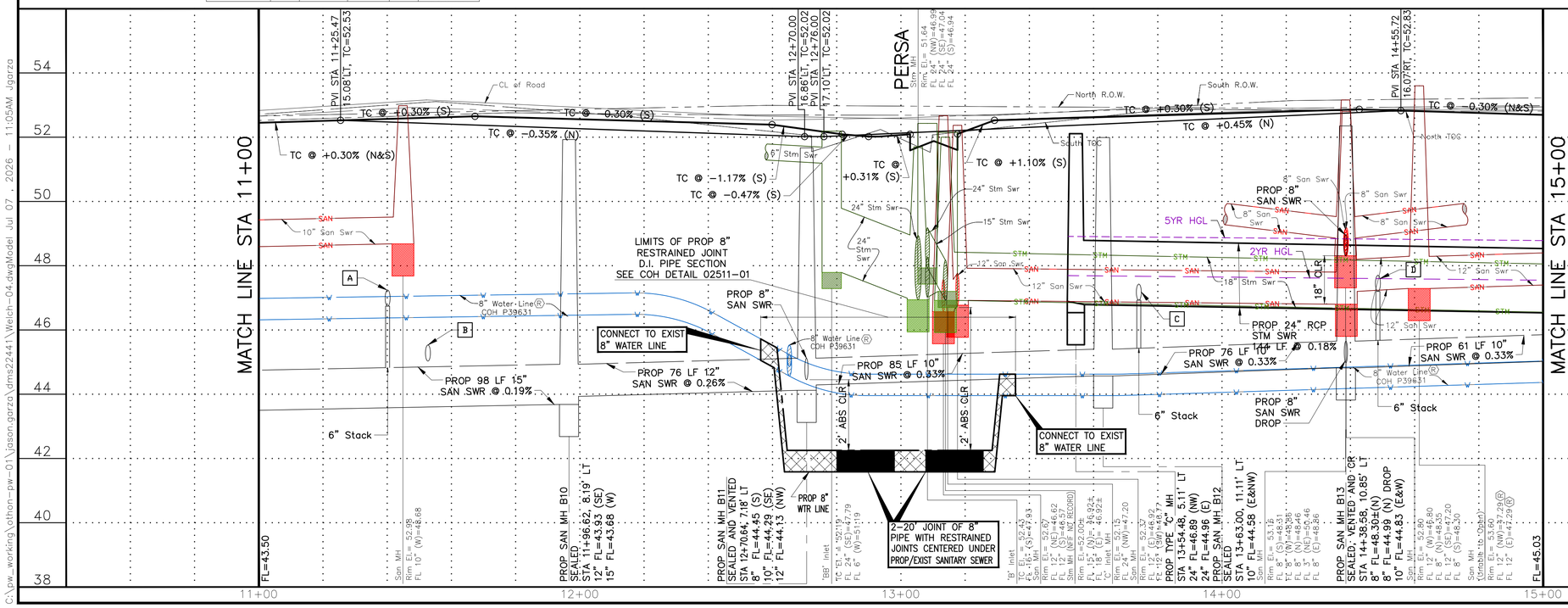
Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY



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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WELCH

STA 11+00 TO STA 15+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 206 OF 391	

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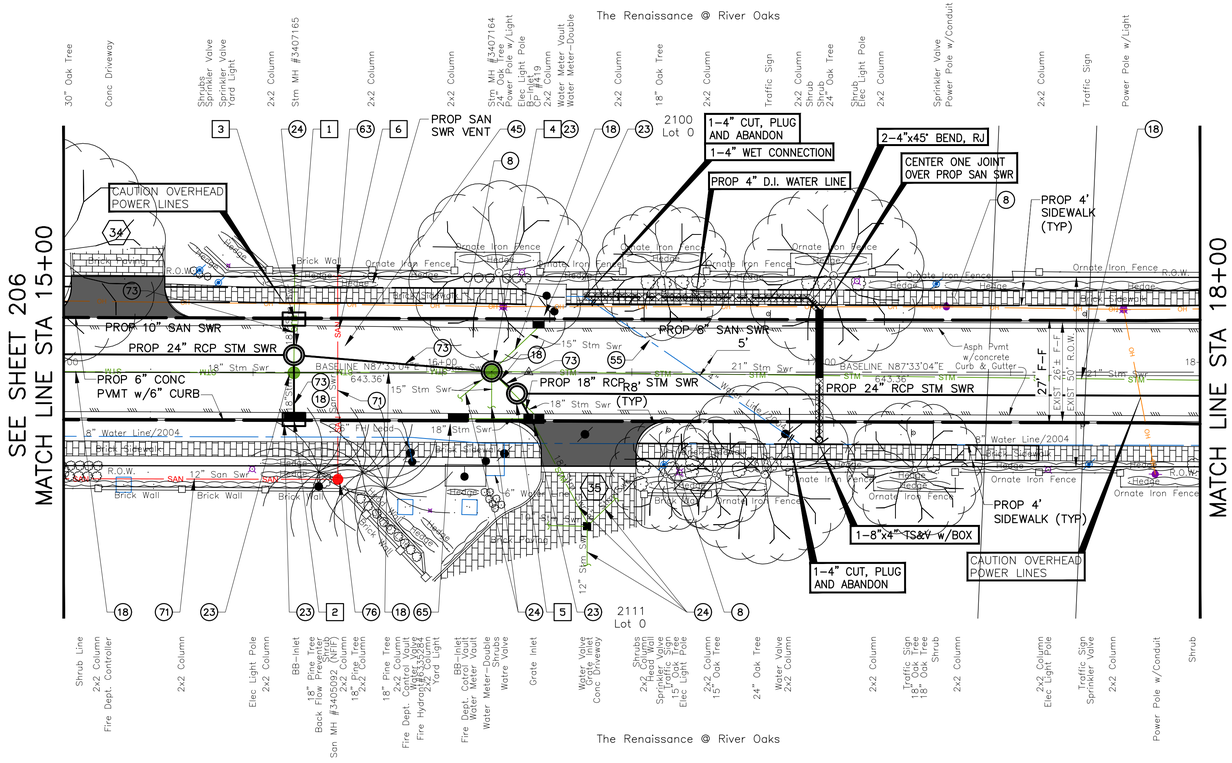
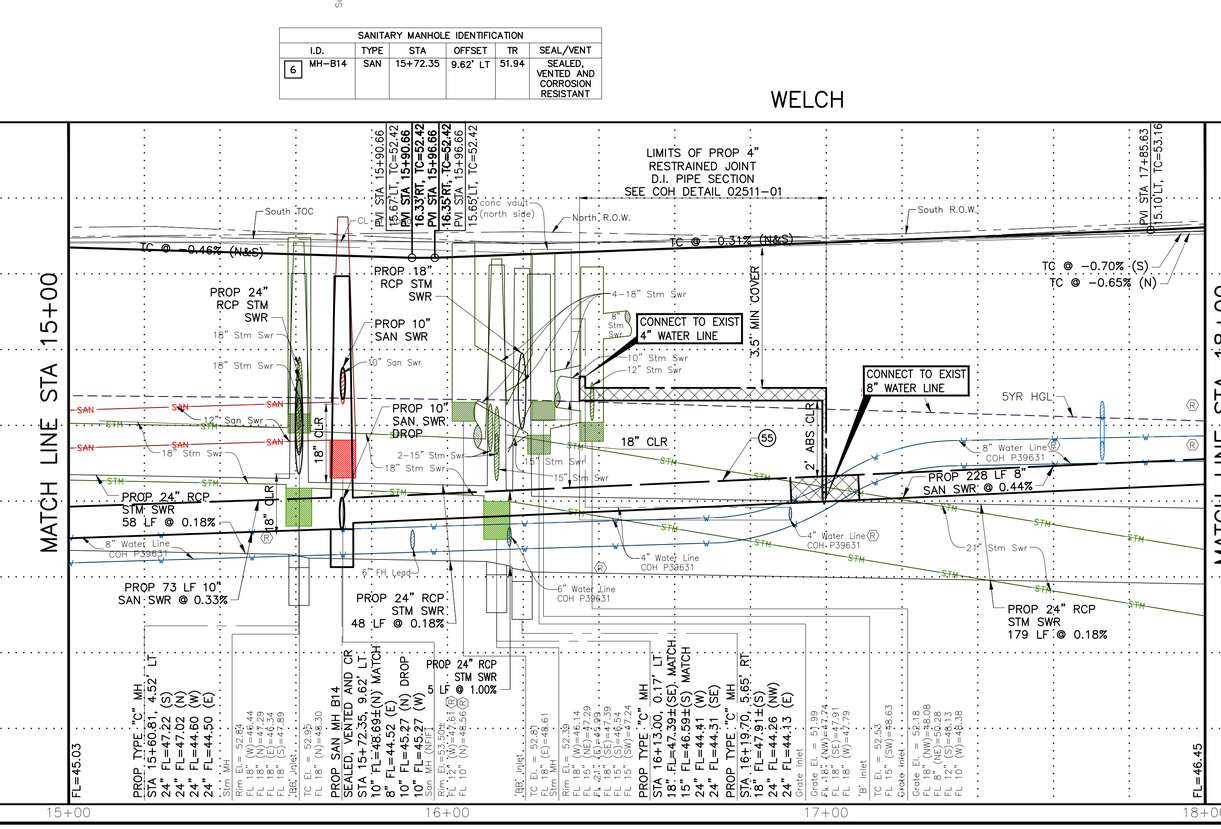
STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-WEL2	"C"	15+60.81	4.52' LT	52.01
2	BB-A38	"BB"	15+60.84	12.74' RT	52.32
3	BB-A13	"BB"	15+60.81	14.26' LT	52.32
4	MH-WEL3	"C"	16+13.00	0.17' LT	52.23
5	MH-A39	"C"	16+19.70	5.65' RT	52.14



SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-B14	SAN	15+72.35	9.62' LT	51.94	SEALED, VENTED AND CORROSION RESISTANT



NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-419, SET MAG NAIL
STA 16+22.77
EL. 52.65

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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Date:

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
REGISTERED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WELCH
STA 15+00 TO STA 18+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **207** OF 391	

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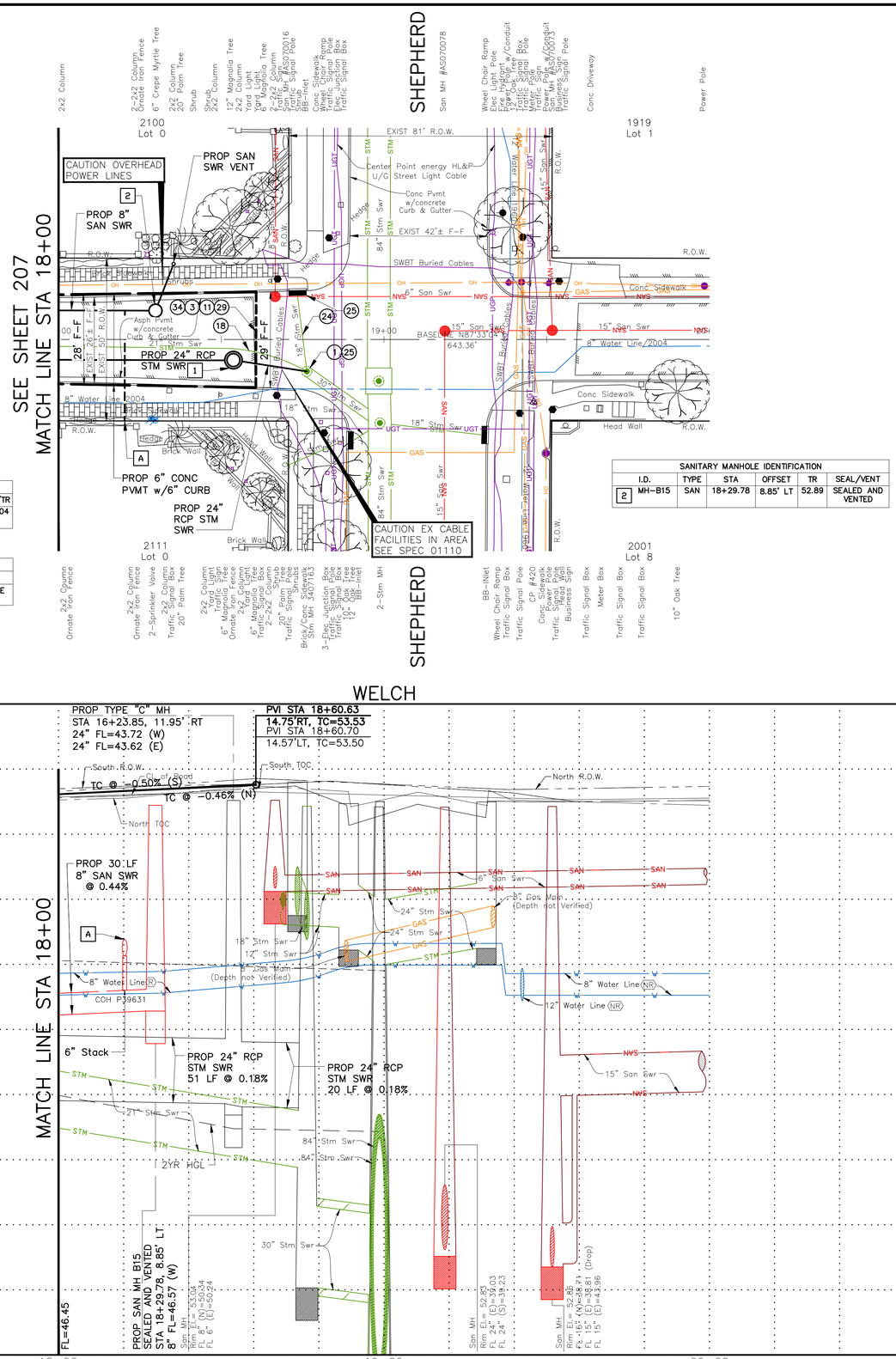

STORM MANHOLE/INLET IDENTIFICATION				
I.D.	TYPE	STA	OFFSET	TC/TR
1 MH-WEL4A	"C"	18+53.74	6.35' LT	53.04

6" SANITARY SEWER SERVICE CONNECTION				
I.D.	STA	OFFSET	FL @ ROW	PIPE
A	18+20.31	25.01' RT	48.26	DUCTILE IRON

SANITARY MANHOLE IDENTIFICATION						
I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
2 MH-B15	SAN	18+29.78	8.85' LT	52.89	SEALED AND VENTED

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-420, SET X-CUT AT
STA 19+46.00, 19.16' RT.
EL. 52.72

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

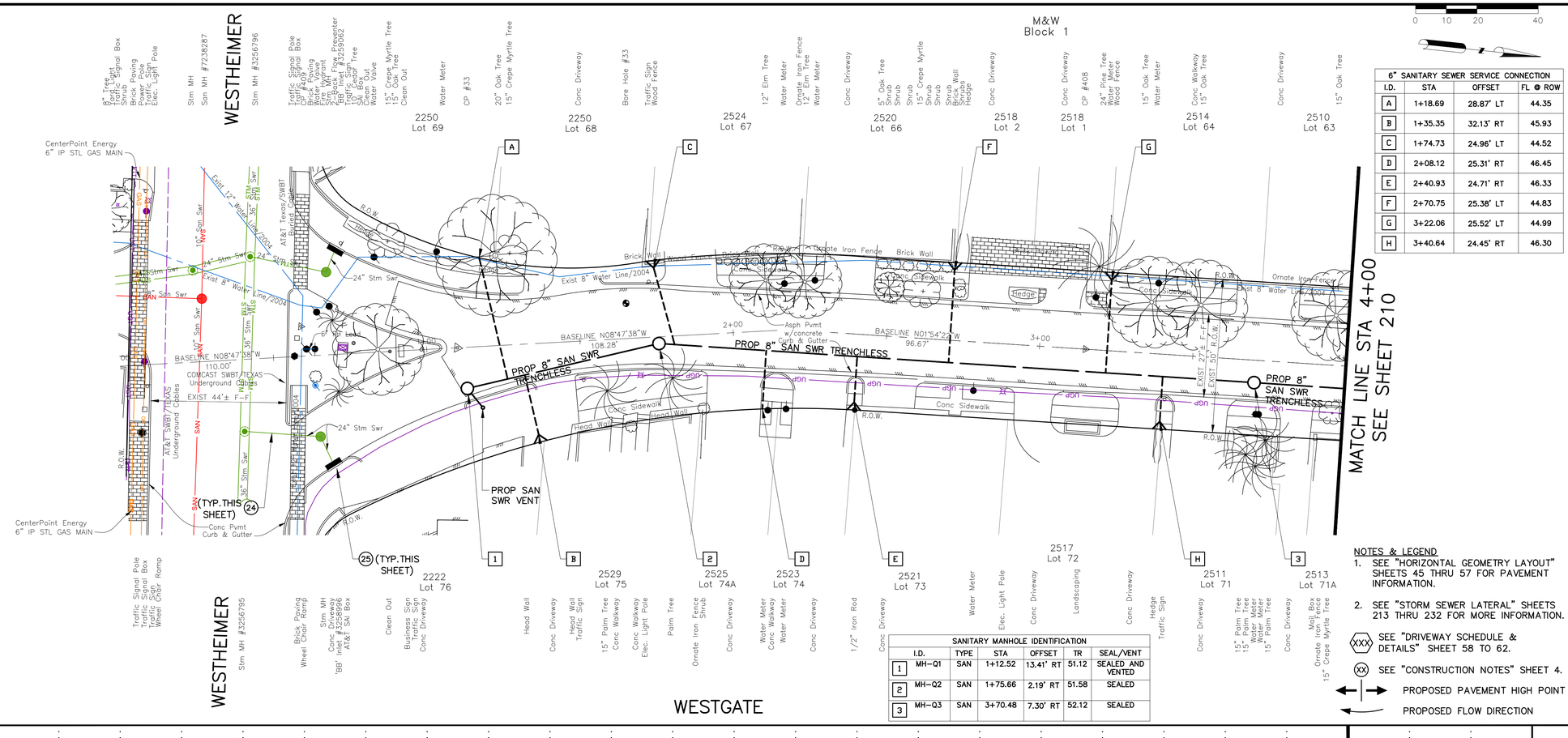
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WELCH
STA 18+00 TO END

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **208** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\Welch-06.dwgModel May 27, 2026 - 9:36AM Jgarza



SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
1	MH-Q1	SAN	1+12.52	13.41' RT	51.12	SEALED AND VENTED
2	MH-Q2	SAN	1+75.66	2.19' RT	51.58	SEALED
3	MH-Q3	SAN	3+70.48	7.30' RT	52.12	SEALED

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	1+18.69	28.87' LT	44.35
B	1+35.35	32.13' RT	45.93
C	1+74.73	24.96' LT	44.52
D	2+08.12	25.31' RT	46.45
E	2+40.93	24.71' RT	46.33
F	2+70.75	25.38' LT	44.83
G	3+22.06	25.52' LT	44.99
H	3+40.64	24.45' RT	46.30

NOTES & LEGEND

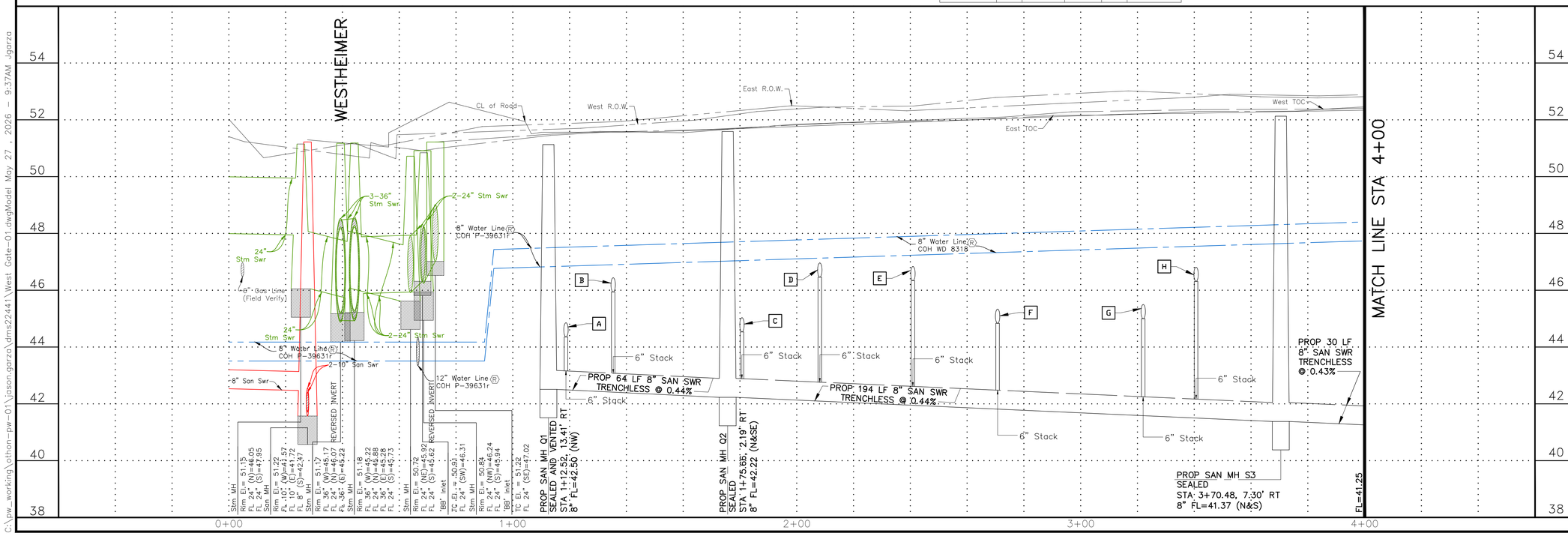
1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

XXX SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

XX SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-33, SET MAG NAIL W/SHINNER AT
STA 1+10
EL. 51.56

CP-409, SET MAG NAIL
STA 0+59.23
EL. 51.63, 9.72 LT

CP-408, SET MAG NAIL
STA 3+14.96
EL. 52.20

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WESTGATE
STA 0+00 TO STA 4+00

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **209** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\West Gate-01.dwgModel May 27, 2026 - 9:37AM jgarza

STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	MH-FAI5	"E"	8+70.97	5.92' LT	52.26
2	JB	"A"	10+58.60	15.86' LT	52.92
3	MH-WEG3	"C"	11+15.44	5.37' LT	52.70
4	MH-WEG8	"C"	12+03.66	4.34' LT	52.30
5	BB-A75	"BB"	12+11.32	16.09' RT	52.62

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	9+40.01	24.69' RT	46.99
B	9+53.58	25.29' LT	42.72
C	9+91.88	24.78' RT	46.90
D	10+18.94	25.17' LT	43.05
E	10+81.92	25.03' LT	43.17
F	11+41.01	24.76' LT	43.36
G	12+05.14	11.40' LT	45.13

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-Q5	SAN	8+42.36	8.58' RT	52.14	SEALED
7	MH-Q6	SAN	8+79.00	8.40' RT	52.01	SEALED
8	MH-Q7	SAN	11+04.10	7.32' RT	52.64	SEALED
9	MH-Q8	SAN	12+00.00	7.00' RT	52.34	SEALED

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-14, X CUT
STA 8+49.61
EL. 51.84
CP-808, SET MAG NAIL
STA 11+14.31
EL. 52.75
CP-31, SET MAG NAIL W/SHINNER AT
STA 11+46.27
EL. 52.71

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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(Gas service lines are not shown.) This signature not to be used for conflict verification.
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Date:
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
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Date:
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CABLE COMPANY

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

SEE SHEET 144
SEE SHEET 210
MATCH LINE STA 7+80
SEE SHEET 144
SEE SHEET 187
MATCH LINE STA 12+20
SEE SHEET 212
FAIRVIEW
SALISBURY
WESTGATE
2402 Lot 55
2310 Lot 54
2306 Lot 53
2304 Lot 52
2304 Lot 51
2210 Lot 50
2208 Lot 49
2227 Lot 103
2220 Lot 104B
2313 Lot 104A
2221 Lot 117
2223 Lot 117A
2215 Lot 118
2-8"x22.5° BENDS, RJ 1-8" WET CONNECTION
2-8" CUT, PLUG AND ABANDON
CENTER ONE JOINT OVER PROP SAN SWR
PROP 8" D.I. WATER LINE 2-8"x45° BENDS, RJ 1-8" WET CONNECTION
2-8"x22.5° BENDS, RJ 1-8" WET CONNECTION
PROP 8" D.I. WATER LINE 2-8"x22.5° BENDS, RJ 1-8" WET CONNECTION
MIN 4" HORIZONTAL CLEARANCE BETWEEN PROP 8" WL & INLET, IN ADDITION TO MIN 5' HORIZONTAL CLEARANCE BETWEEN PROP WL & ROW
PROP 4' SIDEWALK (TYP)
CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110
PROP 6" CONC PVMT w/6" CURB
PROP 5' SIDEWALK
PROP 4' SIDEWALK (TYP)
PROP 8" SAN SWR
PROP 24" RCP STM SWR
PROP 72" RCP STM SWR
PROP 24" SAN SWR
R1' PROP 8" SAN SWR
PROP 8" SAN SWR
PROP 5' SIDEWALK
PROP 24" RCP STM SWR
84 LF @ 0.18%
PROP 24" RCP STM SWR
PROP 24" SAN SWR
PROP 56 LF 8" SANSWR @ 0.45%
PROP 37 LF 8" SAN SWR @ 0.44%
PROP 225 LF 8" SAN SWR @ 0.44%
PROP 96 LF 8" SAN SWR @ 0.44%
CONNECT TO EXIST 8" WATER LINE
1-20' JOINT OF 8" PIPE WITH RESTRAINED JOINTS CENTERED OVER PROP SANITARY SEWER
LIMITS OF PROP 8" RESTRAINED JOINT D.I. PIPE SECTION SEE COH DETAIL 02511-01
PROP 24" SAN SWR
PROP 8" SAN SWR
PROP 24" RCP STM SWR
PROP 8" SAN SWR
PROP 24" RCP STM SWR
PROP 24" SAN SWR
PROP 8" SAN SWR
PROP 24" RCP STM SWR
PROP 24" RCP STM SWR
PROP 8" SAN SWR
PROP 5' SIDEWALK
PROP 8" SAN SWR
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1	MH-FAI5	"E"	8+70.97	5.92' LT	52.26
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6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	9+40.01	24.69' RT	46.99
B	9+53.58	25.29' LT	42.72
C	9+91.88	24.78' RT	46.90
D	10+18.94	25.17' LT	43.05
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F	11+41.01	24.76' LT	43.36
G	12+05.14	11.40' LT	45.13

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
6	MH-Q5	SAN	8+42.36	8.58' RT	52.14	SEALED
7	MH-Q6	SAN	8+79.00	8.40' RT	52.01	SEALED
8	MH-Q7	SAN	11+04.10	7.32' RT	52.64	SEALED
9	MH-Q8	SAN	12+00.00	7.00' RT	52.34	SEALED

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:
CP-14, X CUT
STA 8+49.61
EL. 51.84
CP-808, SET MAG NAIL
STA 11+14.31
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CP-31, SET MAG NAIL W/SHINNER AT
STA 11+46.27
EL. 52.71

REV.	DATE	DESCRIPTION	BY

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Date:
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CABLE COMPANY

NOTES & LEGEND

1. SEE "HORIZONTAL GEOMETRY LAYOUT" SHEETS 45 THRU 57 FOR PAVEMENT INFORMATION.
2. SEE "STORM SEWER LATERAL" SHEETS 213 THRU 232 FOR MORE INFORMATION.

(XXX) SEE "DRIVEWAY SCHEDULE & DETAILS" SHEET 58 TO 62.

(XX) SEE "CONSTRUCTION NOTES" SHEET 4.

PROPOSED PAVEMENT HIGH POINT

PROPOSED FLOW DIRECTION

SEE SHEET 144
SEE SHEET 210
MATCH LINE STA 7+80
SEE SHEET 144
SEE SHEET 187
MATCH LINE STA 12+20
SEE SHEET 212
FAIRVIEW
SALISBURY
WESTGATE
2402 Lot 55
2310 Lot 54
2306 Lot 53
2304 Lot 52
2304 Lot 51
2210 Lot 50
2208 Lot 49
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2-8"x22.5° BENDS, RJ 1-8" WET CONNECTION
2-8" CUT, PLUG AND ABANDON
CENTER ONE JOINT OVER PROP SAN SWR
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PROP 4' SIDEWALK (TYP)
CAUTION EX CABLE FACILITIES IN AREA SEE SPEC 01110
PROP 6" CONC PVMT w/6" CURB
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PROP 8" SAN SWR
PROP 24" RCP STM SWR
PROP 72" RCP STM SWR
PROP 24" SAN SWR
R1' PROP 8" SAN SWR
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84 LF @ 0.18%
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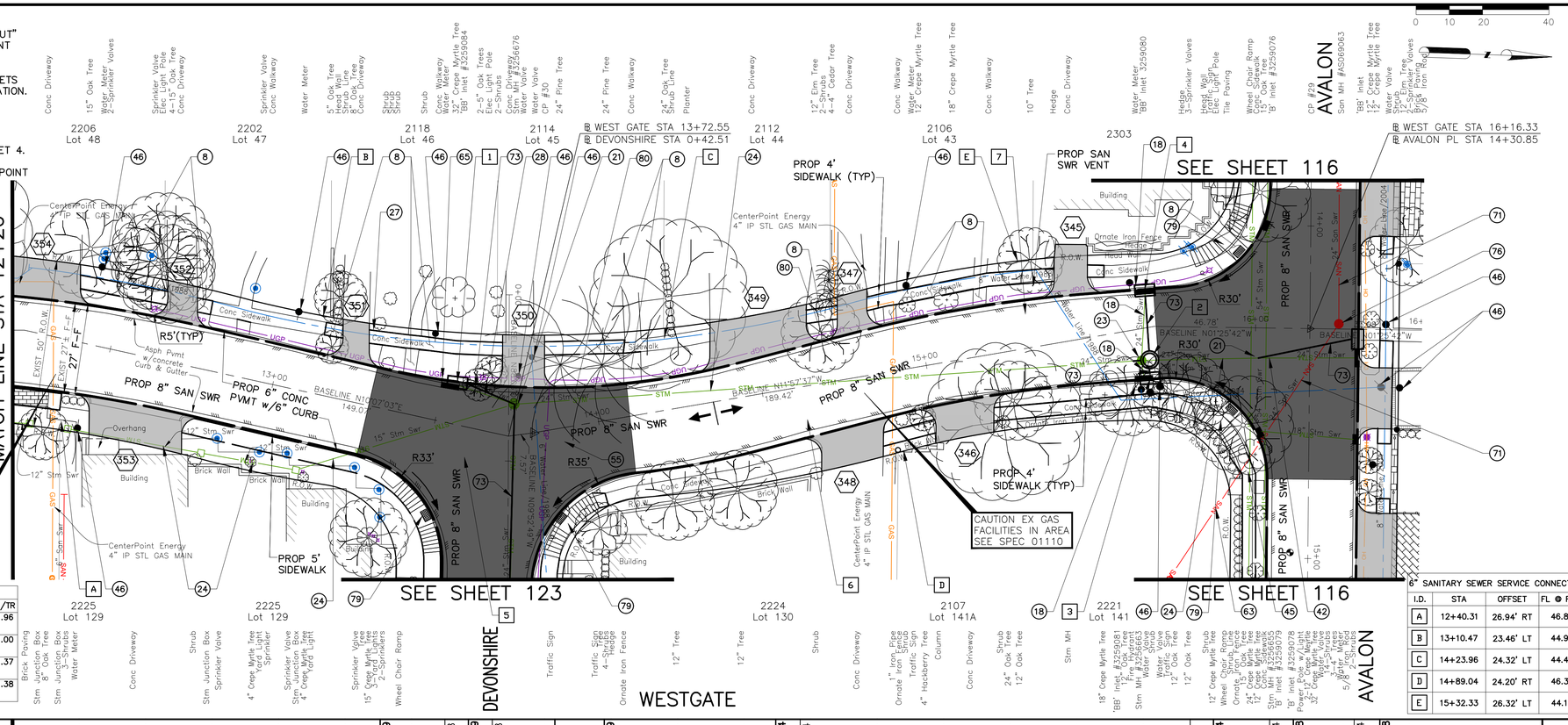
PROPOSED PAVEMENT HIGH POINT

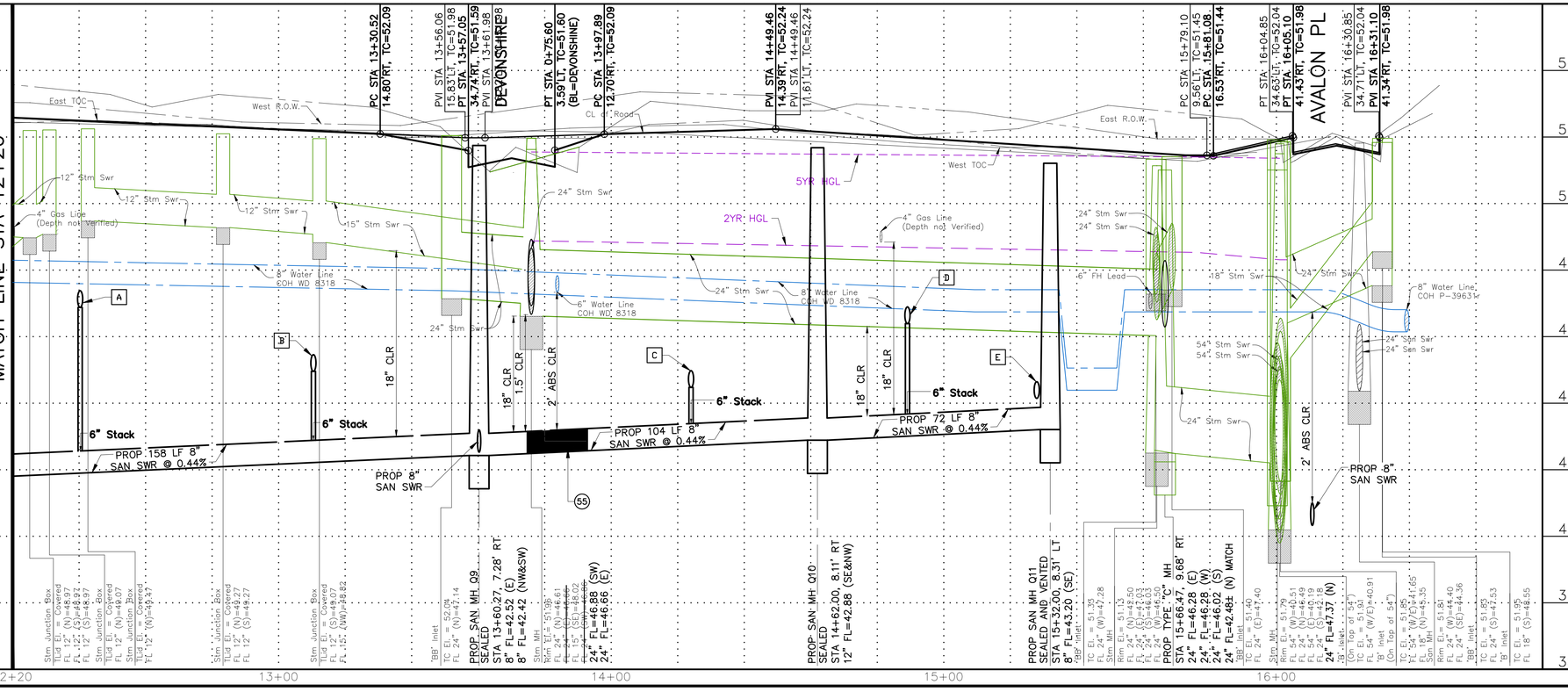
PROPOSED FLOW DIRECTION

0 10 20 40



STORM MANHOLE/INLET IDENTIFICATION					
	I.D.	TYPE	STA	OFFSET	TC/TR
1	BB-A64	"BB"	13+54.07	12.70' LT	51.96
2	MH-WEG1	"C"	15+66.47	9.68' RT	51.00
3	BB-A68	"BB"	15+65.58	15.40' RT	51.37
4	BB-A62	"BB"	15+68.58	11.44' LT	51.38

6" SANITARY SEWER SERVICE CONNECTION			
I.D.	STA	OFFSET	FL @ ROW
A	12+40.31	26.94' RT	46.87
B	13+10.47	23.46' LT	44.95
C	14+23.96	24.32' LT	44.47
D	14+89.04	24.20' RT	46.39
E	15+32.33	26.32' LT	44.14



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

TBM:

CP-30, SET MAG NAIL W/SHINNER AT STA 13+80.13 EL. 52.13

CP-29, SET MAG NAIL W/SHINNER AT STA 16+16.32 EL. 52.01

SANITARY MANHOLE IDENTIFICATION						
	I.D.	TYPE	STA	OFFSET	TR	SEAL/VENT
5	MH-Q09	SAN	13+60.27	7.28' RT	51.74	SEALED
6	MH-Q10	SAN	14+62.00	8.11' RT	51.67	SEALED
7	MH-Q11	SAN	15+32.00	8.31' LT	51.20	SEALED AND VENTED

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

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CABLE COMPANY

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TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WESTGATE
STA 12+20 TO END

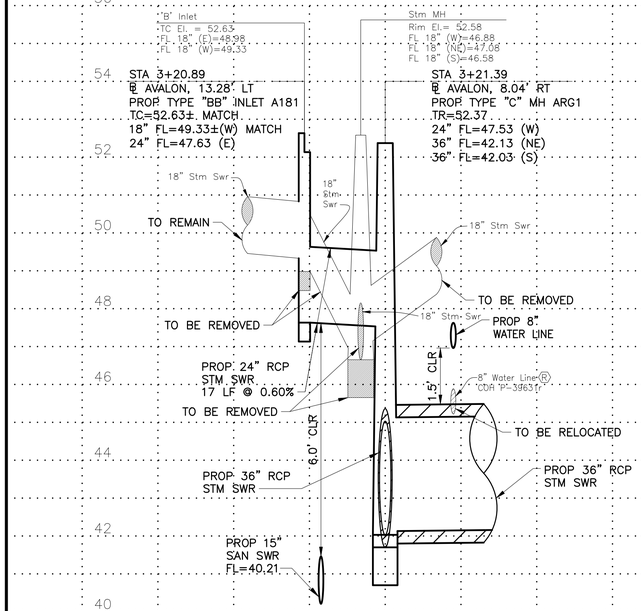
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 212 OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\West Gate-04.dwgModel Jul 08, 2026 - 11:11AM Jgarza

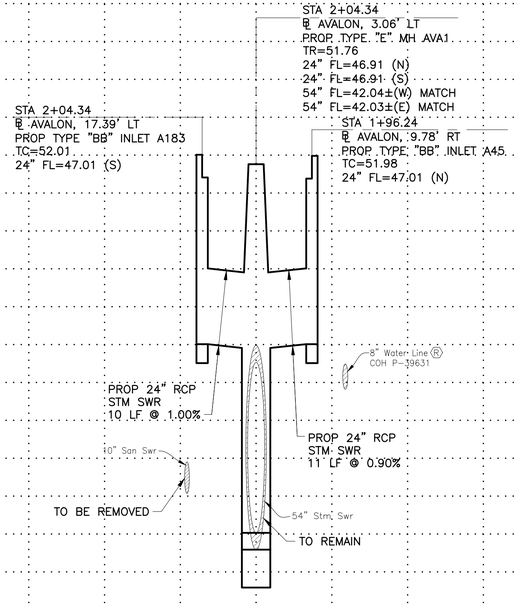
0 10 20 40

BENCHMARK:

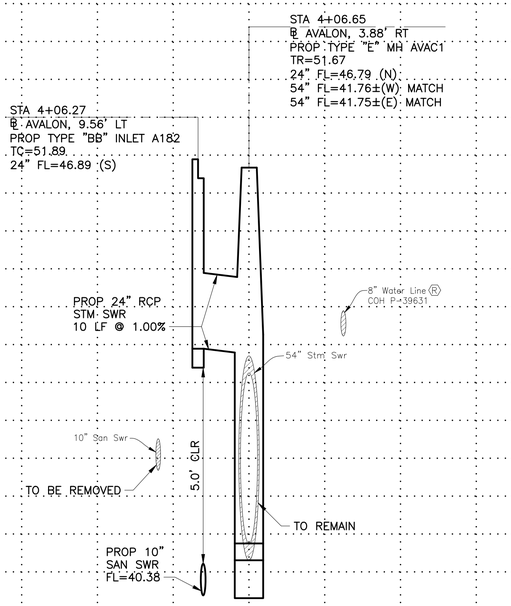
CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)



"ARGONNE" SEE SHEET 111 STA 3+21.23



"AVALON" SEE SHEET 111 STA 2+04.34



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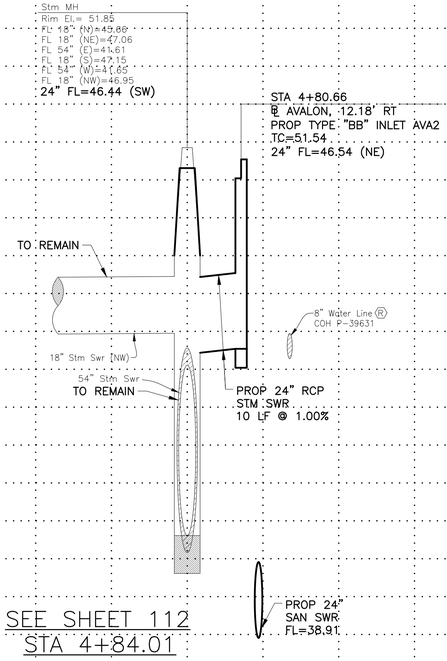
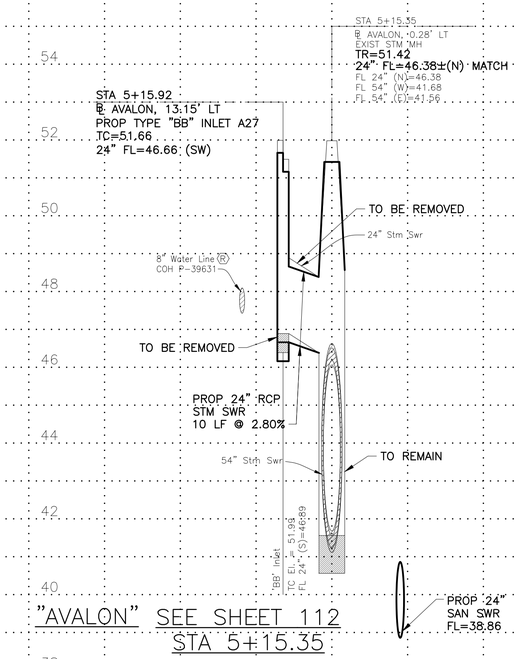
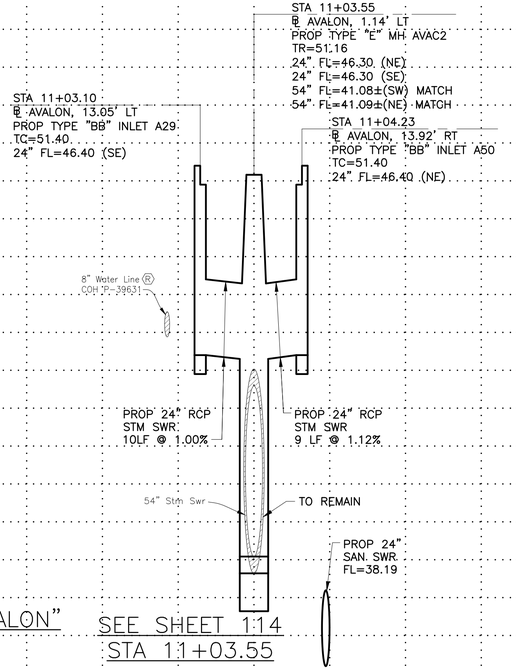


"AVALON" SEE SHEET 112 STA 4+84.01



"AVALON" SEE SHEET 112 STA 5+15.35



"AVALON" SEE SHEET 114 STA 11+03.55

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

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SUITE 100
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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

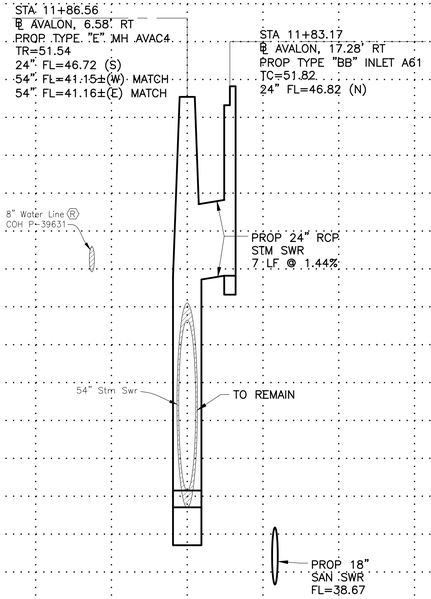
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

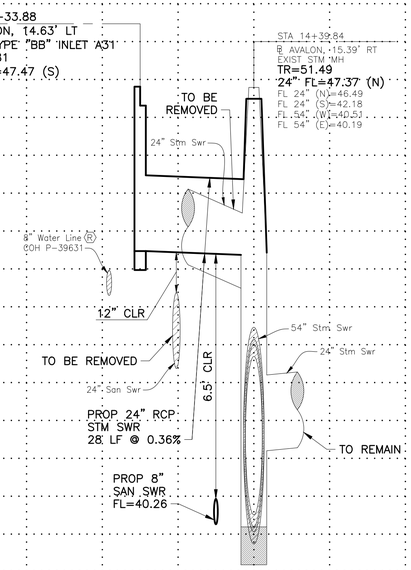
STORM SEWER LATERALS
SHEET 1 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **213** OF 391

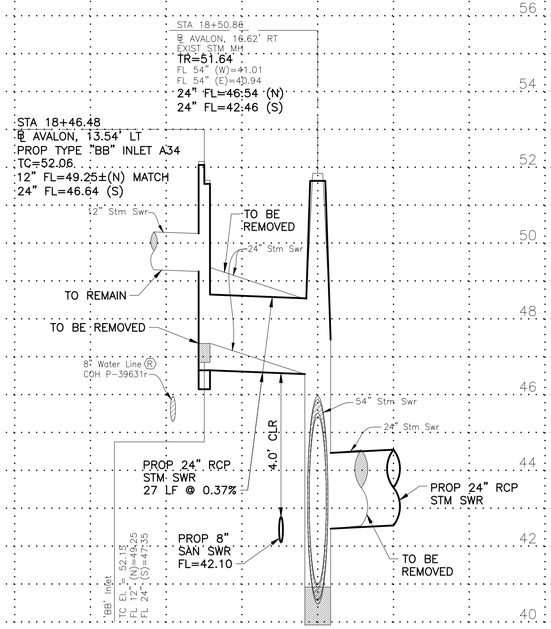
C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET1 May 27, 2026 — 10:55AM jgarza



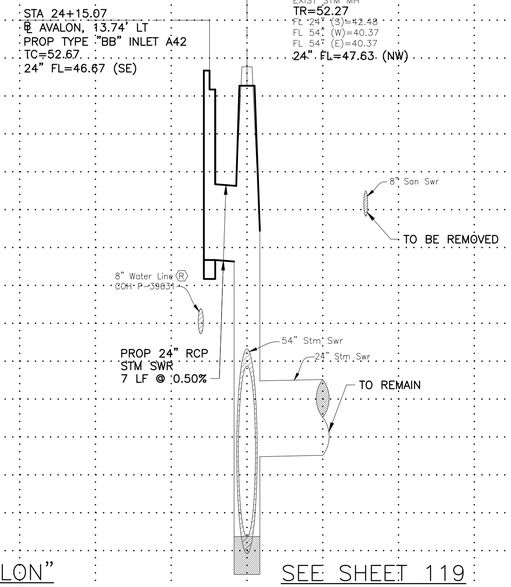
"AVALON" SEE SHEET 114
STA 11+86.56



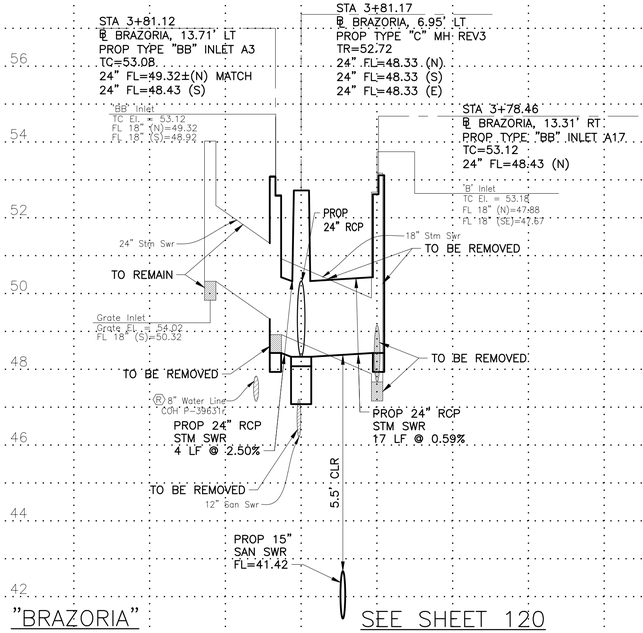
"AVALON" SEE SHEET 116
STA 14+39.84



"AVALON" SEE SHEET 117
STA 18+50.86



"AVALON" SEE SHEET 119
STA 24+25.84



"BRAZORIA" SEE SHEET 120
STA 3+81.17

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

OTHON, INC. TBPE NO. F-1471

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8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 2 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **214** OF 391

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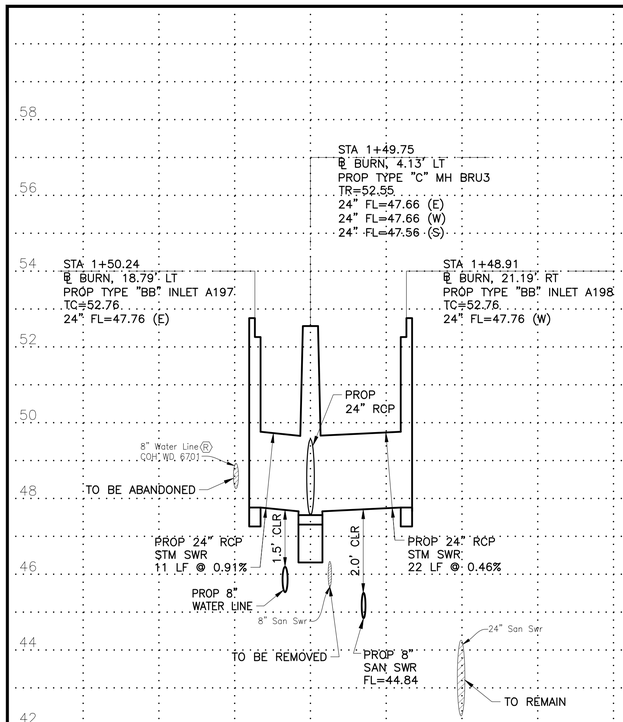
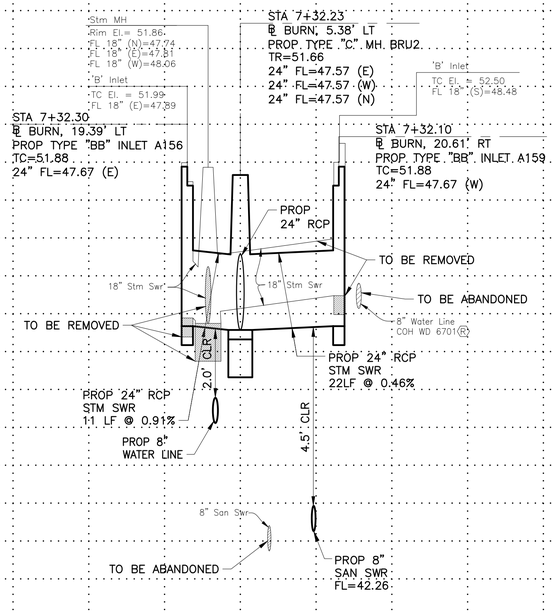


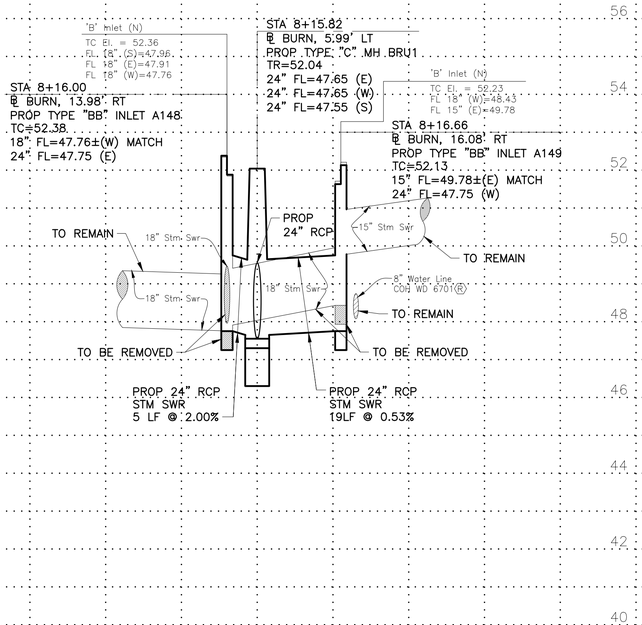
"BURN"

SEE SHEET 121
STA 1+49.75



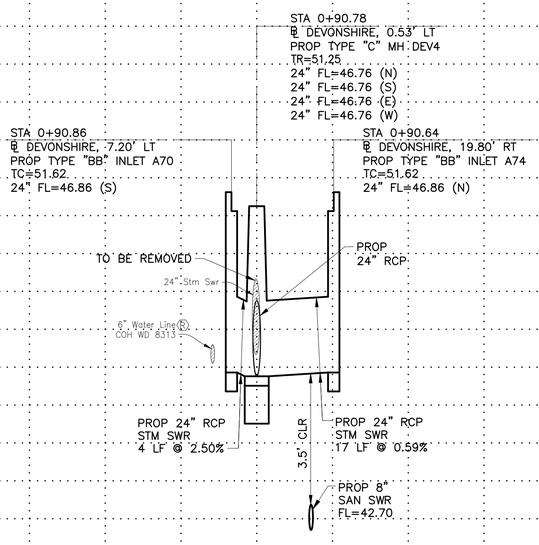
"BURN"

SEE SHEET 122
STA 7+32.23



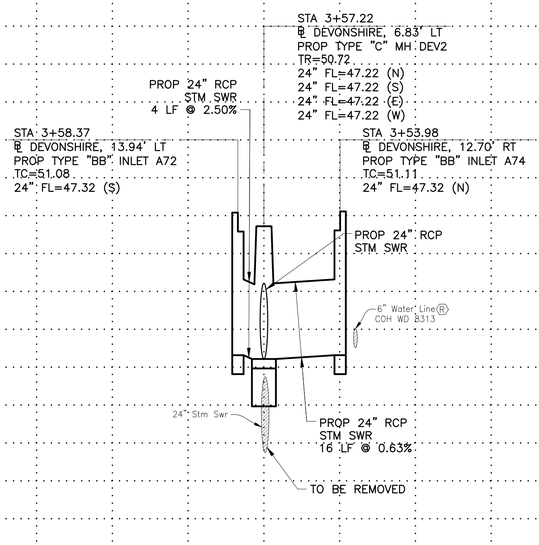
"BURN"

SEE SHEET 122
STA 8+15.33



"DEVONSHIRE"

SEE SHEET 123
STA 0+90.78



"DEVONSHIRE"

SEE SHEET 123
STA 3+57.22

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

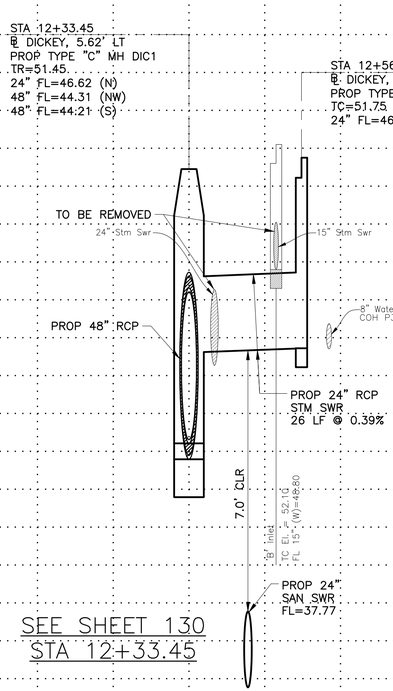
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 3 OF 22

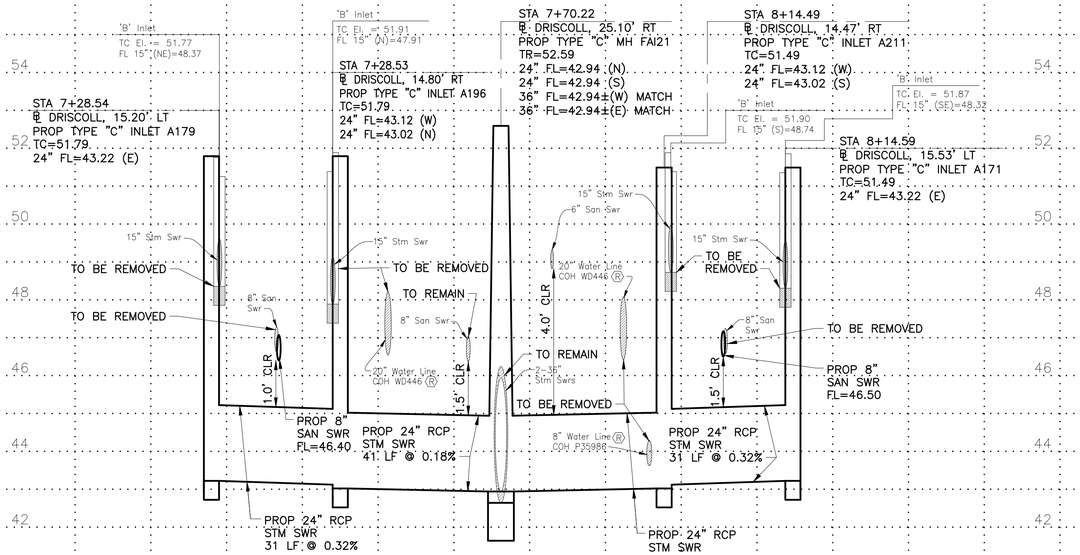
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **215** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET3 May 27, 2026 — 10:56AM jgarza



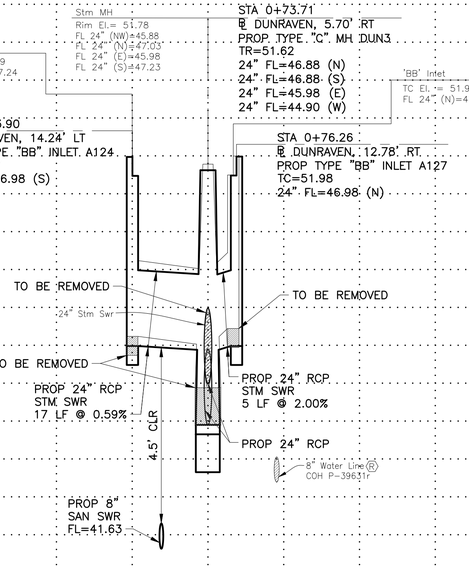
"DICKEY"

SEE SHEET 130
STA 12+33.45



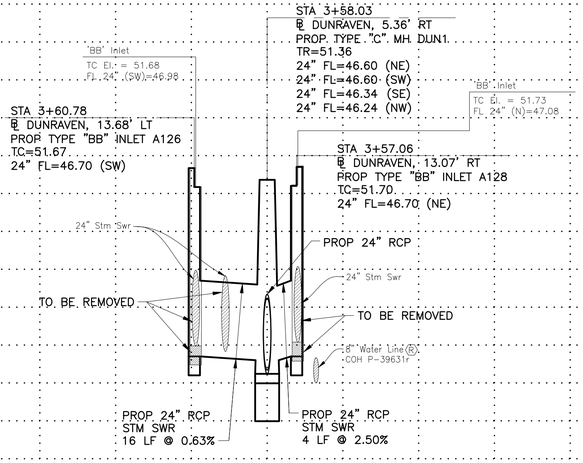
"DRISCOLL"

SEE SHEET 122
STA 7+70.11



"DUNRAVEN"

SEE SHEET 139
STA 0+73.71



"DUNRAVEN"

SEE SHEET 139
STA 3+58.12

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

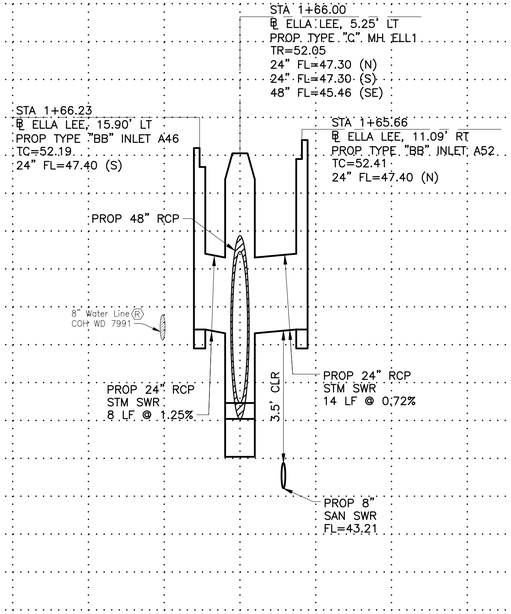
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 4 OF 22

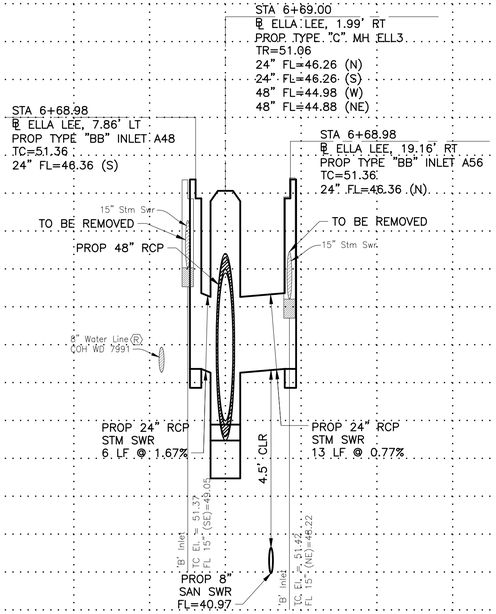
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **216** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET4 May 27, 2026 — 10:56AM jgarza



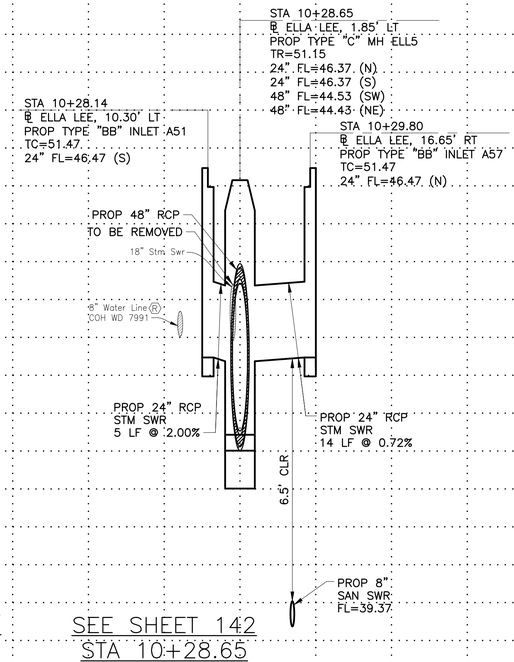
"ELLA LEE"

SEE SHEET 140
STA 1+66.00



"ELLA LEE"

SEE SHEET 141
STA 6+69.00



"ELLA LEE"

SEE SHEET 142
STA 10+28.65

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 5 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **217** OF 391

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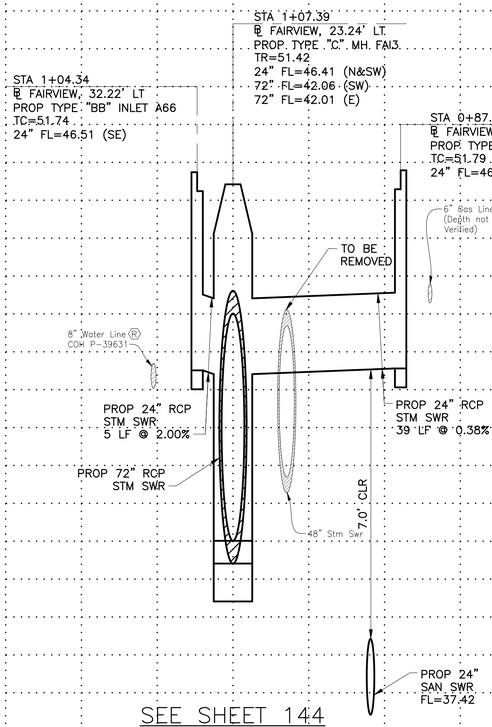

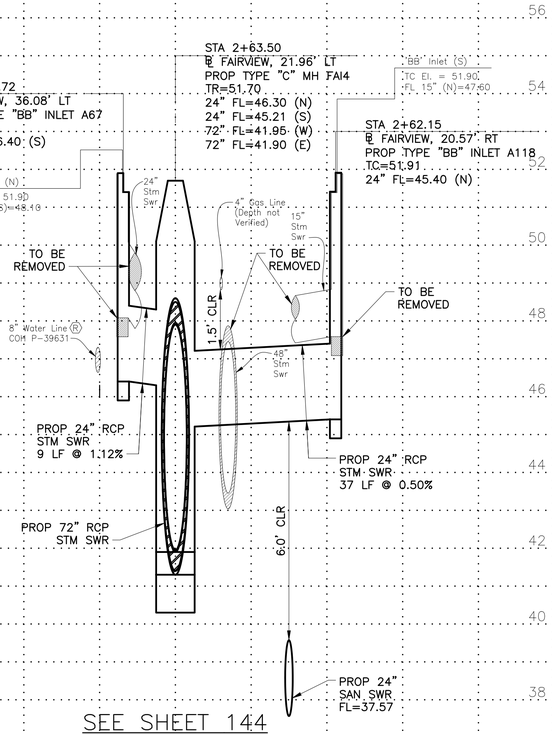

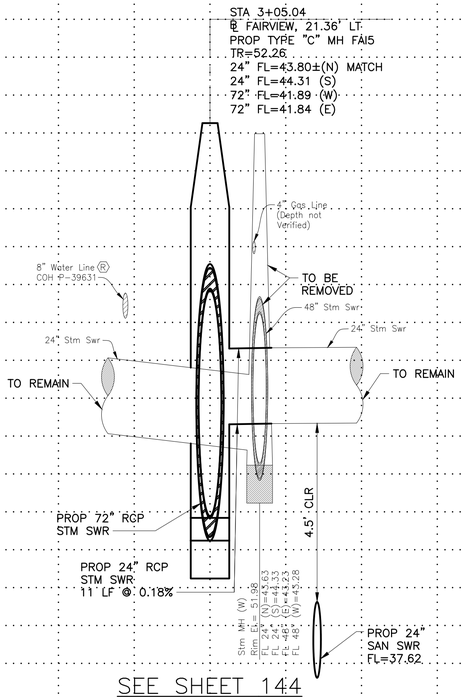

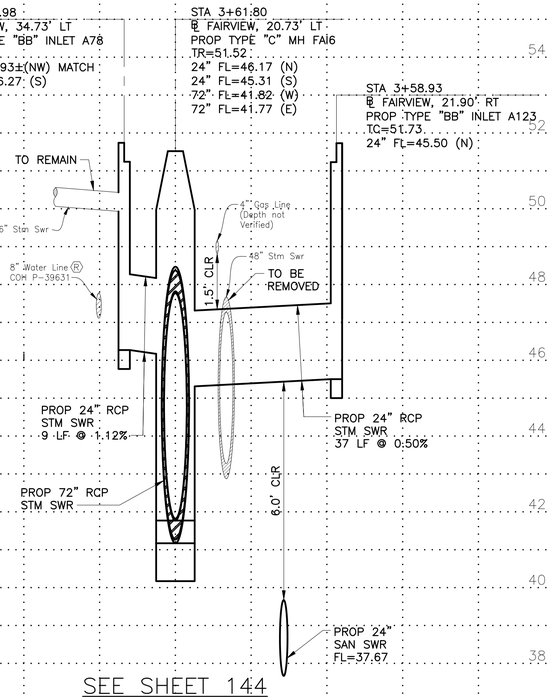

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 6 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **218** OF 391

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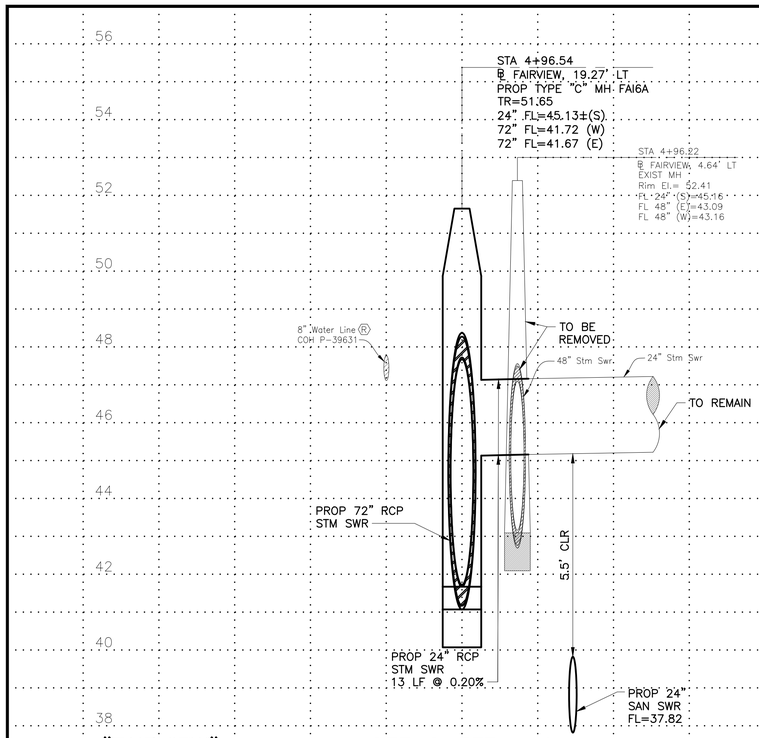

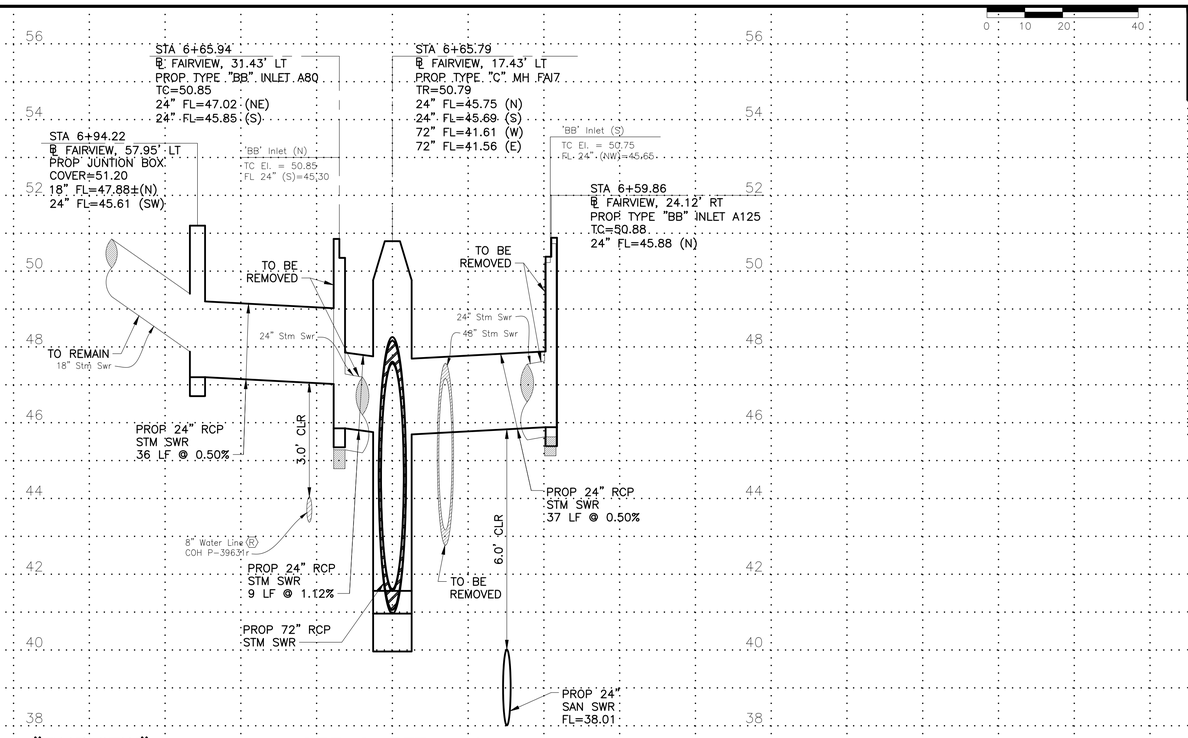

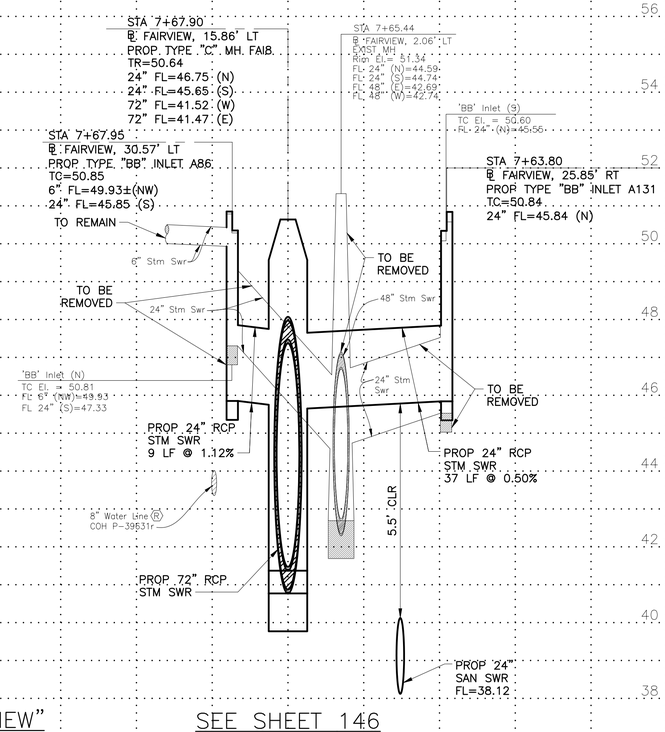

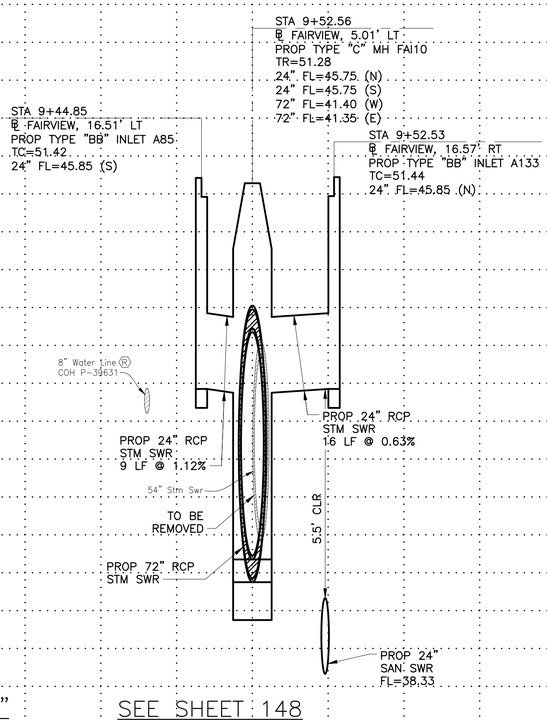

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 7 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **219** OF 391

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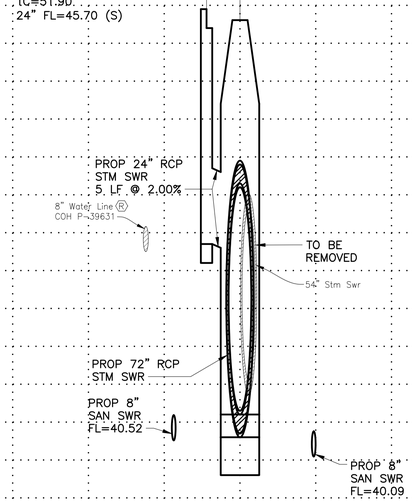

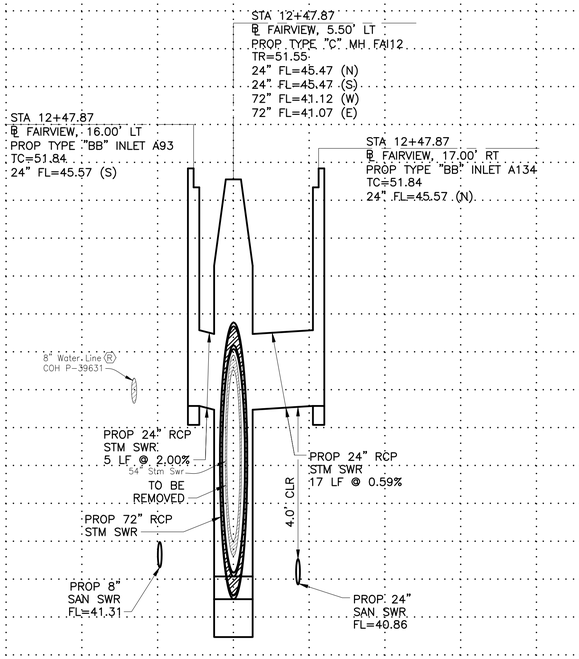

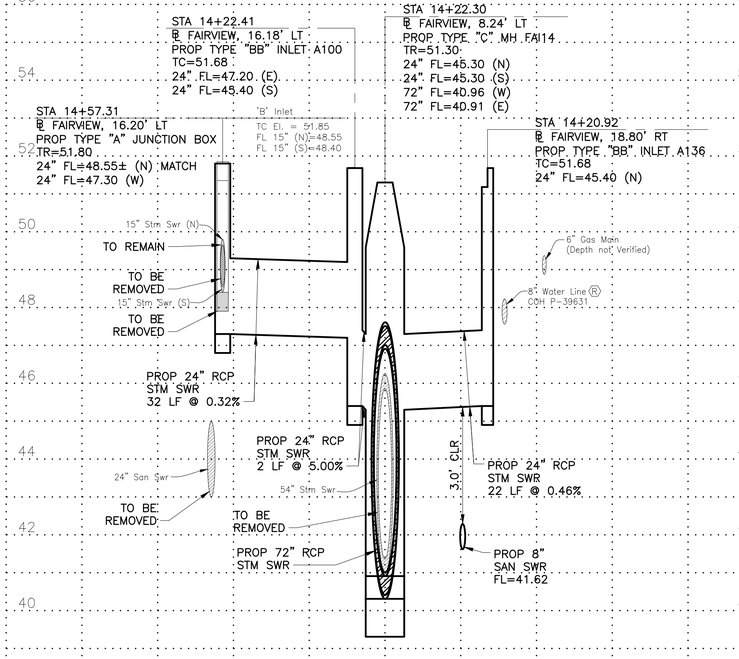

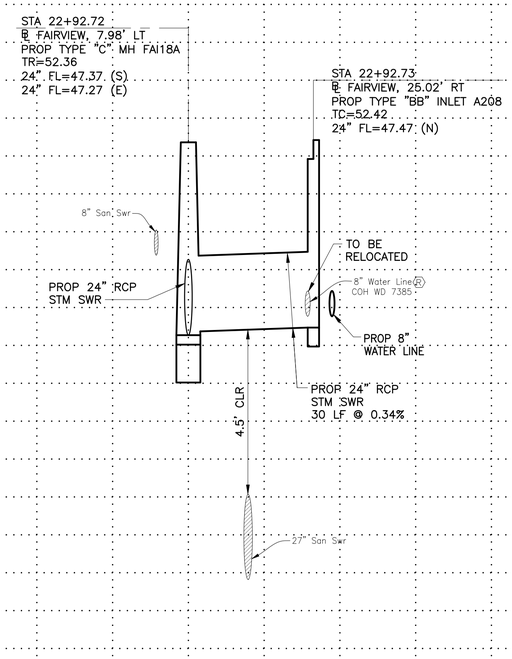

"FAIRVIEW" SEE SHEET 148 STA 10+72.82

"FAIRVIEW" SEE SHEET 150 STA 12+47.87

"FAIRVIEW" SEE SHEET 150 STA 14+22.30

"FAIRVIEW" SEE SHEET 153 STA 22+92.72

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TEL: (713) 270-5700
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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 8 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **220** OF 391

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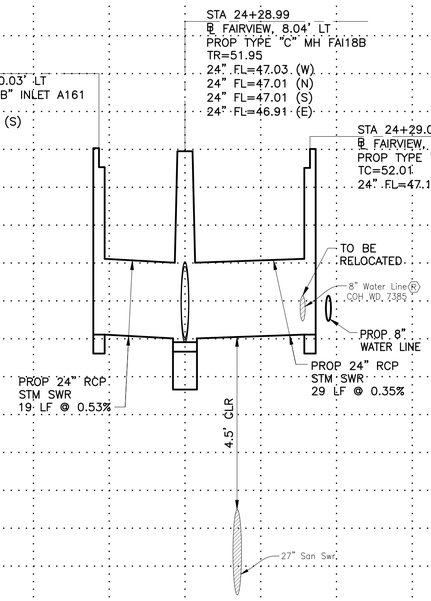
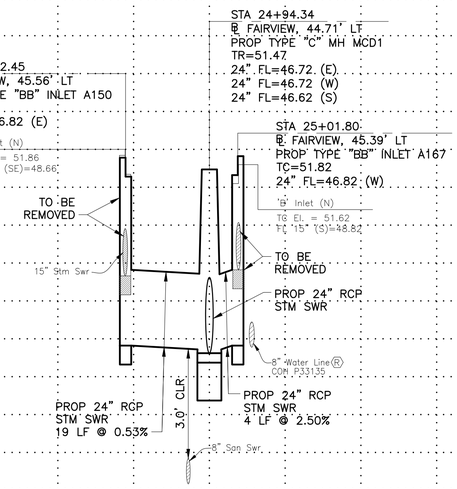
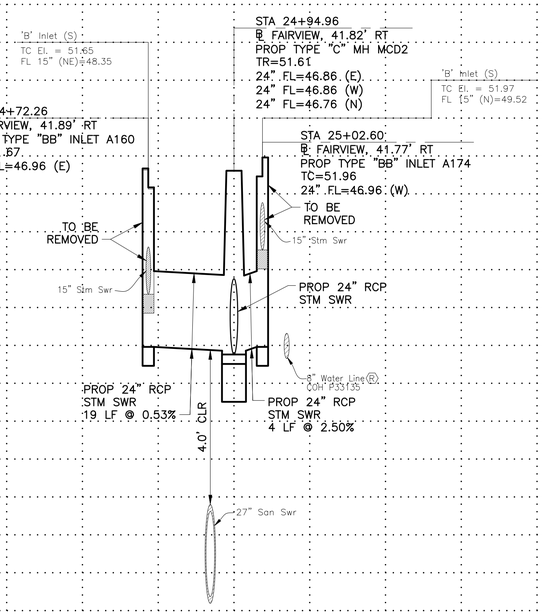


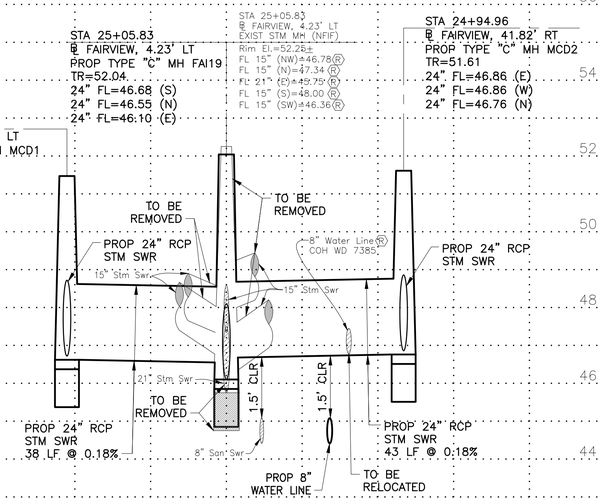
"FAIRVIEW"
SEE SHEET 153
STA 24+28.99



"FAIRVIEW"
SEE SHEET 150
STA 24+94.34



"FAIRVIEW"
SEE SHEET 150
STA 24+95.08



"FAIRVIEW"
SEE SHEET 153
STA 25+05.83

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 9 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **221** OF 391

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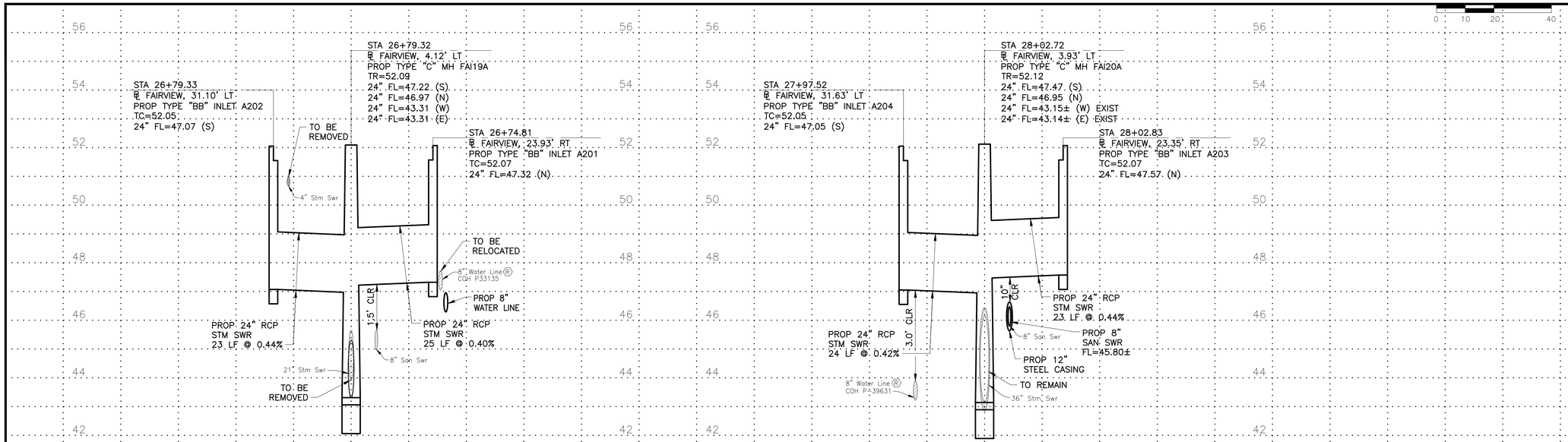

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

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TEL: (713) 270-5700
TBPE REG NO: F-4528
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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

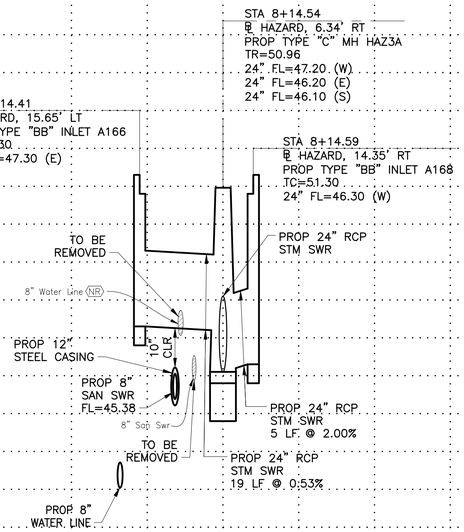
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 10 OF 22

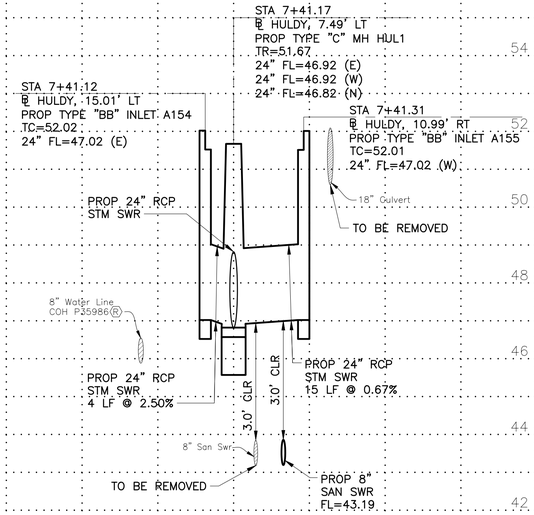
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **222** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET10 May 27, 2026 - 10:57AM Jgarza



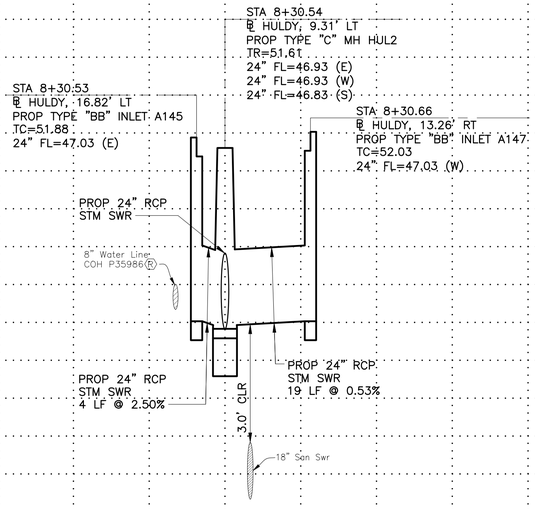
"HAZARD"

SEE SHEET 158
STA 8+14.04



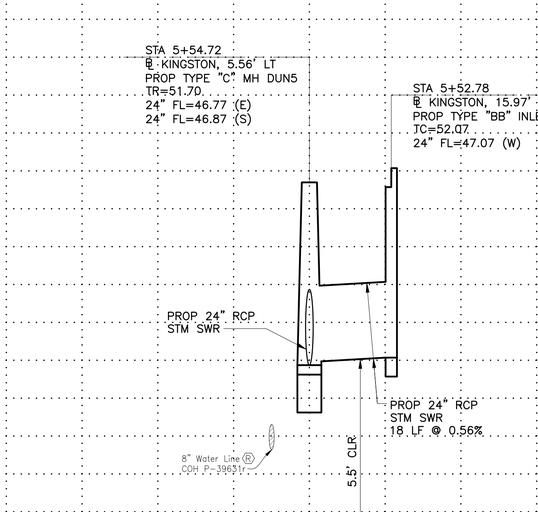
"HULDY"

SEE SHEET 161
STA 7+41.84



"HULDY"

SEE SHEET 161
STA 8+30.54



"KINGSTON"

SEE SHEET 164
STA 5+54.72

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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TBPE REG NO: F-4528
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FB No. P-5723

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MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

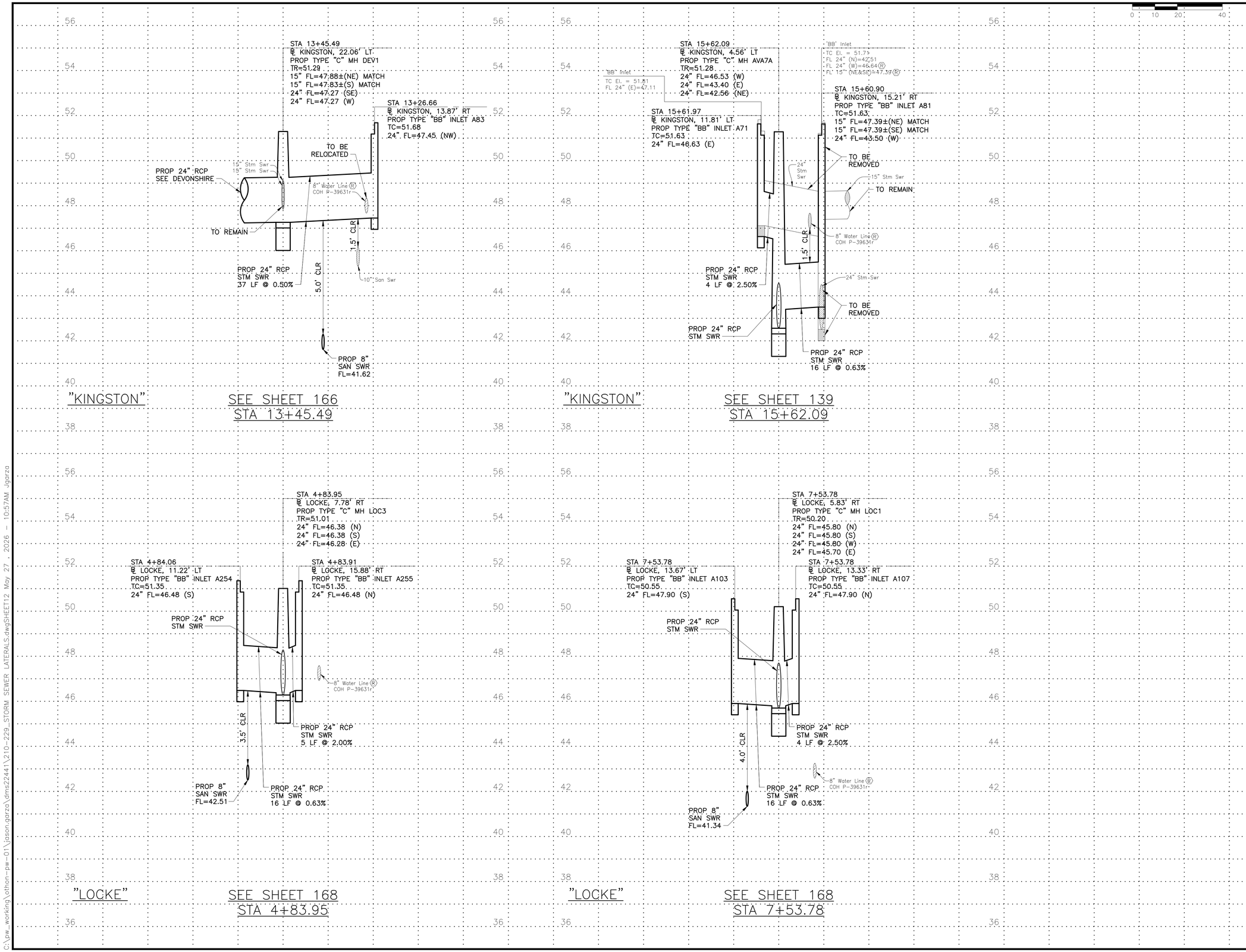
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 11 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **223** OF 391	

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET11 May 27, 2026 - 10:57AM Jgarza



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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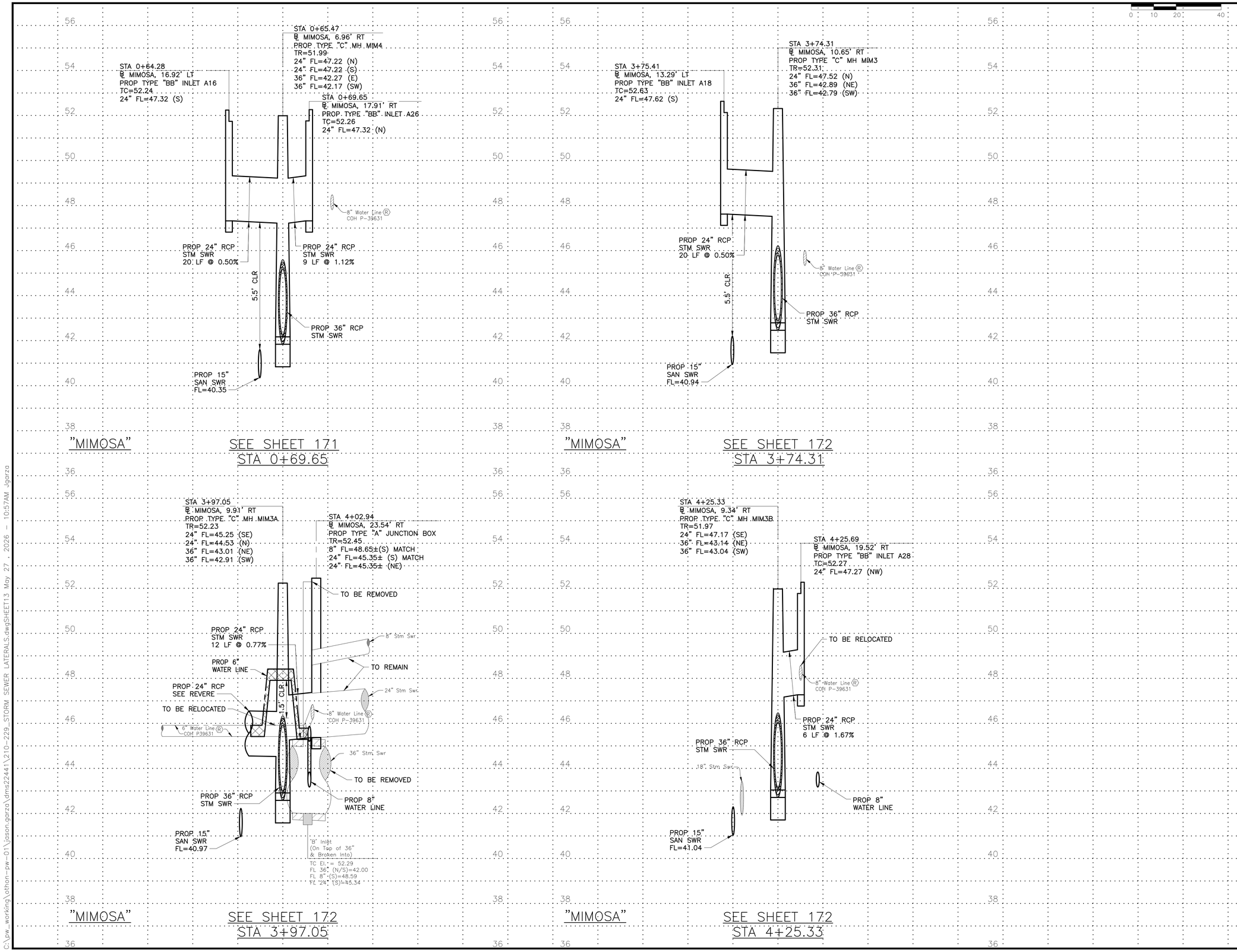
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 12 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **224** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET12 May 27 , 2026 - 10:57AM Jgarza



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 13 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **225** OF 391

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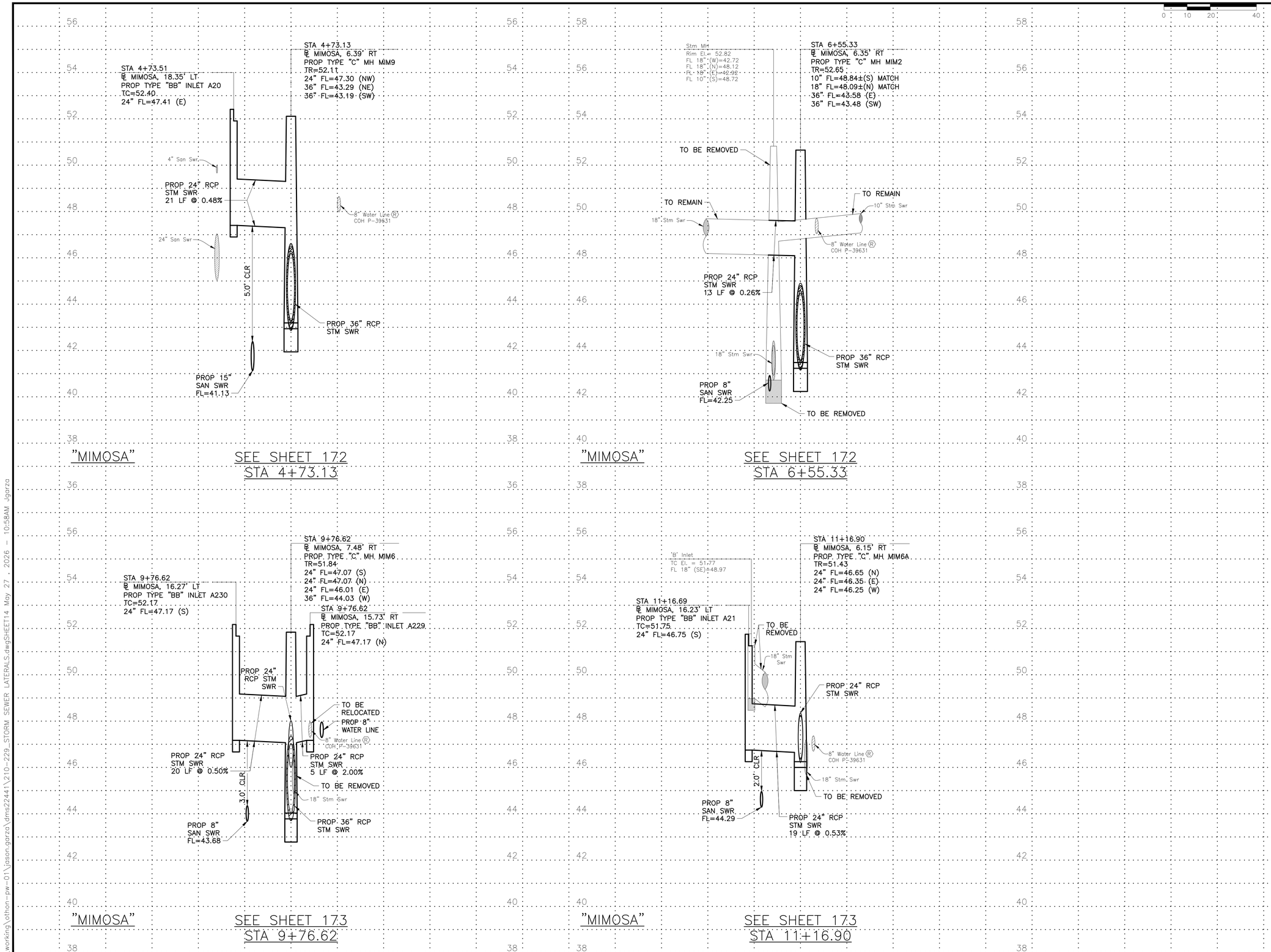

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 14 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **226** OF 391

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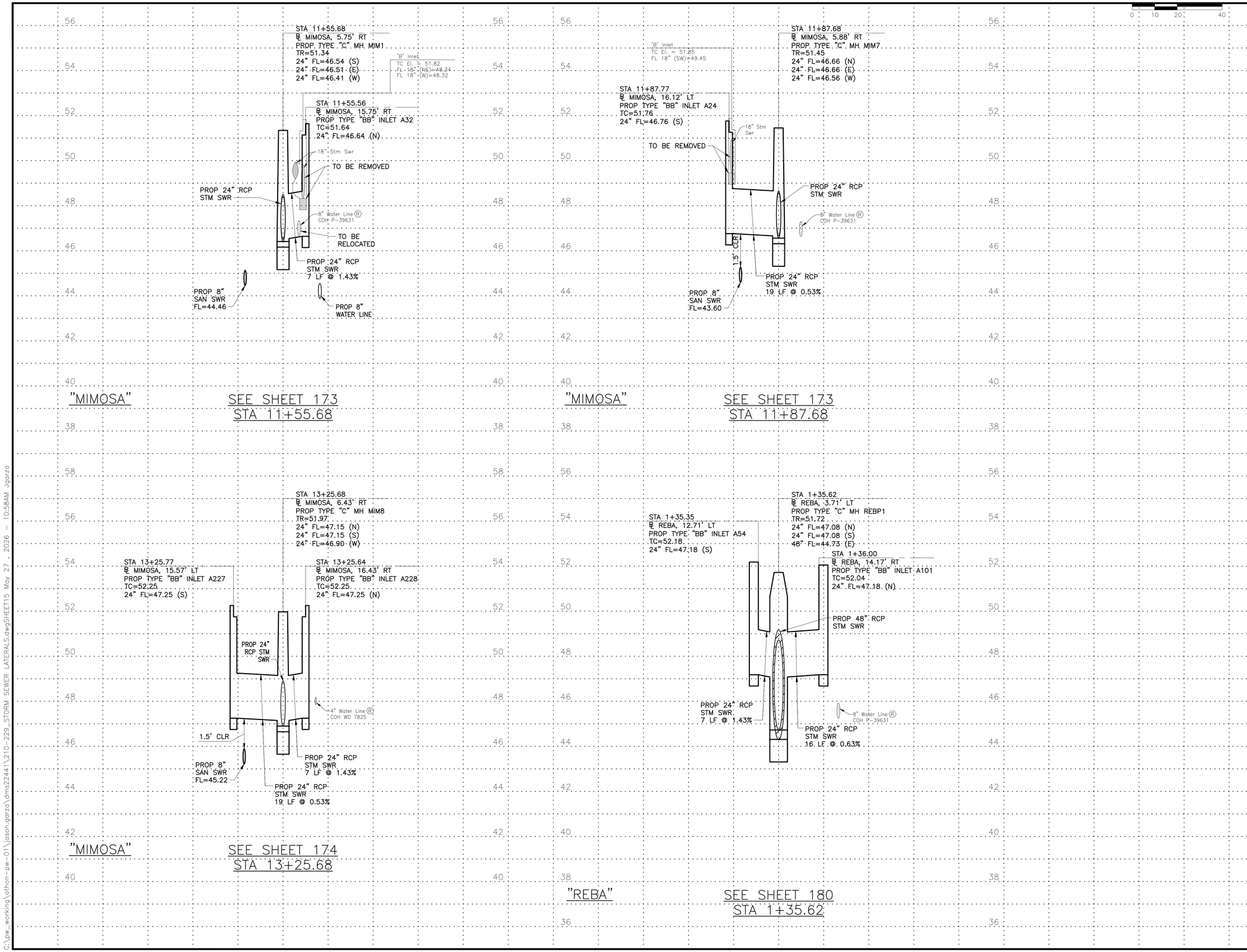

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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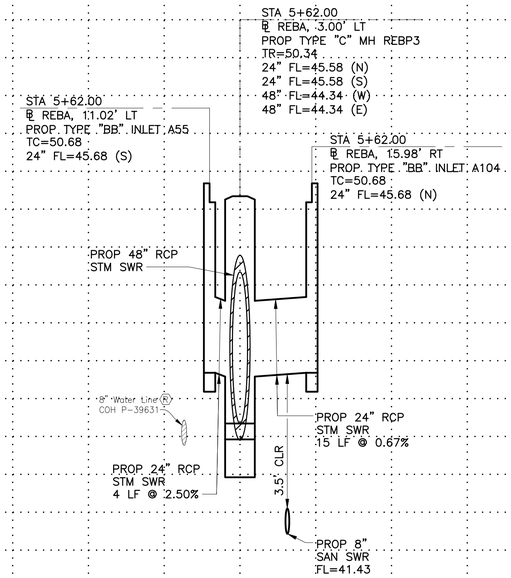
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 15 OF 22

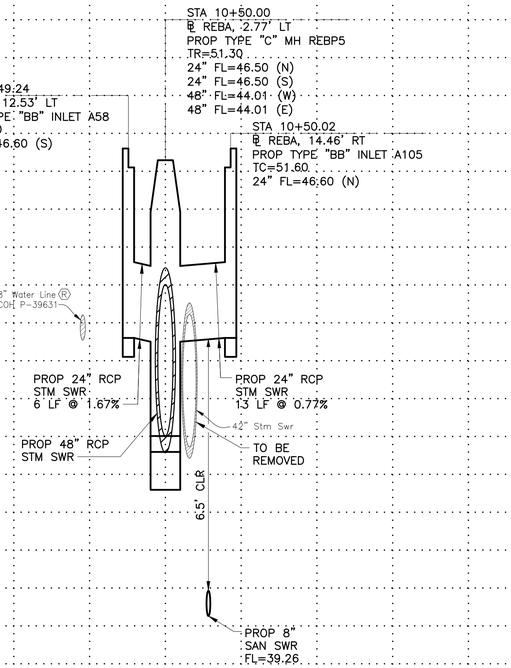
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **227** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET15 May 27 , 2026 - 10:58AM Jgarza



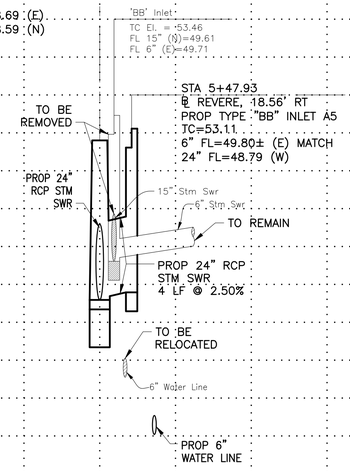
"REBA"

SEE SHEET 181
STA 5+62.00



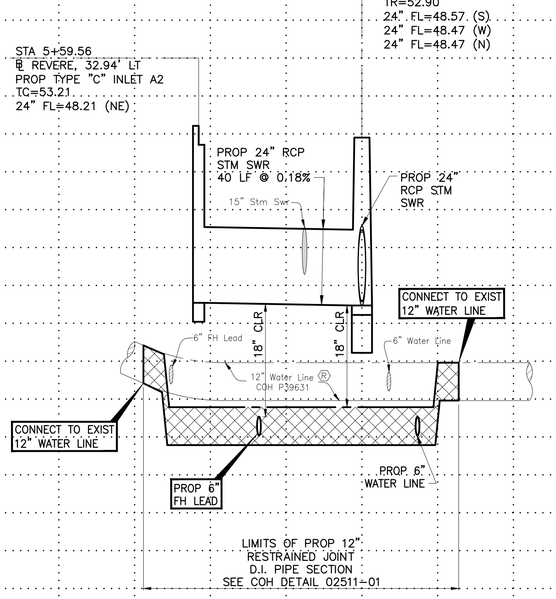
"REBA"

SEE SHEET 182
STA 10+50.00



"REVERE"

SEE SHEET 189
STA 5+48.11



"REVERE"

SEE SHEET 189
STA 5+60.19

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

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MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 16 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **228** OF 391	

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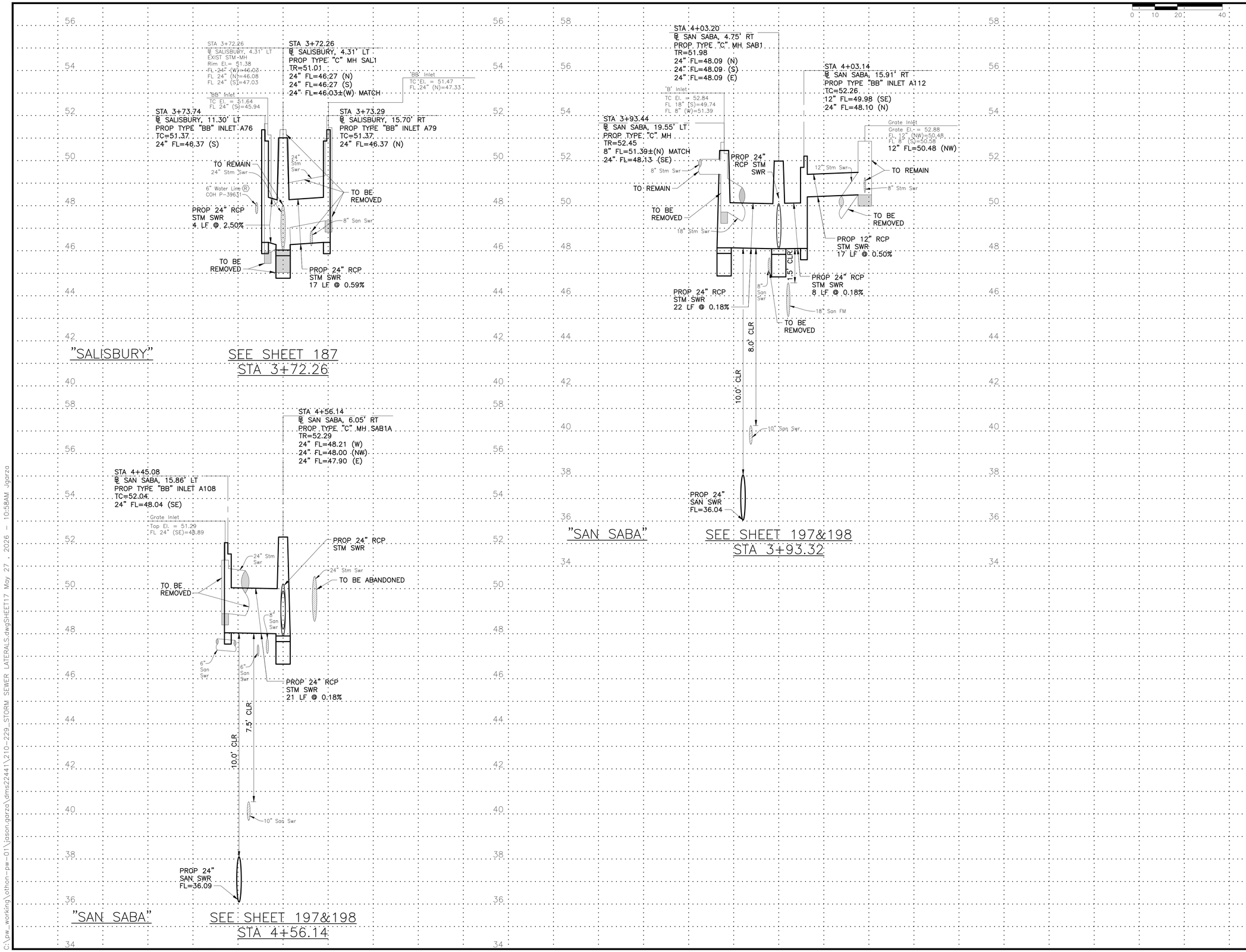

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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SURVEYED BY: AMANI ENGINEERING, INC.
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07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 17 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 229 OF 391	

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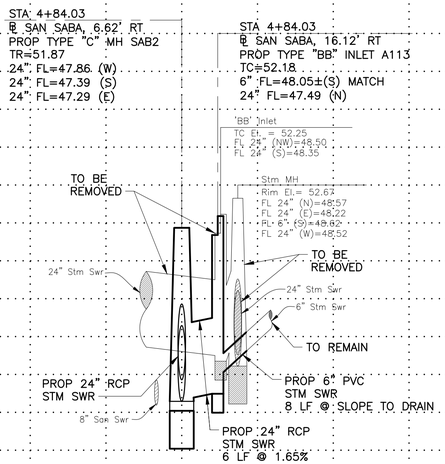

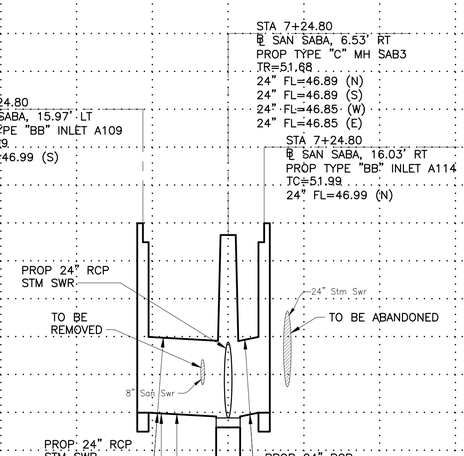

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BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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07/29/2026

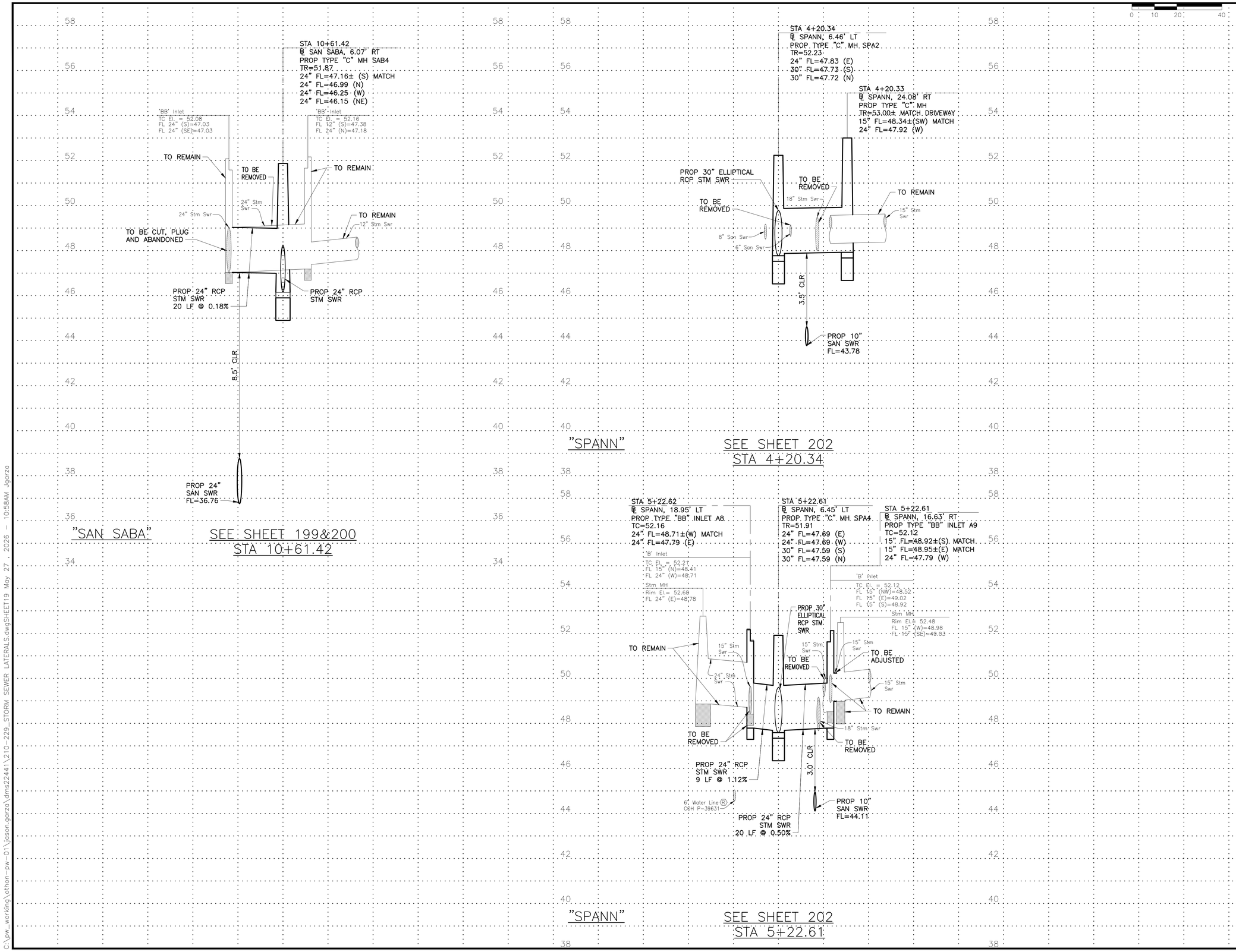
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 18 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **230** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\210-229_STORM SEWER LATERALS.dwgSHEET18 May 27, 2026 - 10:58AM Jgarza



BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 19 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **231** OF 391

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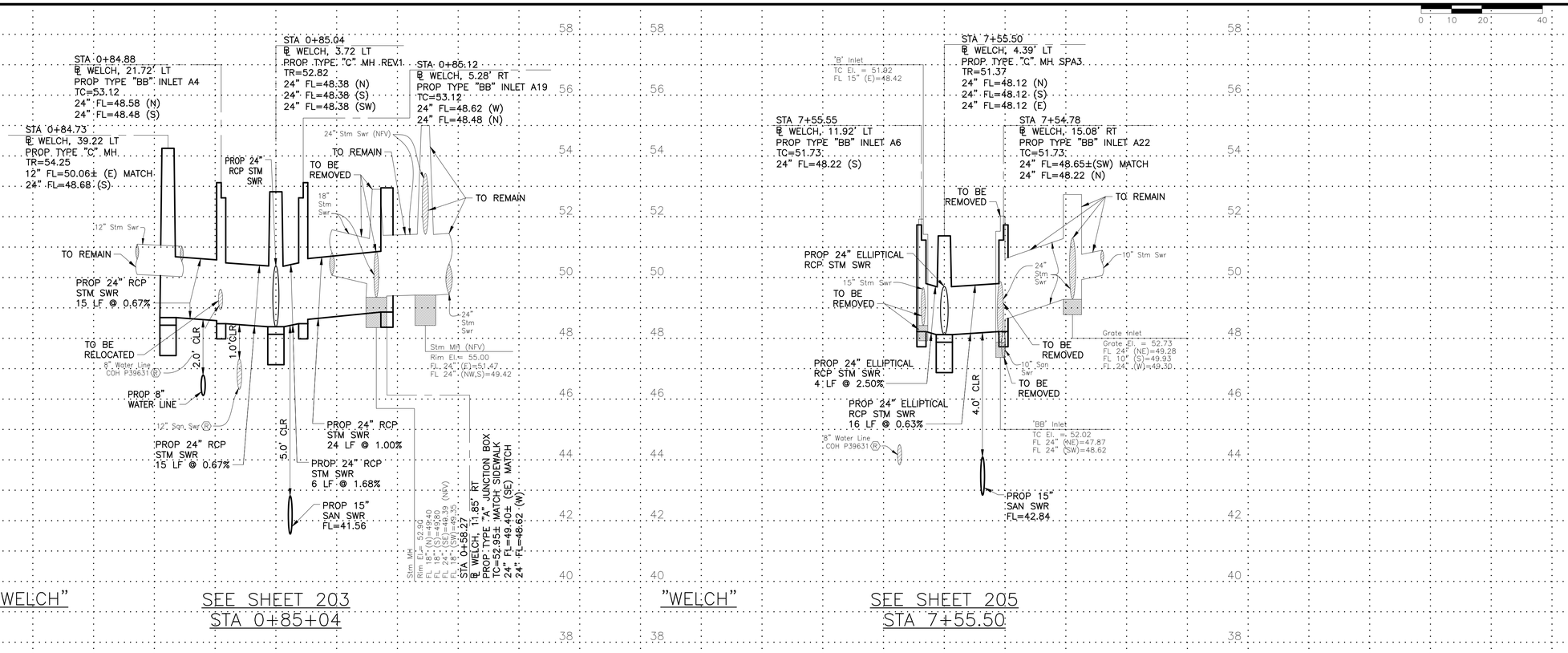

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)

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FB No. P-5723

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143557
LICENSED ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 20 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **232** OF 391

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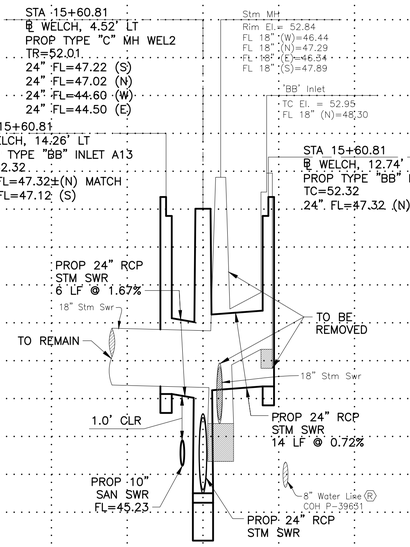
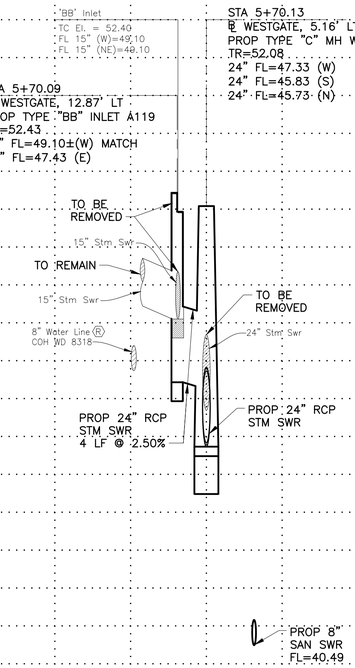


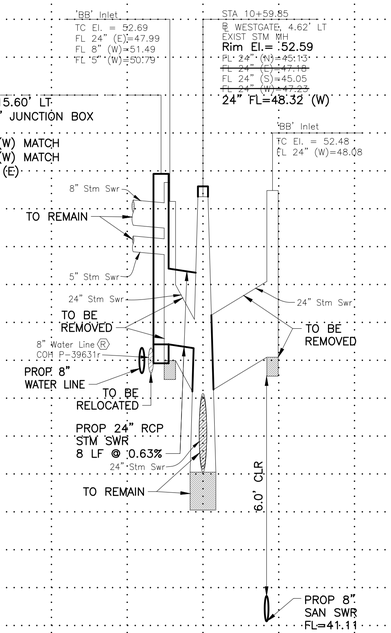
"WELCH"

SEE SHEET 206
STA 15+60.81



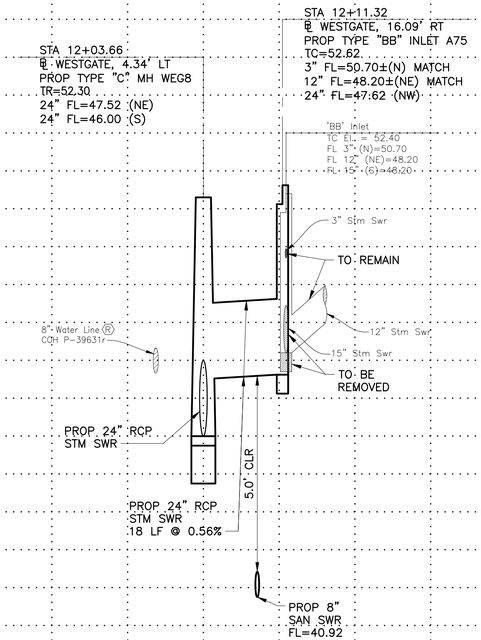
"WESTGATE"

SEE SHEET 210
STA 5+70.13



"WESTGATE"

SEE SHEET 211
STA 10+59.85



"WESTGATE"

SEE SHEET 211
STA 12+03.66

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

OTHON

OTHON, INC. TBPE NO. F-1471

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AMANI ENGINEERING, INC.
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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 21 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **233** OF 391	

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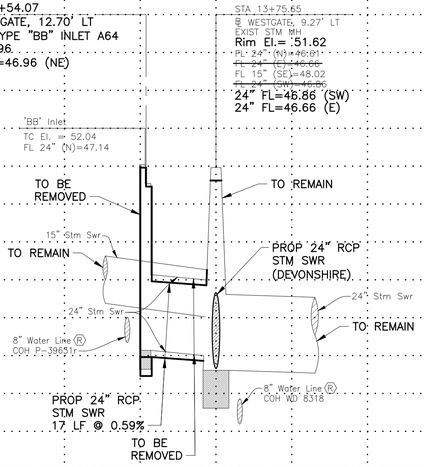
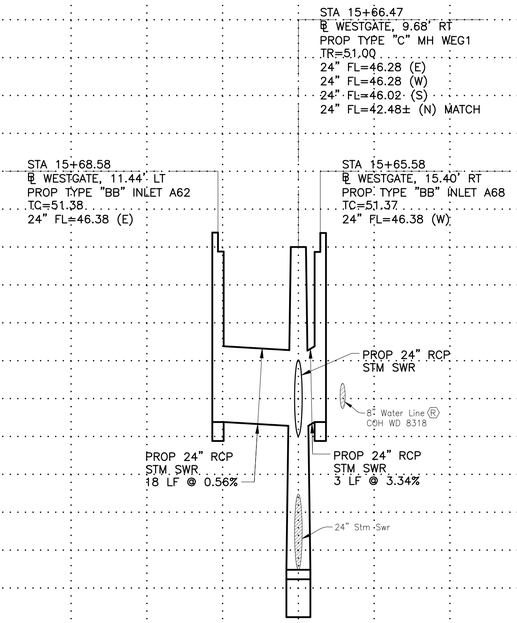


"WESTGATE"

SEE SHEET 21?
STA 13+75.65



"WESTGATE"

SEE SHEET 21?
STA 15+66.47

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

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07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER LATERALS
SHEET 22 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **234** OF 391

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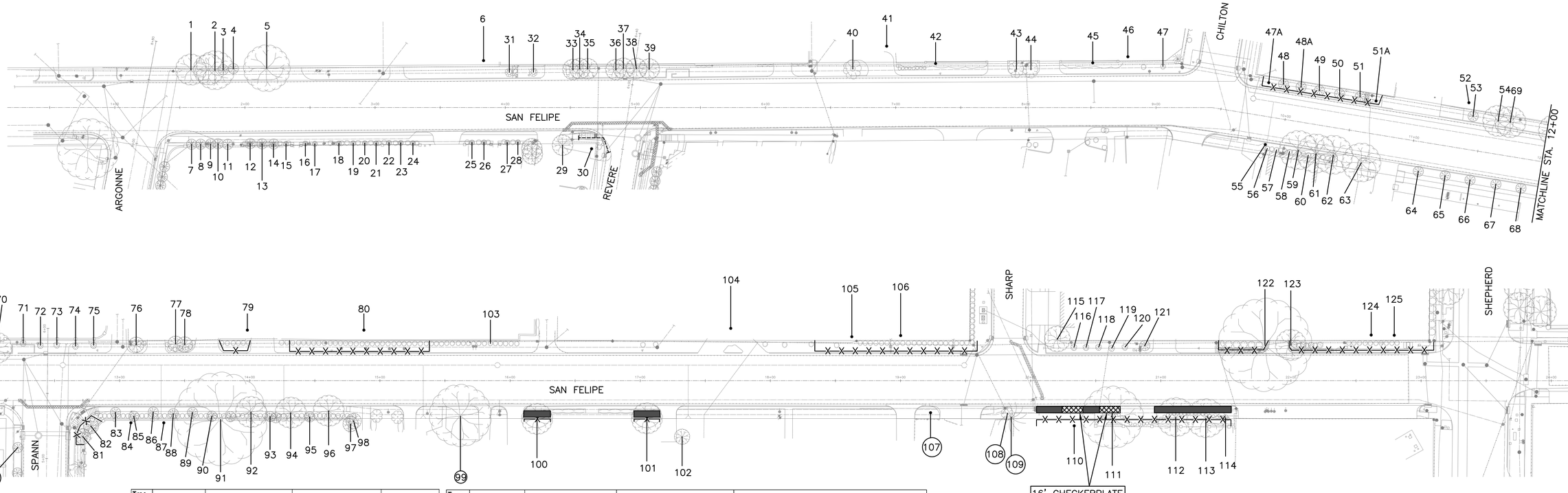

Tree No.	Location	Description	Comments	Treatment
Trees on San Felipe				
1	2523 San Felipe	12" Camphor	Tree recently removed	
2	2523 San Felipe	10" Camphor	Tree recently removed	
3	2523 San Felipe	6" Camphor	Tree recently removed	
4	2523 San Felipe	12" Raintree	Tree recently removed	
5	2523 San Felipe	18" Raintree	Tree recently removed	
6	2441 San Felipe	24" Tallow	Private tree	Clearance prune
7	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
8	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
9	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
10	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
11	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
12	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
13	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
14	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
15	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
16	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
17	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
18	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
19	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
20	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
21	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
22	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
23	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
24	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
25	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
26	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
27	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
28	2415 San Felipe	5" Slender Silhouette Sweetgum	Not ordinance tree	
29	2401 San Felipe	4" River Birch	Tree recently removed	
30	2401 San Felipe	30" Water Oak	Private tree	Root prune for sidewalk
31	2439 San Felipe	4" Crepe Myrtle	Topped, Not ordinance tree	
32	2439 San Felipe	4" Crepe Myrtle	Topped, Not ordinance tree	
33	2439 San Felipe	4" Cherry Laurel	Tree recently removed	
34	2439 San Felipe	6" Cherry Laurel	Tree recently removed	
35	2439 San Felipe	4" Cherry Laurel	Tree recently removed	
36	2439 San Felipe	8" Cherry Laurel	Tree recently removed	
37	2439 San Felipe	4" Cherry Laurel	Tree recently removed	
38	2439 San Felipe	6" Cherry Laurel	Tree recently removed	
39	2439 San Felipe	5" Cherry Laurel	Tree recently removed	
40	2415 San Felipe	12" Crepe Myrtle	Tree recently removed	
41	2415 San Felipe	30" Live Oak	Tree recently removed	
42	2415 San Felipe	15" Mulberry	Not ordinance tree	Clearance prune
43	2314 San Felipe	16" Crepe Myrtle	Not ordinance tree	
44	2314 San Felipe	16" Crepe Myrtle	Not ordinance tree	
45	2314 San Felipe	14" Rain Tree	Private tree	Clearance prune
46	2314 San Felipe	40" Live Oak	Private tree	Clearance prune
47	2314 San Felipe	5" Juniper	Not ordinance tree	
47A	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
48	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
48A	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
49	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
50	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
51	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
51A	2241 San Felipe	4" Holly	Ordinance tree	Fence, Bore sanitary
52	2239 San Felipe	35" Live oak	Private tree	
53	2239 San Felipe	4" Pear	Not ordinance tree	
54	2239 San Felipe	12" Pear	50% dieback, Not ordinance tree	
55	2243 San Felipe	4" River Birch	Tree recently removed	
56	2243 San Felipe	4" Oleander	Tree recently removed	
57	2243 San Felipe	4" River Birch	Tree recently removed	
58	2243 San Felipe	1" Azalea	Tree recently removed	
59	2243 San Felipe	15" Water Oak	Tree recently removed	
60	2243 San Felipe	1" Azalea	Tree recently removed	
61	2243 San Felipe	13" Water oak	Tree recently removed	
62	2243 San Felipe	15" Water Oak	Tree recently removed	
63	2243 San Felipe	15" Sugarberry	Tree recently removed	

Tree No.	Location	Description	Comments	Treatment
Trees on San Felipe				
64	2229 San Felipe	5" Lacebark Elm	Ordinance tree, Not impacted	
65	2229 San Felipe	5" Lacebark Elm	Ordinance tree, Not impacted	
66	2229 San Felipe	5" Lacebark Elm	Ordinance tree, Not impacted	
67	2229 San Felipe	5" Lacebark Elm	Ordinance tree, Not impacted	
68	2229 San Felipe	5" Lacebark Elm	Ordinance tree, Not impacted	
69	2239 San Felipe	10" Pear	50% dieback, Not ordinance tree	
70	2237 San Felipe	16" Pear	Tree recently removed	
71	2237 San Felipe	5" Crepe Myrtle	Topped, Not ordinance tree	
72	2237 San Felipe	5" Crepe Myrtle	Topped, Not ordinance tree	
73	2237 San Felipe	5" Crepe Myrtle	Topped, Not ordinance tree	
74	2237 San Felipe	5" Crepe Myrtle	Topped, Not ordinance tree	
75	2237 San Felipe	5" Crepe Myrtle	Topped, Not ordinance tree	
76	2215 San Felipe	8" Sugarberry	Not ordinance tree	
77	2215 San Felipe	8" Ligustrum	Not ordinance tree	
78	2215 San Felipe	8" Ligustrum	Not ordinance tree	
79	2215 San Felipe	30" Live Oak	Private tree	Clearance prune, Fence
80	2211 San Felipe	30" Live Oak	Private tree	Clearance prune, Fence
81	1901 San Felipe	5" Savannah Holly	Ordinance tree	Fence
82	1901 San Felipe	5" Savannah Holly	Ordinance tree	Fence
83	1901 San Felipe	5" Savannah Holly	Ordinance tree, Not impacted	
84	1901 San Felipe	20" Live oak	Private tree	Clearance prune
85	1901 San Felipe	4" Savannah Holly	Ordinance tree, Not impacted	
86	1901 San Felipe	5" Savannah Holly	Ordinance tree, Not impacted	
87	1905 San Felipe	30" Live Oak	Private tree	Clearance prune
88	1905 San Felipe	4" Yew	Not ordinance tree	
89	1905 San Felipe	5" Savannah Holly	Ordinance tree, Not impacted	
90	1905 San Felipe	4" Savannah Holly	Ordinance tree, Not impacted	
91	1905 San Felipe	28" Live Oak	Private tree, Not impacted	
92	1909 San Felipe	12" Live Oak	Ordinance tree, Not impacted	
93	1909 San Felipe	7" Savannah Holly	Ordinance tree, Not impacted	
94	1911 San Felipe	17" Live oak	Ordinance tree, Not impacted	
95	1911 San Felipe	6" Savannah Holly	Ordinance tree, Not impacted	
96	1911 San Felipe	13" Live oak	Ordinance tree, Not impacted	
97	2205 San Felipe	6" Sugarberry	Dead, Private, Not impacted	
98	2205 San Felipe	10" Crepe Myrtle	Private tree	
99	2203 San Felipe	15" Magnolia	Tree recently removed	
100	2131 San Felipe	10" Shumard Oak	Private tree, Preservation will require field changes during construction	Demo-form-pour walk without damage to roots 1" or larger, Fence, Contractor to coordinate with project engineer and forester prior to doing any excavation for proposed walk or ramp
101	2131 San Felipe	11" Shumard Oak	Private tree, Preservation will require field changes during construction	Demo-form-pour walk without damage to roots 1" or larger, Fence, Contractor to coordinate with project engineer and forester prior to doing any excavation for proposed walk or ramp
102	2131 San Felipe	11" Red Maple	Private tree	
103	2207 San Felipe	12" Oleander Hedge	Not ordinance tree	
104	2145 San Felipe	35" Live oak	Private tree	Clearance prune
105	2145 San Felipe	25" Live Oak	Private tree	Clearance prune, Fence
106	2145 San Felipe	30" Live Oak	Private tree	Clearance prune, Fence
107	2121 San Felipe	19" Live Oak	Ordinance tree, Remove for walk	Remove tree, Provide 19" in replacement
108	2121 San Felipe	12" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
109	2121 San Felipe	1' Sago	Not ordinance tree, Remove for walk	Remove tree, No replacement required
110	2100 San Felipe	30" Live Oak	Private tree, Preservation will require field changes during construction	16' Checkerplate, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune, Contractor to coordinate with project engineer and forester prior to doing any excavation for proposed walk or ramp
111	2100 San Felipe	14" Live Oak	Ordinance tree	16' checkerplate, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
112	2100 San Felipe	18" Pine	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
113	2100 San Felipe	14" Pine	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
114	2100 San Felipe	4" Crepe Myrtle	Not ordinance tree	Fence
115	1933 San Felipe	4" Little Gem Magnolia	Ordinance tree, Not impacted	
116	1933 San Felipe	12" Crepe Myrtle	Not ordinance tree	
117	1933 San Felipe	4" Crepe Myrtle	Not ordinance tree	
118	1933 San Felipe	4" Crepe Myrtle	Not ordinance tree	
119	1933 San Felipe	4" Crepe Myrtle	Not ordinance tree	
120	1933 San Felipe	4" Crepe Myrtle	Not ordinance tree	
121	1933 San Felipe	5" Magnolia	Tree recently removed	
122	1925 San Felipe	23" Live Oak	Ordinance tree	Clearance prune, Fence
123	1921 San Felipe	15" Live Oak	60% dieback, Ordinance tree	Clearance prune, Fence
124	1921 San Felipe	30" Live Oak	Private tree	Fence
125	1921 San Felipe	27" Live Oak	Private tree	Fence

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- —X—X— TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

40 0 40

SCALE: 1"=40'

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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TBPE REG NO: F–4528

C.N. Koehl Urban Forestry, Inc. 210 Stone Bush Ct. • Katy, Texas 77493 281–391–0022 ckoehl@koehlurbanforestry.com

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

APPROVED Craig N. Koehl 03–09–2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 1 OF 22

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 235 OF 391	

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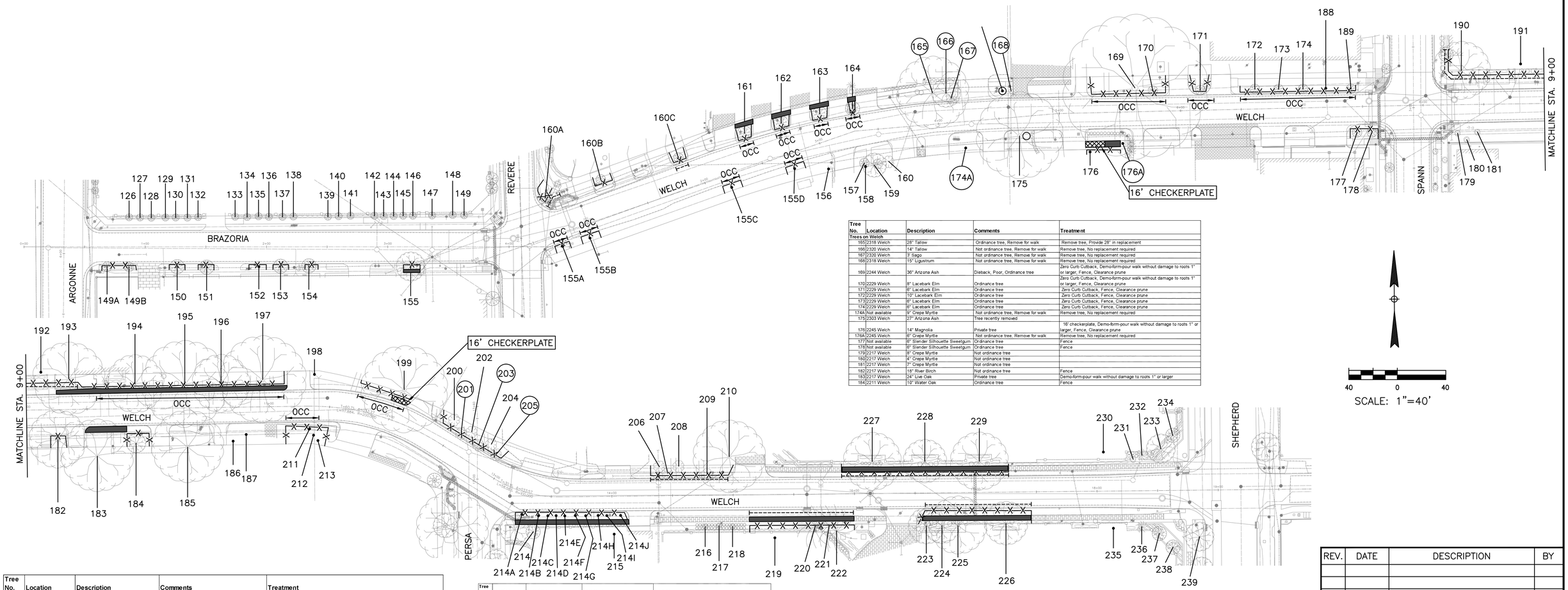

Tree No.	Location	Description	Comments	Treatment
Trees on Brazoria				
126	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
127	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
128	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
129	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
130	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
131	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
132	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
133	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
134	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
135	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
136	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
137	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
138	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
139	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
140	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
141	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
142	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
143	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
144	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
145	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
146	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
147	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
148	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
149	2415 Brazoria	7" Slender Silhouette Sweetgum	Ordinance tree, Not impacted	
149A	2419 Brazoria	8" Live oak	Ordinance tree	Fence, Clearance prune
149B	2419 Brazoria	9" Live Oak	Ordinance tree	Fence, Clearance prune
150	2419 Brazoria	12" Live oak	Ordinance tree	Fence, Clearance prune
151	2419 Brazoria	10" Live oak	Ordinance tree	Fence, Clearance prune
152	2415 Brazoria	11" Live oak	Ordinance tree	Fence, Clearance prune
153	2415 Brazoria	10" Live oak	Ordinance tree	Fence, Clearance prune
154	2411 Brazoria	11" Live oak	Ordinance tree	Fence, Clearance prune
155	2405 Brazoria	11" Live oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
Trees on Welch				
155A	2325 Welch	5" Live oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
155B	2325 Welch	6" Live oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
155C	2325 Welch	5" Live oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
155D	2325 Welch	3" Holly	Ordinance tree	Fence
156	2325 Welch	1" Citrus	Tree recently removed	
157	2325 Welch	4' Sago	Not ordinance tree	
158	2325 Welch	6" Wax Myrtle	Tree recently removed	
159	2325 Welch	6" Wax Myrtle	Tree recently removed	
160	2325 Welch	10" Crepe Myrtle	Private tree	Clearance prune
160A	Not available	11" Live Oak	Ordinance tree	Root prune for water line, Fence, Clearance prune
160B	Not available	10" Live Oak	Ordinance tree	Fence, Clearance prune
160C	Not available	7" Live Oak	Ordinance tree	Fence, Clearance prune
161	2326 Welch	12" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
162	2326 Welch	9" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
163	2324 Welch	13" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
164	2318 Welch	15" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune

Tree No.	Location	Description	Comments	Treatment
Trees on Welch				
165	2318 Welch	25" Tallow	Ordinance tree, Remove for walk	Remove tree, Provide 28" in replacement
166	2320 Welch	14" Tallow	Not ordinance tree, Remove for walk	Remove tree, No replacement required
167	2320 Welch	3' Sago	Not ordinance tree, Remove for walk	Remove tree, No replacement required
168	2318 Welch	15" Ligustrum	Not ordinance tree, Remove for walk	Remove tree, No replacement required
169	2244 Welch	36" Arizona Ash	Dieback, Poor, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
170	2229 Welch	8" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
171	2229 Welch	6" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
172	2229 Welch	10" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
173	2229 Welch	6" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
174	2229 Welch	6" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
174A	Not available	9" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
175	2303 Welch	27" Arizona Ash	Tree recently removed	
176	2245 Welch	14" Magnolia	Private tree	16' checkerplate, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
176A	2245 Welch	6" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
177	Not available	6" Slender Silhouette Sweetgum	Ordinance tree	Fence
178	Not available	6" Slender Silhouette Sweetgum	Ordinance tree	Fence
179	2217 Welch	8" Crepe Myrtle	Not ordinance tree	
180	2217 Welch	4" Crepe Myrtle	Not ordinance tree	
181	2217 Welch	7" Crepe Myrtle	Not ordinance tree	
182	2217 Welch	18" River Birch	Not ordinance tree	Fence
183	2217 Welch	24" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
184	2211 Welch	10" Water Oak	Ordinance tree	Fence

Tree No.	Location	Description	Comments	Treatment
Trees on Welch				
185	2211 Welch	18" Water Oak	Tree recently removed	
186	2201 Welch	18" Magnolia	Tree recently removed	
187	2201 Welch	18" Water Oak	Tree recently removed	
188	2239 Welch	7" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
189	2239 Welch	11" Lacebark Elm	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
190	2222 Welch	27" Live oak	Arboriculturally significant, Ordinance tree	Root prune for street, Fence, Clearance prune
191	2222 Welch	25" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Fence, Clearance prune
192	2318 Welch	33" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Fence, Clearance prune
193	2216 Welch	26" Live Oak	Arboriculturally significant, Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
194	2212 Welch	27" Live oak	Arboriculturally significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
195	2208 Welch	24" Live Oak	Arboriculturally significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
196	2206 Welch	17" Live oak	Arboriculturally significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
197	2202 Welch	35" Live oak	Arboriculturally significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
198	2200 Welch	30" Tallow	Tree recently removed	
199	2200 Welch	35" Live oak	Arboriculturally significant, Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
200	2134 Welch	15" Crepe Myrtle	Not ordinance tree	Fence
201	2134 Welch	10" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
202	2134 Welch	10" Crepe Myrtle	Not ordinance tree	Fence
203	2134 Welch	12" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
204	2134 Welch	10" Crepe Myrtle	Not ordinance tree	Fence
205	2134 Welch	12" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
206	2120 Welch	10" Crepe Myrtle	Not ordinance tree	Root prune for street, Fence, Clearance prune
207	2120 Welch	10" Crepe Myrtle	Not ordinance tree	Root prune for street, Fence, Clearance prune
208	2120 Welch	15" Crepe Myrtle	Not ordinance tree	Root prune for street, Fence, Clearance prune
209	2120 Welch	5" Crepe Myrtle	Not ordinance tree	Root prune for street, Fence, Clearance prune
210	2120 Welch	27" Live oak	Private tree	Root prune for street, Fence
211	2201 Welch	9" Water Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
212	2201 Welch	18" Water Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
213	2131 Welch	15" Pecan	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
214	2001 Welch	14" Live Oak	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
214A	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214B	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214C	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214D	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214E	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214F	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214G	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214H	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214I	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
214J	2001 Welch	2" Holly	ordinance tree	Fence, Demo-form-pour walk without damage to roots 1" or larger
215	2001 Welch	22" Water Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
216	2111 Welch	4" Crepe Myrtle	Private tree	
217	2111 Welch	4" Crepe Myrtle	Private tree	
218	2111 Welch	4" Crepe Myrtle	Private tree	
219	2111 Welch	25" Water Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
220	2111 Welch	14" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
221	2111 Welch	16" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
222	2111 Welch	15" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
223	2111 Welch	2" Holly	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
224	2111 Welch	14" Pear	40% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
225	2111 Welch	20" Pear	40% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
226	2111 Welch	22" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
227	2100 Welch	22" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
228	2100 Welch	17" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
229	2100 Welch	20" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
230	2100 Welch	18" Pear	Tree recently removed	
231	2100 Welch	10" Crepe Myrtle	Private tree	
232	2100 Welch	3' Sago	Private tree	
233	2100 Welch	10" Little Gem Magnolia	Private tree	
234	2100 Welch	6" Little Gem Magnolia	Private tree	
235	2111 Welch	20" Pear	40% dieback, Private tree	
236	2111 Welch	3' Sago	Private tree	
237	2111 Welch	10" Little Gem Magnolia	Private tree	
238	2111 Welch	10" Little Gem Magnolia	Private tree	
239	2111 Welch	17" Live Oak	Ordinance tree, Not impacted	

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- —X—X— TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- —0CC— ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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281–391–0022 ckoehl@koehlurbanforestry.com

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

APPROVED Craig N. Koehl 03–09–2020

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 2 OF 22

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 236 OF 391	

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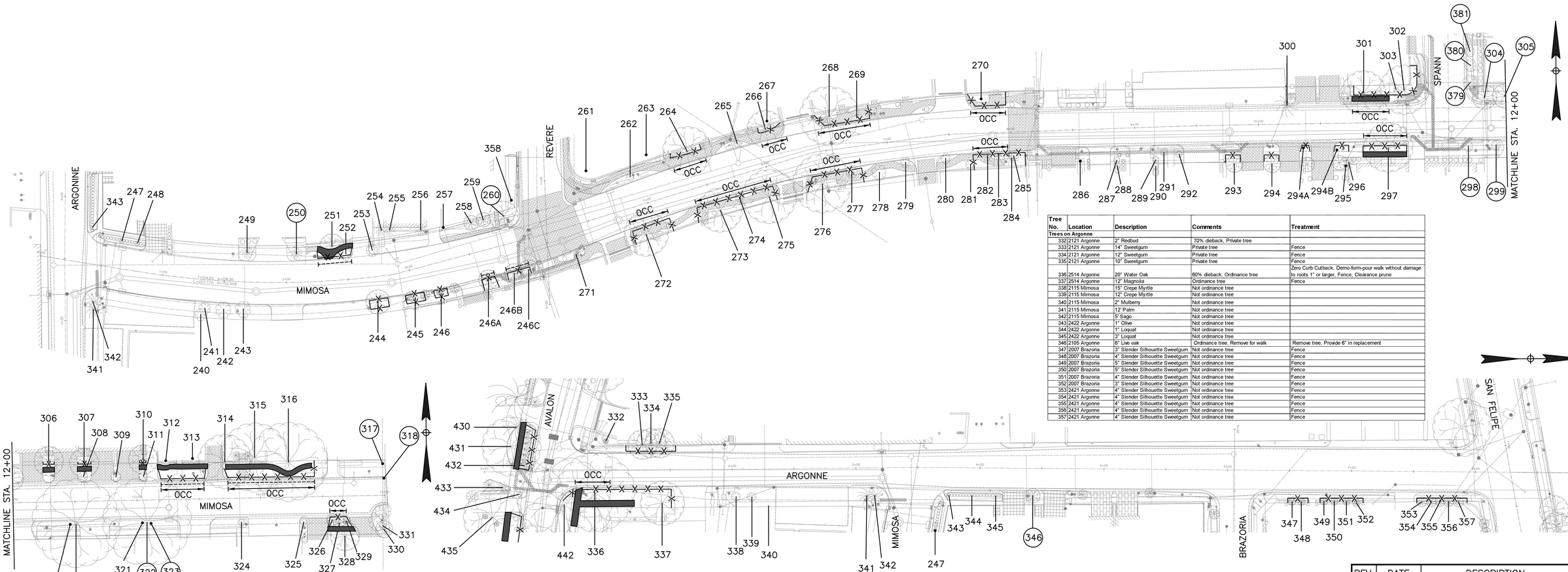

Tree No.	Location	Description	Comments	Treatment
Trees on Argonne				
332	2121 Argonne	2" Redbud	70% dieback, Private tree	
333	2121 Argonne	14" Sweetgum	Private tree	Fence
334	2121 Argonne	12" Sweetgum	Private tree	Fence
335	2121 Argonne	10" Sweetgum	Private tree	Fence
336	2514 Argonne	20" Water Oak	60% dieback, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
337	2514 Argonne	12" Magnolia	Ordinance tree	Fence
338	2115 Mimosa	15" Crepe Myrtle	Not ordinance tree	
339	2115 Mimosa	12" Crepe Myrtle	Not ordinance tree	
340	2115 Mimosa	2" Mulberry	Not ordinance tree	
341	2115 Mimosa	12' Palm	Not ordinance tree	
342	2115 Mimosa	5' Sago	Not ordinance tree	
343	2422 Argonne	1" Olive	Not ordinance tree	
344	2422 Argonne	1" Loquat	Not ordinance tree	
345	2422 Argonne	3" Loquat	Not ordinance tree	
346	2105 Argonne	6" Live oak	Ordinance tree, Remove for walk	Remove tree, Provide 6" in replacement
347	2007 Brazoria	3" Slender Silhouette Sweetgum	Not ordinance tree	Fence
348	2007 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
349	2007 Brazoria	5" Slender Silhouette Sweetgum	Not ordinance tree	Fence
350	2007 Brazoria	5" Slender Silhouette Sweetgum	Not ordinance tree	Fence
351	2007 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
352	2007 Brazoria	3" Slender Silhouette Sweetgum	Not ordinance tree	Fence
353	2421 Argonne	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
354	2421 Argonne	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
355	2421 Argonne	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
356	2421 Argonne	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
357	2421 Argonne	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence

Tree No.	Location	Description	Comments	Treatment
Trees on Mimosa				
240	2115 Argonne	15" Crepe Myrtle	Tree recently removed	
241	2115 Argonne	18" Crepe Myrtle	Not ordinance tree	Clearance prune
242	2115 Argonne	12" Crepe Myrtle	Not ordinance tree	Clearance prune
243	2115 Argonne	14" Crepe Myrtle	Tree recently removed	
244	2415 Mimosa	5" Live Oak	Ordinance tree	Fence
245	2415 Mimosa	5" Live Oak	Ordinance tree	Fence
246	2415 Mimosa	5" Live Oak	Ordinance tree	Fence
246A	2415 Mimosa	6" Live Oak	Ordinance tree	Root prune for street, Fence, Clearance prune
246B	2415 Mimosa	6" Live Oak	Ordinance tree	Root prune for street, Fence, Clearance prune
246C	2415 Mimosa	6" Live Oak	Ordinance tree	Root prune for street, Fence, Clearance prune
247	2422 Mimosa	2" Citrus	Not ordinance tree	
248	2422 Mimosa	2" Citrus	Not ordinance tree	
249	2414 Mimosa	3' Sago	Tree recently removed	
250	2414 Mimosa	3' Sago	Not ordinance tree, Remove for walk	Remove tree, No replacement required
251	2410 Mimosa	10" Magnolia	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
252	2410 Mimosa	10" Crepe Myrtle	Topped, Not ordinance tree	
253	2410 Mimosa	5" Crepe Myrtle	Topped, Not ordinance tree	
254	2406 Mimosa	15' Palm	Tree recently removed	
255	2406 Mimosa	3' Sago	Tree recently removed	
256	2406 Mimosa	12' Palm	Tree recently removed	
257	2020 Mimosa	18" Raintree	Tree recently removed	
258	2020 Mimosa	5" Raintree	Tree recently removed	
259	2020 Mimosa	7" Raintree	Tree recently removed	
260	2020 Mimosa	5" Savannah Holly	Dead, Ordinance tree, Remove for sidewalk	Remove tree, No replacement required
261	2318 Mimosa	18" Live Oak	Private tree	Clearance prune
262	2318 Mimosa	5" Crepe Myrtle	Topped, Not ordinance tree	
263	2316 Mimosa	17" Shumard Oak	65% dieback, Private tree	Clearance prune
264	2316 Mimosa	14" Shumard Oak	Tree recently removed	
265	2312 Mimosa	5" Crepe Myrtle	Not ordinance tree	
266	2312 Mimosa	17" Live oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
267	2312 Mimosa	12" Live Oak	Private tree	Zero Curb Cutback, Fence, Clearance prune
268	2308 Mimosa	20" Live oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
269	2308 Mimosa	4" Crepe Myrtle	Topped, Not ordinance tree	
270	2300 Mimosa	18" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
271	2335 Mimosa	6" Crepe Myrtle	Topped, Not ordinance tree	
272	2331 Mimosa	15" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
273	2327 Mimosa	16" Nuttal Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
274	2327 Mimosa	5" Crepe Myrtle	Topped, Not ordinance tree	
275	2327 Mimosa	18" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
276	2325 Mimosa	20" Live oak	Ordinance tree	Complete sanitary plug work from inside manhole without excavation, Zero Curb Cutback, Fence, Clearance prune
277	2325 Mimosa	6" Crepe Myrtle	Topped, Not ordinance tree	
278	2321 Mimosa	15" Crepe Myrtle	Topped, Not ordinance tree	
279	2321 Mimosa	8" Crepe Myrtle	Topped, Not ordinance tree	
280	2317 Mimosa	8" Crepe Myrtle	Topped, Not ordinance tree	
281	2317 Mimosa	10" Live Oak	Ordinance tree, Not impacted	
282	2317 Mimosa	11" Pine	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
283	2317 Mimosa	12" Pine	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
284	2315 Mimosa	4" Yaupon	Not ordinance tree	

Tree No.	Location	Description	Comments	Treatment
Trees on Mimosa				
285	2315 Mimosa	14" Pine	Ordinance tree	Fence
286	2315 Mimosa	5" Japanese Blueberry	Tree recently removed	
287	2313 Mimosa	5" Japanese Blueberry	Tree recently removed	
288	2313 Mimosa	5" Japanese Blueberry	Private tree	
289	2313 Mimosa	5" Japanese Blueberry	Tree recently removed	
290	2313 Mimosa	5" Japanese Blueberry	Private tree	
291	2311 Mimosa	4" Crepe Myrtle	Not ordinance tree	
292	2311 Mimosa	4" Crepe Myrtle	Tree recently removed	
293	Not available	4" Holly	Private tree	Fence
294	Not available	4" Holly	Private tree	Fence
294A	Not available	6" Fringe Tree	Ordinance tree	Fence, Clearance prune
294B	Not available	6" Fringe Tree	Ordinance tree	Fence, Clearance prune
295	Not available	3" Live Oak	Tree recently removed	
296	Not available	10' Palm	Tree recently removed	
297	2229 Mimosa	20" Magnolia	Tree recently removed	
298	2229 Mimosa	8" Crepe Myrtle	Not ordinance tree, remove for vertical bend	Remove tree, No replacement required
299	2229 Mimosa	8" Crepe Myrtle	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
300	2238 Mimosa	25' Palm	Tree recently removed	
301	2230 Mimosa	19" Crepe Myrtle	Not ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
302	2230 Mimosa	17" Shumard Oak	Tree recently removed	
303	2230 Mimosa	3" Texas Mountain Laurel	Not ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
304	2228 Mimosa	8" Crepe Myrtle	Not ordinance tree, remove for larger street radius	Remove tree, No replacement required
305	2228 Mimosa	10" Crepe Myrtle	Not ordinance tree, remove for larger street radius	Remove tree, No replacement required
306	2228 Mimosa	8" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
307	2224 Mimosa	5" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
308	2224 Mimosa	8" Crepe Myrtle	Not ordinance tree	
309	2222 Mimosa	5" Crepe Myrtle	Not ordinance tree	
310	2222 Mimosa	5" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
311	2222 Mimosa	6" Crepe Myrtle	Not ordinance tree	
312	2212 Mimosa	26" Live Oak	80% dieback, Private tree	Zero Curb Cutback, Clearance prune, Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
313	2212 Mimosa	18" Live Oak	60% dieback, Private tree	Zero Curb Cutback, Clearance prune, Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
314	2208 Mimosa	20" Live oak	Private tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
315	2208 Mimosa	25" Live Oak	Private tree	Zero Curb Cutback, Clearance prune, Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
316	2208 Mimosa	36" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Clearance prune, Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
317	2202 Mimosa	3" Arizona Ash	Not ordinance tree, Remove for walk	Remove tree, No replacement required
318	2202 Mimosa	12" Water Oak	Ordinance tree, Remove for street	Remove tree, provide 12" in replacement
319	2215 Mimosa	8" Sugarberry	Not ordinance tree, remove for street	Remove tree, No replacement required
320	2215 Mimosa	16" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
321	2213 Mimosa	8" Sugarberry	Tree recently removed	
322	2213 Mimosa	21" Sugarberry	80% dieback, Poor , Ordinance tree	Remove tree, No replacement required
323	2213 Mimosa	10" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
324	2211 Mimosa	4" Crepe Myrtle	Tree recently removed	
325	2205 Mimosa	3" Crepe Myrtle	Not ordinance tree	
326	2201 Mimosa	3" Magnolia	Ordinance tree	Root prune for street, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
327	2201 Mimosa	4" Magnolia	Ordinance tree	Root prune for street, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
328	2201 Mimosa	3" Magnolia	Ordinance tree	Root prune for street, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
329	2201 Mimosa	11" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
330	2201 Mimosa	12" Crepe Myrtle	Not ordinance tree	
331	2201 Mimosa	18" Crepe Myrtle	Not ordinance tree	

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- X-X — TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

40 0 40

SCALE: 1"=40'

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

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281-391-0022 ckoehl@koehlurbanforestry.com
APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 3 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 237 OF 391	

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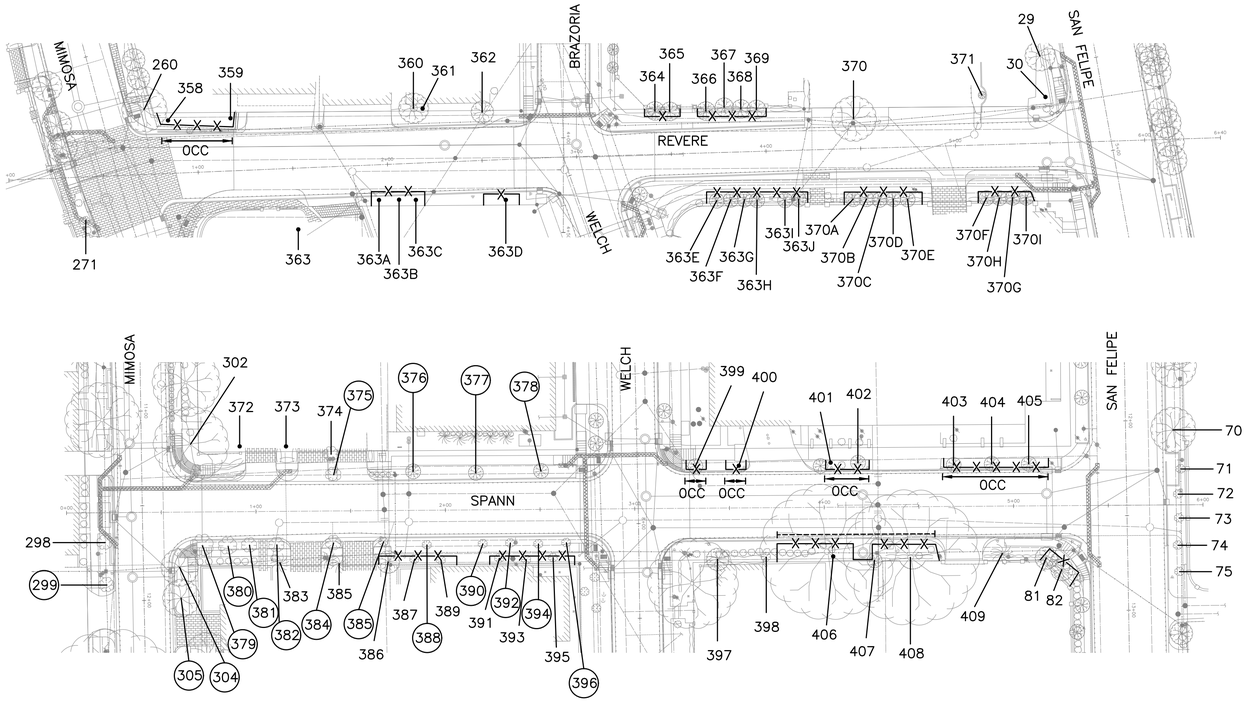

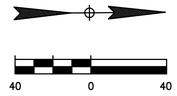

TREE PRESERVATION PLAN LEGEND	
1	TREE NUMBER/LOCATION
(1)	TREE TO BE REMOVED
-X-X-	TREE PROTECTION FENCE
------	ROOT PRUNING TRENCH
⊙	REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
0CC	ZERO CUTBACK CURB
	SIDEWALK ON GRADE
	CHECKERPLATE SECTION

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3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

Tree No.	Location	Description	Comments	Treatment
Trees on Revere				
358	2020 Revere	12" Magnolia	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
359	2020 Revere	12" Magnolia	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
360	2403 Brazoria	5" Raintree	Tree recently removed	
361	2403 Brazoria	5" Raintree	Tree recently removed	
362	2403 Brazoria	10" Ligustrum	Tree recently removed	
363	2318 Mimosa	20" Water Oak	Private tree	Clearance prune
363A	Not available	5" Magnolia	Ordinance tree	Fence
363B	Not available	5" Magnolia	Ordinance tree	Fence
363C	Not available	5" Magnolia	Ordinance tree	Fence
363D	Not available	6" Live oak	Ordinance tree	Fence
363E	Not available	3" Holly	Ordinance tree	Fence
363F	Not available	3" Holly	Ordinance tree	Fence
363G	Not available	3" Holly	Ordinance tree	Fence
363H	Not available	3" Holly	Ordinance tree	Fence
363I	Not available	3" Holly	Ordinance tree	Fence
363J	Not available	3" Holly	Ordinance tree	Fence
364	1918 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
365	1918 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
366	1918 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
367	1918 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
368	1918 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
369	1918 Brazoria	4" Slender Silhouette Sweetgum	Not ordinance tree	Fence
370	2401 San Felipe	8" Sugarberry	Not ordinance tree	
370A	Not available	3" Holly	Ordinance tree	Fence
370B	Not available	3" Holly	Ordinance tree	Fence
370C	Not available	3" Holly	Ordinance tree	Fence
370D	Not available	3" Holly	Ordinance tree	Fence
370E	Not available	3" Holly	Ordinance tree	Fence
370F	Not available	3" Holly	Ordinance tree	Fence
370G	Not available	3" Holly	Ordinance tree	Fence
370H	Not available	3" Holly	Ordinance tree	Fence
371	2401 San Felipe	2" Mexican Sycamore	Private tree	

Tree No.	Location	Description	Comments	Treatment
Trees on Spann				
372	2226 Spann	8" Ligustrum	Private tree	Clearance prune
373	2226 Spann	8" Magnolia	Private tree	Clearance prune
374	2226 Spann	7" Crepe Myrtle	Private tree	
375	2226 Spann	5" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
376	2226 Spann	4" Slender Silhouette Sweetgum	Not ordinance tree, remove for street	Remove tree, No replacement required
377	2226 Spann	4" Slender Silhouette Sweetgum	Not ordinance tree, remove for street	Remove tree, No replacement required
378	2226 Spann	4" Slender Silhouette Sweetgum	Not ordinance tree, remove for street	Remove tree, No replacement required
379	2228 Spann	14" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
380	2228 Spann	12" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
381	2228 Spann	10" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
382	2228 Spann	8" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
383	2011 Spann	3' Sago	Not ordinance tree	
384	2009 Spann	2" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
385	2009 Spann	4" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
386	2009 Spann	10" Savannah Holly	Ordinance tree	Fence
387	2009 Spann	7" Crepe Myrtle	Ordinance tree	Fence
388	2009 Spann	7" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
389	2009 Spann	7" Crepe Myrtle	Not ordinance tree	
390	2009 Spann	5" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
391	2009 Spann	5" Crepe Myrtle	Not ordinance tree	
392	2009 Spann	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
393	2009 Spann	5" Crepe Myrtle	Not ordinance tree	
394	2009 Spann	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
395	2009 Spann	5" Crepe Myrtle	Not ordinance tree	
396	2009 Spann	5" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
397	2226 Spann	5" Yew	Not ordinance tree	
398	2226 Spann	3" Crepe Myrtle	Not ordinance tree	
399	2229 Spann	4" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
400	2229 Spann	4" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
401	2229 Spann	3" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
402	2229 Spann	3" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
403	2229 Spann	3" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
404	2229 Spann	3" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
405	2229 Spann	3" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
406	1923 Spann	26" Live Oak	Ordinance tree, Arboriculturally Significant	Root prune for street, Fence, Clearance prune
407	1923 Spann	5" Ligustrum	Not ordinance tree	
408	1923 Spann	38" Live Oak	Ordinance tree, Arboriculturally Significant	Root prune for street, Fence, Clearance prune
409	1901 Spann	4" Holly	Tree recently removed	

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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281-391-0022 ckoehl@koehlurbanforestry.com
APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 4 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 238 OF 391

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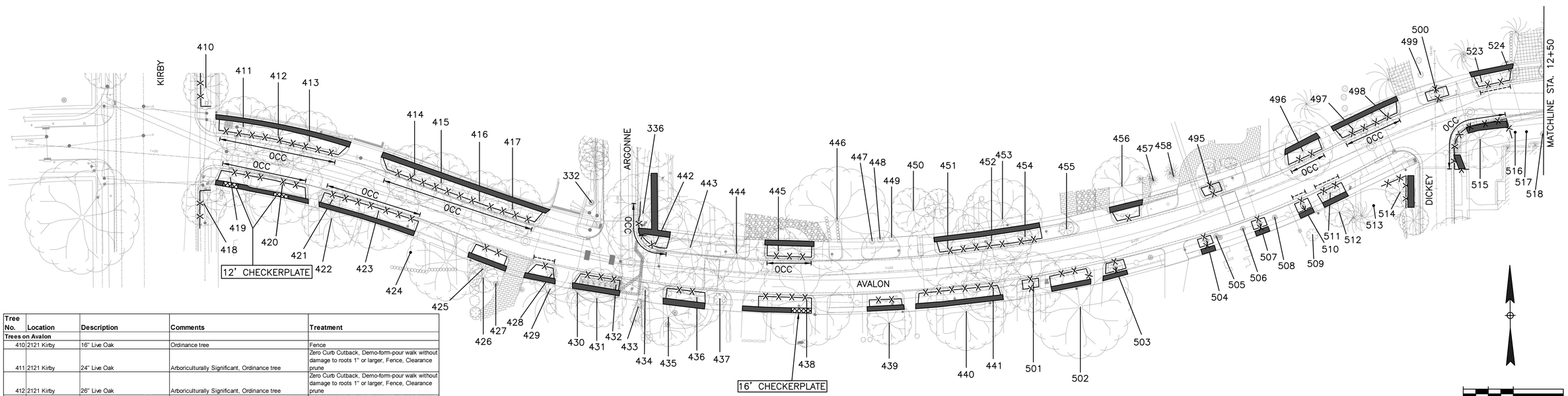

SCALE: 1"=40'

Tree No.	Location	Description	Comments	Treatment
Trees on Avalon				
410	2121 Kirby	16" Live Oak	Ordinance tree	Fence
411	2121 Kirby	24" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
412	2121 Kirby	26" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
413	2121 Kirby	25" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
414	2121 Kirby	21" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
415	2121 Kirby	22" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
416	2121 Kirby	23" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
417	2121 Kirby	25" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
418	2615 Avalon	14" Water Oak	30% dieback, Ordinance tree	Fence
419	2615 Avalon	26" Water Oak	50% dieback, Ordinance tree	12' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
420	2615 Avalon	27" Water Oak	20% dieback, Arboriculturally Significant, Ordinance tree	12' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
421	2611 Avalon	3' Sago	Not ordinance tree	
422	2611 Avalon	24" Live Oak	40% dieback, Private tree	1" or larger, Fence
423	2611 Avalon	37" Water Oak	Borers in trunk, Poor, Arboriculturally significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
424	2607 Avalon	6" Red maple	Private tree	
425	2603 Avalon	3' Sago	Private tree	Clearance prune
426	2603 Avalon	14" Red Maple	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
427	2603 Avalon	4" Crepe Myrtle	Private tree	
428	2519 Avalon	3' Sago	Not ordinance tree	
429	2519 Avalon	26" Pine	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
430	2519 Avalon	2' Sago	Private tree	
431	2519 Avalon	26" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
432	2519 Avalon	2" Juniper	Not ordinance tree	
433	2515 Avalon	1' Sago	Private tree	
434	2515 Avalon	6" Ligustrum	Not ordinance tree	
435	2515 Avalon	26" Live Oak	30% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
436	2515 Avalon	10" Crepe Myrtle	Tree recently removed	
437	2515 Avalon	8" Crepe Myrtle	Topped, Not ordinance tree	
438	2511 Avalon	34" Water Oak	60% dieback, Ordinance tree	16' Checkerplate, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline
439	2507 Avalon	21" Water Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
440	2503 Avalon	31" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
441	2419 Avalon	25" Water Oak	Tree recently removed	
442	2514 Avalon	32" Water Oak	Tree recently removed	
443	2514 Avalon	35" Water Oak	Tree recently removed	
444	2514 Avalon	25" Water Oak	Tree recently removed	
445	2510 Avalon	21" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
446	2506 Avalon	28" Water Oak	Tree recently removed	
447	2506 Avalon	4" Crepe Myrtle	Not ordinance tree	
448	2506 Avalon	7" Crepe Myrtle	Not ordinance tree	
449	2506 Avalon	5" Crepe Myrtle	Not ordinance tree	
450	2506 Avalon	20" Live Oak	Private tree	Clearance prune
451	2504 Avalon	28" Water Oak	Tree recently removed	
452	2504 Avalon	30" Water Oak	Tree recently removed	
453	2504 Avalon	23" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
454	2500 Avalon	7" Mexican Plum	Tree recently removed	
455	2500 Avalon	7" Mexican Plum	Not ordinance tree	
456	2414 Avalon	25" Live Oak	50% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
457	2414 Avalon	2" Juniper	Private tree	
458	2414 Avalon	2" Yew	Private tree	
459 to 494	Not used			
495	2410 Avalon	7" Nuttal Oak	Ordinance tree	Fence
496	2406 Avalon	22" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
497	2406 Avalon	16" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
498	2406 Avalon	15" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
499	2400 Avalon	5" Crepe Myrtle	Private tree	
500	2400 Avalon	11" Live Oak	Ordinance tree	Fence
501	2419 Avalon	7" Red Maple	Ordinance tree	Bore sanitary, Fence
502	2419 Avalon	28" Live Oak	30% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
503	2415 Avalon	9" Shumard Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
504	2409 Avalon	6" Red Maple	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
505	2409 Avalon	3" Mulberry	Tree recently removed	
506	2409 Avalon	4" Mulberry	Tree recently removed	
507	2409 Avalon	8" Polymorpha Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
508	2409 Avalon	3" Pecan	Tree recently removed	
509	2403 Avalon	16" Crepe Myrtle	Private tree	
510	2403 Avalon	9" White Oak	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
511	2403 Avalon	8" Shumard Oak	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore sanitary
512	2403 Avalon	15" Shumard Oak	Private tree	
513	2403 Avalon	13" Laurel Oak	Tree recently removed	
514	2403 Avalon	15" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
515	2101 Dickey	26" Live Oak	Ordinance tree	Zero Curb Cutback, Bore sanitary, Fence, Clearance prune
516	2101 Dickey	9" Crepe Myrtle	Not ordinance tree	
517	2101 Dickey	10" Crepe Myrtle	Not ordinance tree	
518	2101 Dickey	12" Crepe Myrtle	Not ordinance tree	
523	2400 Avalon	12" Live Oak	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
524	2400 Avalon	11" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- -X-X- — TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- OCC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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FB No. P-5723

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281-391-0022 ckoehl@koehlurbanforestry.com
APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 5 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 239 OF 391	

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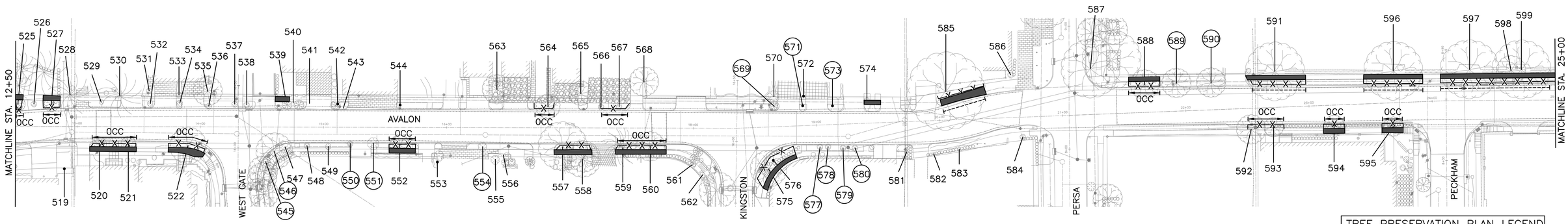

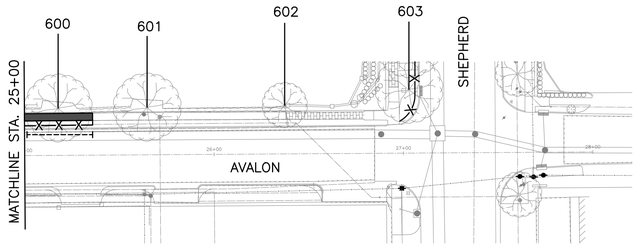

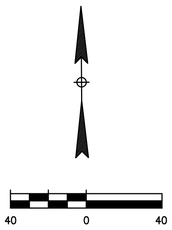

TREE PRESERVATION PLAN LEGEND

- TREE NUMBER/LOCATION
- (1) TREE TO BE REMOVED
- TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

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Tree No.	Location	Description	Comments	Treatment
Trees on Avalon				
519	2101 Dickey	6" Crepe Myrtle	Private tree	
520	2307 Westgate	10" Fringe Tree	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
521	2307 Westgate	9" Fringe Tree	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
522	2307 Westgate	21" Overcup Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
525	2312 Avalon	13" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
526	2312 Avalon	5" Crepe Myrtle	Not ordinance tree	Clearance prune
527	2312 Avalon	15" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
528	2308 Avalon	4' Sago	Not ordinance tree	Clearance prune
529	2308 Avalon	4' Sago	Not ordinance tree	
530	2308 Avalon	5' Sago	Not ordinance tree	Clearance prune
531	2306 Avalon	6" Crepe Myrtle	Private tree	
532	2306 Avalon	6" Crepe Myrtle	Not ordinance tree	
533	2306 Avalon	8" Crepe Myrtle	Not ordinance tree	
534	2306 Avalon	5" Crepe Myrtle	Not ordinance tree	
535	2302 Avalon	11" Lacebark Elm	Topped, Private tree	
536	2302 Avalon	8" Crepe Myrtle	Not ordinance tree	
537	2302 Avalon	12" Crepe Myrtle	Not ordinance tree	
538	2302 Avalon	9" Crepe Myrtle	Not ordinance tree	
539	2226 Avalon	9" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
540	2226 Avalon	3" Savannah Holly	Ordinance tree	Fence
541	2226 Avalon	3" Savannah Holly	Ordinance tree	Fence
542	2226 Avalon	3" Savannah Holly	Ordinance tree	Bore sanitary lead curb to stack, Fence
543	2224 Avalon	14' Palm	Tree recently removed	
544	2224 Avalon	1' Aloe	Tree recently removed	
545	2221 Avalon	7" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
546	2221 Avalon	16" Pear	Not ordinance tree, Remove for walk	Remove tree, No replacement required
547	2221 Avalon	10" Crepe Myrtle	Not ordinance tree	Clearance prune
548	2221 Avalon	10" Crepe Myrtle	Not ordinance tree	Clearance prune
549	2221 Avalon	14" Crepe Myrtle	Not ordinance tree	Clearance prune
550	2221 Avalon	10" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
551	2221 Avalon	14" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
552	2219 Avalon	12" Shumard oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
553	2219 Avalon	15" Crepe Myrtle	Private tree	
554	2215 Avalon	15" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
555	2215 Avalon	13" Crepe Myrtle	Private tree	
556	2211 Avalon	4" River Birch	Not ordinance tree	
557	2211 Avalon	10" Green Ash	Tree recently removed	
558	2207 Avalon	15" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
559	2207 Avalon	11" Baldcypress	Tree recently removed	
560	2201 Avalon	11" Water Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
561	2201 Avalon	7" Crepe Myrtle	Not ordinance tree	
562	2201 Avalon	7" Crepe Myrtle	Not ordinance tree	
563	2216 Avalon	3" Yaupon	Private tree	
564	2212 Avalon	9" Magnolia	Ordinance tree	Bore sanitary lead curb to stack, Hand dig for stack, Zero curb cutback, Fence, Clearance prune
565	2212 Avalon	10" Magnolia	Private tree	
566	2210 Avalon	14" Crepe Myrtle	Not ordinance tree	Zero curb cutback, Fence, Clearance prune
567	2210 Avalon	5" Crepe Myrtle	Not ordinance tree	Zero curb cutback, Fence, Clearance prune
568	2208 Avalon	12" Sugarberry	Private tree	Clearance prune
569	2518 Avalon	5" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 5" in replacement
570	2518 Avalon	20" Crepe Myrtle	Private tree	
571	2156 Avalon	7" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 7" in replacement
572	2156 Avalon	3" Crepe Myrtle	Private tree	
573	2154 Avalon	7" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 7" in replacement
574	2152 Avalon	6" Savannah Holly	Private tree	Demo-form-pour walk without damage to roots 1" or larger
575	2101 Avalon	14" Savannah Holly	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
576	2101 Avalon	14" Savannah Holly	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
577	2101 Avalon	10" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
578	2101 Avalon	6" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
579	2101 Avalon	10" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
580	2101 Avalon	10" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
581	2101 Avalon	3" Photinia	Not ordinance tree	
582	2101 Avalon	3" Bamboo	Not ordinance tree	
583	2100 Persa	(10)3" Bamboo	Not ordinance tree	
584	2100 Persa	8" Crepe Myrtle	Not ordinance tree	
585	2030 Persa	31" Water Oak	50% dieback, Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
586	2030 Persa	4" Crepe Myrtle	Private tree	
587	2027 Persa	16" Live oak	Ordinance tree, Not impacted	
588	2027 Persa	15" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
589	2027 Persa	15" Live Oak	Ordinance tree, Remove for street	Remove tree, provide 15" in replacement
590	2027 Persa	16" Live Oak	Ordinance tree, Remove for street	Remove tree, provide 16" in replacement
591	2111 Avalon	26" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
592	2103 Persa	13" Magnolia	50% dieback, Ordinance	Zero curb cutback, Fence, Clearance prune
593	2119 Avalon	8" Savannah Holly	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
594	2119 Avalon	10" Savannah Holly	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
595	2119 Avalon	8" Savannah Holly	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
596	2111 Avalon	17" Live oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
597	2111 Avalon	20" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
598	2111 Avalon	13" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
599	2111 Avalon	19" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
600	2111 Avalon	15" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
601	2111 Avalon	19" Live oak	Tree recently removed	
602	2111 Avalon	16" Loquat	Tree recently removed	
603	2111 Avalon	17" Live Oak	Ordinance tree	Fence

REV.	DATE	DESCRIPTION	BY

OTHON

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 6 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 240 OF 391	

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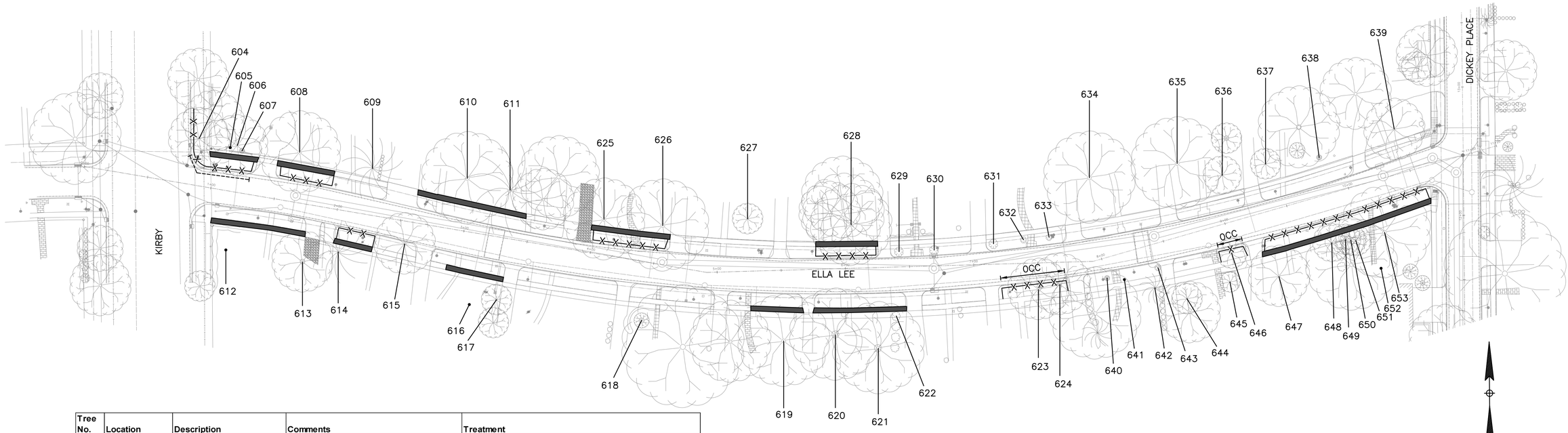

Tree No.	Location	Description	Comments	Treatment
Trees on Ella Lee				
604	2608 Ella Lee	19" Live oak	Ordinance tree	Root prune for street, Fence, Clearance prune
605	2608 Ella Lee	4" Cherry Laurel	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
606	2608 Ella Lee	18" Live Oak	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
607	2608 Ella Lee	2" Yew	Private tree	
608	2604 Ella Lee	25" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
609	2604 Ella Lee	18" Pine	Tree recently removed	
610	2602 Ella lee	25" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
611	2520 Ella Lee	33" Pine	Tree recently removed	
612	2609 Ella Lee	36" Water Oak	40% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger
613	2609 Ella Lee	23" Water Oak	40% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger
614	2605 Ella Lee	21" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
615	2605 Ella Lee	25" Tallow	Tree recently removed	
616	2601 Ella Lee	30" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
617	2601 Ella Lee	6" Ligustrum	Private tree	
618	2511 Ella Lee	4" Live Oak	Private tree	
619	2505 Ella Lee	30" Willow Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
620	2501 Ella Lee	30" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
621	2501 Ella Lee	36" Live oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
622	2415 Ella Lee	4" Yaupon	Not ordinance tree	
623	2411 Ella Lee	16" Live oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
624	2411 Ella Lee	14" Live Oak	Ordinance tree	Hand dig for stack, Bore sanitary lead from curb to stack, Zero Curb Cutback, Fence, Clearance prune
625	2516 Ella Lee	25" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
626	2516 Ella Lee	32" Water Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
627	2512 Ella Lee	12" Live Oak	Private tree	
628	2502 Ella Lee	27" Willow Oak	30% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
629	2416 Ella Lee	18" Crepe Myrtle	Not ordinance tree	Clearance prune
630	2416 Ella Lee	18" Crepe Myrtle	Not ordinance tree	Clearance prune
631	2412 Ella Lee	18" Crepe Myrtle	Not ordinance tree	
632	2412 Ella Lee	12" Crepe Myrtle	Tree recently removed	
633	2412 Ella Lee	14" Crepe Myrtle	Not ordinance tree	
634	2400 Ella Lee	28" Live Oak	Arboriculturally significant, Private tree	Clearance prune
635	2316 Ella Lee	32" Willow Oak	Arboriculturally significant, Private tree	Clearance prune
636	2316 Ella Lee	15" Live Oak	Private tree	Clearance prune
637	2306 Ella Lee	15" Magnolia	Poor, Private tree	
638	2306 Ella Lee	4" Live Oak	Private tree	
639	2302 Ella Lee	8" Pine	Private tree, Not impacted	
640	2409 Ella Lee	2" Plum	Tree recently removed	
641	2409 Ella Lee	2" Plum	Tree recently removed	
642	2409 Ella Lee	5' Sago	Private tree	
643	2409 Ella Lee	4" Crepe Myrtle	Not ordinance tree	
644	2315 Ella Lee	6" Mexican Sycamore	Private tree	
645	2315 Ella Lee	7" Mexican Sycamore	Private tree	
646	2315 Ella Lee	10" Swamp Chestnut Oak	Ordinance tree	Hand dig for stack, Bore sanitary lead from curb to stack, Zero Curb Cutback, Fence, Clearance prune
647	2307 Ella Lee	20" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
648	2301 Ella Lee	12" Burford Holly	Not ordinance tree	
649	2301 Ella Lee	4" River Birch	Not ordinance tree	
650	2301 Ella Lee	3" River Birch	Tree recently removed	
651	2301 Ella Lee	4" River Birch	Tree recently removed	
652	2301 Ella Lee	33" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
653	2301 Ella Lee	36" Live oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- —X—X— TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- OCC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

40 0 40

SCALE: 1"=40'

REV.	DATE	DESCRIPTION	BY

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 7 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 241 OF 391

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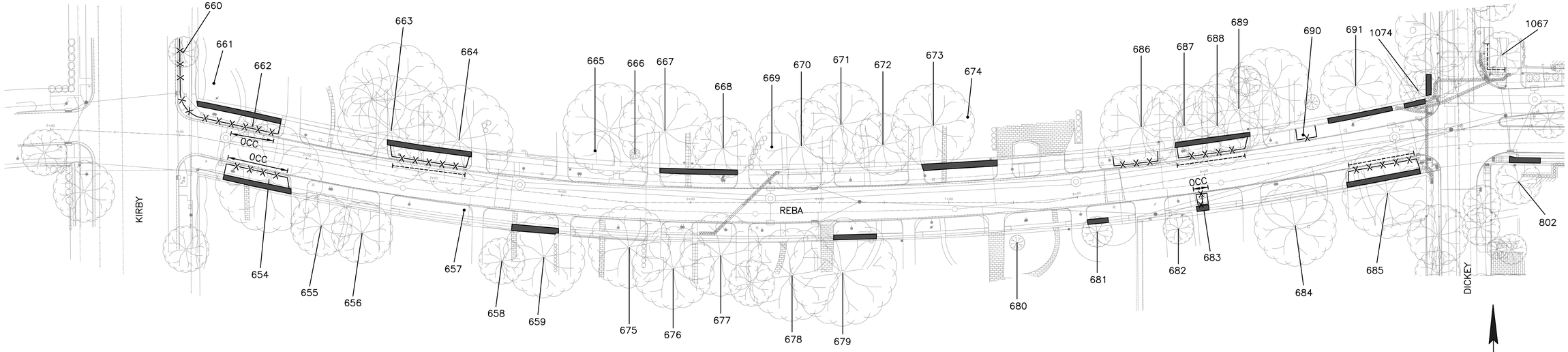

Tree No.	Location	Description	Comments	Treatment
Trees on Reba				
654	2529 Reba	40" Water Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
655	2525 Reba	23" Live Oak	Private tree	
656	2525 Reba	25" Live oak	Private tree	Clearance prune
657	2521 Reba	15" Live Oak	Tree recently removed	
658	2517 Reba	18" Live Oak	Private tree	
659	2517 Reba	30" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
660	2532 Reba	11" Live Oak	Ordinance tree	Clearance prune, Fence
661	2532 Reba	26" Water Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
662	2532 Reba	12" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
663	2524 Reba	32" Live oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
664	2524 Reba	34" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
665	2516 Reba	12" Live Oak	Private tree	
666	2516 Reba	10" Live Oak	Private tree	
667	2510 Reba	15" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
668	2510 Reba	24" Water Oak	Tree recently removed	
669	2508 Reba	9" Live Oak	Private tree	
670	2508 Reba	33" Willow Oak	Tree recently removed	
671	2428 Reba	4" Live Oak	Private tree	
672	2428 Reba	9" Live Oak	Private tree	
673	2424 Reba	36" Live oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
674	2424 Reba	27" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
675	2515 Reba	13" Camphor	Private tree, Not impacted	
676	2511 Reba	6" Live Oak	Private tree, Not impacted	
677	2511 Reba	28" Willow Oak	Tree recently removed	
678	2507 Reba	35" Water Oak	Arboriculturally significant, Private tree	Clearance prune
679	2423 Reba	40" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
680	2419 Reba	13" Nuttal Oak	Private tree	
681	2415 Reba	10" Red Maple	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
682	2411 Reba	16" Water Oak	Private tree	
683	2411 Reba	12" Mexican Sycamore	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
684	2407 Reba	28" Live Oak	Arboriculturally significant, Private tree	Clearance prune
685	2403 Reba	34" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
686	2412 Reba	22" Live Oak	Private tree	Clearance prune
687	2408 Reba	27" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
688	2408 Reba	32" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
689	2408 Reba	25" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
690	2406 Reba	1" Sycamore	Ordinance tree	Fence, Clearance prune
691	2406 Reba	28" Live oak	Arboriculturally significant, Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- -X-X- — TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- OCC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

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40 0 40

SCALE: 1"=40'

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

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SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 8 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
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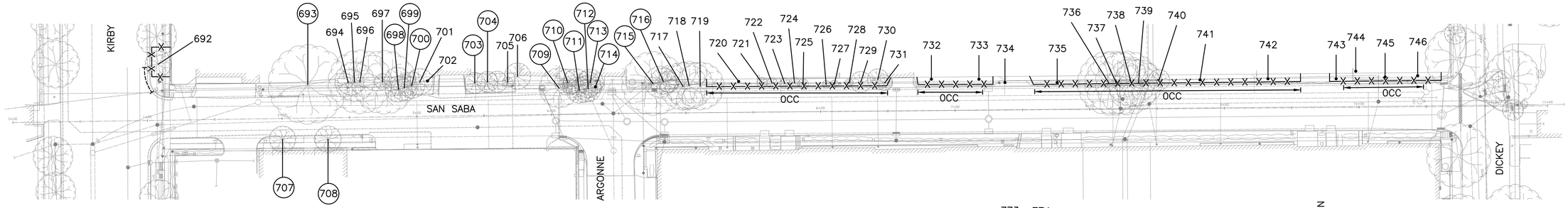

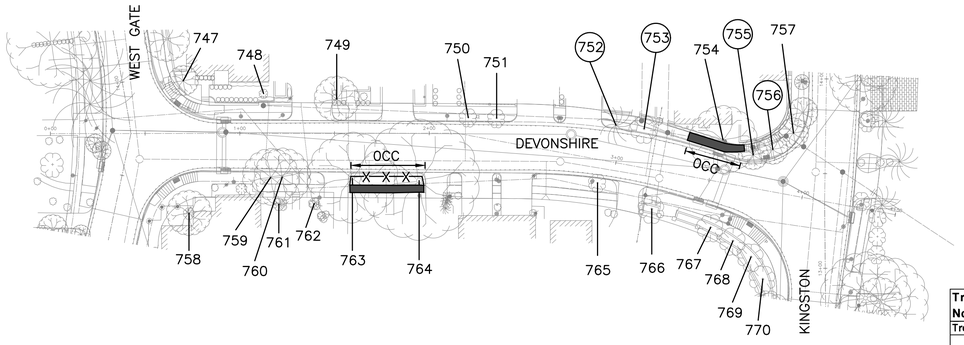

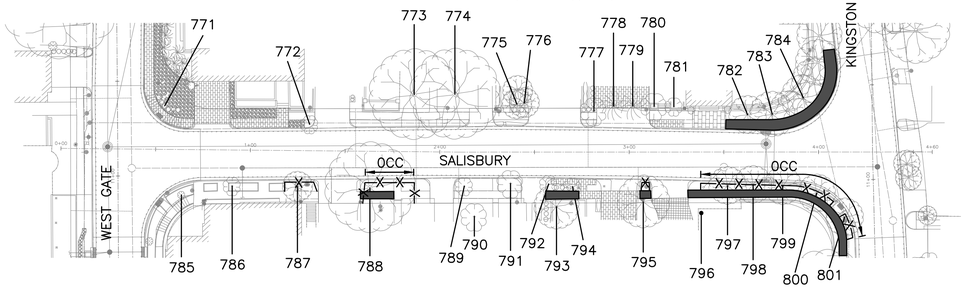

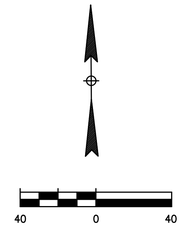

Tree No.	Location	Description	Comments	Treatment
Trees on San Saba				
692	2525 San Saba	10" Live Oak	Ordinance tree	Zero Curb Cutback, Root prune for street, Fence, Clearance prune
693	2515 San Saba	24" Tallow	Cavity at base, Structurally compromised, Remove	Remove tree, No replacement required
694	2511 San Saba	8" Sugarberry	Not ordinance tree	Clearance prune
695	2511 San Saba	13" Sugarberry	Poor, Not ordinance tree	
696	2511 San Saba	18" Tallow	Poor, Not ordinance tree	Clearance prune
697	2511 San Saba	10" Tallow	Not ordinance tree	Clearance prune
698	2511 San Saba	18" Lacebark Elm	Poor, Ordinance tree, Remove for walk	Remove tree, No replacement required
699	2511 San Saba	8" Lacebark Elm	Ordinance tree, Remove for walk	Remove tree, Provide 8" in replacement
700	2511 San Saba	13" Lacebark Elm	Ordinance tree, Remove for walk	Remove tree, Provide 13" in replacement
701	2511 San Saba	15" Lacebark Elm	Private tree	Clearance prune
702	2511 San Saba	5" Cherry Laurel	Poor, Private tree	Clearance prune
703	2507 San Saba	3" Chinese Pistache	Ordinance tree, Remove for walk	Remove tree, Provide 3" in replacement
704	2507 San Saba	6" Chinese Pistache	Ordinance tree, Remove for walk	Remove tree, Provide 6" in replacement
705	2507 San Saba	3" Chinese Pistache	Private tree	Clearance prune
706	2503 San Saba	16" Raintree	Private tree	Clearance prune
707	2719 San Saba	10" Cedar Elm	Ordinance tree, Remove for street	Remove tree, Provide 10" in replacement
708	2719 San Saba	8" Lacebark Elm	Ordinance tree, Remove for street	Remove tree, Provide 8" in replacement
709	2503 San Saba	16" Raintree	Not ordinance tree, Remove for walk	Remove tree, No replacement required
710	2503 San Saba	7" Lacebark Elm	Poor, Ordinance tree, Remove for walk	Remove tree, No replacement required
711	2503 San Saba	2" Cherry Laurel	Not ordinance tree, Remove for walk	Remove tree, No replacement required
712	2503 San Saba	10" American Elm	Not ordinance tree, Remove for walk	Remove tree, No replacement required
713	2503 San Saba	14" Lacebark Elm	Poor, Ordinance tree, Remove for walk	Remove tree, No replacement required
714	2503 San Saba	10" Tallow	Not ordinance tree, Remove for walk	Remove tree, No replacement required
715	2427 San Saba	20" Tallow	Cavity at base, Structurally compromised, Remove	Remove tree, No replacement required
716	2427 San Saba	15" Sugarberry	Not ordinance tree, Remove for walk	Remove tree, No replacement required
717	2427 San Saba	12" Sugarberry	Not ordinance tree	
718	2427 San Saba	15" Sugarberry	Not ordinance tree	
719	2427 San Saba	17" Camphor	Not ordinance tree	
720	2423 San Saba	20" Water Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
721	2419 San Saba	4" Lacebark Elm	Ordinance tree	Zero curb cutback, Fence, Clearance prune
722	2419 San Saba	3" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
723	2419 San Saba	7" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
724	2419 San Saba	5" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
725	2419 San Saba	5" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
726	2419 San Saba	5" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
727	2419 San Saba	3" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
728	2415 San Saba	8" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
729	2415 San Saba	8" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
730	2415 San Saba	8" Live Oak	Ordinance tree	Hand dig stack bore lead stack to curb, Zero curb cutback, Fence, Clearance prune
731	2415 San Saba	8" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
732	2409 San Saba	20" Live oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
733	2409 San Saba	17" Tallow	Not ordinance tree	
734	2409 San Saba	5" Tallow	Not ordinance tree	
735	2405 San Saba	25" Live Oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
736	2401 San Saba	8" Lacebark Elm	Ordinance tree	Zero curb cutback, Fence, Clearance prune
737	2401 San Saba	16" Ligustrum	Not ordinance tree	
738	2401 San Saba	16" Tallow	Not ordinance tree	
739	2401 San Saba	15" Tallow	Not ordinance tree	
740	2401 San Saba	5" Pecan	Ordinance tree	Zero curb cutback, Fence, Clearance prune
741	2311 San Saba	23" Live oak	Ordinance tree	Zero curb cutback, Fence, Clearance prune
742	2307 San Saba	25" Live Oak	Ordinance tree	Hand dig stack bore lead stack to curb, Zero curb cutback, Fence, Clearance prune
743	2307 San Saba	6" Arizona Ash	Not ordinance tree	
744	2301 San Saba	12" Tallow	Not ordinance tree	
745	2301 San Saba	25" Live Oak	Ordinance tree	Hand dig stack bore lead stack to curb, Zero curb cutback, Fence, Clearance prune
746	2301 San Saba	14" Pear	Not ordinance tree	

Tree No.	Location	Description	Comments	Treatment
Trees on Devonshire				
747	2224 Devonshire	6" Verbena	Private tree	Clearance prune
748	2224 Devonshire	6" Crepe Myrtle	Private tree	
749	2220 Devonshire	8" Shumard oak	Private tree	Clearance prune
750	2216 Devonshire	8" Crepe Myrtle	Not ordinance tree	
751	2216 Devonshire	8" Crepe Myrtle	Not ordinance tree	
752	2208 Devonshire	17" Baldcypress	Ordinance tree, Remove for walk	Remove tree, Provide 17" in replacement
753	2208 Devonshire	8" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
754	2114 Devonshire	16" Magnolia	50% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
755	2114 Devonshire	5" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 5" in replacement
756	2114 Devonshire	5" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 5" in replacement
757	2114 Devonshire	5" Savannah Holly	Ordinance tree	Fence, Clearance prune
758	2225 Devonshire	7" Parkinsonia	Private tree	
759	2219 Devonshire	10" Tallow	Not ordinance tree	
760	2219 Devonshire	12" Tallow	Not ordinance tree	
761	2219 Devonshire	6" Crepe Myrtle	Private tree	
762	2219 Devonshire	6" Crepe Myrtle	Private tree	
763	2219 Devonshire	23" Pecan	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
764	2213 Devonshire	26" Pecan	Tree recently removed	
765	2207 Devonshire	8" Crepe Myrtle	Not ordinance tree	
766	2207 Devonshire	18" Crepe Myrtle	Not ordinance tree	
767	2203 Devonshire	18" Crepe Myrtle	Not ordinance tree	
768	2203 Devonshire	18" Crepe Myrtle	Not ordinance tree	
769	2203 Devonshire	18" Crepe Myrtle	Not ordinance tree	
770	2203 Devonshire	18" Crepe Myrtle	Not ordinance tree	
Trees on Salisbury				
771	2224 Salisbury	8" Shumard oak	Private tree	
772	2224 Salisbury	7" Crepe Myrtle	Not ordinance tree	
773	2220 Salisbury	24" Live Oak	Tree recently removed	
774	2216 Salisbury	4" Crepe Myrtle	Not ordinance tree	
775	2212 Salisbury	4" River Birch	Private tree	
776	2212 Salisbury	5" River Birch	Private tree	
777	2208 Salisbury	18" Crepe Myrtle	Private tree	Clearance prune
778	2208 Salisbury	4" Crepe Myrtle	Not ordinance tree	
779	2208 Salisbury	4" Crepe Myrtle	Not ordinance tree	
780	2208 Salisbury	12" Crepe Myrtle	Private tree	
781	2208 Salisbury	13" Crepe Myrtle	Private tree	
782	2206 Salisbury	8" Magnolia	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
783	2206 Salisbury	10" Magnolia	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
784	2206 Salisbury	10" Magnolia	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
785	2223 Salisbury	6" Crepe Myrtle	Not ordinance tree	
786	2223 Salisbury	14" Crepe Myrtle	Not ordinance tree	
787	2221 Salisbury	2" Holly	Ordinance tree	Fence
788	2215 Salisbury	25" Tallow	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
789	2211 Salisbury	10" Crepe Myrtle	Not ordinance tree	
790	2211 Salisbury	18" Crepe Myrtle	Not ordinance tree	
791	2211 Salisbury	13" Crepe Myrtle	Not ordinance tree	
792	2211 Salisbury	14" Crepe Myrtle	Not ordinance tree	
793	2211 Salisbury	8" Savannah Holly	Private tree	Demo-form-pour walk without damage to roots 1" or larger
794	2207 Salisbury	10" Crepe Myrtle	Not ordinance tree	
795	2207 Salisbury	10" Willow Oak	Ordinance tree	Hand dig stack, Bore sanitary lead curb to stack, Demo-form-pour walk without damage to roots 1" or larger, Fence
796	2302 Kingston	14" Willow Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
797	2302 Kingston	4" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
798	2302 Kingston	5" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
799	2302 Kingston	7" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
800	2302 Kingston	5" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
801	2302 Kingston	6" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- -X-X- — TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

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REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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SURVEYED BY: AMANI ENGINEERING, INC.
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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 9 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 243 OF 391	

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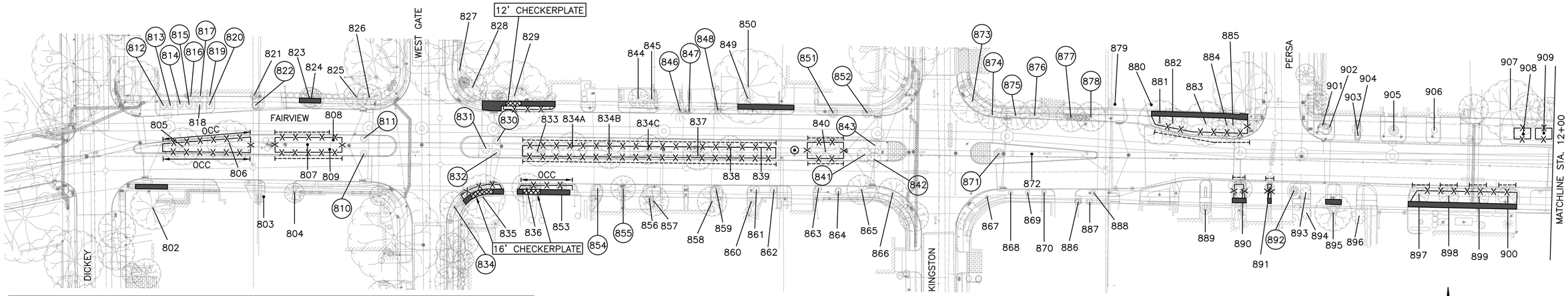

Tree No.	Location	Description	Comments	Treatment
Trees on Fairview				
802	2301 Dickey	25" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
803	2402 Westgate	16" River Birch	Private tree	
804	2402 Westgate	5" Little Gem Magnolia	Private tree	Clearance prune
805	Esplanade	15" Live Oak	Ordinance tree	Fence, Zero Curb Cutback, Clearance prune
806	Esplanade	13" Water Oak	Ordinance tree	Fence, Zero Curb Cutback, Clearance prune
807	Esplanade	20" Crepe Myrtle	Ordinance tree	Fence, Root prune for street, Clearance prune
808	Esplanade	5" Italian Cypress	Not ordinance tree	
809	Esplanade	5" Italian Cypress	Not ordinance tree	
810	Esplanade	26" Crepe Myrtle	Ordinance tree, Remove for storm	Remove tree, Provide 26" in replacement
811	Esplanade	28" Crepe Myrtle	Ordinance tree, Remove for storm	Remove tree, provide 28" in replacement
812	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
813	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
814	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
815	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
816	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
817	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
818	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
819	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
820	2219 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
821	2219 Fairview	14" Crepe Myrtle	Not ordinance tree	
822	2219 Fairview	14" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
823	2310 Fairview	12" Willow Oak	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
824	2310 Fairview	14" Water Oak	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
825	2310 Fairview	15" Willow Oak	Tree recently removed	
826	2310 Fairview	14" Water Oak	Tree recently removed	
827	2220 Fairview	12" Ligustrum	Tree recently removed	
828	2220 Fairview	12" Ligustrum	Tree recently removed	
829	2220 Fairview	29" Water Oak	Arboriculturally significant, Private tree	12' checkerplate, Clearance prune, Fence, Demo-form-pour walk without damage to roots 1" or larger
830	Esplanade	15" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
831	Esplanade	16" Crepe Myrtle	Not Ordinance tree, Remove for storm	Remove tree, No replacement required
832	Esplanade	18" Crepe Myrtle	Not ordinance tree	
833	Esplanade	7" Bur Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
834	2227 Fairview	14" Live Oak	Ordinance tree, Remove for walk	Remove tree, provide 14" in replacement
835	2227 Fairview	19" Live Oak	Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
836	2227 Fairview	11" Live Oak	Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
834A	Esplanade	10" Bur Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
834B	Esplanade	12" Live oak	Ordinance tree	Fence, Root prune for street, Clearance prune
834C	Esplanade	10" Bur Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
837	Esplanade	12" Bur Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
838	Esplanade	8" Bur Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
839	Esplanade	24" Crepe Myrtle	Ordinance tree	Fence, Root prune for street, Clearance prune
840	Esplanade	14" Water Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
841	Esplanade	7" Crepe Myrtle	Not Ordinance tree, Remove for storm	Remove tree, No replacement required
842	Esplanade	8" Crepe Myrtle	Not Ordinance tree, Remove for storm	Remove tree, No replacement required
843	Esplanade	8" Crepe Myrtle	Not Ordinance tree, Remove for storm	Remove tree, No replacement required
844	2214 Fairview	15" Mexican Sycamore	Private tree	
845	2214 Fairview	30' Palm	Private tree	
846	2214 Fairview	30' Palm	Not ordinance tree, Remove for walk	Remove tree, No replacement required
847	2214 Fairview	5" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
848	2210 Fairview	20' Palm	Not ordinance tree, Remove for walk	Remove tree, No replacement required
849	2208 Fairview	3' Sago	Private tree	
850	2208 Fairview	33" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
851	2314 Kingston	10" Live Oak	Ordinance tree, Remove for walk	Remove tree, Provide 10" in replacement
852	2314 Kingston	11" Live Oak	Ordinance tree, Remove for walk	Remove tree, Provide 11" in replacement
853	2223 Fairview	4" Bur Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
854	2217 Fairview	13" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
855	2215 Fairview	11" Pear	Not ordinance tree, remove for street	Remove tree, No replacement required
856	2213 Fairview	14" River Birch	Tree recently removed	
857	2213 Fairview	4' Sago	Private tree	
858	2211 Fairview	12" Japanese Blueberry	Private tree	
859	2211 Fairview	6" Crepe Myrtle	Not ordinance tree	
860	2207 Fairview	3' Sago	Private tree	
861	2207 Fairview	8" Crepe Myrtle	Not ordinance tree	
862	2207 Fairview	8" Crepe Myrtle	Not ordinance tree	
863	2404 Kingston	6" Crepe Myrtle	Tree recently removed	
864	2404 Kingston	6" Crepe Myrtle	Not ordinance tree	
865	2404 Kingston	15" live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
866	2404 Kingston	14" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune

Tree No.	Location	Description	Comments	Treatment
Trees on Fairview				
867	2401 Kingston	4" Crepe Myrtle	Not ordinance tree	
868	2401 Kingston	6" Crepe Myrtle	Not ordinance tree	
869	2401 Kingston	5" Crepe Myrtle	Not ordinance tree	
870	2401 Kingston	5" Crepe Myrtle	Not ordinance tree	
871	Esplanade	6" Live Oak	Ordinance tree, Remove for storm	Remove tree, Provide 6" in replacement
872	Esplanade	4" Italian Cypress	Not ordinance tree	
873	2313 Kingston	4" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 4" in replacement
874	2313 Kingston	4" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 4" in replacement
875	2313 Kingston	3" Savannah Holly	Ordinance tree, Remove for walk	Remove tree, Provide 3" in replacement
876	2313 Kingston	8" Live Oak	Ordinance tree, Remove for walk	Remove tree, Provide 8" in replacement
877	2156 Fairwe	12" Pear	Not ordinance tree, Remove for walk	Remove tree, No replacement required
878	2156 Fairwe	12" Pear	Not ordinance tree, Remove for walk	Remove tree, No replacement required
879	2326 Persa	6" Magnolia	Private tree	
880	2326 Persa	6" Magnolia	Private tree	
881	2326 Persa	14" Pecan	80% dieback, Poor , Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
882	2326 Persa	8" Pecan	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
883	2326 Persa	14" Pecan	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
884	2326 Persa	12" Pecan	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
885	2326 Persa	14" Pecan	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
886	2155 Fairwe	2" Juniper	Tree recently removed	
887	2155 Fairwe	2" Juniper	Tree recently removed	
888	2155 Fairwe	10" Crepe Myrtle	Not ordinance tree	
889	2149 Fairwe	5" Princess tree	Private tree	
890	2145 Fairwe	11" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
891	2143 Fairwe	7" Little Gem Magnolia	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Root prune for street, Fence, Clearance prune
892	2143 Fairwe	5" Pear	Not ordinance tree, remove for street	Remove tree, No replacement required
893	2139 Fairwe	14" Crepe Myrtle	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
894	2139 Fairwe	14" Crepe Myrtle	Private tree	
895	2137 Fairwe	18" Laurel Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
896	2137 Fairwe	18" Crepe Myrtle	Private tree	
897	2131 Fairwe	12" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
898	2131 Fairwe	10" Live Oak	Ordinance tree	Fence, Root prune for street
899	2131 Fairwe	9" Live Oak	Ordinance tree	Fence, Root prune for street
900	2131 Fairwe	10" Live Oak	Ordinance tree	Fence, Root prune for street
901	2138 Fairwe	10" Crepe Myrtle	Not ordinance tree	
902	2138 Fairwe	6" Crepe Myrtle	Not ordinance tree	
903	2138 Fairwe	6" Crepe Myrtle	Not ordinance tree	
904	2138 Fairwe	10" Crepe Myrtle	Not ordinance tree	
905	2136 Fairwe	8" Crepe Myrtle	Not ordinance tree	
906	2136 Fairwe	15" Oleander	Tree recently removed	
907	2324 Peckham	24" Tallow	Tree recently removed	
908	2324 Peckham	3" Parkinsonia	Ordinance tree	Fence
909	2324 Peckham	3" Parkinsonia	Ordinance tree	Fence

NOTE:

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TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- —X—X— TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- —OCC— ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

SCALE: 1"=40'

REV.	DATE	DESCRIPTION	BY

OTHON

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APPROVED Craig N. Koehl 03-09-2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 10 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 244 OF 391	

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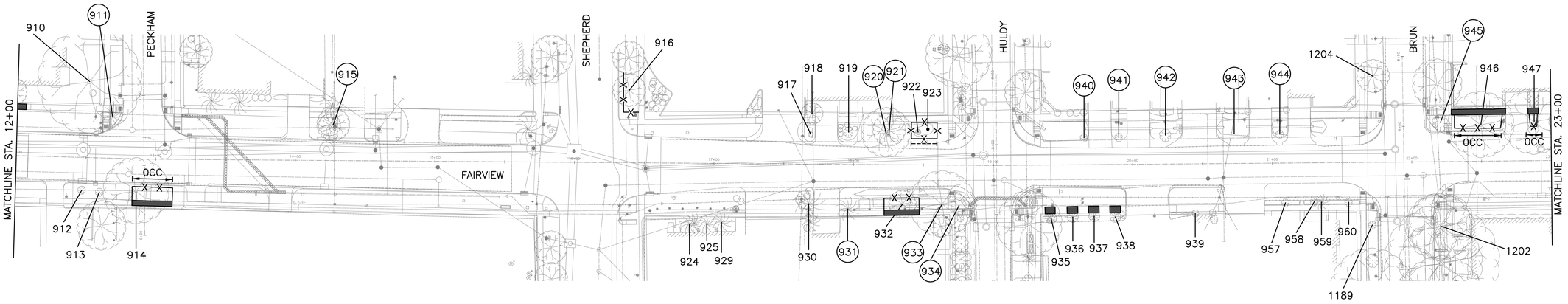

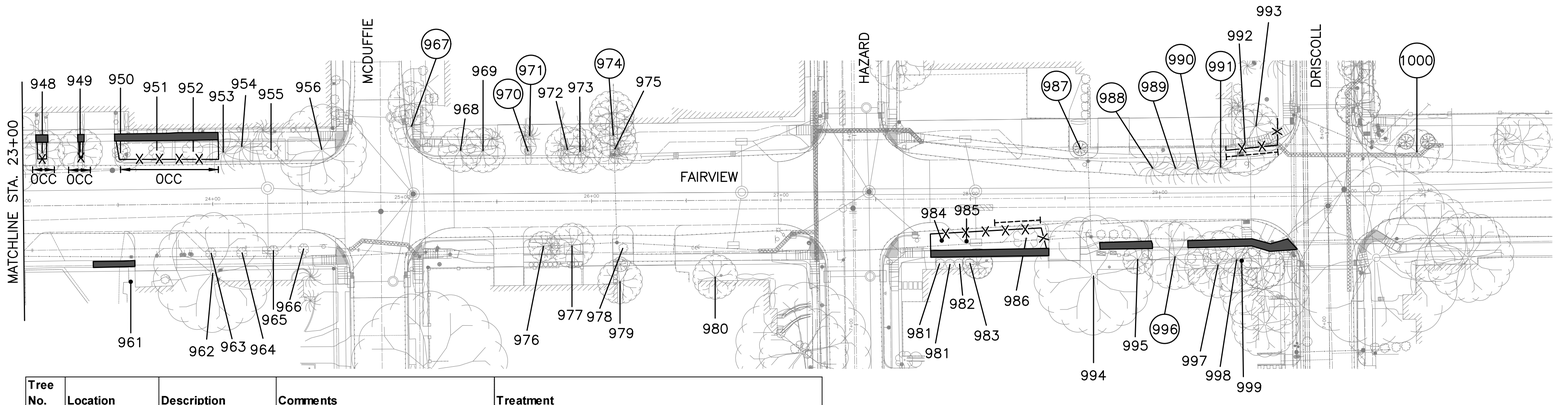

TREE PRESERVATION PLAN LEGEND

- TREE NUMBER/LOCATION
- (1) TREE TO BE REMOVED
- TREE PROTECTION FENCE
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- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
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- SIDEWALK ON GRADE
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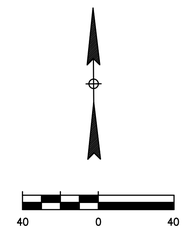

SCALE: 1"=40'

Tree No.	Location	Description	Comments	Treatment
Trees on Fairview				
910	2324 Peckham	39" Live Oak	Private tree, Not impacted	
911	2324 Peckham	3' Sago	Not ordinance tree, remove for street	Remove tree, No replacement required
912	2123 Fairview	6" Crepe Myrtle	Not ordinance tree	
913	2123 Fairview	6" Crepe Myrtle	Not ordinance tree	
914	2119 Fairview	23" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
915	2327 Peckham	18" Mulberry	Not ordinance tree, remove for manhole	Remove tree, No replacement required
916	2359 Peckham	17" Live Oak	Ordinance tree	Fence
917	2040 Fairview	5' Palm	Not ordinance tree	
918	2040 Fairview	5' Palm	Private tree	
919	2040 Fairview	18" Crepe Myrtle	Not ordinance tree	Clearance prune
920	2318 Huldy	30' Palm	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
921	2318 Huldy	4' Palm	Not ordinance tree, remove for street	Remove tree, No replacement required
922	2318 Huldy	6" Polymorpha Oak	Ordinance tree	Fence, Root prune for street, Clearance prune
923	2318 Huldy	3' Palm	Not ordinance tree	
924	2203 Fairview	2' Sago	Private tree	
925	2203 Fairview	2' Sago	Private tree	
926	Not used			
927	Not used			
928	Not used			
929	2203 Fairview	2' Sago	Private tree	
930	2203 Fairview	5" Banana	Not ordinance tree	
931	2402 Huldy	15" Oleander	Not ordinance tree, Remove for walk	Remove tree, No replacement required
932	2402 Huldy	17" Water Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
933	2402 Huldy	18" Ligustrum	Not ordinance tree, Remove for walk	Remove tree, No replacement required
934	2402 Huldy	17" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
935	2025 Fairview	10" Live Oak	Private tree, Not impacted	
936	2025 Fairview	9" Live Oak	Private tree, Not impacted	
937	2025 Fairview	7" Live Oak	Private tree, Not impacted	
938	2025 Fairview	8" Live Oak	Private tree, Not impacted	
939	2025 Fairview	2" Crepe Myrtle	Not ordinance tree	
940	2323 Huldy	8" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
941	2323 Huldy	5" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
942	2024 Fairview	19" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
943	2020 Fairview	14" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
944	2016 Fairview	19" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
945	2014 Fairview	18" Crepe Myrtle	Not ordinance tree, remove for street	Remove tree, No replacement required
946	2014 Fairview	18" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
947	2014 Fairview	19" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
948	2012 Fairview	11" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
949	2012 Fairview	12" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
950	2010 Fairview	24" Crepe Myrtle	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
951	2008 Fairview	14" Crepe Myrtle	Not ordinance tree, remove for street parking	Remove tree, No replacement required
952	2006 Fairview	24" Crepe Myrtle	Ordinance tree, Remove for street parking	Remove tree, Provide 24" in replacement
953	2004 Fairview	30' Palm	Not ordinance tree, remove for street parking	Remove tree, No replacement required
954	2004 Fairview	30' Palm	Not ordinance tree, remove for street parking	Remove tree, No replacement required
955	2002 Fairview	14" Crepe Myrtle	Not ordinance tree, remove for street parking	Remove tree, No replacement required
956	2000 Fairview	18" Tallow	Not ordinance tree	
957	2402 Brun	12" Crepe Myrtle	Not ordinance tree	
958	2402 Brun	10" Crepe Myrtle	Not ordinance tree	
959	2402 Brun	6' Palm	Not ordinance tree	Clearance prune
960	2402 Brun	18" Crepe Myrtle	Not ordinance tree	Clearance prune
961	2007 Fairview	20" Tallow	Private tree	Demo-form-pour walk without damage to roots 1" or larger
962	2007 Fairview	18" Oleander	Private tree	Clearance prune
963	2007 Fairview	8" Crepe Myrtle	Not ordinance tree	
964	2007 Fairview	6" Crepe Myrtle	Not ordinance tree	
965	2007 Fairview	8" Crepe Myrtle	Not ordinance tree	
966	2007 Fairview	6" Crepe Myrtle	Not ordinance tree	
967	2323 McDuffie	15" Pear	Not ordinance tree, Remove for walk	Remove tree, No replacement required
968	2323 McDuffie	12" Pear	Not ordinance tree	
969	2323 McDuffie	14" Pear	Not ordinance tree	Clearance prune
970	2323 McDuffie	3" Crepe Myrtle	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
971	2323 McDuffie	3' Sago	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
972	1976 Fairview	6" Pear	Not ordinance tree	
973	1976 Fairview	1' Sago	Not ordinance tree	
974	1976 Fairview	11" Pear	Not ordinance tree, Remove for walk	Remove tree, No replacement required
975	2320 Hazard	10" Pear	Not ordinance tree	
976	1985 Fairview	5" Pear	Not ordinance tree	Clearance prune
977	1985 Fairview	11" Pear	Not ordinance tree	Clearance prune
978	1985 Fairview	17" Oleander	Not ordinance tree	
979	2402 Hazard	8" Sugarberry	Private tree	
980	2402 Hazard	12" Mimosa	Dead, Private, Not impacted	
981	2403 Hazard	2" Savannah Holly	Private tree	Fence
982	2403 Hazard	2" Savannah Holly	Private tree	Fence
983	2403 Hazard	2" Savannah Holly	Private tree	Fence
984	2403 Hazard	3" Magnolia	Ordinance tree	Fence
985	2403 Hazard	3" Magnolia	Ordinance tree, remove for street parking	Remove tree, Provide 3" in replacement
986	2403 Hazard	24" Crepe Myrtle	Trunk decay, Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
987	1960 Fairview	9" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
988	2320 Driscoll	20' Palm	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
989	2320 Driscoll	20' Palm	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
990	2320 Driscoll	15' Palm	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
991	2320 Driscoll	15' Palm	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
992	2320 Driscoll	10" Sweetgum	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
993	2320 Driscoll	11" Live Oak	Ordinance tree	Fence
994	2402 Driscoll	33" Water Oak	90% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger
995	2402 Driscoll	8" Pecan	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger
996	2402 Driscoll	16" Sugarberry	Not ordinance tree, Remove for walk	Remove tree, No replacement required
997	2402 Driscoll	18" Tallow	Private tree	Demo-form-pour walk without damage to roots 1" or larger
998	2402 Driscoll	14" Pecan	80% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger
999	2402 Driscoll	4" Camphor	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1000	1944 Fairview	17" Live oak	Ordinance tree, Remove for street	Remove tree, provide 17" in replacement

REV.	DATE	DESCRIPTION	BY

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 11 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 245 OF 391	

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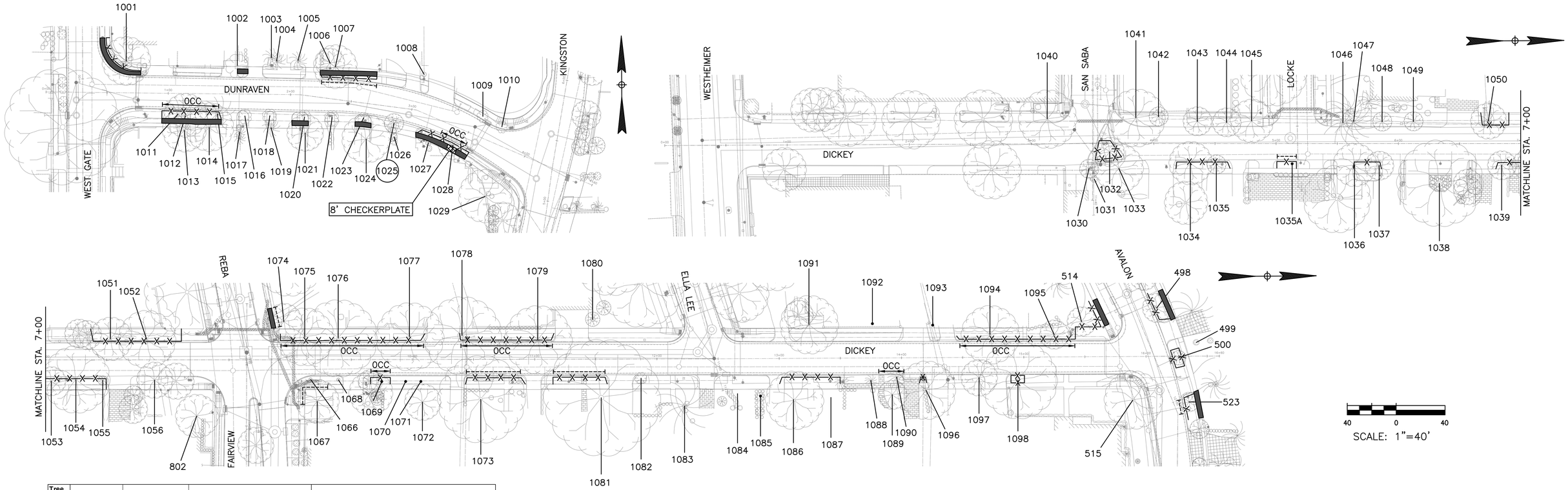

Tree No.	Location	Description	Comments	Treatment
Trees on Dunraven				
1001	2222 Dunraven	18" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1002	2218 Dunraven	24" Crepe Myrtle	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1003	2214 Dunraven	10' Palm	Private tree	
1004	2214 Dunraven	10' Palm	Private tree	
1005	2206 Dunraven	10' Palm	Private tree	
1006	2206 Dunraven	14" Pecan	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1007	2206 Dunraven	24" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1008	2202 Dunraven	14" Wax Myrtle	Tree recently removed	
1009	2414 Kingston	15" Crepe Myrtle	Not ordinance tree	
1010	2414 Kingston	14" Crepe Myrtle	Not ordinance tree	
1011	2501 Westgate	1' Sago	Tree recently removed	
1012	2501 Westgate	14" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1013	2501 Westgate	14" Water Oak	Private tree	
1014	2219 Dunraven	16" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1015	2219 Dunraven	1' Sago	Tree recently removed	
1016	2219 Dunraven	12" Crepe Myrtle	Not ordinance tree	
1017	2219 Dunraven	4" Italian Cypress	80% dieback, Private tree	
1018	2217 Dunraven	12" Crepe Myrtle	Not ordinance tree	
1019	2215 Dunraven	4' Sago	Not ordinance tree	
1020	2213 Dunraven	10" Crepe Myrtle	Not ordinance tree	
1021	2213 Dunraven	18" Water Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1022	2211 Dunraven	18" Crepe Myrtle	Not ordinance tree	
1023	2207 Dunraven	12" Crepe Myrtle	Not ordinance tree	
1024	2207 Dunraven	20" Water Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1025	2207 Dunraven	10" Magnolia	Ordinance tree, Remove for driveway	Remove tree, Provide 10" in replacement
1026	2205 Dunraven	6" Crepe Myrtle	Private tree	
1027	2500 Kingston	24" American Elm	Tree recently removed	
1028	2500 Kingston	11" Overcup Oak	Ordinance tree	8' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1029	2500 Kingston	12" Crepe Myrtle	Private tree	
Trees on Dickey Place				
1030	2515 Dickey Place	5" Magnolia	Ordinance tree, Not impacted	
1031	2515 Dickey Place	10" Crepe Myrtle	Private tree	
1032	Esplanade	5" Live Oak	Ordinance tree, Remove for manhole	Remove tree, Provide 5" in replacement
1033	2515 Dickey Place	20" Pine	Ordinance tree, Not impacted	
1034	2505 Dickey Place	18" Magnolia	Ordinance tree	Clearance prune, Fence
1035	2505 Dickey Place	9" Magnolia	Ordinance tree	Clearance prune, Fence
1035A	Not available	9" Shumard Oak	Ordinance tree	Root prune for street, Fence
1036	2421 Dickey Place	14" Live Oak	Ordinance tree	Clearance prune, Fence
1037	2421 Dickey Place	12" Live oak	Ordinance tree	Clearance prune, Fence
1038	2411 Dickey Place	30" Live Oak	Arboriculturally significant, Private tree	Clearance prune
1039	2409 Dickey Place	7" Mexican Sycamore	Ordinance tree	Clearance prune, Fence
1040	2400 Dickey Place	22" Tallow	Ordinance tree, Not impacted	
1041	2301 San Saba	18" Pear	Tree recently removed	
1042	2301 San Saba	8" Loquat	Tree recently removed	
1043	2301 San Saba	14" Raintree	Tree recently removed	
1044	2301 San Saba	10" Raintree	Tree recently removed	
1045	2301 San Saba	18" Raintree	Tree recently removed	
1046	2302 Locke	13" Pine	Tree recently removed	
1047	2302 Locke	24" Pine	Tree recently removed	
1048	2302 Locke	8" Ligustrum	Tree recently removed	
1049	2302 Locke	10" Ligustrum	Tree recently removed	
1050	2302 Locke	12" Live oak	Ordinance tree	Clearance prune, Fence
1051	2403 Reba	18" Live Oak	Ordinance tree	Clearance prune, Fence
1052	2403 Reba	22" Live Oak	Ordinance tree	Clearance prune, Fence
1053	2409 Dickey Place	7" Mexican Sycamore	Ordinance tree	Clearance prune, Fence
1054	2409 Dickey Place	26" Live Oak	70% dieback, Ordinance tree	Fence
1055	2405 Dickey Place	4" Live Oak	Ordinance tree	Fence
1056	2405 Dickey Place	14" Tallow	Not ordinance tree	

Tree No.	Location	Description	Comments	Treatment
Trees on Dickey Place				
1057	Not used			
1058	Not used			
1059	Not used			
1060	Not used			
1061	Not used			
1062	Not used			
1063	Not used			
1064	Not used			
1065	Not used			
1066	2219 Dickey Place	10" Crepe Myrtle	Not ordinance tree	Clearance prune
1067	2219 Dickey Place	22" Live Oak	Private tree	Clearance prune
1068	2219 Dickey Place	12" Crepe Myrtle	Not ordinance tree	Clearance prune
1069	2219 Dickey Place	6" Pecan	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1070	2219 Dickey Place	6" Pear	Tree recently removed	
1071	2219 Dickey Place	16" Crepe Myrtle	Not ordinance tree	
1072	2219 Dickey Place	12" Water Oak	Tree recently removed	
1073	2211 Dickey Place	30" Live Oak	40% dieback, Private tree	Fence, Root prune for street
1074	2402 Reba	14" Magnolia	Private tree	Root prune for walk
1075	2402 Reba	27" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1076	2402 Reba	36" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1077	2402 Reba	26" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1078	2301 Ella Lee	27" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1079	2301 Ella Lee	24" Live oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1080	2301 Ella Lee	5" River Birch	Tree recently removed	
1081	2205 Dickey Place	36" Live Oak	Arboriculturally significant, Private tree	Clearance, Root prune for street
1082	2201 Dickey Place	4" Crepe Myrtle	Tree recently removed	
1083	2201 Dickey Place	26" Pine	Private tree	
1084	2117 Dickey Place	4" Laurel Oak	Tree recently removed	
1085	2117 Dickey Place	6" Crepe Myrtle	Private tree	
1086	2115 Dickey Place	18" Live Oak	Private tree	Fence
1087	2115 Dickey Place	18" Live Oak	Private tree	Fence, Clearance prune
1088	2113 Dickey Place	11" Baldcypress	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1089	2113 Dickey Place	6" Magnolia	Tree recently removed	
1090	2113 Dickey Place	12" Bald Cypress	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1091	2302 Ella Lee	10" Magnolia	Private tree, Not impacted	
1092	2302 Ella Lee	12" Water Oak	Tree recently removed	
1093	2403 Avalon	13" Water Oak	Tree recently removed	
1094	2403 Avalon	22" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1095	2403 Avalon	10" Shumard Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1096	2109 Dickey Place	10" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1097	2109 Dickey Place	10" Arizona Ash	Not ordinance tree	Clearance prune
1098	2109 Dickey Place	4" Live Oak	Ordinance tree	Fence

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- -X-X- — TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- OCC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 12 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 246 OF 391	

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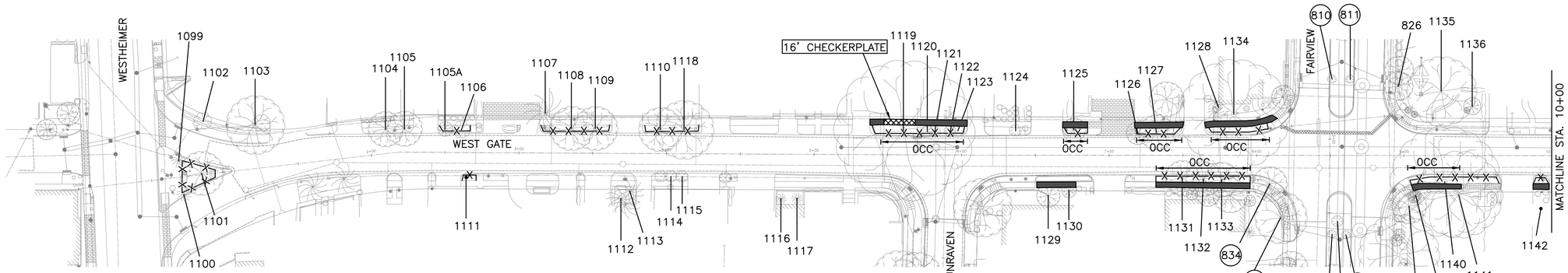

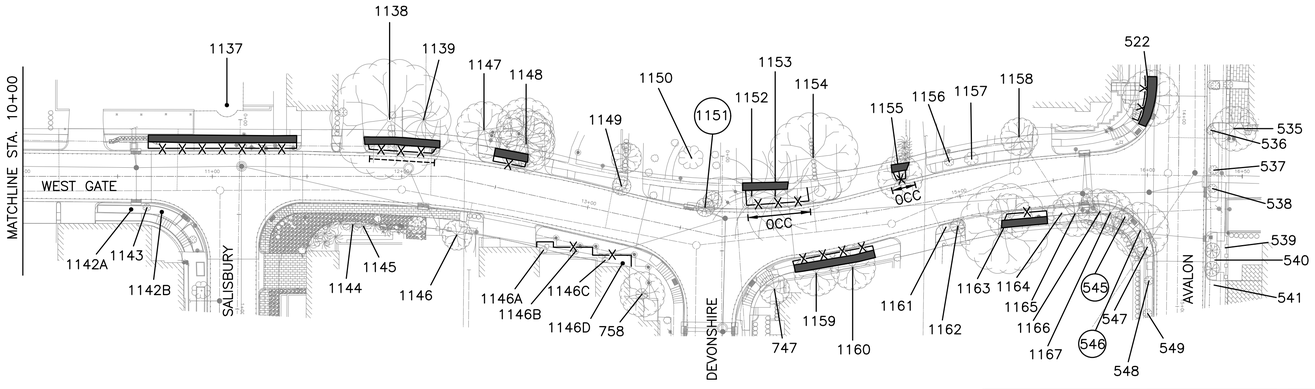

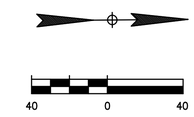

Tree No.	Location	Description	Comments	Treatment
Trees on Westgate				
1099	Esplanade	6" Italian Cypress	Not ordinance tree	
1100	Esplanade	6" Italian Cypress	Tree recently removed	
1101	Esplanade	12" Live Oak	Ordinance tree	Fence
1102	2250 Westgate	6" Crepe Myrtle	Not ordinance tree	
1103	2250 Westgate	15" Lacebark Elm	Private tree	
1104	2524 Westgate	4" Live Oak	Tree recently removed	
1105	2524 Westgate	5" Live Oak	Tree recently removed	
1105A	2520 Westgate	8" Live Oak	Ordinance tree	Clearance prune, Fence
1106	2520 Westgate	10" Crepe Myrtle	Tree recently removed	
1107	2518 Westgate	18" Pine	Tree recently removed	
1108	2514 Westgate	12" Live oak	Ordinance tree	Clearance prune, Fence
1109	2514 Westgate	12" Live oak	Ordinance tree	Clearance prune, Fence
1110	2510 Westgate	5" Live Oak	Tree recently removed	
1111	2521 Westgate	5" Lacebark Elm	Ordinance tree	Fence
1112	2511 Westgate	8" Shumard Oak	Private tree	
1113	2511 Westgate	8" Shumard Oak	Private tree	
1114	2509 Westgate	12" Crepe Myrtle	Topped, Not ordinance tree	
1115	2509 Westgate	12" Crepe Myrtle	Topped, Not ordinance tree	
1116	2501 Westgate	8" Magnolia	Private tree	
1117	2501 Westgate	8" Magnolia	Private tree	
1118	2510 Westgate	12" Live oak	Ordinance tree	Clearance prune, Fence
1119	2424 Westgate	40" Live Oak	40% dieback, Ordinance tree, Arboriculturally significant	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1120	2418 Westgate	6" Crepe Myrtle	Not ordinance tree	
1121	2418 Westgate	6" Crepe Myrtle	Not ordinance tree	
1122	2418 Westgate	6" Crepe Myrtle	Not ordinance tree	
1123	2418 Westgate	6" Crepe Myrtle	Not ordinance tree	
1124	2414 Westgate	6" Crepe Myrtle	Topped, Not ordinance tree	
1125	2412 Westgate	6" Magnolia	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1126	2412 Westgate	8" Magnolia	Tree recently removed	
1127	2412 Westgate	6" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1128	2402 Westgate	1' Sago	Private tree	
1129	2222 Dunraven	4" Magnolia	Dieback, Poor, Private tree	Demo-form-pour walk without damage to roots 1" or larger
1130	2222 Dunraven	5" Cherry Laurel	Private tree	
1131	2227 Westgate	12" Live oak	Dieback, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1132	2227 Westgate	10" Live Oak	Dieback, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1133	2227 Westgate	12" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1134	2402 Westgate	38" Water Oak	Private tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune

Tree No.	Location	Description	Comments	Treatment
Trees on Westgate				
1135	2310 Westgate	18" Ligustrum	Private tree	
1136	2310 Westgate	10" Fringe Tree	Tree recently removed	
1137	2304 Westgate	38" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1138	2208 Westgate	20" Crepe Myrtle	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1139	2208 Westgate	24" Baldcypress	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1140	2220 Fairview	35" Water oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1141	2220 Fairview	22" Water Oak	Private tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1142	2313 Westgate	20" Sweetgum	30% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1142A	2223 Salisbury	6" Pear	Not ordinance tree	
1143	2223 Salisbury	5" Crepe Myrtle	Not ordinance tree	
1143A	2223 Salisbury	6" Pear	Not ordinance tree	
1144	2215 Westgate	4" Italian Cypress	30% dieback, Private tree	
1145	2215 Westgate	4" Italian Cypress	30% dieback, Private tree	
1146	2225 Westgate	6" Fig	Private tree	
1146A	2225 Devonshire	4" Holly	Ordinance tree	Fence
1146B	2225 Devonshire	4" Holly	Ordinance tree	Fence
1146C	2225 Devonshire	4" Holly	Ordinance tree	Fence
1146D	2225 Devonshire	4" Shumard oak	Ordinance tree	Fence
1147	2206 Westgate	12" Ligustrum	Private tree	
1148	2206 Westgate	15" Willow Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1149	2202 Westgate	4" Tupelo	Not ordinance tree	
1150	2218 Westgate	26" Crepe Myrtle	Private tree	
1151	2218 Westgate	5" Red Maple	Ordinance tree, Remove for street	Remove tree, Provide 5" in replacement
1152	2114 Westgate	16" Pine	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1153	2114 Westgate	20" Pine	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1154	2112 Westgate	23" Huisache	Private tree	Clearance prune
1155	2112 Westgate	10" Mexican Sycamore	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1156	2106 Westgate	8" Crepe Myrtle	Not ordinance tree	
1157	2106 Westgate	16" Crepe Myrtle	Not ordinance tree	
1158	2106 Westgate	9" Pittosporum	Private tree	
1159	2224 Devonshire	12" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1160	2224 Devonshire	12" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1161	2221 Avalon	3" Crepe Myrtle	Not ordinance tree	
1162	2221 Avalon	1" Shumard Oak	Not ordinance tree	
1163	2221 Avalon	20" Pear	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1164	2221 Avalon	10" Pear	Not ordinance tree	
1165	2221 Avalon	11" Pear	Not ordinance tree	
1166	2221 Avalon	11" Pear	Not ordinance tree	
1167	2221 Avalon	10" Crepe Myrtle	Not ordinance tree	

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- X-X-X — TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 13 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 247 OF 391	

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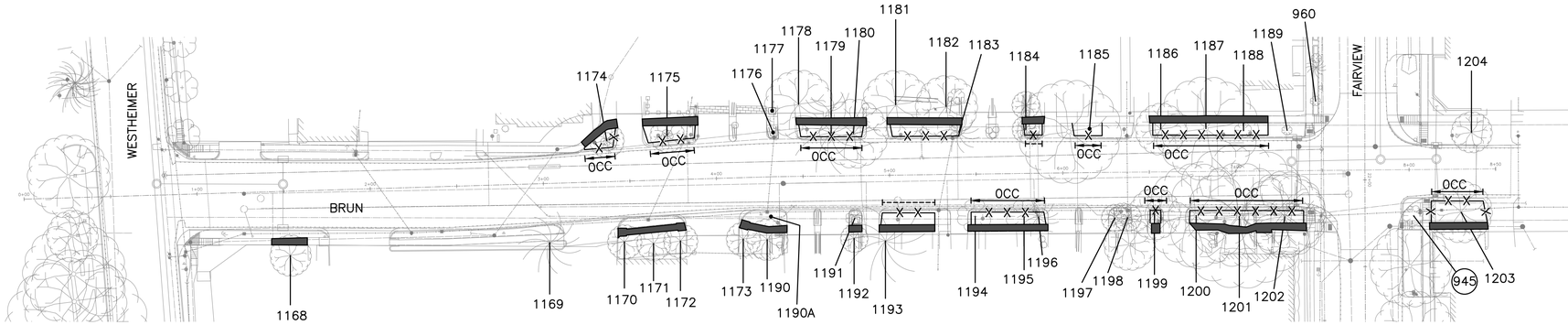

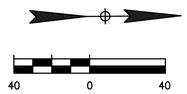

Tree No.	Location	Description	Comments	Treatment
Trees on Brun				
1168	2006 Westheimer	12" Chinese Pistache	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1169	2006 Westheimer	10' Palm	Tree recently removed	
1170	2006 Westheimer	9" Chinese Pistache	Tree recently removed	
1171	2006 Westheimer	6" Chinese Pistache	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1172	2006 Westheimer	11" Chinese Pistache	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1173	2006 Westheimer	2" Chinese Pistache	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1174	2508 Brun	13" Nuttal Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1175	2508 Brun	15" Nuttal Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1176	2426 Brun	1' Sago	Not ordinance tree	
1177	2426 Brun	4" Savannah Holly	Private tree	
1178	2422 Brun	18" Mexican Sycamore	Tree recently removed	
1179	2422 Brun	16" Pine	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1180	2422 Brun	14" Mexican Sycamore	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1181	2418 Brun	12" River Birch	Tree recently removed	
1182	2416 Brun	18" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1183	2416 Brun	2' Sago	Tree recently removed	
1184	2414 Brun	5" Little Gem Magnolia	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1185	2410 Brun	3" Fringe Tree	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1186	2406 Brun	16" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1187	2406 Brun	18" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1188	2402 Brun	10" Crepe Myrtle	Topped, Not ordinance tree	
1189	2402 Brun	10" Crepe Myrtle	Topped, Not ordinance tree	
1190	2006 Brun	10" Chinese Pistache	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1190A	2006 Brun	5" Crepe Myrtle	Not ordinance tree	
1191	2304 Brun	4" Crepe Myrtle	Not ordinance tree	
1192	2304 Brun	5" Savannah Holly	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1193	2417 Brun	25" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Root prune for street
1194	2413 Brun	25" Crepe Myrtle	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1195	2413 Brun	23" Crepe Myrtle	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1196	2413 Brun	4' Palm	Not ordinance tree	
1197	2409 Brun	6" Little Gem Magnolia	Tree recently removed	
1198	2409 Brun	10" Arizona Ash	Not ordinance tree	
1199	2405 Brun	12" Post Oak	Dieback, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1200	2405 Brun	20" Post Oak	Dieback, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1201	2401 Brun	36" Live Oak	Arboriculturally significant, Dieback, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1202	2401 Brun	25" Durand Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1203	2014 Fairview	24" Crepe Myrtle	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1204	2320 Brun	14" Crepe Myrtle	Not ordinance tree	Clearance prune

TREE PRESERVATION PLAN LEGEND

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- —X—X— TREE PROTECTION FENCE
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APPROVED Craig N. Koehl 03-09-2020

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 14 OF 22

WBS NUMBER
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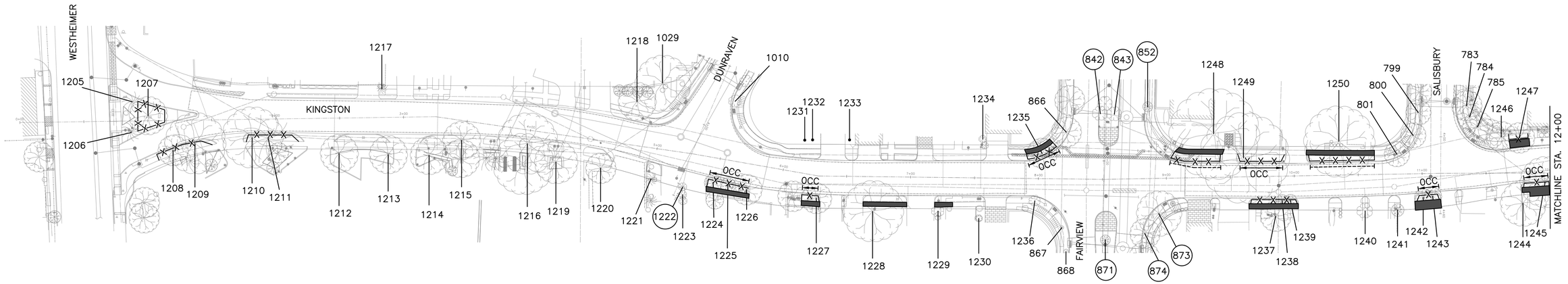

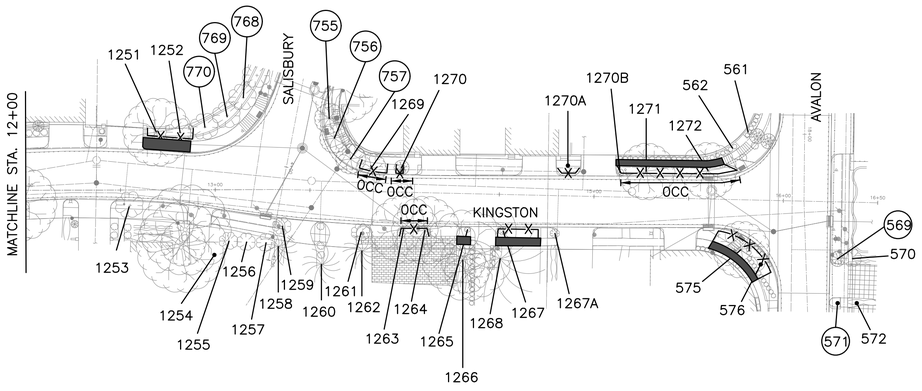

TREE PRESERVATION PLAN LEGEND

- TREE NUMBER/LOCATION
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- TREE PROTECTION FENCE
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Tree No.	Location	Description	Comments	Treatment
Trees on Kingston				
1205	Esplanade	4" Italian Cypress	Not ordinance tree	
1206	Esplanade	4" Italian Cypress	Not ordinance tree	
1207	Esplanade	6" Live Oak	Ordinance tree	Fence
1208	2529 Kingston	10" Tallow	Not ordinance tree	Clearance prune
1209	2529 Kingston	15" Water Oak	Ordinance tree	Bore sanitary, Fence
1210	2525 Kingston	16" Live oak	Ordinance tree	Fence
1211	2525 Kingston	15" Pine	Ordinance tree	Fence
1212	2517 Kingston	14" Live Oak	Private tree	
1213	2515 Kingston	12" Live oak	Private tree	
1214	2507 Kingston	12" Live oak	Private tree	
1215	2505 Kingston	12" Vitex	Not ordinance tree	Clearance prune
1216	2503 Kingston	18" Vitex	Not ordinance tree	Clearance prune
1217	2518 Kingston	6" Juniper	Not ordinance tree	
1218	2203 Dunraven	11" Water Oak	Private tree	Clearance prune
1219	2435 Kingston	14" Live Oak	Private tree	Clearance prune
1220	2435 Kingston	10" Live Oak	Private tree	Clearance prune
1221	2433 Kingston	3" Juniper	Private tree	
1222	2433 Kingston	6" Crepe Myrtle	Not ordinance tree, Remove for wider drive	Remove tree, No replacement required
1223	2433 Kingston	6" Crepe Myrtle	Private tree	
1224	2415 Kingston	6" Savannah Holly	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1225	2415 Kingston	6" Japanese Blueberry	Not ordinance tree	
1226	2415 Kingston	8" River Birch	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1227	2415 Kingston	14" Shumard Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1228	2409 Kingston	19" Tallow	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1229	2405 Kingston	3" Crepe Myrtle	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1230	2401 Kingston	14" Crepe Myrtle	Private tree	
1231	2414 Kingston	10" Japanese Blueberry	Private tree	Clearance prune
1232	2414 Kingston	8" Japanese Blueberry	Private tree	Clearance prune
1233	2410 Kingston	4" River Birch	Private tree	
1234	2404 Kingston	12" Crepe Myrtle	Private tree	
1235	2404 Kingston	15" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1236	2401 Kingston	12" Crepe Myrtle	Not ordinance tree	
1237	2303 Kingston	6" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1238	2303 Kingston	4" Savannah Holly	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1239	2303 Kingston	4" Savannah Holly	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1240	2217 Kingston	8" Crepe Myrtle	Private tree	
1241	2217 Kingston	5" Savannah Holly	Private tree	
1242	2313 Kingston	6" Savannah Holly	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1243	2313 Kingston	5" Savannah Holly	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1244	2205 Kingston	20" Crepe Myrtle	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1245	2205 Kingston	15" Bald Cypress	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1246	2206 Kingston	6" Japanese Blueberry	Not ordinance tree	
1247	2206 Kingston	7" Magnolia	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1248	2314 Kingston	40" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1249	2310 Kingston	37" Live Oak	Arboriculturally Significant, Ordinance tree	Hand dig stack, Bore lead from curb to stack, Zero Curb Cutback, Fence, Clearance prune
1250	2306 Kingston	24" Magnolia	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1251	2203 Devonshire	17" Live oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1252	2203 Devonshire	18" Crepe Myrtle	Not ordinance tree	
1253	2201 Kingston	16" Crepe Myrtle	Not ordinance tree	
1254	2123 Kingston	24" Crepe Myrtle	Private tree	Clearance prune
1255	2123 Kingston	10" Crepe Myrtle	Private tree	Clearance prune
1256	2123 Kingston	14" Crepe Myrtle	Private tree	Clearance prune
1257	2123 Kingston	14" Crepe Myrtle	Private tree	
1258	2123 Kingston	15' Palm	Private tree	
1259	2119 Kingston	5" Crepe Myrtle	Not ordinance tree	
1260	2115 Kingston	10' Palm	Private tree	
1261	2113 Kingston	6" Crepe Myrtle	Not ordinance tree	
1262	2113 Kingston	15' Palm	Private tree	
1263	2113 Kingston	15" Live oak	Ordinance tree	Hand dig stack, Bore lead from curb to stack, Zero Curb Cutback, Fence, Clearance prune
1264	2113 Kingston	14" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1265	2109 Kingston	2" Crepe Myrtle	Not ordinance tree	
1266	2109 Kingston	10" Water Oak	Private tree	Clearance prune
1267	2109 Kingston	5" Crepe Myrtle	Not ordinance tree	
1267A	2109 Kingston	4' Palm	Not ordinance tree	
1268	2109 Kingston	20" Pine	Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1269	2114 Kingston	4" Savannah Holly	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1270	2114 Kingston	4" Savannah Holly	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1270A	2201 Avalon	2" Holly	Ordinance tree	Fence
1270B	2201 Avalon	3" Crepe Myrtle	Not ordinance tree	
1271	2201 Avalon	15" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1272	2201 Avalon	16" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence

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SCALE: 1"=40'

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SHEET 15 OF 22

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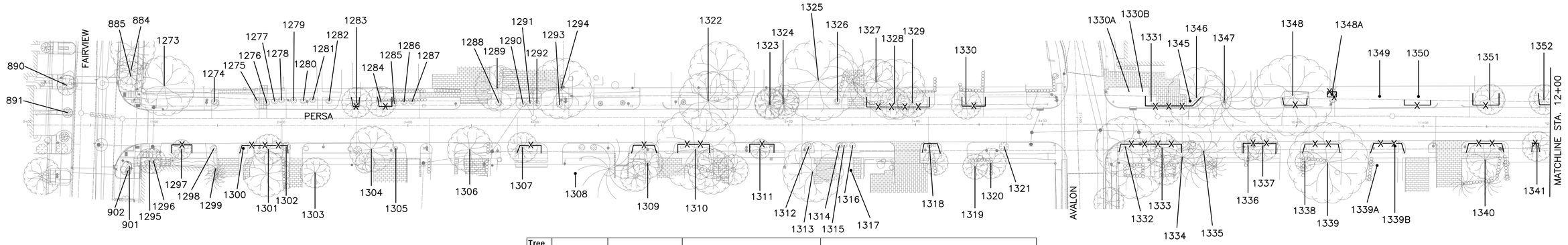

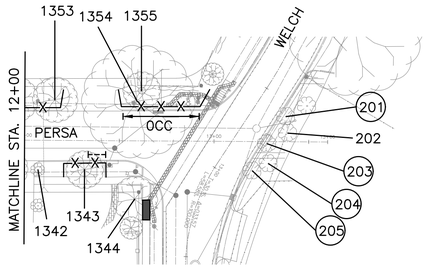

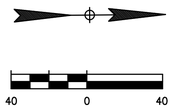

TREE PRESERVATION PLAN LEGEND

- TREE NUMBER/LOCATION
- TREE TO BE REMOVED
- TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
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Tree No.	Location	Description	Comments	Treatment
Trees on Persa				
1273	2326 Persa	24" Nuttal Oak	Private tree	
1274	2322 Persa	10" Crepe Myrtle	Not ordinance tree	
1275	2322 Persa	8" Crepe Myrtle	Not ordinance tree	
1276	2322 Persa	8" Crepe Myrtle	Not ordinance tree	
1277	2322 Persa	8" Crepe Myrtle	Not ordinance tree	
1278	2322 Persa	8" Crepe Myrtle	Not ordinance tree	
1279	2322 Persa	6" Crepe Myrtle	Not ordinance tree	
1280	2322 Persa	6" Crepe Myrtle	Tree recently removed	
1281	2322 Persa	6" Crepe Myrtle	Not ordinance tree	
1282	2322 Persa	6" Crepe Myrtle	Not ordinance tree	
1283	2314 Persa	10" Magnolia	Ordinance tree	Fence
1284	2314 Persa	8" Magnolia	Ordinance tree	Fence
1285	2314 Persa	12" Crepe Myrtle	Not ordinance tree	
1286	2314 Persa	12" Crepe Myrtle	Not ordinance tree	
1287	2314 Persa	14" Crepe Myrtle	Not ordinance tree	
1288	2306 Persa	10" Crepe Myrtle	Not ordinance tree	
1289	2306 Persa	18" Live Oak	Private tree	
1290	2306 Persa	12" Crepe Myrtle	Not ordinance tree	
1291	2306 Persa	8" Crepe Myrtle	Not ordinance tree	
1292	2306 Persa	10" Crepe Myrtle	Not ordinance tree	
1293	2306 Persa	6" Crepe Myrtle	Topped, Not ordinance tree	
1294	2306 Persa	26" Live oak	Ordinance tree, Not impacted	
1295	2140 Fairview	10" Crepe Myrtle	Not ordinance tree	
1296	2140 Fairview	10" Crepe Myrtle	Not ordinance tree	
1297	2140 Fairview	7" Live Oak	Ordinance tree	Clearance prune, Fence
1298	2140 Fairview	7" Crepe Myrtle	Not ordinance tree	
1299	2140 Fairview	5" Italian Cypress	Private tree	
1300	2321 Persa	13" Live Oak	Ordinance tree	Clearance prune, Fence
1301	2321 Persa	11" Live Oak	Ordinance tree	Clearance prune, Fence
1302	2321 Persa	10" Crepe Myrtle	Not ordinance tree	
1303	2317 Persa	18" Laurel Oak	Private tree	
1304	2313 Persa	13" Pecan	Tree recently removed	
1305	2313 Persa	2" Live Oak	Ordinance tree	Fence
1306	2309 Persa	16" Tallow	Not ordinance tree	Clearance prune
1307	2305 Persa	8" Water Oak	Tree recently removed	
1308	2301 Persa	5" Shumard oak	Private tree	
1309	2301 Persa	14" Magnolia	Ordinance tree	Fence
1310	2121 Persa	32" Arizona Ash	Ordinance tree	Clearance prune, Fence
1311	2121 Persa	8" Mexican Sycamore	Ordinance tree	Fence
1312	2115 Persa	5" Crepe Myrtle	Tree recently removed	
1313	2115 Persa	28" Live Oak	Arboriculturally significant, Private tree	Clearance prune
1314	2115 Persa	5" Crepe Myrtle	Tree recently removed	
1315	2115 Persa	5" Crepe Myrtle	Tree recently removed	
1316	2115 Persa	5" Crepe Myrtle	Tree recently removed	
1317	2115 Persa	3" Lacebark Elm	Private tree	
1318	2107 Persa	2" Shumard Oak	Ordinance tree	Fence
1319	2103 Persa	12" River Birch	Private tree	
1320	2103 Persa	11" River Birch	Not ordinance tree	
1321	2103 Persa	14" Crepe Myrtle	Not ordinance tree	
1322	2118 Persa	19" White oak	Ordinance tree	Clearance prune
1323	2118 Persa	6" Hawthorne	Not ordinance tree	
1324	2106 Persa	12" Hawthorne	Tree recently removed	
1325	2106 Persa	27" Live oak	Arboriculturally significant, Private tree	Clearance prune
1326	2106 Persa	8" Hawthorne	Not ordinance tree	
1327	2106 Persa	13" Mexican Maple	Private tree	
1328	2106 Persa	8" Polymorpha Oak	Ordinance tree	Fence
1329	2106 Persa	10" Polymorpha Oak	Ordinance tree	Fence
1330	2106 Persa	14" Polymorpha Oak	Ordinance tree	Clearance prune, Fence
1330A	2030 Persa	6" Crepe Myrtle	Private tree	
1330B	2030 Persa	6" Crepe Myrtle	Private tree	
1331	2030 Persa	4" Crepe Myrtle	Not ordinance tree	
1332	2027 Persa	14" Live Oak	Ordinance tree	Fence
1333	2027 Persa	12" Live oak	Ordinance tree	Clearance prune, Fence
1334	2025 Parsa	4' Sago	Tree recently removed	
1335	2025 Parsa	4' Palm	Tree recently removed	
1336	2021 Parsa	10" Live Oak	80% dieback, Ordinance tree	Fence
1337	2021 Parsa	8" Pear	Not ordinance tree	
1338	2021 Parsa	6" Sawannah Holly	Ordinance tree	Fence
1339	2017 Parsa	30" Live Oak	Arboriculturally Significant, Ordinance tree	Hand dig stack, Bore lead from curb to stack, Fence, Clearance prune
1339A	2017 Parsa	18" Live Oak	Private tree	Fence
1339B	2017 Parsa	4" Live Oak	Private tree	Fence
1340	2009 Parsa	20" Live oak	Ordinance tree	Fence
1341	2005 Parsa	6" Live Oak	Ordinance tree	Fence
1342	2001 Parsa	14" Crepe Myrtle	Not ordinance tree	Clearance prune
1343	2001 Parsa	13" Live Oak	Ordinance tree	Root prune for street, Fence, Clearance prune
1344	2001 Parsa	18" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1345	2026 Parsa	2" Nuttal Oak	Tree recently removed	
1346	2026 Parsa	25" Live oak	Ordinance tree	Fence
1347	2026 Parsa	9' Palm	Not ordinance tree	
1348	2022 Parsa	27" Live Oak	Ordinance tree	Fence
1348A	2022 Parsa	4" Holly	Ordinance tree	Fence
1349	2018 Parsa	8" American Elm	Not ordinance tree	
1350	2018 Parsa	15" Live Oak	Ordinance tree	Fence
1351	2006 Parsa	10" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1352	2006 Parsa	11" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1353	2006 Parsa	10" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1354	2131 Welch	30" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1355	2131 Welch	12" Raintree	Not ordinance tree	

REV.	DATE	DESCRIPTION	BY

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APPROVED Craig N. Koehl 03-09-2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TREE PROTECTION PLAN

SHEET 16 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 258 OF 391	

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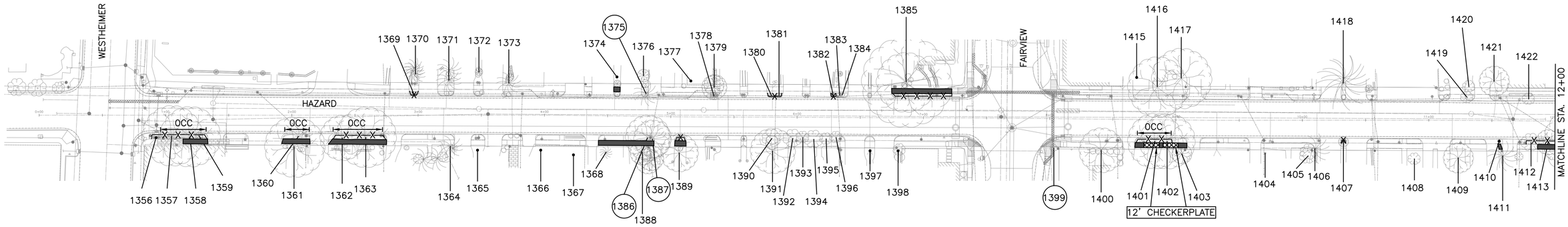

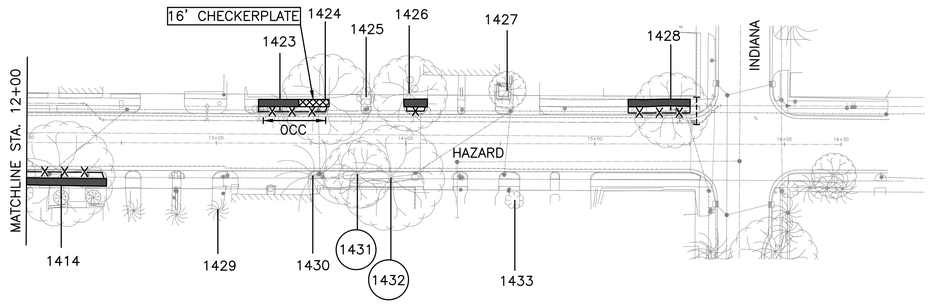

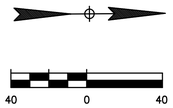

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- —X—X— TREE PROTECTION FENCE
- ------ ROOT PRUNING TRENCH
- ⊙ REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- OCC ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

NOTE:

1. THIS TREE PROTECTION PLAN WAS DEVELOPED WITH INFORMATION PROVIDED BY DESIGN ENGINEER IN DRAWINGS DATED DECEMBER 2025. THE PLAN CONSIDERS ALL FITTINGS, VERTICAL OFFSETS AND AREAS OF NECESSARY EXCAVATION. CHANGES MADE TO DESIGN MAY COMPROMISE THE TREE PROTECTION PLAN. REFER SPECIFICATIONS 01562 AND 02915. CONDITION OF EACH TREE IS BASED ON VISUAL EVALUATION AT TIME OF DESIGN. CONDITION AND STRUCTURAL INTEGRITY OF EACH TREE IS NOT GUARANTEED BY DESIGNER AT ANY POINT IN THE FUTURE, AS ENVIRONMENTAL AND MAINTENANCE INFLUENCES ON EACH TREE CAN NOT BE DETERMINED BY DESIGNER.
2. IN AREAS WHERE INDIVIDUAL TREES HAVE NOT BEEN TIED IN BY SURVEY APPROXIMATE LOCATION IS INDICATED ON TPP. ACCURACY OF REPRESENTED LOCATION CAN'T, AND IS NOT GUARANTEED BY DESIGNER.
3. THE CONTRACTOR'S ARBORTIST WILL MARK LOCATIONS OF THE NEW TREES AND OBTAIN APPROVAL BY THE CITY ENGINEER AND CITY FORESTER BEFORE PURCHASING AND PLANTING TREES.

Tree No.	Location	Description	Comments	Treatment
Trees on Hazard				
1356	1038 Westheimer	2" Live Oak	Ordinance tree	Fence
1357	1038 Westheimer	20" Live Oak	Ordinance tree	Zero Curb Cutback, Fence, Clearance prune
1358	1038 Westheimer	23" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1359	1038 Westheimer	2" Ligustrum	Not ordinance tree	
1360	2521 Hazard	12" Baldcypress	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1361	2521 Hazard	15" Tallow	Tree recently removed	
1362	2515 Hazard	12" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1363	2515 Hazard	23" Live oak	Ordinance tree	Hand dig stack, Bore lead from curb to stack, Zero Curb Cutback, Fence, Demo-form-pour walk without damage to roots 1" or larger, Clearance prune
1364	2505 Hazard	4' Yucca	Private tree	
1365	2505 Hazard	5" Little Gem Magnolia	Private tree	Clearance prune
1366	2501 Hazard	32" Arizona Ash	Trunk cavties, Poor, Private tree	
1367	2501 Hazard	20" Crepe Myrtle	Private tree	
1368	2427 Hazard	13" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1369	2510 Hazard	4" Live Oak	Ordinance tree	Fence, Bore waterline
1370	2510 Hazard	2" Juniper	Private tree	
1371	2510 Hazard	8' Palm	Private tree	
1372	2506 Hazard	2" Savannah Holly	Private tree	
1373	2502 Hazard	8' Palm	Private tree	
1374	2418 Hazard	13" Live Oak	Private tree	Clearance prune, Demo-form-pour walk without damage to roots 1" or larger
1375	2418 Hazard	5' Palm	Not ordinance tree, Remove for walk	Remove tree, No replacement required
1376	2418 Hazard	5" Little Gem Magnolia	Private tree	
1377	2416 Hazard	20" Arizona Ash	Tree recently removed	
1378	2414 Hazard	3" Cherry Laurel	Tree recently removed	
1379	2414 Hazard	6" Loquat	Tree recently removed	
1380	2414 Hazard	2" Savannah Holly	Ordinance tree	Bore sanitary lead curb to stack, Fence, Bore waterline
1381	2414 Hazard	2" Savannah Holly	Ordinance tree	Bore sanitary lead curb to stack, Fence, Bore waterline
1382	2410 Hazard	2" Savannah Holly	Ordinance tree	Fence, Bore waterline
1383	2410 Hazard	4" Crepe Myrtle	Not ordinance tree	
1384	2410 Hazard	4" Crepe Myrtle	Not ordinance tree	
1385	2404 Hazard	30" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1386	2427 Hazard	12" Ligustrum	Not ordinance tree	
1387	2427 Hazard	15" Tallow	Not ordinance tree, Remove for walk	Remove tree, No replacement required
1388	2427 Hazard	8" Loquat	Private tree	
1389	2423 Hazard	12" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1390	2415 Hazard	16" Crepe Myrtle	Not ordinance tree	
1391	2415 Hazard	15" Crepe Myrtle	Private tree	
1392	2411 Hazard	14" Crepe Myrtle	Tree recently removed	
1393	2411 Hazard	10" Crepe Myrtle	Tree recently removed	
1394	2411 Hazard	14" Crepe Myrtle	Tree recently removed	
1395	2411 Hazard	12" Crepe Myrtle	Tree recently removed	
1396	2411 Hazard	10" Crepe Myrtle	Tree recently removed	
1397	2405 Hazard	2" Savannah Holly	Private tree	
1398	2403 Hazard	4" Crepe Myrtle	Private tree	
1399	1960 Fairview	14" Crepe Myrtle	Not ordinance tree, Remove for walk	Remove tree, No replacement required
1400	1960 Fairview	13" Pear	Tree recently removed	
1401	2313 Hazard	21" Live Oak	Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1402	2313 Hazard	23" Live oak	Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1403	2313 Hazard	6" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1404	2307 Hazard	2" Crepe Myrtle	Private tree	
1405	2307 Hazard	20" Crepe Myrtle	Private tree	
1406	2301 Hazard	6' Palm	Not ordinance tree	
1407	2301 Hazard	6" Live Oak	Ordinance tree	Fence
1408	2217 Hazard	13" Crepe Myrtle	Private tree	
1409	2213 Hazard	11" Live Oak	Private tree	Clearance prune
1410	2213 Hazard	4" Crepe Myrtle	Not ordinance tree	
1411	2209 Hazard	15" Sycamore	Tree recently removed	
1412	2209 Hazard	14" Crepe Myrtle	Not ordinance tree	
1413	2209 Hazard	10" Water Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1414	2209 Hazard	26" Live oak	80% dieback, Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1415	2316 Hazard	14" Yew	Private tree	Clearance prune
1416	2316 Hazard	18" Crepe Myrtle	Not ordinance tree	
1417	2316 Hazard	20" Yew	Private tree	Clearance prune
1418	2304 Hazard	30' Palm	Private tree	
1419	2216 Hazard	6" Crepe Myrtle	Not ordinance tree	
1420	2216 Hazard	12" Crepe Myrtle	Private tree	
1421	2214 Hazard	10" Pear	Tree recently removed	
1422	2206 Hazard	4" Crepe Myrtle	Not ordinance tree	
1423	2118 Hazard	7" Bald Cypress	Tree recently removed	
1424	2114 Hazard	22" Laurel Oak	Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1425	2114 Hazard	3" Crepe Myrtle	Not ordinance tree	
1426	2112 Hazard	14" Laurel Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1427	2110 Hazard	4" Little Gem Magnolia	Private tree	
1428	2102 Hazard	16" Live oak	Ordinance tree	Root prune for fire hydrant, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1429	2119 Hazard	8' Palm	Private tree	
1430	2117 Hazard	30' Palm	Tree recently removed	
1431	2115 Hazard	17" Live oak	Ordinance tree, Remove for ADA sloped walk	Remove tree, Provide 17" in replacement/mitigation
1432	2115 Hazard	27" Live oak	Arboriculturally Significant, Ordinance tree, Remove for ADA sloped walk	Remove tree, Provide 27" in replacement/mitigation
1433	2105 Hazard	10" Crepe Myrtle	Private tree	

REV.	DATE	DESCRIPTION	BY

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APPROVED Craig N. Koehl 03-09-2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 17 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 251 OF 391	

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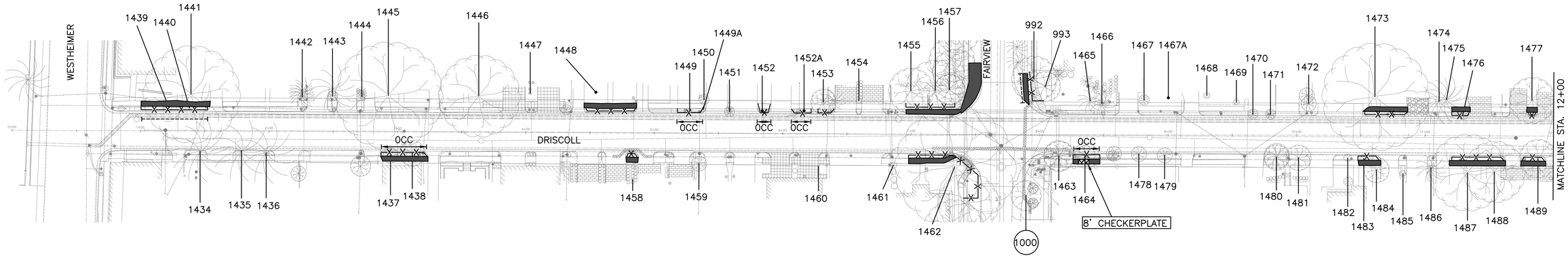

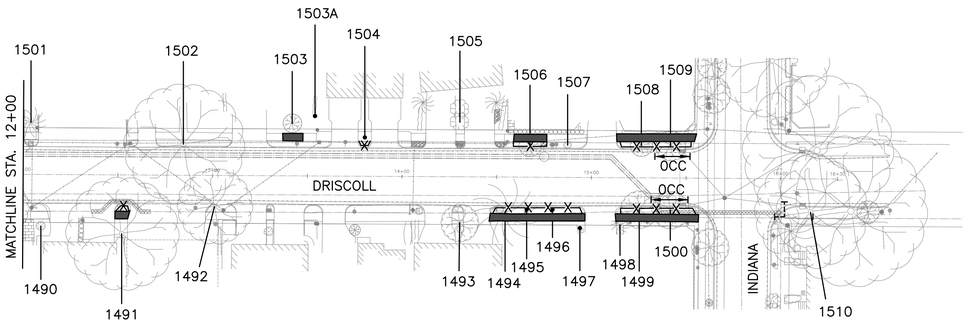

Tree No.	Location	Description	Comments	Treatment
Trees on Driscoll				
1434	2523 Driscoll	8' Palm	Not ordinance tree	Clearance prune
1435	2521 Driscoll	8' Palm	Not ordinance tree	Clearance prune
1436	2521 Driscoll	8' Palm	Not ordinance tree	Clearance prune
1437	2509 Driscoll	5" Live Oak	Ordinance tree	Bore waterline, Fence, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Clearance Prune
1438	2509 Driscoll	17" Live Oak	Ordinance tree	Bore waterline, Fence, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Clearance Prune
1439	2528 Driscoll	4" Crepe Myrtle	Tree recently removed	
1440	2528 Driscoll	4" Crepe Myrtle	Not ordinance tree	
1441	2528 Driscoll	27" Live oak	Arboriculturally Significant, Ordinance tree, Pruned by CPE	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1442	2520 Driscoll	4" Sweet Virburnum	Private tree	
1443	2520 Driscoll	6" Savannah Holly	Private tree	
1444	2518 Driscoll	12" Sugarberry	Private tree	
1445	2514 Driscoll	30" Water Oak	Tree recently removed	
1446	2510 Driscoll	24" Water Oak	Private tree, Topped by CPE	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1447	2506 Driscoll	5" Crepe Myrtle	Topped, private tree	
1448	Not Available	28" Sycamore	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1449	2422 Driscoll	3" Crepe Myrtle	Not ordinance tree	
1449A	2422 Driscoll	4" Holly	Ordinance tree	Zero curb cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1450	2422 Driscoll	4" Savannah Holly	80% dieback, Private tree	
1451	2416 Driscoll	8" Black Locust	Tree recently removed	
1452	2414 Driscoll	3" Live Oak	Ordinance tree	Zero curb cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1452A	2414 Driscoll	3" Live Oak	Ordinance tree	Zero curb cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence
1453	2410 Driscoll	12" Live oak	Tree recently removed	
1454	2406 Driscoll	10" Crepe Myrtle	Private tree	
1455	2402 Driscoll	18" Sugarberry	Tree recently removed	
1456	2402 Driscoll	24" Water Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1457	2402 Driscoll	15" Water Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1458	2421 Driscoll	24" Live oak	Tree recently removed	
1459	2417 Driscoll	6" Oleander	Tree recently removed	
1460	2409 Driscoll	3" Crepe Myrtle	Poor, Private tree	
1461	2401 Driscoll	1" Pittosporum	Private tree	
1462	2401 Driscoll	40" Tallow	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1463	1944 Fairview	6" Little Gem Magnolia	Tree recently removed	
1464	1944 Fairview	10" Live Oak	Ordinance tree	8' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1465	2320 Driscoll	2' Sago	Tree recently removed	
1466	2320 Driscoll	3' Sago	Tree recently removed	
1467	2314 Driscoll	5" Water Oak	Private tree	
1467A	2314 Driscoll	7" Fringe Tree	Private tree	Clearance prune
1468	2310 Driscoll	25" Crepe Myrtle	Poor, Private tree	
1469	2310 Driscoll	5" Crepe Myrtle	Topped, private tree	
1470	2306 Driscoll	3" Pear	Tree recently removed	
1471	2306 Driscoll	5" Pear	Tree recently removed	
1472	2300 Driscoll	5" Live Oak	Tree recently removed	
1473	2218 Driscoll	26" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1474	2214 Driscoll	15 Palm	Private tree	
1475	2214 Driscoll	10' Palm	Private tree	
1476	2214 Driscoll	14" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1477	2208 Driscoll	19" Live oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1478	1944 Fairview	8" Little Gem Magnolia	Tree recently removed	
1479	1944 Fairview	6" Little Gem Magnolia	Tree recently removed	
1480	2309 Driscoll	11" Redbud	Tree recently removed	
1481	2309 Driscoll	12" Mexican Plum	Tree recently removed	
1482	2307 Driscoll	18" Crepe Myrtle	Not ordinance tree	Clearance prune
1483	2307 Driscoll	14" Crepe Myrtle	Not ordinance tree	Clearance prune
1484	2221 Driscoll	10" Trident Maple	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1485	2221 Driscoll	5" Crepe Myrtle	Private tree	
1486	2219 Driscoll	2' Sago	Private tree	
1487	2215 Driscoll	5" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1488	2215 Driscoll	22" Live Oak	Tree recently removed	
1489	2209 Driscoll	15" Mexican Sycamore	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1490	2205 Driscoll	18" Crepe Myrtle	Private tree	
1491	2203 Driscoll	24" Sugarberry	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1492	2201 Driscoll	16" Live oak	Tree recently removed	
1493	2111 Driscoll	5" Parkinsonia	Private tree	
1494	2109 Driscoll	16" Pine	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline
1495	2107 Driscoll	10" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1496	2107 Driscoll	14" Nuttal oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1497	2107 Driscoll	6" Italian Cypress	Tree recently removed	
1498	1969 Indiana	6" Italian Cypress	Tree recently removed	
1499	1969 Indiana	13" Nuttal oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1500	1969 Indiana	12" Nuttal oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Bore waterline, Clearance prune
1501	2208 Driscoll	5" Italian Cypress	Tree recently removed	
1502	2202 Driscoll	28" Camphor	Tree recently removed	
1503	2118 Driscoll	10" Red Maple	Private tree	Demo-form-pour walk without damage to roots 1" or larger
1503A	2118 Driscoll	4" Fringe Tree	Private tree	Clearance prune
1504	2114 Driscoll	4" Savannah Holly	Ordinance tree	Fence
1505	2110 Driscoll	8" Wax Myrtle	Tree recently removed	
1506	2106 Driscoll	12" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1507	2106 Driscoll	5" Bottlebrush	Not ordinance tree	Clearance prune
1508	1971 Indiana	5" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1509	1971 Indiana	12" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1510	1964 Indiana	25" Live Oak	Ordinance tree	Root prune for ts&v

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- —X—X— TREE PROTECTION FENCE
- ROOT PRUNING TRENCH
- REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- —OCC— ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

40 0 40

SCALE: 1"=40'

NOTE:

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REV.	DATE	DESCRIPTION	BY

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 18 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 260 OF 391	

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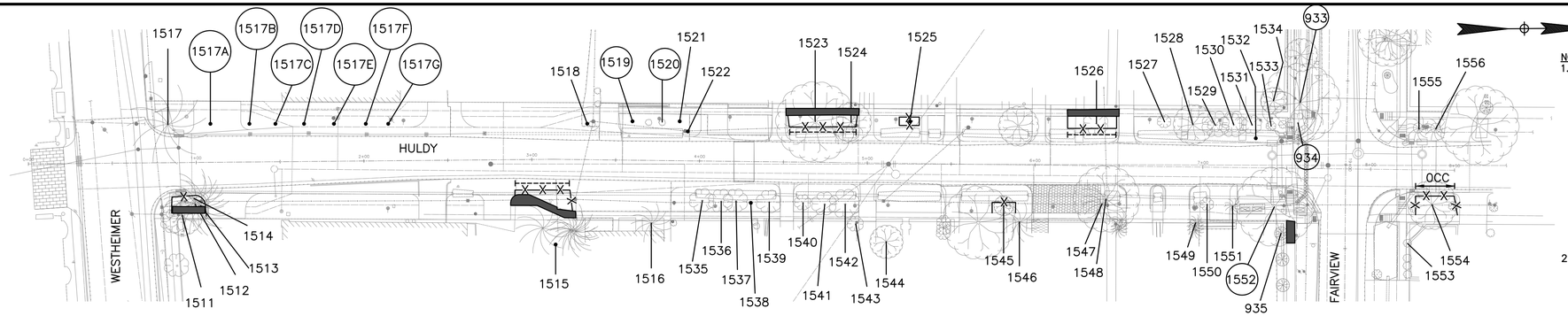

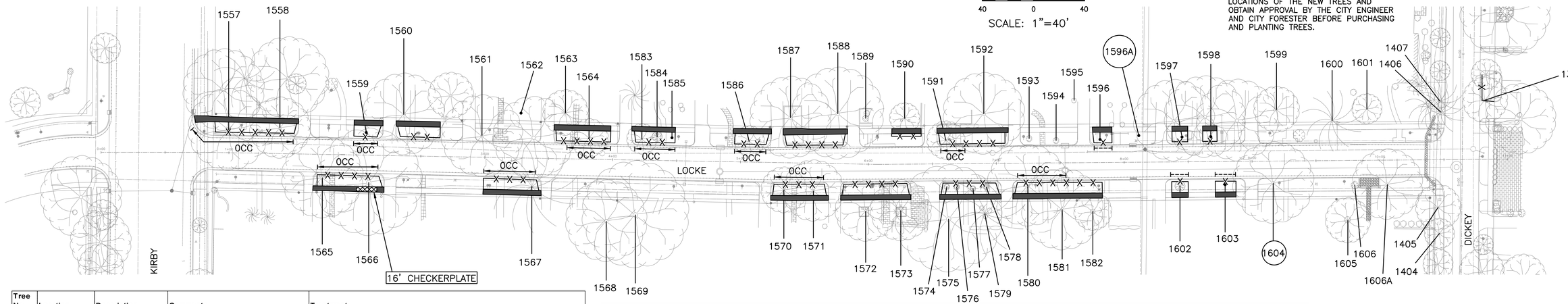

SCALE: 1"=40'

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TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- X-X — TREE PROTECTION FENCE
- ------ — ROOT PRUNING TRENCH
- ⊙ — REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
- CHECKERPLATE SECTION

Tree No.	Location	Description	Comments	Treatment
Trees on Huldy				
1511	2330 Huldy	10" Shumard Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1512	2330 Huldy	10' Palm	Not ordinance tree	
1513	2330 Huldy	10' Palm	Not ordinance tree	
1514	2330 Huldy	8' Palm	Not ordinance tree	
1515	2505 Huldy	36" Live Oak	Arboriculturally significant, Private tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1516	2505 Huldy	5' Sago	Tree recently removed	
1517	2036 Huldy	6' Palm	Not ordinance tree	
1517A	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1517B	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1517C	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1517D	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1517E	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1517F	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1517G	2036 Huldy	2" Live Oak	Remove for parking, Ordinance tree	Remove tree, Provide 2" in replacement/mitigation
1518	2502 Huldy	15" Oleander	Tree recently removed	
1519	2502 Huldy	4' Sago	Remove for parking, Ordinance tree	Remove tree, No replacement required
1520	2502 Huldy	3' Aloe	Remove for parking, Ordinance tree	Remove tree, No replacement required
1521	2502 Huldy	3' Sago	Tree recently removed	
1522	2502 Huldy	10" Oleander	Tree recently removed	
1523	2420 Huldy	27" Tallow	50% dieback, Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1524	2420 Huldy	10" Saucer Magnolia	Not ordinance tree	Clearance prune
1525	2414 Huldy	3" Magnolia	Ordinance tree	Fence
1526	2412 Huldy	20" Crepe Myrtle	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1527	2406 Huldy	6" Crepe Myrtle	Not ordinance tree	Clearance prune
1528	2406 Huldy	14" Magnolia	80% dieback, Ordinance tree	
1529	2406 Huldy	18" Crepe Myrtle	Not ordinance tree	Clearance prune
1530	2406 Huldy	17" Crepe Myrtle	Not ordinance tree	Clearance prune
1531	2406 Huldy	18" Crepe Myrtle	Not ordinance tree	Clearance prune
1532	2406 Huldy	10" Crepe Myrtle	Not ordinance tree	
1533	2406 Huldy	16" Crepe Myrtle	Not ordinance tree	
1534	2406 Huldy	8" Loquat	Private tree	
1535	2427 Huldy	14" Crepe Myrtle	Not ordinance tree	Clearance prune
1536	2427 Huldy	14" Crepe Myrtle	Not ordinance tree	Clearance prune
1537	2427 Huldy	8" Crepe Myrtle	Not ordinance tree	Clearance prune
1538	2427 Huldy	18" Crepe Myrtle	Not ordinance tree	Clearance prune
1539	2427 Huldy	16" Crepe Myrtle	Not ordinance tree	Clearance prune
1540	2423 Huldy	8" Crepe Myrtle	Tree recently removed	
1541	2423 Huldy	12" Crepe Myrtle	Tree recently removed	
1542	2423 Huldy	18" Crepe Myrtle	Tree recently removed	
1543	2423 Huldy	12" Crepe Myrtle	Tree recently removed	
1544	2419 Huldy	17" Red Maple	Private tree	
1545	2417 Huldy	6" Savannah Holly	Ordinance tree	Fence
1546	2417 Huldy	15' Palm	Tree recently removed	
1547	2409 Huldy	4' Palm	Not ordinance tree	
1548	2409 Huldy	18" Arizona Ash	Not ordinance tree	
1549	2405 Huldy	8" Japanese Blueberry	Private tree	
1550	2033 Huldy	9" Crepe Myrtle	Not ordinance tree	
1551	2033 Huldy	6" Juniper	Not ordinance tree	Clearance prune
1552	2033 Huldy	23" Arizona Ash	80% dieback, Ordinance tree	Remove tree, No replacement required
1553	2323 Huldy	4" Crepe Myrtle	Tree recently removed	
1554	2323 Huldy	19" Water Oak	Ordinance tree	Zero Curb cutback, Root prune for street, Fence, Clearance prune
1555	2318 Huldy	12' Palm	Not ordinance tree	
1556	2318 Huldy	12' Palm	Not ordinance tree	

Tree No.	Location	Description	Comments	Treatment
Trees on Locke				
1557	2532 Locke	28" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1558	2532 Locke	25" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1559	2514 Locke	11" Water oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1560	2510 Locke	30" Live Oak	30% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1561	2506 Locke	34" Willow Oak	Tree recently removed	
1562	2506 Locke	11" Live Oak	Private tree	
1563	2502 Locke	20" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1564	2502 Locke	18" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1565	2515 Locke	36" Live Oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1566	2515 Locke	32" Live oak	50% dieback, Ordinance tree	16' checkerplate, Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1567	2507 Locke	27" Pine	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1568	2503 Locke	35" Willow Oak	Tree recently removed	
1569	2427 Locke	36" Willow Oak	Tree recently removed	
1570	2419 Locke	14" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1571	2419 Locke	17" Live oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1572	2415 Locke	24" Water Oak	90% dieback, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1573	2415 Locke	20" Water Oak	70% dieback, Topped, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1574	2409 Locke	4" Crepe Myrtle	Not ordinance tree	
1575	2409 Locke	4" Crepe Myrtle	Not ordinance tree	
1576	2409 Locke	34" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1577	2409 Locke	4" Crepe Myrtle	Not ordinance tree	
1578	2409 Locke	4" Crepe Myrtle	Not ordinance tree	
1579	2409 Locke	26" Pine	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1580	2405 Locke	28" Live oak	Arboriculturally Significant, Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1581	2405 Locke	28" Water	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1582	2401 Locke	10" Magnolia	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1583	2428 Locke	12" Live Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1584	2428 Locke	4" Savannah Holly	Tree recently removed	
1585	2428 Locke	2" Savannah Holly	Tree recently removed	
1586	2424 Locke	16" Water Oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1587	2420 Locke	30" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1588	2420 Locke	30" Live Oak	Arboriculturally significant, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1589	2416 Locke	11" Crepe Myrtle	Topped, private tree	
1590	2416 Locke	17" Live Oak	Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1591	2410 Locke	12" Water oak	Ordinance tree	Zero Curb Cutback, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1592	2410 Locke	30" Water Oak	Trunk burls, Private tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1593	2406 Locke	5" Crepe Myrtle	Topped, Not ordinance tree	
1594	2406 Locke	5" Crepe Myrtle	Topped, Not ordinance tree	
1595	2406 Locke	12" Nuttal oak	Private tree	
1596	2402 Locke	7" Live Oak	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1596A	2310 Locke	6" Polymorpha Oak	Remove for storm plug, Ordinance tree	Remove tree, Provide 6" in replacement/mitigation
1597	2310 Locke	9" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1598	2310 Locke	11" Live Oak	Ordinance tree	Demo-form-pour walk without damage to roots 1" or larger, Fence
1599	2308 Locke	17" Live Oak	Private tree	
1600	2308 Locke	20" Pine	Tree recently removed	
1601	2302 Locke	7" Pear	Private tree	
1602	2311 Locke	9" Water Oak	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1603	2311 Locke	10" Water Oak	Ordinance tree	Root prune for street, Demo-form-pour walk without damage to roots 1" or larger, Fence, Clearance prune
1604	2307 Locke	22" Tallow	Decay, Structurally compromised, Hazardous	Remove tree, No replacement required
1605	2301 Locke	14" Pear	Tree recently removed	
1606	2301 Locke	5" Crepe Myrtle	Not ordinance tree	
1606A	2301 Locke	3" Crepe Myrtle	Not ordinance tree	

REV.	DATE	DESCRIPTION	BY

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 19 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 253 OF 391	

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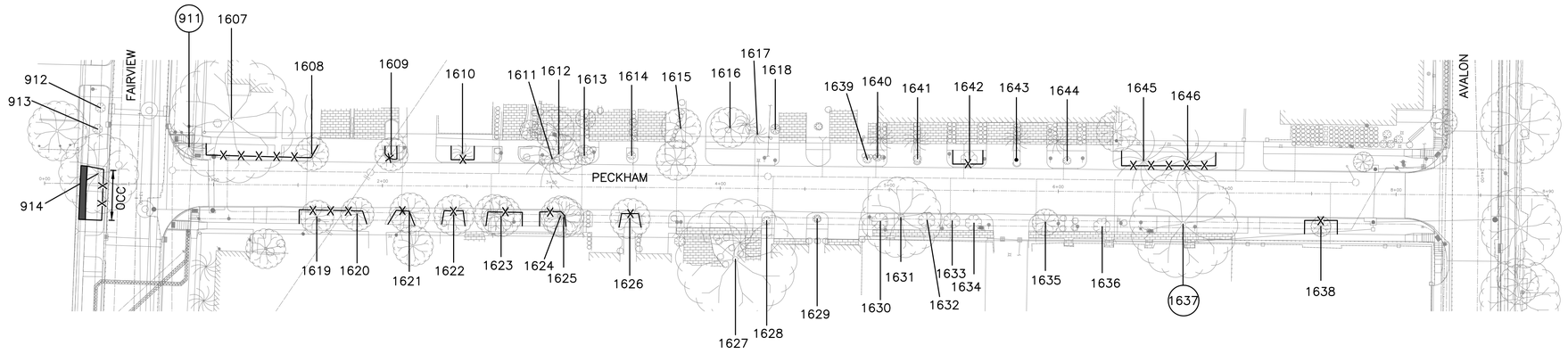

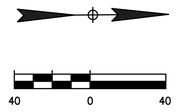

Tree No.	Location	Description	Comments	Treatment
Trees on Peckham				
1607	2324 Peckham	33" Live Oak	Arboriculturally significant, Private tree	Clearance prune, Fence
1608	2322 Peckham	9" Sweetgum	Ordinance tree	Fence, Bore lead from curb to stack
1609	2320 Peckham	13" Live Oak	Ordinance tree	Clearance prune, Fence
1610	2318 Peckham	12" Baldcypress	Ordinance tree	Clearance prune, Fence
1611	2314 Peckham	4' Sago	Not ordinance tree	
1612	2314 Peckham	5" Mulberry	Not ordinance tree	Clearance prune
1613	2314 Peckham	8" River Birch	70% dieback, Not ordinance tree	
1614	2312 Peckham	9" Crepe Myrtle	Not ordinance tree	
1615	2310 Peckham	16" Water Oak	Private tree	
1616	2306 Peckham	13" Shumard Oak	Tree recently removed	
1617	2306 Peckham	14" Pine	Private tree	
1618	2306 Peckham	4" Savannah Holly	Private tree	
1619	2321 Peckham	2" Savannah Holly	Tree recently removed	
1620	2321 Peckham	7" Savannah Holly	Ordinance tree	Fence
1621	2319 Peckham	7" Savannah Holly	Ordinance tree	Fence
1622	2317 Peckham	13" Shumard Oak	Ordinance tree	Clearance prune, Fence
1623	2313 Peckham	5" Shumard Oak	Ordinance tree	Clearance prune, Fence
1624	2313 Peckham	5" Crepe Myrtle	Not ordinance tree	
1625	2313 Peckham	5" Shumard Oak	Ordinance tree	Clearance prune, Fence
1626	2309 Peckham	15" Live Oak	Ordinance tree	Clearance prune, Fence
1627	2305 Peckham	40" Live Oak	Arboriculturally significant, Private tree	Clearance prune
1628	2303 Peckham	5" Vitex	Not ordinance tree	
1629	2303 Peckham	15" Crepe Myrtle	Not ordinance tree	
1630	2129 Peckham	18" Crepe Myrtle	Not ordinance tree	Clearance prune
1631	2129 Peckham	24" Tallow	Tree recently removed	
1632	2127 Peckham	14" Crepe Myrtle	Not ordinance tree	Clearance prune
1633	2125 Peckham	17" Crepe Myrtle	Not ordinance tree	Clearance prune
1634	2125 Peckham	15" Crepe Myrtle	Not ordinance tree	Clearance prune
1635	2123 Peckham	2" Crepe Myrtle	Not ordinance tree	
1636	2121 Peckham	16" Crepe Myrtle	Not ordinance tree	Clearance prune
1637	2117 Peckham	34" Tallow	Decay, Structurally compromised, Hazardous	Remove tree, No replacement required
1638	2119 Peckham	12" Live Oak	Ordinance tree	Clearance prune, Fence
1639	2302 Peckham	10" Crepe Myrtle	Not ordinance tree	
1640	2302 Peckham	8" Crepe Myrtle	Not ordinance tree	
1641	2134 Peckham	8" Crepe Myrtle	Not ordinance tree	
1642	2132 Peckham	20" Crepe Myrtle	Topped, Ordinance tree	Fence, Bore lead from curb to stack
1643	2130 Peckham	6" Crepe Myrtle	Not ordinance tree	
1644	2126 Peckham	7" Crepe Myrtle	Not ordinance tree	
1645	2119 Peckham	15" Baldcypress	Ordinance tree	Fence
1646	2119 Peckham	23" Baldcypress	Ordinance tree	Fence

TREE PRESERVATION PLAN LEGEND

- 1 — TREE NUMBER/LOCATION
- (1) — TREE TO BE REMOVED
- -X-X- — TREE PROTECTION FENCE
- ------ — ROOT PRUNING TRENCH
- ⊙ — REPLACEMENT PLANTING SPECIES AND SIZE/TYPE
- 0CC — ZERO CUTBACK CURB
- SIDEWALK ON GRADE
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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 20 OF 22

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 254 OF 391

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Tree Removal List

Tree No.	Location	Description	Replacement requirement
107	2121 San Felipe	19" Live Oak	19
108	2121 San Felipe	12" Crepe Myrtle	0
109	2121 San Felipe	1' Sago	0
165	2318 Welch	28" Tallow	28
166	2320 Welch	14" Tallow	0
167	2320 Welch	3' Sago	0
168	2318 Welch	15" Ligustrum	0
174A	Not available	9" Crepe Myrtle	0
176A	2245 Welch	6" Crepe Myrtle	0
201	2134 Welch	10" Crepe Myrtle	0
203	2134 Welch	12" Crepe Myrtle	0
205	2134 Welch	12" Crepe Myrtle	0
250	2414 Mimosa	3' Sago	0
260	2020 Mimosa	5" Savannah Holly	0
286	2315 Mimosa	5" Japanese Blueberry	0
287	2313 Mimosa	5" Japanese Blueberry	0
289	2313 Mimosa	5" Japanese Blueberry	0
298	2229 Mimosa	8" Crepe Myrtle	0
299	2229 Mimosa	8" Crepe Myrtle	0
304	2228 Mimosa	8" Crepe Myrtle	0
305	2228 Mimosa	10" Crepe Myrtle	0
317	2202 Mimosa	3" Arizona Ash	0
318	2202 Mimosa	12" Water Oak	12
319	2215 Mimosa	8" Sugarberry	0
320	2215 Mimosa	16" Crepe Myrtle	0
322	2213 Mimosa	21" Sugarberry	0
323	2213 Mimosa	5" Crepe Myrtle	0
346	2105 Argonne	6" Live oak	6
375	2226 Spann	5" Crepe Myrtle	0
376	2226 Spann	4" Slender Silhouette Sweetgum	0
377	2226 Spann	4" Slender Silhouette Sweetgum	0
378	2226 Spann	4" Slender Silhouette Sweetgum	0
379	2228 Spann	14" Crepe Myrtle	0
380	2228 Spann	12" Crepe Myrtle	0
381	2228 Spann	10" Crepe Myrtle	0
382	2228 Spann	8" Crepe Myrtle	0
384	2009 Spann	2" Crepe Myrtle	0
385	2009 Spann	4" Crepe Myrtle	0
388	2009 Spann	7" Crepe Myrtle	0
390	2009 Spann	5" Crepe Myrtle	0
392	2009 Spann	5" Crepe Myrtle	0
394	2009 Spann	5" Crepe Myrtle	0
396	2009 Spann	5" Crepe Myrtle	0
545	2221 Avalon	7" Crepe Myrtle	0
546	2221 Avalon	16" Pear	0
550	2221 Avalon	10" Crepe Myrtle	0
551	2221 Avalon	14" Crepe Myrtle	0
554	2215 Avalon	15" Crepe Myrtle	0
564	2212 Avalon	6" Magnolia	6
566	2210 Avalon	14" Crepe Myrtle	0
567	2210 Avalon	5" Crepe Myrtle	0
569	2518 Avalon	5" Savannah Holly	5
571	2156 Avalon	7" Savannah Holly	7
573	2154 Avalon	7" Savannah Holly	7
577	2101 Avalon	10" Crepe Myrtle	0
578	2101 Avalon	6" Crepe Myrtle	0
579	2101 Avalon	10" Crepe Myrtle	0
580	2101 Avalon	10" Crepe Myrtle	0
581	2101 Avalon	3" Photinia	0
582	2101 Avalon	3" Bamboo	0
583	2100 Persa	(10)3" Bamboo	0
584	2100 Persa	5" Crepe Myrtle	0
589	2027 Persa	15" Live Oak	15
590	2027 Persa	16" Live Oak	16
693	2515 San Saba	24" Tallow	0
698	2511 San Saba	18" Lacebark Elm	0
699	2511 San Saba	8" Lacebark Elm	8
700	2511 San Saba	13" Lacebark Elm	13
703	2507 San Saba	3" Chinese Pistache	3
704	2507 San Saba	6" Chinese Pistache	6
707	2719 San Saba	10" Cedar Elm	10
708	2719 San Saba	8" Lacebark Elm	8
709	2503 San Saba	16" Raintree	0
710	2503 San Saba	7" Lacebark Elm	0
711	2503 San Saba	2" Cherry Laurel	0
712	2503 San Saba	10" American Elm	0
713	2503 San Saba	14" Lacebark Elm	0
714	2503 San Saba	10" Tallow	0
715	2427 San Saba	20" Tallow	0
716	2427 San Saba	15" Sugarberry	0
752	2208 Devonshire	17" Baldcypress	17
753	2208 Devonshire	8" Crepe Myrtle	0
755	2114 Devonshire	5" Savannah Holly	5
756	2114 Devonshire	5" Savannah Holly	5
804	2402 Westgate	5" Little Gem Magnolia	5
810	Esplanade	26" Crepe Myrtle	26
811	Esplanade	28" Crepe Myrtle	28
812	2219 Fairview	5" Crepe Myrtle	0
813	2219 Fairview	5" Crepe Myrtle	0
814	2219 Fairview	5" Crepe Myrtle	0
815	2219 Fairview	5" Crepe Myrtle	0
816	2219 Fairview	5" Crepe Myrtle	0
817	2219 Fairview	5" Crepe Myrtle	0
818	2219 Fairview	5" Crepe Myrtle	0
819	2219 Fairview	5" Crepe Myrtle	0
820	2219 Fairview	5" Crepe Myrtle	0
822	2219 Fairview	14" Crepe Myrtle	0
830	Esplanade	15" Crepe Myrtle	0
831	Esplanade	16" Crepe Myrtle	0
834	2227 Fairview	14" Live Oak	14
836A	Esplanade	10" Bur Oak	10

Tree Removal List

Tree No.	Location	Description	Replacement requirement
836B	Esplanade	12" Live oak	12
836C	Esplanade	10" Bur Oak	10
838	Esplanade	8" Bur Oak	8
839	Esplanade	24" Crepe Myrtle	24
840	Esplanade	14" Water Oak	14
841	Esplanade	7" Crepe Myrtle	0
842	Esplanade	8" Crepe Myrtle	0
843	Esplanade	8" Crepe Myrtle	0
846	2214 Fairview	30' Palm	0
847	2214 Fairview	5" Crepe Myrtle	0
848	2210 Fairview	20' Palm	0
851	2314 Kingston	10" Live Oak	10
852	2314 Kingston	11" Live Oak	11
854	2217 Fairview	13" Crepe Myrtle	0
855	2215 Fairview	11" Pear	0
871	Esplanade	6" Live Oak	6
873	2313 Kingston	4" Savannah Holly	4
874	2313 Kingston	4" Savannah Holly	4
875	2313 Kingston	3" Savannah Holly	3
876	2313 Kingston	8" Live Oak	8
877	2156 Fairview	12" Pear	0
878	2156 Fairview	12" Pear	0
892	2143 Fairview	5" Pear	0
893	2139 Fairview	14" Crepe Myrtle	0
911	2324 Peckham	3' Sago	0
915	2327 Peckham	18" Mulberry	0
920	2318 Huldy	4' Palm	0
921	2318 Huldy	4' Palm	0
931	2402 Huldy	15" Oleander	0
933	2402 Huldy	18" Ligustrum	0
934	2402 Huldy	17" Crepe Myrtle	0
940	2323 Huldy	8" Crepe Myrtle	0
941	2323 Huldy	5" Crepe Myrtle	0
942	2024 Fairview	17" Crepe Myrtle	0
943	2020 Fairview	14" Crepe Myrtle	0
944	2016 Fairview	19" Crepe Myrtle	0
945	2014 Fairview	18" Crepe Myrtle	0
951	2008 Fairview	14" Crepe Myrtle	0
952	2006 Fairview	24" Crepe Myrtle	24
953	2004 Fairview	30' Palm	0
954	2004 Fairview	30' Palm	0
955	2002 Fairview	14" Crepe Myrtle	0
967	2323 McDuffie	15" Pear	0
970	2323 McDuffie	3" Crepe Myrtle	0
971	2323 McDuffie	3' Sago	0
974	1976 Fairview	11" Pear	0
985	2403 Hazard	3" Magnolia	3
987	1960 Fairview	9" Crepe Myrtle	0
988	2320 Driscoll	20' Palm	0
989	2320 Driscoll	20' Palm	0
990	2320 Driscoll	15' Palm	0
991	2320 Driscoll	15' Palm	0
996	2402 Driscoll	16" Sugarberry	0
1000	1944 Fairview	17" Live oak	17
1025	2207 Dunraven	10" Magnolia	10
1032	Esplanade	5" Live Oak	5
1151	2218 Westgate	5" Red Maple	5
1222	2433 Kingston	6" Crepe Myrtle	0
1375	2418 Hazard	5' Palm	0
1386	2427 Hazard	12" Ligustrum	0
1387	2427 Hazard	15" Tallow	0
1399	1960 Fairview	14" Crepe Myrtle	0
1431	2115 Hazard	17" Live oak	17
1432	2115 Hazard	27" Live oak	27
1517A	2036 Huldy	2" Live Oak	2
1517B	2036 Huldy	2" Live Oak	2
1517C	2036 Huldy	2" Live Oak	2
1517D	2036 Huldy	2" Live Oak	2
1517E	2036 Huldy	2" Live Oak	2
1517F	2036 Huldy	2" Live Oak	2
1517G	2036 Huldy	2" Live Oak	2
1518	2502 Huldy	15" Oleander	0
1519	2502 Huldy	4' Sago	0
1520	2502 Huldy	3' Aloe	0
1522	2502 Huldy	10" Oleander	0
1550	2033 Huldy	9" Crepe Myrtle	0
1552	2033 Huldy	20" Arizona Ash	0
1561	2506 Locke	34" Willow Oak	0
1562	2506 Locke	30" Willow Oak	0
1596A	2310 Locke	6" Polymorpha Oak	6
1604	2307 Locke	18" Tallow	0
1637	2117 Peckham	34" Tallow	0
		TOTAL REPLACEMENT INCHES REQUIRED	**521**

Tree Replacement List

Quantity	Caliper Size	Species	Container/Tree Spade size
		TOTAL REPLACEMENT INCHES INCLUDED IN PLAN	**0**

NOTES:

Tree replacement locations shown on plans are not final. Locations must be coordinated with adjacent property owner and City of Houston Forestry and Public Works prior to PURCHASING trees and excavation for planting. All trees may not be planted and locations and species may change relative to coordination with listed parties. Coordination shall be completed by construction contractor's Certified Arborist.

Trees are to be maintained and watered for 2 years following planting per standard spec 02915. Timing of planting may be delated in periods of drought with mandatory water restrictions in place-timing to be coordinated with City of Houston Forestry.

Tree replacement locations shall comply with Houston Public Works spec sections 02811, 02911, 02912, 02915, 02921 & 02922. In general trees along sides of street right of ways shall be no closer than 3' to back of curb or 20' from another tree. Trees in medians shall be no closer than 6' back of curb, 75' from an intersection, 50' to a median cut, or 20' from another tree. Contractor to coordinate locations with City Forestry and HPW prior to PURCHASING trees. All replacement trees called out on plans may not be planted on project relative to coordination with listed parties.

Cash Allowance Due Parks from HPW for Balance of Mitigation Not Planted on Project

	Required Mitigation total	Mitigation rate/inch	
0-5.99"	61	$ 297.98	$ 18,176.78
6-11.99"	149	496.64	$ 73,999.36
12" +	311	662.19	$ 205,941.09
		TOTAL REQUIRED MITIGATION FEE	**$ 298,117.23**

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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FB No. P-5723

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APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 21 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 255 OF 391	

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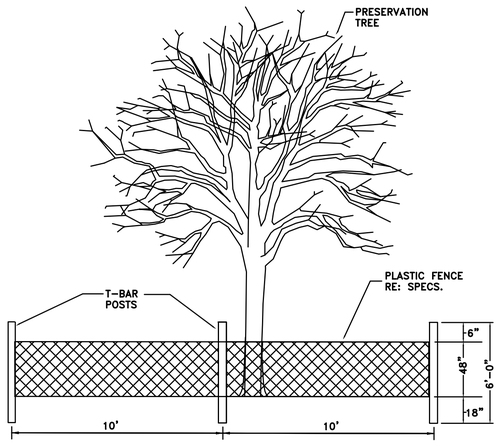
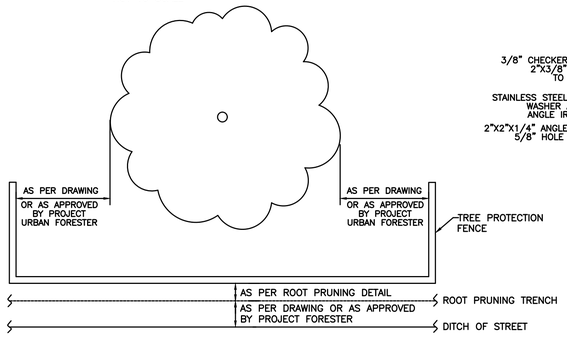
Arboriculturally Significant Tree List

Tree No.	Location	Description
41	2415 San Felipe	30" Live Oak
46	2314 San Felipe	40" Live Oak
79	2215 San Felipe	30" Live Oak
80	2211 San Felipe	30" Live Oak
87	1905 San Felipe	30" Live Oak
91	1905 San Felipe	28" Live Oak
104	2145 San Felipe	35" Live oak
105	2145 San Felipe	25" Water Oak
106	2145 San Felipe	30" Live Oak
110	2100 San Felipe	30" Live Oak
124	1921 San Felipe	30" Live Oak
125	1921 San Felipe	27" Live Oak
183	2217 Welch	24" Live Oak
190	2222 Welch	27" Live oak
191	2222 Welch	25" Live Oak
192	2218 Welch	33" Live Oak
193	2216 Welch	26" Live Oak
194	2212 Welch	27" Live oak
195	2208 Welch	24" Live Oak
196	2206 Welch	17" Live oak
197	2202 Welch	35" Live oak
199	2200 Welch	35" Live oak
219	2111 Welch	25" Water Oak
312	2212 Mimosa	26" Live Oak
315	2208 Mimosa	25" Live Oak
316	2208 Mimosa	36" Live Oak
406	1923 Spann	26" Live Oak
408	1923 Spann	38" Live Oak
411	2121 Kirby	23" Live Oak
412	2121 Kirby	24" Live Oak
413	2121 Kirby	23" Live Oak
417	2121 Kirby	25" Live Oak
419	2615 Avalon	26" Water Oak
420	2615 Avalon	27" Water Oak
422	2611 Avalon	24" Live Oak
423	2611 Avalon	37" Water Oak
429	2519 Avalon	26" Pine
431	2519 Avalon	26" Live Oak
435	2515 Avalon	26" Live Oak
438	2511 Avalon	34" Water Oak
456	2414 Avalon	25" Live Oak
502	2419 Avalon	28" Live Oak
515	2101 Dickey	26" Live Oak
585	2030 Persa	28" Water Oak
591	2111 Avalon	26" Live Oak
608	2604 Ella Lee	25" Live Oak
610	2602 Ella lee	25" Live Oak
611	2520 Ella Lee	33" Pine
612	2609 Ella Lee	36" Water Oak
616	2601 Ella Lee	30" Live Oak
619	2505 Ella Lee	30" Willow Oak
620	2501 Ella Lee	30" Live Oak
621	2501 Ella Lee	36" Live oak
625	2516 Ella Lee	25" Live Oak
626	2516 Ella Lee	32" Water Oak
634	2400 Ella Lee	28" Live Oak
635	2316 Ella Lee	32" Willow Oak
652	2301 Ella Lee	33" Live Oak
653	2301 Ella Lee	36" Live oak
654	2529 Reba	40" Water Oak
656	2525 Reba	25" Live oak
659	2517 Reba	30" Live Oak
661	2532 Reba	26" Water Oak
663	2524 Reba	32" Live oak
664	2524 Reba	34" Live Oak
670	2508 Reba	33" Willow Oak
673	2424 Reba	36" Live oak
674	2424 Reba	25" Live Oak
677	2511 Reba	28" Willow Oak
678	2507 Reba	35" Water Oak
679	2423 Reba	40" Live Oak
684	2407 Reba	28" Live Oak
685	2403 Reba	34" Live Oak
687	2408 Reba	27" Live Oak
688	2408 Reba	32" Live Oak
689	2408 Reba	25" Live Oak
691	2406 Reba	28" Live oak
735	2405 San Saba	25" Live Oak
742	2307 San Saba	25" Live Oak
745	2301 San Saba	25" Live Oak
773	2220 Salisbury	24" Live Oak
802	2301 Dickey	25" Live Oak
829	2220 Fairview	26" Water Oak
850	2208 Fairview	33" Live Oak
910	2324 Peckham	39" Live Oak
994	2402 Driscoll	33" Water Oak
1007	2206 Dunraven	24" Live Oak
1038	2411 Dickey Place	30" Live Oak
1073	2211 Dickey Place	30" Live Oak
1075	2402 Reba	27" Live Oak
1076	2402 Reba	36" Live Oak
1077	2402 Reba	26" Live Oak
1078	2301 Ella Lee	27" Live Oak
1079	2301 Ella Lee	24" Live oak
1081	2205 Dickey Place	36" Live Oak
1083	2201 Dickey Place	26" Pine
1119	2424 Westgate	40" Live Oak
1134	2402 Westgate	38" Water Oak
1137	2304 Westgate	38" Live Oak
1139	2208 Westgate	24" Baldcypress
1140	2220 Fairview	35" Water oak
1193	2417 Brun	25" Pine
1201	2405 Brun	36" Live Oak
1202	2401 Brun	25" Durand Oak
1248	2314 Kingston	40" Live Oak
1249	2310 Kingston	37" Live Oak
1250	2306 Kingston	24" Magnolia
1273	2326 Persa	24" Nuttal Oak
1294	2306 Persa	26" Live oak
1313	2115 Persa	28" Live Oak
1325	2106 Persa	27" Live oak
1339	2017 Parsa	30" Live Oak
1346	2026 Parsa	25" Live oak
1348	2022 Parsa	27" Live Oak
1354	2131 Welch	30" Live Oak
1385	2404 Hazard	30" Live Oak
1414	2209 Hazard	26" Live oak
1432	2115 Hazard	27" Live oak
1441	2528 Driscoll	27" Live oak
1446	2510 Driscoll	24" Water Oak
1456	2402 Driscoll	24" Water Oak
1473	2218 Driscoll	26" Live Oak
1510	1964 Indiana	25" Live Oak
1515	2305 Huldy	36" Live Oak
1557	2532 Locke	28" Live Oak
1558	2532 Locke	25" Live Oak
1560	2510 Locke	30" Live Oak
1565	2515 Locke	36" Live Oak
1566	2515 Locke	32" Live oak
1567	2507 Locke	27" Pine
1572	2415 Locke	24" Water Oak
1576	2409 Locke	28" Live Oak
1579	2409 Locke	26" Pine
1580	2405 Locke	24" Live oak
1581	2405 Locke	28" Water
1587	2420 Locke	30" Live Oak
1588	2420 Locke	30" Live Oak
1592	2410 Locke	30" Water Oak
1607	2324 Peckham	33" Live Oak
1627	2305 Peckham	40" Live Oak

Trees Identified by City of Houston Forestry/Parks & Recreation Department as Arboriculturally Significant are identified here and/or in treatment schedule included on TPP sheets. Arboriculturally Significant trees are to be pruned under direct supervision of City of Houston Forestry. Minimal pruning will be allowed for construction equipment access, and in some cases no pruning will be allowed. Contractor must review conditions around and/or under the canopy of Arboriculturally Significant trees and consider restrictions when preparing cost estimate and planning construction equipment that will be necessary to accomplish design installation with minimal to no tree pruning.



TREE PROTECTION FENCING DETAIL A
NOT TO SCALE



TREE PROTECTION FENCING DETAIL B
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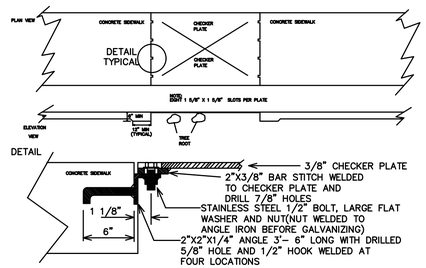
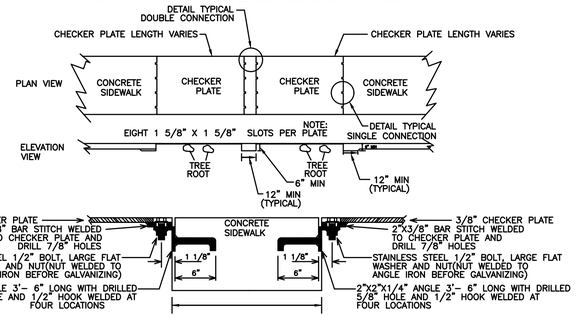
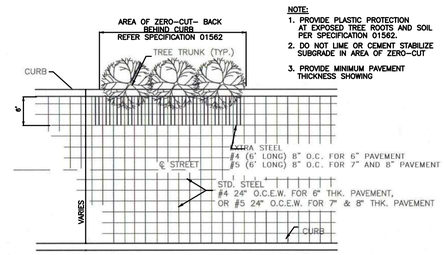


CHECKERPLATE DETAIL-SINGLE CONNECTION
NOT TO SCALE
NOTE:
ALL IRONWORK TO BE HOT DIPPED GALVINIZED EXCEPT AS NOTED.

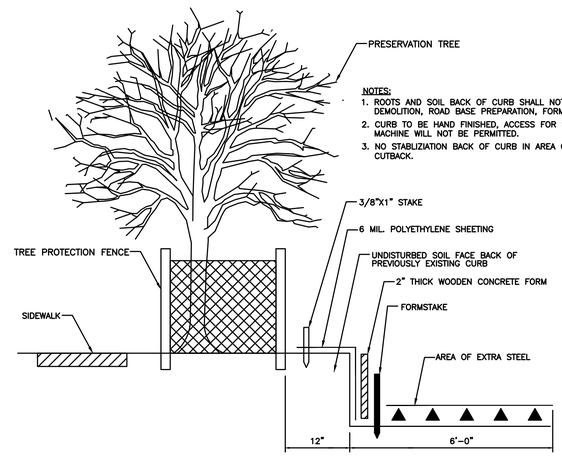


CHECKERPLATE DETAIL-DOUBLE CONNECTION
NOT TO SCALE
NOTE:
ALL IRONWORK TO BE HOT DIPPED GALVINIZED EXCEPT AS NOTED.



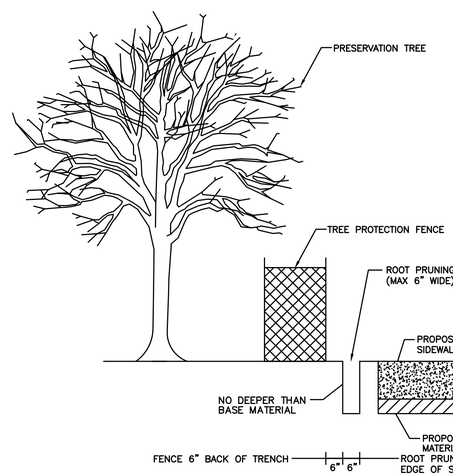
NOTE:
1. PROVIDE PLASTIC PROTECTION AT EXPOSED TREE ROOTS AND SOIL PER SPECIFICATION 01562.
2. DO NOT LIME OR CEMENT STABILIZE SUBGRADE IN AREA OF ZERO-CUT
3. PROVIDE MINIMUM PAVEMENT THICKNESS SHOWING

ZERO CURB CUTBACK DETAIL
EXTRA STEEL BEHIND CURB
NOT TO SCALE

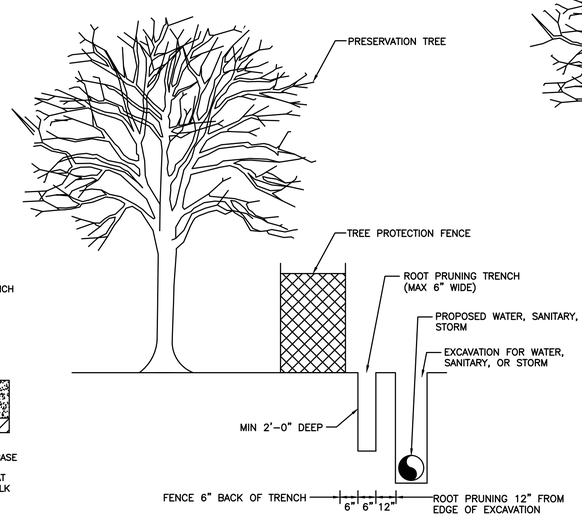


NOTES:
1. ROOTS AND SOIL BACK OF CURB SHALL NOT BE DISTURBED IN DEMOLITION, ROAD BASE PREPARATION, FORMING, OR FINISHING.
2. CURB TO BE HAND FINISHED, ACCESS FOR SLIP CURB MACHINE WILL NOT BE PERMITTED.
3. NO STABLIZIATION BACK OF CURB IN AREA OF ZERO CURB CUTBACK.

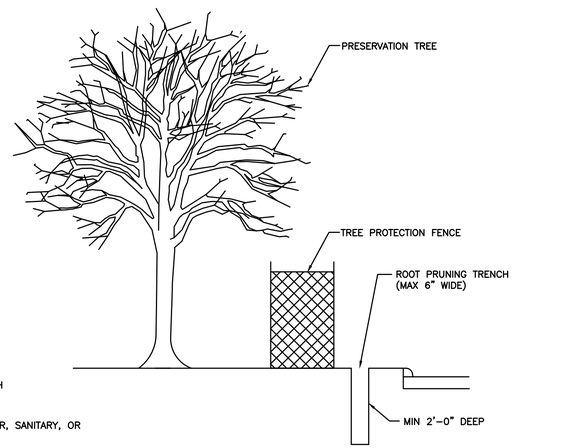
ZERO CURB CUTBACK DETAIL-PROFILE VIEW
NOT TO SCALE



ROOT PRUNE FOR SIDEWALK
NOT TO SCALE



ROOT PRUNE FOR WATER, SANITARY, OR STORM LINE
NOT TO SCALE



ROOT PRUNE FOR STREET-CURB & GUTTER - NO OCC
NOT TO SCALE

REV.	DATE	DESCRIPTION	BY

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

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281-391-0022 ckoehl@koehlurbanforestry.com
APPROVED Craig N. Koehl 03-09-2020

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TREE PROTECTION PLAN

SHEET 22 OF 22

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 256 OF 391	

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1. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) LATEST EDITION WITIH REVISIONS DURING THE ENTIRE CONSTRUCTION PERIOD.
2. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM THE LATEST VERSION OF THE TMUTCD.
3. NO LANES SHALL BE CLOSED DURING THE HOURS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM MONDAY THRU FRIDAY WITHOUT APPROVAL OF THE CITY TRAFFIC ENGINEER.
4. NO WORK SHALL BE PERFORMED IN RESIDENTIAL AREAS FROM 7:00 PM TO 7:00 AM.
5. CONTRACTOR SHALL MAINTAIN APPROVED NUMBER OF THROUGH LANES OF TRAFFIC IN EACH DIRECTION DURING CONSTRUCTION WORKING HOURS. TRAFFIC CONTROL PLANS SHALL INCLUDE ONE–WAY AND/OR DETOUR PLANS. CONTRACTOR SHALL MAINTAIN ADA COMPLIANT PEDESTRIAN ACCESS TO BUS STOPS AND ADEQUATE BUS ACCESS TO ALL THE BUS STOPS.
6. CONTRACTOR SHALL MAINTAIN TRAFFIC LANES AND DETOURS ACCORDING TO TRAFFIC CONTROL PLANS DURING WORKING HOURS.
7. CONTRACTOR SHALL COVER OPEN PAVEMENT EXCAVATIONS FOR MINOR UTILITY WORK WITH ANCHORED STEEL PLATES DURING NON–WORKING HOURS, AND OPEN LANES FOR NORMAL TRAFFIC FLOW WHEN FEASIBLE.
8. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF "TRAFFIC CONTROL PLANS" DURING THE CONSTRUCTION THAN WHAT IS OUTLINED IN THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT AN ALTERNATE SET OF TRAFFIC CONTROL PLANS TO THE CITY OF HOUSTON PROJECT MANAGER FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION. THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLARS AND SHALL BE SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. OFFICE OF CITY ENGINEER, MOBILITY PERMITS SECTION REPRESENTATIVE APPROVAL IS REQUIRED TO ACCEPT THE PROPOSED CHANGES.
9. CONTRACTOR SHALL SECURE LANE/SIDEWALK/BICYCLE FACILITY CLOSURE PERMITS FROM OFFICE OF CITY ENGINEER (MOBILITY PERMIT SECTION AT https://geohub.houstontx.gov) BEFORE IMPLEMENTING THE TRAFFIC CONTROL PLAN. THE APPLICATION MUST BE SUBMITTED AT LEAST TEN DAYS PRIOR TO THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN AND/OR BEGINNING CONSTRUCTION WORK. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS, CONSTRUCTION SEQUENCING, AND CONSTRUCTION SCHEDULE WITH THE APPLICATION.
10. CONTRACTOR SHALL HAVE APPROVED TRAFFIC CONTROL PLAN AND PERMIT AT THE JOB SITE FOR INSPECTION AT ALL TIMES.
11. DURING PAVEMENT SURFACE RESTORATION PROJECTS; THE CONTRACTOR SHALL NOT OPEN CLOSED LANES UNTIL THE PAVEMENT SURFACE HAS CURED ENOUGH TO ALLOW VEHICULAR TRAFFIC ACCORDING TO CITY OF HOUSTON STANDARD SPECIFICATIONS.
12. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND COORDINATING ALL CONSTRUCTION ACTIVITIES WITH STAKE HOLDERS IN THE VICINITY INCLUDING EMERGENCY RESPONSE AGENCIES SUCH AS HOUSTON POLICE DEPARTMENT, HOUSTON FIRE DEPARTMENT, AND METROPOLITAN TRANSIT AUTHORITY.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ISSUING ALL WORK DIRECTIVES TO ALL SUB–CONTRACTORS, UTILITY COMPANIES, AND ALL OTHER ENTITIES PERFORMING CONSTRUCTION WORK ASSOCIATED WITH THE PROJECT.
14. NOTHING IN THESE NOTES OR PLANS SHALL RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT; INCLUDING SAFETY OF ALL MODES OF TRANSPORTATION, PERSONS, AND PROPERTY, AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS.
15. THE OFFICE OF CITY ENGINEER (MOBILITY PERMITS GROUP) PER THE DIRECTION OF THE CITY TRAFFIC ENGINEER HAVE THE RIGHT TO DEMAND THE INSTALLATION OF ADDITIONAL TRAFFIC CONTROL DEVICES OR MODIFICATIONS OF THESE PLANS AND NOTES, AS DEEMED NECESSARY TO PROMOTE THE SAFE AND ORDERLY FLOW OF TRAFFIC, INCLUDING PEDESTRIANS AND BICYCLES, THROUGH THE CONSTRUCTION WORK ZONE. THE CONTRACTOR SHALL COMPLY WITH THESE ADDITIONAL REQUESTS OR MODIFICATIONS WITH DUE DILIGENCE.
16. ALL EXISTING TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE MAINTAINED IN VISIBLE LOCATIONS DURING CONSTRUCTION UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM CITY OF HOUSTON PROJECT MANAGER. THE CONTRACTOR SHALL RESTORE OR REPLACE (AT THE DISCRETION OF THE CITY TRAFFIC ENGINEER) ANY PAVEMENT MARKING OR SIGNING DAMAGE DURING CONSTRUCTION OPERATIONS, INCLUDING RAISED PAVEMENT MARKERS (RPMS).
17. WHEN ENTERING OR LEAVING ROADWAYS CARRYING PUBLIC TRAFFIC, THE CONTRACTOR'S EQUIPMENT, WHETHER EMPTY OR LOADED SHALL IN ALL CASES YIELD TO PUBLIC TRAFFIC WITH THE ASSISTANCE OF CONTRACTOR PROVIDED CERTIFIED FLAGGER/PEACE OFFICER.
18. ACCESS TO DRIVEWAYS ADJACENT TO THE CONSTRUCTION WORK ZONE SHALL BE MAINTAINED AT ALL TIMES AS MUCH AS POSSIBLE. ADDITIONAL CONES AND/OR DELINEATORS MAY BE REQUIRED TO DELINEATE THE DRIVEWAY ACCESS ROUTE THROUGH THE CONSTRUCTION WORK ZONE. A MINIMUM OF ONE TRAVEL LANE SHALL BE MAINTAINED ACROSS THE DRIVEWAYS, UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM CITY OF HOUSTON PROJECT MANAGER.
19. SPILLAGE RESULTING FROM HAULING OPERATIONS ALONG OR ACROSS ANY PUBLIC TRAVELED WAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
20. THE CONTRACTOR SHALL SUBMIT AN APPLICATION FOR TEMPORARY PARKING RESTRICTIONS IF THERE ARE PARKING METERS LOCATED AT THE PROPOSED LANE CLOSURES FROM PARKING MANAGEMENT DIVISION (832–393–8690) AT LEAST TEN BUSINESS DAYS BEFORE IMPLEMENTATION OF LANE CLOSURES. IN ADDITION, TEMPORARY NO PARKING SIGNS SHALL BE POSTED 24 HOURS PRIOR TO COMMENCEMENT OF WORK.
21. ADDITIONAL OFF DUTY OFFICERS/FLAGGERS MAY BE REQUESTED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED AT THE DISCRETION OF THE CITY PROJECT MANAGER EVEN IF THEY ARE NOT SPECIFICALLY IDENTIFIED ON THE PROJECT PLANS.
22. THE CONTRACTOR SHALL REPLACE WITHIN 72 HOURS, ALL TRAFFIC SIGNAL LOOP DETECTORS DAMAGED DURING CONSTRUCTION.
23. IN GENERAL, A SOLAR POWERED FLASHING ARROW BOARD SHALL BE REQUIRED ON ALL MAJOR THOROUGHFARE LANES CLOSURES. EXCEPTIONS TO FLASHING ARROW BOARDS AND/OR IMPLEMENTATION ON RESIDENTIAL LANE CLOSURES SHALL BE APPROVED BY CITY TRAFFIC ENGINEER.
24. APPROVED TRAFFIC CONTROL PLAN SHALL BE IN PLACE BEFORE STARTING ANY EXCAVATION.
25. WATER FILLED BARRIERS CAN BE USED AS INSTRUCTED BY THE ENGINEER AND APPROVED BY THE CITY FOR PROJECTS WHERE SPACE IS LIMITED AND HEAVY EQUIPMENT TO PLACE CONCRETE BARRIERS IS NOT FEASIBLE. WATER FILLED BARRIERS SHALL NOT BE USED ON ROADWAYS WITH A POSTED SPEED LIMIT MORE THAN 45 MPH.
26. WATER FILLED BARRIERS MUST BE INSTALLED AND MAINTAINED PER THE MANUFACTURER'S REQUIREMENTS AND ROUTINELY INSPECTED FOR DEFECTS.
27. IF WATER FILLED BARRIER IS PROVIDED, USE ENVIRONMENTALLY SAFE ANTI–FREEZING AGENT IN THE WATER WHEN IT IS APPLICABLE PER MANUFACTURER SPECIFICATIONS AND RECOVER AGENT WHEN THE BARRIER IS DRAINED.
28. DISPOSE OF WATER AND AGENT PROPERLY. DO NOT DRAIN WATER FILLED BARRIER INTO OR ACROSS AN EXISTING TRAVEL LANE.
29. PROVIDE BARRIER UNITS THAT ARE CAPABLE OF BEING LIFTED AND MOVED WHEN FILLED IF DRAINING IS NOT POSSIBLE.
30. PROVIDE WATER FILLED BARRIER THAT ACTS AS ITS OWN FREE STANDING, NON–REDIRECTIVE END TREATMENT.
31. WHEN WATER FILLED BARRIERS ARE USED TO CHANNELIZE PEDESTRIANS, THEY MUST HAVE A CONTINUOUS DETECTABLE BOTTOM FOR USERS OF LONG CANES AND THE TOP OF THE UNIT SHALL NOT BE LESS THAN 32 INCHES IN HEIGHT.
32. ANY CLOSURE OF A PEDESTRIAN OR BICYCLE FACILITY SHALL REQUIRE THE SHORTEST DETOUR THAT MAINTAINS THE SAFETY OF PEDESTRIAN AND/OR BICYCLISTS.

SPACING FOR CHANNELIZING DEVICES

A. PLASTIC DRUMS ON MERGING TAPER @ 30' C – C WITH CHEVRON SIGN @ 60' C – C AND WARNING LIGHTS FOR OVERNIGHT CLOSURE.

B. PLASTIC DRUMS ON DOWNSTREAM TAPER @ 30' C – C (RETURN TAPER AND BARRICADE ARE OPTIONAL AND DIVIDED ROADWAY SECTION)

C. PLASTIC DRUMS ON RADII @ 35' C –C.

D. PLASTIC DRUMS ON TANGENT @ 35' C – C WITH VERTICAL PANEL AT 70' C – C AND APPROVED WARNING LIGHT @ 70' C – C (FOR OVERNIGHT CLOSURE).

E. PLASTIC DRUMS IN FRONT OF CONSTRUCTION ZONE @ 20' C – C WITH VERTICAL PANEL AT 40' C – C AND APPROVED WARNING LIGHT @ 40' C – C (FOR OVERNIGHT CLOSURE).

F. CONCRETE TRAFFIC BARRIER (CTB) OR LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) WITH APPROVED REFLECTORS @ 10' C – C IF PAVEMENT DROP IS GREATER THAN 1 FOOT.

G. PLASTIC DRUMS W/GUARD RAIL MOUNTED.

H. SELF– RIGHTING VERTICAL PANEL SPACING.
– 4 LANES TO 2 LANES UNDIVIDED ROADWAY SECTION @ 20' C – C.
– 4 LANES DIVIDED ROADWAY TO ONE SIDE TWO WAY ROADWAY @ 20' C – C.
– LEFT LANE AND RIGHT LANE STORAGE BAYS @ 15' C – C.

I. SPACING SHOWN ON TRAFFIC CONTROL SHALL SUPERSEDE THE ABOVE SPACING.

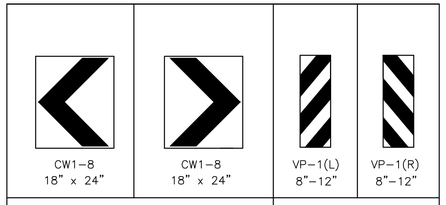
J. SPACING MAY BE ADJUSTED TO PROVIDE DRIVEWAYS, INTERSECTIONS AND /OR MEDIAN OPENINGS.

TABLE C3 – TYPICAL SIGN SPACING, TAPER LENGTHS, AND SUGGESTED SPACING OF CHANNELIZATION DEVICES

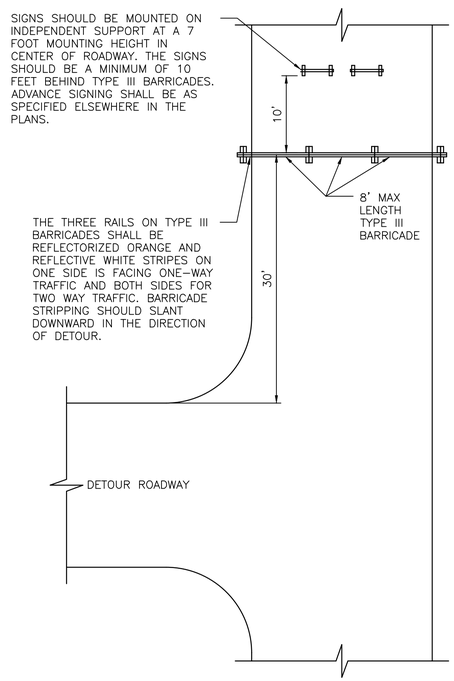
POSTED SPEED (MPH)	SIGN SPACING "X" (FEET)	MIN. DESIRABLE TAPER LENGTH "L"			SUGGESTED MAXIMUM SPACING OF DEVICE	
		10' OFFSET	11' OFFSET	12' OFFSET	ON A TAPER	ON A TANGENT
30	120'	150'	165'	180'	30'	60'–75'
35	160'	205'	225'	245'	35'	70'–90'
40	240'	265'	295'	320'	40'	80'–100'
45	320'	450'	495'	540'	45'	90'–110'
50	400'	500'	550'	600'	50'	100'–125'
55	500'	550'	605'	660'	55'	110'–140'

TABLE C4 – STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

POSTED SPEED (MPH)	DISTANCE "D" (FEET)
30	200
35	250
40	305
45	360
50	425
55	495



CHANNELIZATION AND BARRICADES



PLAN VIEW
TYPE III BARRICADE (POST AND SKID)
TYPICAL APPLICATION

LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

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Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

APPROVED BY: DocuSigned by: Suhail Kanwar 8EF8B0C64F5478...
CITY ENGINEER

APPROVED BY: DocuSigned by: LHUNG NGUYEN 95A28EFDA7584CD...
CITY TRAFFIC ENGINEER

APPROVED BY: DocuSigned by: Carl Haddock A92C4188728345...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: **NOV–27–2023** DWG NO: **01555–01**

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TEL: (713) 270–5700
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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS · YONGKI SHIM · 114557 · LICENSED PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

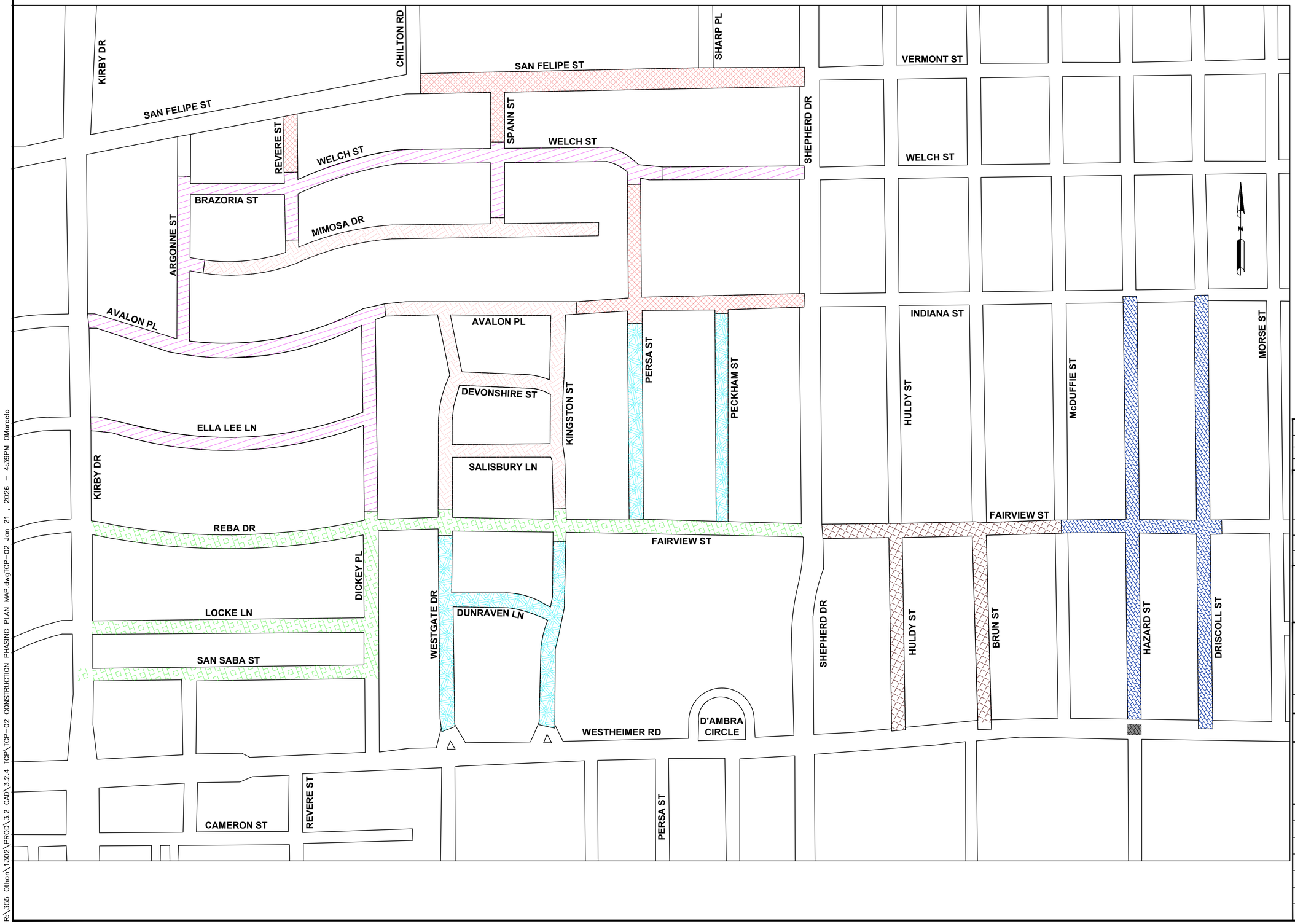
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP NOTES CHANNELIZING DEVICES AND BARRICADES

(TCP–01)

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **257** OF 391	

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THEIR APPLICABILITY, ADEQUACY AND SAFETY. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.



LEGEND

- PHASE IA,IB,IC, MAIN TRUNK
- PHASE II SECONDARY
- PHASE III LATERALS
- PHASE IV LATERALS
- PHASE V LATERALS
- PHASE VI LATERALS
- PHASE VII LATERALS

REV.	DATE	DESCRIPTION	BY

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LICENSED
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP-02 CONSTRUCTION PHASING PLAN

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 60'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 258 OF 391	

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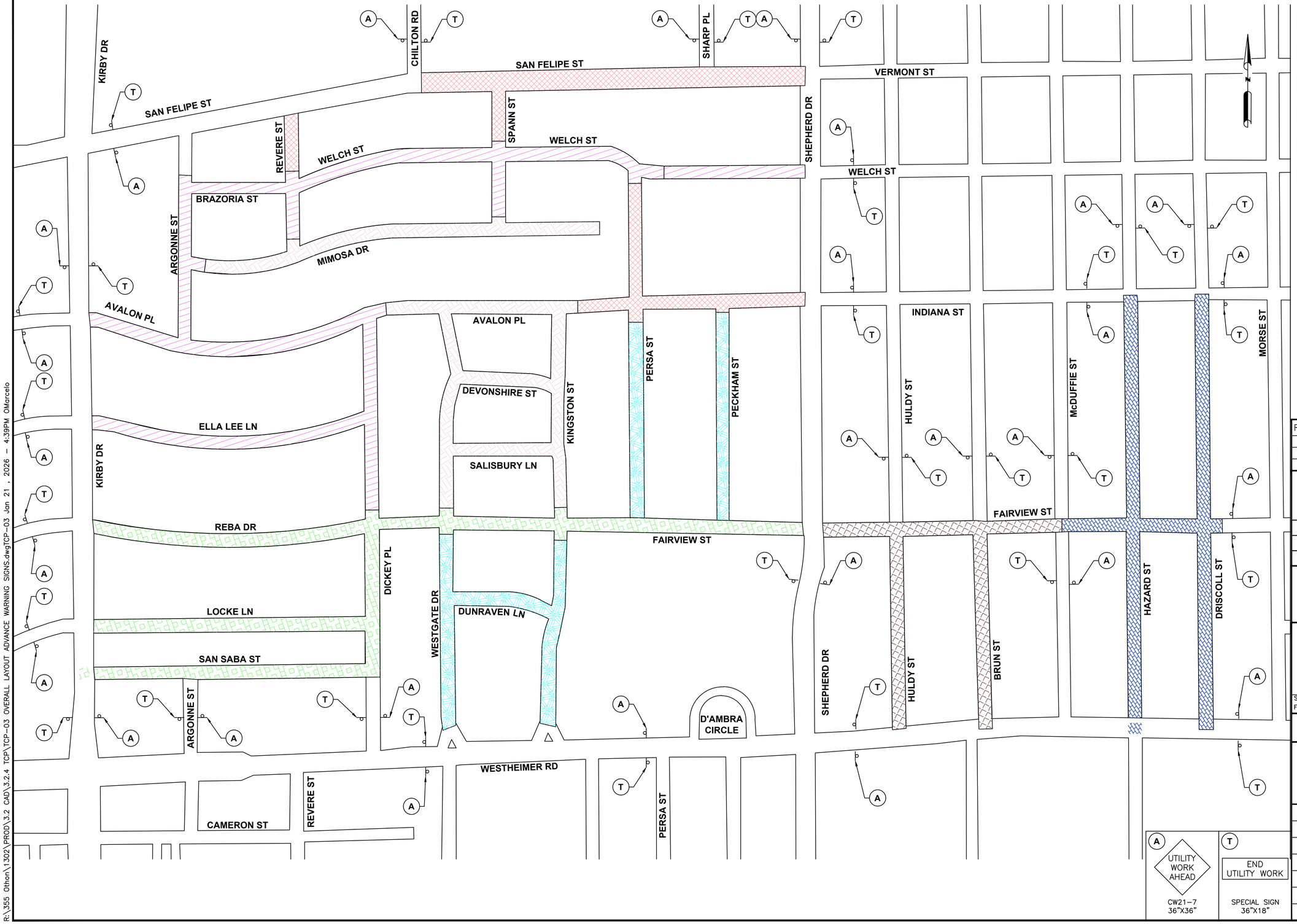

LEGEND

- PHASE IA,IB,IC, MAIN TRUNK
- PHASE II SECONDARY
- PHASE III LATERALS
- PHASE IV LATERALS
- PHASE V LATERALS
- PHASE VI LATERALS
- PHASE VII LATERALS
- PROPOSED SIGN

NOTES:

1. CONTRACTOR SHALL INSTALL ADVANCE WARNING SIGNS AT LEAST TWO WEEKS PRIOR TO COMMENCING ROADWAY CONSTRUCTION/IMPROVEMENT.
2. SEE SHEET NO. 257 FOR TRAFFIC CONTROL NOTES AND DISTANCES.
3. CONSECUTIVE INTERSECTION FULL CLOSURE SHALL NOT BE PERMITTED.
4. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS ONLY AHEAD OF STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION(TCP42-TCP44)/TCP 4-WAY NTERSECTION (TCP45-TCP48). CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.

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1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 TCP-03 OVERALL LAYOUT ADVANCE WARNING SIGNS

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 60'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 259 OF 391	

A — UTILITY WORK AHEAD — CW21-7 36"X36"

T — END UTILITY WORK — SPECIAL SIGN 36"X18"

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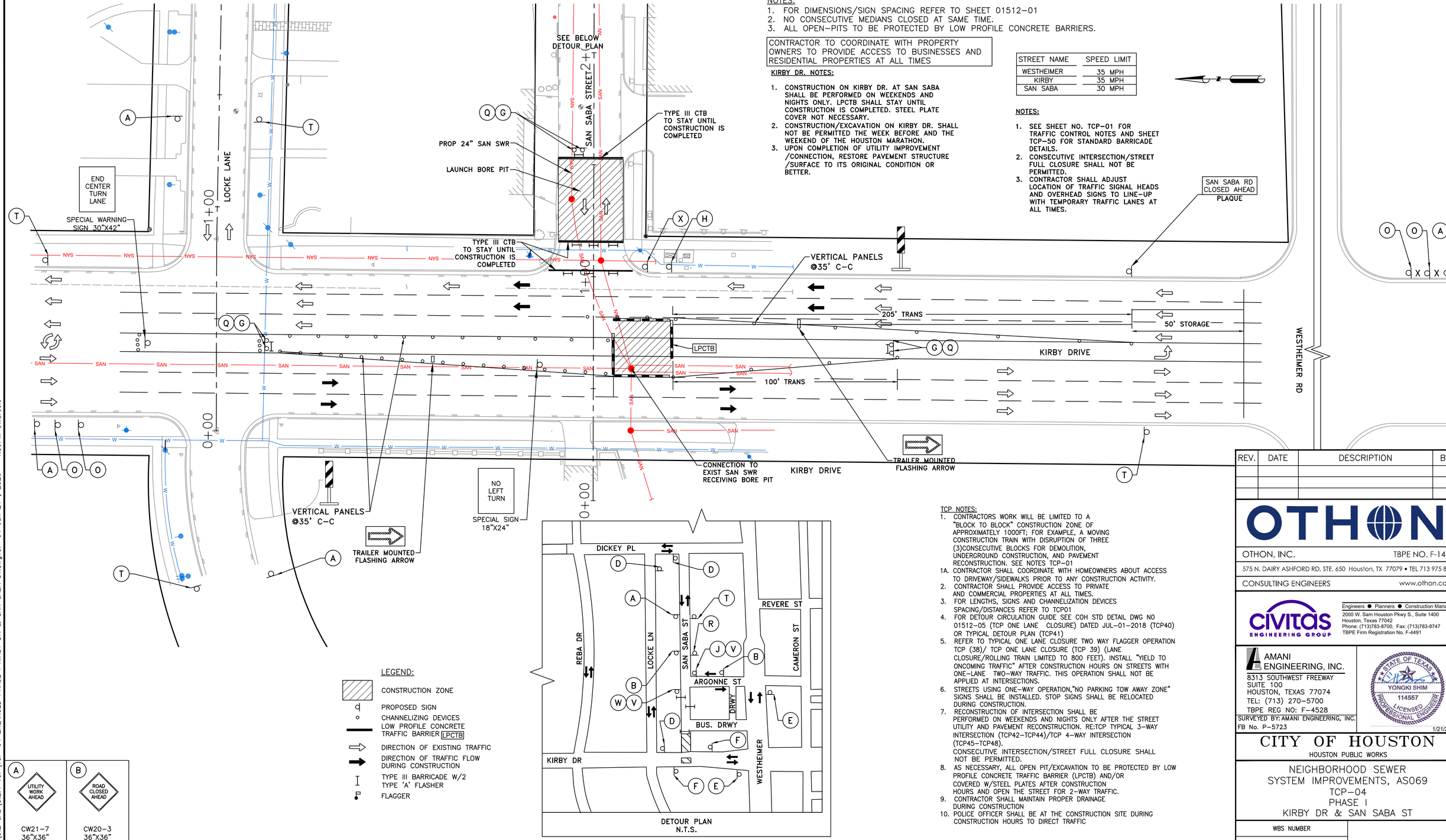

NOTES:
1. FOR DIMENSIONS/SIGN SPACING REFER TO SHEET 01512-01
2. NO CONSECUTIVE MEDIANS CLOSED AT SAME TIME.
3. ALL OPEN-PITS TO BE PROTECTED BY LOW PROFILE CONCRETE BARRIERS.

CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS TO PROVIDE ACCESS TO BUSINESSES AND RESIDENTIAL PROPERTIES AT ALL TIMES

KIRBY DR. NOTES:

1. CONSTRUCTION ON KIRBY DR. AT SAN SABA SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY. LPCTB SHALL STAY UNTIL CONSTRUCTION IS COMPLETED. STEEL PLATE COVER NOT NECESSARY.
2. CONSTRUCTION/EXCAVATION ON KIRBY DR. SHALL NOT BE PERMITTED THE WEEK BEFORE AND THE WEEKEND OF THE HOUSTON MARATHON.
3. UPON COMPLETION OF UTILITY IMPROVEMENT /CONNECTION, RESTORE PAVEMENT STRUCTURE /SURFACE TO ITS ORIGINAL CONDITION OR BETTER.

STREET NAME	SPEED LIMIT
WESTHEIMER	35 MPH
KIRBY	35 MPH
SAN SABA	30 MPH

NOTES:

1. SEE SHEET NO. TCP-01 FOR TRAFFIC CONTROL NOTES AND SHEET TCP-50 FOR STANDARD BARRICADE DETAILS.
2. CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
3. CONTRACTOR SHALL ADJUST LOCATION OF TRAFFIC SIGNAL HEADS AND OVERHEAD SIGNS TO LINE-UP WITH TEMPORARY TRAFFIC LANES AT ALL TIMES.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

A	B	C	D	E	F	G	H	J	K	L	O	Q	R	S	T	U	V	X	Y	Z
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	SAN SABA STREET DETOUR →	SAN SABA STREET DETOUR ←	SAN SABA STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	ONE WAY R6-1L 12"X36" OR ONE WAY R6-1R 12"X36"	LOCAL ACCESS ONLY	NO RIGHT TURN	NO LEFT TURN	TYPE III BARRICADE W/ FLASHING WARNING LIGHTS (OPTIONAL)
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R6-1L 12"X36" R6-1R 12"X36"	R11-3a 60"X30"	SPECIAL SIGN 18"X24"	SPECIAL SIGN 18"X24"	

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FB No. P-5723

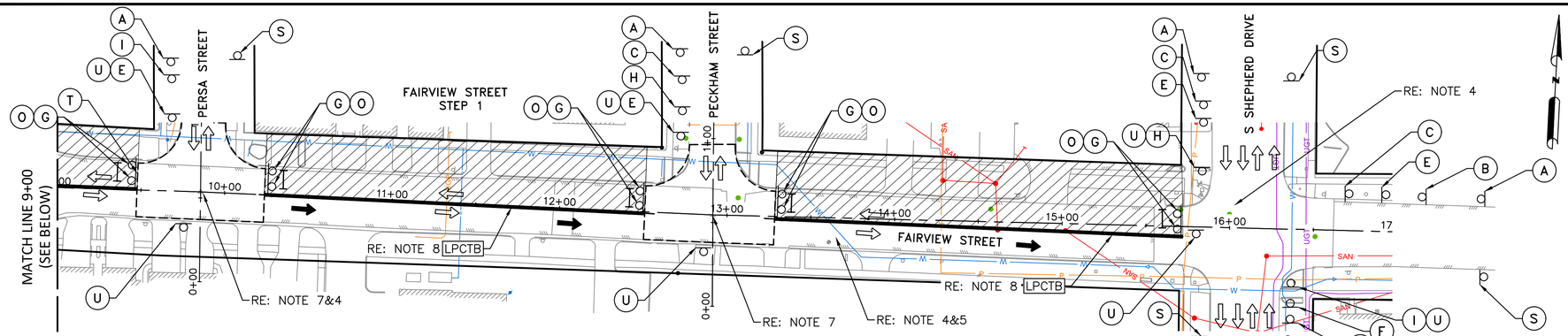
STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

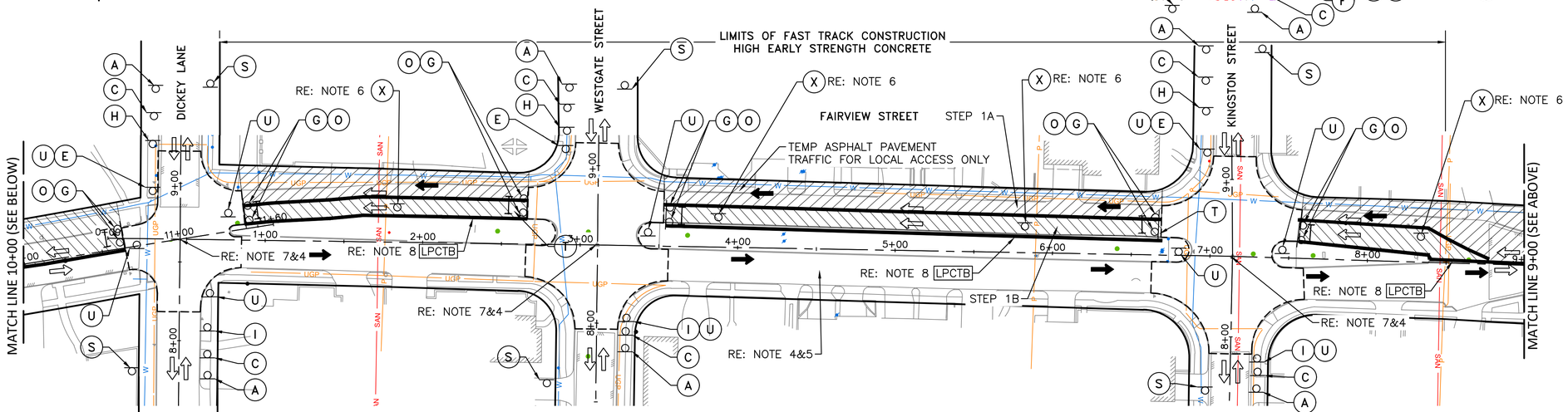
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

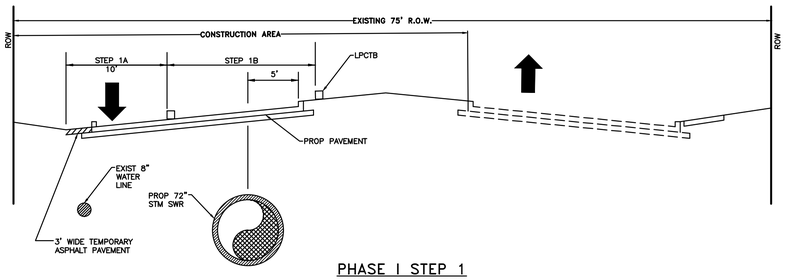
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-04
PHASE I
KIRBY DR & SAN SABA ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 260 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-04 ENLARGED PHASE I KIRBY DR & SAN SABA ST.dwgTCP-04 Jan 21 , 2026 - 4:39PM OMarcelo

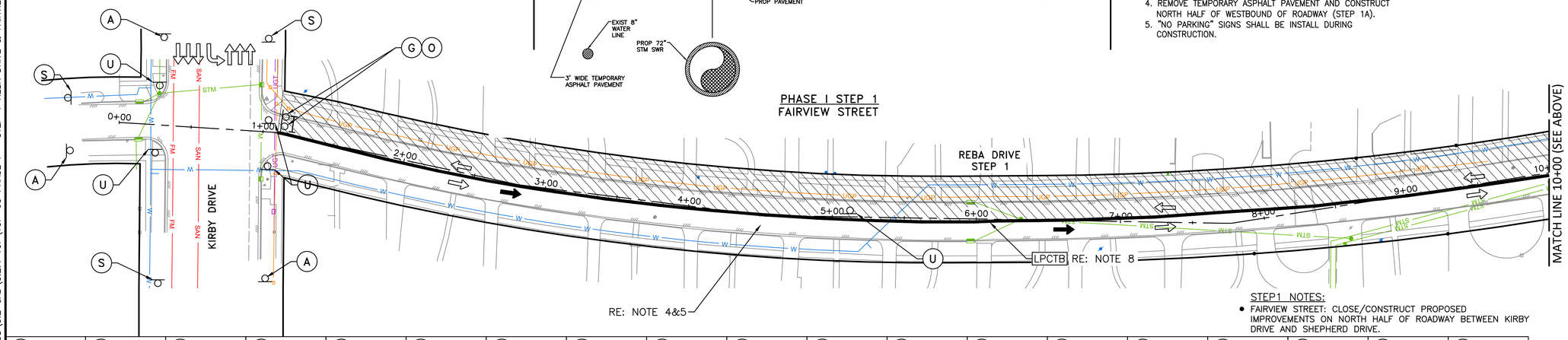






NOTE: LOCAL ACCESS ALTERNATIVE:

1. IMPROVEMENT CONSTRUCTION SHALL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE.
2. INSTALL 3-FT WIDE TEMPORARY ASPHALT PAVEMENT TO WIDEN EXIST PAVEMENT AND PROVIDE ACCESS TO PRIVATE PROPERTIES (STEP 1A).
3. CONSTRUCT PROPOSED STORM SEWER AND SOUTH HALF OF WESTBOUND OF ROADWAY WITHIN THE LIMITS OF HIGH EARLY STRENGTH CONCRETE (STEP 1B).
4. REMOVE TEMPORARY ASPHALT PAVEMENT AND CONSTRUCT NORTH HALF OF WESTBOUND OF ROADWAY (STEP 1A).
5. "NO PARKING" SIGNS SHALL BE INSTALL DURING CONSTRUCTION.



STEP1 NOTES:

- FAIRVIEW STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY BETWEEN KIRBY DRIVE AND SHEPHERD DRIVE.

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	X
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	FAIRVIEW STREET DETOUR →	FAIRVIEW STREET DETOUR ←	FAIRVIEW STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) OR ONE WAY R6-1(R)	NO PARKING ANY TIME TOW-AWAY ZONE
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	12"X36"	R7X1 R7-1 R7-201

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

OTHON

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
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114557
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PROFESSIONAL ENGINEER
1/21/2026

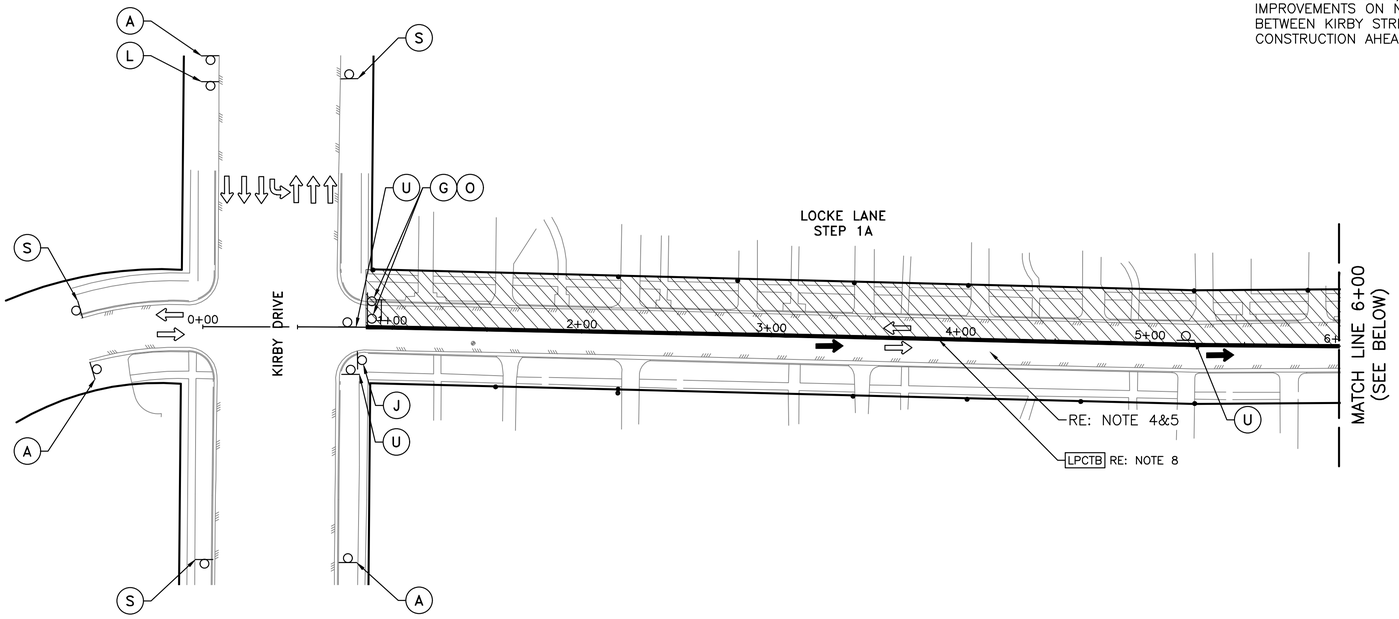
CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 TCP-05 PHASE I – STEP 1 REBA DRIVE & FAIRVIEW STREET

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 261 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-05 PHASE I – STEP 1 REBA DRIVE & FAIRVIEW STREET.dwg\TCP-05 Jan 21, 2026 – 4:39PM OMarcelo



STEP2 NOTES:

- LOCKE LANE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY BETWEEN KIRBY STREET AND DICKY STREET. CONSTRUCTION AHEAD OF SAN SABA.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
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6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
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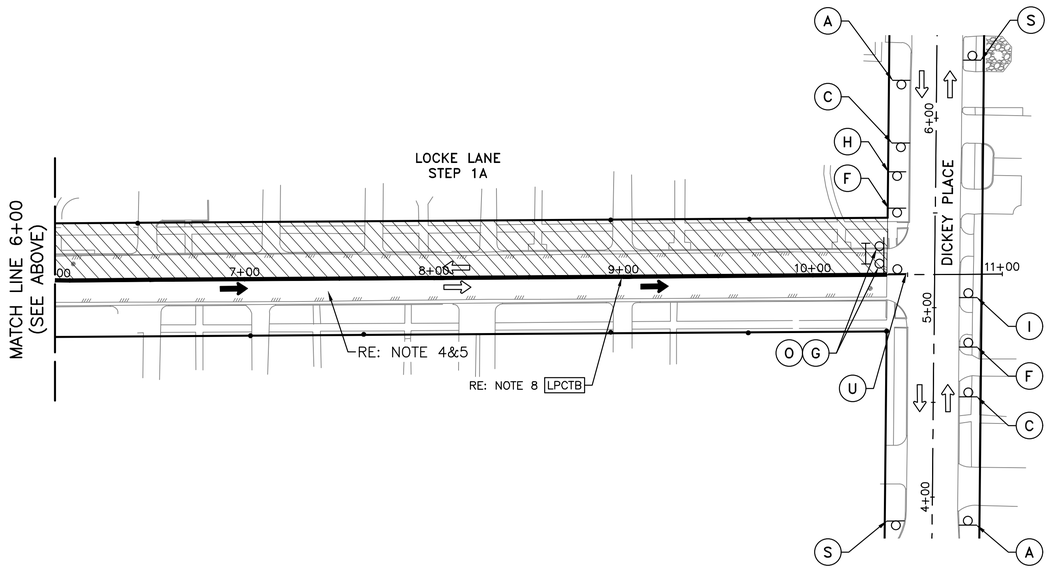
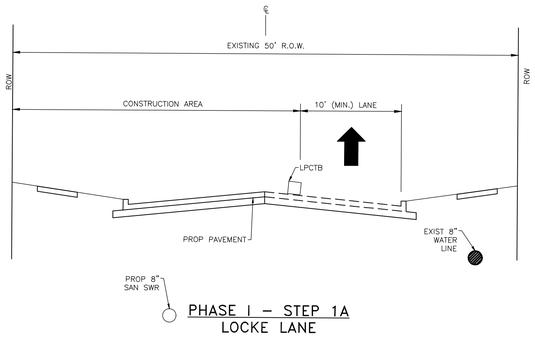
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC





PHASE I - STEP 1A
LOCKE LANE

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	LOCKE STREET / DETOUR →	LOCKE STREET / DETOUR ←	LOCKE STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / OR / ONE WAY	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" R6-1(R) 12"X36"	

REV.	DATE	DESCRIPTION	BY

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TBPE REG NO: F-4528

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

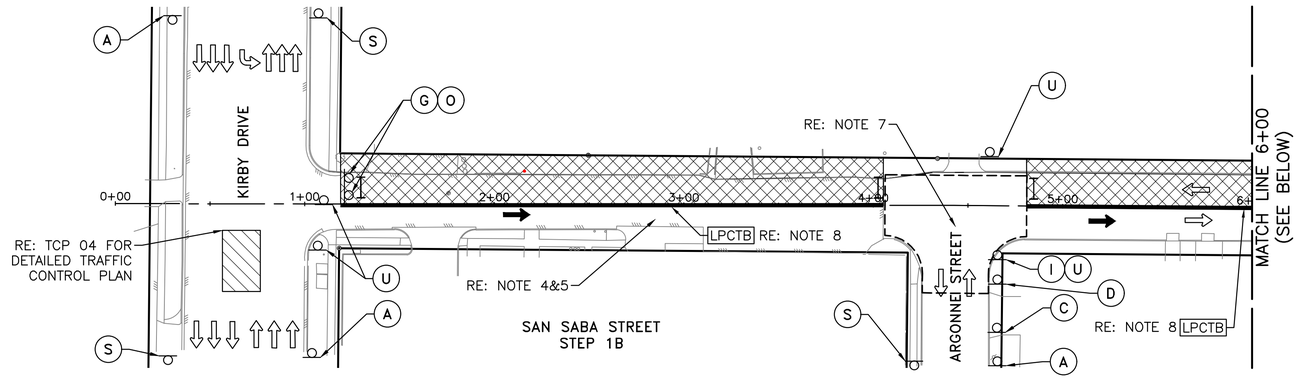
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

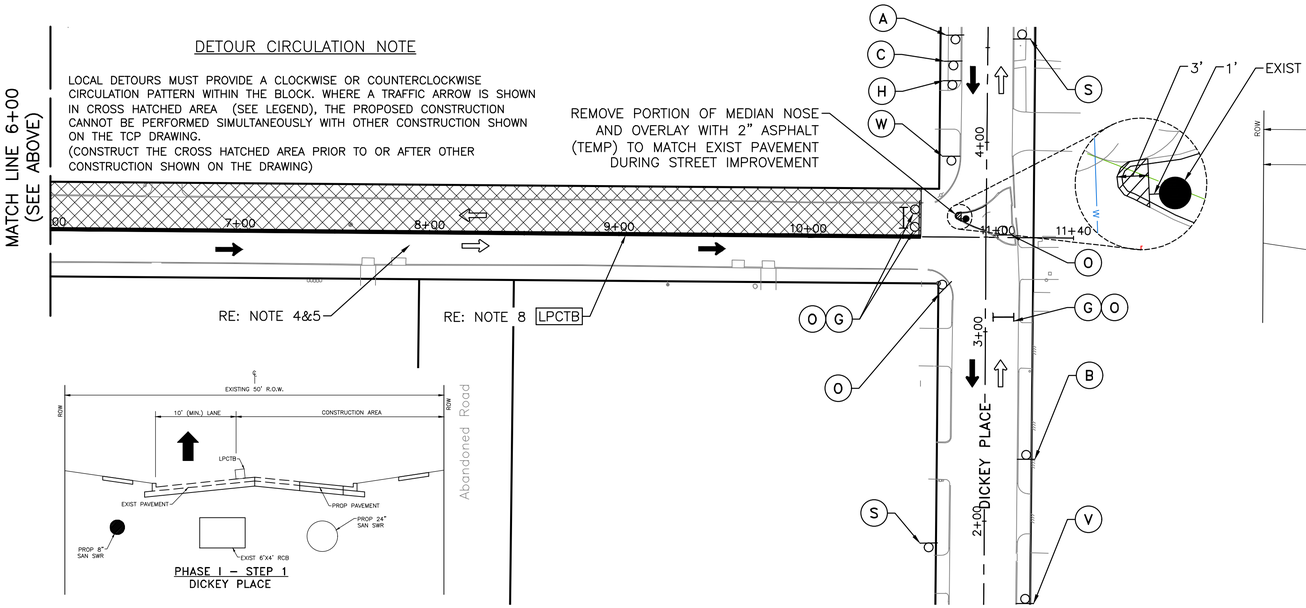
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

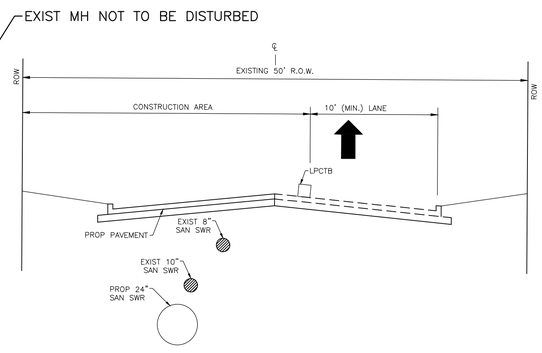
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-06
PHASE I - STEP 1
LOCKE LANE

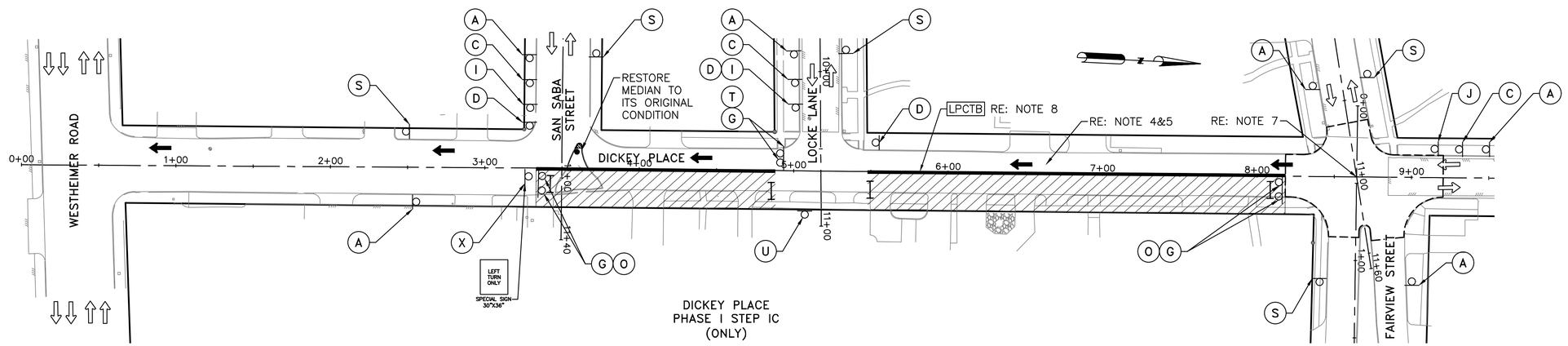
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 262 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-06 PHASE I - STEP 1 LOCKE LANE.dwg\TCP-06 Jan 21, 2026 - 4:39PM OMarcelo









LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE STEP–1B)
- CONSTRUCTION ZONE (STEP–1C)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

STEP1 NOTES:

- SAN SABA STREET: CLOSE/ CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY BETWEEN KIRBY DRIVE AND DICKEY PLACE. IMPROVEMENT SHALL BE AHEAD OF DICKEY PLACE.
- DICKEY PLACE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF ROADWAY BETWEEN WESTHEIMER ROAD AND FAIRVIEW STREET UTILITY IMPROVEMENT SHALL BE BY TRENCHLESS METHOD. 3 BORE PIT MAX

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP–01
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–07
PHASE I – STEP 1
SAN SABA STREET

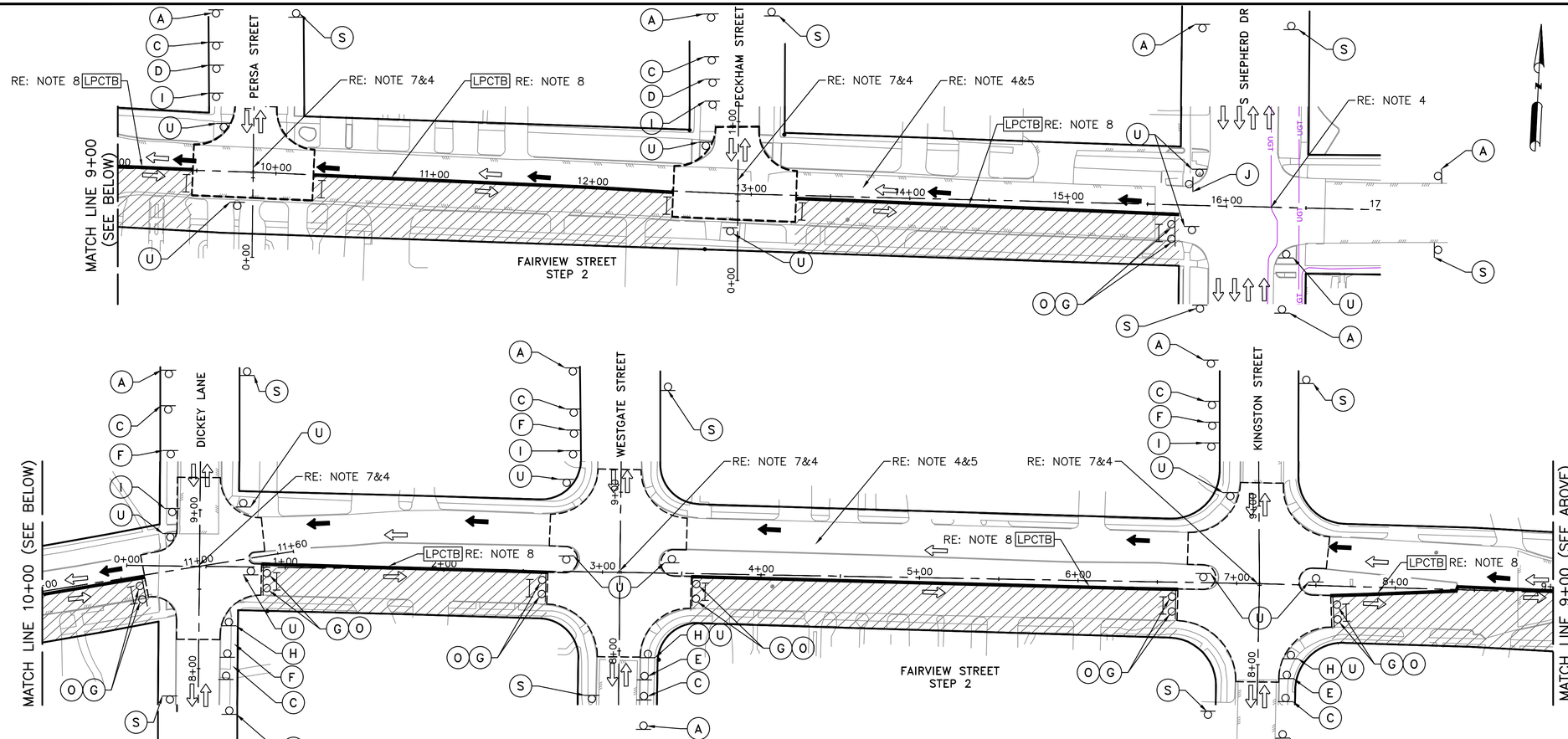
WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	1" = 40'
CITY OF HOUSTON PM	ROBERT MILES, P.E.
SHEET NO. 263 OF 391	

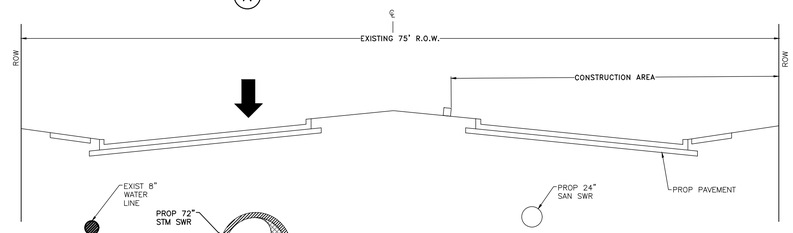
A	UTILITY WORK AHEAD	B	ROAD CLOSED AHEAD	C	DETOUR AHEAD	D	DICKEY PLACE SAN SABA STREET DETOUR	E	SAN SABA STREET DETOUR	F	SAN SABA STREET DETOUR	G	ROAD CLOSED	H		I	
	CW21–7 36"X36"		CW20–3 36"X36"		CW20–2 36"X36"		M4–9R 30"X30"		M4–9L 30"X30"		M4–9T 30"X30"		R11–2 48"X30"		R3–1 24"X24"		R3–2 24"X24"

J	BEGIN ONE WAY	K	RIGHT LANE CLOSED AHEAD	L	LEFT LANE CLOSED AHEAD	O	DO NOT ENTER	Q	END DETOUR	R	END ROAD WORK	S	END UTILITY WORK	T	LOCAL ACCESS ONLY	U	ONE WAY R6–1(L) 12"X36" OR ONE WAY R6–1(R) 12"X36"
	R6–6 36"X36"		CW20–5(2) 36"X36" CW16–3 36"X18"		CW20–5(1) 36"X36" CW16–3 36"X18"		R5–1 36"X36"		SPECIAL SIGN 36"X18"		G20–2 36"X18"		M4–8a 24"X18"		R11–3a 60"X30"		

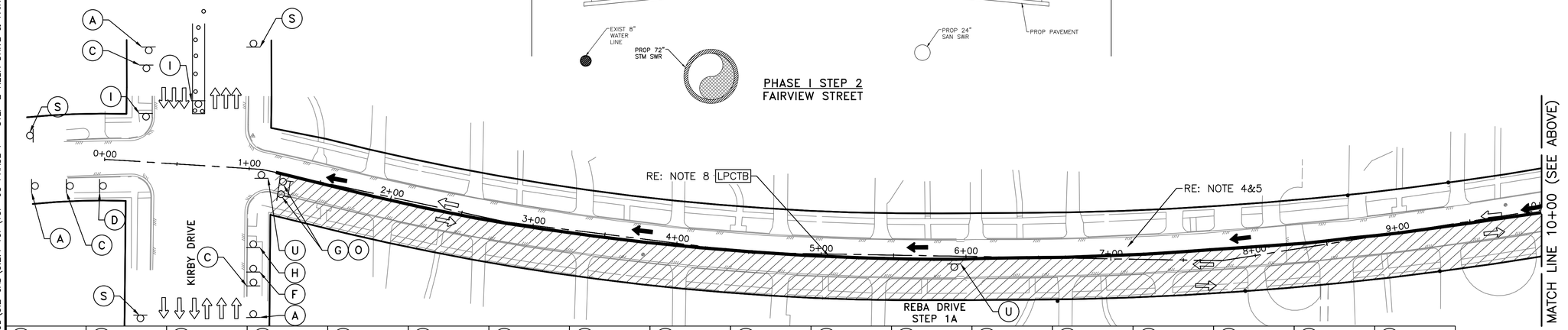
V	DEAD END	W		X	YIELD TO ONCOMING TRAFFIC
	W14–1 30"X30"		R4–7 12"X18"		R1–2 36"X36" R1–2aP 36"X30"

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–07 PHASE I – STEP 1 SAN SABA STREET.dwgTCP–07 Jan 21 , 2026 – 4:40PM OMarcelo





PHASE I STEP 2
FAIRVIEW STREET



STEP2 NOTES:

- FAIRVIEW STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY BETWEEN KIRBY DRIVE AND SHEPHERD DRIVE.

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	FAIRVIEW STREET / DETOUR →	FAIRVIEW STREET / DETOUR ←	FAIRVIEW STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / ONE WAY	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"	

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
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TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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AMANI ENGINEERING, INC.

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
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114557
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PROFESSIONAL ENGINEER
1/21/2026

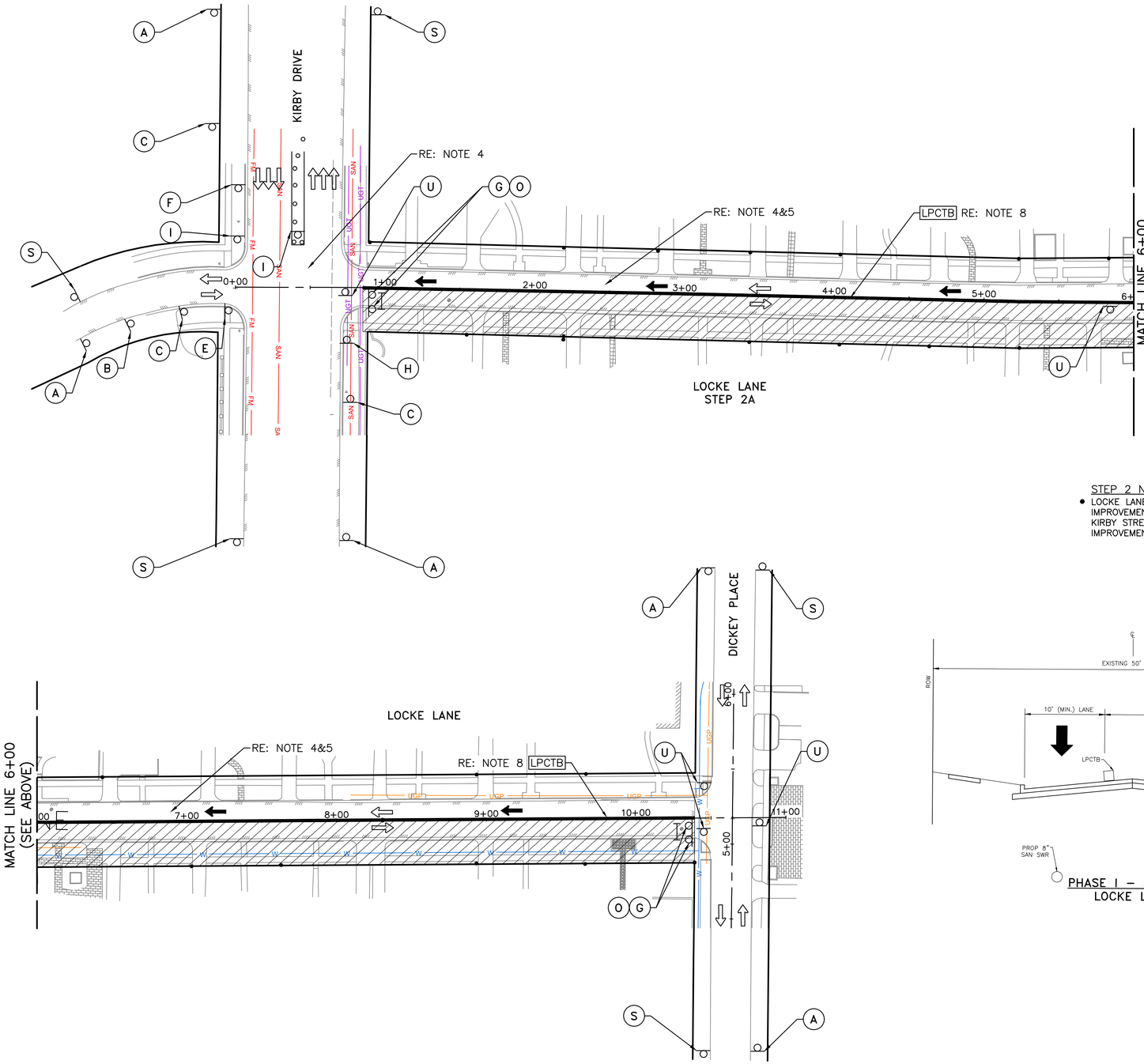
CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-08
PHASE I - STEP 2
REBA DRIVE & FAIRVIEW STREET

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 264 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-08 PHASE I - STEP 2 REBA DRIVE & FAIRVIEW STREET.dwgTCP-08 Jan 21 , 2026 - 4:40PM OMarcelo



PHASE I – STEP 2A
LOCKE LANE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01

1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.

2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
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6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

STEP 2 NOTES:

- LOCKE LANE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY BETWEEN KIRBY STREET AND DICKEY PLACE. IMPROVEMENT AHEAD OF SAN SABA.

REV.	DATE	DESCRIPTION	BY

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OTHON, INC. TBPE NO. F-1471

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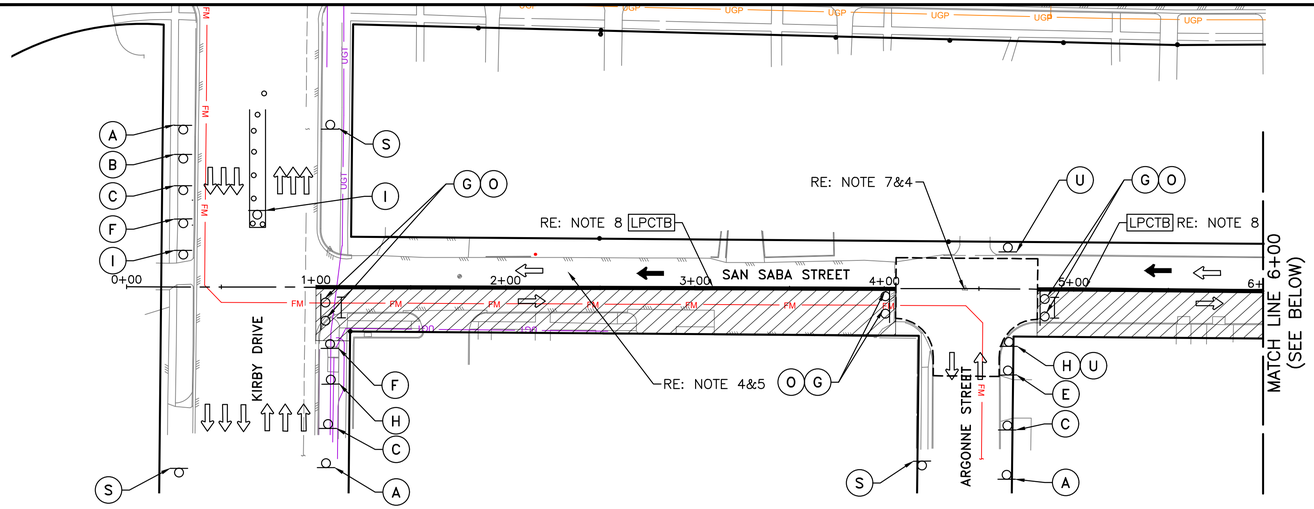
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

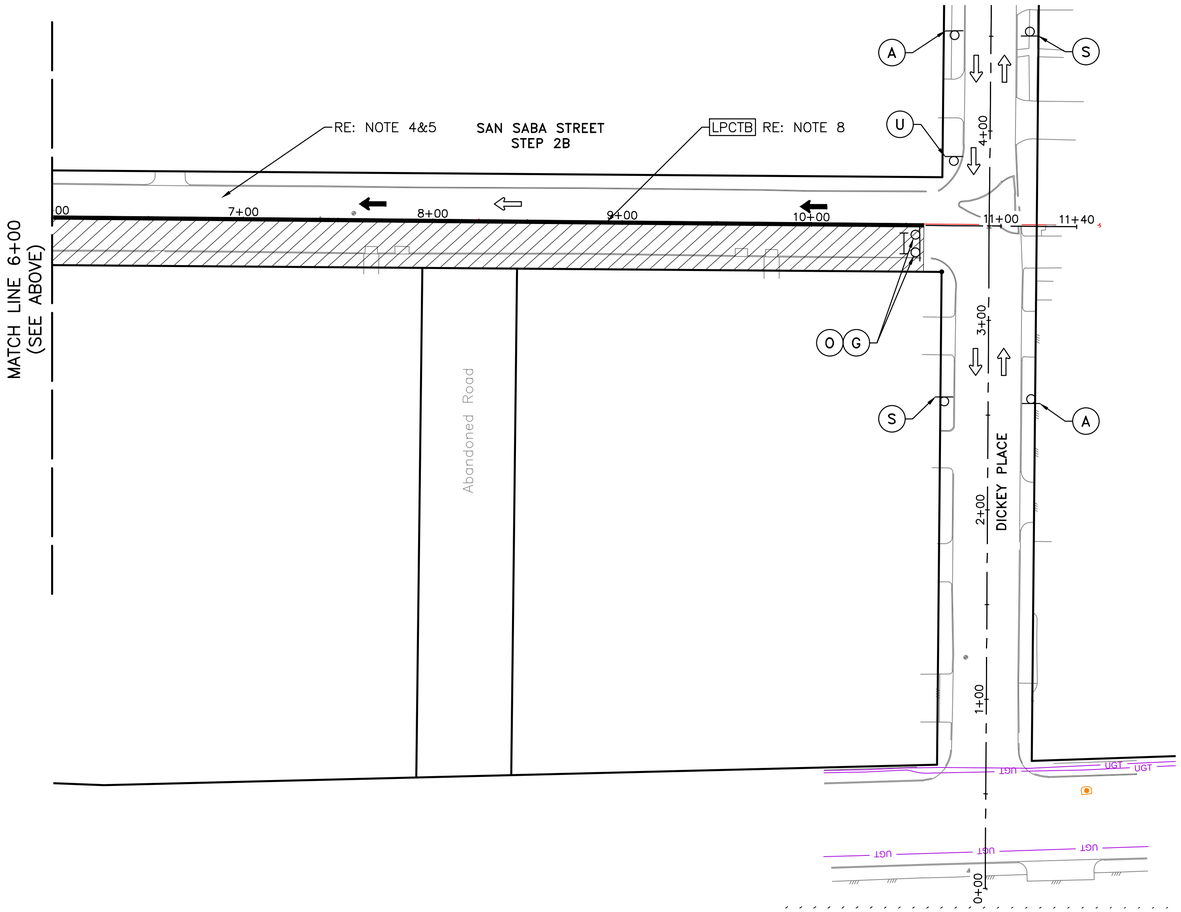
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-09
PHASE I – STEP 2
LOCKE LANE

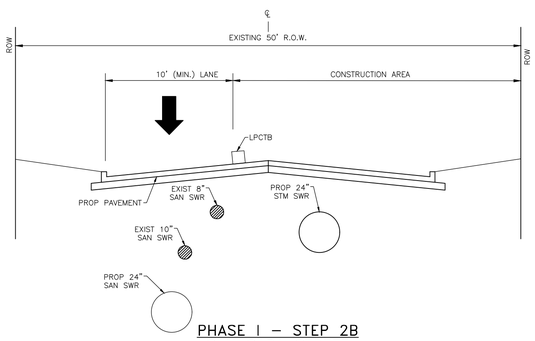
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 265 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	NAME STREET / DETOUR →	NAME STREET / DETOUR ←	LOCKE LANE / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-09 PHASE I – STEP 2 LOCKE LANE.dwgTCP-09 Jan 21 , 2026 – 4:40PM OMarcelo







PHASE I – STEP 2B
SAN SABA STREET

STEP 2 NOTES:

- SAN SABA STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY BETWEEN KIRBY DRIVE AND DICKEY PLACE.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	SAN SABA STREET DETOUR →	SAN SABA STREET DETOUR ←	SAN SABA STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY OR ONE WAY	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" R6-1(R) 12"X36"	

(SHEET REF. NO. TCP-32)

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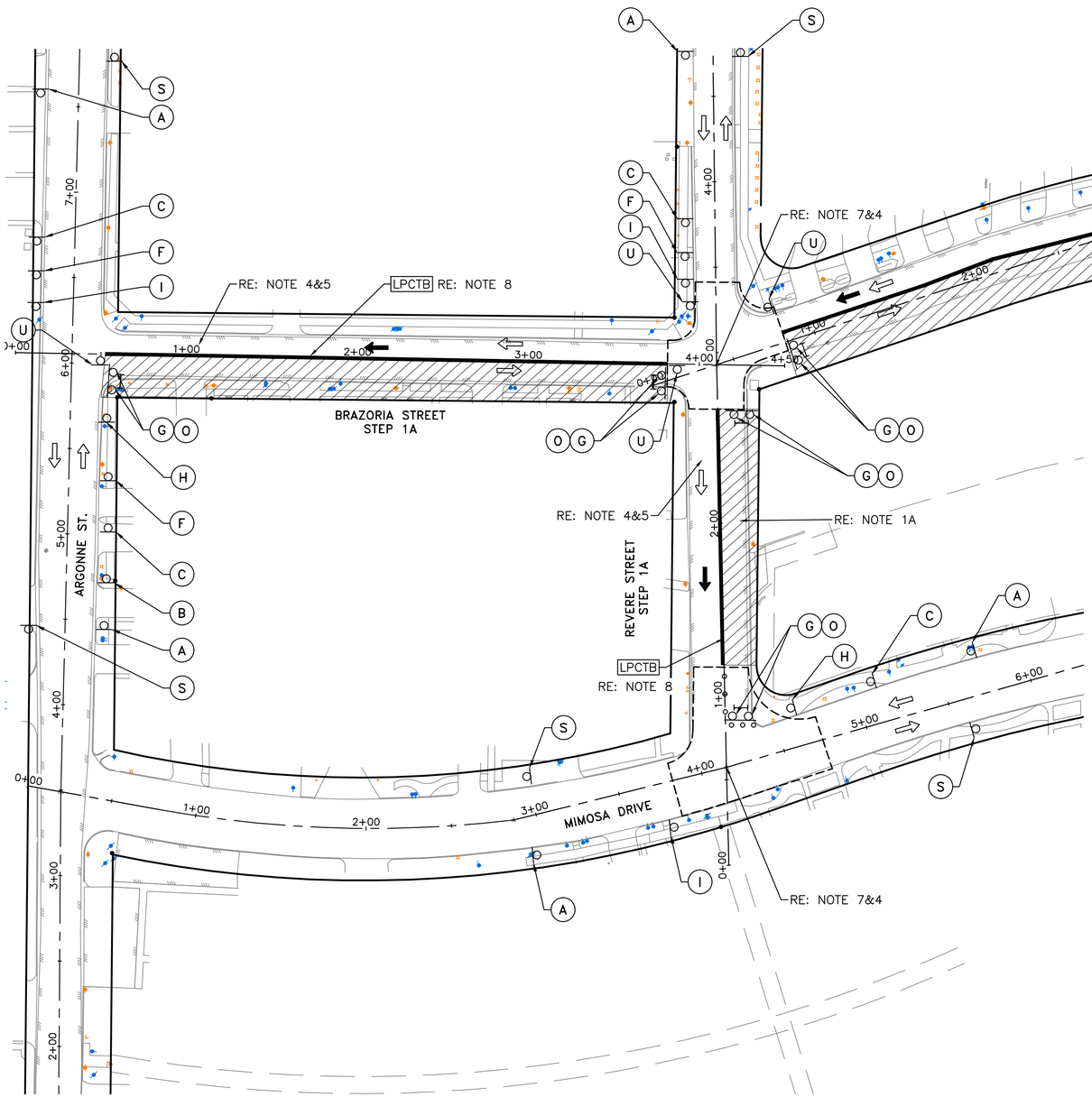
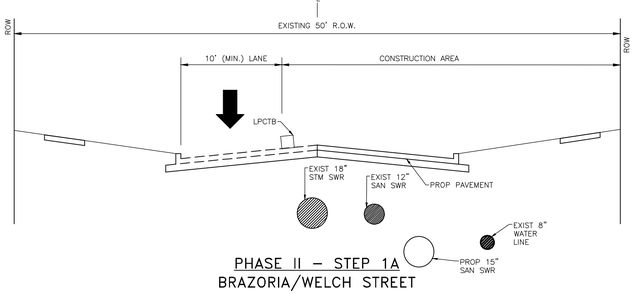
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-10
PHASE I – STEP 2
SAN SABA STREET

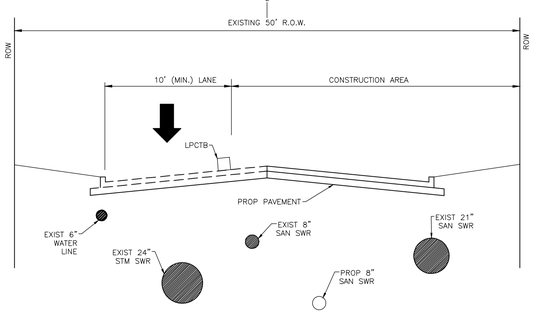
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 266 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-10 PHASE I – STEP 2 SAN SABA STREET.dwgTCP-10 Jan 21 , 2026 – 4:40PM OMarcelo





PHASE II – STEP 1A
BRAZORIA/WELCH STREET



PHASE II – STEP 1A
REVERE STREET

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

STEP 1A NOTES:

- BRAZORIA STREET/WELCH STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY BETWEEN ARGONNE STREET AND PERSA STREET.
- REVERE STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF ROADWAY BETWEEN MIMOSA STREET TO WELCH STREET AHEAD OF STEP 1B.

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
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6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

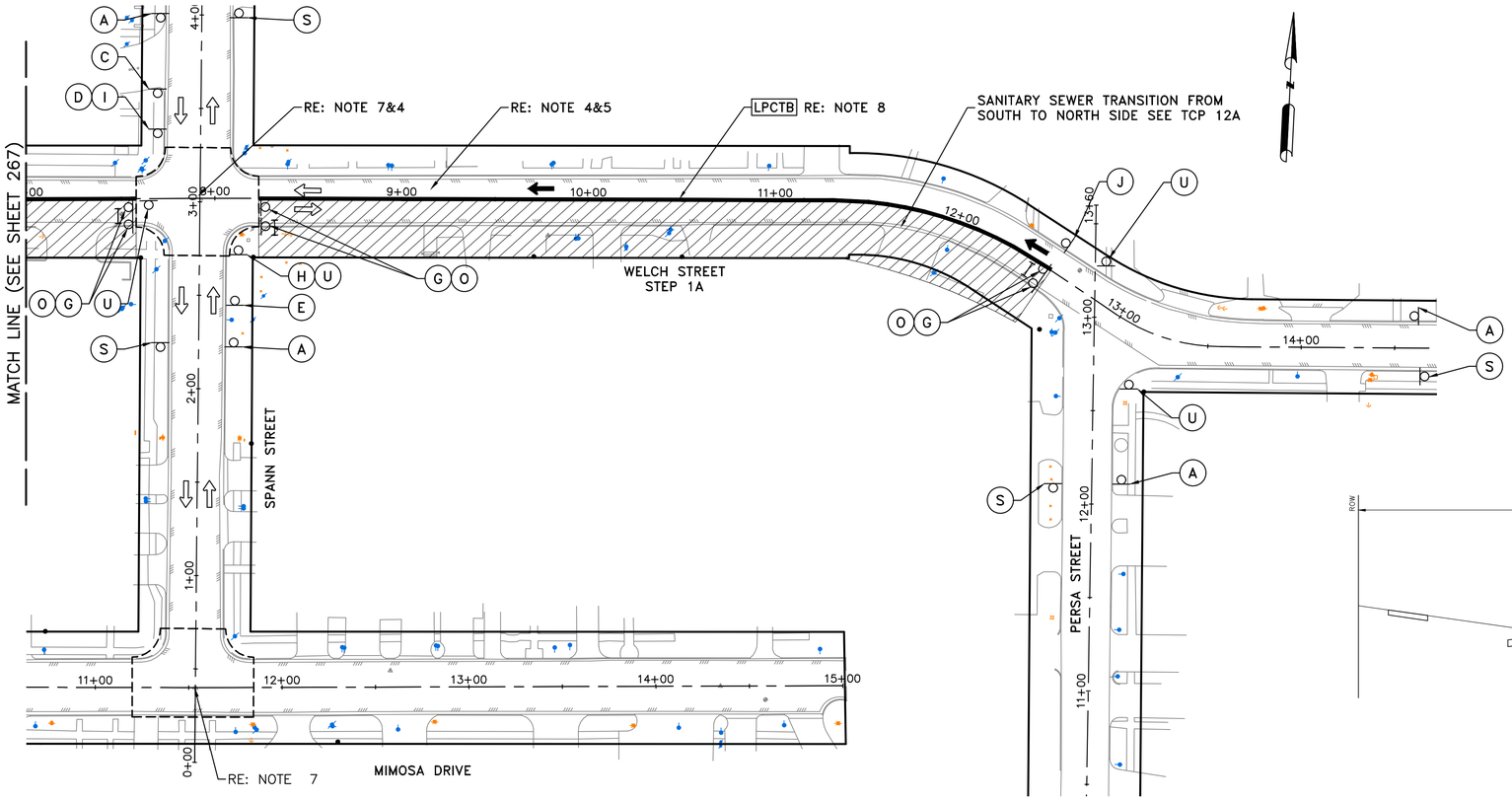
TCP-11
PHASE II – STEP 1
BRAZORIA ST/WELCH ST, & REVERE ST

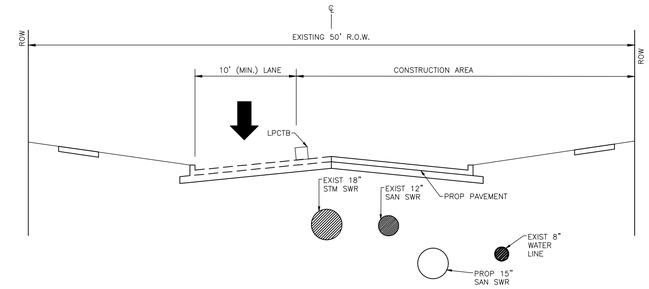
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 267 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	NAME STREET DETOUR →	NAME STREET DETOUR ←	BRAZORIA STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(A) 12"X36" ONE WAY R6-1(B) 12"X36"
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	

(SHEET REF. NO. TCP-15)

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-12 PHASE II – STEP 1 WELCH ST, & SPAWN ST.dwgTCP-11 Jan 21, 2026 – 4:40PM OMarcelo





PHASE II – STEP 1A
WELCH STREET

STEP 1A NOTES:

- WELCH STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY BETWEEN ARGONNE STREET AND PERSA STREET. CONSTRUCT SAN SWR TRANSITION IMPROVEMENT AHEAD OF STEP 1B.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

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6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
   CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET / DETOUR →	WELCH STREET / DETOUR ←	WELCH STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"

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STATE OF TEXAS
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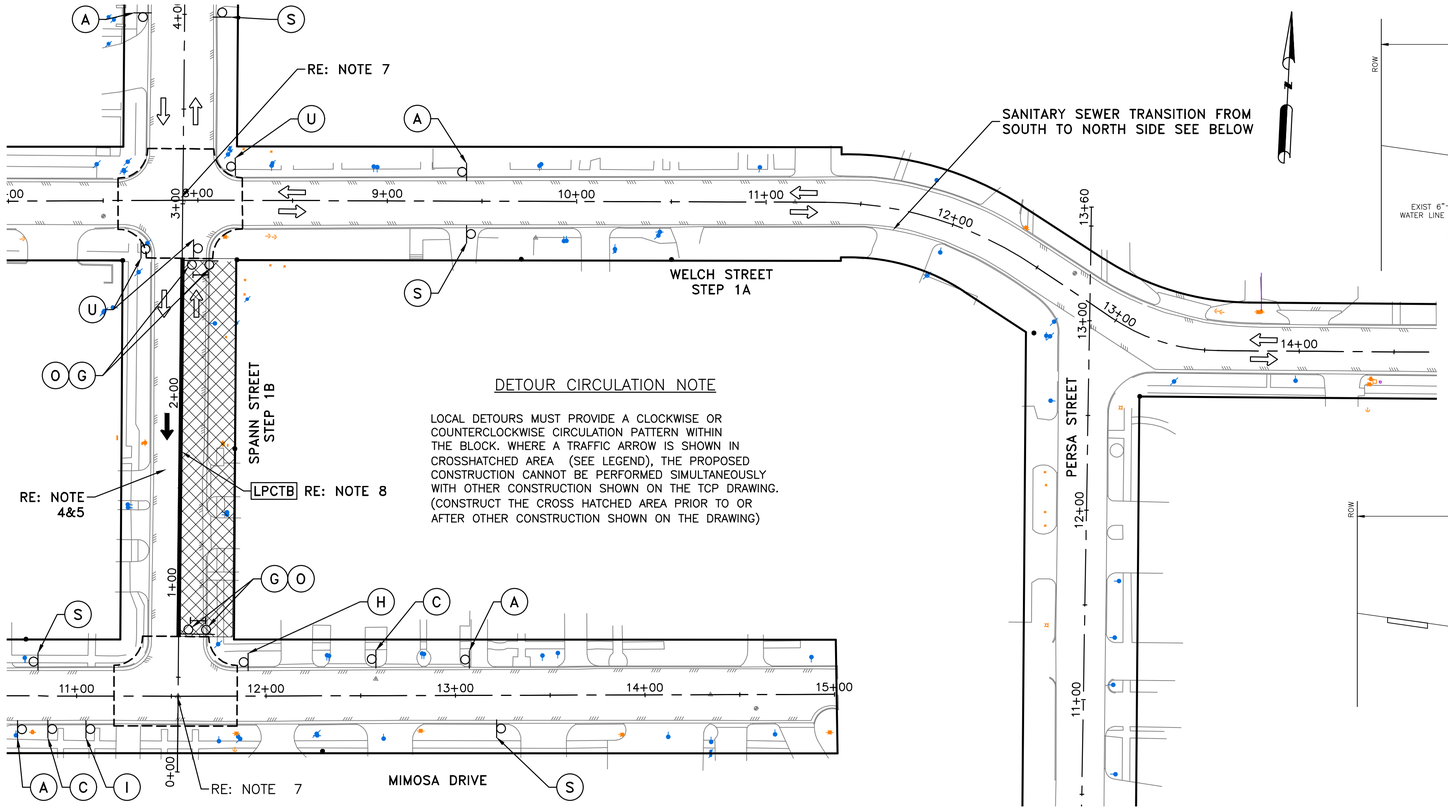
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-12
PHASE II – STEP 1
WELCH ST, & SPANN ST

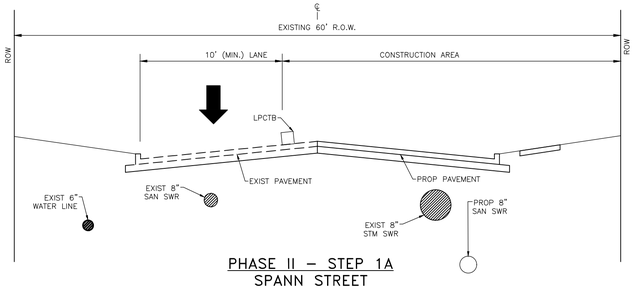
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 268 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-12 PHASE II – STEP 1 WELCH ST, & SPANN ST.dwgTCP-12 Jan 21 , 2026 – 4:41PM OMarcelo



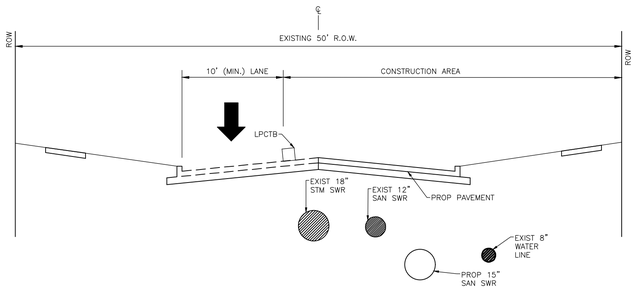
DETOUR CIRCULATION NOTE

LOCAL DETOURS MUST PROVIDE A CLOCKWISE OR COUNTERCLOCKWISE CIRCULATION PATTERN WITHIN THE BLOCK. WHERE A TRAFFIC ARROW IS SHOWN IN CROSSHATCHED AREA (SEE LEGEND), THE PROPOSED CONSTRUCTION CANNOT BE PERFORMED SIMULTANEOUSLY WITH OTHER CONSTRUCTION SHOWN ON THE TCP DRAWING. (CONSTRUCT THE CROSS HATCHED AREA PRIOR TO OR AFTER OTHER CONSTRUCTION SHOWN ON THE DRAWING)



PHASE II – STEP 1A
SPANN STREET

STEP 1B.
- SPANN STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF ROADWAY BETWEEN MIMOSA STREET TO WELCH STREET.



PHASE II – STEP 1A
WELCH STREET

LEGEND:

AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)

PROPOSED SIGN
CHANNELIZING DEVICES
LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
DIRECTION OF EXISTING TRAFFIC
DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
TYPE III BARRICADE W/2
TYPE 'A' FLASHER
FLAGGER

TCP NOTES:
1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
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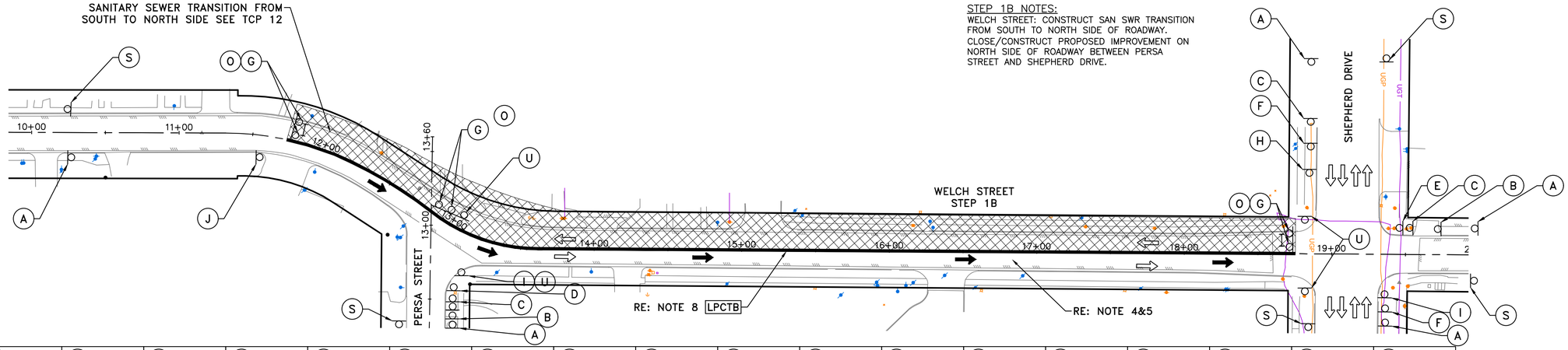
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC



STEP 1B NOTES:
WELCH STREET: CONSTRUCT SAN SWR TRANSITION FROM SOUTH TO NORTH SIDE OF ROADWAY. CLOSE/CONSTRUCT PROPOSED IMPROVEMENT ON NORTH SIDE OF ROADWAY BETWEEN PERSA STREET AND SHEPHERD DRIVE.

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U		
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET DETOUR	WELCH STREET DETOUR	WELCH STREET DETOUR	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / ONE WAY		
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(B) 12"X36"		

REV.	DATE	DESCRIPTION	BY

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STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

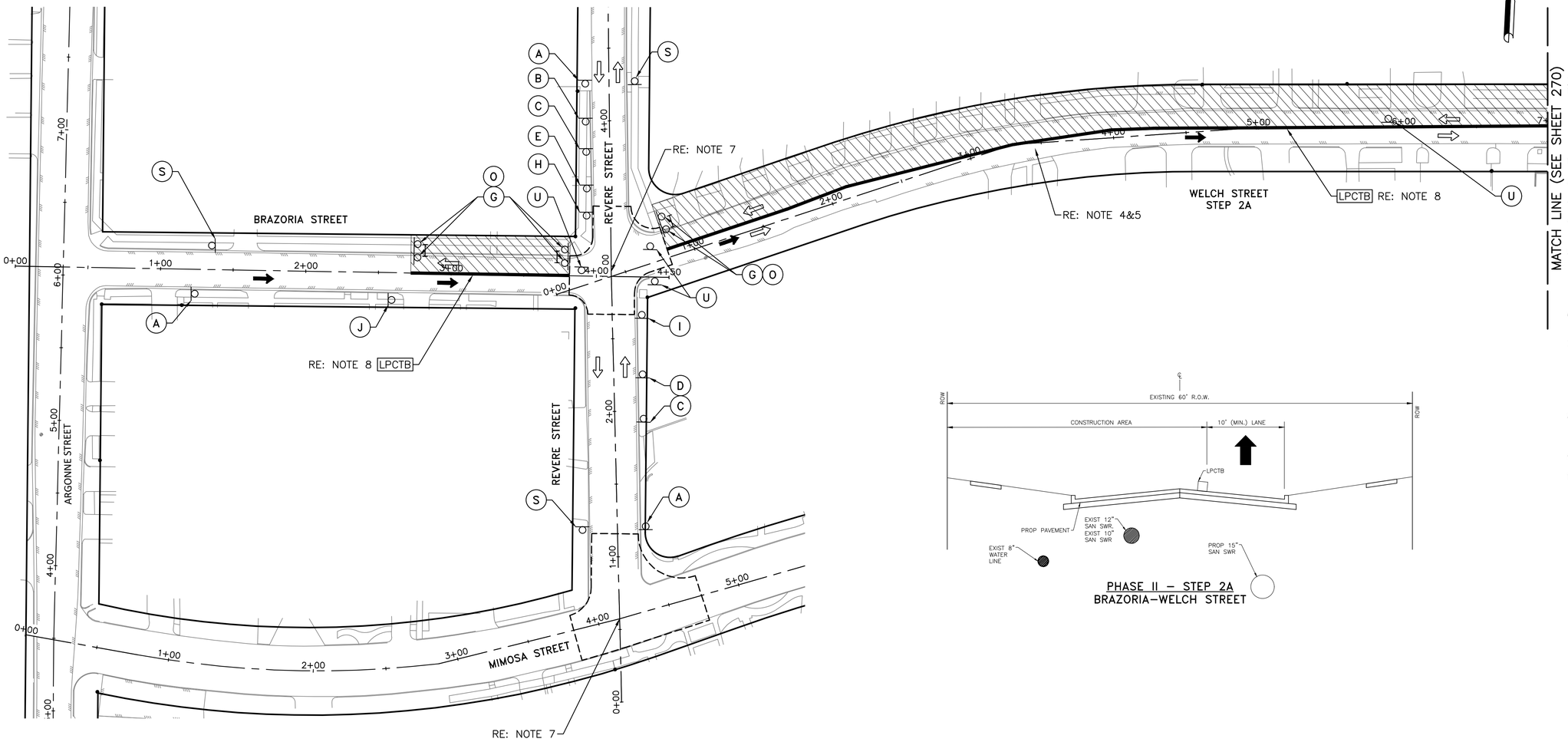
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-12A
PHASE II – STEP 1
WELCH ST, & SPANN ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO.268A OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-12A PHASE II – STEP 1 WELCH ST. & SPAWN ST.dwgTCP-12A Jan 21 , 2026 – 4:41PM OMarcelo

STEP2 NOTES:
WELCH STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY BETWEEN REVERE STREET AND PERSA STREET.



PHASE II – STEP 2A
BRAZORIA–WELCH STREET

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	V
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	NAME STREET / DETOUR →	NAME STREET / DETOUR ←	REVERE STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / OR / ONE WAY	
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" R6–1(R) 12"X36"	CW20–7 36"X36"

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1/21/2026

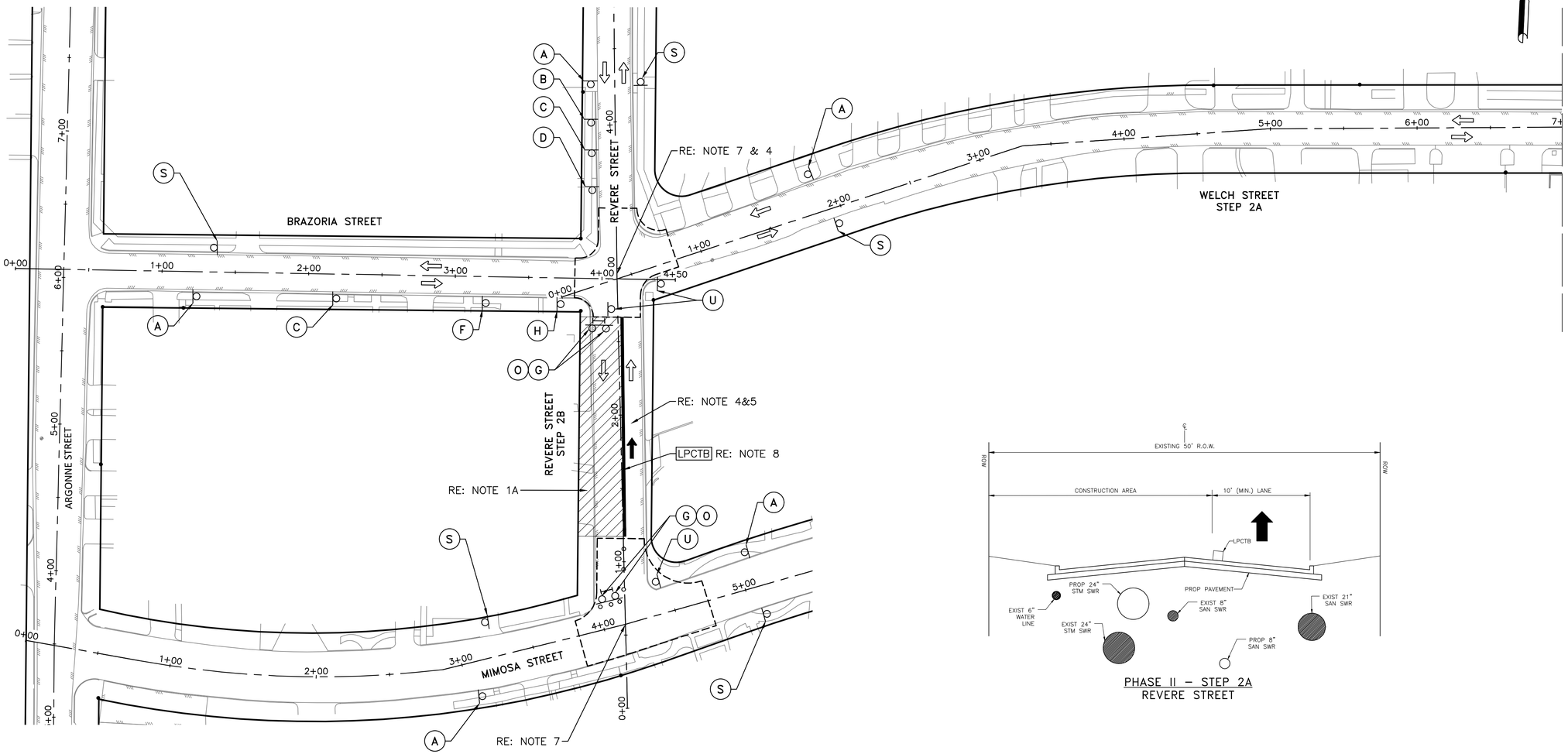
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–13
PHASE II – STEP 2
BRAZORIA ST/WELCH ST & REVERE ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 269 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP13 PHASE II – STEP 2 BRAZORIA ST WELCH ST & REVERE ST.dwgTCP–13 Jan 21 , 2026 – 4:41PM OMarcelo

STEP2 NOTES:
REVERE STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF ROADWAY BETWEEN MIMOSA STREET AND WELCH STREET AHEAD OF 2B.



PHASE II – STEP 2A
REVERE STREET

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
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REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	V
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	NAME STREET DETOUR →	NAME STREET DETOUR ←	REVERE STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6–1(L) OR ONE WAY R6–1(B)	
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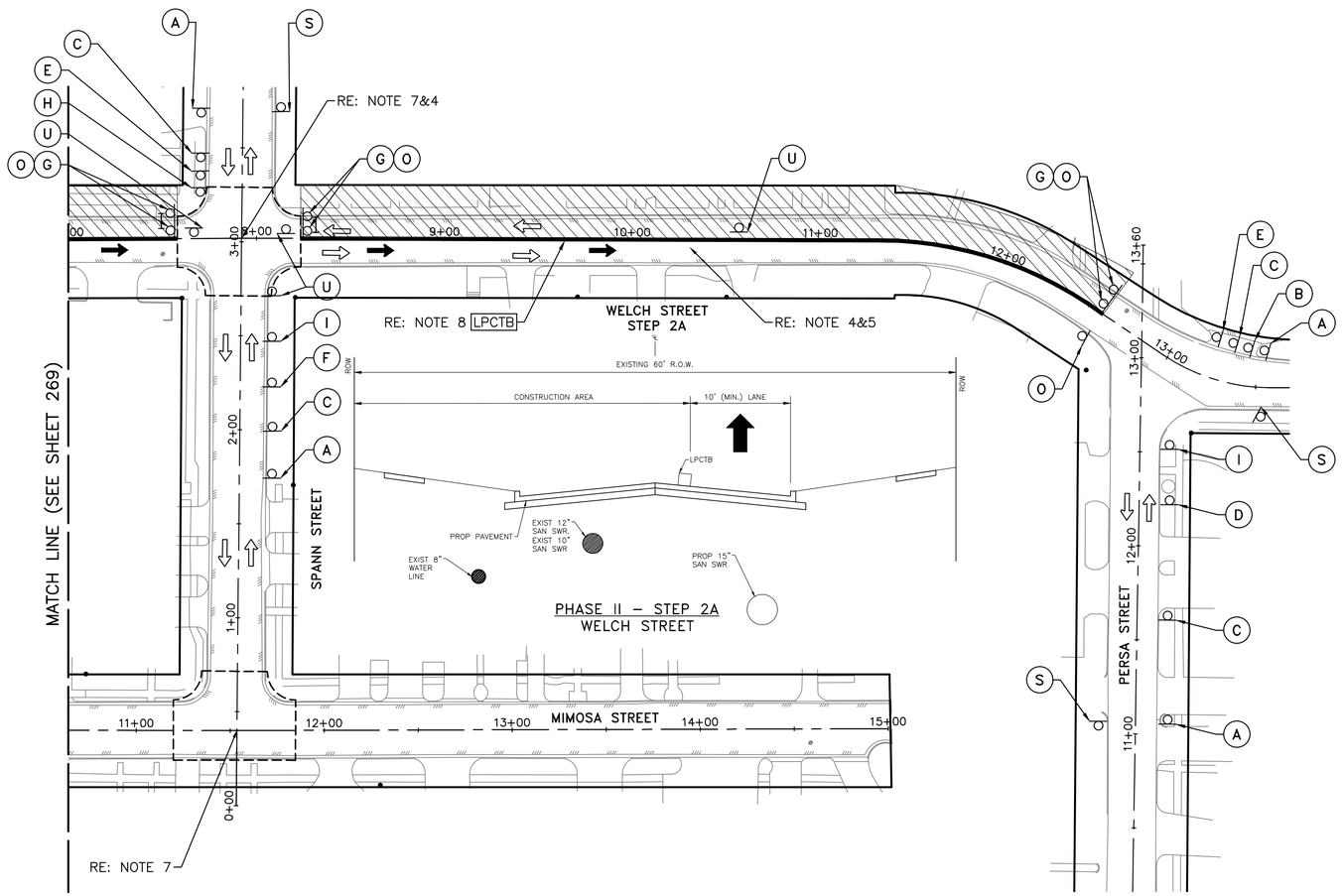
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

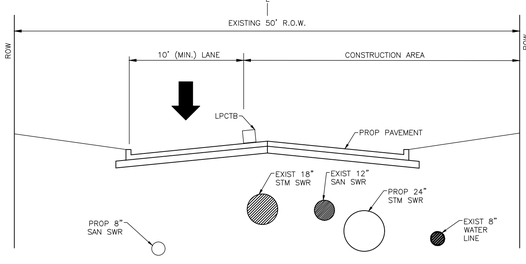
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–13A
PHASE II – STEP 2
BRAZORIA ST/WELCH ST & REVERE ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 269A OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–13A PHASE II – STEP 2 BRAZORIA ST WELCH ST & REVERE ST.dwg\TCP–13A Jan 21 , 2026 – 4:41PM OMarcelo



PHASE II – STEP 2A
WELCH STREET



PHASE II – STEP 2B
WELCH STREET

STEP 2A NOTES:
WELCH STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENT ON NORTH HALF OF ROADWAY BETWEEN ARGONNE STREET AND PERSA STREET. IMPROVEMENT AHEAD OF STEP 2B.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
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4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512–05 (TCP ONE LANE CLOSURE) DATED JUL–01–2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
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6. STREETS USING ONE–WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3–WAY INTERSECTION (TCP42–TCP44)/TCP 4–WAY INTERSECTION (TCP45–TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2–WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U		
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET DETOUR →	WELCH STREET DETOUR ←	WELCH STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← OR ONE WAY →		
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" R6–1(B) 12"X36"		

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

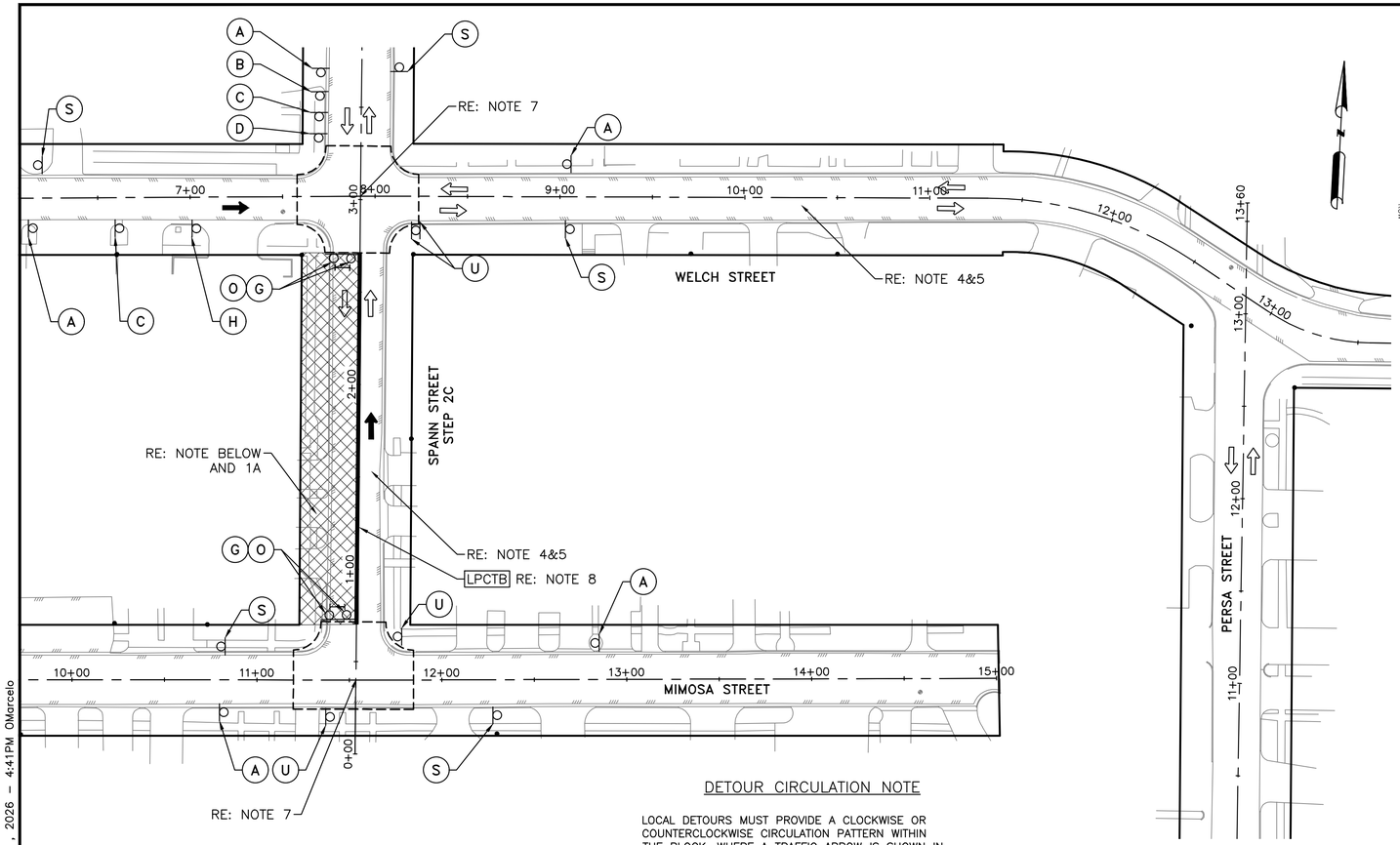
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP–14
PHASE II – STEP 2
WELCH ST, & SPANN ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 270 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP14 PHASE II – STEP 2 WELCH ST, & SPAWN ST.dwgTCP–14 Jan 21 , 2026 – 4:41PM OMarcelo

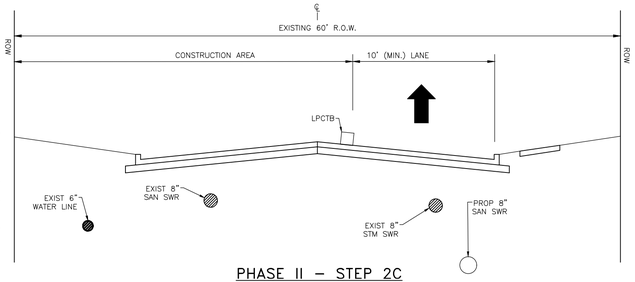


DETOUR CIRCULATION NOTE

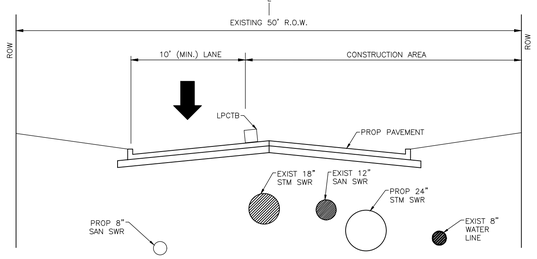
LOCAL DETOURS MUST PROVIDE A CLOCKWISE OR COUNTERCLOCKWISE CIRCULATION PATTERN WITHIN THE BLOCK. WHERE A TRAFFIC ARROW IS SHOWN IN CROSSHATCHED AREA (SEE LEGEND), THE PROPOSED CONSTRUCTION CANNOT BE PERFORMED SIMULTANEOUSLY WITH OTHER CONSTRUCTION SHOWN ON THE TCP DRAWING. (CONSTRUCT THE CROSS HATCHED AREA PRIOR TO OR AFTER OTHER CONSTRUCTION SHOWN ON THE DRAWING)

STEP 2 NOTES:

SPANN STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENT ON WEST HALF OF ROADWAY BETWEEN MIMOSA STREET AND WELCH STREET.



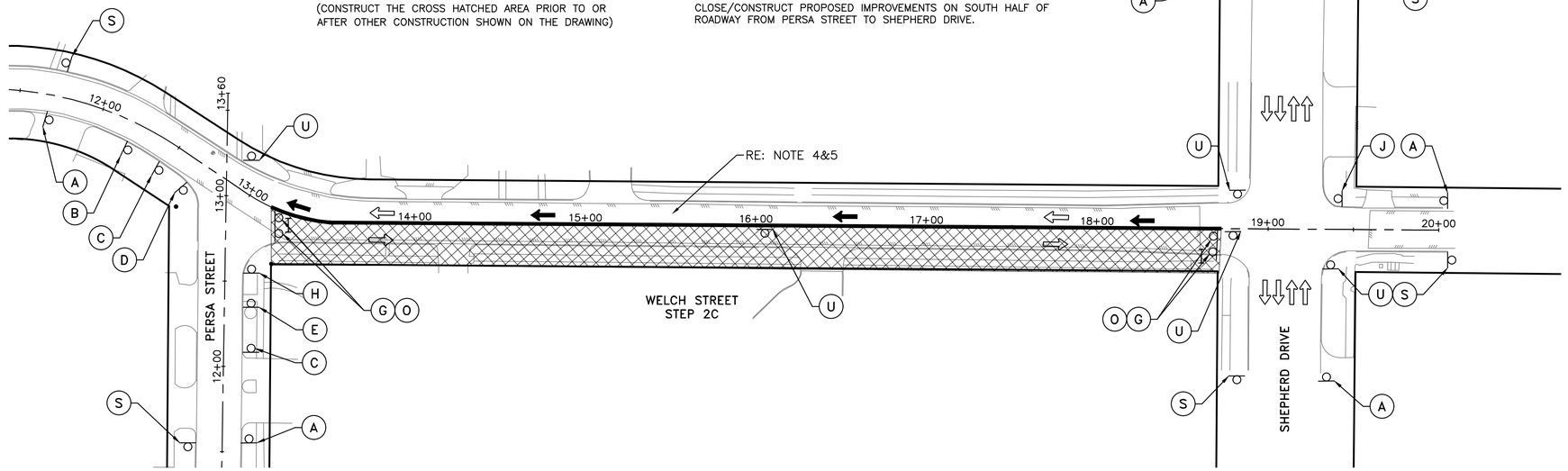
PHASE II – STEP 2C
SPANN STREET



PHASE II – STEP 2C
WELCH STREET

STEP 2B NOTES:

WELCH STREET:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY FROM PERSA STREET TO SHEPHERD DRIVE.



A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET DETOUR →	SPANN STREET DETOUR ←	WELCH STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) OR ONE WAY R6-1(B)
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	12"X36"

LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON

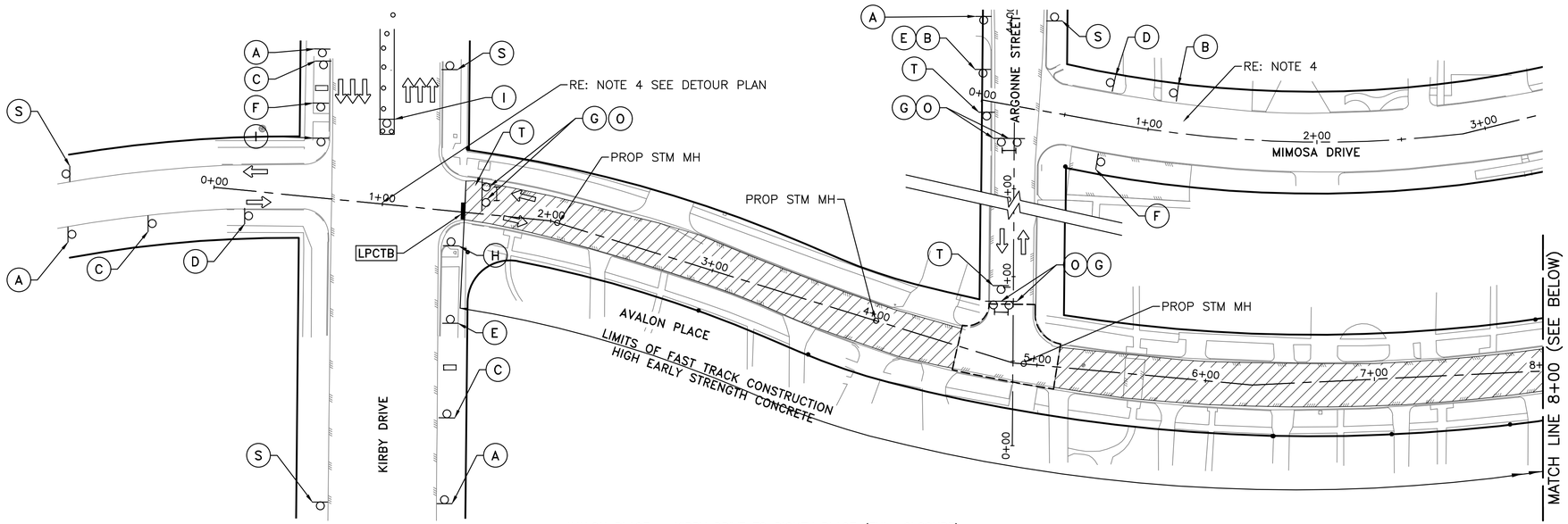
HOUSTON PUBLIC WORKS

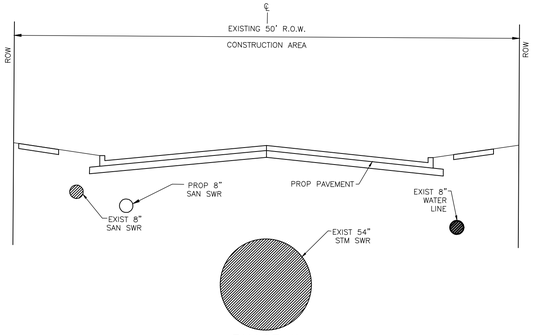
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP-14A
PHASE II – STEP 2
WELCH ST, & SPANN ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 270A OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP14A PHASE II – STEP 2 WELCH ST, & SPAWN ST.dwgTCP-14A Jan 21 , 2026 – 4:41PM OMarcelo

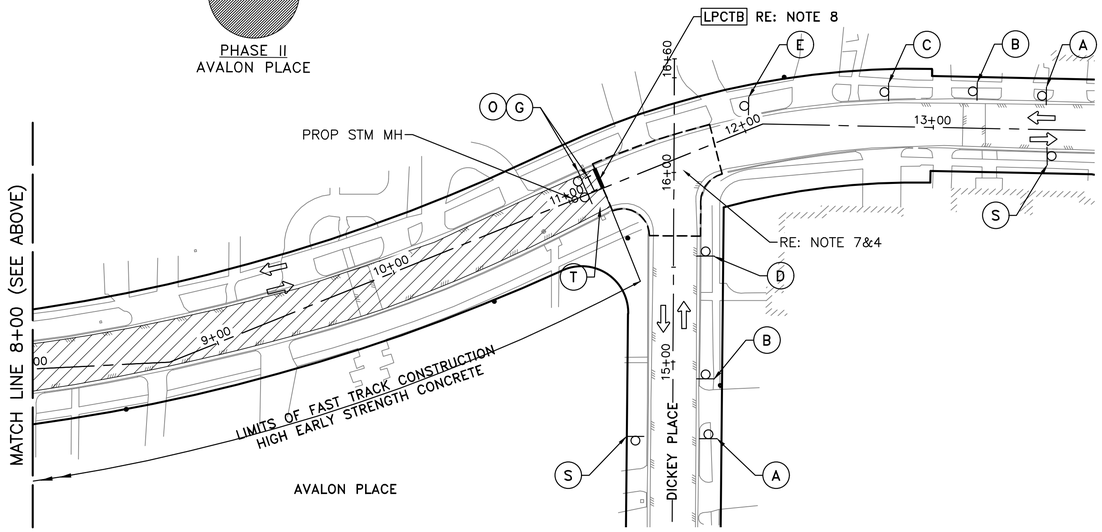




PHASE II
AVALON PLACE

AVALON PLACE – KIRBY DRIVE TO DICKEY PLACE (FULL CLOSURE)
PHASE II NOTES

1. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AND CONSTRUCTION MANAGEMENT IN REGARD WITH THE PENDING STREET IMPROVEMENTS.
2. IMPROVEMENTS REQUIRING STREET FULL CLOSURE, CONTRACTOR WILL BE LIMITED TO A BLOCK TO BLOCK/ FROM STREET TO STREET CONSTRUCTION ZONE.
3. A PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE INSTALLED AT LEAST 7-DAYS PRIOR TO COMMENCING CONSTRUCTION.
4. CONTRACTOR TO PROVIDE TEMPORARY PARKWAY PLAN FOR AVALON PLACE RESIDENTS DURING THE PERIOD WHEN THEIR DRIVEWAYS ARE NOT ACCESSIBLE.
5. RE: TCP NOTES 2&4



DETOUR PLAN
N.T.S.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN (PCSM)

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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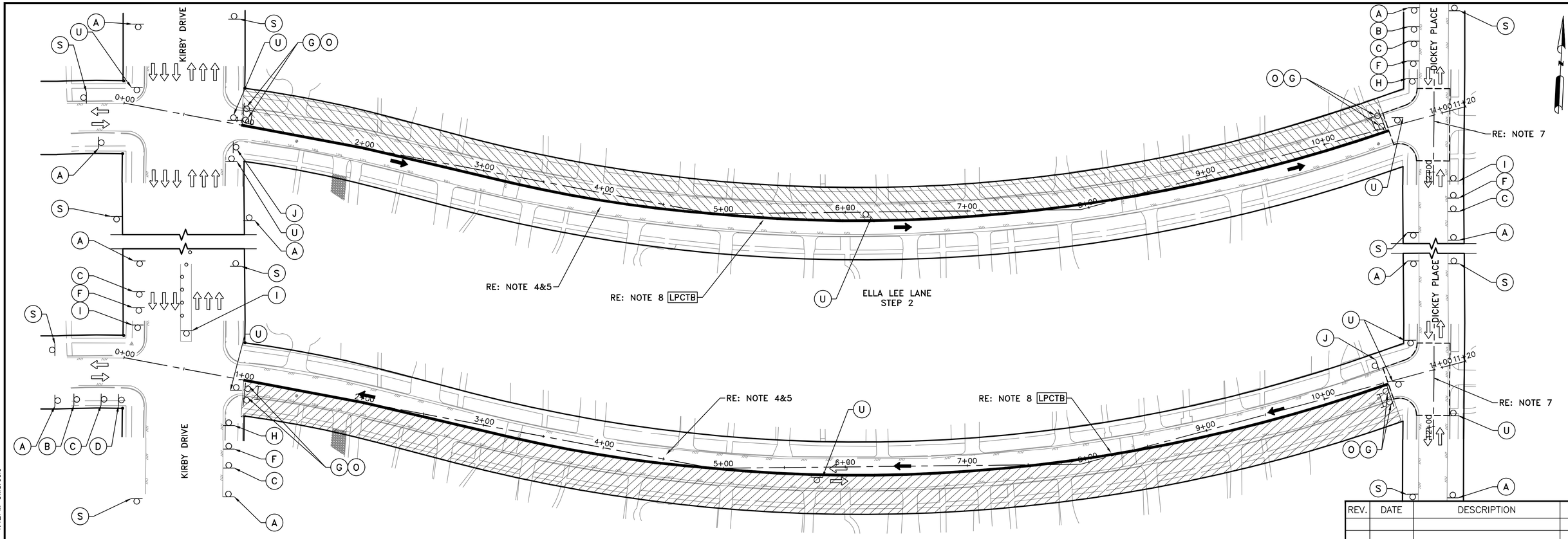
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

TCP-15
PHASE II
AVALON PLACE

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 271 OF 391

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	AVALON STREET DETOUR →	NAME STREET DETOUR ←	NAME STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) OR ONE WAY R6-1(R)	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	12"X36"	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP15 PHASE II AVALON PLACE.dwg|TCP-15 Jan 21 , 2026 - 4:42PM OMarcelo



R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP16 PHASE II – STEPS 1 & 2 ELLA LEE LANE.dwgTCP-16 Jan 21 , 2026 – 4:42PM OMarcelo

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

STEP1 & STEP2 NOTES

- STEP1: ELLA LEE LANE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH–HALF OF ROADWAY BETWEEN KIRBY DRIVE AND DICKEY PLACE.
- STEP2: ELLA LEE LANE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY BETWEEN KIRBY DRIVE AND DICKEY PLACE.

TCP NOTES:

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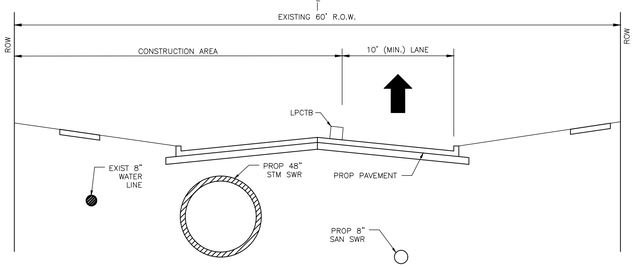
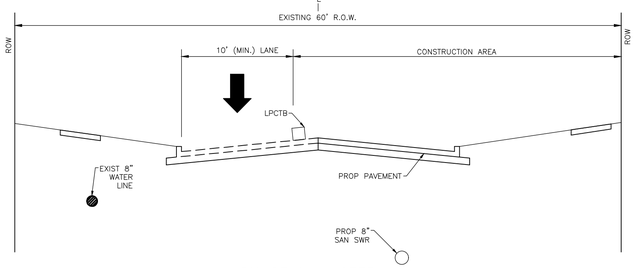


PHASE II – STEP 2
ELLA LEE LANE



PHASE II – STEP 1
ELLA LEE LANE

	A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
	UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	ELLA LEE STREET DETOUR →	ELLA LEE STREET DETOUR ←	ELLA LEE STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6–1(L) 12"X36" OR ONE WAY R6–1(R) 12"X36"
	CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	

(SHEET REF. NO. TCP–23)

REV.	DATE	DESCRIPTION	BY

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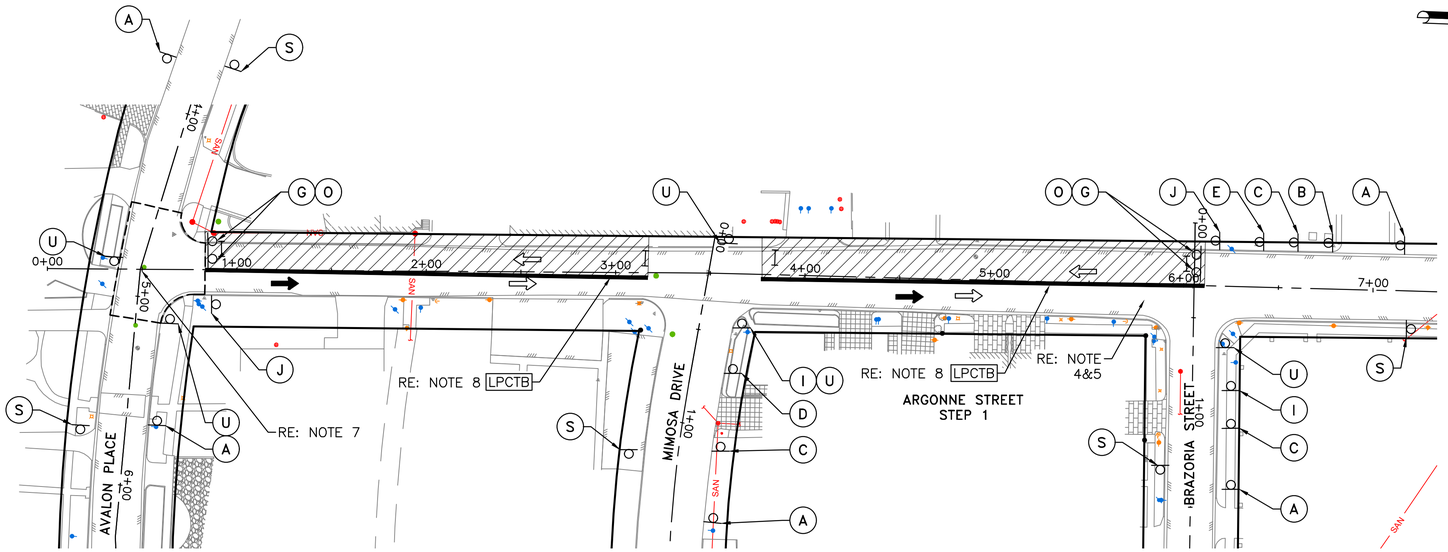
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–16
PHASE II – STEPS 1 & 2
ELLA LEE LANE

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	1" = 40'
CITY OF HOUSTON PM	ROBERT MILES, P.E.
SHEET NO. 272 OF 391	

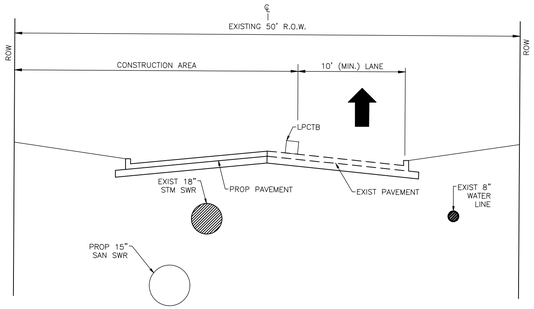


STEP 1 NOTES:

- ARGONNE STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF BETWEEN AVALON PLACE AND BRAZORIA STREET.

STEP 2 NOTES:

- ARGONNE STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF BETWEEN AVALON PLACE AND BRAZORIA STREET.



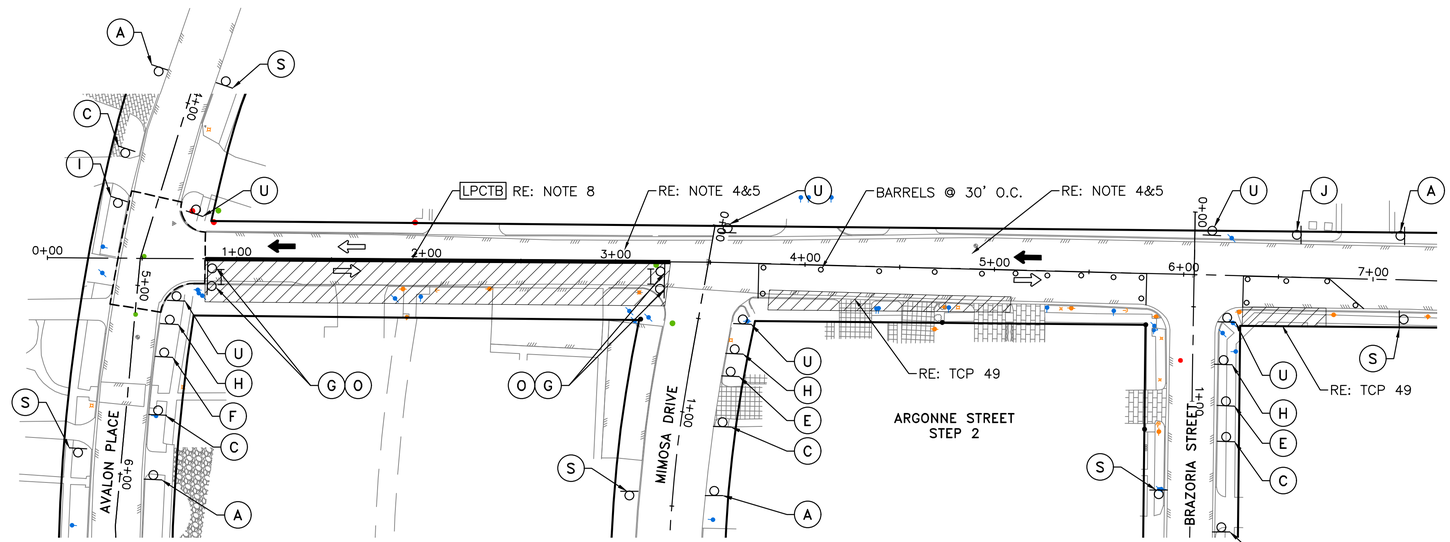
PHASE II – STEP 1
ARGONNE STREET

LEGEND:

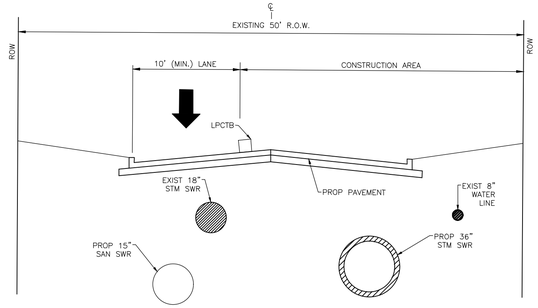
- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
- 1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
   CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC



STEP 2



PHASE II – STEP 2
ARGONNE STREET

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U		
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	ARGONNE STREET DETOUR →	ARGONNE STREET DETOUR ←	ARGONNE STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →		
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"		

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

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FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
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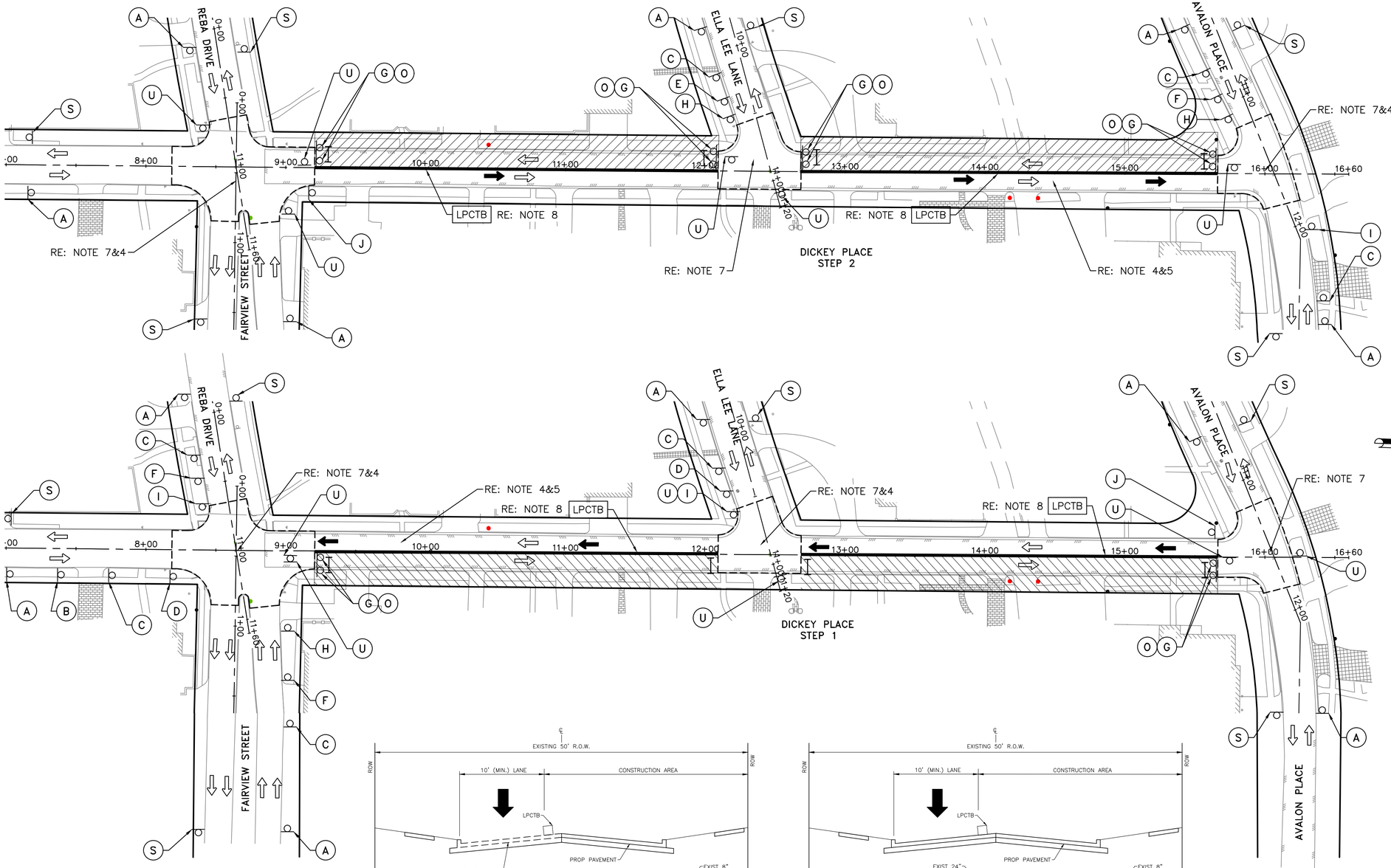
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-17
PHASE II – STEPS 1 & 2
ARGONNE STREET

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 273 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP17 PHASE II – STEPS 1 & 2 ARGONNE STREET.dwgTCP-17 Jan 21 , 2026 – 4:42PM OMarcelo



PHASE II – STEP 1
DICKEY PLACE

PHASE II – STEP 2
DICKEY PLACE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

STEP1 & STEP2 NOTES:

- STEP1: DICKEY PLACE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF ROADWAY BETWEEN REBA DRIVE AND AVALON PLACE.
- STEP2: DICKEY PLACE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF ROADWAY BETWEEN REBA DRIVE AND AVALON PLACE.

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	DICKEY PLACE DETOUR →	DICKEY PLACE DETOUR ←	DICKEY PLACE DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / OR / ONE WAY
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" OR R6–1(R) 12"X36"

REV.	DATE	DESCRIPTION	BY

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

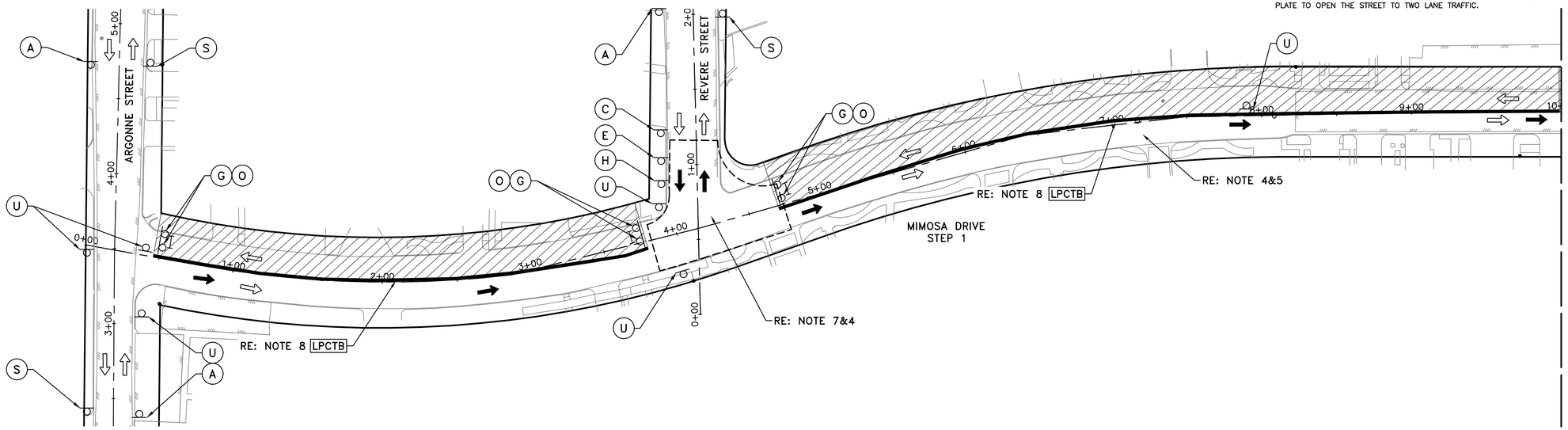
STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–18
PHASE II – STEPS 1 & 2
DICKEY PLACE

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 274 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP18 PHASE II – STEPS 1 & 2 DICKEY PLACE.dwg|TCP–18 Jon 21 , 2026 – 4:42PM OMarcelo



STEP 2 NOTES:

- MIMOSA DRIVE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY BETWEEN SPANN STREET TO DEAD END. FLAGGER SHALL BE PRESENT TO MAINTAIN TWO WAY TRAFFIC DURING WORKING HOURS ANY EXCAVATION SHALL BE COVERED WITH STEEL PLATE TO OPEN THE STREET TO TWO LANE TRAFFIC.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
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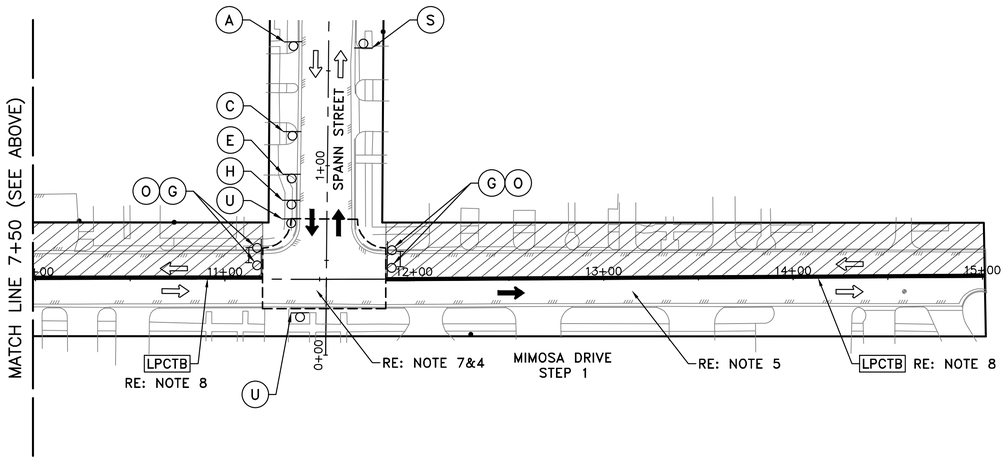
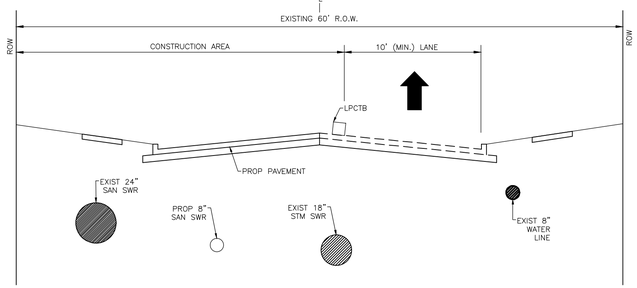
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC





PHASE III - STEP 1
MIMOSA DRIVE

REV.	DATE	DESCRIPTION	BY

OTHON, INC. TBPE NO. F-1471

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STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER
1/21/2026

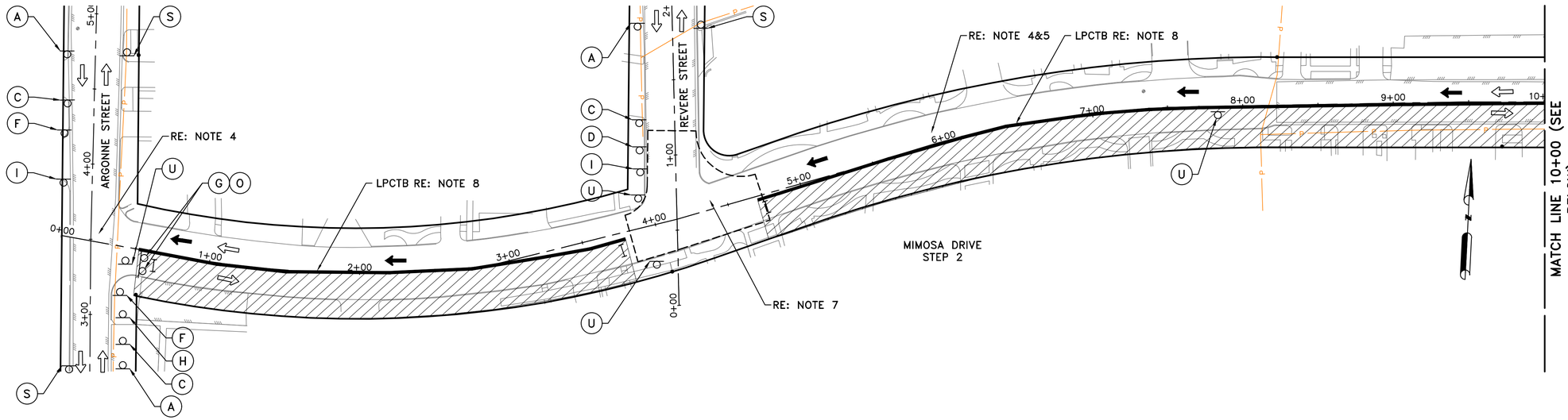
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-19
PHASE III - STEP 1
MIMOSA DRIVE

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 275 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	MIMOSA STREET / DETOUR →	MIMOSA STREET / DETOUR ←	MIMOSA STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / ONE WAY
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"

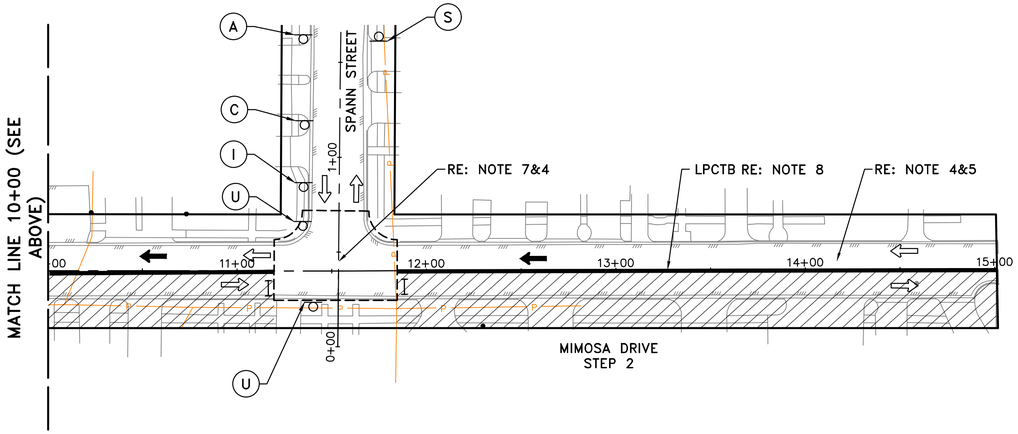
R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP19 PHASE III - STEP 1 MIMOSA DRIVE.dwgTCP-19 Jan 21 , 2026 - 4:43PM OMarcelo



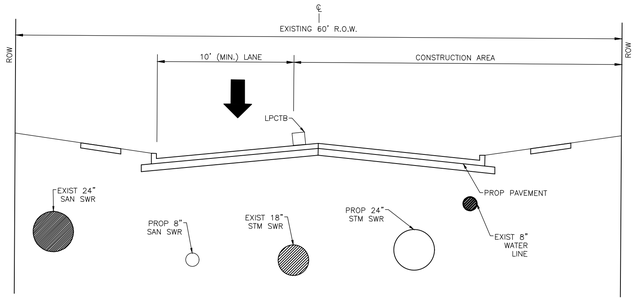
MIMOSA DRIVE
STEP 2

STEP 1 NOTES:

- MIMOSA DRIVE CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH–HALF OF ROADWAY BETWEEN ARGONNE STREET TO DEAD END. FLAGGER SHALL BE PRESENT TO MAINTAIN TWO WAY TRAFFIC DURING WORKING HOURS ANY OPEN EXCAVATION SHALL BE COVERED WITH STEEL PLATE TO OPEN THE STREET TO TWO LANE TRAFFIC.



MIMOSA DRIVE
STEP 2



PHASE III – STEP 2
MIMOSA DRIVE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB)
- DIRECTION OF EXISTING TRAFFIC
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REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	MIMOSA STREET / DETOUR →	MIMOSA STREET / DETOUR ←	MIMOSA STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" OR R6–1(R) 12"X36"

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STATE OF TEXAS
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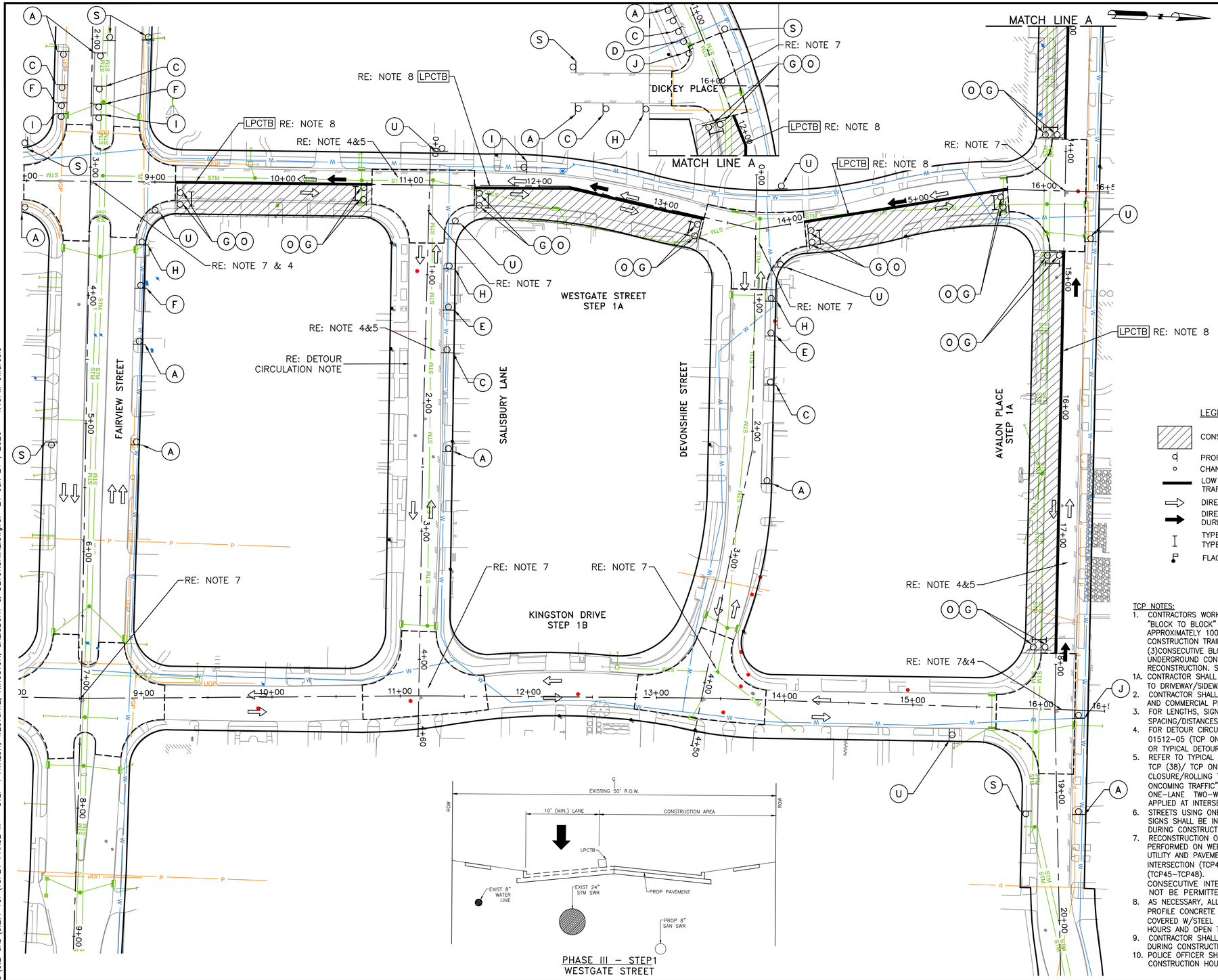
PROFESSIONAL ENGINEER
1/21/2026

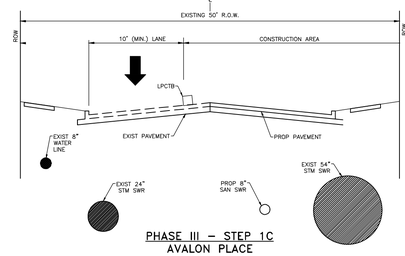
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–20
PHASE III – STEP 2
MIMOSA DRIVE

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 276 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP20 PHASE III – STEP 2 MIMOSA DRIVE.dwgTCP–20 Jan 21 , 2026 – 4:43PM OMarcelo





PHASE III – STEP 1C
AVALON PLACE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

STEP1 NOTES:

- STEP1A: WESTGATE ST CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF WESTGATE ST BETWEEN FAIRVIEW AND AVALON.
- STEP1A: AVALON PLACE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF AVALON PLACE BETWEEN DICKEY AND PL AND KINGSTON ST.

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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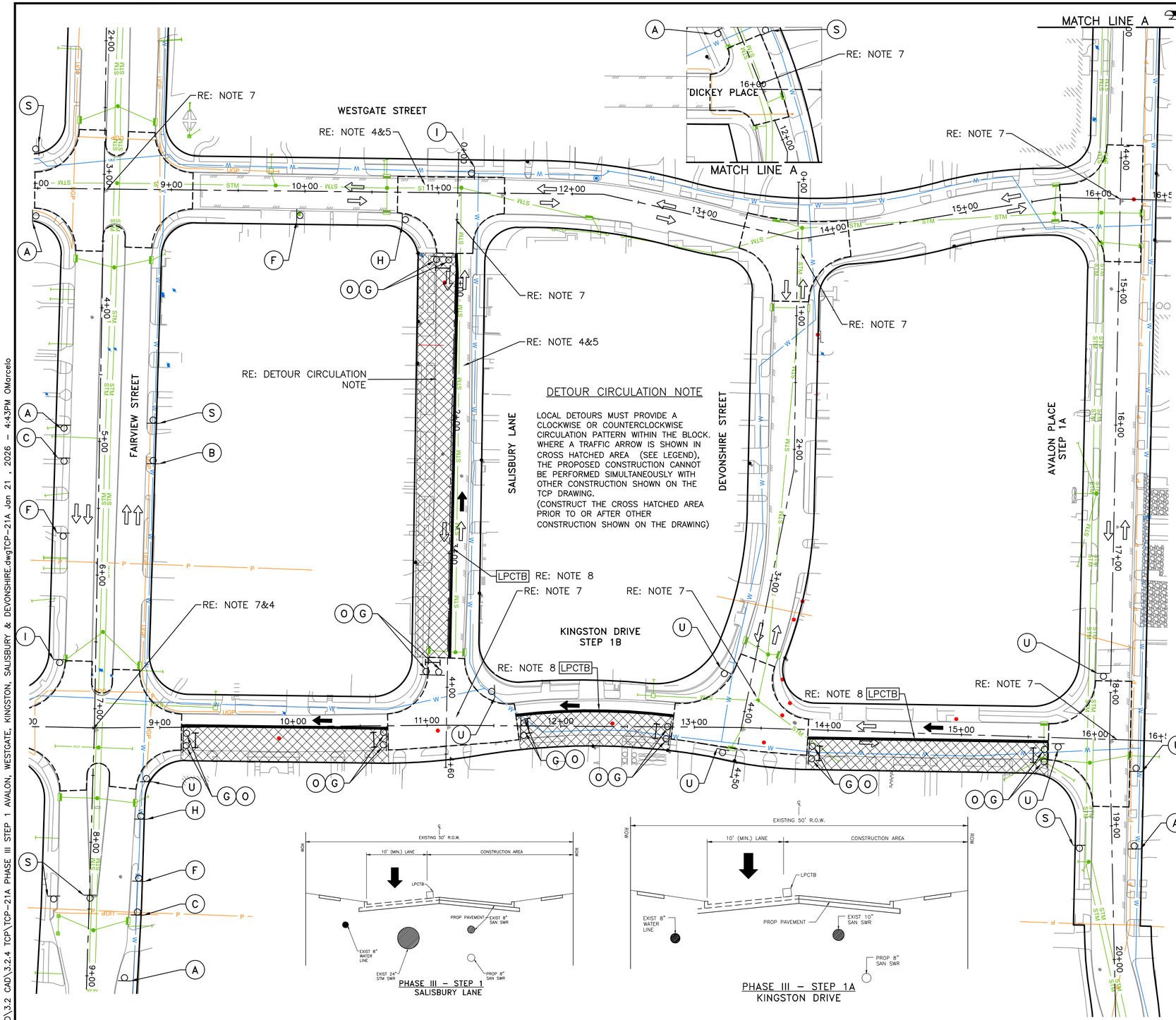
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-21
PHASE III – STEP 1
AVALON,WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 277 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U			
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME DETOUR →	STREET NAME DETOUR ←	STREET NAME DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) 12"X36" OR ONE WAY R6-1(R) 12"X36"			
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"				

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP21 PHASE III – STEP 1 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE.dwg TCP-21 Jan 21 , 2026 – 4:43PM OMarcelo



PHASE III – STEP 1
SALISBURY LANE

PHASE III – STEP 1A
KINGSTON DRIVE

STEP1 NOTES:

- STEP1B: SALISBURY ST: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF SALISBURY ST BETWEEN WESTGATE ST AND KINGSTON DRIVE
- STEP1B: KINGSTON DR. CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OR ROADWAY BETWEEN FAIRVIEW AND DEVONSHIRE.
- STEP 1A, 1B, 1C SHALL BE CONSTRUCTED IN SEQUENCE.

LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
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5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME / DETOUR →	STREET NAME / DETOUR ←	STREET NAME / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / OR / ONE WAY	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"	

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STATE OF TEXAS
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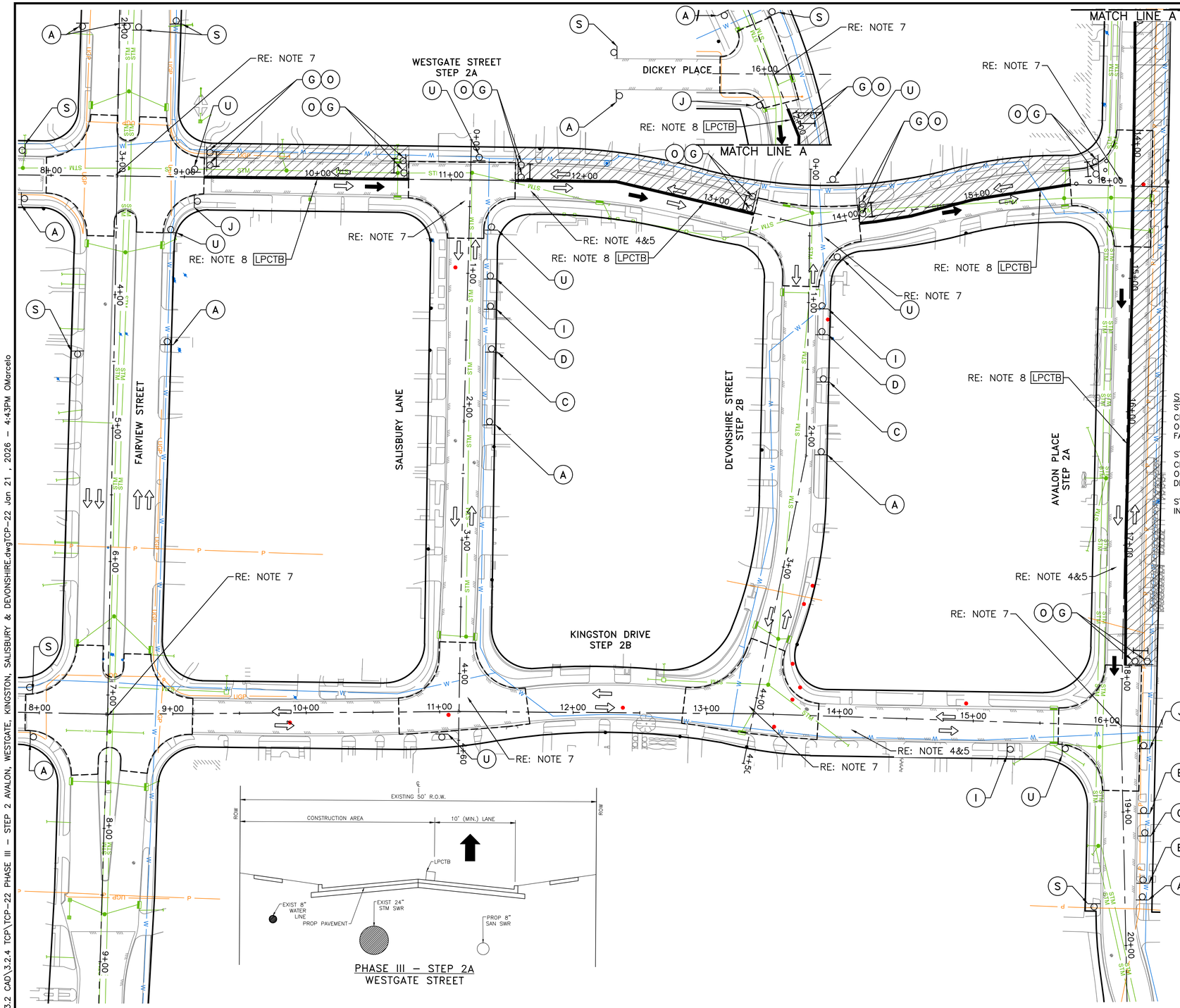
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-21A
PHASE III – STEP 1
AVALON,WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE

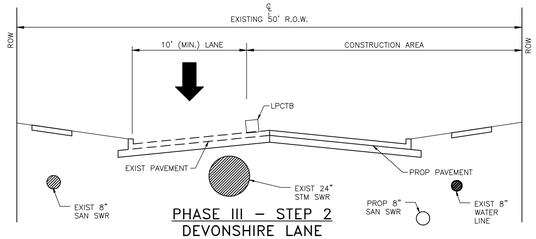
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 277AOF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-21A PHASE III STEP 1 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE.dwgTCP-21A Jan 21 , 2026 - 4:43PM OMarcelo

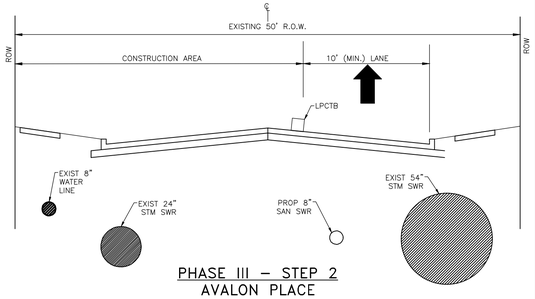
R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-22 PHASE III - STEP 2 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE.dwg|TCP-22 Jan 21 , 2026 - 4:43PM OMarcelo



PHASE III – STEP 2A
WESTGATE STREET



PHASE III – STEP 2
DEVONSHIRE LANE



PHASE III – STEP 2
AVALON PLACE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

STEP2 NOTES:

STEP2A: WESTGATE ST:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF WESTGATE ST BETWEEN FAIRVIEW AND AVALON.

STEP2A: AVALON PLACE:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF AVALON PLACE BETWEEN DICKEY PL AND AND KINGSTON ST.

STEP 2A, 2B, 2C SHALL BE CONSTRUCTED IN SEQUENCE.

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
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2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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1/21/2026

CITY OF HOUSTON

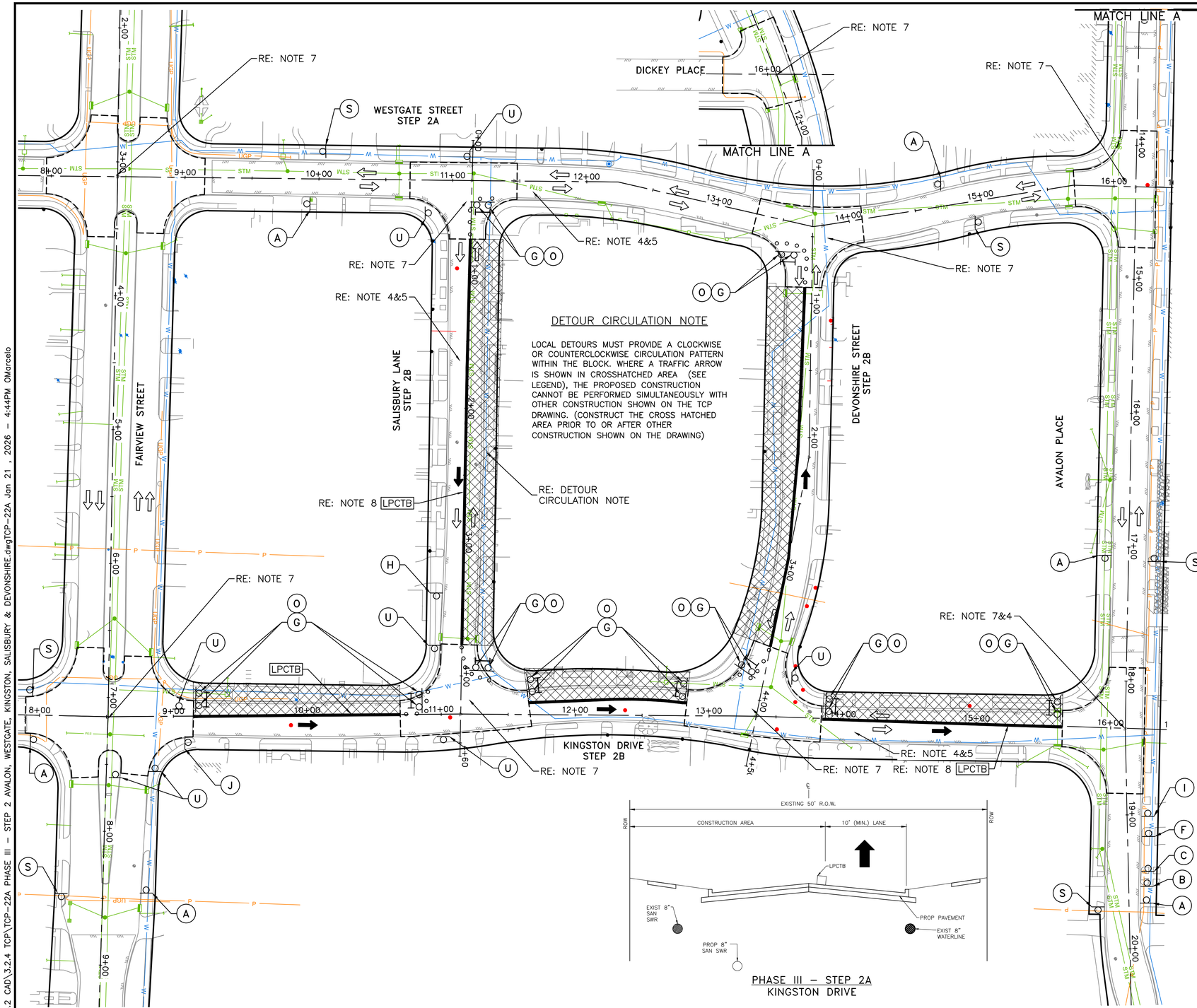
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

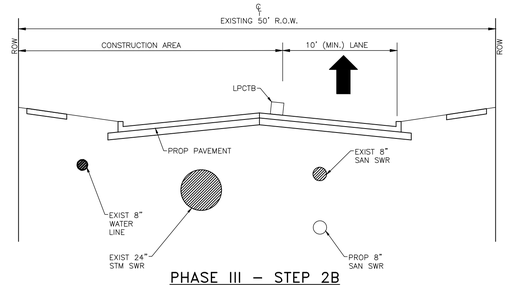
TCP-22
PHASE III – STEP 2
AVALON,WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 278 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME / DETOUR →	STREET NAME / DETOUR ←	STREET NAME / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"	



PHASE III – STEP 2A
KINGSTON DRIVE



PHASE III – STEP 2B
SALISBURY LANE

LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

STEP2 NOTES

STEP2B: KINGSTON DRIVE:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF ROADWAY BETWEEN FAIRVEIW AN AVALON.

STEP2B: SALISBURY ST AND DEVONSHIRE ST:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF SALISBURY ST AND SOUTH HALF OF DEVONSHIRE ST BETWEEN WESTGATE ST AND KINGSTON ST

STEP 2A, 2B, 2C SHALL BE CONSTRUCTED IN SEQUENCE.

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP–01
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6. STREETS USING ONE–WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3–WAY INTERSECTION (TCP42–TCP44)/TCP 4–WAY INTERSECTION (TCP45–TCP48).
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8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2–WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

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FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
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PROFESSIONAL ENGINEER
1/21/2026

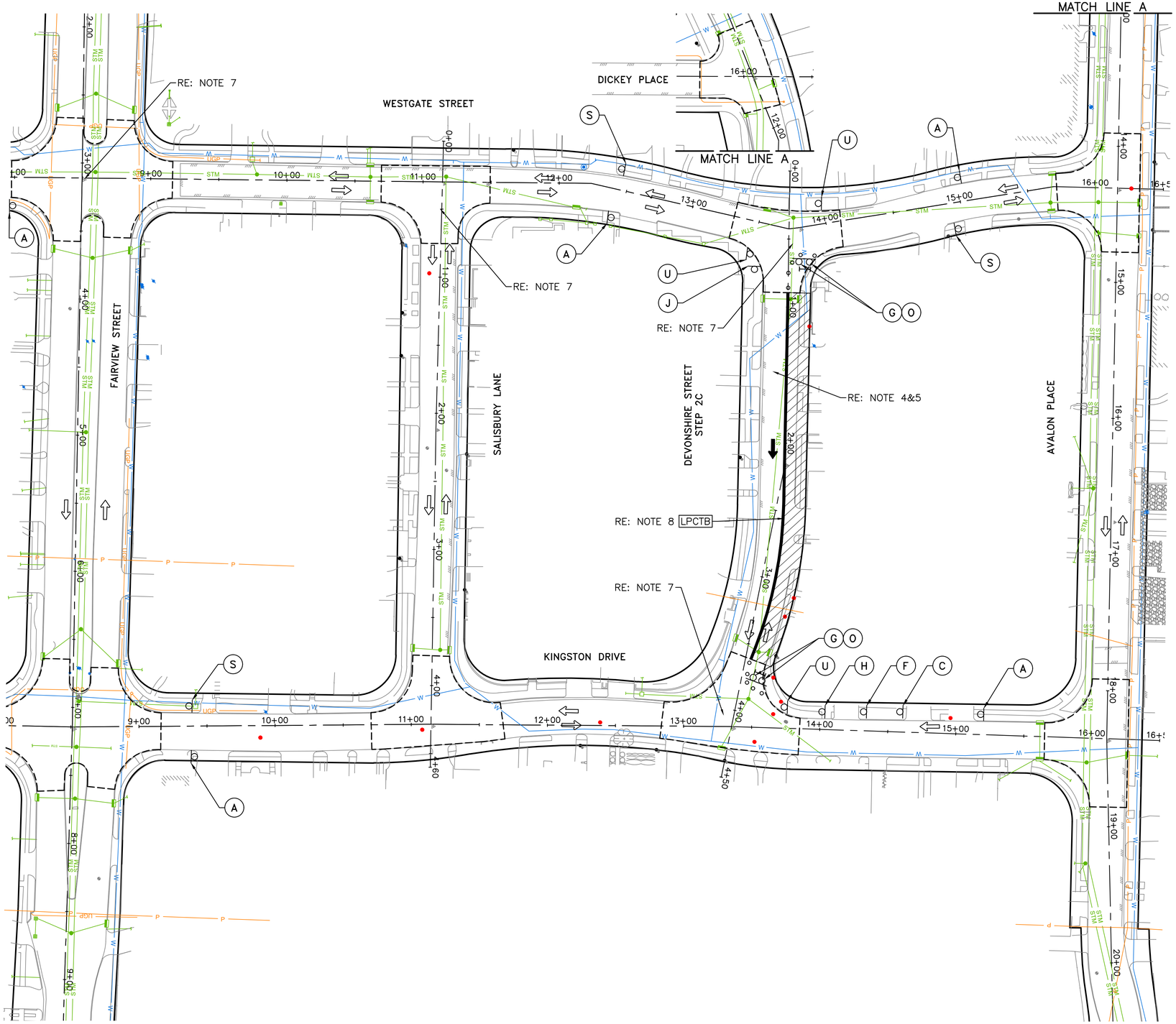
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

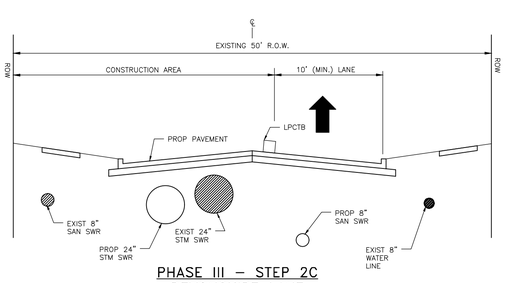
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP–22A
PHASE III – STEP 2
AVALON,WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO.278A OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME DETOUR →	STREET NAME DETOUR ←	STREET NAME DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" OR R6–1(R) 12"X36"

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–22A PHASE III – STEP 2 AVALON, WESTGATE, KINGSTON, SALISBURY & DEVONSHIRE.dwgTCP–22A Jan 21 , 2026 – 4:44PM OMarcelo





PHASE III – STEP 2C
DEVONSHIRE LANE

STEP 2 NOTES:

STEP 2C: DEVONSHIRE ST.:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY FROM WESTGATE ST. TO KINGSTON DR. AHEAD OF STEP 2D

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP–01
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2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512–05 (TCP ONE LANE CLOSURE) DATED JUL–01–2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE–LANE TWO–WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
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1/21/2026

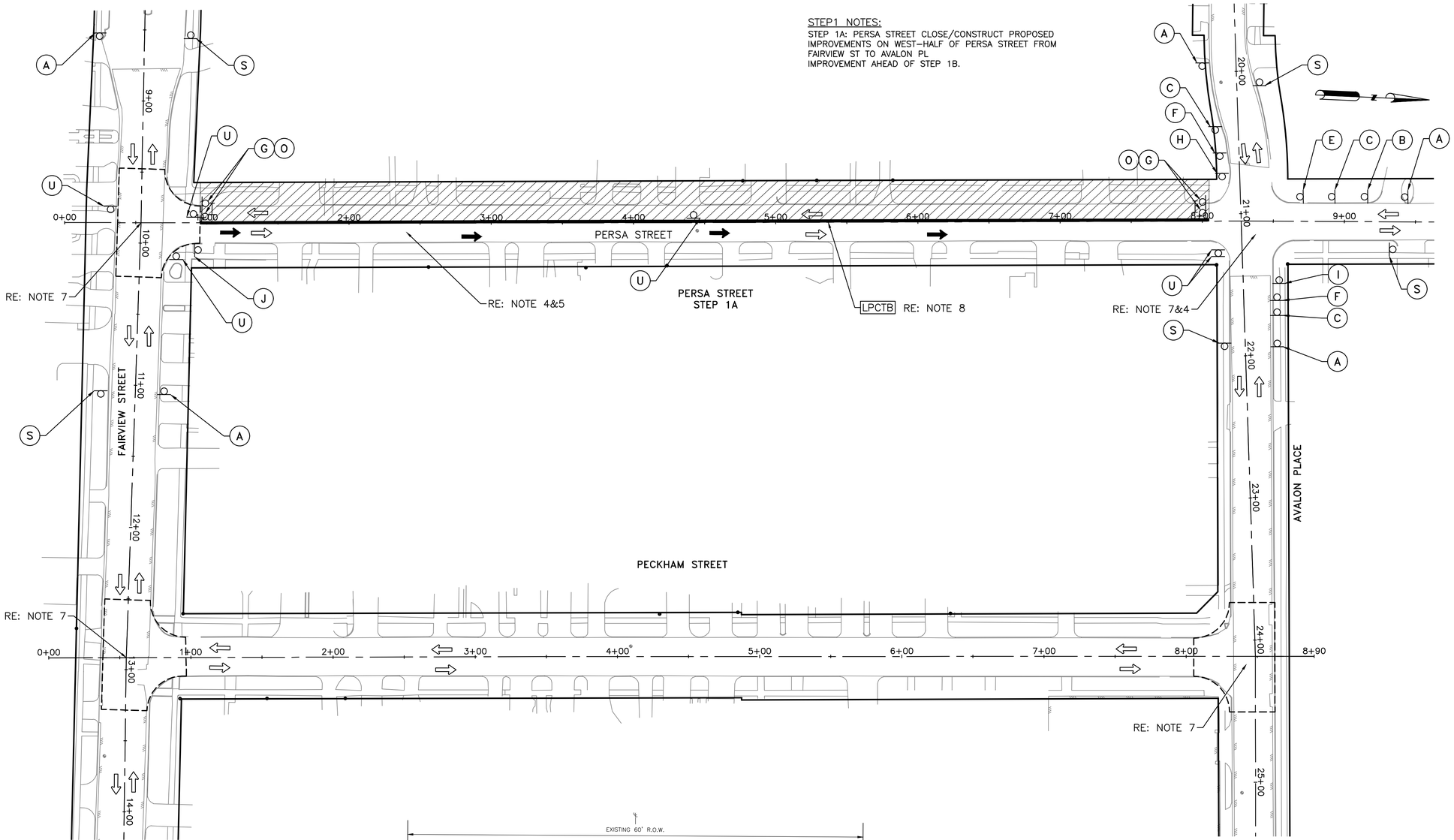
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–23
PHASE III – STEP 2
KINGSTON, DEVONSHIRE

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 279 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME DETOUR →	STREET NAME DETOUR ←	STREET NAME DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6–1(L) 12"X36" OR ONE WAY R6–1(R) 12"X36"
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–23 PHASE III – STEP 2 KINGSTON, DEVONSHIRE.dwgTCP–23 Jan 21 , 2026 – 4:44PM OMarcelo



STEP1 NOTES:

STEP 1A: PERSA STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST–HALF OF PERSA STREET FROM FAIRVIEW ST TO AVALON PL
IMPROVEMENT AHEAD OF STEP 1B.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

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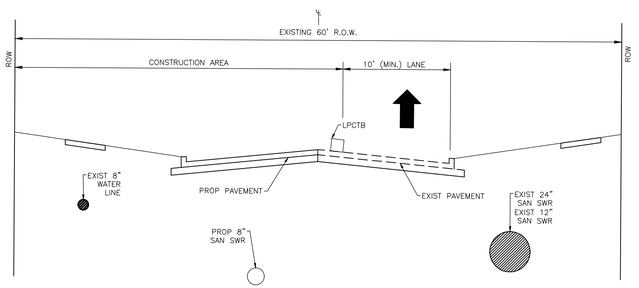

PHASE IV – STEP 1A
PERSA STREET

REV.	DATE	DESCRIPTION	BY

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1/21/2026

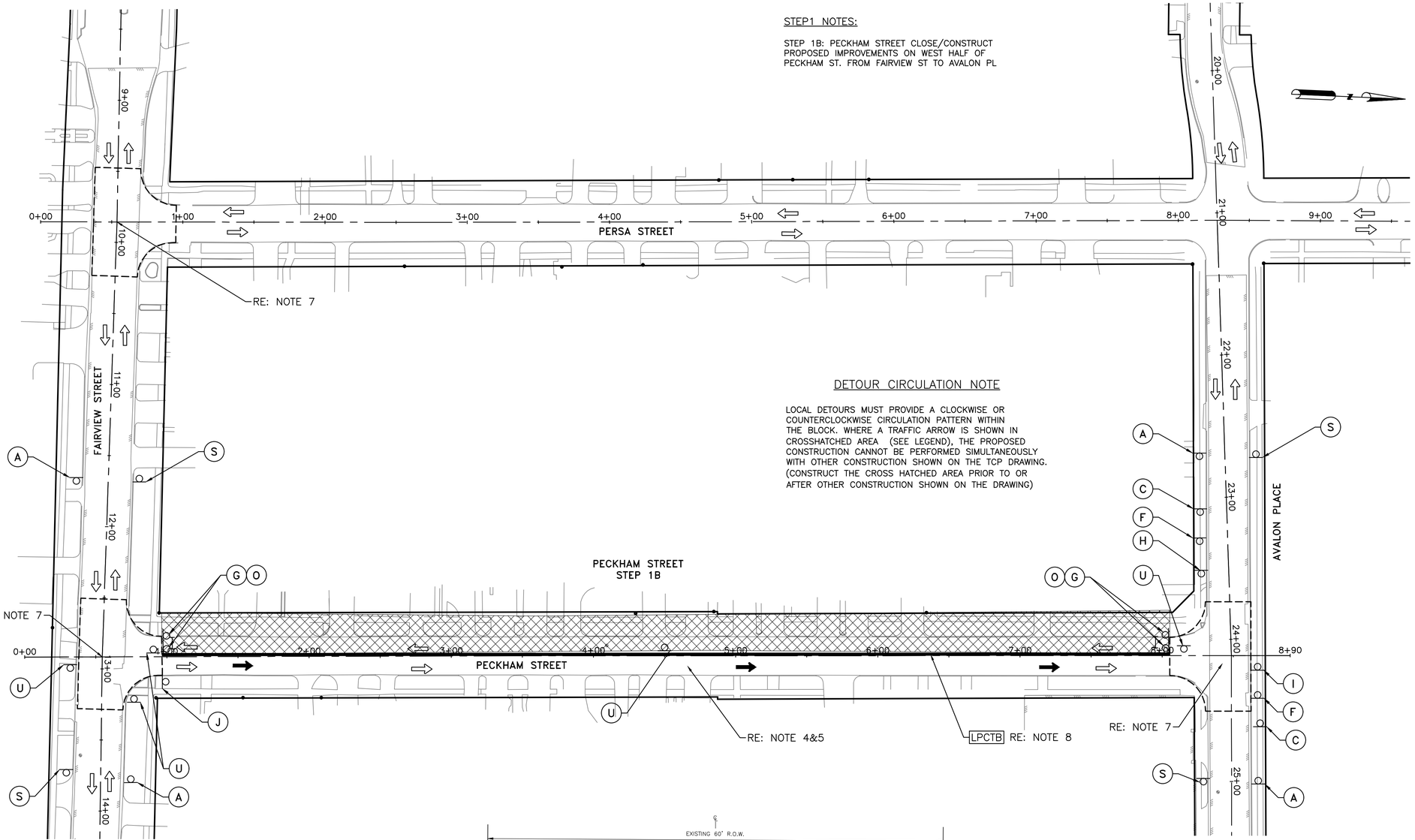
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP–24
PHASE IV – STEP1
PERSA ST & PECKHAM ST

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 280 OF 391

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET / DETOUR	PERSA STREET / DETOUR	PERSA STREET / DETOUR	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / ONE WAY	
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" OR R6–1(R) 12"X36"	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–24 PHASE IV – STEP 1 PERSA ST & PECKHAM ST.dwgTCP–24 Jan 21 , 2026 – 4:44PM OMarcelo

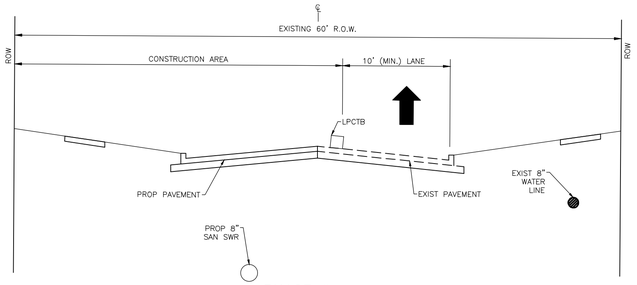


STEP1 NOTES:

STEP 1B: PECKHAM STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF PECKHAM ST. FROM FAIRVIEW ST TO AVALON PL

DETOUR CIRCULATION NOTE

LOCAL DETOURS MUST PROVIDE A CLOCKWISE OR COUNTERCLOCKWISE CIRCULATION PATTERN WITHIN THE BLOCK. WHERE A TRAFFIC ARROW IS SHOWN IN CROSSHATCHED AREA (SEE LEGEND), THE PROPOSED CONSTRUCTION CANNOT BE PERFORMED SIMULTANEOUSLY WITH OTHER CONSTRUCTION SHOWN ON THE TCP DRAWING. (CONSTRUCT THE CROSS HATCHED AREA PRIOR TO OR AFTER OTHER CONSTRUCTION SHOWN ON THE DRAWING)



PHASE IV – STEP 1B
PECKHAM STREET

LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–24A
PHASE IV – STEP1
PERSA ST & PECKHAM ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 208A OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET DETOUR →	WELCH STREET DETOUR ←	PECKHAM STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →	
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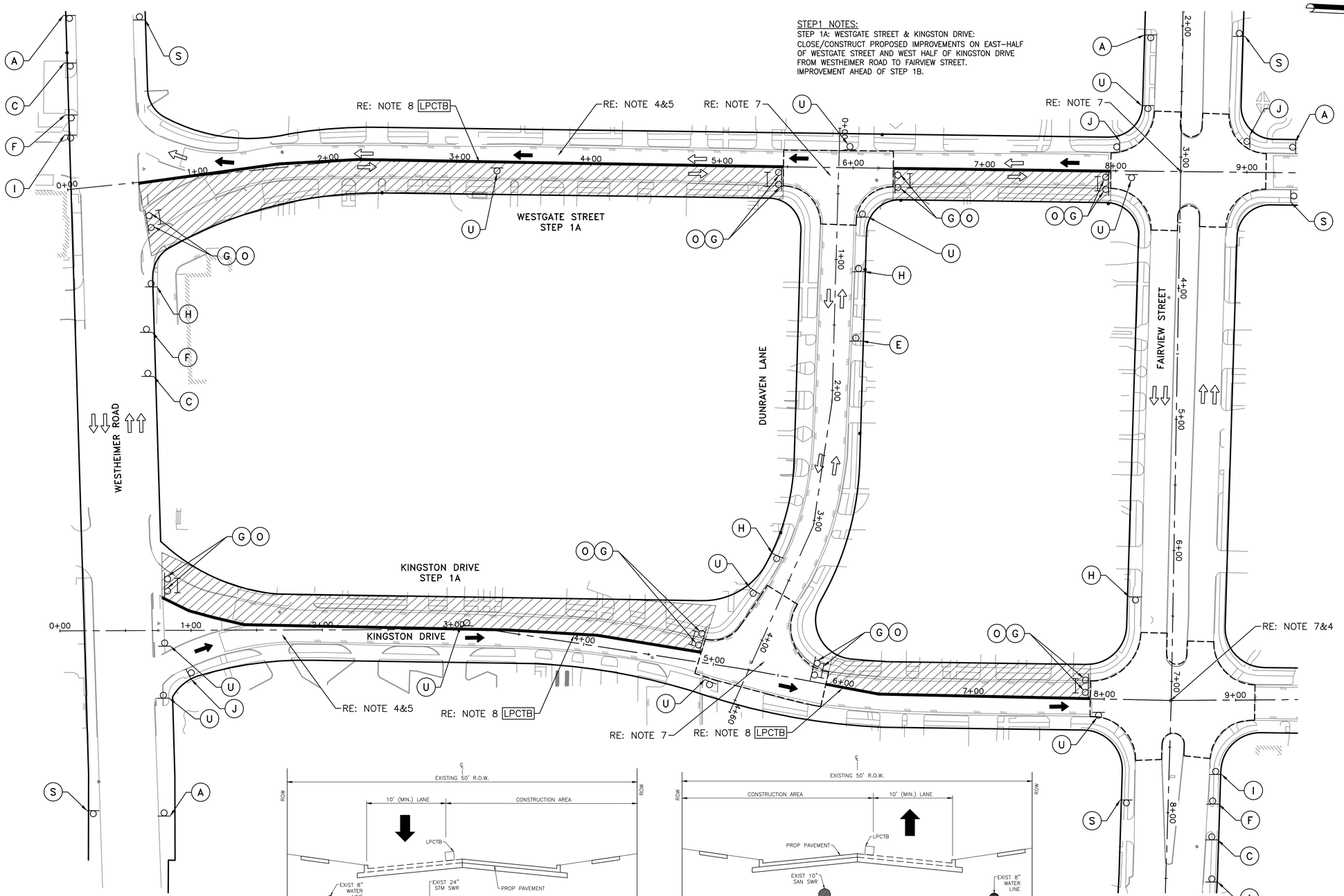
R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–24A PHASE IV – STEP 1 PERSA ST & PECKHAM ST.dwgTCP–24A Jan 21 , 2026 – 4:44PM OMarcelo



STEP1 NOTES:
STEP 1A: WESTGATE STREET & KINGSTON DRIVE:
CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST–HALF OF WESTGATE STREET AND WEST HALF OF KINGSTON DRIVE FROM WESTHEIMER ROAD TO FAIRVIEW STREET.
IMPROVEMENT AHEAD OF STEP 1B.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
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10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

PHASE IV – STEP 1A
WESTGATE STREET

PHASE IV – STEP 1A
KINGSTON DRIVE

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME / DETOUR →	STREET NAME / DETOUR ←	STREET NAME / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" OR R6–1(R) 12"X36"

REV.	DATE	DESCRIPTION	BY

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SUITE 100
HOUSTON, TEXAS 77074
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SURVEYED BY: AMANI ENGINEERING, INC.
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STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–25
PHASE IV – STEP 1
WESTGATE ST, KINGSTON ST & DUNRAVEN LN

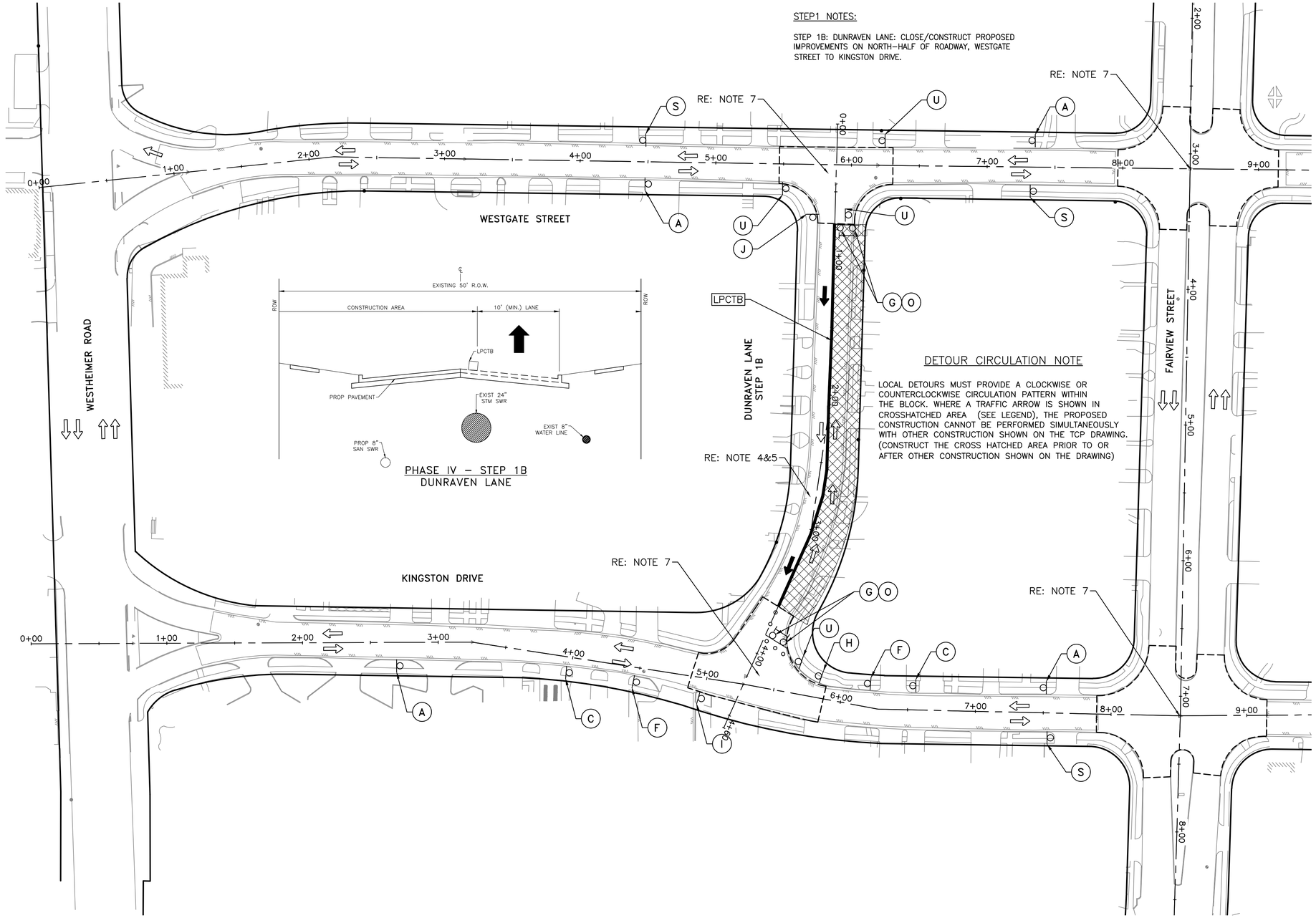
WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 281 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–25 PHASE IV – STEP 1 WESTGATE ST, KINGSTON ST & DUNRAVEN LN.dwgTCP–25 Jan 21 , 2026 – 4:44PM OMarcelo

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-25A PHASE IV - STEP 1 WESTGATE ST, KINGSTON ST & DUNRAVEN LN.dwg\TCP-25A Jan 21, 2026 - 4:45PM OMarcelo

STEP1 NOTES:

STEP 1B: DUNRAVEN LANE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH-HALF OF ROADWAY, WESTGATE STREET TO KINGSTON DRIVE.



PHASE IV - STEP 1B
DUNRAVEN LANE

DETOUR CIRCULATION NOTE

LOCAL DETOURS MUST PROVIDE A CLOCKWISE OR COUNTERCLOCKWISE CIRCULATION PATTERN WITHIN THE BLOCK. WHERE A TRAFFIC ARROW IS SHOWN IN CROSSHATCHED AREA (SEE LEGEND), THE PROPOSED CONSTRUCTION CANNOT BE PERFORMED SIMULTANEOUSLY WITH OTHER CONSTRUCTION SHOWN ON THE TCP DRAWING. (CONSTRUCT THE CROSS HATCHED AREA PRIOR TO OR AFTER OTHER CONSTRUCTION SHOWN ON THE DRAWING)

LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01
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6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
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REV.	DATE	DESCRIPTION	BY

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UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	STREET NAME / DETOUR →	STREET NAME / DETOUR ←	STREET NAME / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
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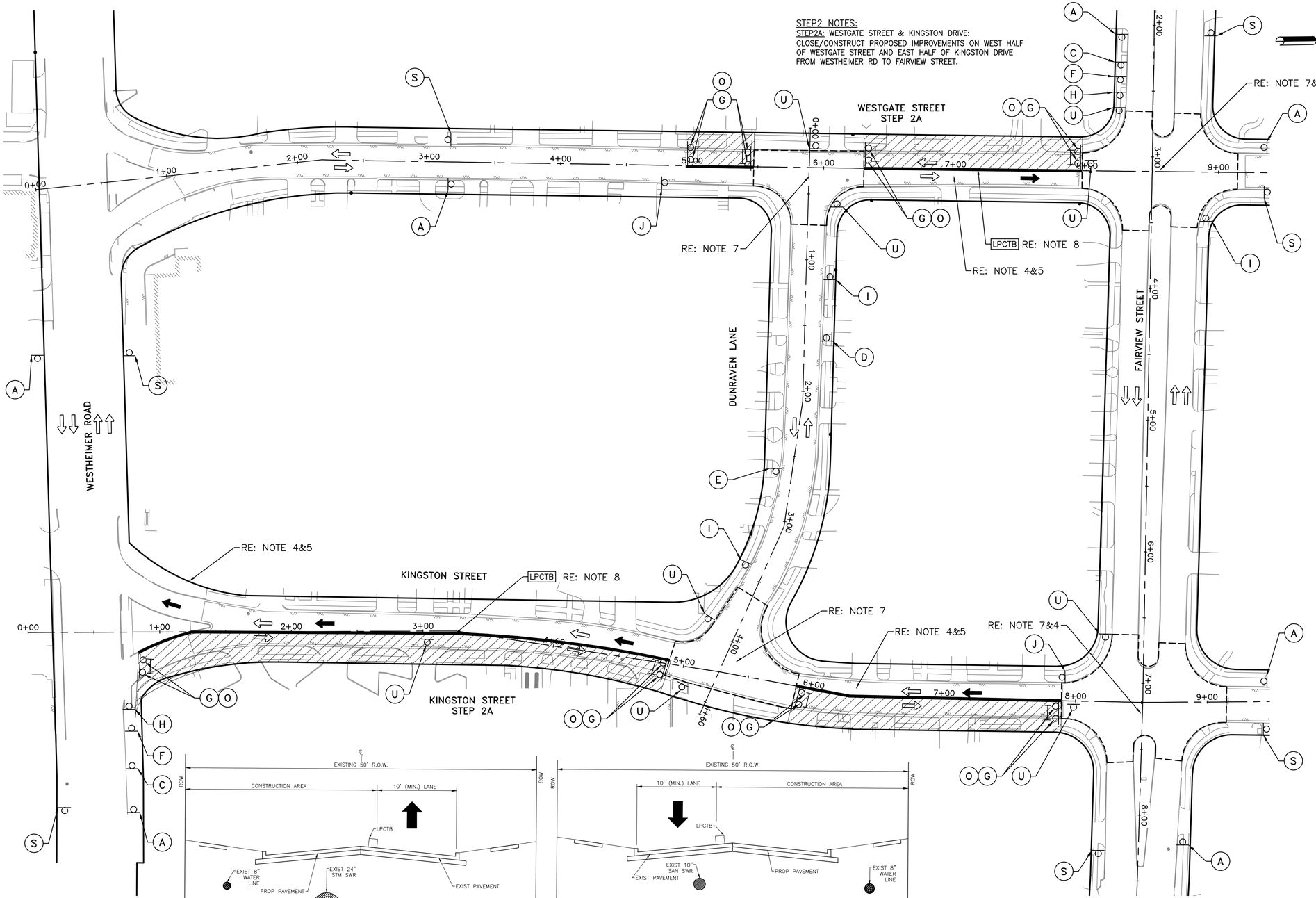
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-25A
PHASE IV - STEP 1
WESTGATE ST, KINGSTON ST & DUNRAVEN LN

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 281AOF 391	



PHASE IV – STEP 2A
WESTGATE STREET

PHASE IV – STEP 2A
KINGSTON DRIVE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
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TCP NOTES:

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-26
PHASE IV-STEP 2
WESTGATE ST. KINGSTON ST & DUNRAVEN LN

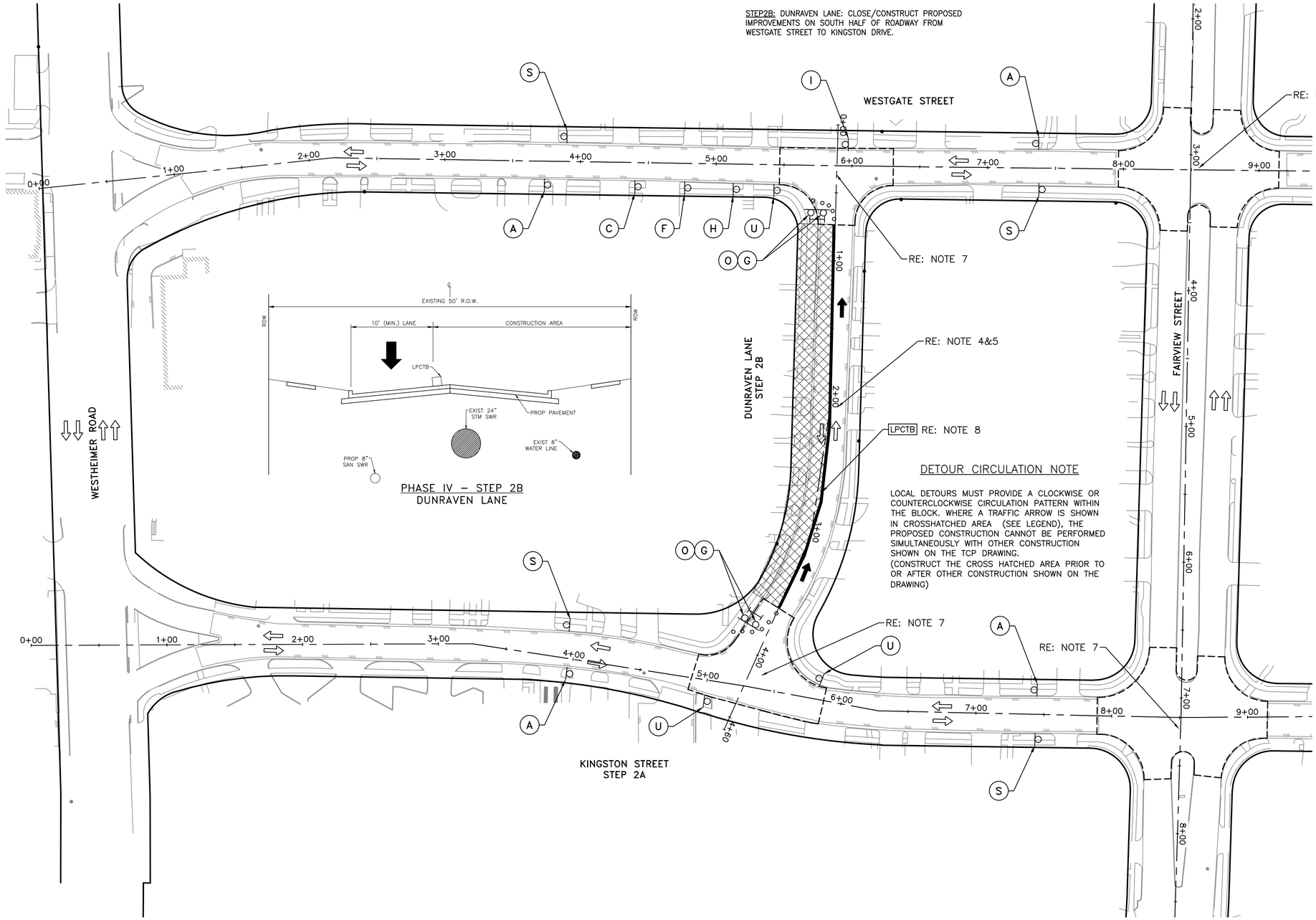
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 282 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-26 PHASE IV - STEP 2 WESTGATE ST, KINGSTON ST & DUNRAVEN LN.dwgTCP-26 Jan 21 , 2026 - 4:45PM OMarcelo

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-26A PHASE IV - STEP 2 WESTGATE ST, KINGSTON ST & DUNRAVEN LN.dwgTCP-26A Jan 21 , 2026 - 4:45PM OMarcelo

STEP2 NOTES:

STEP2B: DUNRAVEN LANE: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY FROM WESTGATE STREET TO KINGSTON DRIVE.



PHASE IV – STEP 2B
DUNRAVEN LANE

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A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
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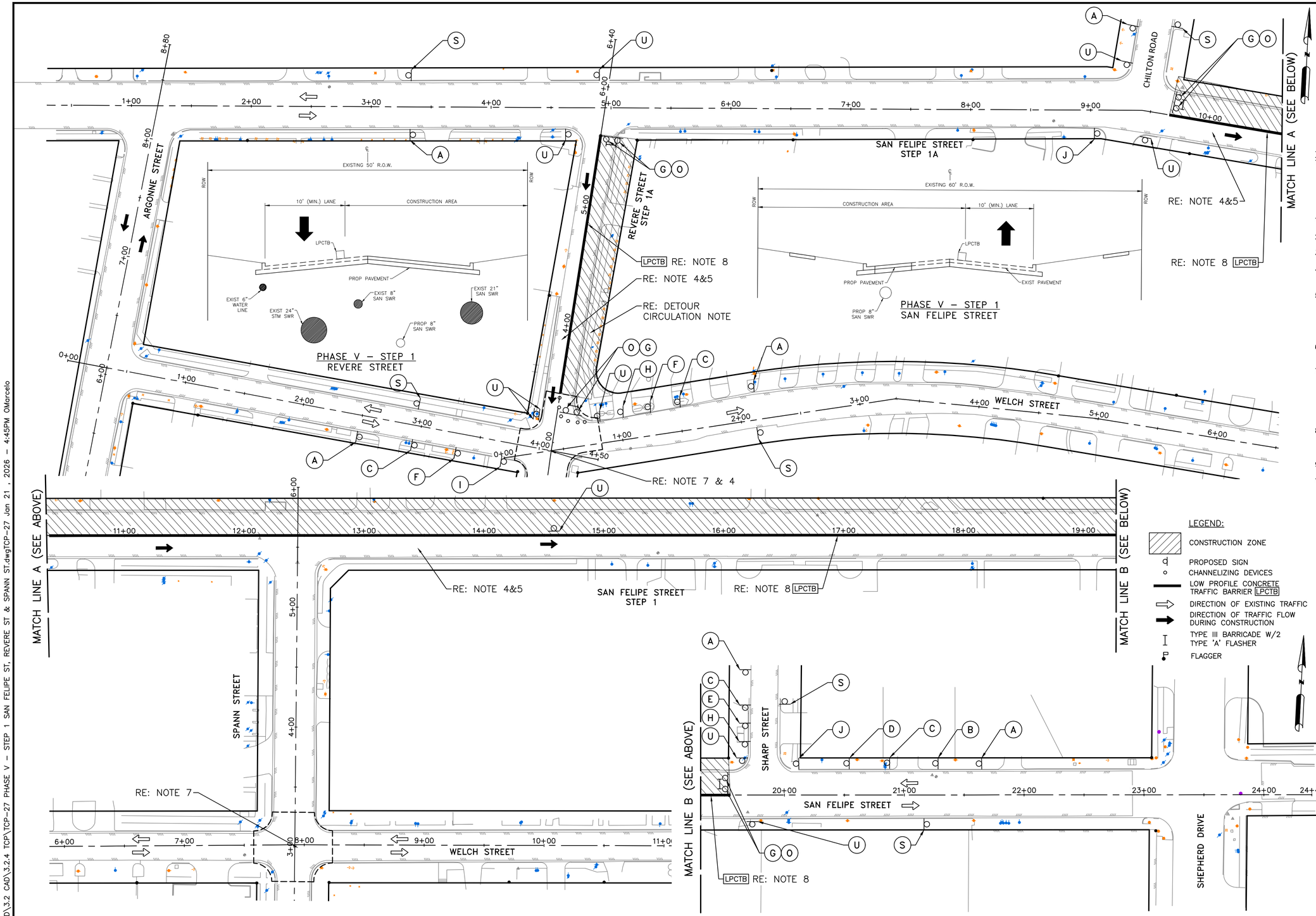

STEP 1 NOTES:

STEP 1A: SAN FELIPE STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY FROM CHILTON RD TO SHEPHERD DR

STEP 1A: REVERE STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF REVERE ST FROM WELCH TO SAN FELIPE AHEAD OF STEP 1B.

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LEGEND:

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- PROPOSED SIGN
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- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
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UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	SAN FELIPE STREET DETOUR →	SAN FELIPE STREET DETOUR ←	REVERE STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) OR ONE WAY R6-1(R)
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2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

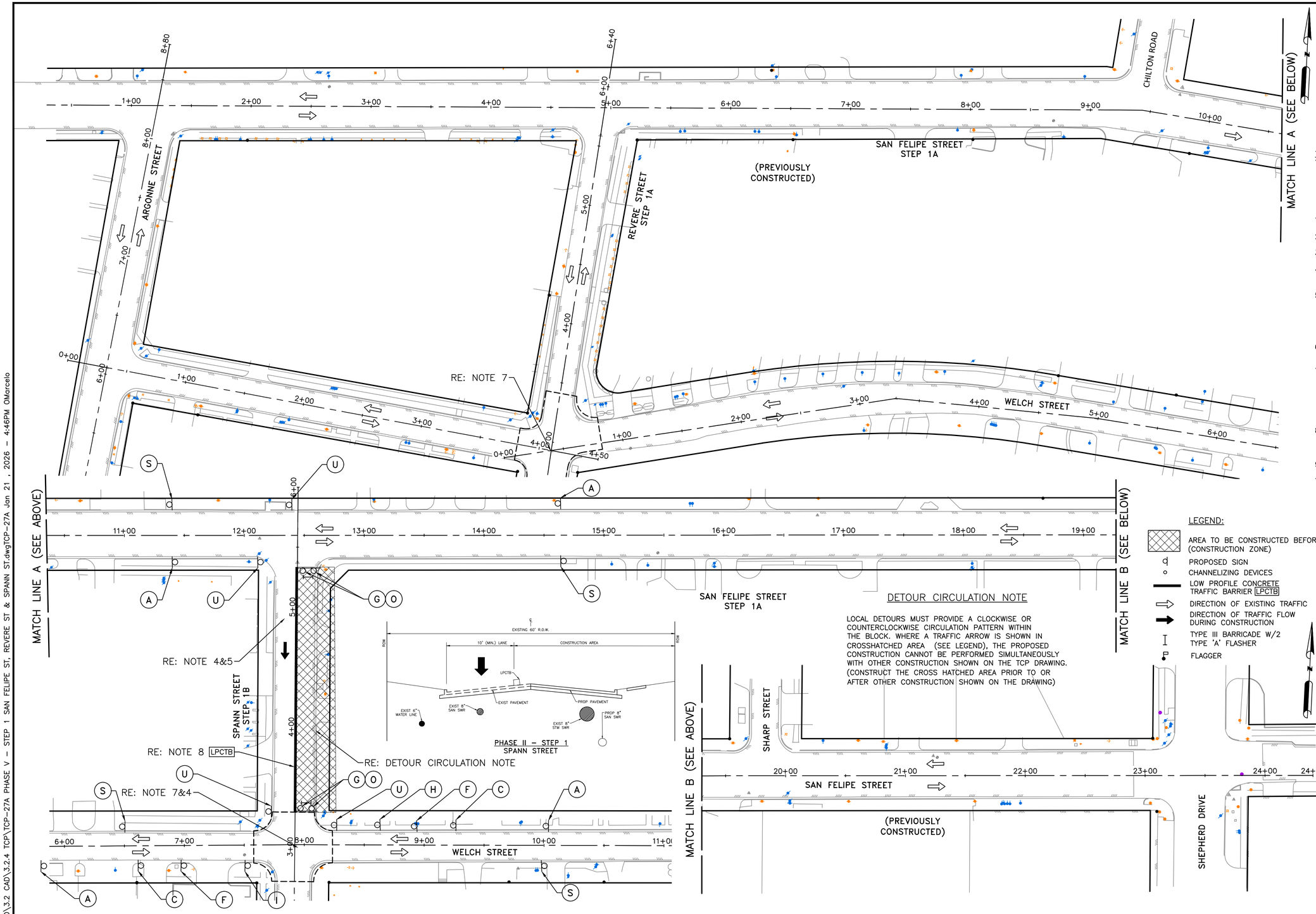
STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-27
PHASE V – STEP 1
SAN FELIPE ST, REVERE ST & SPANN ST

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1" = 40'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 283 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-27 PHASE V – STEP 1 SAN FELIPE ST, REVERE ST & SPANN ST.dwgTCP-27 Jan 21 , 2026 – 4:45PM OMarcelo



STEP 1 NOTES:

STEP 1B: SPANN STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF SPANN STREET FROM WELCH TO SAN FELIPE ST.

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP–01
- 1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512–05 (TCP ONE LANE CLOSURE) DATED JUL–01–2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE–LANE TWO–WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE–WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3–WAY INTERSECTION (TCP42–TCP44)/TCP 4–WAY INTERSECTION (TCP45–TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2–WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

DETOUR CIRCULATION NOTE

LOCAL DETOURS MUST PROVIDE A CLOCKWISE OR COUNTERCLOCKWISE CIRCULATION PATTERN WITHIN THE BLOCK. WHERE A TRAFFIC ARROW IS SHOWN IN CROSSHATCHED AREA (SEE LEGEND), THE PROPOSED CONSTRUCTION CANNOT BE PERFORMED SIMULTANEOUSLY WITH OTHER CONSTRUCTION SHOWN ON THE TCP DRAWING. (CONSTRUCT THE CROSS HATCHED AREA PRIOR TO OR AFTER OTHER CONSTRUCTION SHOWN ON THE DRAWING)

LEGEND:

- AREA TO BE CONSTRUCTED BEFORE OR AFTER (CONSTRUCTION ZONE)
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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1/21/2026

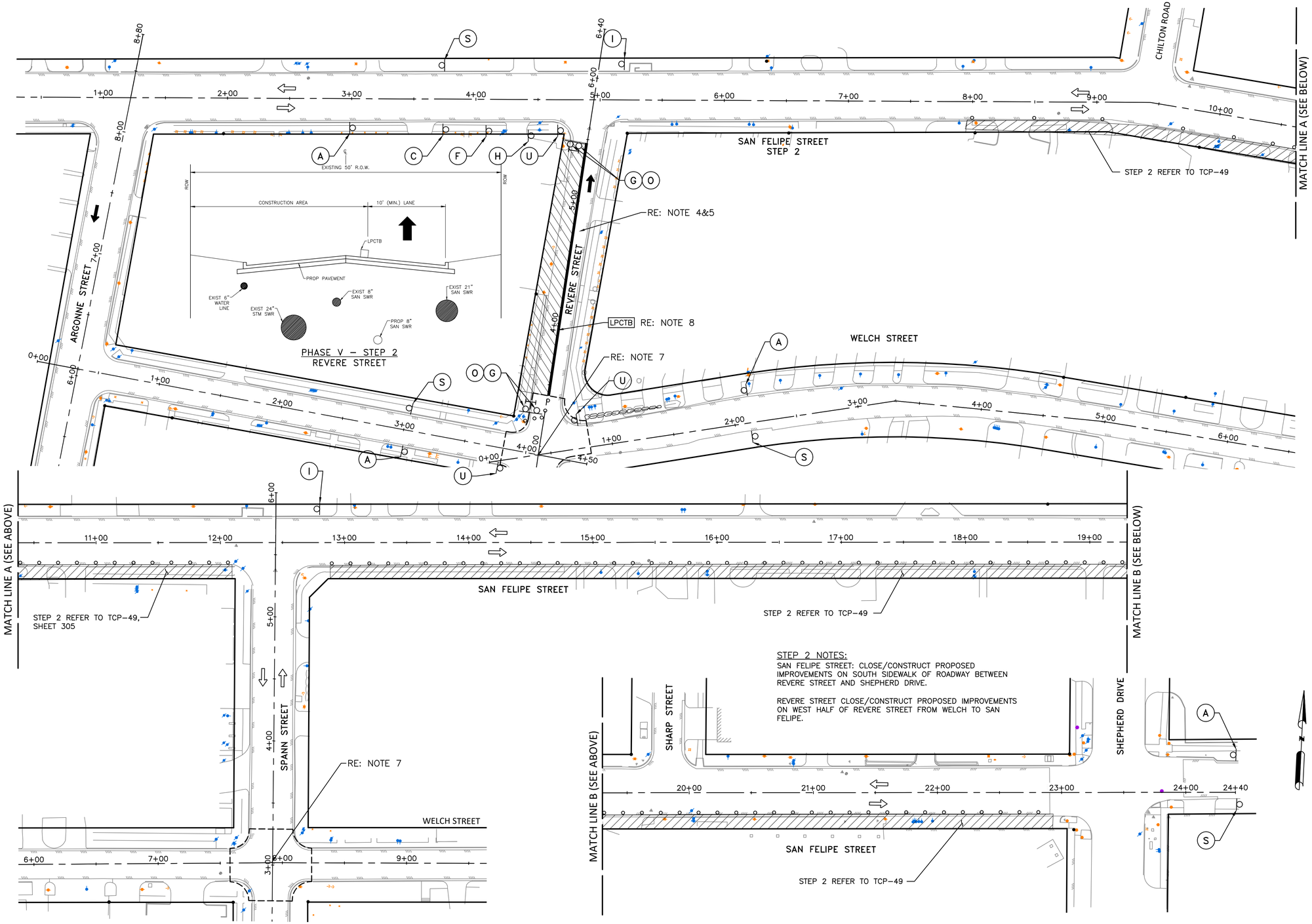
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–27A
PHASE V – STEP 1
SAN FELIPE ST, REVERE ST & SPANN ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 283A OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	SAN FELIPE STREET DETOUR →	SAN FELIPE STREET DETOUR ←	SPANN STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6–1(L) 12"X36" OR ONE WAY R6–1(R) 12"X36"
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–27A PHASE V – STEP 1 SAN FELIPE ST, REVERE ST & SPANN ST.dwgTCP–27A Jan 21 , 2026 – 4:46PM OMarcelo



LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

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7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

STEP 2 NOTES:

SAN FELIPE STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH SIDEWALK OF ROADWAY BETWEEN REVERE STREET AND SHEPHERD DRIVE.

REVERE STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF REVERE STREET FROM WELCH TO SAN FELIPE.

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET DETOUR →	WELCH STREET DETOUR ←	REVERE STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) 12"X36" OR ONE WAY R6-1(R) 12"X36"	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"		

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1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP-28
PHASE V – STEP 2
SAN FELIPE ST, REVERE ST & SPANN ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 284 OF 391	

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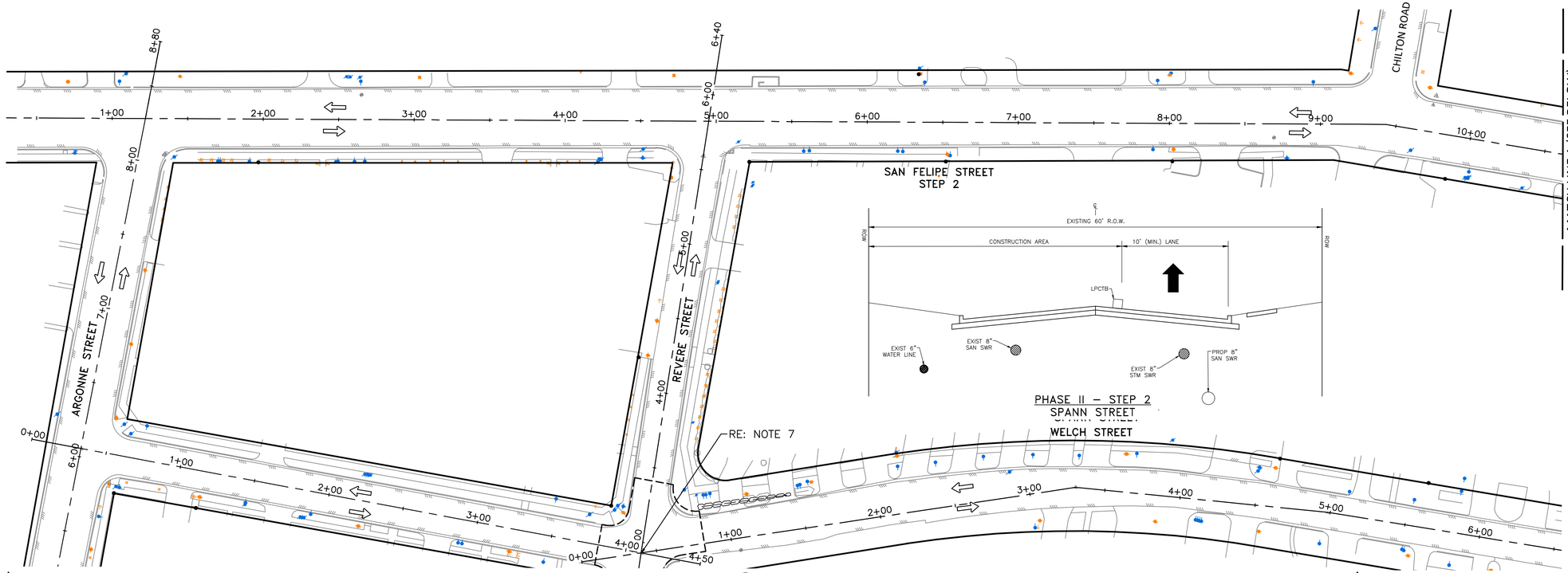

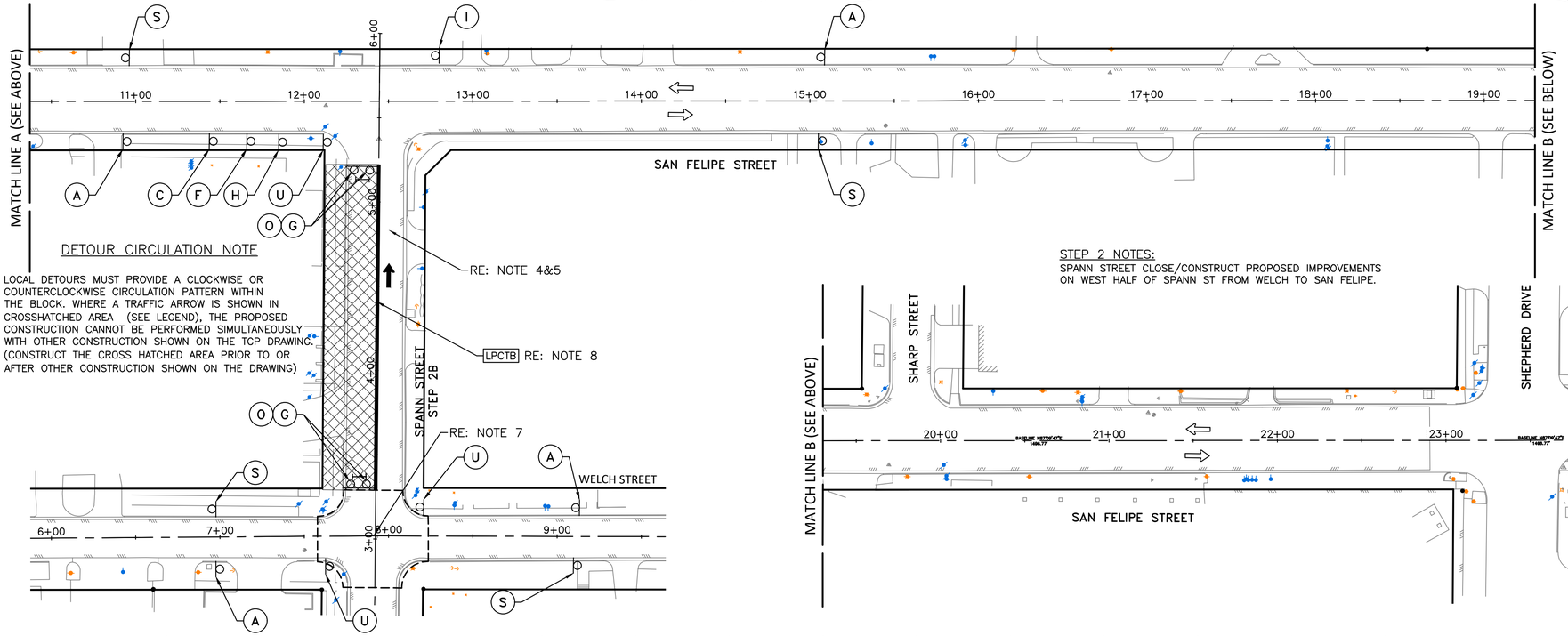

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STEP 2 NOTES:

SPANN STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF SPANN ST FROM WELCH TO SAN FELIPE.

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	WELCH STREET DETOUR →	WELCH STREET DETOUR ←	SPANN STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) 12"X36" OR ONE WAY R6-1(R) 12"X36"
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- CHANNELIZING DEVICES
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1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–28A
PHASE V – STEP 2
SAN FELIPE ST, REVERE ST & SPANN ST

WBS NUMBER	
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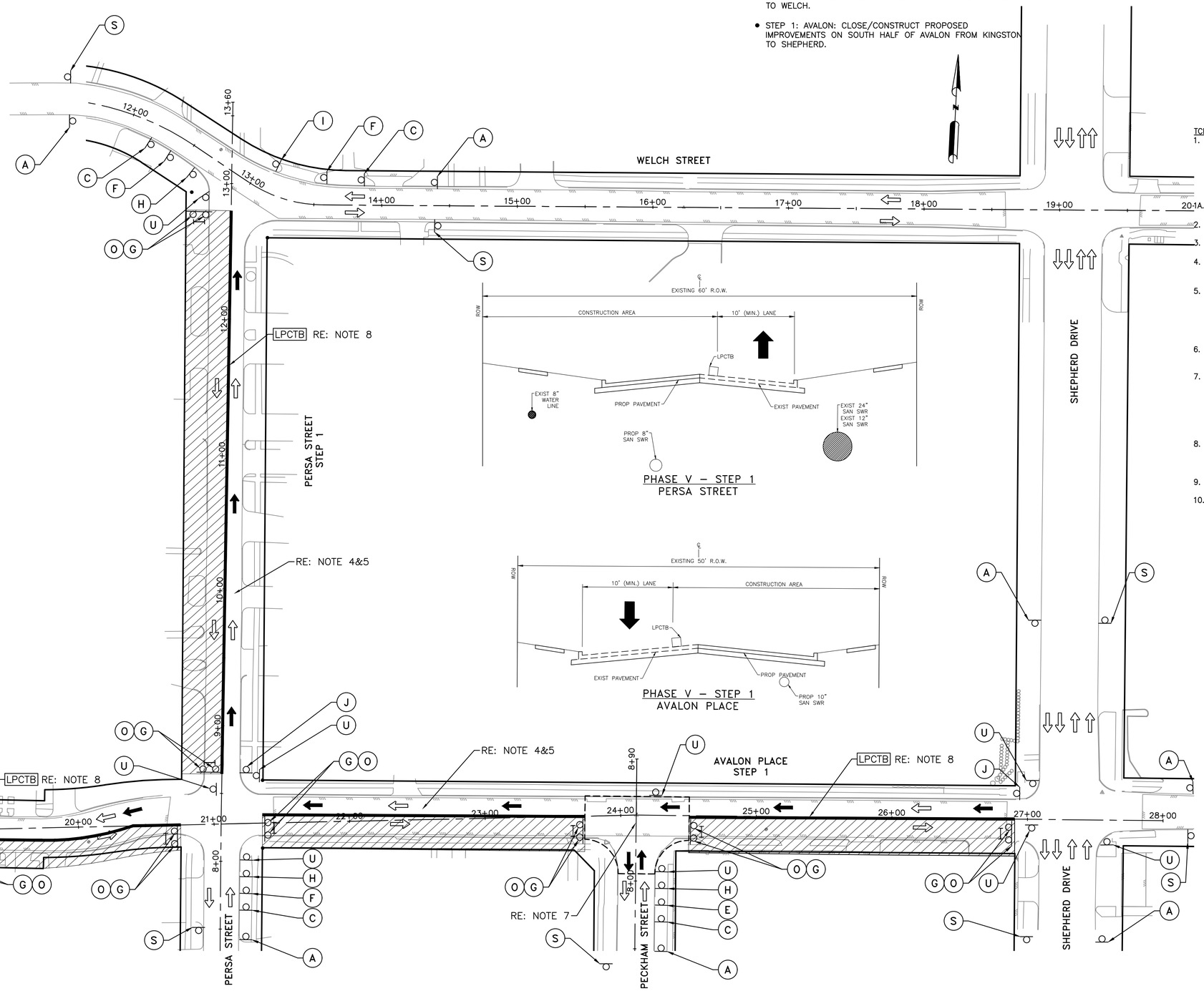
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 284A OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–28A PHASE V – STEP 2 SAN FELIPE ST, REVERE ST & SPANN ST.dwgTCP–28A Jan 21 , 2026 – 4:46PM OMarcelo

STEP1 NOTES:

- STEP 1: PERSA ST: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF ROADWAY FROM AVALON TO WELCH.
- STEP 1: AVALON: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF AVALON FROM KINGSTON TO SHEPHERD.



PHASE V – STEP 1
PERSA STREET

PHASE V – STEP 1
AVALON PLACE

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
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REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U		
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	KINGSTON STREET DETOUR	AVALON PLACE DETOUR	AVALON STREET DETOUR	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY OR ONE WAY		
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"		R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" R6–1(R) 12"X36"		

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1/21/2026

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–29
PHASE V – STEP 1
AVALON PL & PERSA ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
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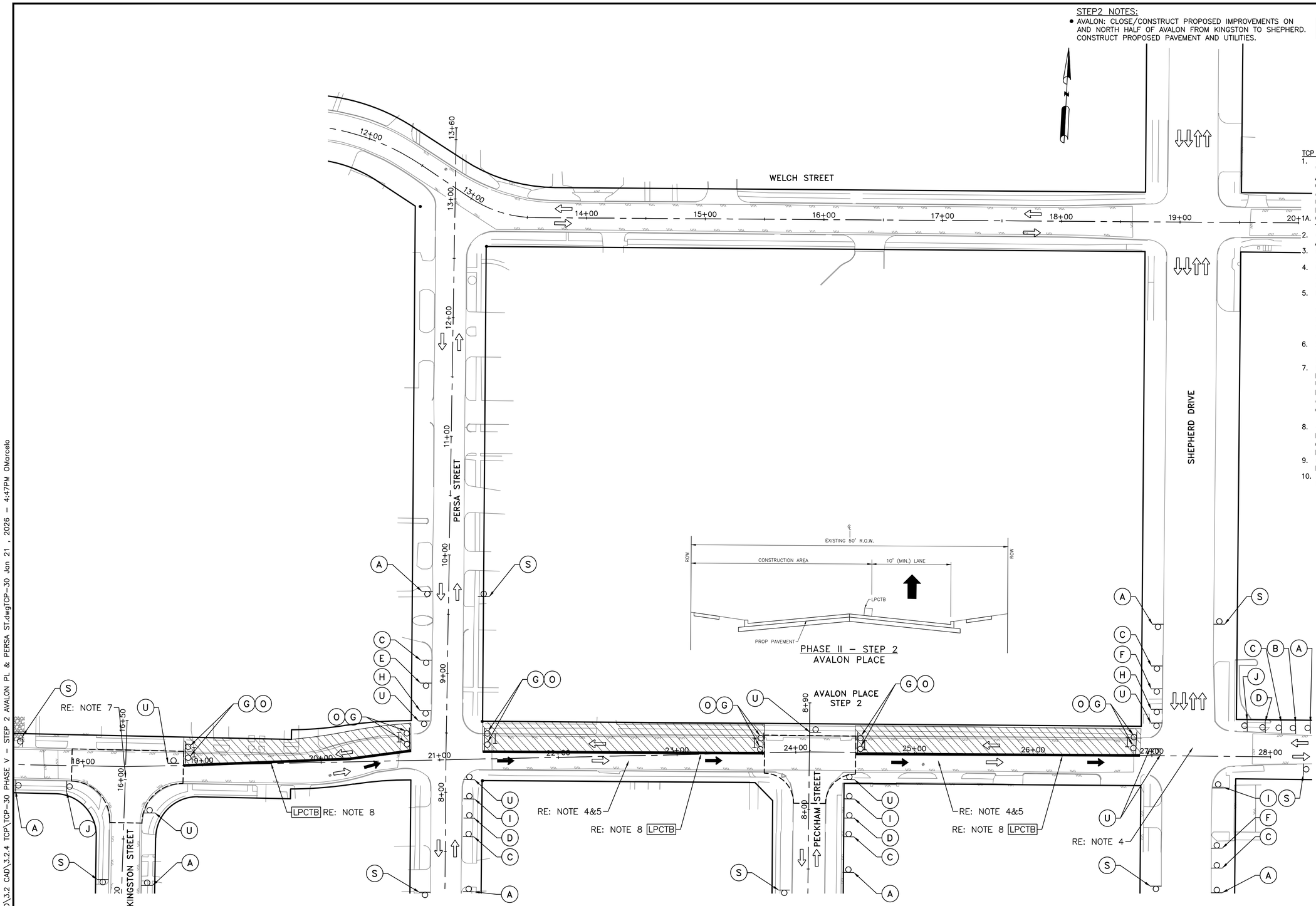
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 285 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–29 PHASE V – STEP 1 AVALON PL & PERSA ST.dwgTCP–29 Jan 21 , 2026 – 4:46PM OMarcelo



STEP2 NOTES:

- AVALON: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON AND NORTH HALF OF AVALON FROM KINGSTON TO SHEPHERD. CONSTRUCT PROPOSED PAVEMENT AND UTILITIES.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP–01
1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512–05 (TCP ONE LANE CLOSURE) DATED JUL–01–2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE–LANE TWO–WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE–WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3–WAY INTERSECTION (TCP42–TCP44)/TCP 4–WAY INTERSECTION (TCP45–TCP48).
CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2–WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U		
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	AVALON STREET DETOUR →	AVALON STREET DETOUR ←	AVALON STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY OR ONE WAY		
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"		R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" OR R6–1(R) 12"X36"		

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FB No. P–5723

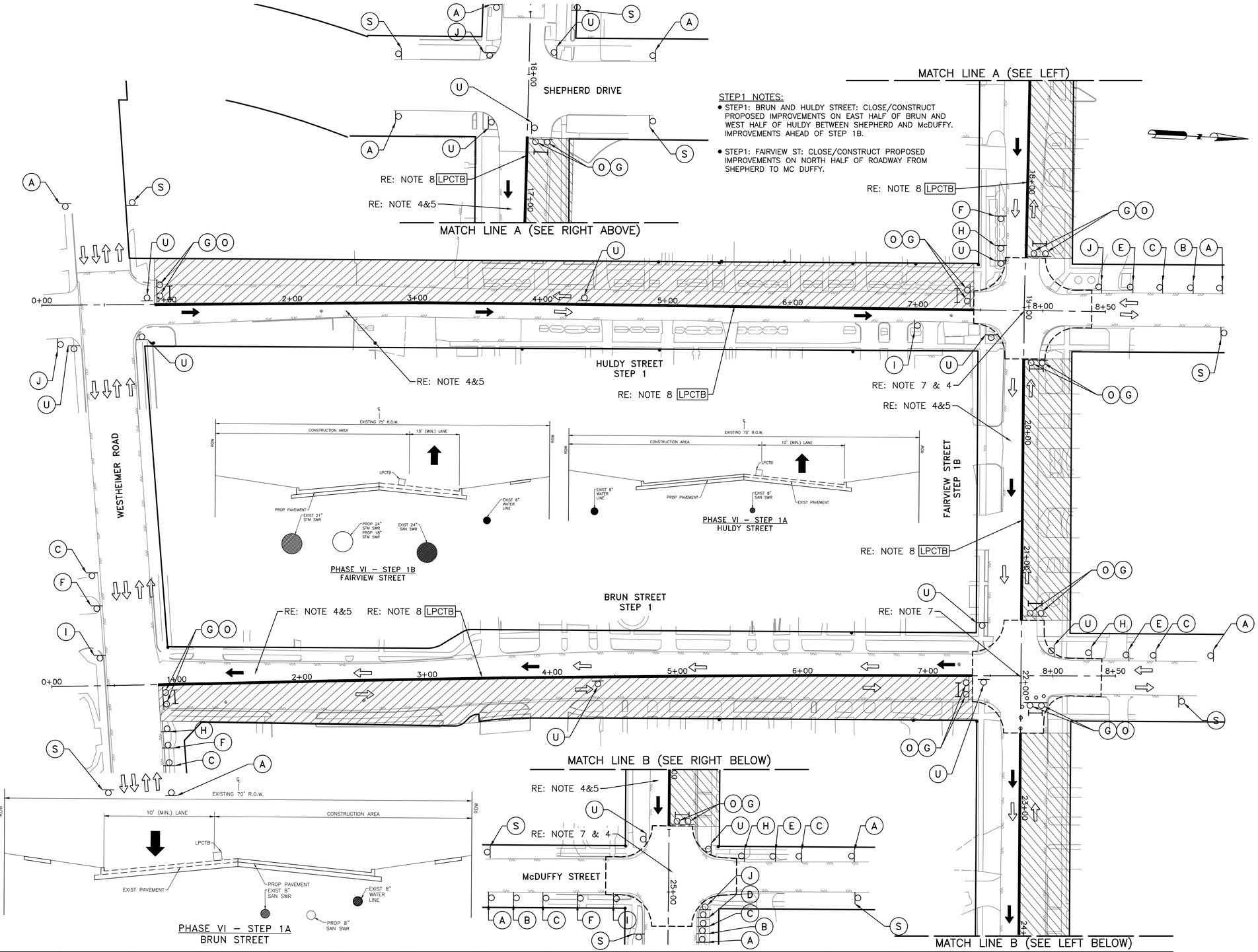
STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–30
PHASE V –STEP 2
AVALON PL & PERSA ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 286 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–30 PHASE V – STEP 2 AVALON PL & PERSA ST.dwgTCP–30 Jan 21 , 2026 – 4:47PM OMarcelo



STEP1 NOTES:

- STEP1: BRUN AND HULDY STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF BRUN AND WEST HALF OF HULDY BETWEEN SHEPHERD AND McDUFFY. IMPROVEMENTS AHEAD OF STEP 1B.
- STEP1: FAIRVIEW ST: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY FROM SHEPHERD TO MC DUFFY.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
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TCP NOTES:

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REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	FAIRVIEW STREET / DETOUR	NAME STREET / DETOUR	NAME STREET / DETOUR	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / ONE WAY	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"	

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1/21/2026

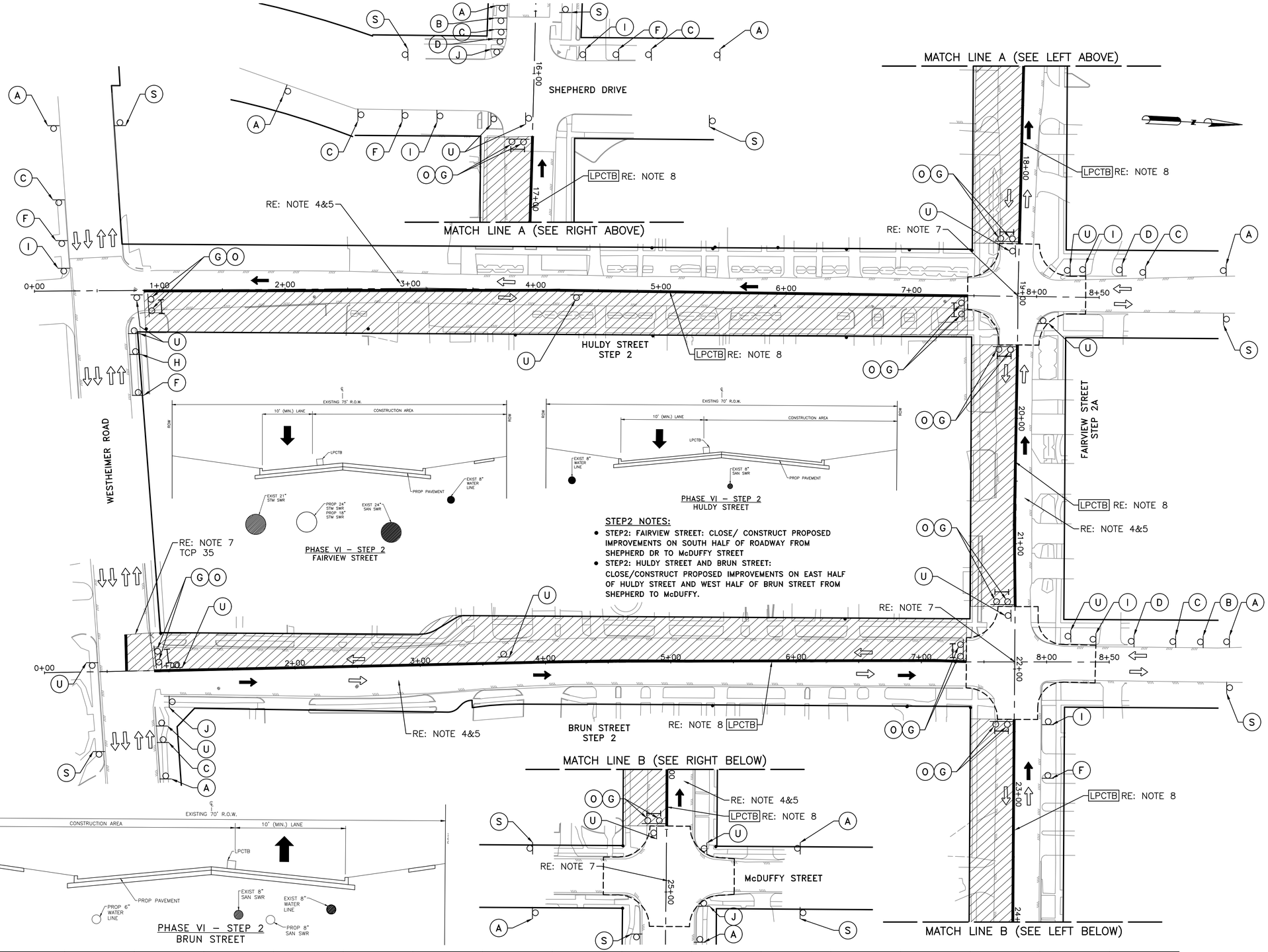
CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-31
PHASE VI – STEP 1
HULDY ST, BRUN ST & FAIRVIEW ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 287 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-31 PHASE VI – STEP 1 HULDY ST, BRUN ST & FAIRVIEW ST.dwg|TCP-31 Jan 21, 2026 – 4:47PM OMarcelo



STEP2 NOTES:

- **STEP2: FAIRVIEW STREET: CLOSE/ CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY FROM SHEPHERD DR TO McDUFFY STREET**
- **STEP2: HULDY STREET AND BRUN STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF HULDY STREET AND WEST HALF OF BRUN STREET FROM SHEPHERD TO McDUFFY.**

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

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REV.	DATE	DESCRIPTION	BY

A	B		D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	NAME STREET DETOUR →	HULDY STREET DETOUR ←	NAME STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6–1(L) 12"X36" OR ONE WAY R6–1(R) 12"X36"
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	

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1/21/2026

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HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP–32
PHASE VI – STEP 2
HULDY ST, BRUN ST & FAIRVIEW ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 288 OF 391	

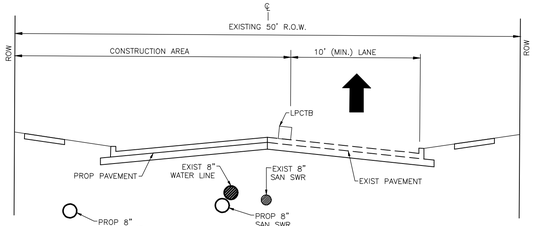
R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP–32 PHASE VI – STEP 2 HULDY ST, BRUN ST & FAIRVIEW ST.dwg[TCP–32 Jan 21, 2026 – 4:47PM OMarcelo

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-33 PHASE VII - STEP 1 HAZARD ST, DRISCOLL ST & FAIRVIEW ST.dwg|TCP-33 Jan 21 , 2026 - 4:47PM OMarcelo

McDUFFIE STREET

STEP 1 NOTES:

- STEP 1A: FAIRVIEW STREET CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON NORTH HALF OF ROADWAY FROM McDUFFIE ST TO MORSE ST.
- STEP 1B: HAZARD ST AND DRISCOLL ST CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF HAZARD ST AND EAST HALF OF DRISCOLL ST FROM WESTHEIMER ROAD TO FAIRVIEW ST.



PHASE VII – STEP 1B
HAZARD STREET

HAZARD STREET
STEP 1B

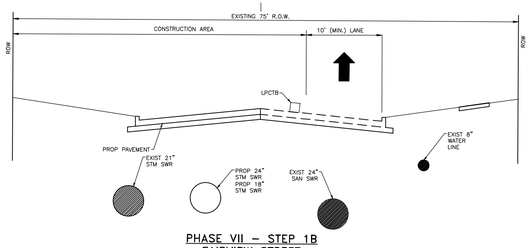
RE: NOTE 4&5

RE: NOTE 8 LPCTB

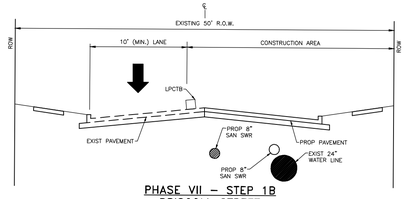
RE: NOTE 7

RE: TCP–35, NOTE 7

WESTHEIMER ROAD



PHASE VII – STEP 1B
FAIRVIEW STREET



PHASE VII – STEP 1B
DRISCOLL STREET

FAIRVIEW STREET
STEP 1A

DRISCOLL STREET
STEP 1B

RE: NOTE 4&5

LPCTB RE: NOTE 8

RE: NOTE 7

RE: NOTE 7 TCP 35

MATCH LINE A (SEE RIGHT BELOW)

MORSE STREET

FAIRVIEW STREET

MATCH LINE A (SEE LEFT ABOVE)

MATCH LINE A (SEE SHEET 290)

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	HAZARD STREET / DETOUR →	NAME STREET / DETOUR ←	NAME STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ↓ / OR / ONE WAY →	
CW21–7 36"X36"	CW20–3 36"X36"	CW20–2 36"X36"	M4–9R 30"X30"	M4–9L 30"X30"	M4–9T 30"X30"	R11–2 48"X30"	R3–1 24"X24"	R3–2 24"X24"	R6–6 36"X36"	CW20–5(2) 36"X36" CW16–3 36"X18"	CW20–5(1) 36"X36" CW16–3 36"X18"	R5–1 36"X36"	SPECIAL SIGN 36"X18"	G20–2 36"X18"	M4–8a 24"X18"	R11–3a 60"X30"	R6–1(L) 12"X36" R6–1(R) 12"X36"	

LEGEND:

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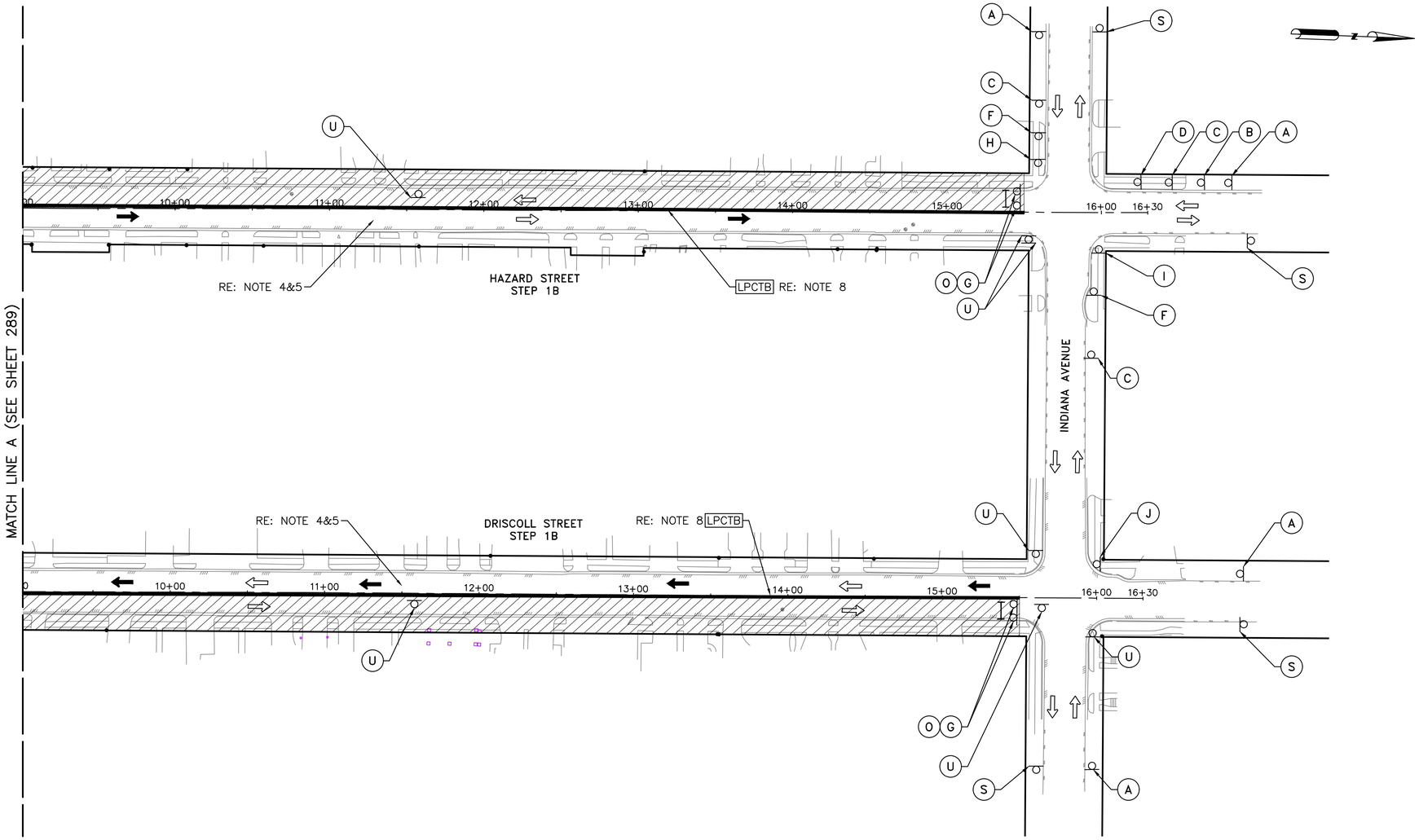
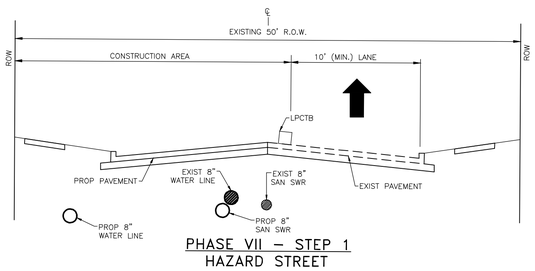
HOUSTON PUBLIC WORKS

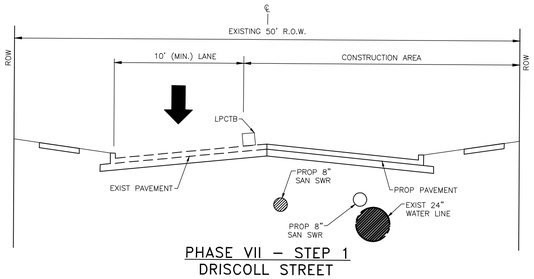
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP–33
PHASE VII – STEP 1
HAZARD ST, DRISCOLL ST & FAIRVIEW ST

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 289 OF 391	





PHASE VII – STEP 1
HAZARD STREET



PHASE VII – STEP 1
DRISCOLL STREET

STEP 1B NOTES:

- HAZARD ST CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON WEST HALF OF HAZARD ST AND EAST HALF OF DRISCOLL ST FROM FAIRVIEW ST TO INDIANA ST.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

1. CONTRACTORS WORK WILL BE LIMITED TO A "BLOCK TO BLOCK" CONSTRUCTION ZONE OF APPROXIMATELY 1000FT; FOR EXAMPLE, A MOVING CONSTRUCTION TRAIN WITH DISRUPTION OF THREE (3)CONSECUTIVE BLOCKS FOR DEMOLITION, UNDERGROUND CONSTRUCTION, AND PAVEMENT RECONSTRUCTION. SEE NOTES TCP-01

1A. CONTRACTOR SHALL COORDINATE WITH HOMEOWNERS ABOUT ACCESS TO DRIVEWAY/SIDEWALKS PRIOR TO ANY CONSTRUCTION ACTIVITY.

2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES AT ALL TIMES.
3. FOR LENGTHS, SIGNS AND CHANNELIZATION DEVICES SPACING/DISTANCES REFER TO TCP01
4. FOR DETOUR CIRCULATION GUIDE SEE COH STD DETAIL DWG NO 01512-05 (TCP ONE LANE CLOSURE) DATED JUL-01-2018 (TCP40) OR TYPICAL DETOUR PLAN (TCP41)
5. REFER TO TYPICAL ONE LANE CLOSURE TWO WAY FLAGGER OPERATION TCP (38)/ TCP ONE LANE CLOSURE (TCP 39) (LANE CLOSURE/ROLLING TRAIN LIMITED TO 800 FEET). INSTALL "YIELD TO ONCOMING TRAFFIC" AFTER CONSTRUCTION HOURS ON STREETS WITH ONE-LANE TWO-WAY TRAFFIC. THIS OPERATION SHALL NOT BE APPLIED AT INTERSECTIONS.
6. STREETS USING ONE-WAY OPERATION,"NO PARKING TOW AWAY ZONE" SIGNS SHALL BE INSTALLED. STOP SIGNS SHALL BE RELOCATED DURING CONSTRUCTION.
7. RECONSTRUCTION OF INTERSECTION SHALL BE PERFORMED ON WEEKENDS AND NIGHTS ONLY AFTER THE STREET UTILITY AND PAVEMENT RECONSTRUCTION. RE:TCP TYPICAL 3-WAY INTERSECTION (TCP42-TCP44)/TCP 4-WAY INTERSECTION (TCP45-TCP48).
   CONSECUTIVE INTERSECTION/STREET FULL CLOSURE SHALL NOT BE PERMITTED.
8. AS NECESSARY, ALL OPEN PIT/EXCAVATION TO BE PROTECTED BY LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) AND/OR COVERED W/STEEL PLATES AFTER CONSTRUCTION HOURS AND OPEN THE STREET FOR 2-WAY TRAFFIC.
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC

REV.	DATE	DESCRIPTION	BY

	A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
	UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	HAZARD STREET DETOUR →	HAZARD STREET DETOUR ←	HAZARD STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1(L) 12"X36" OR ONE WAY R6-1(R) 12"X36"
	CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

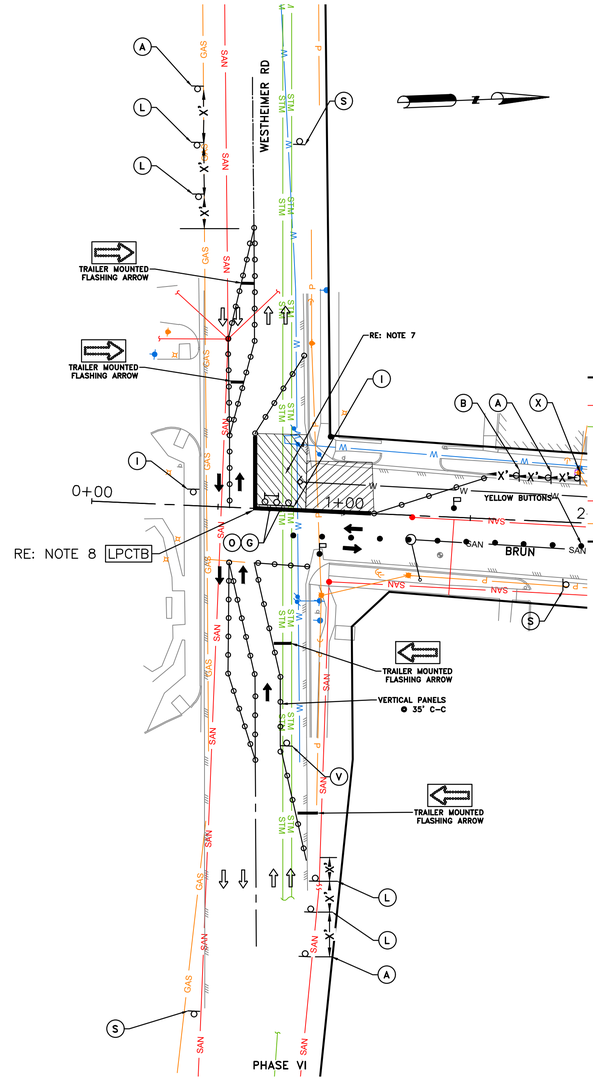
STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

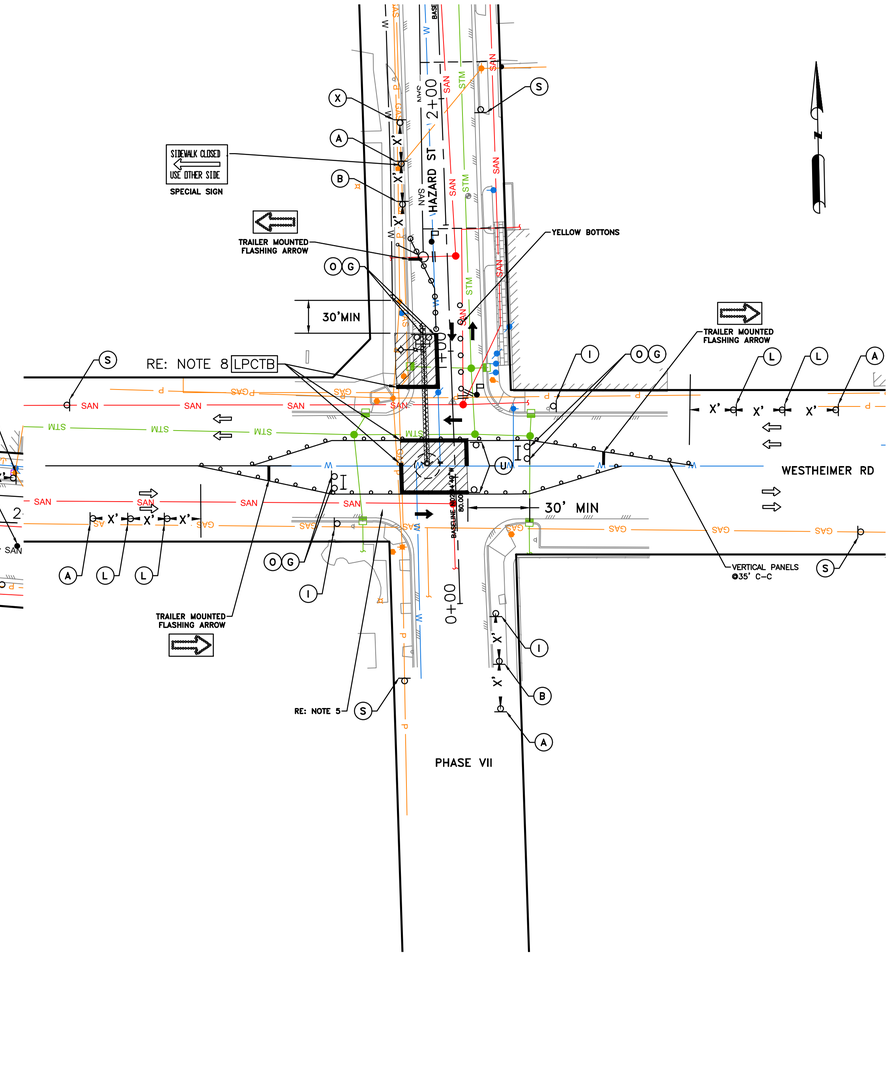
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

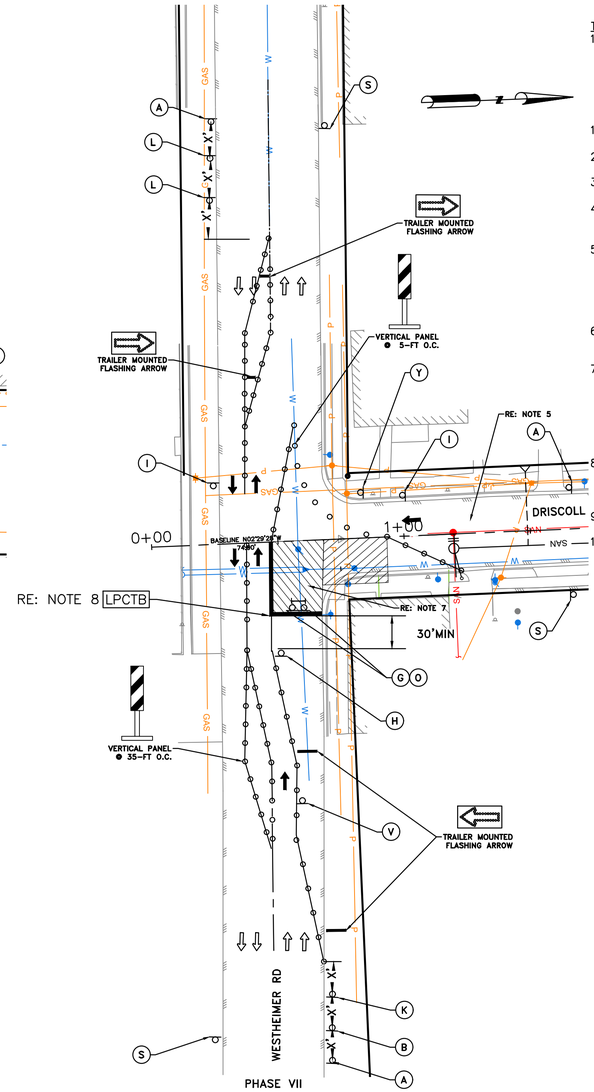
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-34
PHASE VII – STEP 1
HAZARD ST, & DRISCOLL ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 290 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-34 PHASE VII - STEP 1 HAZARD ST, & DRISCOLL ST.dwg TCP-34 Jan 21 , 2026 - 4:47PM OMarcelo







NOTES:

1. SEE SHEET NO. TCP-01 FOR TRAFFIC CONTROL NOTES AND SIGN DISTANCES SHEET TCP-50 FOR STANDARD BARRICADE DETAILS.
2. CONSECUTIVE INTERSECTION FULL CLOSURE SHALL NOT BE PERMITTED. IMPROVEMENTS SHALL BE ON WEEKENDS AND NIGHTS ONLY.
3. CONTRACTOR SHALL ADJUST LOCATION OF TRAFFIC SIGNAL HEADS AND OVERHEAD SIGNS TO LINE-UP WITH TEMPORARY TRAFFIC LANES AT ALL TIMES.

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLAGGER

TCP NOTES:

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REV.	DATE	DESCRIPTION	BY

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STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-35 PHASE VII
BRUN ST, HAZARD ST, DISCOLL ST AT WESTHEIMER RD

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 30'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 291 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	V	Y
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	HAZARD STREET DETOUR →	HAZARD STREET DETOUR ←	HAZARD STREET DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY R6-1L 12"X36" OR ONE WAY R6-1R 12"X36"		NO LEFT TURN
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"		CW1-4L 30" X 30"	SPECIAL SIGN 18"X24"

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-35 PHASE VII BRUN ST, HAZARD ST, DRISCOLL ST AT WESTHEIMER RD.dwg\TCP-35 Jan 21 , 2026 - 4:48PM OMarcelo

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-36 PHASE VII – STEP 2 HAZARD ST, DRISCOLL ST & FAIRVIEW ST.dwgTCP-36 Jan 21 , 2026 – 4:48PM OMarcelo

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER LPCTB
- DIRECTION OF EXISTING TRAFFIC
- DIRECTION OF TRAFFIC FLOW DURING CONSTRUCTION
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
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TCP NOTES:

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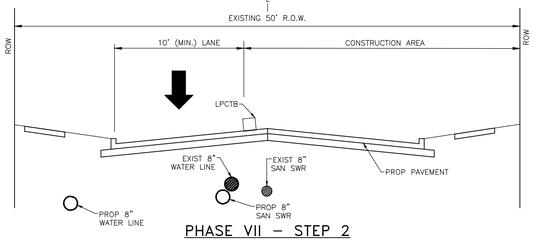
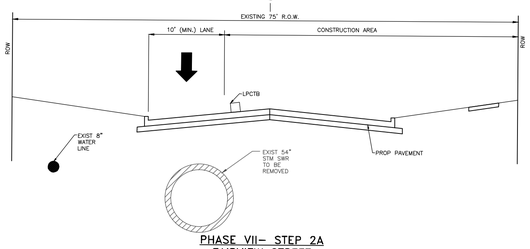
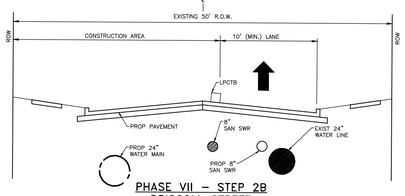
9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
10. POLICE OFFICER SHALL BE AT THE CONSTRUCTION SITE DURING CONSTRUCTION HOURS TO DIRECT TRAFFIC



PHASE VII – STEP 2
HAZARD STREET



PHASE VII– STEP 2A
FAIRVIEW STREET

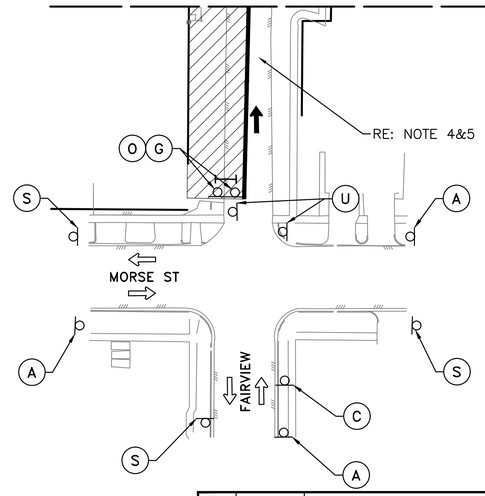


PHASE VII – STEP 2B
DRISCOLL STREET

STEP 2 NOTES:

- STEP 2A: FAIRVIEW STREET: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON SOUTH HALF OF ROADWAY FROM McDUFFIE TO MORSE.
- STEP 2B: HAZARD AND DRISCOLL: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF HAZARD ST AND WEST HALF OF DRISCOLL FROM WESTHEIMER TO FAIRVIEW.

MATCH LINE A (SEE LEFT BELOW)



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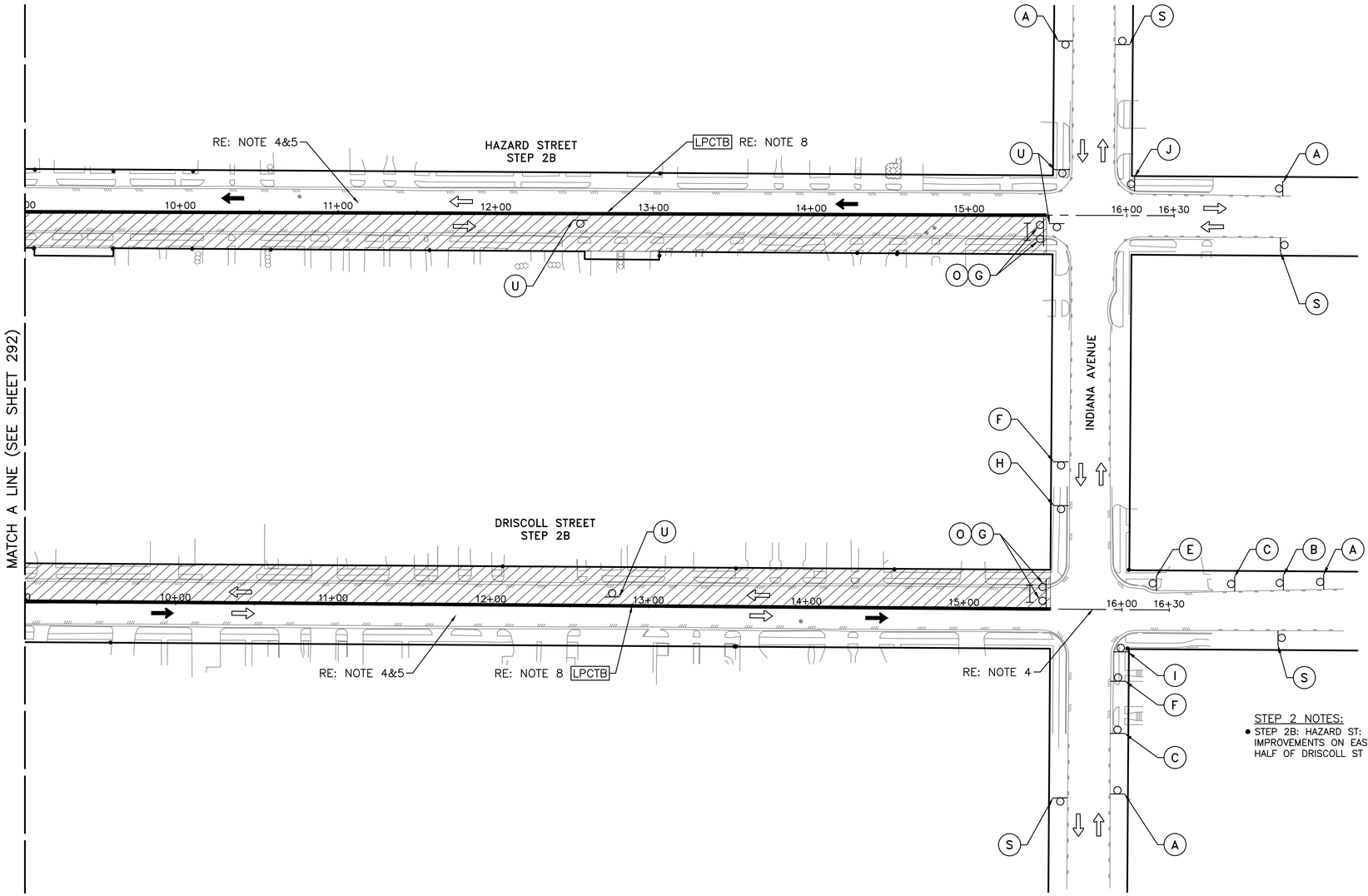
STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

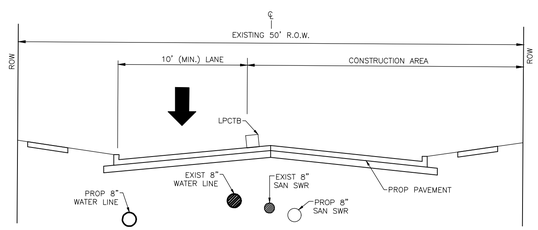
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-36
PHASE VII – STEP 2
HAZARD ST, DRISCOLL ST & FAIRVIEW ST

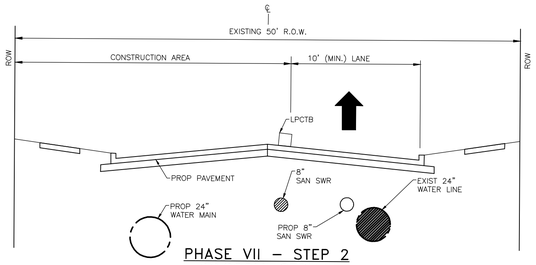
WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 292 OF 391	

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U	
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	NAME STREET / DETOUR →	HAZARD STREET / DETOUR ←	NAME STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY / ONE WAY	
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"	





PHASE VII – STEP 2
HAZARD STREET



PHASE VII – STEP 2
DRISCOLL STREET

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER [LPCTB]
- DIRECTION OF EXISTING TRAFFIC
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9. CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE DURING CONSTRUCTION
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STEP 2 NOTES:

- STEP 2B: HAZARD ST: CLOSE/CONSTRUCT PROPOSED IMPROVEMENTS ON EAST HALF OF HAZARD ST AND WEST HALF OF DRISCOLL ST FROM FAIRVIEW ST TO INDIANA AVE.

REV.	DATE	DESCRIPTION	BY

A	B	C	D	E	F	G	H	I	J	K	L	O	Q	R	S	T	U
UTILITY WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	HAZARD STREET / DETOUR →	DRISCOLL STREET / DETOUR ←	DRISCOLL STREET / DETOUR ↑	ROAD CLOSED			BEGIN ONE WAY	RIGHT LANE CLOSED / AHEAD	LEFT LANE CLOSED / AHEAD	DO NOT / ENTER	END DETOUR	END ROAD WORK	END UTILITY WORK	LOCAL ACCESS ONLY	ONE WAY ← / ONE WAY →
CW21-7 36"X36"	CW20-3 36"X36"	CW20-2 36"X36"	M4-9R 30"X30"	M4-9L 30"X30"	M4-9T 30"X30"	R11-2 48"X30"	R3-1 24"X24"	R3-2 24"X24"	R6-6 36"X36"	CW20-5(2) 36"X36" CW16-3 36"X18"	CW20-5(1) 36"X36" CW16-3 36"X18"	R5-1 36"X36"	SPECIAL SIGN 36"X18"	G20-2 36"X18"	M4-8a 24"X18"	R11-3a 60"X30"	R6-1(L) 12"X36" OR R6-1(R) 12"X36"

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

CIVITAS ENGINEERING GROUP

Engineers ● Planners ● Construction Managers
2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

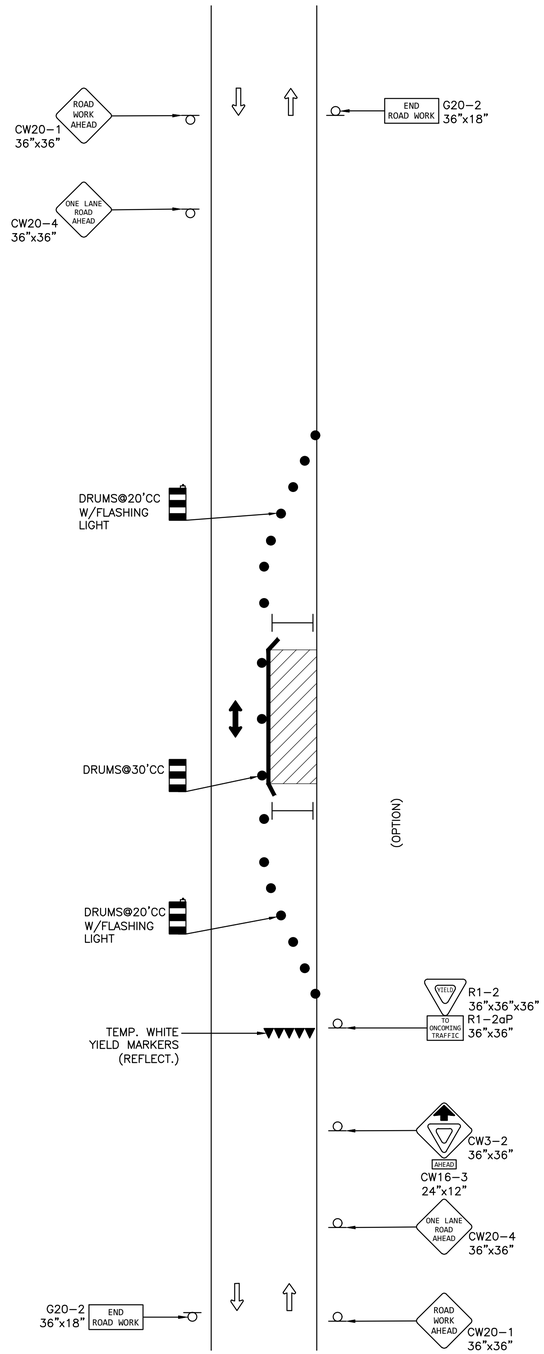
STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

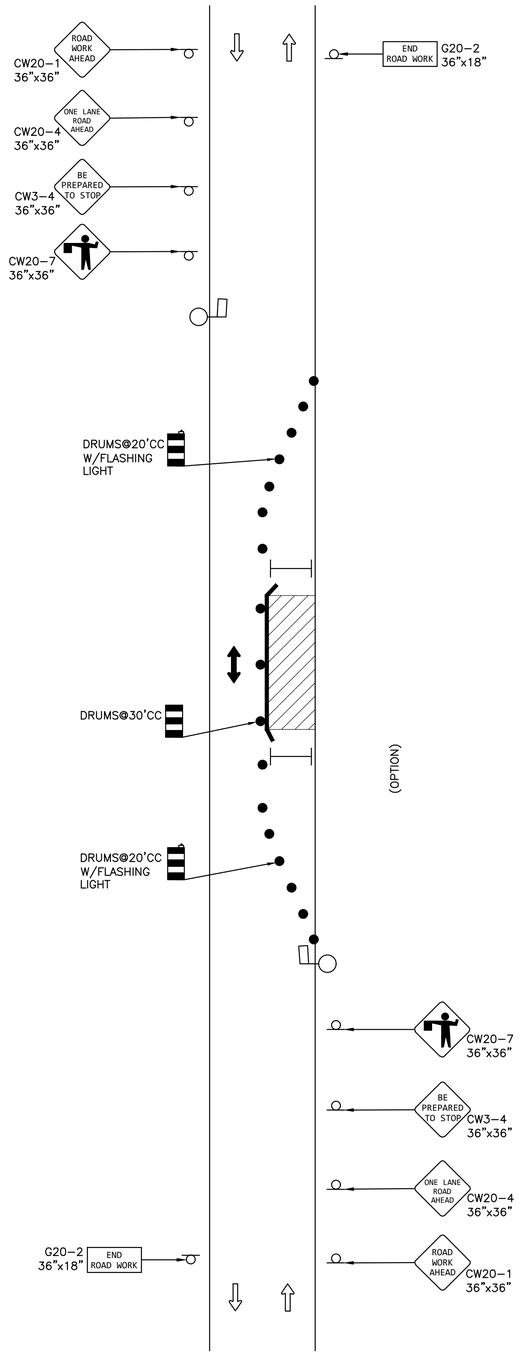
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-37
PHASE VII – STEP 2
HAZARD ST & DRISCOLL ST

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1" = 40'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 293 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-37 PHASE VII – STEP 2 HAZARD ST & DRISCOLL ST.dwgTCP-37 Jan 21 , 2026 – 4:48PM OMarcelo



ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(DURING NIGHT TIME AND NO CONSTRUCTION IN AREA WITH LOW VOLUME TRAFFIC.)



ONE LANE TWO-WAY
CONTROL WITH FLAGGERS
(DURING DAY TIME CONSTRUCTION)

LEGEND:

- CONSTRUCTION ZONE
- PROPOSED SIGN
- CHANNELIZING DEVICES
- LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB)
- DIRECTION OF EXISTING TRAFFIC FLOW
- DIRECTION OF TRAFFIC FLOW
- TYPE III BARRICADE W/2 TYPE 'A' FLASHER
- FLASHING ARROW PANEL
- FLAGGER (OFF DUTY POLICEMEN)

NOTE:
1. FOR DIMENSIONS AND SIGNS SPACING REFER TO COH DWG NO. TCP-01
2. CONTRACTOR SHALL PROVIDE ACCESS TO PRIVATE PROPERTIES AT AL TIMES DURING CONSTRUCTION
3. COORDINATE RELOCATIONS OF METRO BUS STOPS WITH METRO BUS CONTROL AT 713-864-2264/2272 PRIOR TO BEGINNING WORK.
4. ALL OPEN TRENCHES/PITS SHALL BE PROTECTED WITH LPCTB AND FENCED AROUND AFTER CONSTRUCTION HOURS.
5. CONTRACTOR SHALL RESTORE DISTURBED AREAS TO IT'S ORIGINAL CONDITION OR BETTER

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
TCP-38
TYPICAL ONE LANE TWO WAY
FLAGGER OPERATION

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
N.T.S.	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 294 OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-38 TYPICAL ONE LANE TWO WAY FLAGGER OPERATION.dwgTCP-38 Jan 21, 2026 - 4:48PM OMarcelo

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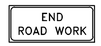
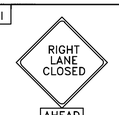
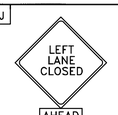
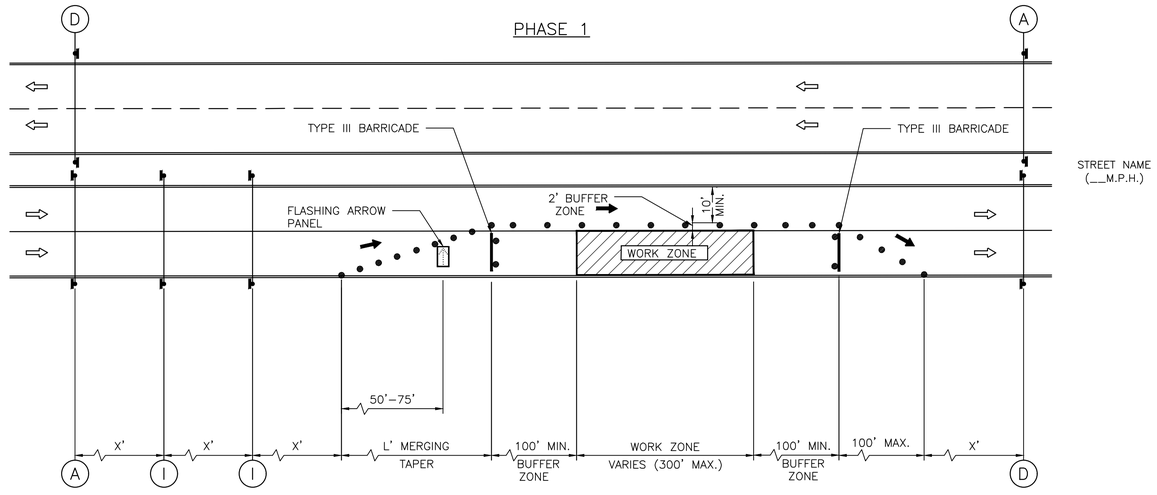
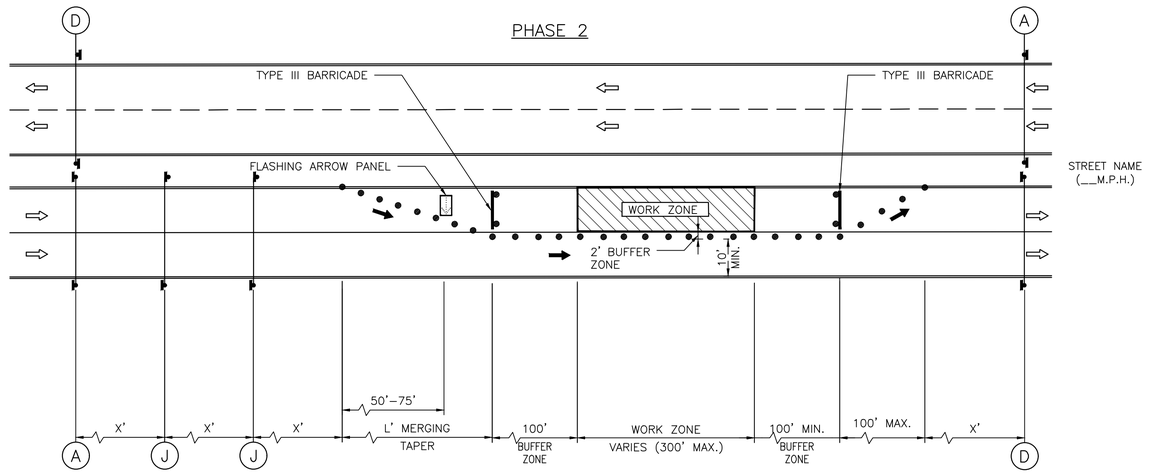
 CW20-1	 G20-2	 CW20-5(2) CW16-3	 CW20-5(1) CW16-3

PHASE 1



PHASE 2



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. RETURN TAPERS AND DOWNSTREAM BARRICADES ARE OPTIONAL ON A DIVIDED ROADWAY SECTION.
2. DOUBLE SIGNS SHALL BE USED ONLY ON ROADWAYS WITH MEDIANS.
3. FOR DIMENSIONS REFER TO SHEET 01555–01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.

OTHON
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CIVITAS ENGINEERING GROUP
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Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

APPROVED BY:	APPROVED BY:
DocuSigned by: Suhail Kanwar 9EF5B0C641F5478...	DocuSigned by: KHANG NGUYEN 95A29EFDA7584CD...
CITY ENGINEER	CITY TRAFFIC ENGINEER

APPROVED BY:
DocuSigned by: Carol Haddock A93C4105772B3453...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV–27–2023	DWG NO: 01555–04

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS · YONGKI SHIM · 114557 · LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP ONE LANE CLOSURE PHASE 1 & 2

TCP–39

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 295 OF 391	

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THEIR APPLICABILITY, ADEQUACY AND SAFETY. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

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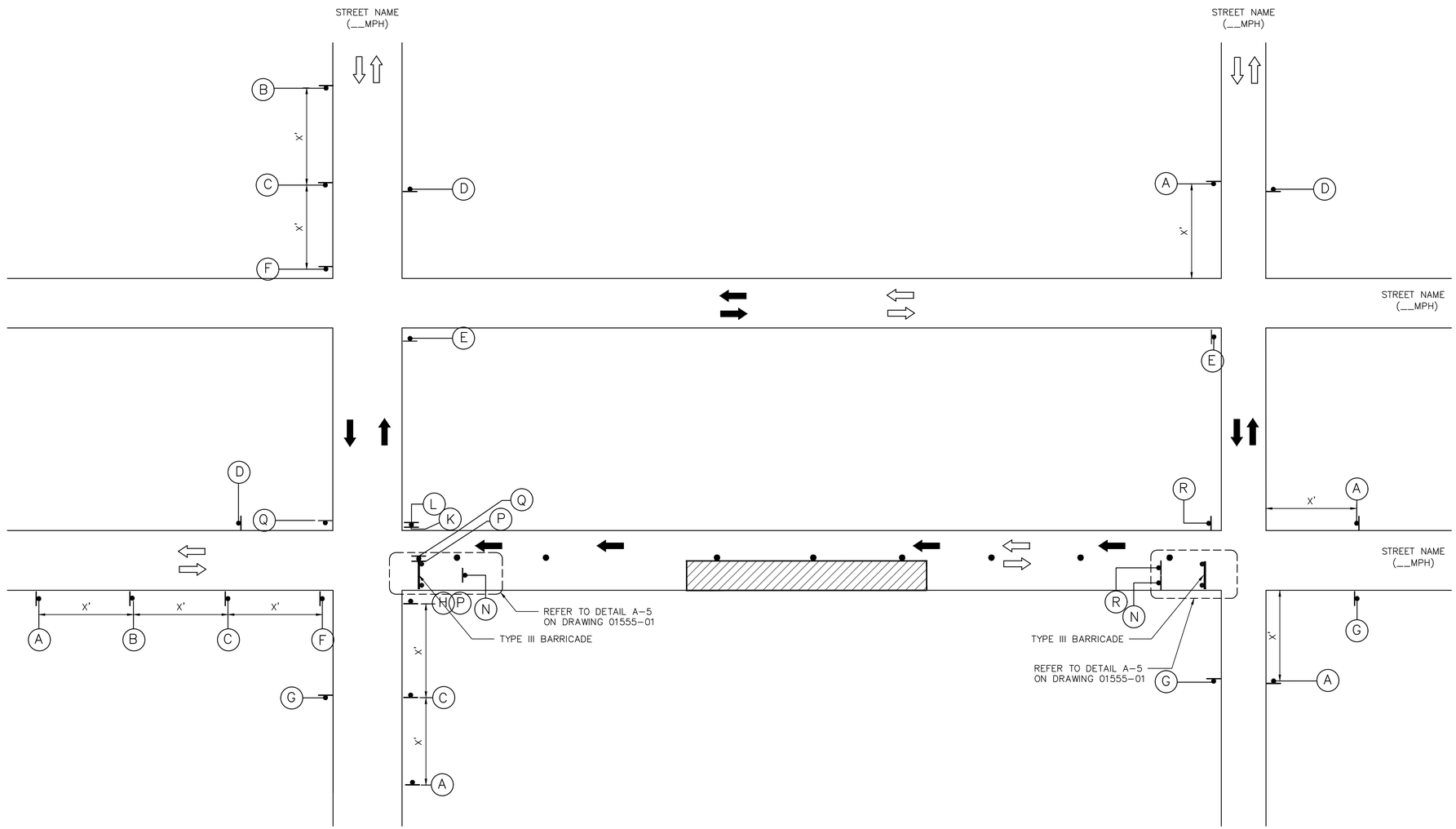
A	B	C	D	E	F	G	H	I	J
ROAD WORK AHEAD	ROAD CLOSED AHEAD	DETOUR AHEAD	END ROAD WORK	STREET NAME DETOUR →	STREET NAME DETOUR ←	END DETOUR	STREET NAME DETOUR ↑	RIGHT LANE CLOSED AHEAD	LEFT LANE CLOSED AHEAD
CW20-1	CW20-3	CW20-2	G20-2	M4-9R	M4-9L	M4-8a	M4-9T	CW20-5(2) CW16-3	CW20-5(1) CW16-3
K	L	M	N	O	P	Q	R		
ONE WAY ←	ONE WAY →	DO NOT ENTER	ROAD CLOSED	DETOUR			BEGIN ONE WAY		
R6-2(L)	R6-2(R)	R5-1	R11-2	M4-10(L)	R3-1	R3-2	R6-6		



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. A 10' MINIMUM LANE WIDTH FOR EMERGENCY SHALL BE MADE AVAILABLE AND MAINTAINED BY THE CONTRACTOR AT ALL TIMES.
2. FOR DIMENSIONS REFER TO SHEET 01555-01.
3. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.

OTHON
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TBPE Firm Registration No. F-4491

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CITY ENGINEER

APPROVED BY:
DocuSigned by: KHANG NGUYEN 95A29EFDA758C4CD...
CITY TRAFFIC ENGINEER

APPROVED BY:
DocuSigned by: Carol Haddock A93C4105772B3453...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023
DWG NO: 01555-05

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS · YONGKI SHIM · 114557 · LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL DETOUR ROUTING WITH ONE LANE CLOSURE (ONE BLOCK)

TCP-40

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 296 OF 391	

DISCLAIMER:
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		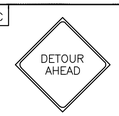	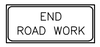				
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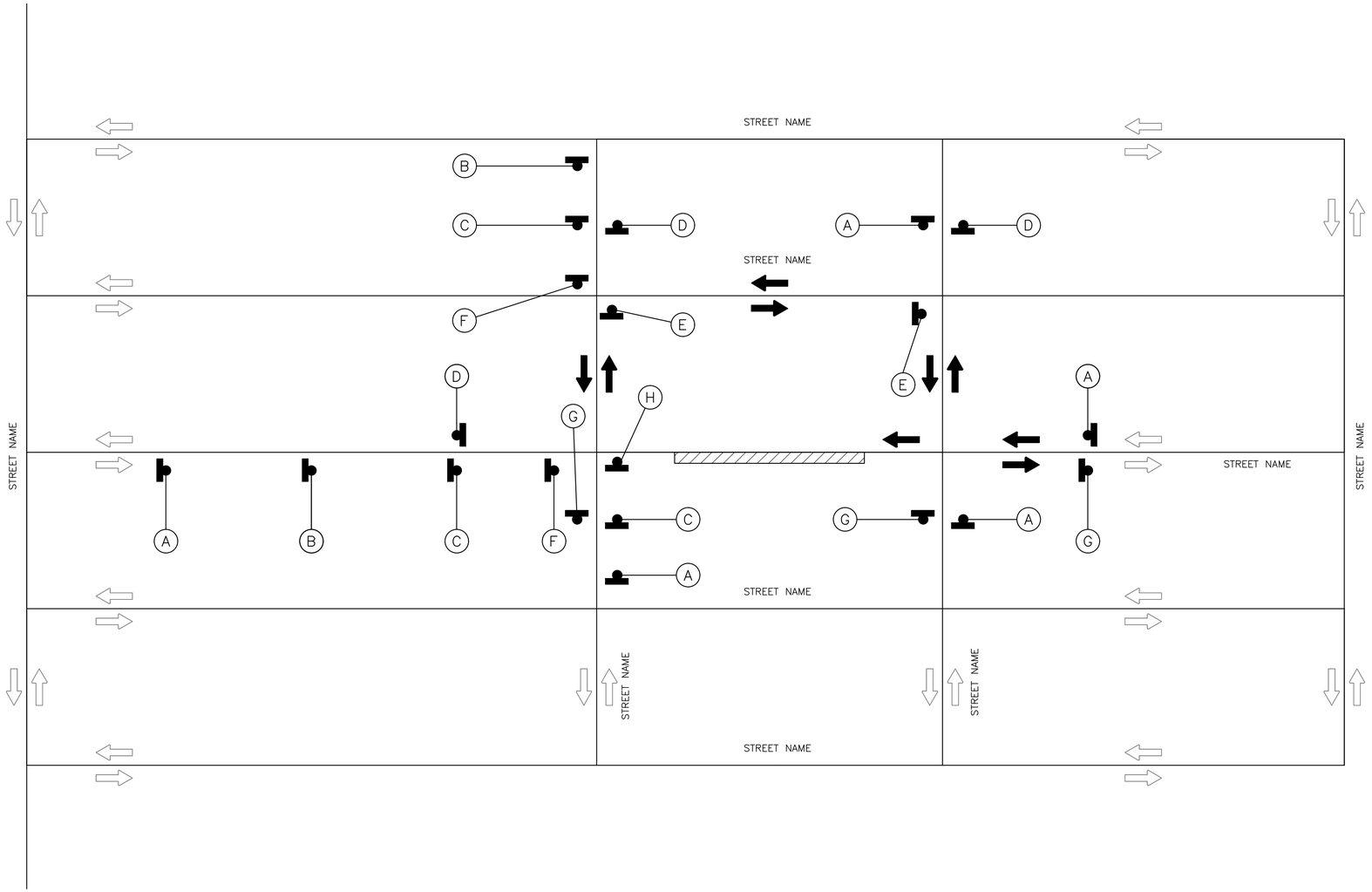

LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

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DocuSigned by: Suhail Kanwar 9EF8B0C641F5478...	DocuSigned by: HANG NGUYEN 95A29EFDA7584CD...
CITY ENGINEER	CITY TRAFFIC ENGINEER

APPROVED BY:

DocuSigned by: A83C4106728B453...

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV–27–2023	DWG NO: 01555–03

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TRAFFIC CONTROL LAYOUT

TCP–41

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 297 OF 391	

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			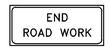		
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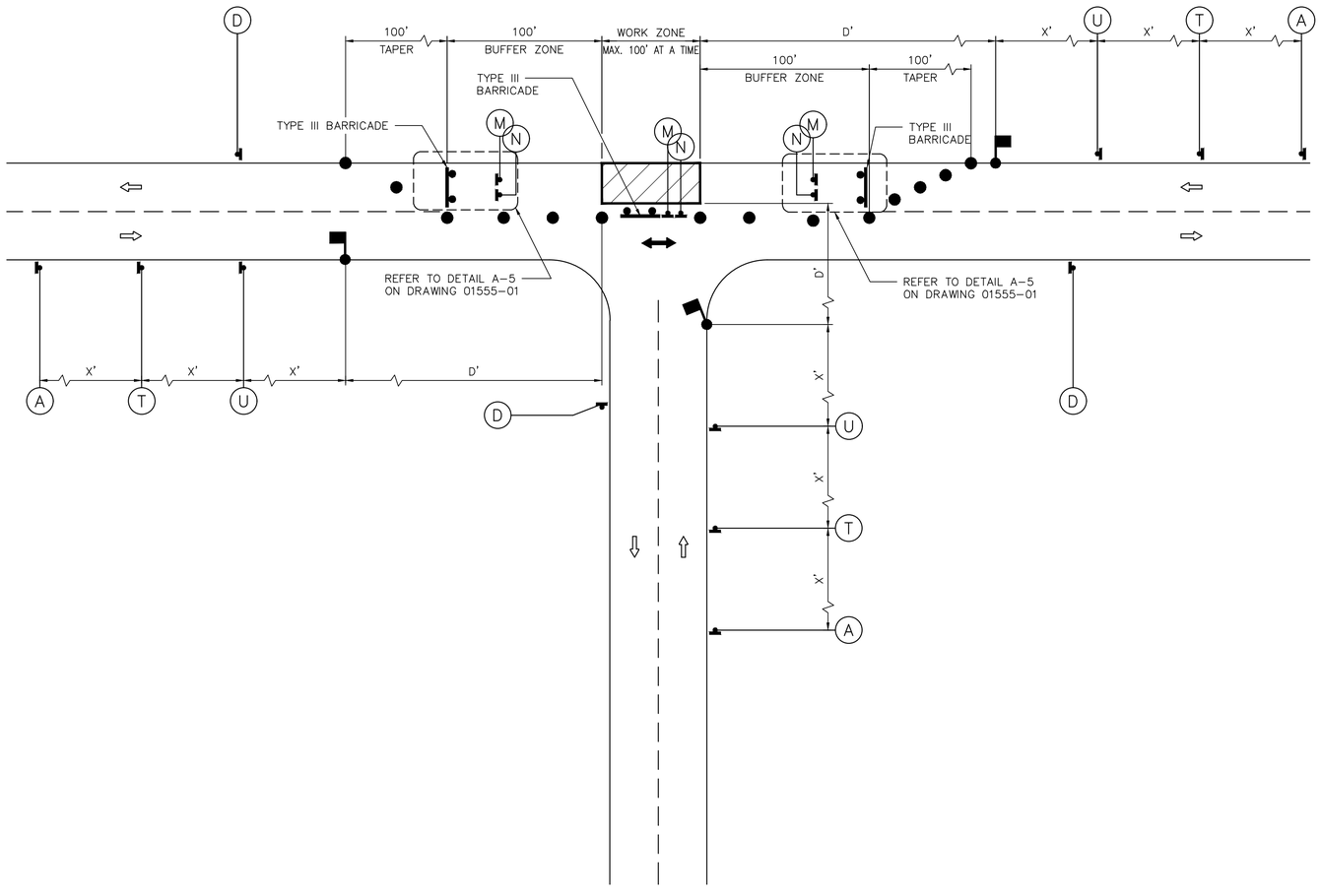

LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. MINOR WORK AND DAYTIME OPERATIONS ONLY.
2. REFER TO PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR DIMENSIONS REFER TO SHEET 01555–01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.
5. MAX. 100' WORK ZONE AT A TIME.

OTHON

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TBPE Firm Registration No. F-4491

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CITY ENGINEER	CITY TRAFFIC ENGINEER

APPROVED BY:
DocuSigned by: Carol Haddock A93C4105728B453...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV–27–2023	DWG NO: 01555–06

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS · YONGKI SHIM · 114557 · LICENSED PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL CONSTRUCTION ZONE AT A T–INTERSECTION PHASE 1 OF 3

TCP–42

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 298 OF 391	

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		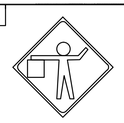	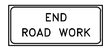		
CW20-1	CW20-4	CW20-7	G20-2	R5-1	R11-2

LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

1. MINOR WORK AND DAYTIME OPERATIONS ONLY.
2. REFER TO PROJECT SPECIFIC TRAFFIC CONTROL PLANS FOR MAJOR OPERATIONS AND OVERNIGHT LANE CLOSURES.
3. FOR DIMENSIONS REFER TO SHEET 01555-01.
4. INSTALL FLASHERS ON DRUMS WHERE REQUIRED AND APPROVED BY CITY TRAFFIC ENGINEER.
5. MAX. 100' WORK ZONE AT A TIME.

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2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

APPROVED BY:
DocuSigned by: Suhail Kanwar 9EF8B0C641F5478...
CITY ENGINEER

APPROVED BY:
DocuSigned by: KHANG NGUYEN 95A29EFDA758C4D...
CITY TRAFFIC ENGINEER

APPROVED BY:
DocuSigned by: Carol Haddock A93C4105728B453...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023
DWG NO: 01555-07

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL CONSTRUCTION ZONE AT A T-INTERSECTION PHASE 2 OF 3

TCP-43

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 299 OF 391	

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		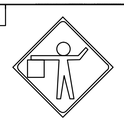	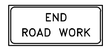		
CW20-1	CW20-4	CW20-7	G20-2	R5-1	R11-2

LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

NOTES:

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TBPE Firm Registration No. F-4491

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CITY ENGINEER

APPROVED BY:
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CITY TRAFFIC ENGINEER

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DocuSigned by: Carol Haddock A93C4105728B453...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023
DWG NO: 01555-08

AMANI ENGINEERING, INC.
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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS · YONGKI SHIM · 114557 · LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL CONSTRUCTION ZONE AT A T-INTERSECTION PHASE 3 OF 3

TCP-44

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
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CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 300 OF 391	

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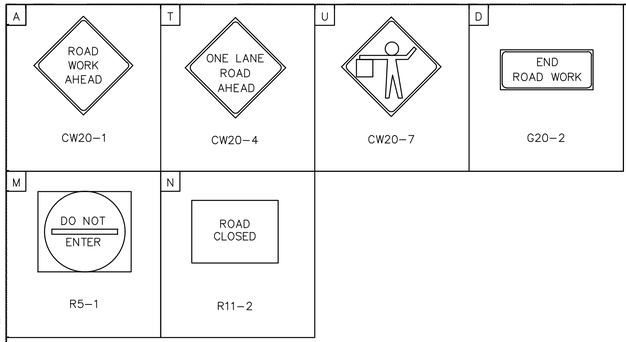

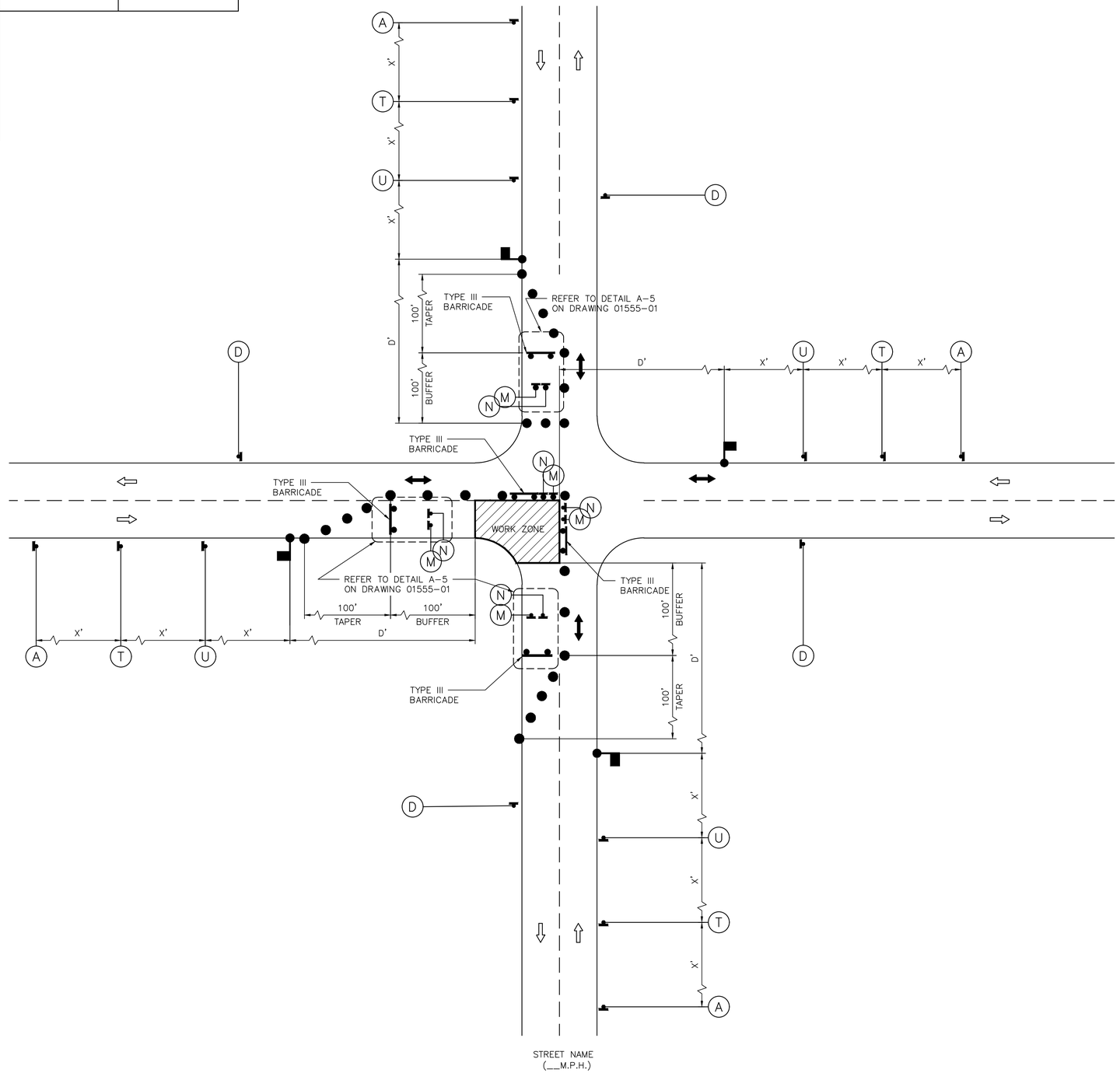

LEGEND:

- SIGN
- FLAGGER
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- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
- TRAFFIC CONTROL PLAN DETOUR TRAVEL WAY

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CITY ENGINEER	CITY TRAFFIC ENGINEER

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DocuSigned by: Carol Haddock A93C410B72B3453...

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023	DWG NO: 01555-09

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL CONSTRUCTION ZONE AT A 4-WAY INTERSECTION (LOW VOLUME TRAFFIC) PHASE 1 OF 4

TCP-45

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
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CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 301 OF 391	

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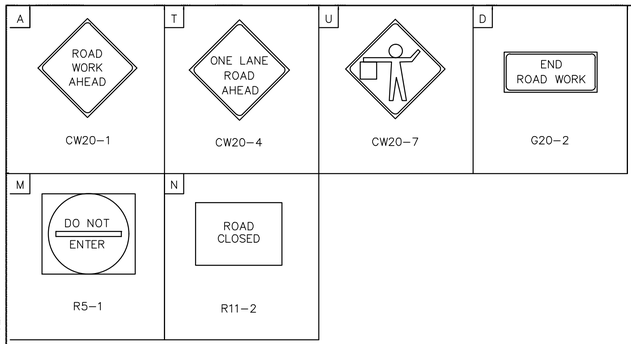

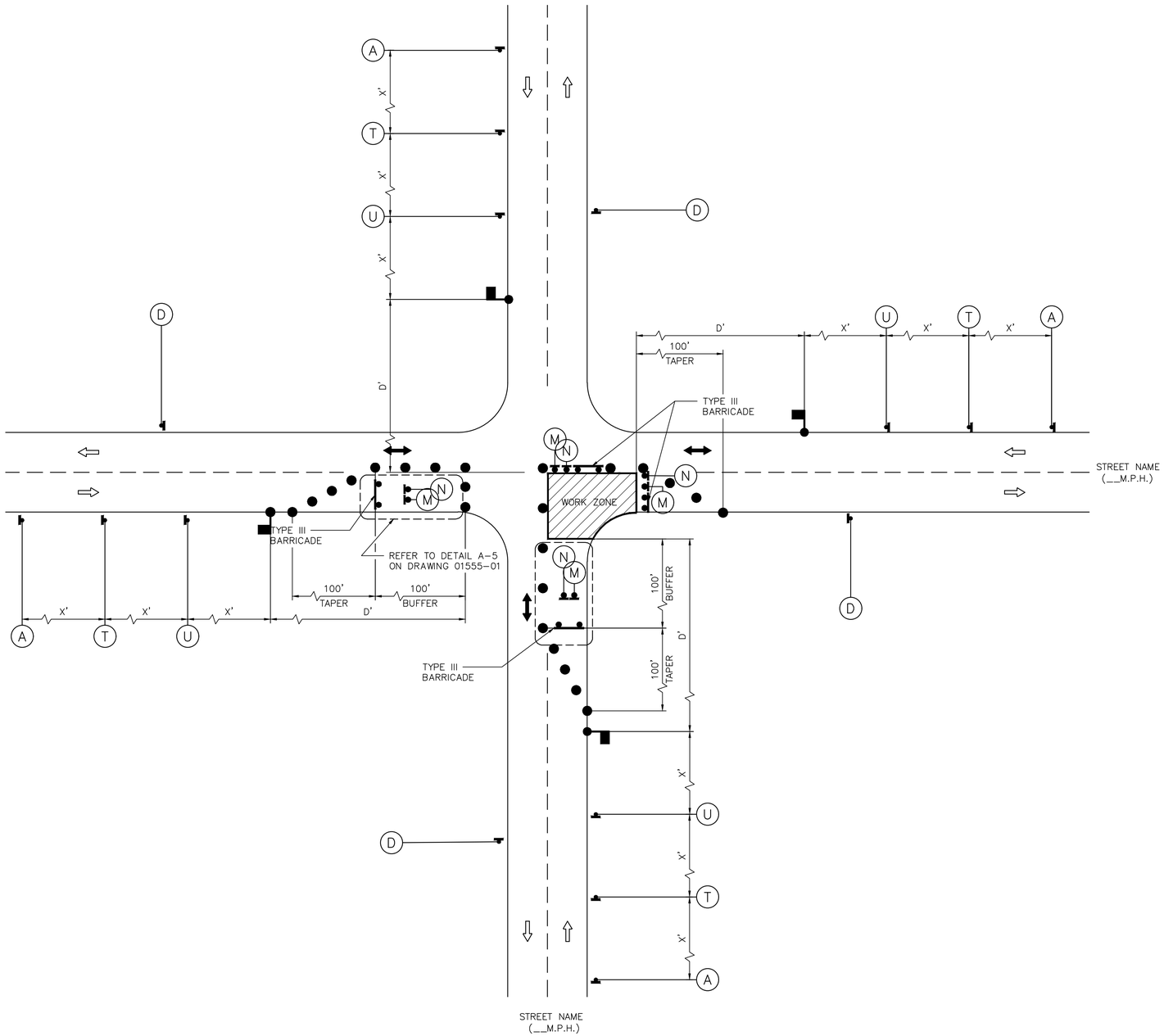

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CITY ENGINEER	CITY TRAFFIC ENGINEER

APPROVED BY:

DocuSigned by: Carol Haddock A93C410B72B3453...

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023	DWG NO: 01555-10

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL CONSTRUCTION ZONE AT A 4-WAY INTERSECTION (LOW VOLUME TRAFFIC)

PHASE 2 OF 4

TCP-46

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
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CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 302 OF 391	

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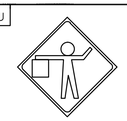
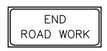
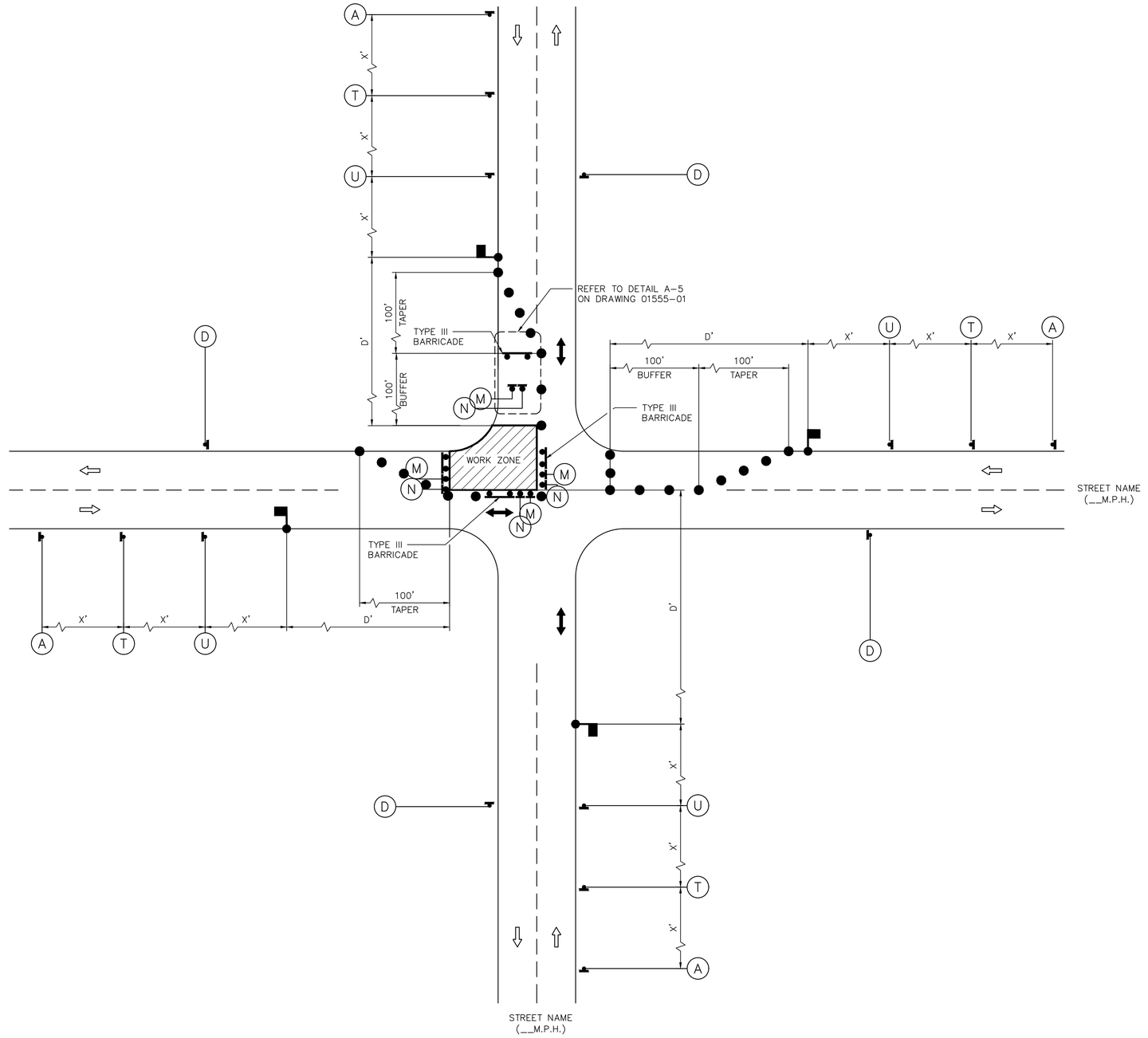
 CW20–1	 CW20–4	 CW20–7	 G20–2

M	N
 R5–1	 R11–2



LEGEND:

- SIGN
- FLAGGER
- APPROVED CHANNELIZATION DEVICE
- BARRICADE
- FLASHING ARROW PANEL
- AREA UNDER CONSTRUCTION
- EXISTING TRAVEL WAY
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NOTES:

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CITY ENGINEER

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CITY TRAFFIC ENGINEER

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DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV–27–2023

DWG NO: 01555–11

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

TCP TYPICAL CONSTRUCTION ZONE AT A 4–WAY INTERSECTION (LOW VOLUME TRAFFIC) PHASE 3 OF 4

TCP–47

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 303 OF 391	

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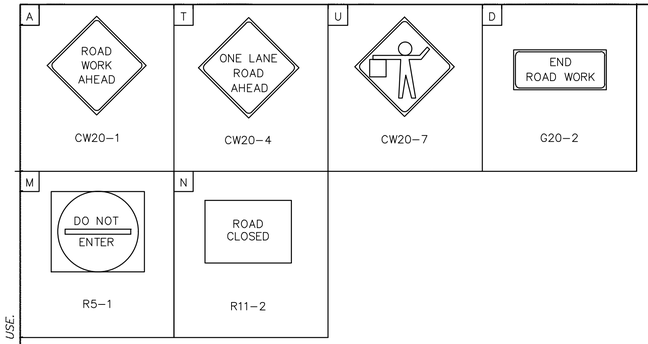

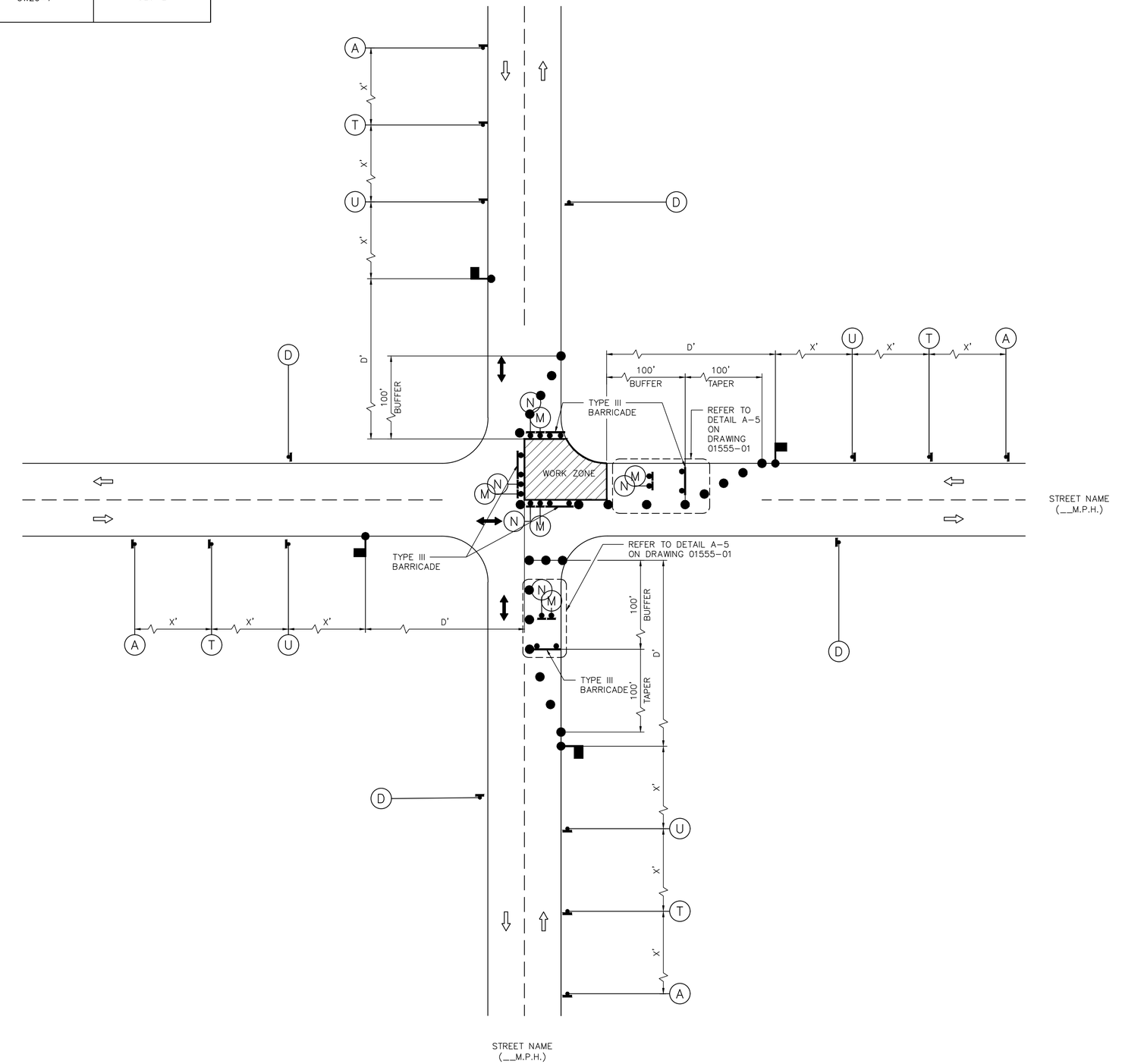

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CITY ENGINEER	CITY TRAFFIC ENGINEER

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DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023	DWG NO: 01555-12

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP TYPICAL CONSTRUCTION ZONE AT A 4-WAY INTERSECTION (LOW VOLUME TRAFFIC)
PHASE 4 OF 4
TCP-48

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 304 OF 391	

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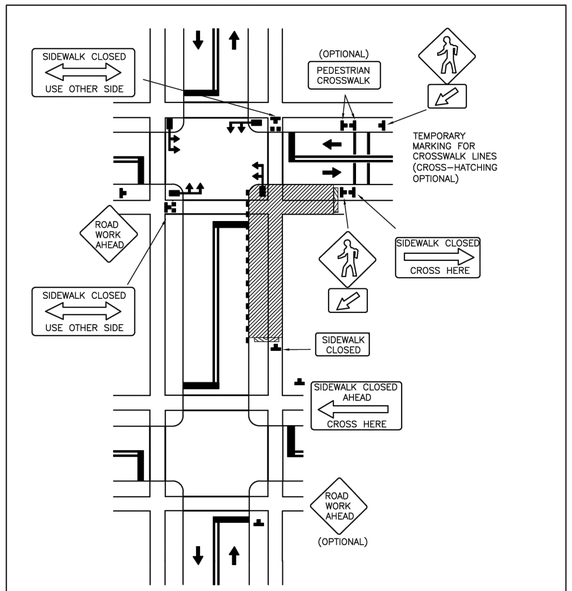

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Suhail Kanwar	KHANG NGUYEN	Carol Haddock
9EFB80C6419F0478...	95A29EFDA7B64CD...	A93C4109F2B3403...
CITY ENGINEER	CITY TRAFFIC ENGINEER	DIRECTOR OF HPW

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

CROSSWALK CLOSURES AND PEDESTRIAN DETOURS

(SCALE: NOT TO SCALE)

EFF DATE: NOV-27-2023 | DWG NO: 01555-16

REV.	DATE	DESCRIPTION	BY

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OTHON, INC. TBPE NO. F-1471

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
TCP-49
CROSSWALK CLOSURES AND PEDESTRIAN DETOURS

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
N.T.S.
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 305 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.4 TCP\TCP-49 CROSSWALK CLOSURES AND PEDESTRIAN DETOURS DETAIL.dwgTCP-49 Jan 21 , 2026 - 4:49PM OMarcelo

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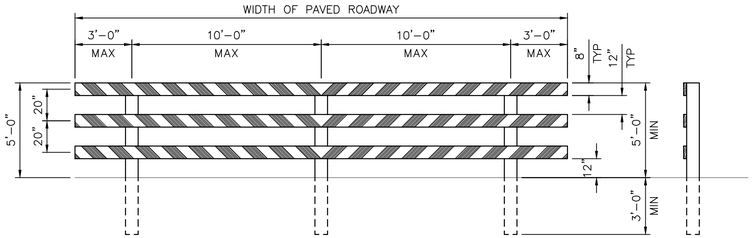
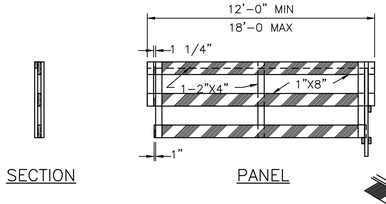
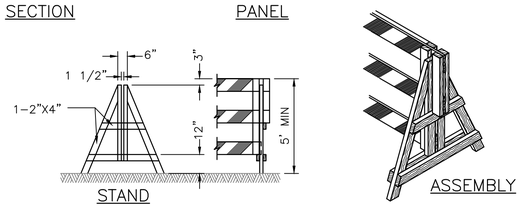


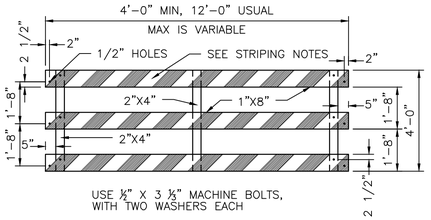
TYPE III BARRICADE FOR END OF ROAD

FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) RAILS SHALL BE REFLECTIVE RED AND RELFLECTIVE WHITE STRIPES ON SIDE FACING TRAFFIC

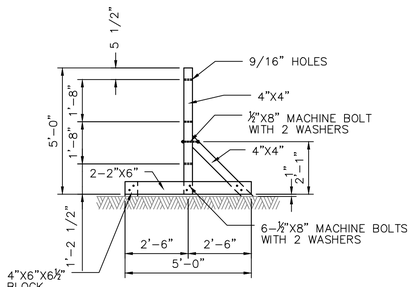




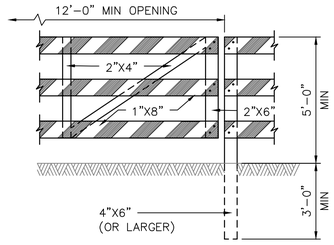
DEMOUNTABLE TYPE III BARRICADE



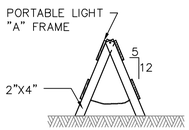
PANEL FOR TYPE III BARRICADE



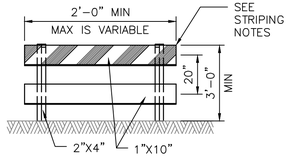
STAND FOR TYPE III BARRICADE



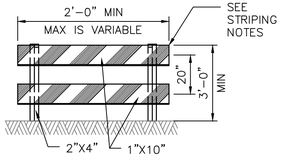
GATE FOR TYPE III BARRICADE



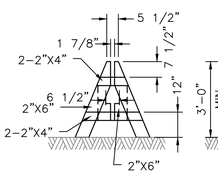
"A" FRAME



TYPE I



TYPE II



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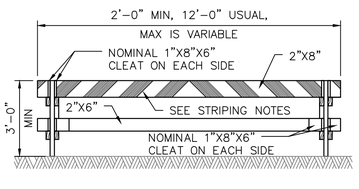
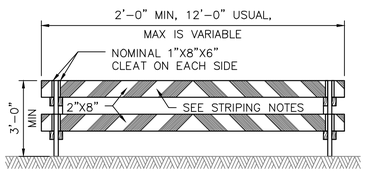


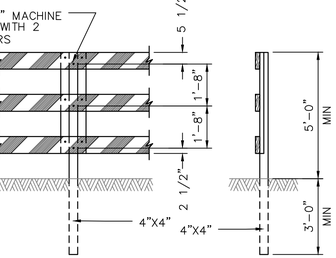
TYPE I



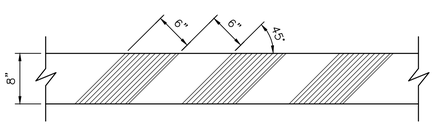
TYPE II

BARRICADE NOTES:

1. THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND IT'S REVISIONS, SHALL GOVERN THE CONSTRUCTION AND USE OF ALL ITEMS HEREIN DESCRIBED.
2. CHANNELIZATION DEVICES OTHER THAN BARRICADES SHOULD NORMALLY BE USED FOR CHANNELIZATION PURPOSES.
3. BARRICADES SHOULD NORMALLY BE PLACED PERPENDICULAR TO THE TRAFFIC FLOW. OTHER CHANNELIZING DEVICES, SUCH AS DRUMS, VERTICAL PANELS OR PORTABLE BARRIERS, SHOULD BE USED WHERE NEEDED TO SEPARATE TRAFFIC FROM THE WORK AREA. IN ALL CASES, THE BARRICADES SHOULD BE SO LOCATED AS TO MOST ADVANTAGEOUSLY WARN AND DIRECT TRAFFIC.
4. BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD OR ANY OTHER SUITABLE MATERIAL APPROVED BY THE TMUTCD. THE CONSTRUCTION DETAILS SHOWN HEREON ARE TYPICAL AND ARE SUGGESTED DETAILS FOR WOOD SUPPORT SYSTEMS FOR BARRICADES. THE DETAILS OF RAIL WIDTH AND STRIPING, NUMBER AND SPACING OF RAILS, MINIMUM LENGTH AND HEIGHT (ABOVE PAVEMENT) OF RAILS MUST BE ADHERED TO WHEN ALTERNATE DESIGNS ARE USED.
5. BARRICADES ARE TO BE CONSTRUCTED OF CLEAN SOUND MATERIAL. ALL SURFACES ABOVE GROUND, WHICH ARE NOT STRIPED, SHALL BE WHITE EXCEPT THE UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED. COMPONENTS MADE OF LUMBER SHALL BE PAINTED WITH A MINIMUM OF TWO COATS OF AN APPROVED BRAND OF WHITE PAINT TO SECURE THOROUGH COVERAGE AND A UNIFORM WHITE COLOR.
6. THE REFLECTORIZED WHITE AND REFLECTORIZED ORANGE (REFLECTORIZED RED) STRIPES FOR BARRICADES, DRUMS AND VERTICAL PANELS SHALL BE CONSTRUCTED OF HIGH INTESITY SHEETING AND SHALL BE MAINTAINED TO MEET THE APPEARANCE, COLOR AND REFLECTIVITY REQUIREMENTS SET BY DOTT.
7. THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.
8. BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.

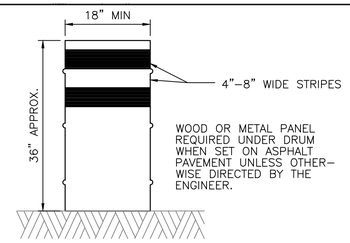


POST FOR TYPE III BARRICADE



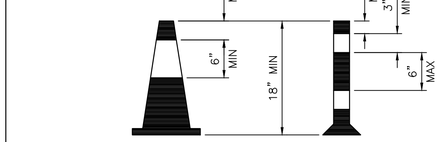
STRIPING FOR BARRICADE

1. FOR ALL TYPES OF BARRICADES WITH RAILS LESS THAN 3'-0" LONG, STRIPES 4" WIDE SHALL BE USED. IDENTIFICATION MARKINGS MAY BE SHOWN ONLY ON BACK SIDE OF BARRICADE RAILS.
2. STRIPING SHOULD COVER THE FULL WIDTH OF THE RAIL. STRIPING OF RAILS, PANELS, ETC, SHOULD SLOPE DOWNWARD AT AN ANGLE OF 45° DEGREES IN DIRECTIONS TRAFFIC IS TO PASS.
3. WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING. WHEN BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE CHEVRON STRIPING MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.



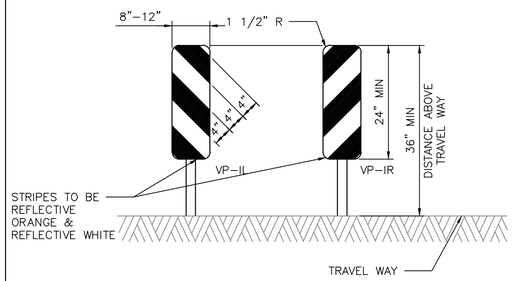
DRUMS

1. DRUMS, SET ON END, AND USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE APPROX 36" IN HEIGHT AND A MIN OF 18" IN DIAMETER. THE CONTRACTOR, AT HIS OPTION, MAY USE DRUMS MADE FROM STEEL BARRELS OR BLACK POLYETHYLENE PLASTIC DRUM LINERS WEIGHING APPROX EIGHT POUNDS EACH. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, REFLECTORIZED ORANGE AND REFLECTORIZED WHITE STRIPES, 4 TO 8 INCHES WIDE. THE FIRST REFLECTORIZED STRIPE SHOULD START WITHIN TWO (2) INCHES OF THE TOP OF THE DRUM. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES ON EACH DRUM. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, THEY SHALL BE NO MORE THAN 2 INCHES WIDE. METAL DRUMS SHALL BE PAINTED BLACK OR ORANGE BEFORE REFLECTORIZED STRIPES ARE ADDED. ALL DRUMS ON PROJECT WILL BE THE SAME COLOR. WHEN DRUMS ARE PLACED IN THE ROADWAY, APPROPIATE WARNING SIGNS SHOULD BE USED. DURING HOURS OF DARKNESS, A FLASHING WARNING LIGHT SHOULD BE PLACED ON DRUMS USED SINGLY AS A WARNING DEVICE. STEADY BURN ELECTRIC LIGHTS OR DELINEATORS SHOULD BE PLACED ON DRUMS USED IN SERIES FOR TRAFFIC CHANNELIZATION. DRUMS SHALL BE WEIGHTED WITH SAND TO THE EXTENT INDICATED IN THE PLANS.
2. CWI-8 CHEVRON SIGNS, CWI-6A ARROW SIGNS OR VP-1 VERTICAL PANELS MOUNTED ABOVE DRUMS MAY BE USED AS SUPPLEMENTS TO DRUM DELINEATION.



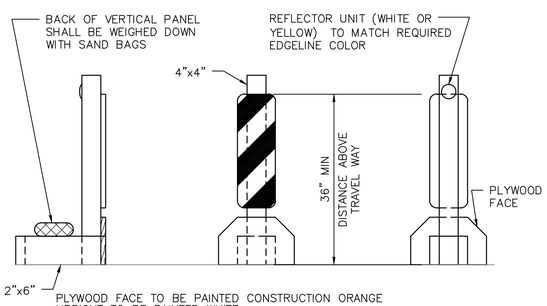
CONES

1. TRAFFIC CONES AND TUBULAR MARKERS SHALL BE A MIN OF 18" INCHES IN HEIGHT WITH A BROADENED BASE AND MAY BE MADE OF VARIOUS MATERIALS TO WITHSTAND IMPACT WITHOUT DAMAGE TO THEMSELVES OR TO VEHICLES. LARGER SIZES SHOULD BE USED ON FREEWAYS AND OTHER ROADWAYS WHERE SPEED ARE RELATIVELY HIGH OR WHERE EVER MORE CONSPICUOUS GUIDANCE IS NEEDED. ORANGE SHALL BE THE PREDOMINANT COLOR ON CONES AND TUBULAR MARKERS. THEY SHOULD BE KEPT CLEAN AND BRIGHT FOR MAX TARGET VALUE. FOR NIGHT TIME USE THEY SHALL BE REFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES FOR MAX VISIBILITY. REFLECTORIZED MATERIAL SHALL HAVE A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROX COLOR DAY AND NIGHT.
2. REFLECTORIZATION OF TUBULAR MARKERS SHALL BE A MIN OF TWO THREE-INCH BANDS PLACED A MAX OF 2" FROM THE TOP WITH A MAX OF 6" BETWEEN THE BANDS. REFLECTORIZATION OF CONES SHALL BE PROVIDED BY A MIN 6" BAND PLACED A MAX OF 3" FROM THE TOP.
3. CONES OR TUBULAR MARKERS ARE GENERALLY ONLY SUITABLE FOR TEMPORARY USAGE (UP TO 8 HOURS) WITH OTHER CHANNELIZATION DEVICES SUCH AS VERTICAL PANELS OR BARRICADES PREFERRED FOR LONGER TERM USAGE. CARE SHOULD BE TAKEN TO INSURE THAT THEY REMAIN IN THEIR PROPER LOCATION AND IN AN UPRIGHT POSITION.



VERTICAL PANELS (VP)

VERTICAL PANELS ARE NORMALLY USED AS CHANNELIZING DEVICES TO INDICATE TANGENT OR NEARLY TANGENT ROADWAY ALIGNMENT WHERE GOOD TARGET VALUE OF A DEVICE IS NEEDED IN DAYTIME AS WELL AS THE NIGHTTIME. IN ADDITION, VERTICAL PANELS SHOULD BE USED AT THE EDGE OF SHOULDER DROP-OFFS AND OTHER SUCH AREAS AS LANE TRANSITIONS WHERE POSITIVE DAY AND NIGHT DELINEATION MAY BE REQUIRED. VERTICAL PANELS SHOULD BE MOUNTED BACK TO BACK IF USED AT THE EDGE OF CUTS ADJACENT TO TWO-WAY TWO LANE ROADWAYS. STRIPES SHOULD ALWAYS SLOPE DOWNWARD TOWARD THE TRAVELED WAY.



TYPICAL PORTABLE VERTICAL PANEL OR DELINEATOR

OTHER SIMILAR SUPPORTS MAY BE USED WHEN APPROVED BY TMUTCD AND DIRECTED BY THE CITY OF HOUSTON.

OTHON

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Engineers ● Planners ● Construction Managers
2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

APPROVED BY:	APPROVED BY:
DocuSigned by: Sukail kanwar 9EF8BDC641F5478...	DocuSigned by: KHANG NGUYEN 95A29EFDA758ACD...
CITY ENGINEER	CITY TRAFFIC ENGINEER

APPROVED BY:
DocuSigned by: Carol Haddock A83C4108728B453...
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023 | DWG NO: 01555-14

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS YONGKI SHIM 114557 LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

BARRICADE AND CHANNELIZING DEVICES

TCP-50

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NOT TO SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 306 OF 391	

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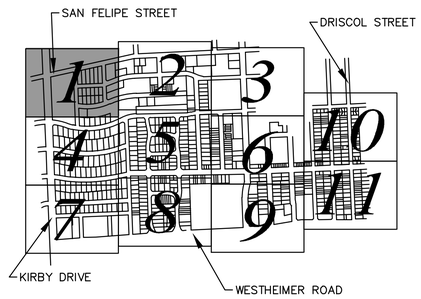
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THEIR APPLICABILITY, ADEQUACY AND SAFETY. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.





NOTE:

1. SEE SHEET REF. NO. 12 FOR STORM WATER POLLUTION PREVENTION PLAN(SWPPP) NOTES & DETAILS.
2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

IPB — INLET PROTECTION BARRIER

RFB — REINFORCED FILTER FABRIC BARRIER

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–01
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 307 OF 391

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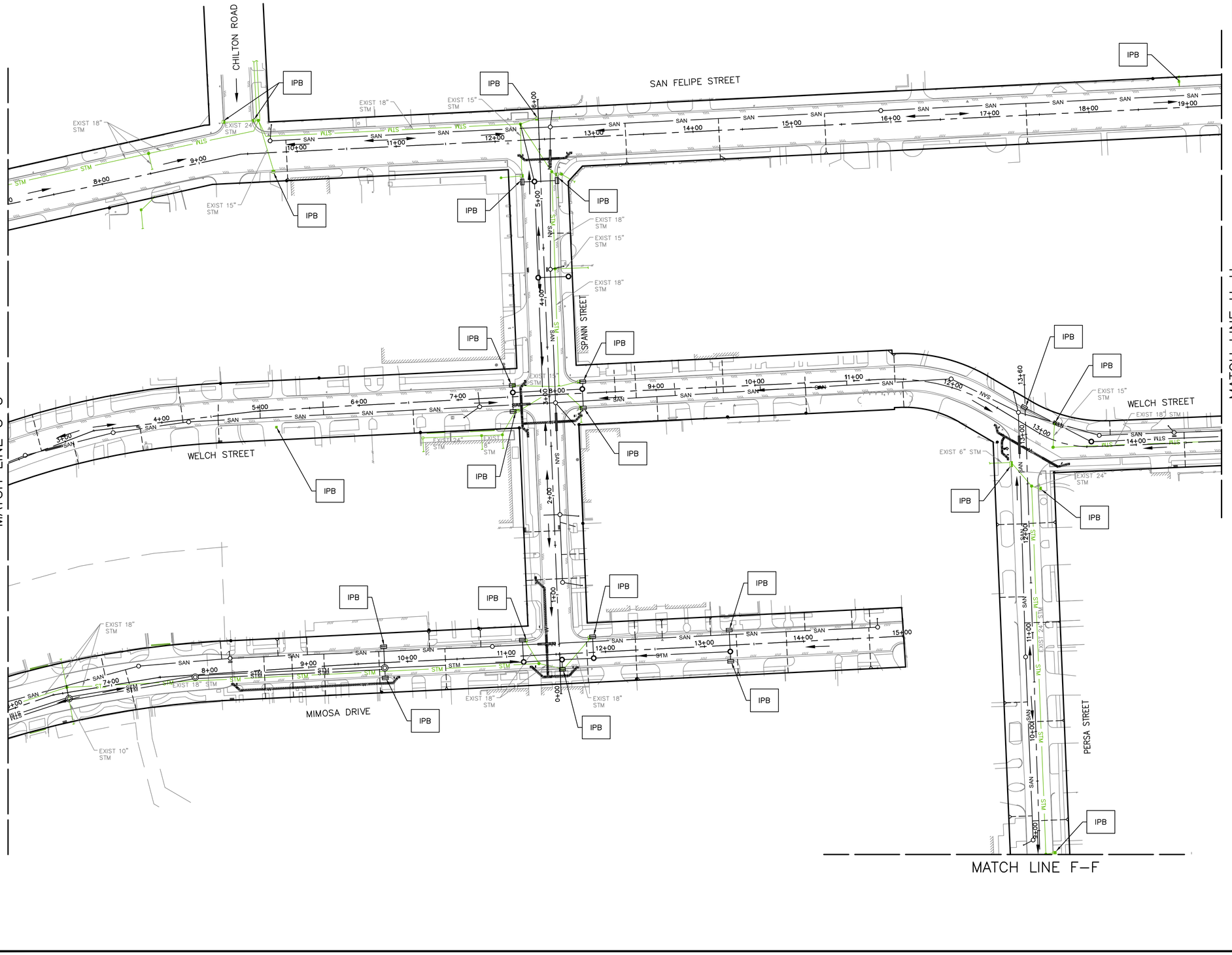

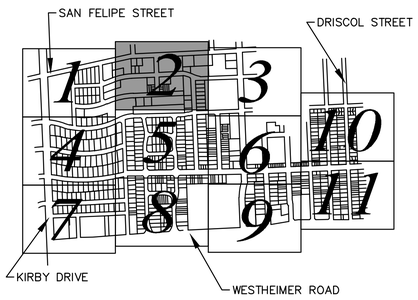

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IPB — INLET PROTECTION BARRIER

FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

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1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–02
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 308 OF 391

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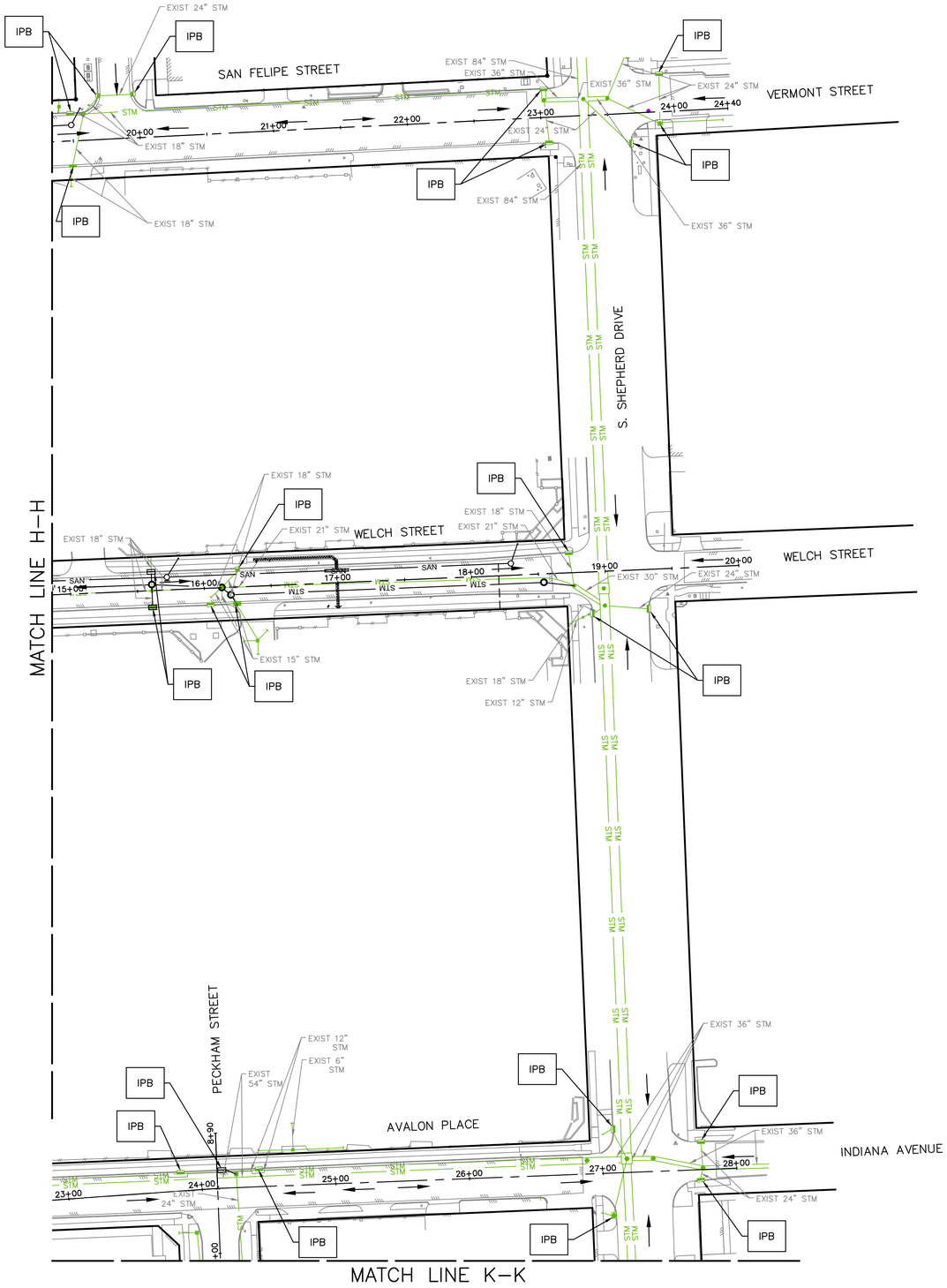

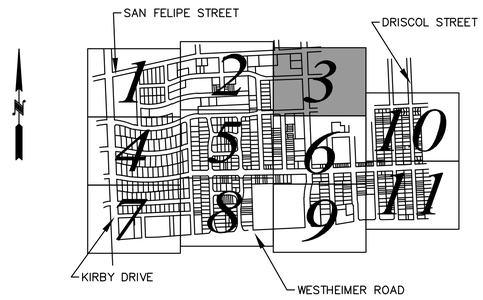

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→ FLOW DIRECTION

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NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP-03
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 309 OF 391	

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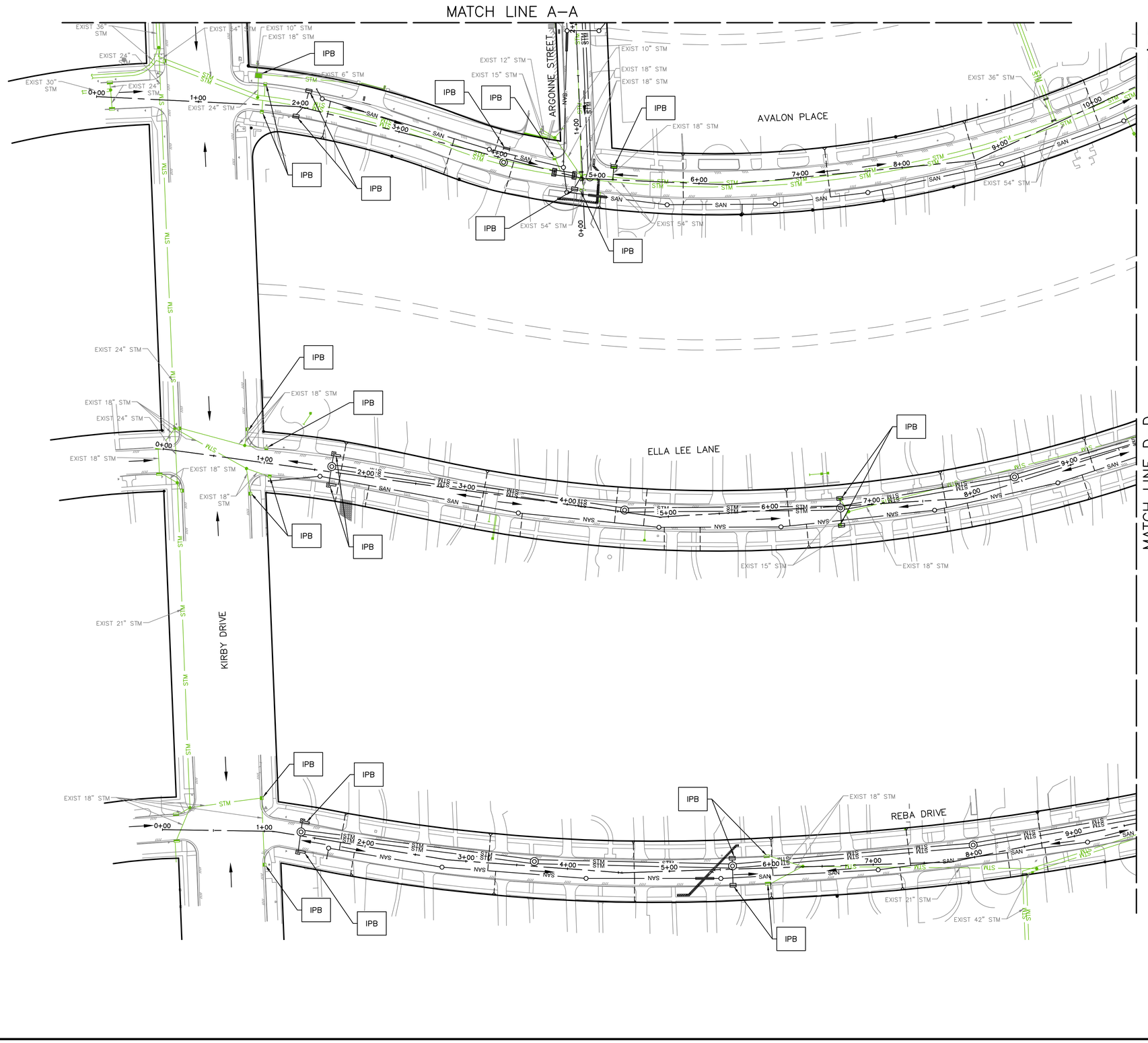

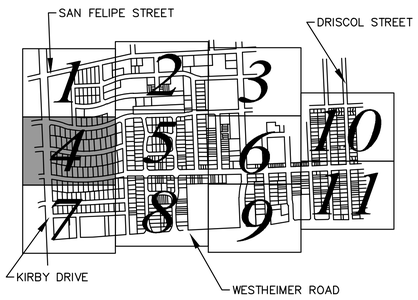

NOTE:

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2. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT, INCLUDING TRUCK WASHING AREA, VERIFIED IN THE FIELD AND AUTHORIZED BY THE CITY ENGINEER.

LEGEND:

IPB — INLET PROTECTION BARRIER

→ FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

CIVITAS ENGINEERING GROUP

Engineers ● Planners ● Construction Managers
2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–04
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 310 OF 391	

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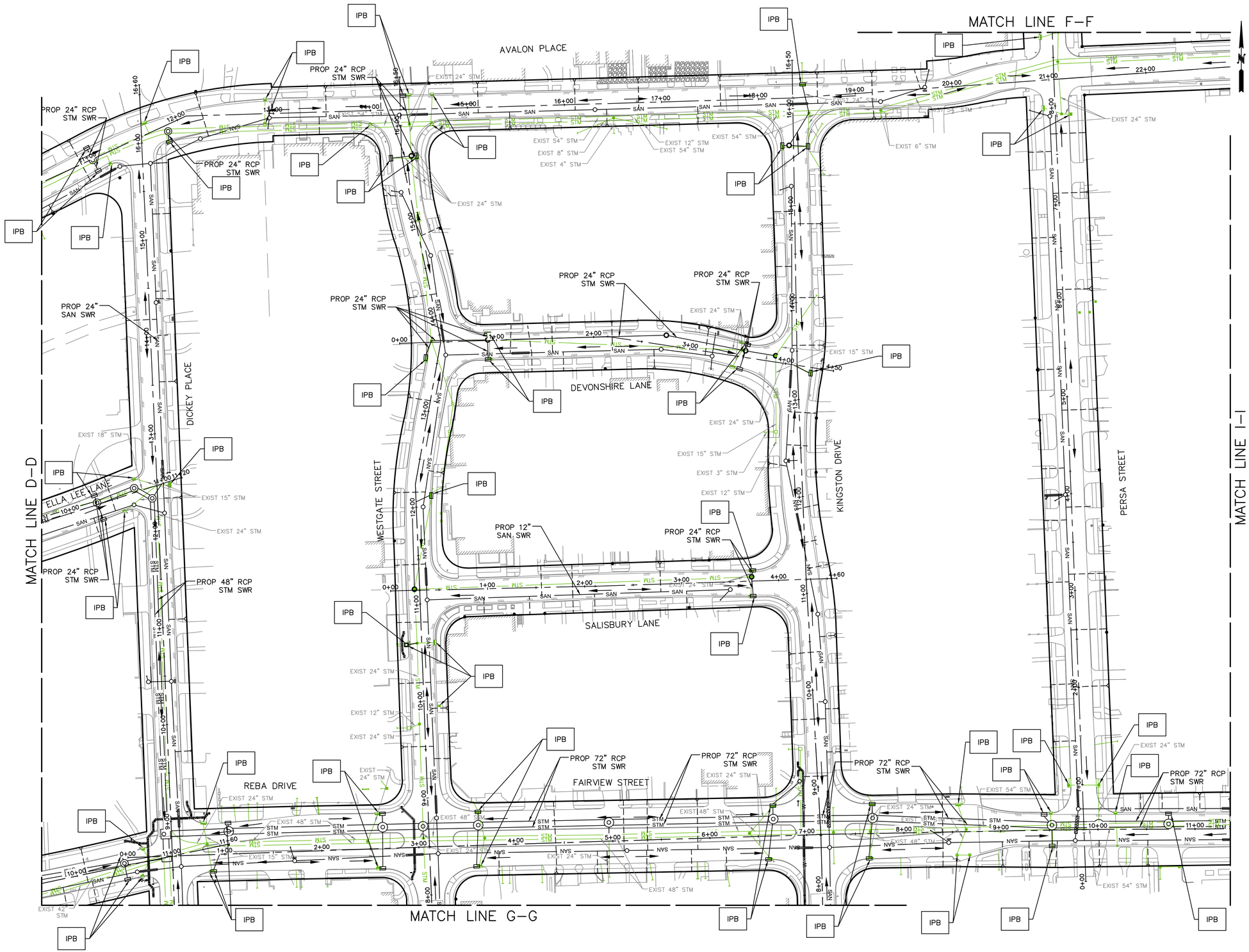

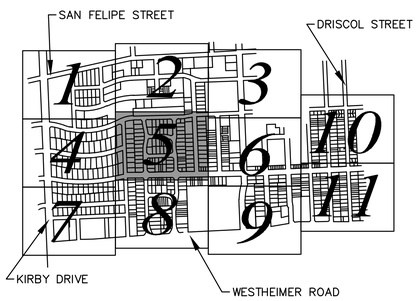

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IPB — INLET PROTECTION BARRIER

→ FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

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TEL: (713) 270-5700
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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP-05
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 311 OF 391	

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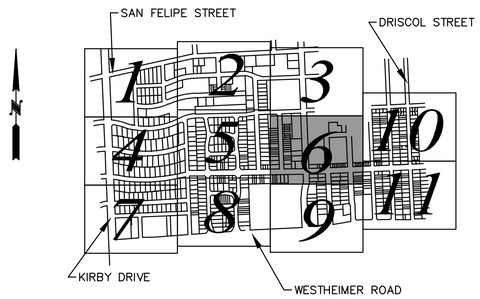

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LEGEND:

- IPB — INLET PROTECTION BARRIER
- FLOW DIRECTION
- RFB — REINFORCED FILTER FABRIC BARRIER

REV.	DATE	DESCRIPTION	BY

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TEL: (713) 270–5700
TBPE REG NO: F–4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS — YONGKI SHIM — 114557 — LICENSED PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–06
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 312 OF 391	

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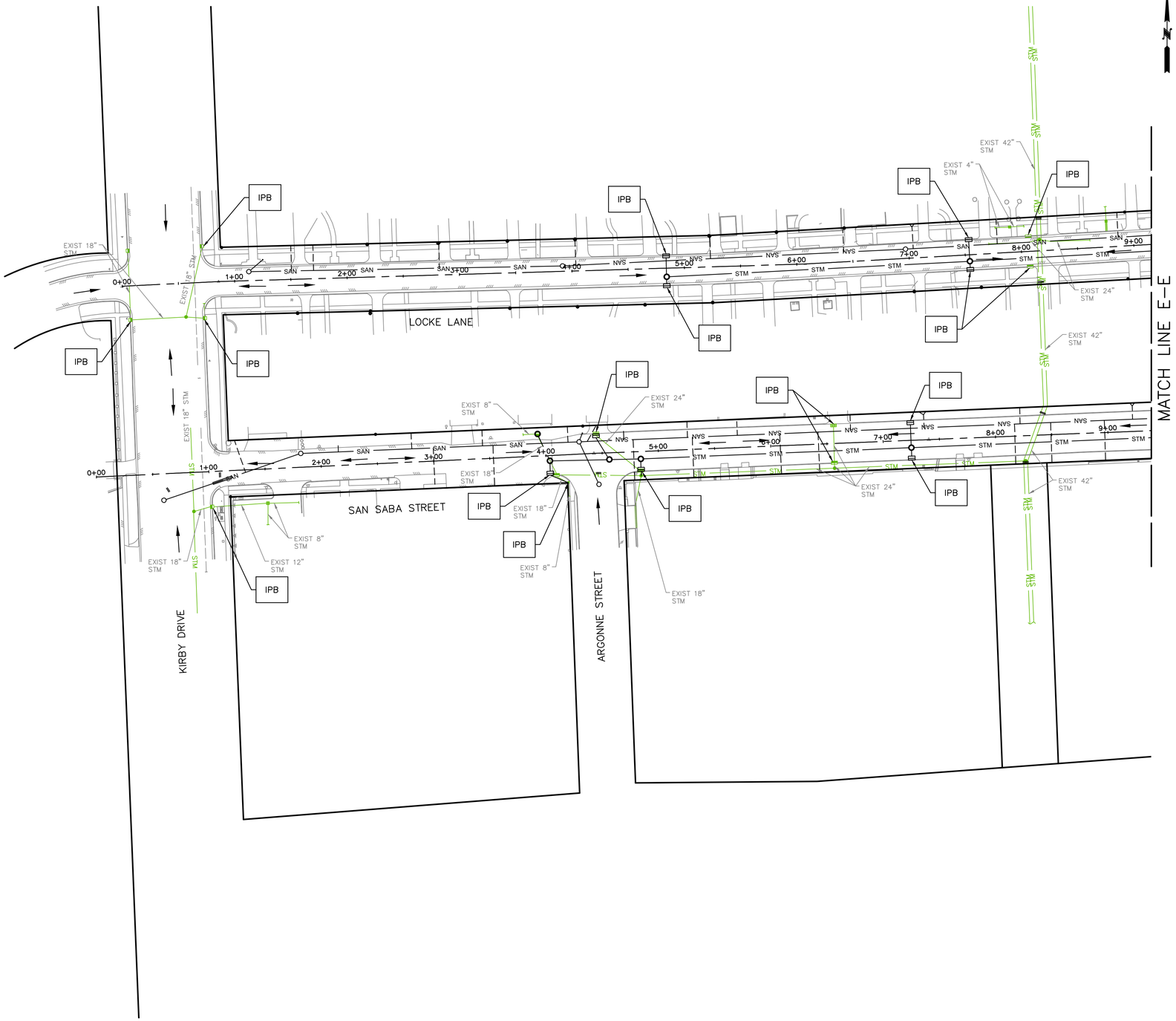

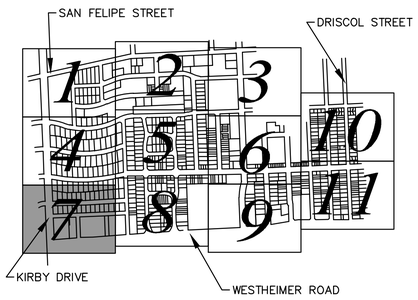

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LEGEND:

IPB — INLET PROTECTION BARRIER

→ FLOW DIRECTION

REV.	DATE	DESCRIPTION	BY

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STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

1/21/2026

CITY OF HOUSTON

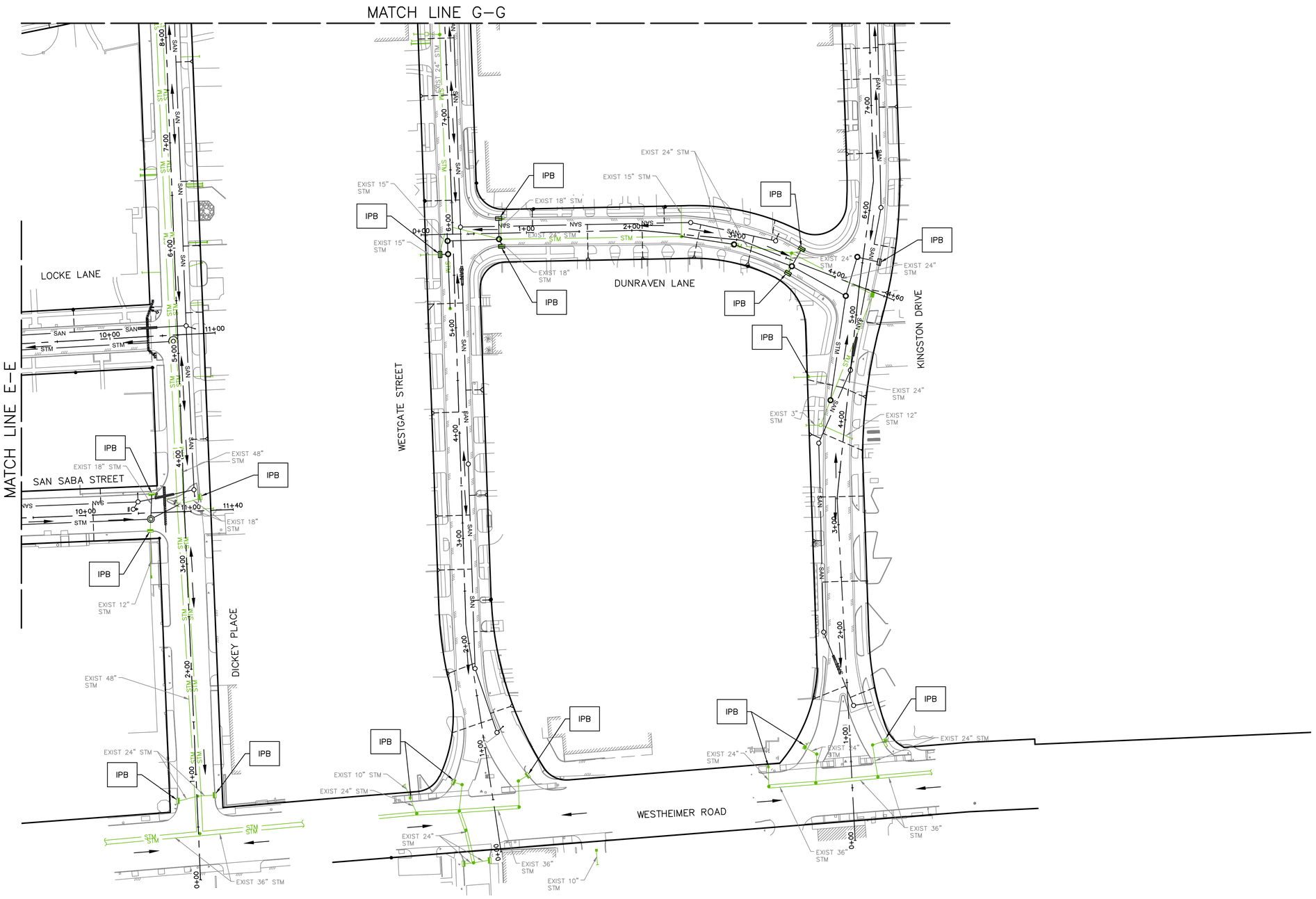
HOUSTON PUBLIC WORKS

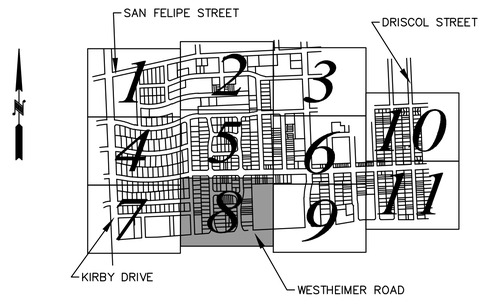
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP-07
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 313 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.5 SWPPP\SWPPP-NSSI.dwgSWPPP-07 Jan 21 , 2026 - 4:34PM OMarcelo





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IPB — INLET PROTECTION BARRIER

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REV.	DATE	DESCRIPTION	BY

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–08
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 314 OF 391

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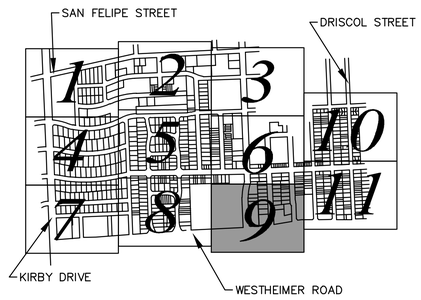

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- FLOW DIRECTION
- RFB — REINFORCED FILTER FABRIC BARRIER

REV.	DATE	DESCRIPTION	BY

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
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PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

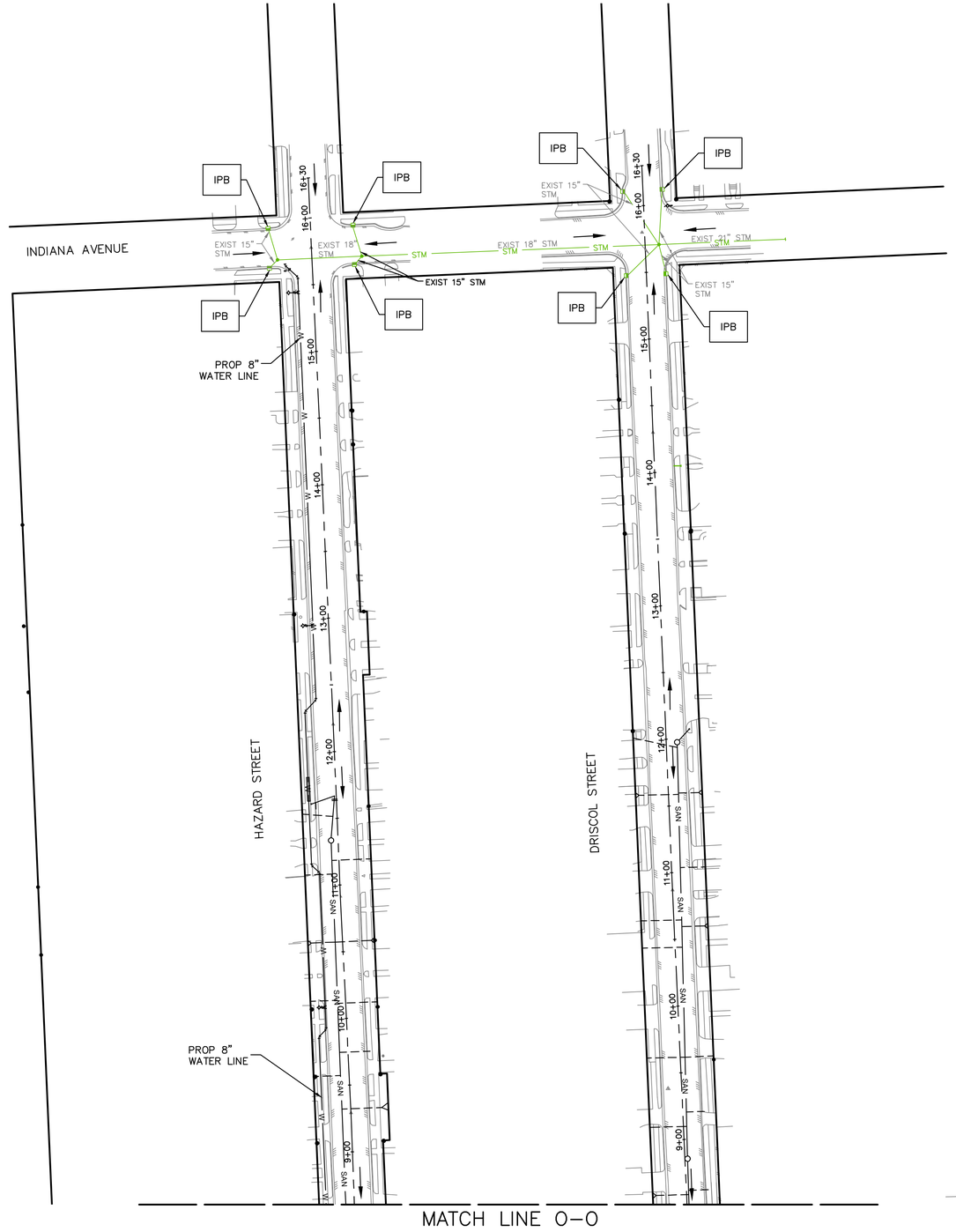
HOUSTON PUBLIC WORKS

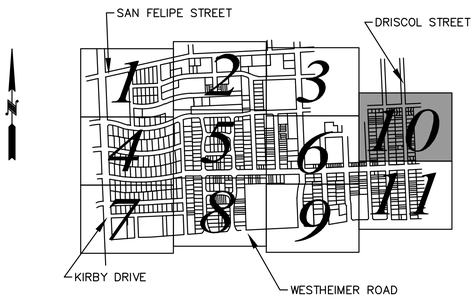
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–09
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 315 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.5 SWPPP\SWPPP–NSSI.dwgSWPPP–09 Jan 21, 2026 – 4:34PM OMarcelo





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IPB — INLET PROTECTION BARRIER

→ FLOW DIRECTION

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1/21/2026

CITY OF HOUSTON

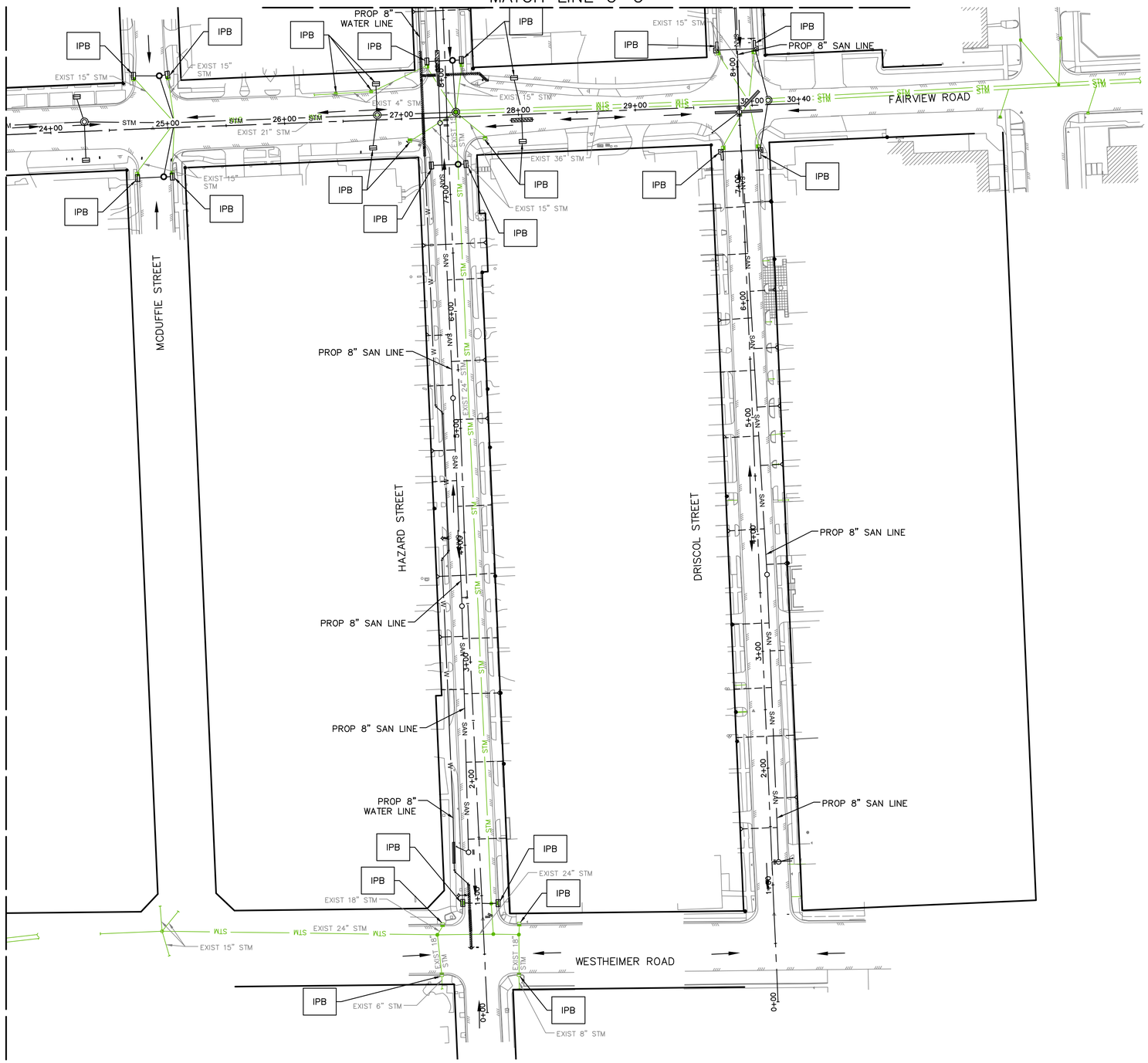
HOUSTON PUBLIC WORKS

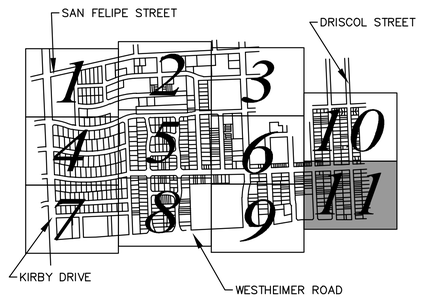
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP-10
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 316 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.5 SWPPP\SWPPP-NSSI.dwgSWPPP-10 Jan 21 , 2026 - 4:34PM OMarcelo





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STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP–11
STORMWATER POLLUTION PREVENTION PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 317 OF 391	

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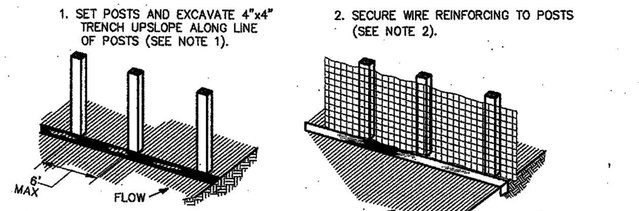
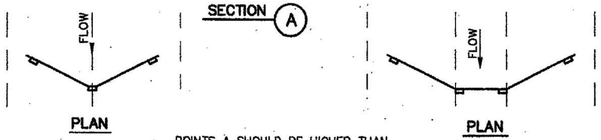
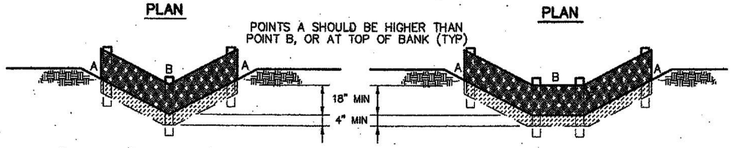




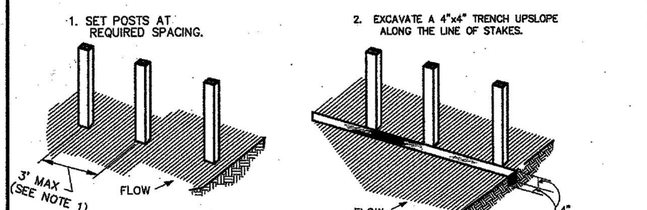


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

×— (RFB) —×
SYMBOL

REINFORCED FILTER FABRIC BARRIER

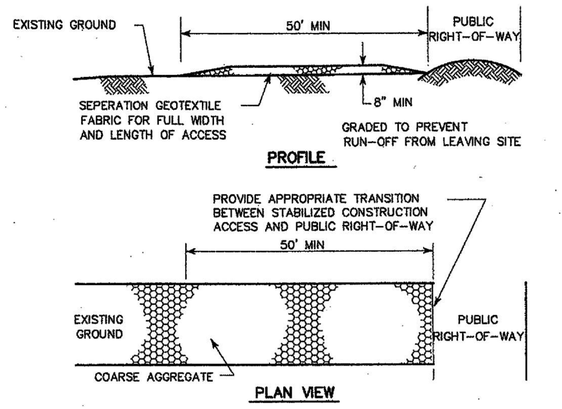


CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

×— (FF) —×
SYMBOL

FILTER FABRIC BARRIER

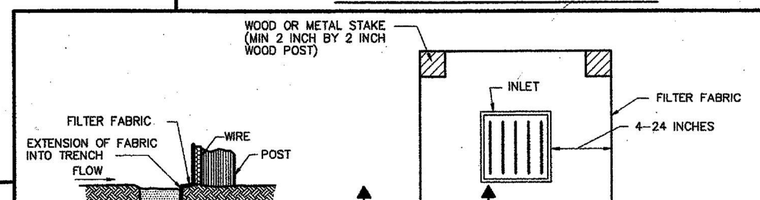


CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

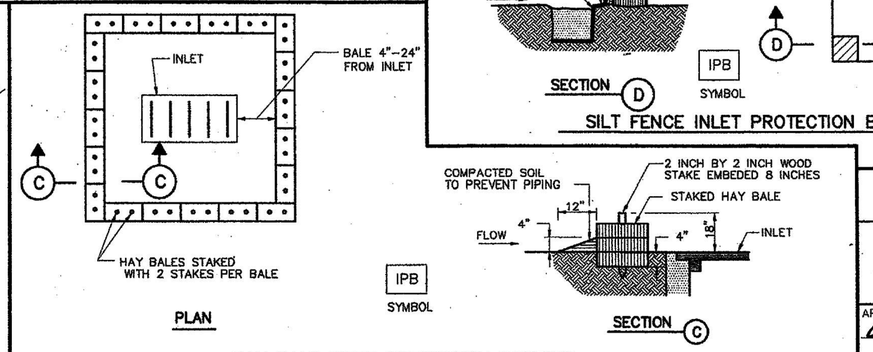
SC
SYMBOL

STABILIZED CONSTRUCTION ACCESS



CONSTRUCTION NOTE:

1. SEE CONSTRUCTION NOTES FOR RFB.



REV.	DATE	DESCRIPTION	BY

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575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

CIVITAS ENGINEERING GROUP
Engineers ● Planners ● Construction Managers
2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED
CITY ENGINEER

APPROVED
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010

DWG NO: 01571-01

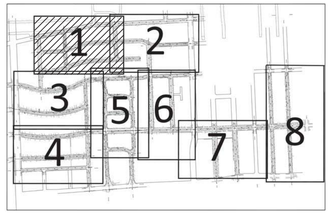
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SWPPP-12
STORMWATER POLLUTION PREVENTION DETAILS

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
N.T.S.
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 318 OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.5 SWPPP\SWPPP-NSSI.dwgSWPPP-12 Jan 21 - 2026 - 4:34PM OMarcelo



GRAPHIC SCALE
0 40 80
(IN FEET)

SAN FELIPE

MATCHLINE SEE SHEET 2

San Felipe RD
Argonne ST
STOP
(REMOVE AND RELOCATE EXISTING SIGN)

Revere ST
San Felipe RD
STOP
(REMOVE AND RELOCATE EXISTING SIGN)

ARGONNE

REVERE

WELCH

(PROPOSED STA. 6+54.06, 21.0'LT) (5)

(PROPOSED STA. 6+54.06, 21.0'RT) (6)

Argonne ST
Brazoria ST
STOP
(PROPOSED STA.0+60.81, 15.4'LT) (2)

Revere ST
Brazoria ST
STOP
(PROPOSED STA.3+20.19, 13.90'LT) (3)

BRAZORIA

Revere ST
Welch ST
STOP
(PROPOSED STA.2+74.87, 23.1'RT) (4)

(PROPOSED STA. 5+52.39, 18.3'RT) (7)

(PROPOSED STA. 5+52.39, 18.3'LT) (8)

Revere ST
Mimosa DR
STOP
(PROPOSED STA.0+91.10, 24.55'LT) (1)

Mimosa DR
Argonne ST
STOP
(EXISTING SIGN TO REMAIN)

MIMOSA

MATCHLINE SEE SHEET 3

LEGEND

- (A) REMOVE & REPLACE EXISTING SIGN
- (B) RELOCATE EXISTING SIGN
- (C) REMOVE EXISTING SIGN
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN

NOTES

1. SEE SHEET S&PM 10 FOR SIGN DETAILS.
2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	7
Remove & Relocate Sign	4
Proposed Sign	12
Remove Sign	5

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED
PROFESSIONAL ENGINEER
7/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 1 OF 9

S&PM 1

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 319 OF 381	

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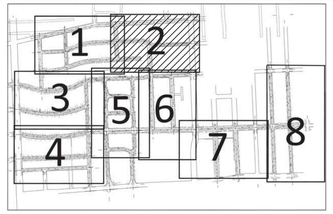

MATCHLINE SEE SHEET 1

SAN FELIPE

San Felipe ST
Spann ST
STOP
(EXISTING SIGN TO REMAIN)

Welch ST
Spann ST
STOP
ALL WAY
(PROPOSED STA.3+26.60,21.51'LT) (9)

Welch ST
Spann ST
STOP
ALL WAY
(EXISTING SIGN TO REMAIN)

SPANN

MATCHLINE SEE SHEET 1

WELCH

W1-4R
25
M.P.H.
W13-1P
(PROPOSED ADVISORY SPEED SIGN STA.9+65.2,17.04'RT) (12)

Welch ST
Spann ST
STOP
ALL WAY
(PROPOSED STA.7+60.52,17.45'RT) (10)

SPANN

MATCHLINE SEE SHEET 1

MIMOSA

Spann ST
Mimosa DR
STOP
(PROPOSED STA.0+65.92,21.99'LT) (11)

W1-4R
25
M.P.H.
W13-1P
(PROPOSED ADVISORY SPEED SIGN STA.14+84.56,13.19'LT) (13)

SAN FELIPE

WELCH

PERSA

Welch ST
Persa ST
STOP
(EXISTING SIGN TO REMAIN)

MATCHLINE SEE SHEET 6

GRAPHIC SCALE
0 40 80
(IN FEET)

SHEPHERD

RD

LEGEND

- (A) REMOVE & REPLACE EXISTING SIGN
- (B) RELOCATE EXISTING SIGN
- (C) REMOVE EXISTING SIGN
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN
- PROP PAVEMENT EDGE

NOTES

1. SEE SHEET S&PM 10 FOR SIGN DETAILS.
2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	14
Remove & Relocate Sign	2
Proposed Sign	5
Remove Sign	3

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REGISTERED PROFESSIONAL ENGINEER
4/15/26

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

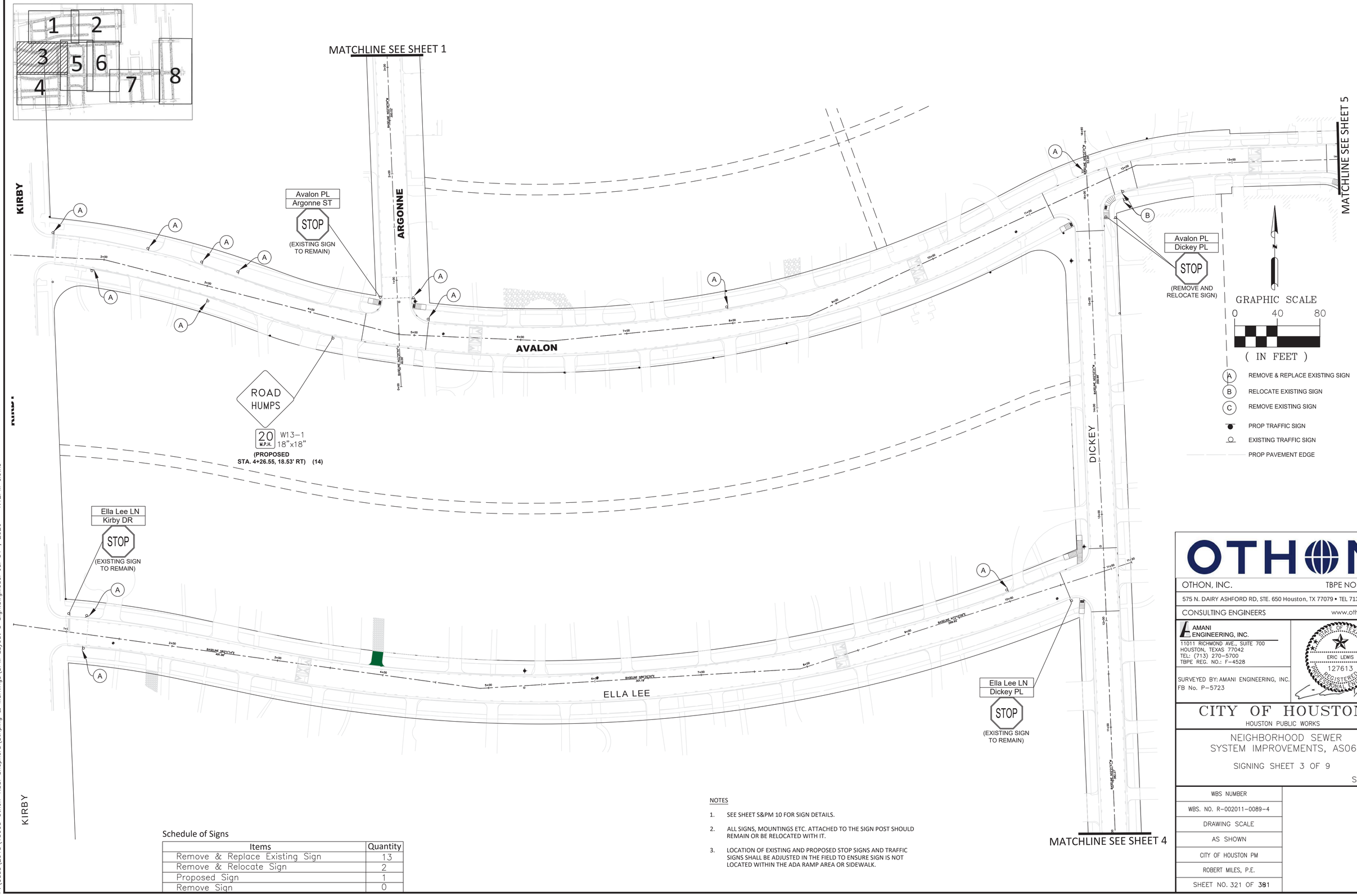
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 2 OF 9

S&PM 2

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 320 OF 381	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 2 Sign.dwgModel Jul 31 , 2026 - 1:12PM elewis



Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	13
Remove & Relocate Sign	2
Proposed Sign	1
Remove Sign	0

NOTES

1. SEE SHEET S&PM 10 FOR SIGN DETAILS.
2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

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127613
REGISTERED PROFESSIONAL ENGINEER
1/6/26

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 3 OF 9

S&PM 3

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 321 OF 381	

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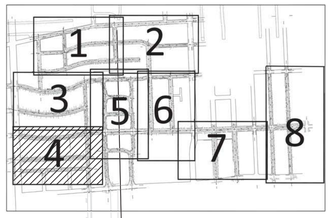

MATCHLINE SEE SHEET 3

MATCHLINE SEE SHEET 5

Reba DR
Kirby DR
STOP
(EXISTING SIGN TO REMAIN)

Reba DR
Dickey PL
STOP
ALL WAY
(EXISTING SIGN TO REMAIN)

Fairview DR
Dickey PL
STOP
ALL WAY
(EXISTING SIGN TO REMAIN)

Fairview DR
Dickey PL
STOP
ALL WAY
(REMOVE AND RELOCATE SIGN)

Kirby DR
Locke LN
STOP
(EXISTING SIGN TO REMAIN)

Locke LN
Dickey PL
STOP
(EXISTING SIGN TO REMAIN)

San Saba ST
Kirby DR
STOP
(EXISTING SIGN TO REMAIN)

REBA

FAIRVIEW

LOCKE

SAN SABA

KIRBY

DICKEY

ARGONNE

GRAPHIC SCALE
0 40 80
(IN FEET)

- (A) REMOVE & REPLACE EXISTING SIGN
- (B) RELOCATE EXISTING SIGN
- (C) REMOVE EXISTING SIGN
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN
- PROP PAVEMENT EDGE

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	17
Remove & Relocate Sign	2
Proposed Sign	0
Remove Sign	0

NOTES

1. SEE SHEET S&PM 10 FOR SIGN DETAILS.
2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
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STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
7/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 4 OF 9

S&PM 4

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 322 OF 381	

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MATCHLINE SEE SHEET 4

MATCHLINE SEE SHEET 3

WEST GATE

KINGSTON

DUNRAVEN

FAIRVIEW

SALISBURY

DEVONSHIRE

AVALON

AVALON

GRAPHIC SCALE
0 40 80
(IN FEET)

West Gate DR
Dunraven LN
STOP
(EXISTING SIGN TO REMAIN)

West Gate DR
Fairview ST
STOP
(EXISTING SIGN TO REMAIN)

West Gate ST
Salisbury LN
STOP
(EXISTING SIGN TO REMAIN)

West Gate ST
Devonshire ST
STOP
(REMOVE AND RELOCATE SIGN)

West Gate ST
Avalon PL
STOP
(EXISTING SIGN TO REMAIN)

Kingston DR
Dunraven LN
STOP
(EXISTING SIGN TO REMAIN)

Kingston DR
Fairview ST
STOP
(EXISTING SIGN TO REMAIN)

Kingston DR
Salisbury Ln
STOP
(REMOVE AND RELOCATE SIGN)

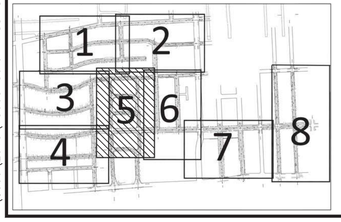
Kingston DR
Devonshire ST
STOP
(REMOVE AND RELOCATE SIGN)

Kinston DR
Avalon PL
STOP
(EXISTING SIGN TO REMAIN)

Kingston DR
Fairview ST
STOP
(EXISTING SIGN TO REMAIN)

MATCHLINE SEE SHEET 6

MATCHLINE SEE SHEET 6



NOTES

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2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

(A) REMOVE & REPLACE EXISTING SIGN
(B) RELOCATE EXISTING SIGN
(C) REMOVE EXISTING SIGN
PROP TRAFFIC SIGN
EXISTING TRAFFIC SIGN
PROP PAVEMENT EDGE

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	5
Remove & Relocate Sign	4
Proposed Sign	0
Remove Sign	0

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STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
1/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 5 OF 9

S&PM 5

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 323 OF 381	

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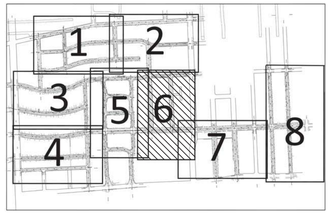

MATCHLINE SEE SHEET 5

W1-4L

25 M.P.H.

W13-1P

(PROPOSED ADVISORY SPEED SIGN STA.18+81.35,15.5'RT) (15)

GRAPHIC SCALE

0 40 80

(IN FEET)

MATCHLINE SEE SHEET 5

Fairview ST
Persa ST

STOP

(EXISTING SIGN TO REMAIN)

Avalon ST
Persa ST

STOP

ALL WAY

(EXISTING SIGN TO REMAIN)

PERSA

AVALON

MATCHLINE SEE SHEET 2

Avalon ST
Persa ST

STOP

ALL WAY

(EXISTING SIGN TO REMAIN)

W1-4L

25 M.P.H.

W13-1P

(PROPOSED ADVISORY SPEED SIGN STA.14+84.56,13.19'LT) (16)

Fairview ST
Peckham ST

STOP

(EXISTING SIGN TO REMAIN)

PECKHAM

FAIRVIEW

Avalon PL
Peckham ST

STOP

(PROPOSED STA.8+15.56, 18.9'RT) (17)

MATCHLINE A-A THIS SHEET

Avalon PL
Shepherd ST

STOP

(EXISTING SIGN TO REMAIN)

AVALON

SHEPHERD

MATCHLINE A-A THIS SHEET

MATCHLINE SEE SHEET 7

(A) REMOVE & REPLACE EXISTING SIGN

(B) RELOCATE EXISTING SIGN

(C) REMOVE EXISTING SIGN

PROP TRAFFIC SIGN

EXISTING TRAFFIC SIGN

PROP PAVEMENT EDGE

NOTES

1. SEE SHEET S&PM 10 FOR SIGN DETAILS.
2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	7
Remove & Relocate Sign	2
Proposed Sign	5
Remove Sign	1

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TBPE REG. NO.: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
ERIC LEWIS
127613
LICENSED PROFESSIONAL ENGINEER
1/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 6 OF 10

S&PM 6

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 324 OF 381	

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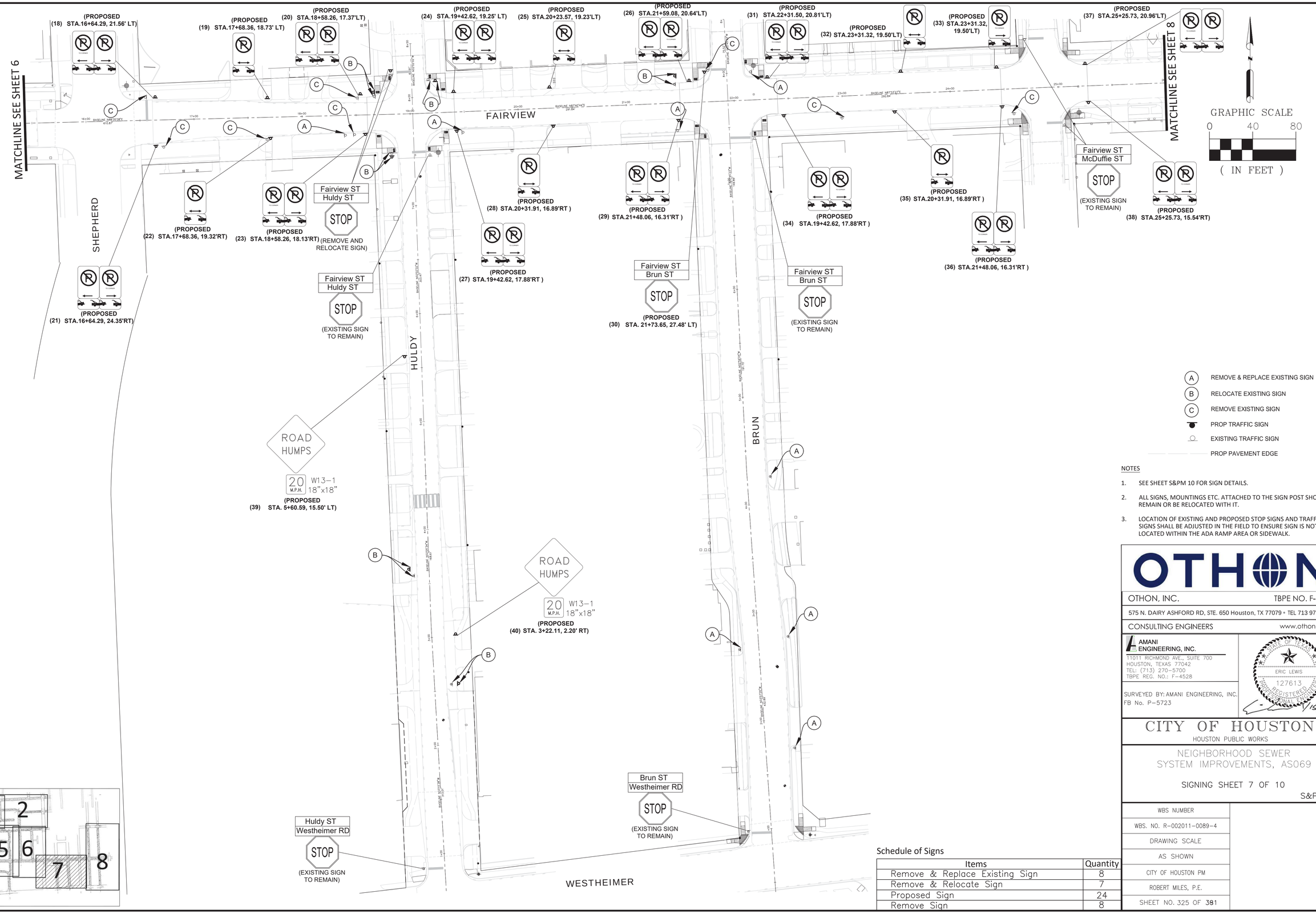

NOTES

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3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	8
Remove & Relocate Sign	7
Proposed Sign	24
Remove Sign	8

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STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
1/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 7 OF 10

S&PM 7

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 325 OF 381	

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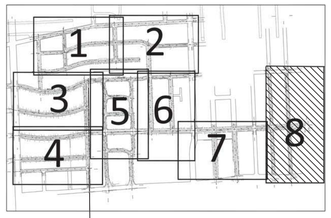

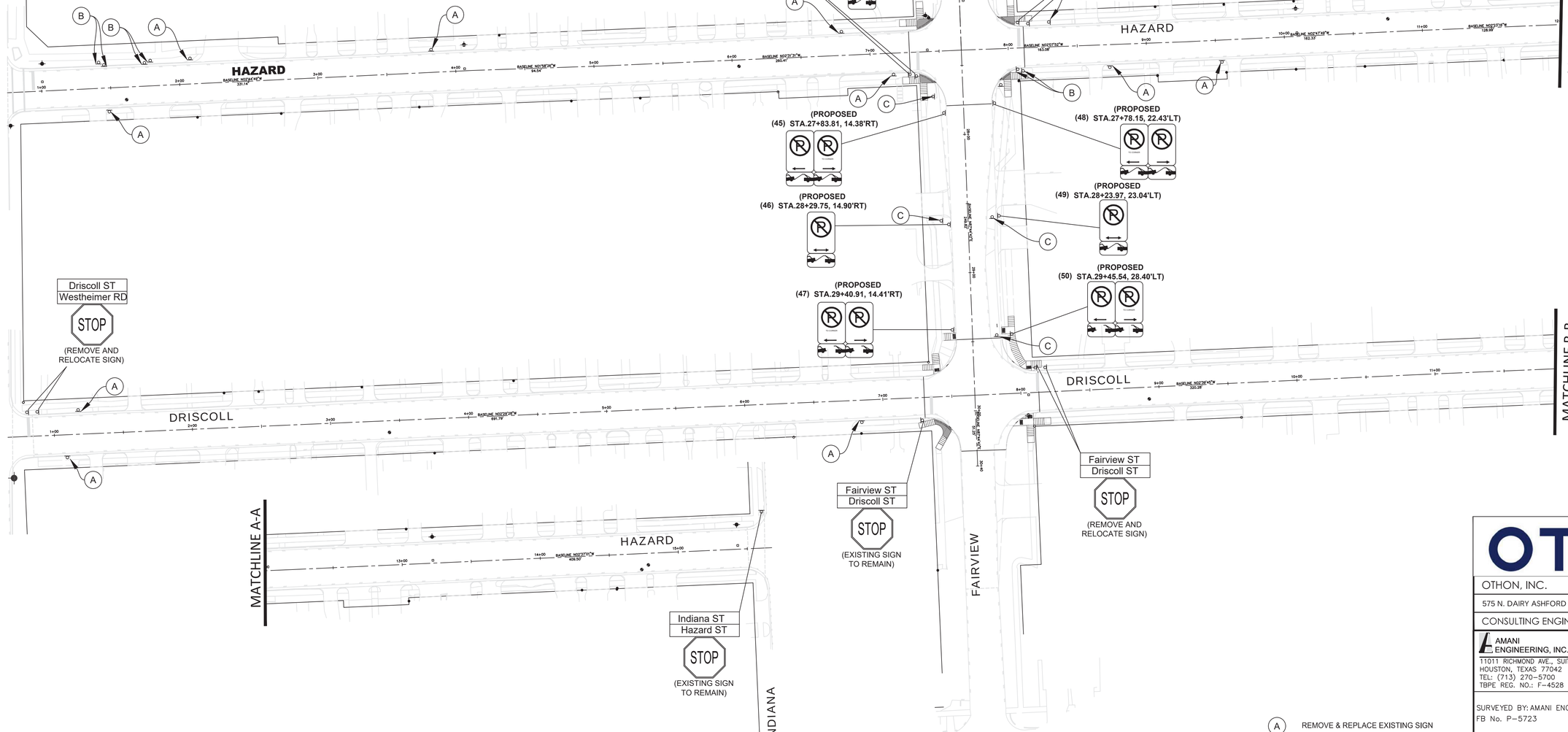

GRAPHIC SCALE
0 40 80
(IN FEET)

A REMOVE & REPLACE EXISTING SIGN
B RELOCATE EXISTING SIGN
C REMOVE EXISTING SIGN
PROP TRAFFIC SIGN
EXISTING TRAFFIC SIGN
PROP PAVEMENT EDGE

NOTES

1. SEE SHEET S&PM 10 FOR SIGN DETAILS.
2. ALL SIGNS, MOUNTINGS ETC. ATTACHED TO THE SIGN POST SHOULD REMAIN OR BE RELOCATED WITH IT.
3. LOCATION OF EXISTING AND PROPOSED STOP SIGNS AND TRAFFIC SIGNS SHALL BE ADJUSTED IN THE FIELD TO ENSURE SIGN IS NOT LOCATED WITHIN THE ADA RAMP AREA OR SIDEWALK.

Schedule of Signs

Items	Quantity
Remove & Replace Existing Sign	11
Remove & Relocate Sign	7
Proposed Sign	10
Remove Sign	6

OTHON
OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555
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AMANI ENGINEERING, INC.
11011 RICHMOND AVE., SUITE 700
HOUSTON, TEXAS 77042
TEL: (713) 270-5700
TBPE REG. NO.: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED
PROFESSIONAL ENGINEER
4/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SIGNING SHEET 8 OF 10

S&PM 8

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
AS SHOWN
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 326 OF 381

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 8 Sign.dwgModel Jul 31, 2026 - 1:14PM elewis

SUMMARY OF SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN TEXT	DIMENSIONS	SQUARE POST	SIGNAL MOUNT	ROUND POST (PERMISSION NEEDED FROM CITY TRAFFIC ENGINEER)	NUMBER OF POSTS (1 OR 2)	SIGN AREA SQ. FT. (FOR INFORMATION ONLY, NOT INTENDED FOR BID)	SIGN POST SIZE (TABLE A)
S&PM 1	1	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	REVERE ST	18"x6"					0.75	
		D3-1	MIMOSA DR	18"x6"					0.75	
S&PM 1	2	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	ARGONNE ST	18"x6"					0.75	
		D3-1	BRAZORIA ST	24"x6"					1	
S&PM 1	3	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	REVERE ST	18"x6"					0.75	
		D3-1	BRAZORIA ST	24"x6"					1	
S&PM 1	4	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	REVERE ST	18"x6"					0.75	
		D3-1	WELCH ST	18"x6"					0.75	
S&PM 1	5	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 1	6	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 1	7	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 1	8	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 2	9	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	WELCH ST	18"x6"					0.75	
		D3-1	SPANN ST	18"x6"					0.75	
		R1-3P	ALL WAY	18"x6"					0.75	
S&PM 2	10	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	WELCH ST	18"x6"					0.75	
		D3-1	SPANN ST	18"x6"					0.75	
		R1-3P	ALL WAY	18"x6"					0.75	
S&PM 2	11	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	SPANN ST	18"x6"					0.75	
		D3-1	MIMOSA DR	18"x6"					0.75	
		R1-3P	ALL WAY	18"x6"					0.75	
S&PM 2	12	W1-4R	RIGHT REVERSE CURVE AHEAD	24"x24"	1			1	4	1-3/4"x1-3/4"
		W13-1P	ADVISORY SPEED SIGN - 25 M.P.H	18"x18"					2.25	
S&PM 2	13	W1-4R	RIGHT REVERSE CURVE AHEAD	24"x24"	1			1	4	1-3/4"x1-3/4"
		W13-1P	ADVISORY SPEED SIGN - 25 M.P.H	18"x18"					2.25	
S&PM 3	14	W17-1	ROAD HUMPS	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		W13-1	20 MPH	18"x18"					2.25	
S&PM 6	15	W1-4L	LEFT REVERSE CURVE AHEAD	24"x24"	1			1	4	1-3/4"x1-3/4"
		W13-1P	ADVISORY SPEED SIGN - 25 M.P.H	18"x18"					2.25	
S&PM 6	16	W1-4L	LEFT REVERSE CURVE AHEAD	24"x24"	1			1	4	1-3/4"x1-3/4"
		W13-1P	ADVISORY SPEED SIGN - 25 M.P.H	18"x18"					2.25	
S&PM 6	17	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	AVALON PL	18"x6"					0.75	
		D3-1	PECKHAM ST	18"x6"					0.75	
S&PM 7	18	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	

SUMMARY OF SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN TEXT	DIMENSIONS	SQUARE POST	SIGNAL MOUNT	ROUND POST (PERMISSION NEEDED FROM CITY TRAFFIC ENGINEER)	NUMBER OF POSTS (1 OR 2)	SIGN AREA SQ. FT. (FOR INFORMATION ONLY, NOT INTENDED FOR BID)	SIGN POST SIZE (TABLE A)
S&PM 7	19	R7-1D	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	20	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1R	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	21	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1R	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	22	R7-1D	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	23	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	24	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	25	R7-1D	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	26	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1R	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	27	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1R	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	28	R7-1D	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	29	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	30	R1-1	STOP SIGN	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		D3-1	FAIRVIEW ST	18"x6"					0.75	
		D3-1	BRUN ST	18"x6"					0.75	
S&PM 7	31	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	32	R7-1D	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	33	R7-1R	NO PARKING TO CORNER	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	34	R7-1R	NO PARKING TO CORNER	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	35	R7-1D	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	

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STATE OF TEXAS
ERIC LEWIS
127613
LICENSED PROFESSIONAL ENGINEER
7/15/26

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SUMMARY OF SMALL SIGNS

(1 OF 2)

SHEET 9 OF 10 S&PM 9

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 327 OF 381	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\Summary of Small Signs.dwgModel Jul 31, 2026 - 1:15PM elewis

SUMMARY OF SIGNS

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN TEXT	DIMENSIONS	SQUARE POST	SIGNAL MOUNT	ROUND POST (REQUIRES CITY TRAFFIC ENGINEER)	NUMBER OF POSTS (1 OR 2)	SIGN AREA SQ. FT. (FOR INFORMATION ONLY, NOT INTENDED FOR BID)	SIGN POST SIZE (TABLE A)
S&PM 7	36	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	37	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	38	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1R	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 7	39	W17-1	ROAD HUMPS	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		W13-1	20 MPH	18"x18"					2.25	
S&PM 7	40	W17-1	ROAD HUMPS	30"x30"	1			1	6.25	1-3/4"x1-3/4"
		W13-1	20 MPH	18"x18"					2.25	
S&PM 8	41	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	42	R7-1L	NO PARKING TO CORNER	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	43	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	44	R7-1R	NO PARKING TO CORNER	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	45	R7-1R	NO PARKING TO CORNER	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	46	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	47	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1L	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	48	R7-1L	NO PARKING TO CORNER	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	49	R7-1R	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
S&PM 8	50	R7-1L	NO PARKING	12"x18"	1			1	1.5	1-3/4"x1-3/4"
		R7-201A	TOW ZONE	6"x12"					0.5	
		R7-1R	NO PARKING TO CORNER	12"x18"					1.5	
		R7-201A	TOW ZONE	6"x12"					0.5	

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FB No. P-5723

STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
7/16/24

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

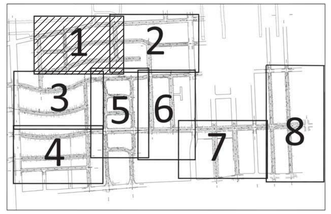
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SUMMARY OF SMALL SIGNS (2 OF 2)

SHEET 10 OF 10 S&PM 10

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
AS SHOWN
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 327 OF 381

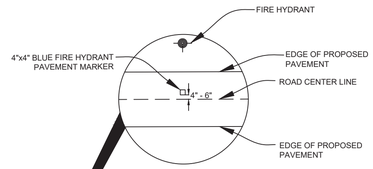
P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\Summary of Small Signs 2.dwgModel Jul 31 , 2026 - 1:15PM elewis



SAN FELIPE

MATCHLINE SEE SHEET 2

GRAPHIC SCALE
0 40 80
(IN FEET)



DETAIL A
(TYPICAL)

CONTRACTOR SHALL MAKE SURE THAT THE MARKER IS PLACED OFF THE CENTERLINE OF THE STREET 4 TO 6 INCHES TO INDICATE ON WHICH SIDE OF THE STREET THE FIRE HYDRANT IS LOCATED.

ARGONNE

REVERE

WELCH

BRAZORIA

MIMOSA

MATCHLINE SEE SHEET 3

LEGEND

- (D) PROP 24" WHITE STOP LINE
- [1] BLUE FIRE HYDRANT MARKER
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN
- PROP PAVEMENT EDGE

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A THIS SHEET FOR FIRE HYDRANT MARKER DETAILS.

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HOUSTON PUBLIC WORKS

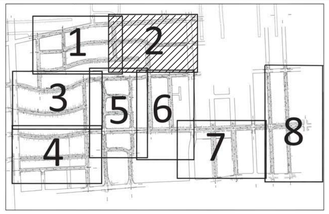
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 1 OF 8

S&PM 12

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 329 OF 391	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 1 PM.dwgModel Jul 31 , 2026 – 1:15PM elewis



MATCHLINE SEE SHEET 1

MATCHLINE SEE SHEET 1

MATCHLINE SEE SHEET 6

SAN FELIPE

SAN FELIPE

SPANN

SPANN

WELCH

WELCH

WELCH

MIMOSA

PERSA

SHEPHERD

RD

(EXISTING 24" WHITE STOP LINE TO REMAIN)

GRAPHIC SCALE

0 40 80

(IN FEET)

LEGEND

- (D) PROP 24" WHITE STOP LINE
- (E) PROP 4" DOUBLE YELLOW SOLID LINE
- (F) PROP 4" WHITE SOLID LINE
- (I) PROP 6" WHITE SOLID LINE
- [1] BLUE FIRE HYDRANT MARKER
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN
- PROP PAVEMENT EDGE

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A IN S&PM 12 PAVEMENT MARKING SHEET 1 OF 8 FOR FIRE HYDRANT MARKER DETAILS.

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HOUSTON PUBLIC WORKS

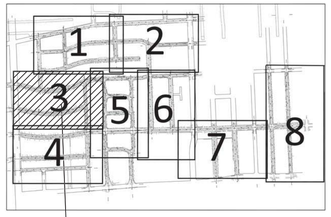
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 2 OF 8

S&PM 13

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
AS SHOWN
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 330 OF 391

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 2 PM.dwgModel Jul 31 , 2026 – 1:16PM elewis



MATCHLINE SEE SHEET 1

KIRBY

(EXISTING 24" WHITE STOP LINE TO REMAIN)

ARGONNE

AVALON

DICKEY

MATCHLINE SEE SHEET 5

GRAPHIC SCALE

0 40 80

(IN FEET)

D PROP 24" WHITE STOP LINE

I PROP STREET CUSHION (RUBBER) SEE SHEET S&PM 21

1 BLUE FIRE HYDRANT MARKER

PROP TRAFFIC SIGN

EXISTING TRAFFIC SIGN

PROP PAVEMENT EDGE

KIRBY

ELLA LEE

MATCHLINE SEE SHEET 4

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A IN S&PM 12 PAVEMENT MARKING SHEET 1 OF 8 FOR FIRE HYDRANT MARKER DETAILS.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
11011 RICHMOND AVE., SUITE 700
HOUSTON, TEXAS 77042
TEL: (713) 270-5700
TBPE REG. NO.: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
9/16/24

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

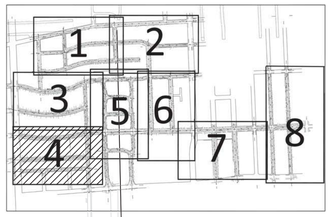
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 3 OF 8

S&PM 14

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
AS SHOWN
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. 331 OF 391

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 3 PM.dwgModel Jul 31 , 2026 - 1:16PM elewis



MATCHLINE SEE SHEET 3

MATCHLINE SEE SHEET 5

DICKEY

FAIRVIEW

REBA

LOCKE

SAN SABA

KIRBY

ARGONNE

DICKEY

GRAPHIC SCALE

0 40 80

(IN FEET)

D	PROP 24" WHITE STOP LINE
E	PROP 12" WHITE CROSS WALK
I	PROP STREET CUSHION (RUBBER) SEE SHEET S&PM 21
1	BLUE FIRE HYDRANT MARKER
	PROP TRAFFIC SIGN
	EXISTING TRAFFIC SIGN
	PROP PAVEMENT EDGE

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A IN S&PM 12 PAVEMENT MARKING SHEET 1 OF 8 FOR FIRE HYDRANT MARKER DETAILS.

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STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
1/15/26

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 4 OF 8

S&PM 15

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 332 OF 391	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 4 PM.dwgModel Jul 31 , 2026 - 1:17PM elewis

MATCHLINE SEE SHEET 4

MATCHLINE SEE SHEET 3

WEST GATE

DUNRAVEN

FAIRVIEW

SALISBURY

DEVONSHIRE

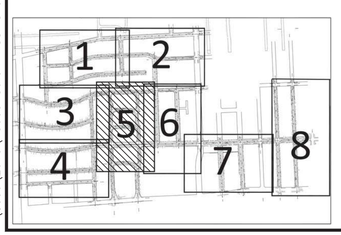
AVALON

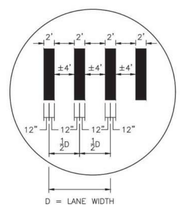
KINGSTON

GRAPHIC SCALE
0 40 80
(IN FEET)

MATCHLINE SEE SHEET 6

MATCHLINE SEE SHEET 6





DETAIL G
N.T.S

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A IN S&PM 12 PAVEMENT MARKING SHEET 1 OF 8 FOR FIRE HYDRANT MARKER DETAILS.

- (D) PROP 24" WHITE STOP LINE
- (E) PROP 12" WHITE CROSSWALK
- (F) PROP 4" DOUBLE YELLOW SOLID LINE
- (G) PROP STREET HUMP - 24" WHITE STRIPES SEE DETAIL G THIS SHEET
- (H) PROP YELLOW MEDIAN NOSE
- [1] BLUE FIRE HYDRANT MARKER
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN
- PROP PAVEMENT EDGE

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TEL: (713) 270-5700
TBPE REG. NO.: F-4528

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FB No. P-5723

STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
7/15/26

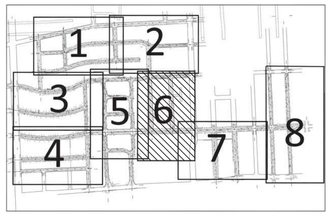
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

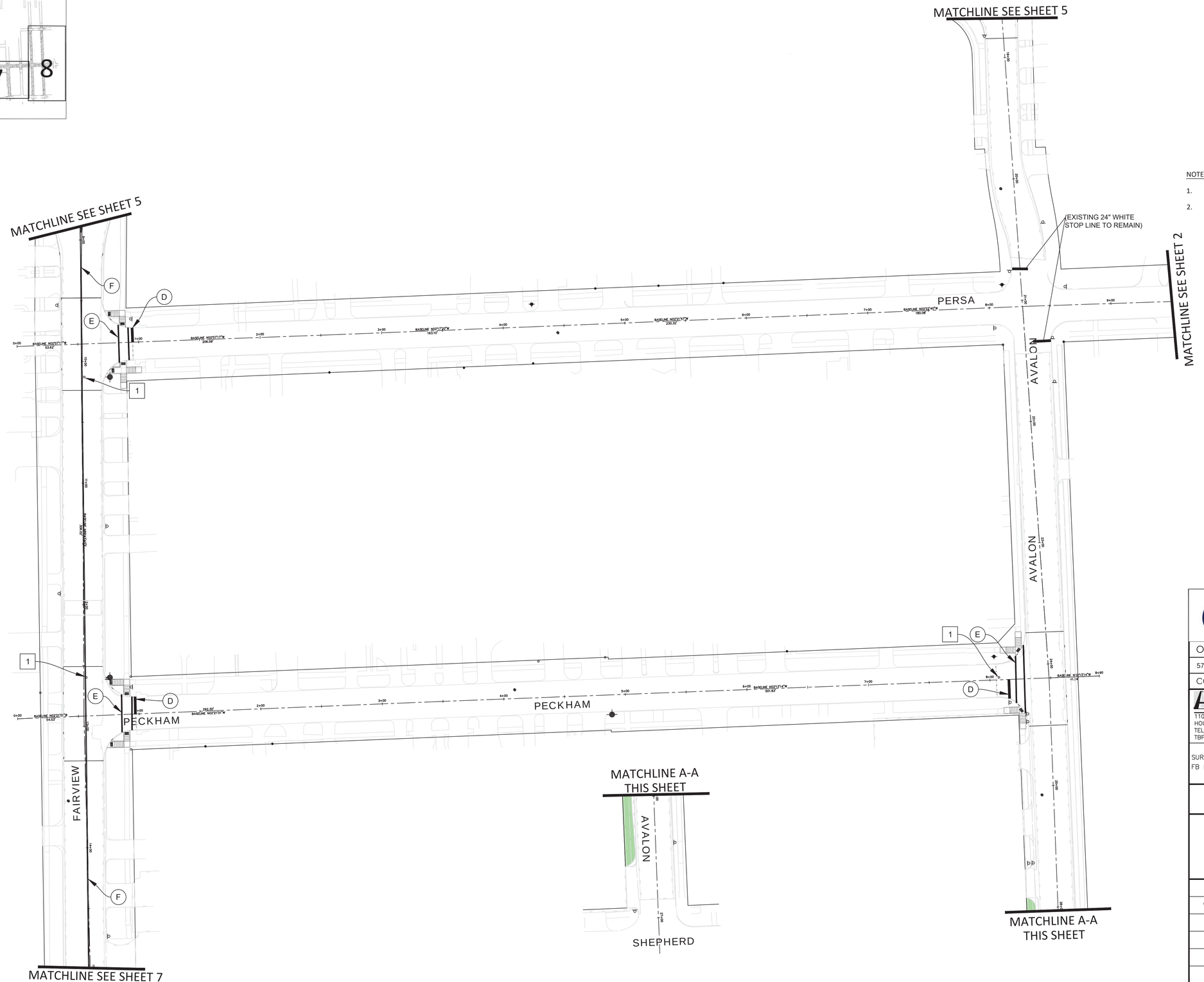
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 5 OF 8 S&PM 16

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 333 OF 391	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 5 PM.dwgModel Jul 31, 2026 - 1:17PM elewis





GRAPHIC SCALE

0 40 80

(IN FEET)

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A IN S&PM 12 PAVEMENT MARKING SHEET 1 OF 8 FOR FIRE HYDRANT MARKER DETAILS.

- (D) PROP 24" WHITE STOP LINE
- (E) PROP 12" WHITE CROSSWALK
- (F) PROP 4" DOUBLE YELLOW SOLID LINE
- [1] BLUE FIRE HYDRANT MARKER
- PROP TRAFFIC SIGN
- EXISTING TRAFFIC SIGN
- PROP PAVEMENT EDGE

OTHON

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FB No. P-5723

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REGISTERED PROFESSIONAL ENGINEER
7/15/26

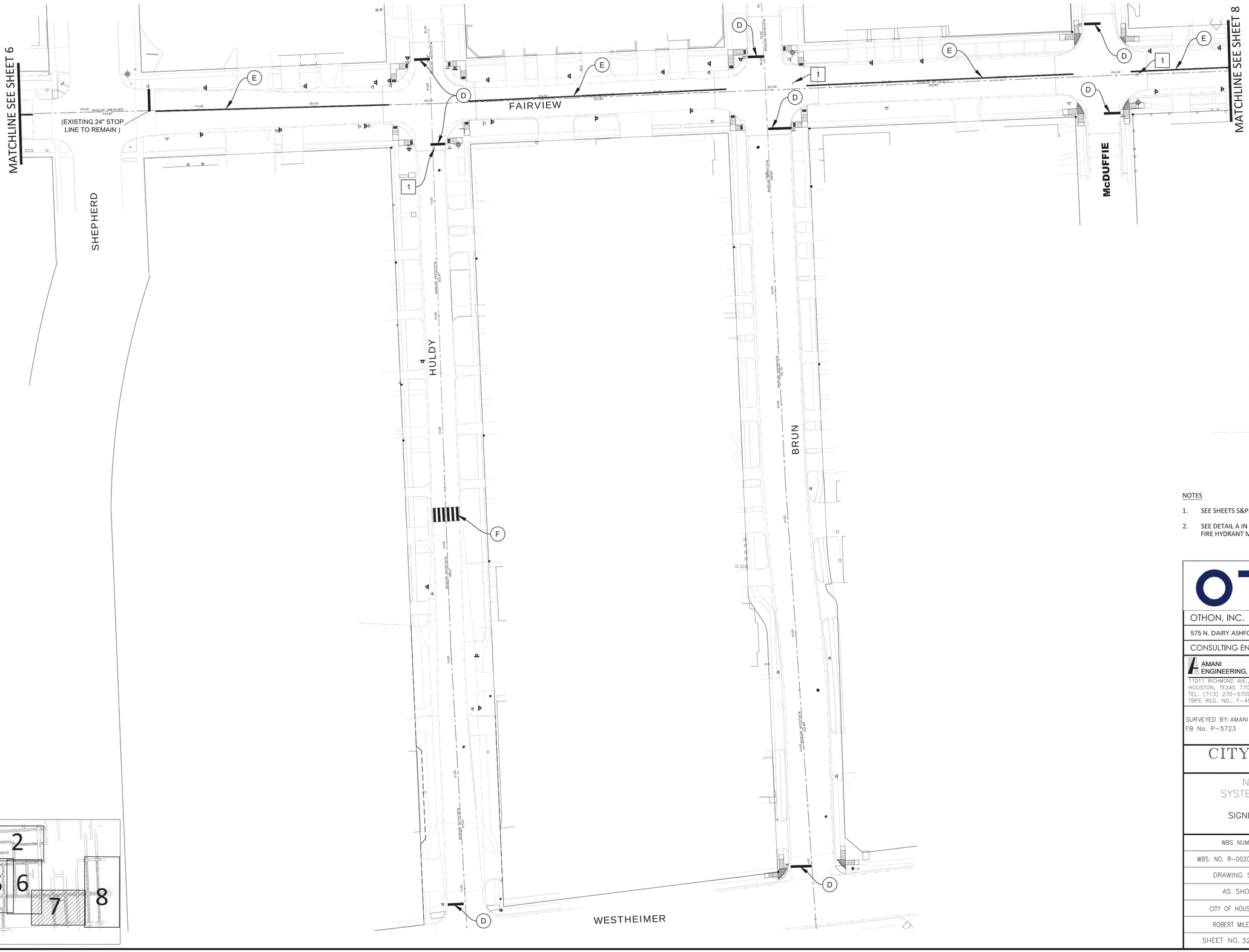
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

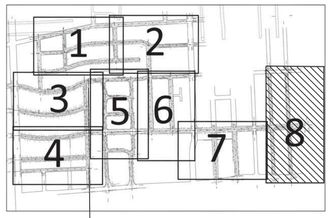
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 6 OF 8 S&PM 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 334 OF 391	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 6 PM.dwgModel Jul 31 , 2026 - 1:18PM elewis


MATCHLINE SEE SHEET 6
MATCHLINE SEE SHEET 8
(EXISTING 24" STOP LINE TO REMAIN)
SHEPHERD
FAIRVIEW
HULDY
BRUN
McDUFFIE
WESTHEIMER
BASELINE N89°35'08"E 410.47'
BASELINE N00°00'00"W 303.47'
BASELINE S89°35'08"W 292.84'
BASELINE S00°00'00"E 292.84'
BASELINE N89°35'08"E 292.84'
BASELINE N00°00'00"W 303.47'
BASELINE N89°35'08"E 410.47'
BASELINE N00°00'00"W 19.00'
BASELINE N00°00'00"W 303.47'
BASELINE N00°00'00"W 303.47'
BASELINE N00°00'00"W 303.47



MATCHLINE SEE SHEET 7

GRAPHIC SCALE
0 40 80
(IN FEET)

WESTHEIMER

HAZARD

DRISCOLL

Driscoll ST
Westheimer RD
STOP
(REMOVE AND RELOCATE SIGN)

MATCHLINE A-A

MATCHLINE B-B

FAIRVIEW

INDIANA

HAZARD

DRISCOLL

DRISCOLL

D PROP 24" WHITE STOP LINE
E PROP 12" WHITE CROSSWALK
H PROP 4" DOUBLE YELLOW SOLID LINE
1 BLUE FIRE HYDRANT MARKER
PROP TRAFFIC SIGN
EXISTING TRAFFIC SIGN
PROP PAVEMENT EDGE

NOTES

1. SEE SHEETS S&PM 20 & 21 FOR PAVEMENT MARKING DETAILS.
2. SEE DETAIL A IN S&PM 12 PAVEMENT MARKING SHEET 1 OF 8 FOR FIRE HYDRANT MARKER DETAILS.

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STATE OF TEXAS
ERIC LEWIS
127613
REGISTERED PROFESSIONAL ENGINEER
4/15/26

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT MARKING
SHEET 8 OF 8
S&PM 19

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
AS SHOWN	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 336 OF 391	

P:\Cadd\2013\13005 Othon-NSSI Shepherd\Striping & Markings\SPM Layout 8 PM.dwgModel Jul 31 , 2026 – 1:19PM elewis

STREET LIGHT NOTES

1. ALL STREET LIGHTS SHALL BE IN FULL CONFORMANCE WITH CITY OF HOUSTON AND CENTERPOINT ENERGY STANDARDS.
2. CENTER POINT ENERGY SHALL REMOVE AND REPLACE ALL STREET LIGHTS WITHIN THE PROJECT LIMIT UNLESS NOTED OTHERWISE. SCOPE OF WORK SHALL INCLUDE REMOVING AND REPLACING THE LIGHT POLE, LAMPS, SERVICE WARNING, CONDUITS AND FOOTINGS.
3. THERE MAY BE MANY OTHER EXISTING UNDERGROUND UTILITIES AND CABLES BOTH PRIVATE AND PUBLIC WITHIN THE PROJECT LIMITS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL UTILITIES UNLESS CALLED OUT ON THE PLANS TO BE REMOVED. ANY DAMAGE TO EXISTING UTILITIES AND STRUCTURES BY CONTRACTOR ACTIVITIES SHALL BE REPAIRED TO ITS ORIGINAL CONDITION OR BETTER AT CONTRACTOR'S OWN EXPENSE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING AND PAYING FOR ALL PERMITS REQUIRED FOR THIS SCOPE OF WORK.
5. STREET LIGHT CONTRACTOR SHALL COORDINATE THIS WORK WITH OTHER CONTRACTORS WORKING ON THIS PROJECT TO AVOID CONFLICTS OR DELAY TO THE PROJECT PROGRESS.

NOTES:

1. CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING THIRTY DAYS (30) PRIOR TO DESIRED START OF CONSTRUCTION BY CONTACTING THE CPEH PROJECT COORDINATOR AND THE COH PROJECT MANAGER (STREET LIGHTING SECTION).
2. POLES AND OTHER DEVICES SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT REPLACEMENT POLES, SIGNS, TRAFFIC SIGNALS AND LIGHTING HAVE BEEN INSTALLED.
3. NEW AND/OR EXISTING POLE LOCATION SHOULD ALLOW FOR ADA/TAS WHEELCHAIR PASSAGE WIDTH OF 32" MIN. CLR.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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CIVITAS ENGINEERING GROUP

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Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

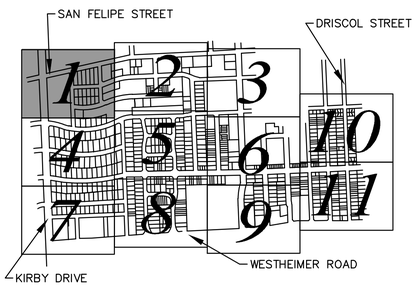
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SLP-01
STREET LIGHTING GENERAL NOTES

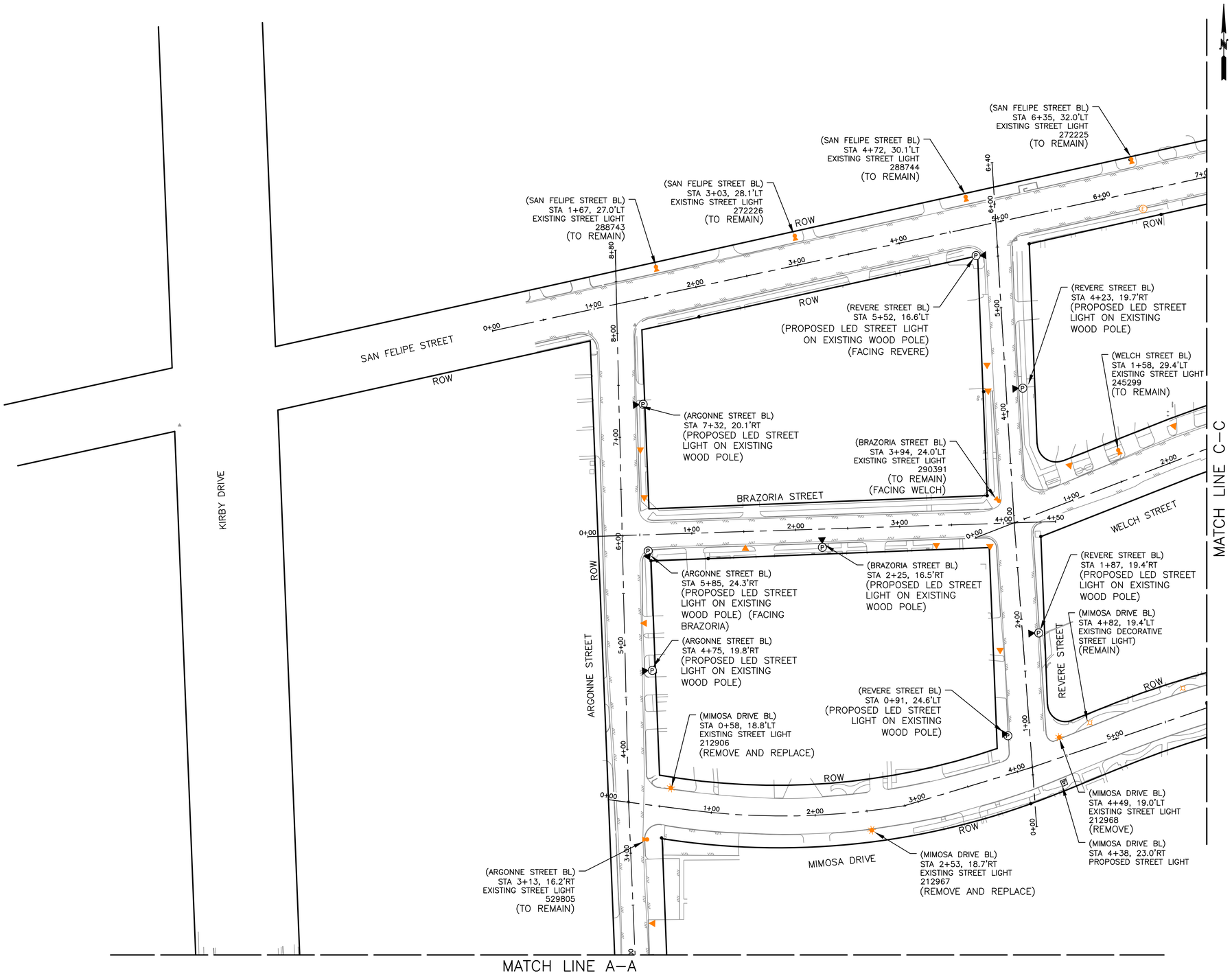
WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NTS
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **337** OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP-01 STREET LIGHTING GENERAL NOTES.dwgSLP-01 Jan 21 , 2026 - 4:31PM OMarcelo



LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- (E) EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- (P) PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM



NOTES:

1. FOR STREET LIGHTING NOTES, SEE SLP–01, SHEET 328.
2. THE CONTRACTOR WILL TRIM TREES 3' RADIUS AROUND THE STREET LIGHT. CONTRACTOR CAN NOT TRIM OUTSIDE OF THE CITY OF HOUSTON R.O.W.

REV.	DATE	DESCRIPTION	BY

OTHON

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TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON

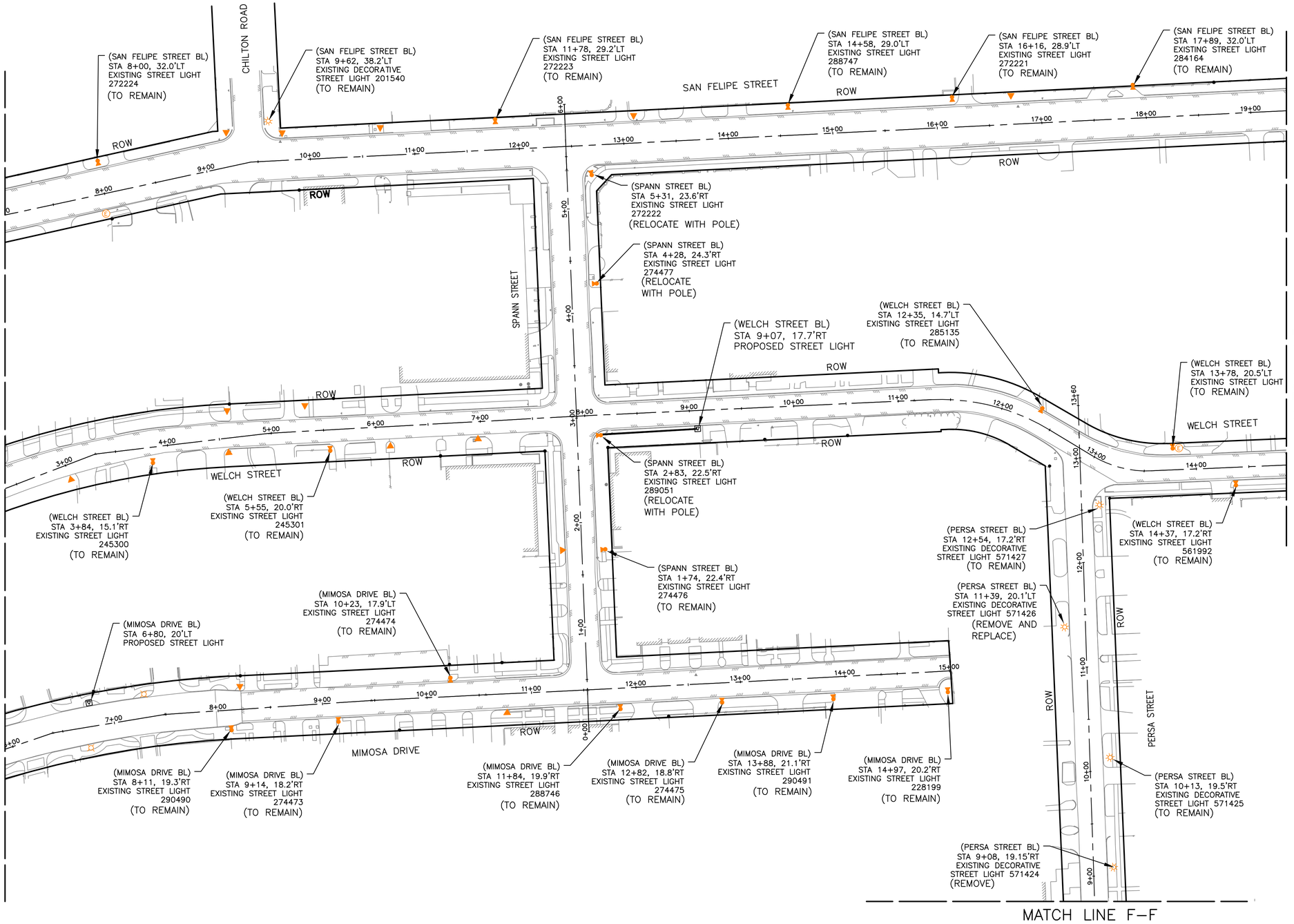
HOUSTON PUBLIC WORKS

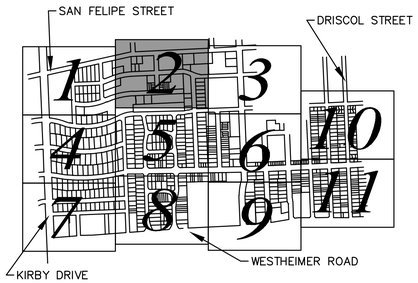
NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 SLP–02

STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **338** OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–02 Jan 21 , 2026 – 4:31PM OMarcelo





LEGEND:

- CONDUIT AND CONDUCTOR (BORED)
- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM

NOTES:

1. FOR STREET LIGHTING NOTES, SEE SLP–01, SHEET 328.
2. THE CONTRACTOR WILL TRIM TREES 3' RADIUS AROUND THE STREET LIGHT. CONTRACTOR CAN NOT TRIM OUTSIDE OF THE CITY OF HOUSTON R.O.W.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

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TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

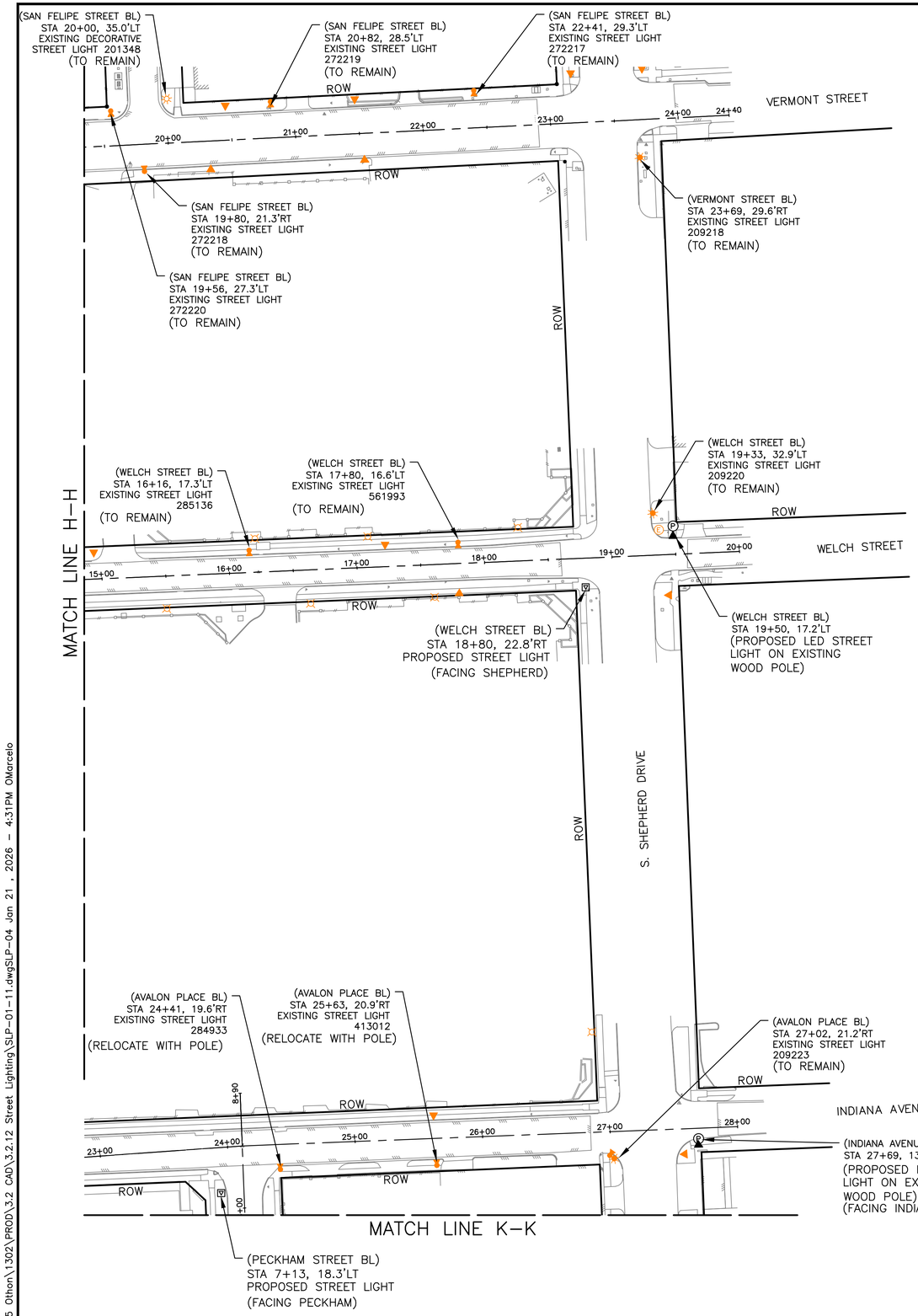
CITY OF HOUSTON

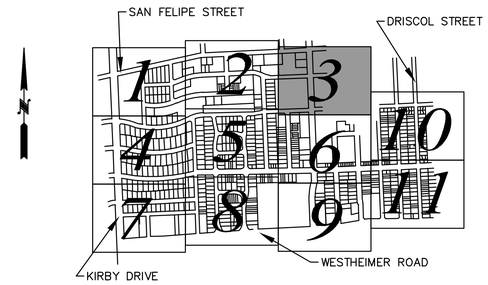
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 SLP–03 STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **339** OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–03 Jan 21 , 2026 – 4:31PM OMarcelo





LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM

NOTES:

1. FOR STREET LIGHTING NOTES, SEE SLP-01, SHEET 328.
2. THE CONTRACTOR WILL TRIM TREES 3' RADIUS AROUND THE STREET LIGHT. CONTRACTOR CAN NOT TRIM OUTSIDE OF THE CITY OF HOUSTON R.O.W.

REV.	DATE	DESCRIPTION	BY

OTHON

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TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 SLP-04

STREET LIGHTING PLAN

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **340** OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP-01-11.dwgSLP-04 Jan 21 , 2026 - 4:31PM OMarcelo

MATCH LINE A–A

(AVALON PLACE BL)
STA 0+43, 19.9'LT
EXISTING DECORATIVE
STREET LIGHT 219244
(TO REMAIN)

(AVALON PLACE BL)
STA 3+71, 14.6'LT
PROPOSED STREET LIGHT

(AVALON PLACE BL)
STA 4+10, 14.6'LT
EXISTING DECORATIVE
STREET LIGHT 510739
(TO REMOVE)

(ARGONNE STREET BL)
STA 1+88, 15.2'RT
(PROPOSED LED STREET
LIGHT ON EXISTING
WOOD POLE)

(AVALON PLACE BL)
STA 6+85, 14.9'LT
PROPOSED STREET LIGHT

(AVALON PLACE BL)
STA 9+84, 13.8'LT
EXISTING DECORATIVE
STREET LIGHT 510743
(TO REMOVE)

(AVALON PLACE BL)
STA 1+44.6, 12.4'RT
PROPOSED 115 W LED
STREET LIGHT ON 35'
EMBEDDED METAL POLE

(AVALON PLACE BL)
STA 2+18, 12.4'RT
EXISTING DECORATIVE
STREET LIGHT 510738
(REMOVE AND REPLACE)

(AVALON PLACE BL)
STA 5+28, 18.4'RT
PROPOSED STREET
LIGHT

(AVALON PLACE BL)
STA 5+65, 18.4'RT
EXISTING DECORATIVE
STREET LIGHT 510740
(TO REMOVE)

(AVALON PLACE BL)
STA 7+04, 20.5'RT
EXISTING DECORATIVE
STREET LIGHT 510741
(TO REMOVE)

(AVALON PLACE BL)
STA 8+42, 12.0'RT
EXISTING DECORATIVE
STREET LIGHT 510742
(TO REMOVE AND REPLACE)

(AVALON PLACE BL)
STA 10+00, 21.9'RT
PROPOSED STREET
LIGHT

AVALON PLACE

ROW

(ELLA LEE LANE BL)
STA 1+80, 18.7'LT
EXISTING DECORATIVE
STREET LIGHT 510745
(REMOVE AND REPLACE)

(ELLA LEE LANE BL)
STA 4+89, 16.9'LT
EXISTING DECORATIVE
STREET LIGHT 510747
(REMOVE AND REPLACE)

(ELLA LEE LANE BL)
STA 8+03, 21.4'LT
PROPOSED STREET LIGHT

(ELLA LEE LANE BL)
STA 8+37, 17.5'LT
EXISTING DECORATIVE
STREET LIGHT 510749
(TO REMOVE)

(ELLA LEE LANE BL)
STA –0+08, 31.2'RT
EXISTING DECORATIVE
STREET LIGHT218853
(TO REMAIN)

(ELLA LEE LANE)
STA 0+96.44, 23.1' RT
PROPOSED 115W LED ON EXISTING
WOOD POLE FACING KIRBY

(ELLA LEE LANE BL)
STA 3+30, 22.5'RT
EXISTING DECORATIVE
STREET LIGHT 510746
(REMOVE AND REPLACE)

(ELLA LEE LANE BL)
STA 6+42, 23.7'RT
PROPOSED STREET LIGHT

(ELLA LEE LANE BL)
STA 6+94, 21.0'RT
EXISTING DECORATIVE
STREET LIGHT 510748
(TO REMOVE)

(ELLA LEE LANE BL)
STA 9+60, 23.0'RT
EXISTING DECORATIVE
STREET LIGHT 510750
(REMOVE AND REPLACE)

ELLA LEE LANE

KIRBY DRIVE

ROW

(REBA DRIVE BL)
STA 0+09, 13.5'RT
EXISTING DECORATIVE
STREET LIGHT 219250
(TO REMAIN)

(REBA DRIVE BL)
STA 2+10, 19.0'RT
EXISTING DECORATIVE
STREET LIGHT 510756
(REMOVE AND REPLACE)

(REBA DRIVE BL)
STA 3+83, 14.8'LT
EXISTING DECORATIVE
STREET LIGHT 510751
(TO REMOVE)

(REBA DRIVE BL)
STA 5+10, 20.3'LT
PROPOSED STREET LIGHT

(REBA DRIVE BL)
STA 6+60, 18.1'LT
PROPOSED STREET LIGHT

(REBA DRIVE BL)
STA 6+88, 17.8'LT
EXISTING DECORATIVE
STREET LIGHT 510753
(TO REMOVE)

(REBA DRIVE BL)
STA 9+60, 14.5'LT
EXISTING DECORATIVE
STREET LIGHT 510755
(TO REMAIN)

(REBA DRIVE BL)
STA 1+05, 35.4'RT
EXISTING STREET LIGHT
486588
(REMOVE AND REPLACE)

(REBA DRIVE BL)
STA 3+60, 20.8'LT
PROPOSED STREET LIGHT

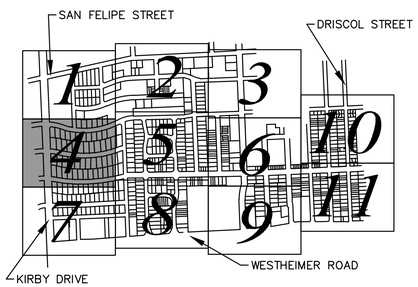
(REBA DRIVE BL)
STA 5+52, 19.8'RT
EXISTING DECORATIVE
STREET LIGHT 510752
(TO REMOVE)

(REBA DRIVE BL)
STA 8+10, 13.3'RT
PROPOSED STREET LIGHT

(REBA DRIVE BL)
STA 8+27, 12.5'RT
EXISTING DECORATIVE
STREET LIGHT 510754
(TO REMOVE)

REBA DRIVE

MATCH LINE D–D



LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM

NOTES:
1. FOR STREET LIGHTING NOTES, SEE SLP–01, SHEET 328.
2. THE CONTRACTOR WILL TRIM TREES 3' RADIUS AROUND THE STREET LIGHT. CONTRACTOR CAN NOT TRIM OUTSIDE OF THE CITY OF HOUSTON R.O.W.

REV.	DATE	DESCRIPTION	BY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

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HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED PROFESSIONAL ENGINEER
1/21/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 SLP–05
STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **341** OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–05 Jan 21 , 2026 – 4:31PM OMarcelo

MATCH LINE F-F

MATCH LINE D-D

MATCH LINE I-I

MATCH LINE G-G

(AVALON PLACE BL) STA 11+57, 17.4'LT PROPOSED STREET LIGHT

(AVALON PLACE BL) STA 12+50, 14.6'LT EXISTING DECORATIVE STREET LIGHT 510744 (TO REMOVE)

(AVALON PLACE BL) STA 12+98, 16.3'LT EXISTING STREET LIGHT 420452 (TO REMAIN)

(AVALON PLACE BL) STA 13+55, 15.7'LT EXISTING STREET LIGHT 420453 (RELOCATE WITH POLE)

(AVALON PLACE BL) STA 14+63, 17.4'LT EXISTING STREET LIGHT 420454 (TO REMAIN)

AVALON PLACE

(AVALON PLACE BL) STA 15+62, 15.4'LT EXISTING STREET LIGHT 420455 (RELOCATE WITH POLE)

(AVALON PLACE BL) STA 17+65, 16.2'LT EXISTING STREET LIGHT 425418 (TO REMOVE)

(AVALON PLACE BL) STA 19+76, 10.2'LT EXISTING STREET LIGHT 420458 (RELOCATE WITH POLE)

(AVALON PLACE BL) STA 18+64, 14.0'LT EXISTING STREET LIGHT 200573 (RELOCATE WITH POLE)

(AVALON PLACE BL) STA 20+63, 10.1'RT EXISTING STREET LIGHT 28X405 (TO REMAIN)

(PERSA STREET BL) STA 8+62, 19.9'LT PROPOSED STREET LIGHT ON DECORATIVE POLE

(AVALON PLACE BL) STA 22+53, 13.2'RT EXISTING STREET LIGHT 4108XX (RELOCATE WITH POLE)

(AVALON PLACE BL) STA 22+52, 21.3'LT EXISTING STREET LIGHT XXXXXX (TO BE REMOVED)

(PERSA STREET BL) STA 7+15, 16.5'RT EXISTING STREET LIGHT 423138 (REMOVE EXISTING STREET LIGHT)

(PERSA STREET BL) STA 4+77, 15.0'LT EXISTING STREET LIGHT 423137 (REMOVE AND REPLACE)

(PERSA STREET BL) STA 3+13, 17.8'RT EXISTING STREET LIGHT 423136 (TO REMAIN)

(PERSA STREET BL) STA 0+83, 18.5'LT EXISTING STREET LIGHT 423135 (TO REMOVE)

(PERSA STREET BL) STA 0+94, 18.7'RT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 11+14, 21.0'RT EXISTING STREET LIGHT 424162 (TO REMOVE)

(FAIRVIEW STREET BL) STA 10+26, 22.2'RT PROPOSED STREET LIGHT

(PERSA STREET BL) STA 6+60, 17.0' RT PROPOSED STREET LIGHT

(KINGSTON DRIVE BL) STA 15+31, 18.8'RT EXISTING DECORATIVE STREET LIGHT 553555 (REMOVE AND REPLACE)

(KINGSTON DRIVE BL) STA 13+91, 11.8'LT PROPOSED STREET LIGHT (CENTER BETWEEN TREES)

(KINGSTON DRIVE BL) STA 13+32, 17.8'RT EXISTING DECORATIVE STREET LIGHT 553554 (TO REMOVE)

(KINGSTON DRIVE BL) STA 12+24, 6.0'RT EXISTING DECORATIVE STREET LIGHT 553556 (REMOVE AND REPLACE)

(KINGSTON DRIVE BL) STA 10+90, 23.9'LT EXISTING DECORATIVE STREET LIGHT 553562 (TO REMOVE)

(KINGSTON DRIVE BL) STA 10+67, 16.4'LT PROPOSED STREET LIGHT

(KINGSTON DRIVE BL) STA 9+86, 12.5'LT EXISTING DECORATIVE STREET LIGHT 553557 (TO REMOVE)

(KINGSTON DRIVE BL) STA 9+17, 15.9'LT PROPOSED STREET LIGHT

(KINGSTON RD BL) STA 7+78, 17.1'RT PROPOSED STREET LIGHT

(DEVONSHIRE LANE BL) STA 0+94, 11.0'LT PROPOSED STREET LIGHT

(DEVONSHIRE LANE BL) STA 2+24, 10.5'LT EXISTING DECORATIVE STREET LIGHT 553539 (TO REMOVE)

(DEVONSHIRE LANE BL) STA 2+26, 11.1'LT PROPOSED STREET LIGHT (CENTER BETWEEN PLANTS)

(DEVONSHIRE LANE BL) STA 3+65, 17.1'LT PROPOSED STREET LIGHT

DEVONSHIRE LANE

(SALISBURY LANE BL) STA 2+10, 17.5'LT PROPOSED STREET LIGHT

(SALISBURY LANE BL) STA 2+34, 15.0'LT EXISTING DECORATIVE STREET LIGHT 553563 (TO REMOVE)

(SALISBURY LANE BL) STA 00+80, 17.3'RT PROPOSED STREET LIGHT

SALISBURY LANE

(SALISBURY LANE) STA 3+40, 18.5'RT PROPOSED STREET LIGHT

(DICKEY PLACE BL) STA 15+50, 17.4'LT PROPOSED STREET LIGHT

(DICKEY PLACE BL) STA 13+95, 17.9'LT EXISTING DECORATIVE STREET LIGHT 510736 (REMOVE AND REPLACE)

(DICKEY PLACE BL) STA 12+41, 17.2' RT PROPOSED STREET LIGHT

(DICKEY PLACE BL) STA 12+22, 15.9'RT EXISTING DECORATIVE STREET LIGHT 510735 (TO REMOVE)

(DICKEY PLACE BL) STA 10+80, 17.0'LT EXISTING DECORATIVE STREET LIGHT 510734 (REMOVE AND REPLACE)

(DICKEY PLACE BL) STA 9+25, 17.1'RT EXISTING DECORATIVE STREET LIGHT 510733 (REMOVE AND REPLACE)

DICKEY PLACE

(AVALON PLACE BL) STA 11+65, 30.6'RT EXISTING DECORATIVE STREET LIGHT 510737 (TO REMOVE)

(WESTGATE STREET BL) STA 15+86, 17.1'LT EXISTING DECORATIVE STREET LIGHT 553564 (TO REMOVE)

(WESTGATE STREET BL) STA 15+37, 18.7'LT PROPOSED STREET LIGHT

(WESTGATE STREET BL) STA 14+00, 15.8'LT PROPOSED STREET LIGHT

(WESTGATE STREET BL) STA 13+61, 15.6'LT EXISTING DECORATIVE STREET LIGHT 553538 (TO REMOVE)

(WESTGATE STREET BL) STA 12+60, 14.6'LT EXISTING DECORATIVE STREET LIGHT 553565 (TO REMOVE)

(WESTGATE STREET BL) STA 12+50, 16.0'LT PROPOSED STREET LIGHT

(WESTGATE STREET BL) STA 11+17, 16.0'LT EXISTING DECORATIVE STREET LIGHT 553566 (TO REMOVE)

(WESTGATE STREET BL) STA 11+00, 16.1'LT PROPOSED STREET LIGHT

(WESTGATE STREET BL) STA 9+62, 15.0'RT EXISTING DECORATIVE STREET LIGHT 553567 (TO REMOVE)

(WESTGATE STREET BL) STA 9+50, 18.3'LT PROPOSED STREET LIGHT

WESTGATE STREET

(FAIRVIEW STREET BL) STA 1+00, 35.7'LT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 2+73, 39.7'LT EXISTING DECORATIVE STREET LIGHT 553548 (TO REMOVE)

(FAIRVIEW STREET BL) STA 2+50, 40.5'LT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 3+41, 41.2'LT EXISTING DECORATIVE STREET LIGHT 553550 (TO REMOVE)

(FAIRVIEW STREET BL) STA 3+50, 39.8'LT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 4+85, 36.5'LT EXISTING DECORATIVE STREET LIGHT 553549 (TO REMAIN)

(FAIRVIEW STREET BL) STA 6+35, 36.'LT PROPOSED STREET LIGHT

FAIRVIEW STREET

(FAIRVIEW STREET BL) STA 6+86, 40.1'LT EXISTING DECORATIVE STREET LIGHT 553545 (TO REMOVE)

(FAIRVIEW STREET BL) STA 7+43, 38.8'LT EXISTING DECORATIVE STREET LIGHT 553544 (TO REMOVE)

(FAIRVIEW STREET BL) STA 8+36, 32.1'LT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 0+91, 20.2'RT EXISTING DECORATIVE STREET LIGHT 553551 (TO REMOVE)

(FAIRVIEW STREET BL) STA 1+00, 22.4'RT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 1+68, 21.2'RT EXISTING DECORATIVE STREET LIGHT 553552 (TO REMOVE)

(FAIRVIEW STREET BL) STA 2+40, 22.7'RT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 2+71, 23.6'RT EXISTING DECORATIVE STREET LIGHT 553553 (TO REMOVE)

(FAIRVIEW STREET BL) STA 3+55, 24.7'RT EXISTING DECORATIVE STREET LIGHT 553546 (REMOVE AND REPLACE)

(FAIRVIEW STREET BL) STA 4+85, 25.0'RT EXISTING DECORATIVE STREET LIGHT 553547 (REMOVE AND REPLACE)

(FAIRVIEW STREET BL) STA 6+86, 35.8'RT EXISTING DECORATIVE STREET LIGHT 567125 (TO REMOVE)

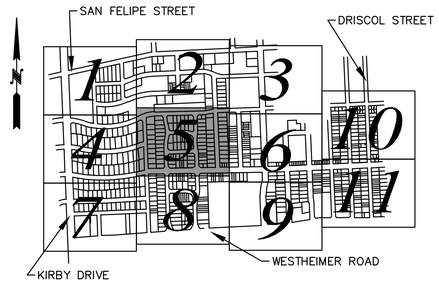
(FAIRVIEW STREET BL) STA 6+35, 26.9'RT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 7+78, 28.5'RT PROPOSED STREET LIGHT

(FAIRVIEW STREET BL) STA 7+35, 45.4'RT EXISTING DECORATIVE STREET LIGHT 553543 (TO REMOVE)

(FAIRVIEW STREET BL) STA 8+36, 26.4'RT EXISTING STREET LIGHT 425416

ROW



LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM

NOTES:
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2. THE CONTRACTOR WILL TRIM TREES 3' RADIUS AROUND THE STREET LIGHT. CONTRACTOR CAN NOT TRIM OUTSIDE OF THE CITY OF HOUSTON R.O.W.

REV.	DATE	DESCRIPTION	BY

OTHON

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civitas ENGINEERING GROUP

Engineers ● Planners ● Construction Managers

2000 W. Sam Houston Pkwy S., Suite 1400
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Phone: (713)783-8700, Fax: (713)783-8747
TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.

8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER

1/21/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SLP-06
STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **342** OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP-01-11.dwgSLP-06 Jan 21 , 2026 - 4:31PM OMarcelo

MATCH LINE K–K

(PECKHAM STREET BL)
STA 6+36, 16.8'RT
EXISTING STREET LIGHT
659135
(TO REMAIN)

(PECKHAM STREET BL)
STA 4+57, 23.3'LT
PROPOSED STREET LIGHT

(PECKHAM STREET BL)
STA 4+22, 16.6'LT
EXISTING STREET LIGHT
263538
(REMOVE EXISTING
STREET LIGHT)

PECKHAM STREET

ROW

7+00 6+00 5+00 4+00 3+00 2+00 1+00 0+00

(PECKHAM STREET BL)
STA 2+67, 15.2'RT
EXISTING STREET LIGHT
263537
(TO REMAIN)

(PECKHAM STREET BL)
STA 1+08, 16.6'LT
EXISTING STREET LIGHT
263536
(REMOVE EXISTING
STREET LIGHT.)

(PECKHAM STREET BL)
STA 0+96, 22.4'LT
PROPOSED STREET LIGHT

(FAIRVIEW ROAD BL)
STA 15+80, 68.3'LT
EXISTING STREET LIGHT
200055
(TO REMAIN)

(FAIRVIEW ROAD BL)
STA 14+72, 29.6'LT
EXISTING STREET LIGHT
(TO REMAIN)

S. SHEPHERD DRIVE

ROW

MATCH LINE I–I

12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00

(FAIRVIEW ROAD BL)
STA 12+18, 21.1'LT
PROPOSED STREET LIGHT

(FAIRVIEW ROAD BL)
STA 14+28, 31.2'RT
EXISTING STREET LIGHT
425417
(TO REMAIN)

(FAIRVIEW ROAD BL)
STA 15+70, 28.4'RT
(PROPOSED LED STREET
LIGHT ON EXISTING
WOOD POLE)
(FACING FAIRVIEW)

(FAIRVIEW ROAD BL)
STA 16+40, 30.2'RT
EXISTING STREET LIGHT
208054
(ROTATE TO
FACE SHEPERD)

(FAIRVIEW ROAD BL)
STA 17+63, 25.3'RT
(PROPOSED STREET
LIGHT ON EXISTING
WOOD POLE)

FAIRVIEW ROAD

(FAIRVIEW ROAD BL)
STA 19+24, 22.7'RT
EXISTING STREET LIGHT
222113
(TO REMAIN)

(HULDY STREET BL)
STA 8+74, 20.5'RT
EXISTING STREET LIGHT
411985
(TO REMAIN)

HULDY STREET

(FAIRVIEW ROAD BL)
STA 20+62, 24.3'RT
EXISTING STREET LIGHT
411787
(TO REMAIN)

BRUN STREET

(FAIRVIEW ROAD BL)
STA 23+52, 22.6'LT
EXISTING STREET LIGHT
411788
(TO REMAIN)

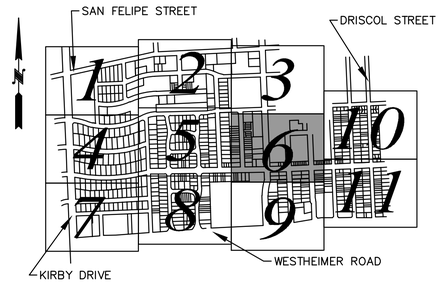
(FAIRVIEW ROAD BL)
STA 22+21, 25.4'RT
EXISTING STREET LIGHT
222112
(ROTATE TO
FACE FAIRVIEW)

(BRUN STREET BL)
STA 6+37, 22.1'RT
EXISTING STREET LIGHT
273392
(TO REMAIN)

8+50 8+00 7+00 6+00

MATCH LINE L–L

MATCH LINE M–M



LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM

NOTES:
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FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
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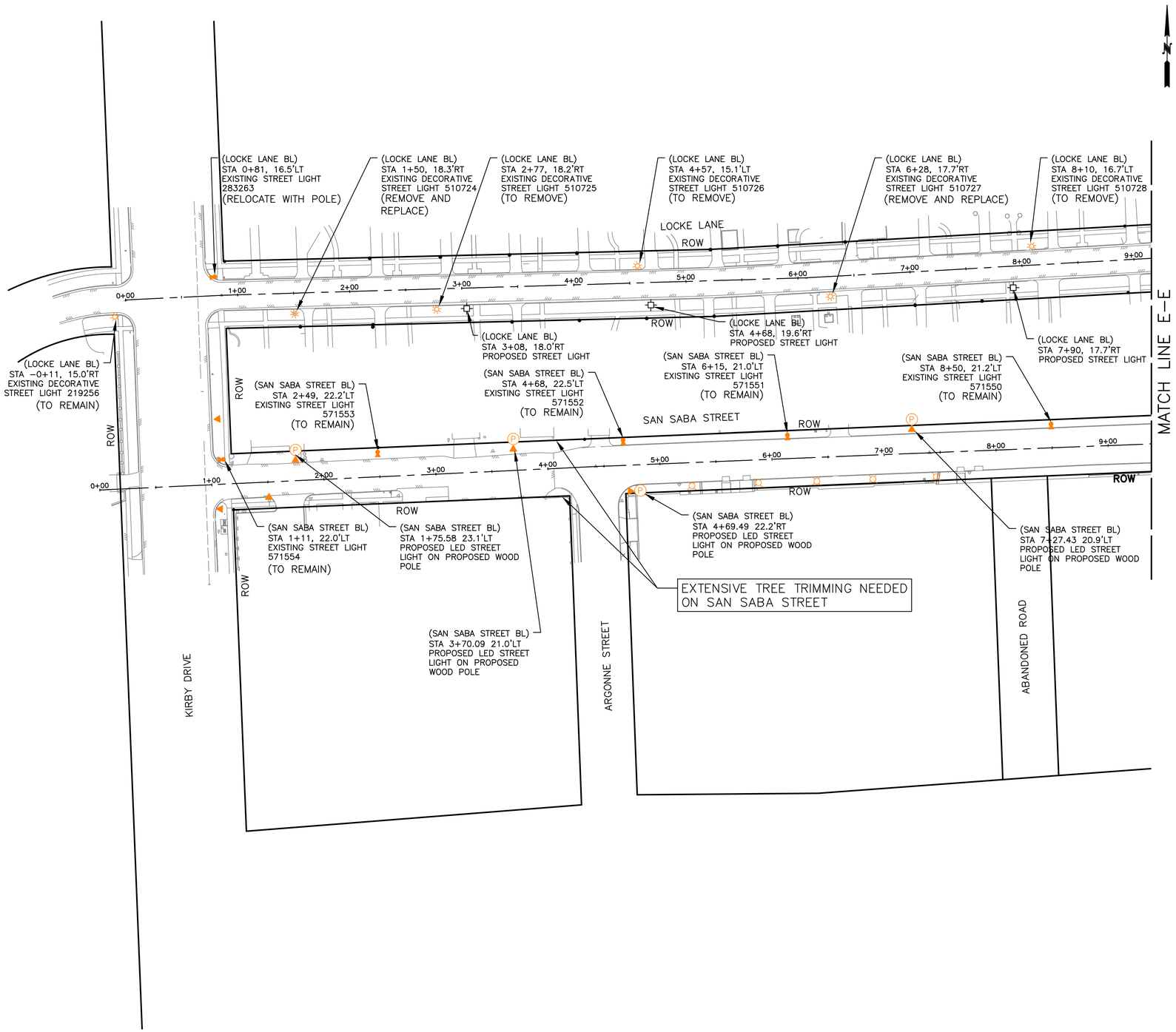
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

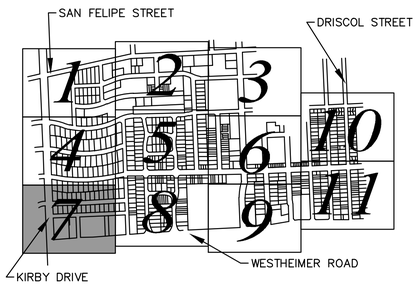
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SLP–07
STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **343** OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–07 Jan 21 , 2026 – 4:31PM OMarcelo





LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
- EXIST. PRIVATE YARD LIGHT
- EXIST. WOODEN TELE. & ELEC. POLE
- EXIST. WOODEN TELE. POLE
- PROPOSED 45W STREET LIGHT ON EXISTING WOODEN POLE
- PROPOSED 45W LED STREET LIGHT ON DECORATIVE POLE
- PROPOSED 45W LED STREET LIGHT ON METAL POLE WITH 4' ARM

REV.	DATE	DESCRIPTION	BY

NOTES:
1. FOR STREET LIGHTING NOTES, SEE SLP−01, SHEET 328.
2. THE CONTRACTOR WILL TRIM TREES 3' RADIUS AROUND THE STREET LIGHT. CONTRACTOR CAN NOT TRIM OUTSIDE OF THE CITY OF HOUSTON R.O.W.

OTHON
OTHON, INC. TBPE NO. F-1471
575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555
CONSULTING ENGINEERS www.othon.com

CIVITAS ENGINEERING GROUP
Engineers ● Planners ● Construction Managers
2000 W. Sam Houston Pkwy S., Suite 1400
Houston, Texas 77042
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TBPE Firm Registration No. F-4491

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270−5700
TBPE REG NO: F−4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P−5723

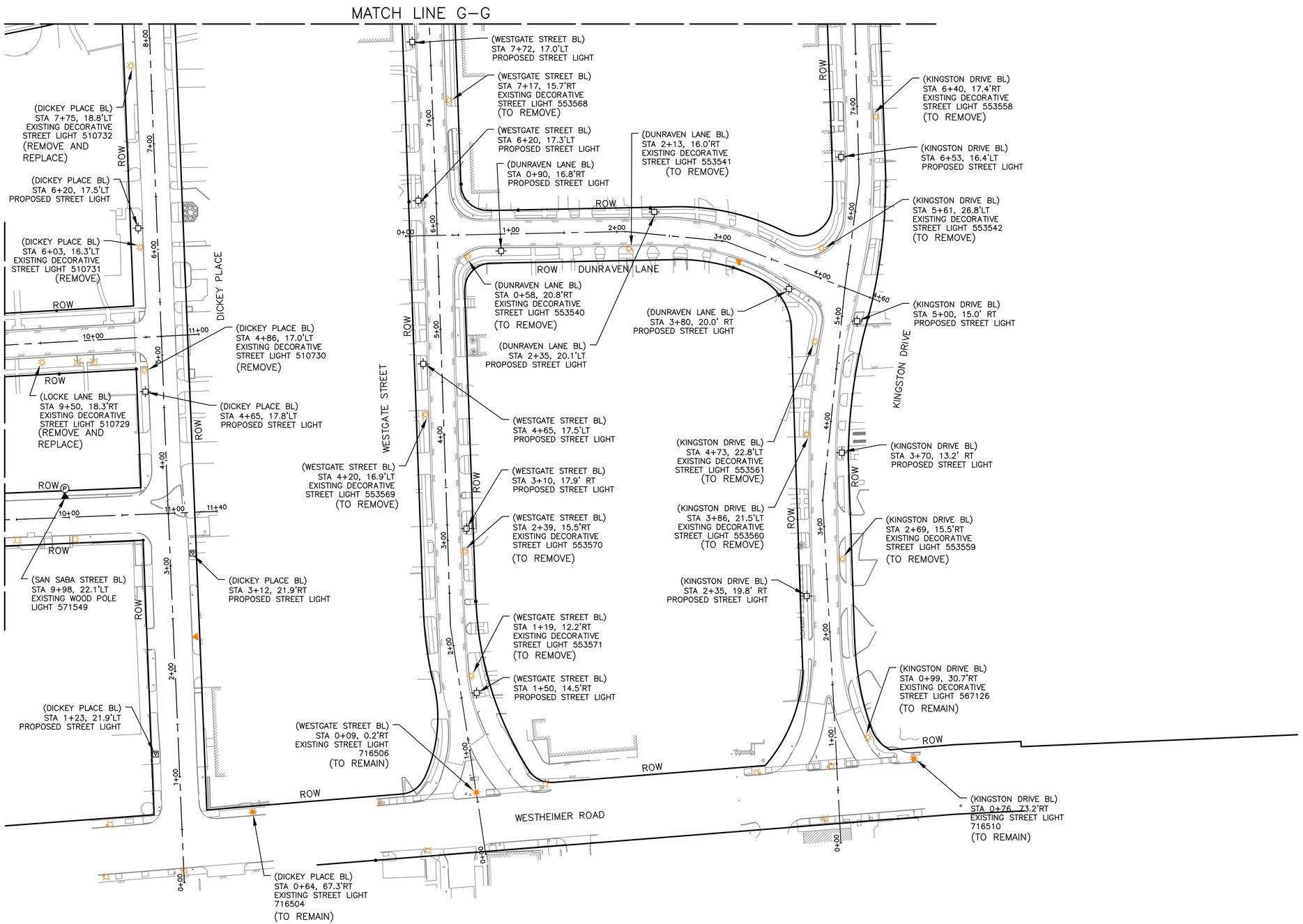
STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

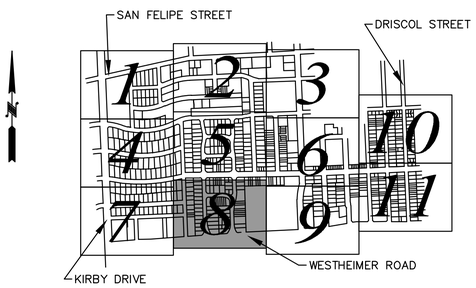
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
SLP−08
STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R−002011−0089−4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **344** OF 391	

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP−01−11.dwgSLP−08 Jan 21 , 2026 − 4:31PM OMarcelo





LEGEND:

- EXIST. WOODEN TELE. & ELEC. POLE WITH STREET LIGHT
- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
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NOTES:

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REV.	DATE	DESCRIPTION	BY

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FB No. P–5723

STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

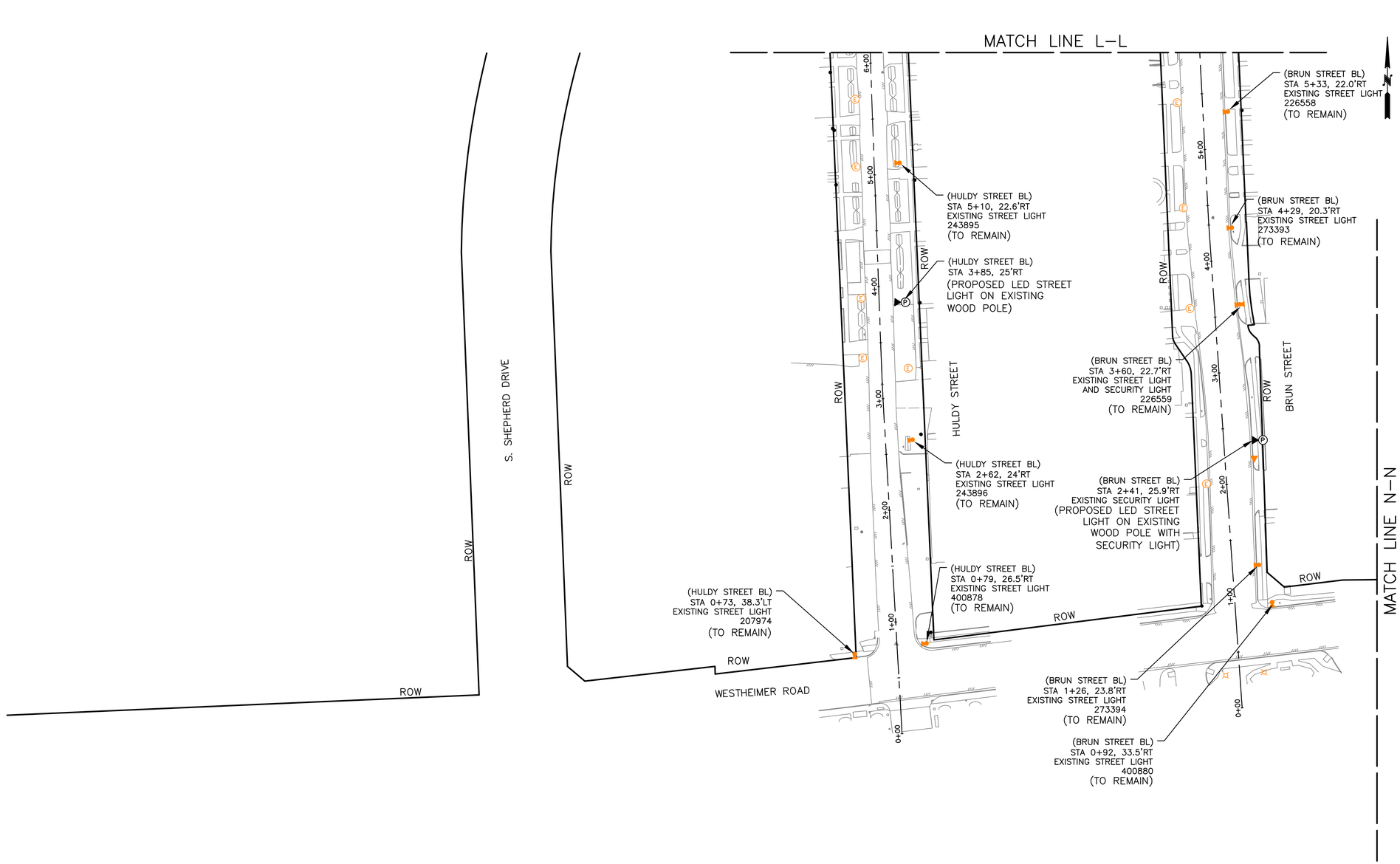
CITY OF HOUSTON

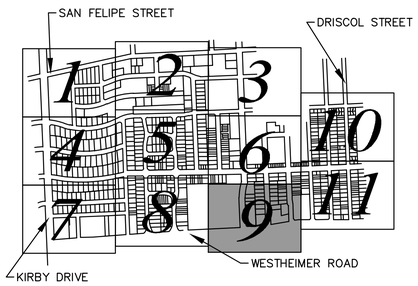
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 SLP–09 STREET LIGHTING PLAN

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **345** OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–09 Jan 21 , 2026 – 4:31PM OMarcelo





LEGEND:

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- EXIST. POWER POLE ONLY
- EXIST. METAL LIGHT STANDARD
- EXIST. DECORATIVE STREET LIGHT
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NOTES:
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FB No. P–5723

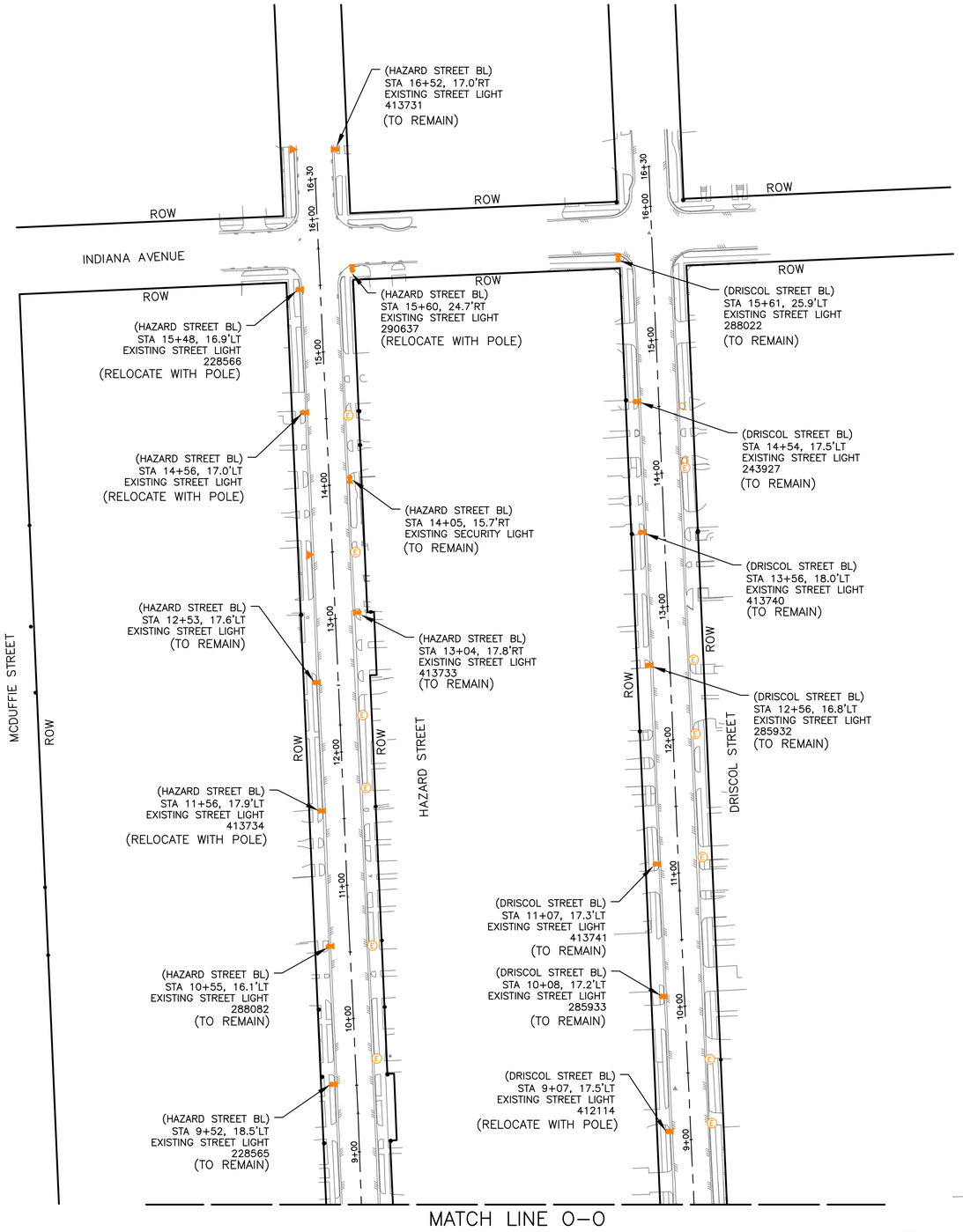
STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

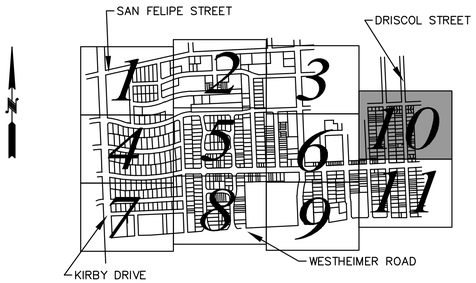
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069
SLP–10
STREET LIGHTING PLAN

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **346** OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–10 Jan 21 , 2026 – 4:31PM OMarcelo





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STATE OF TEXAS
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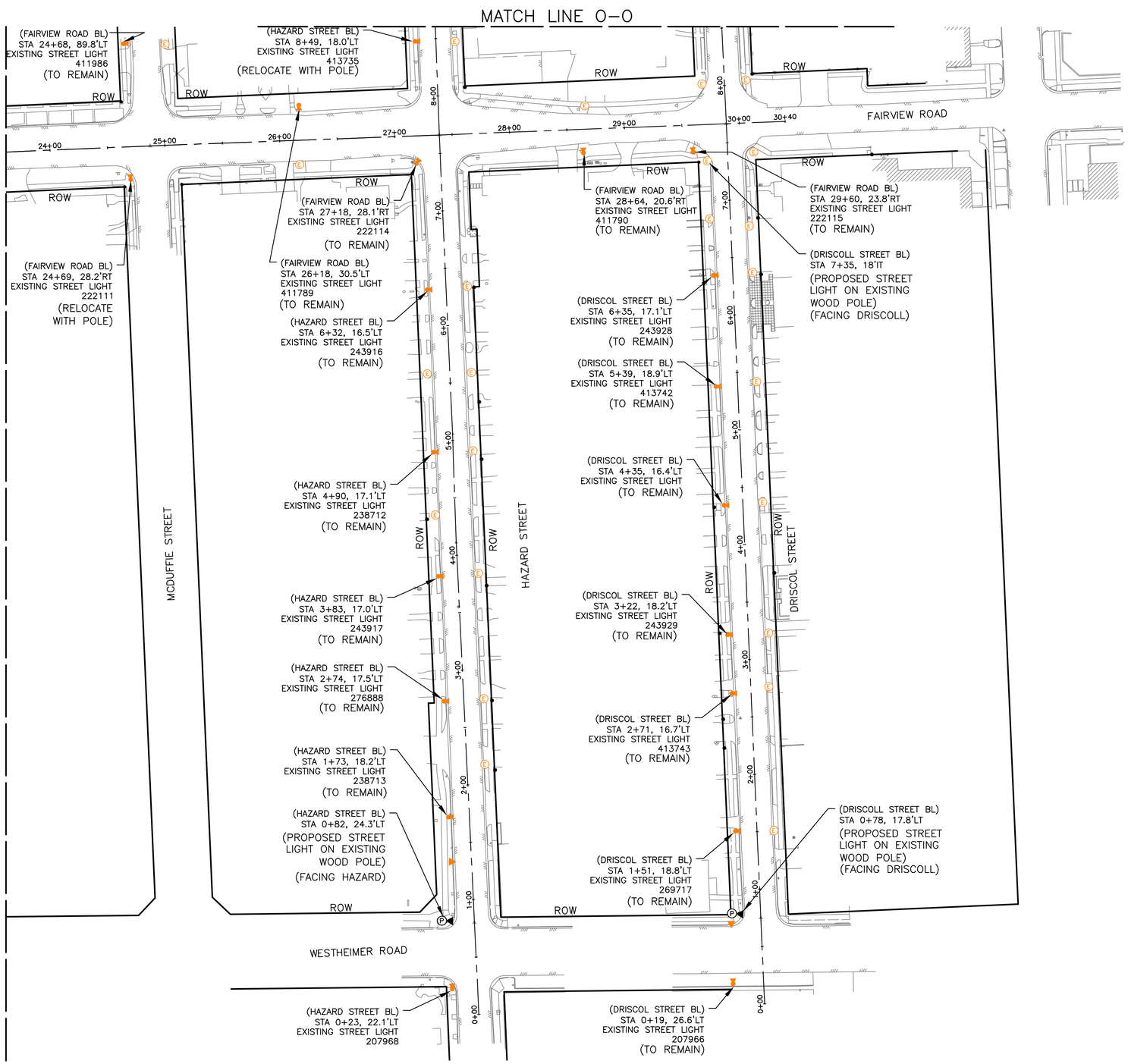
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

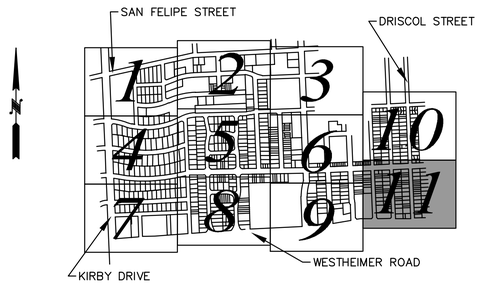
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069
SLP–11
STREET LIGHTING PLAN

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
1"=50'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **347** OF 391

R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP-01-11.dwgSLP-11 Jan 21 , 2026 - 4:31PM OMarcelo





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STATE OF TEXAS
YONGKI SHIM
114557
LICENSED
PROFESSIONAL ENGINEER
1/21/2026

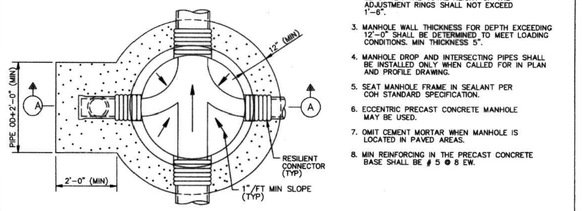
CITY OF HOUSTON

HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069 SLP–12 STREET LIGHTING PLAN

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
1"=50'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **348** OF 391	

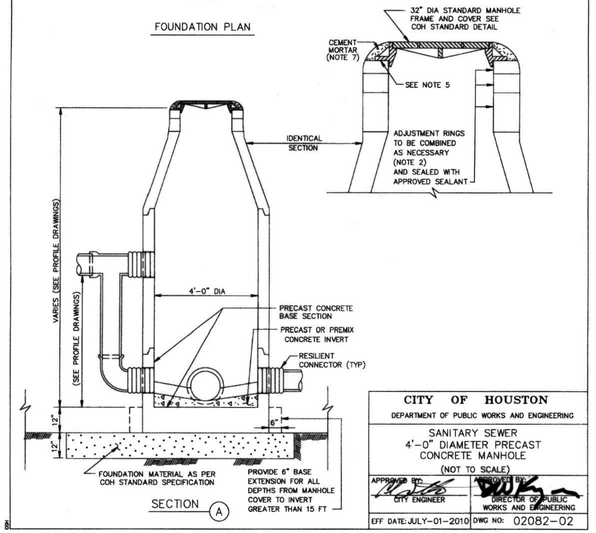
R:\355 Othon\1302\PROD\3.2 CAD\3.2.12 Street Lighting\SLP–01–11.dwgSLP–12 Jan 21 , 2026 – 4:31PM OMarcelo



FOUNDATION PLAN

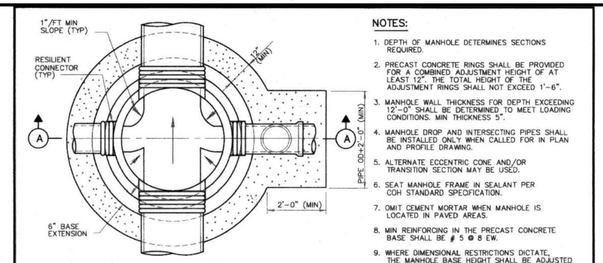
NOTES:

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
5. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
6. ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED.
7. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
8. MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.



SECTION

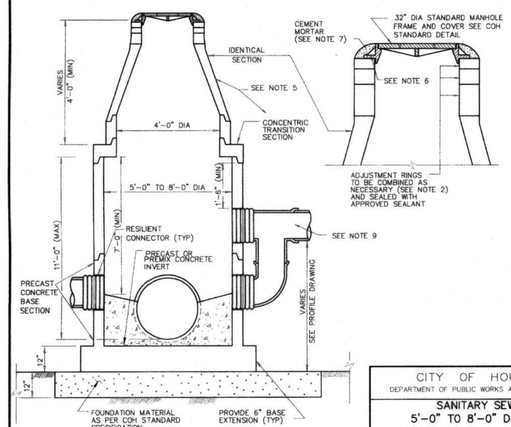
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02082-02



FOUNDATION PLAN

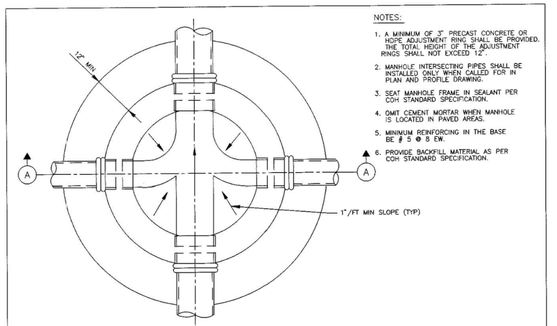
NOTES:

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
5. ALTERNATE ECCENTRIC CONE AND/OR TRANSITION SECTION MAY BE USED.
6. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
7. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
8. MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.
9. WHERE DIMENSIONAL RESTRICTIONS DICTATE, THE MANHOLE BASE HEIGHT SHALL BE ADJUSTED TO HAVE THE UPPER INLET PIPE OF THE DROP ENTER INTO THE 4'-0" DIAMETER RISER SECTION.



SECTION

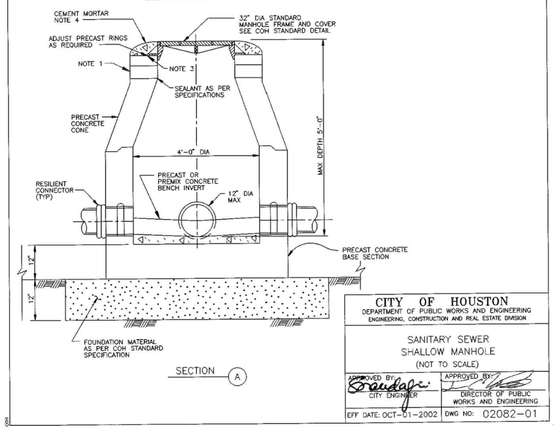
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SANITARY SEWER 5'-0" TO 8'-0" DIAMETER PRECAST CONCRETE MANHOLE (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02082-03



FOUNDATION PLAN

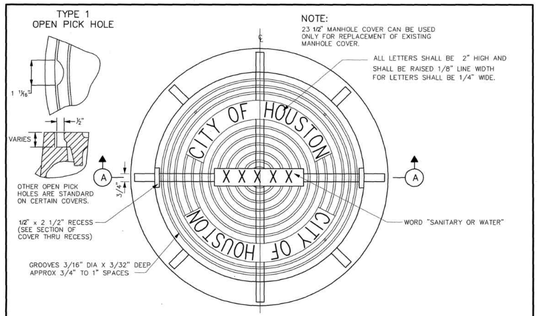
NOTES:

1. A MINIMUM OF 3" PRECAST CONCRETE OR HDPE ADJUSTMENT RING SHALL BE PROVIDED. THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 12".
2. MANHOLE INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
3. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
4. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
5. MINIMUM REINFORCING IN THE BASE BE # 5 @ 8 EW.
6. PROVIDE BACKFILL MATERIAL AS PER COH STANDARD SPECIFICATION.



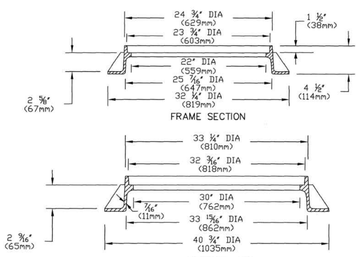
SECTION

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
SANITARY SEWER SHALLOW MANHOLE (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02082-01



PLAN

23 1/2" MANHOLE COVER WITH FRAME



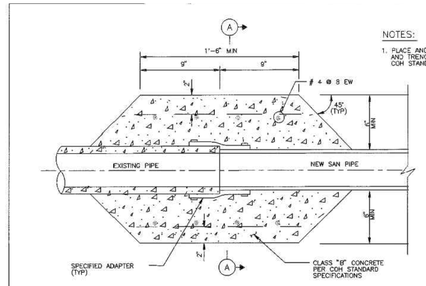
FRAME SECTION

SECTION

32" MANHOLE COVER WITH FRAME

1) NOTE: APPROXIMATE WEIGHTS.
FRAME- 170 LBS 77 kg
COVER- 270 LBS 123 kg
UNIT- 440 LBS 200 kg
2) MATERIAL- GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) MODEL V-14240 ASY OR APPROVED EQUAL

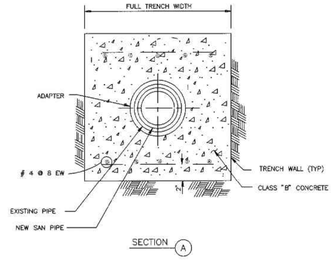
CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
SANITARY SEWER AND WATER MANHOLE FRAME AND COVER (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02090-01



LONGITUDINAL SECTION

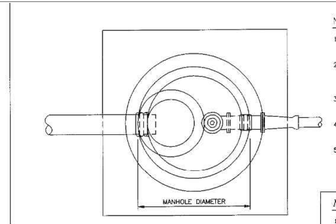
NOTES:

1. PLACE AND COMPACT EMBEDMENT AND TRENCH ZONE BACKFILL PER COH STANDARD SPECIFICATIONS.



SECTION

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
SANITARY SEWER PIPE TRANSITION FOR 36" SEWER AND SMALLER (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02531-04



PLAN VIEW

NOTES:

1. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
2. IF FORCE MAIN HAS BENDS WITHIN 25 FT OF MANHOLE, EXTEND RESTRAINED JOINTS TO 25 FT MINIMUM UPSTREAM OF BEND.
3. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREA.
4. MINIMUM REINFORCING IN BASE SHALL BE 5 @ 8 E W.
5. PRECAST RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".

NOTES TO SPECIFIER:

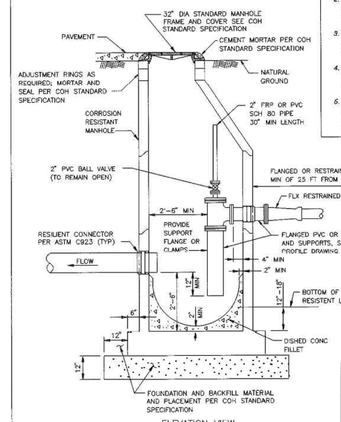
1. INDICATE SIZE OF FORCE MAIN, INCREASER AND DISCHARGE EITHER ON THIS DETAIL OR ON PLAN AND PROFILE.

2. PROVIDE INVERT ELEVATIONS OF FORCE MAIN AND SEWER CONNECTIONS TO MH, ON THIS DETAIL OR PLAN AND PROFILE.

3. THIS DETAIL IS TO BE USED ONLY WHEN THERE ARE NO INTERSECTING GRAVITY SEWERS.

4. DETAIL MAY BE REVISED TO ORIENT INCOMING FORCE MAIN AT OTHER ANGLES RELATIVE TO GRAVITY SEWER.

5. IF LENGTH OF DISCHARGE DROP BELOW FLANGED TEE FITTING EXCEEDS 7 TIMES DISCHARGE DIAMETER, PROVIDE STAINLESS STEEL OR FRP PIPE SUPPORT.



ELEVATION VIEW

TABLE 02082-07			
MANHOLE DIAMETER	4'-0"	5'-0"	6'-0"
MAX DISCHARGE SIZE	6"	14"	24"

CITY OF HOUSTON	
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION	
SANITARY SEWER CORROSION RESISTANT MANHOLE FOR FORCE MAIN DISCHARGE (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02082-07

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SANITARY SEWER DETAILS – SHEET 1 OF 7

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO: **349** OF 391	

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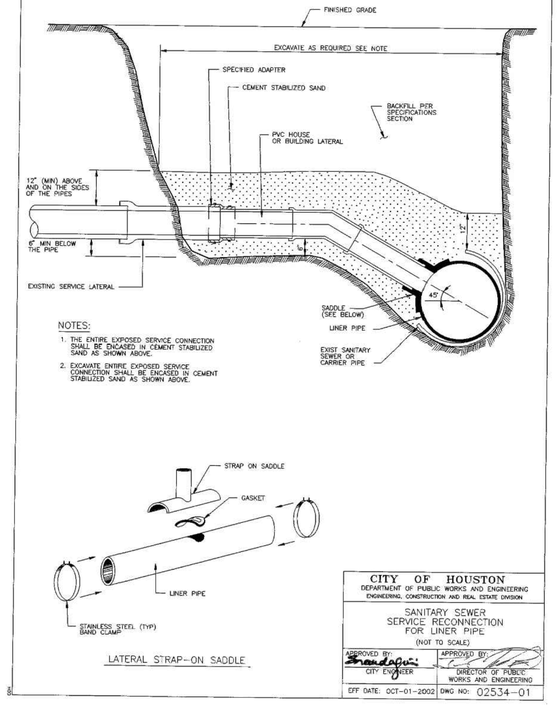
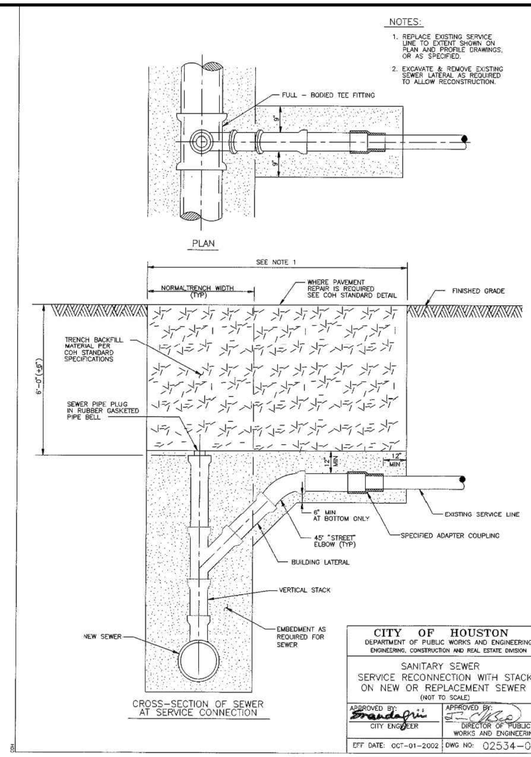


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
SERVICE RECONNECTION
FOR LINER PIPE
(NOT TO SCALE)

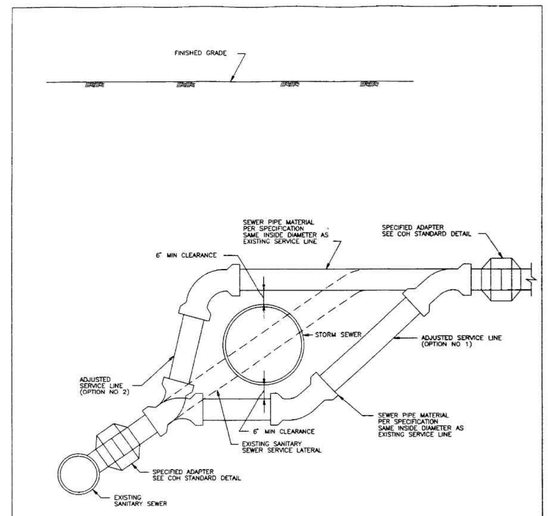
APPROVED BY: Brandagni CITY ENGINEER
APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 DWG NO: 02534-01



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
SERVICE RECONNECTION WITH STACK
ON NEW OR REPLACEMENT SEWER
(NOT TO SCALE)

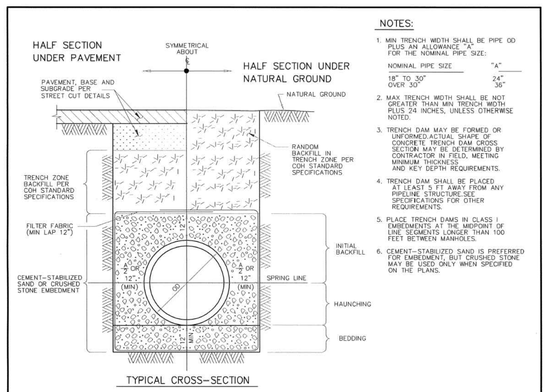
APPROVED BY: Brandagni CITY ENGINEER
APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 DWG NO: 02534-02



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
SERVICE LINE RECONNECTION
FOR STORM SEWER CONFLICTS
(NOT TO SCALE)

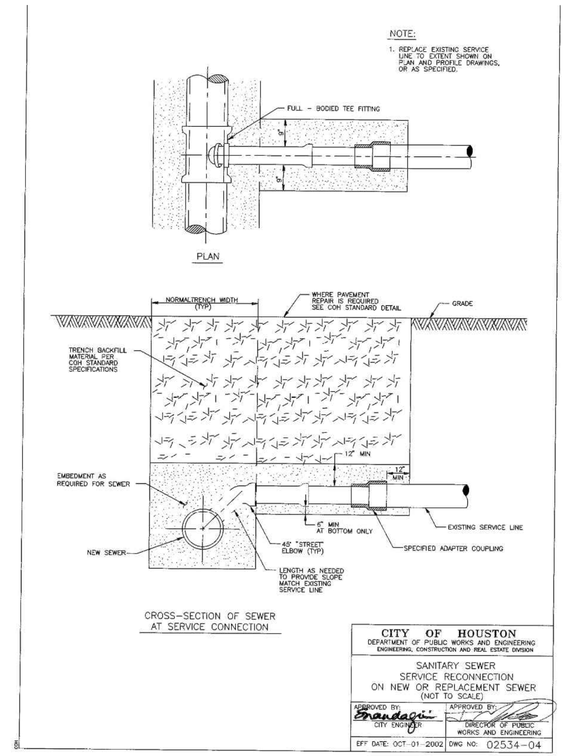
APPROVED BY: Brandagni CITY ENGINEER
APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 DWG NO: 02534-03



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER EMBEDMENT
AND TRENCH ZONE BACKFILL
FOR DRY OR WET STABLE TRENCH
(NOT TO SCALE)

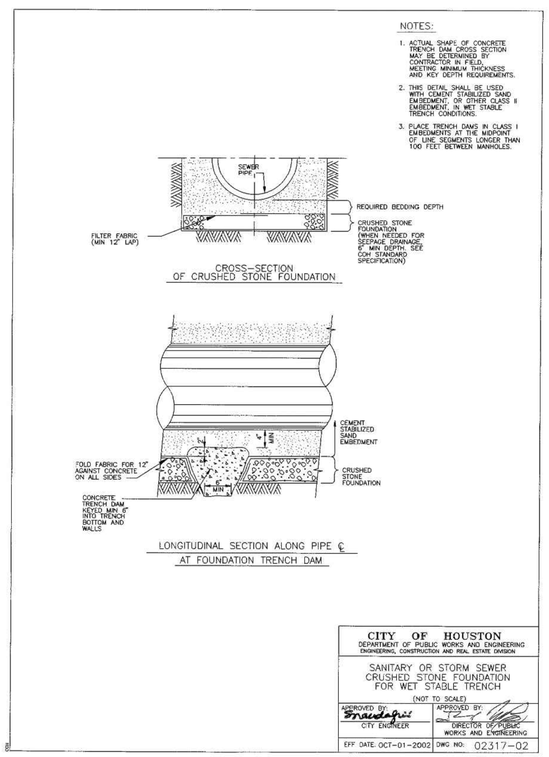
APPROVED BY: CITY ENGINEER
APPROVED BY: Deb A. Peddle DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016 DWG NO: 02317-01



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
SERVICE RECONNECTION
ON NEW OR REPLACEMENT SEWER
(NOT TO SCALE)

APPROVED BY: Brandagni CITY ENGINEER
APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 DWG NO: 02534-04



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY OR STORM SEWER
CRUSHED STONE FOUNDATION
FOR WET STABLE TRENCH
(NOT TO SCALE)

APPROVED BY: Brandagni CITY ENGINEER
APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 DWG NO: 02317-02

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SANITARY SEWER DETAILS – SHEET 2 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **350** OF 391

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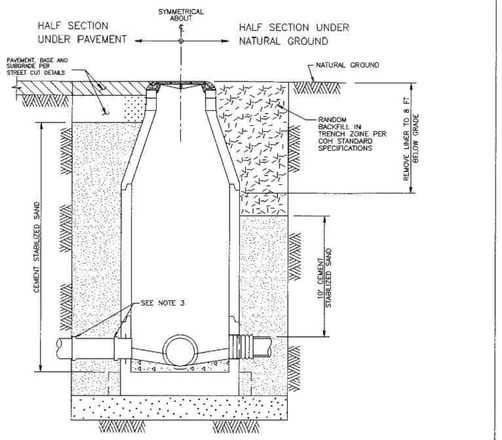
NOTES:

1. GROUTING OF MANHOLE STRUCTURE ANNULAR SPACE WILL BE PERMITTED IN CASES WHERE INSUFFICIENT WORK SPACE EXISTS FOR PLACEMENT AND COMPACTATION OF CEMENT STABILIZED SAND, PER COH STANDARD SPECIFICATION FOR TUNNEL GROUT.
2. THIS DETAIL ALSO APPLIES TO BACKFILL OF SHAFTS WITHOUT STRUCTURES.
3. ARRANGE PIPE JOINTS AS SHOWN WHEN USING RIGID CONNECTION TO CAST IN PLACE MANHOLE BASE.

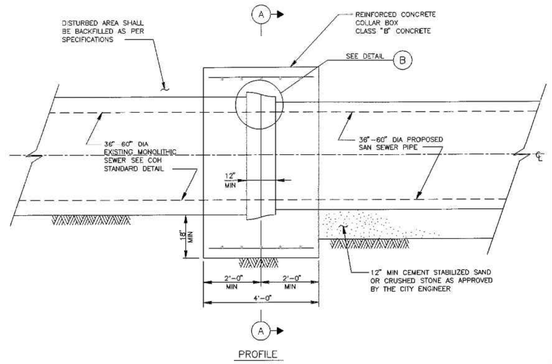


TYPICAL CROSS – SECTION

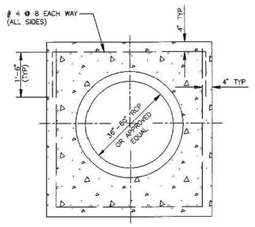
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
BACKFILL OF SHAFTS
(NOT TO SCALE)

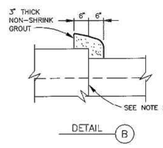
APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 | DWG NO: 02317-08



PROFILE



SECTION A



DETAIL B

NOTES:

1. EXISTING MRC OR RCP SHALL BE SAW CUT AT LOCATION APPROVED BY THE CITY ENGINEER (SMOOTH END).
2. PIPE EDGES SHALL TOUCH EACH OTHER. ALL GAPS IN JOINT SHALL BE FILLED WITH QUICK SETTING NON SHRINK GROUT SEE SPECIFICATION.

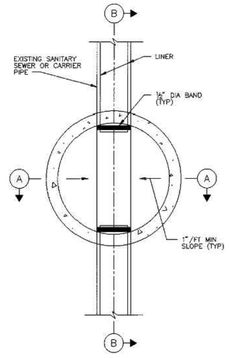
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
CONCRETE COLLAR DETAIL FOR CONNECTING EXISTING MONOLITHIC SEWERS TO PIPE SEWERS
(NOT TO SCALE)

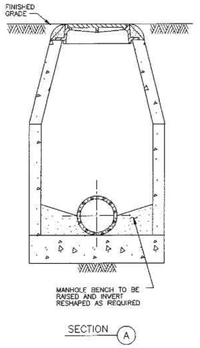
APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 | DWG NO: 02531-07

NOTES:

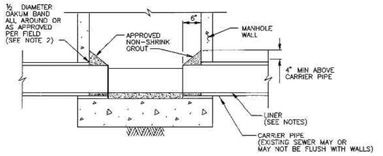
1. ALL LINER SHALL TIGHTLY FIT INSIDE THE EXISTING PIPE. ANNULAR SPACE, IF ANY, SHALL BE FILLED WITH NON-SHRINK GROUT, MINIMUM 12-INCH OR ONE-HALF PIPE DIAMETER.



PLAN



SECTION A



SECTION B

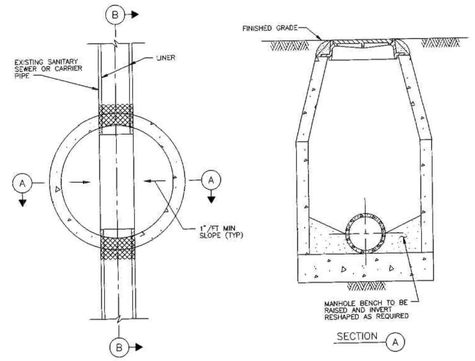
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
SEALING OF CURED-IN-PLACE LINER AT MANHOLE
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 | DWG NO: 02531-02

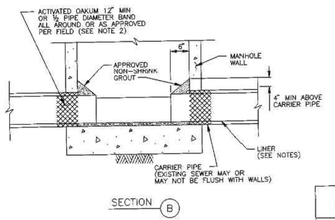
NOTES:

1. ANNULAR SPACE SHALL BE FILLED WITH NON-SHRINK GROUT, MINIMUM 12-INCH OR ONE HALF PIPE DIAMETER OR AS APPROVED BY ENGINEER.



PLAN

SECTION A



SECTION B

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

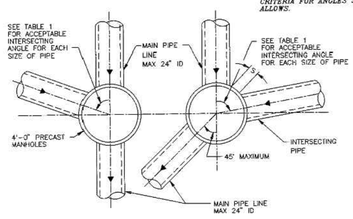
SANITARY SEWER
SEALING OF SLIPLINING AT MANHOLE
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 | DWG NO: 02531-01

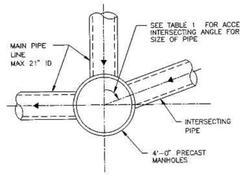
NOTES ON USE OF STANDARD DETAIL 02082-02

NOTES TO SPECIFIER:

1. *"-" INDICATES THAT A SPECIAL DESIGN OR THE NEXT LARGER MANHOLE SIZE SHALL BE USED.*
2. *TABLE 1 IS BASED ON A MIN SEPARATION DISTANCE "S" OF 15.5" OR INTERSECTION PIPE OD/2, WHICHEVER IS GREATER, BETWEEN MAIN AND INTERSECTING PIPES ALONG THE MANHOLE INSIDE WALL ARC.*
3. *PIPE WALL THICKNESS USED IN TABLE 1 ARE BASED ON RCP. THE DESIGN ENGINEER MAY CALCULATE TO SEE IF THINNER WALL PIPES CAN MEET THE SEPARATION CRITERIA FOR ANGLES SMALLER THAN THE TABLE ALLOWS.*



MAX 24" ID MAIN PIPE ALLOWED FOR STRAIGHT THROUGH TO 45° DEFLECTION



MAX 21" ID MAIN PIPE ALLOWED FOR 45° TO 90° DEFLECTION

TABLE 1
MIN ANGLE AND INTERSECTING PIPE SIZES FOR A 4'-0" DIA MANHOLE

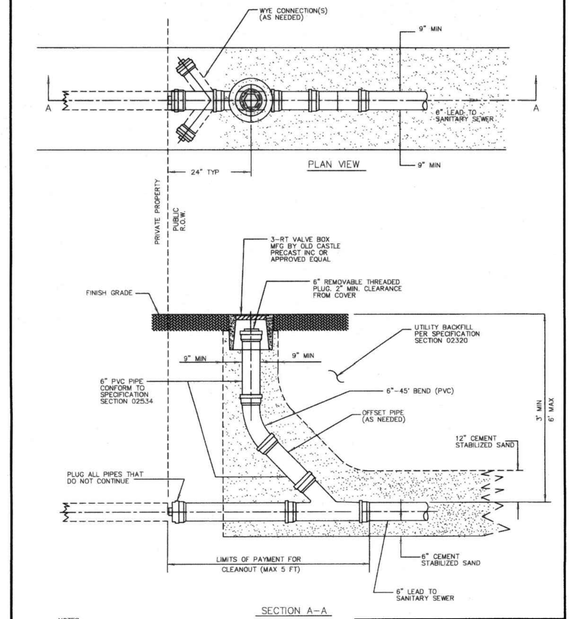
INTERSECTING PIPE SIZE (INCHES)	MIN INTERSECTING ANGLE IN DEGREES FOR FOR VARIOUS MAIN PIPE SIZES IN INCHES							
	6"	8"	10"	12"	15"	18"	21"	24"
6	55	58	60	65	70	75	80	85
8		60	63	68	73	77	82	87
10			66	71	75	80	85	90
12				76	80	85	90	–
15					85	90	–	–
18						–	–	–
21							–	–
24								–

NOT APPLICABLE UNLESS HYDRAULICS DICTATE (INTERSECTING PIPE > MAIN PIPE)

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
4'-0" DIAMETER PRECAST CONCRETE MANHOLE NOTES
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002 | DWG NO: 02082N-02



SECTION A-A

NOTES:

1. USE CEMENT STABILIZED SAND BEDDING 6" BELOW PIPE AND 12" ABOVE PIPE.
2. MAINTAIN MINIMUM CLEARANCE OF 12" FROM DRIVEWAY.
3. CLEANOUT COVER SHALL BE EMBOSSED WITH "SS CO CON".
4. DO NOT LOCATE WITHIN SIDEWALK PAVING, EXCEPT WHEN REQUIRED.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD CLEANOUT
DETAIL ON SERVICE LEAD
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010 | DWG NO: 02534-05

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FB No. P-5723

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SANITARY SEWER DETAILS – SHEET 3 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **351** OF 391

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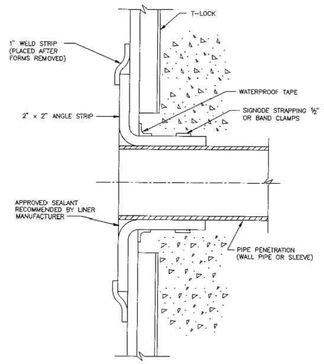

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY SEWER
SEALING PENETRATION THROUGH
PVC-LINED CONCRETE WALL
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER

APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 | DWG NO: 02531-06

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FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
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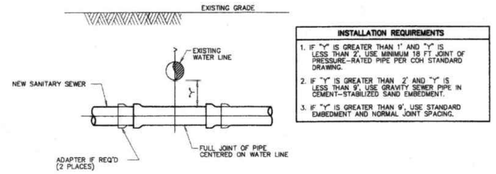
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

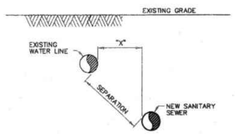
SANITARY SEWER DETAILS – SHEET 4 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **352** OF 391



NEW SANITARY SEWER CROSSING EXISTING WATER LINE

INSTALLATION REQUIREMENTS
1. IF "Y" IS GREATER THAN 1' AND "Y" IS LESS THAN 2', USE MINIMUM 18 FT JOINT OF PRESSURE-RATED PIPE PER COH STANDARD DRAWING.
2. IF "Y" IS GREATER THAN 2' AND "Y" IS LESS THAN 9', USE GRAVITY SEWER PIPE IN CEMENT-STABILIZED SAND EMBEDMENT.
3. IF "Y" IS GREATER THAN 9', USE STANDARD EMBEDMENT AND NORMAL JOINT SPACING.



NEW SANITARY SEWER PARALLEL TO EXISTING WATER LINE

INSTALLATION REQUIREMENTS
1. IF SEPARATION IS LESS THAN 9', USE PRESSURE-RATED PIPE. MH TO MH, "X" MUST BE AT LEAST 4 FT. VERTICAL SEPARATION MUST BE AT LEAST 2 FT.
2. IF SEPARATION IS 9' OR GREATER, USE STANDARD PIPE AND EMBEDMENT.

NOTES:

1. SANITARY SEWER MUST BE BELOW WATER LINE WHEREVER POSSIBLE. WHEN WATERLINE IS BELOW THE SANITARY SEWER PROVIDE MINIMUM 2 FT SEPARATION, AND INSTALL PIPE IN ACCORDANCE TO CHAPTER 7 TABLE 7.3 OF COH DESIGN MANUAL.
2. WHEN PRESSURE-RATED PIPE IS REQUIRED, PROVIDE PIPE WITH MINIMUM 150 psi PRESSURE RATING.
3. ADAPTERS MUST BE FACTORY MOLDED OR FABRICATED, WITH RING STIFFNES AT LEAST EQUAL TO THE ADJOINING SANITARY SEWER PIPE, AND USING RESILIENT GASKET OR SEAL MATERIAL. FLEXIBLE RUBBER "BOOT" TYPE ADAPTERS WILL NOT BE ACCEPTED.
4. INSTALL FORCE MAINS SAME AS FOR GRAVITY SEWER, USING SPECIFIED PRESSURE PIPE.
5. "Y" MUST ALWAYS BE GREATER THAN OR EQUAL TO 1 FT FOR PRESSURE RATED SS AND 2 FT FOR NON-PRESSURE RATED SS.
6. "X" MUST BE GREATER THAN OR EQUAL TO 4 FT.
7. ALTERNATIVES MAY BE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
8. SEPARATION REQUIREMENTS SHOWN HERE DO NOT APPLY TO SERVICE CONNECTIONS – REFER TO PLUMBING CODE FOR APPLICABLE REQUIREMENTS.

INSTALLING SANITARY SEWERS CROSSING OR PARALLEL TO WATER LINES

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER
INSTALLING SANITARY SEWERS
CROSSING OR PARALLEL TO WATER LINES
(NOT TO SCALE)

APPROVED: CITY ENGINEER | DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE-JUL-01-2010 | DWG NO. 02531-05

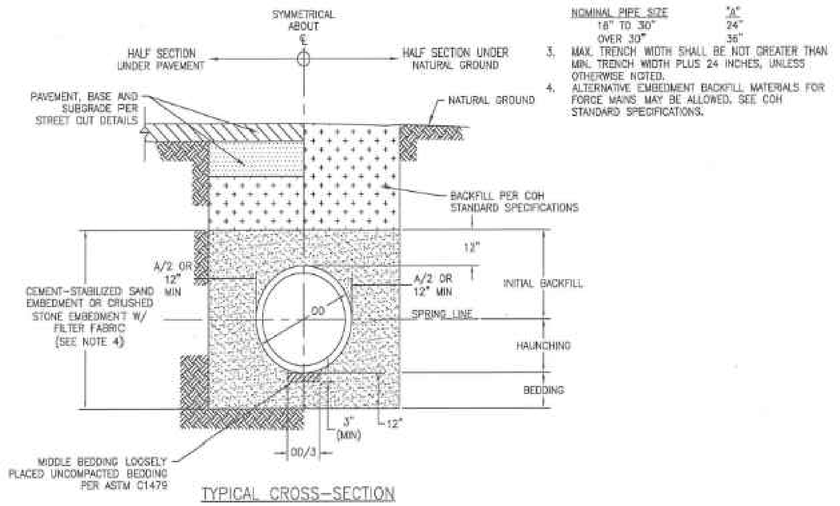
02317-03

NOTES:

1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD. SEE COH STANDARD SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
2. MIN. TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"

3. MAX. TRENCH WIDTH SHALL BE NOT GREATER THAN MIN. TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED. SEE COH STANDARD SPECIFICATIONS.



TYPICAL CROSS-SECTION

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

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STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SANITARY SEWER DETAILS – SHEET 5 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **353** OF 391

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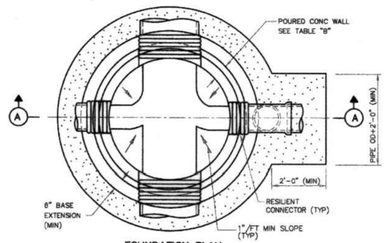
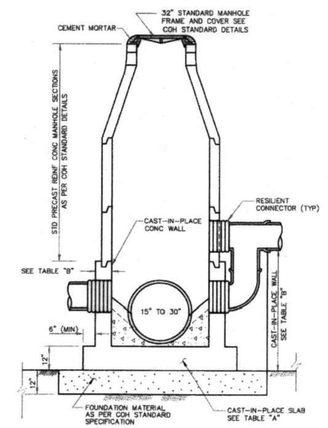


FOUNDATION PLAN



ELEVATION (A)

NOTES:

1. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
2. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
3. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.

NOTES ON USE OF STANDARD DETAIL

TABLE "A"

BASE SLAB REINFORCING AND THICKNESS			
MH INSIDE DIA (FT)	DEPTH TO INV (FT)	BASE THICKNESS	REINFORCING (E W, T & B)
8	≤ 20	1'-0"	# 6 @ 10"
	≤ 25	1'-2"	# 6 @ 8"
	≤ 30	1'-4"	# 6 @ 7"
	≤ 40	1'-6"	# 6 @ 6"
	≤ 50	1'-8"	# 6 @ 6"
	≤ 60	1'-10"	# 6 @ 5"
6	≤ 15	1'-0"	# 5 @ 8"
	≤ 20	1'-0"	# 5 @ 6"
	≤ 25	1'-2"	# 5 @ 7"
	≤ 30	1'-2"	# 5 @ 6"
	≤ 40	1'-2"	# 6 @ 8"
	≤ 50	1'-4"	# 6 @ 8"
	≤ 60	1'-6"	# 6 @ 7"
5	≤ 15	1'-0"	# 5 @ 8"
	≤ 20	1'-0"	# 5 @ 7"
	≤ 25	1'-0"	# 5 @ 6"
	≤ 30	1'-0"	# 6 @ 10"
	≤ 40	1'-2"	# 6 @ 10"
	≤ 50	1'-2"	# 6 @ 8"
	≤ 60	1'-2"	# 6 @ 8"
4	≤ 20	1'-0"	# 5 @ 8"
	≤ 25	1'-0"	# 5 @ 8"
	≤ 30	1'-0"	# 5 @ 7"
	≤ 40	1'-0"	# 6 @ 10"

TABLE "B"

WALL REINFORCING AND THICKNESS					
MH INSIDE DIA (FT)	DEPTH TO PIPE TO INV (FT)	MAXIMUM CAST-IN-PLACE WALL HEIGHT	WALL THICKNESS	REINFORCING AT EACH FACE VERTICAL	HORIZONTAL
8	≤ 20	8'-0"	0'-10"	# 6 @ 12"	# 6 @ 12"
	≤ 25	9'-6"	0'-10"	# 6 @ 10"	
	≤ 30	7'-0"	0'-10"	# 6 @ 8"	
	≤ 40	8'-0"	1'-0"	# 6 @ 8"	
	≤ 50	9'-0"	1'-2"	# 6 @ 8"	
	≤ 60	10'-0"	1'-4"	# 6 @ 6"	
6	≤ 15	5'-0"	0'-8"	# 5 @ 12"	# 5 @ 12"
	≤ 20	5'-0"	0'-8"	# 5 @ 8"	
	≤ 25	6'-0"	0'-9"	# 5 @ 8"	
	≤ 30	6'-0"	0'-9"	# 5 @ 8"	# 5 @ 8"
	≤ 40	7'-0"	0'-10"	# 5 @ 8"	
	≤ 50	7'-0"	1'-0"	# 6 @ 8"	
	≤ 60	8'-0"	1'-2"	# 6 @ 7"	
5	≤ 15	5'-0"	0'-8"	# 5 @ 8"	# 4 @ 12"
	≤ 20	5'-6"	0'-8"	# 5 @ 7"	
	≤ 25	5'-8"	0'-10"	# 5 @ 6"	
	≤ 30	6'-0"	0'-10"	# 5 @ 10"	# 5 @ 12"
	≤ 40	6'-4"	0'-10"	# 6 @ 10"	
	≤ 50	6'-8"	1'-0"	# 6 @ 8"	
	≤ 60	7'-0"	1'-2"	# 6 @ 8"	
4	≤ 20	7'-6"	0'-8"	# 5 @ 12"	# 4 @ 12"
	≤ 25	5'-0"	0'-8"	# 5 @ 10"	
	≤ 30	5'-6"	0'-10"	# 6 @ 12"	
	≤ 40	6'-0"	0'-10"	# 6 @ 12"	

NOTE TO SPECIFIER:

1. TABLES "A" AND "B" WILL BE USED TO DESIGN THE CAST-IN-PLACE BASE AND WALL FOR VARIOUS MANHOLE DIAMETER AND DEPTH.

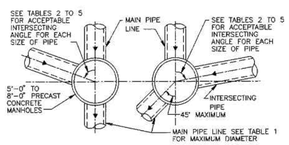
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER
PRECAST CONCRETE MANHOLE
WITH CAST-IN-PLACE BASE
(NOT TO SCALE)

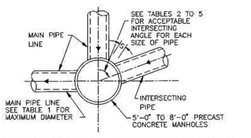
APPROVED BY: CITY ENGINEER — DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02082-08

NOTES ON USE OF STANDARD DETAIL 02082-03



FOR MAIN PIPES FROM STRAIGHT THROUGH TO 45° DEFLECTION



FOR MAIN PIPE WITH 45° TO 90° DEFLECTION

TABLE 1
MAXIMUM MAIN PIPE DIAMETER (I D) IN INCHES

MANHOLE DIAMETER (FT)	STRAIGHT THROUGH TO 45° DEFLECTION	WITH 90° DEFLECTION	TABLE TO BE USED
5	36	27	2
6	42	33	3
7	48	36	4
8	60	42	5

TABLE 2
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 5'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES										
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"
8	49	50	54	58	61	66	69	73	77	82	86
10		53	57	61	64	68	71	76	79	84	88
12			61	65	68	72	75	80	83	88	–
15				68	71	75	79	83	87	–	–
18					75	79	82	87	90	–	–
21						83	86	90	–	–	–
24							90	–	–	–	–
27								–	–	–	–
30									–	–	–
33										–	–
36											–

TABLE 3
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 6'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES										
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"
8	40	42	45	49	51	54	57	61	63	67	70	78
10		44	47	50	53	56	59	62	65	69	72	79
12			50	54	56	60	62	66	68	72	75	83
15				57	59	62	65	69	71	75	78	85
18					62	65	68	71	74	78	81	88
21						68	71	74	77	81	84	–
24							74	77	80	84	87	–
27								83	85	89	–	–
30									–	–	–	–
33										–	–	–
36											–	–
42												–

TABLE 4
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 7'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES												
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"
8	35	36	39	42	44	47	49	52	54	57	59	65	71
10		38	40	43	45	48	50	53	55	59	61	67	73
12			43	46	48	51	53	56	58	61	64	70	76
15				48	50	53	55	58	61	64	66	72	78
18					58	56	58	61	63	66	69	74	81
21						58	60	63	66	69	71	77	83
24							63	66	68	71	74	79	86
27								70	72	76	78	84	90
30									78	81	83	89	–
33										86	88	–	–
36											–	–	–
42												–	–
48													–

TABLE 5
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 8'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES													
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"
8	30	32	34	36	38	41	43	45	47	50	52	56	61	67	74
10		33	35	38	40	42	44	46	48	51	53	58	63	68	77
12			38	40	42	44	46	49	51	53	55	60	65	71	79
15				42	44	47	48	51	53	56	58	62	67	73	81
18					46	49	51	53	55	58	56	64	70	75	83
21						51	53	55	57	60	62	67	72	77	85
24							55	57	59	62	64	69	74	79	89
27								61	63	66	68	73	78	83	–
30									67	70	72	77	82	87	–
33										74	76	81	86	–	–
36											81	85	–	–	–
42												–	–	–	–
48													–	–	–
54														–	–
60															–

* NOT APPLICABLE
(INTERSECTING PIPE GREATER THAN MAIN PIPE)

NOTES TO SPECIFIER:

1. "–" INDICATES THAT A SPECIAL DESIGN OR THE NEXT LARGER MANHOLE SIZE SHALL BE USED.
2. TABLES 2 TO 5 ARE BASED ON A MIN SEPARATION DISTANCE "S" OF 16.5" OR INTERSECTION PIPE OD/2, WHICHEVER IS GREATER, BETWEEN MAIN AND INTERSECTING PIPES ALONG THE MANHOLE INSIDE WALL ARC.
3. PIPE WALL THICKNESS USED IN TABLES 2 TO 5 ARE BASED ON RCP. THE DESIGN ENGINEER MAY CALCULATE TO SEE IF THINNER WALL PIPES CAN MEET THE SEPARATION CRITERIA FOR ANGLES SMALLER THAN THE TABLES ALLOW.
4. LIMITATIONS TO BASE HEIGHT ARE BASED ON RESISTING BUOYANT UPLIFT FORCES BASED ON WATER AT GROUND SURFACE AND A SAFETY FACTOR OF 1.20.
5. A SPECIAL DESIGN IS REQUIRED IF MANHOLE ID IS GREATER THAN 8 FT.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

SANITARY SEWER
5'-0" TO 8'-0" DIAMETER
PRECAST CONCRETE MANHOLE NOTES
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02082N-03

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TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

SANITARY SEWER DETAILS – SHEET 6 OF 7

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. 354 OF 391	

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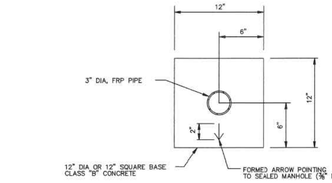
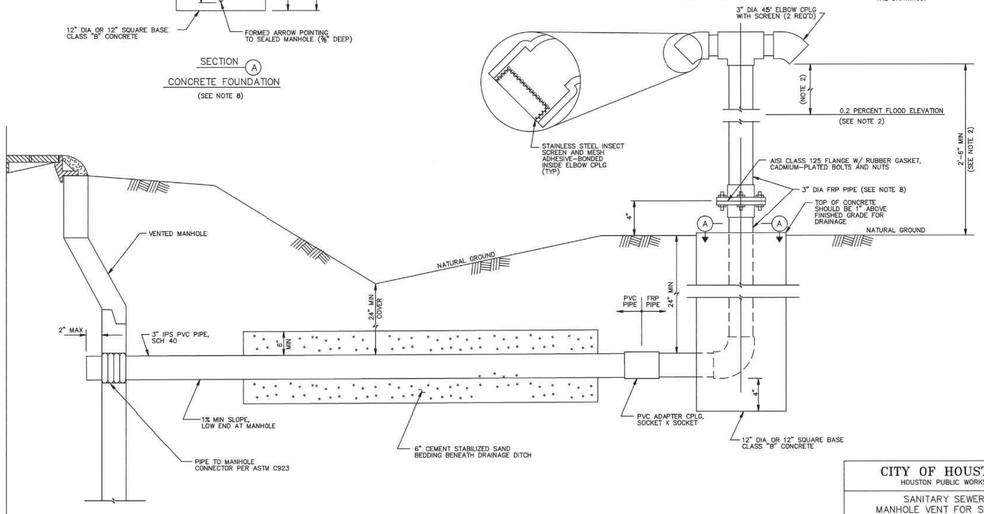


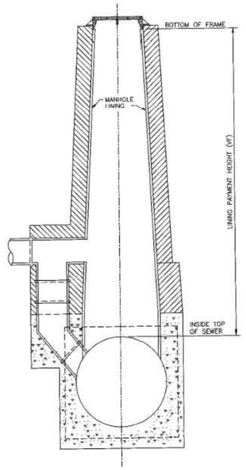
SECTION (A)
CONCRETE FOUNDATION
(SEE NOTE 8)

NOTES:

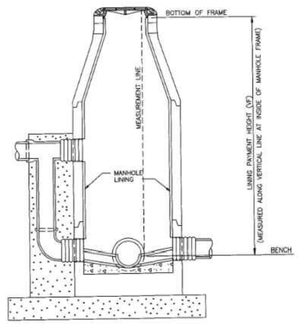
1. INSTALL AT LOCATION AND BASED ON 0.2 PERCENT FLOOD ELEVATION SHOWN ON PLAN AND PROFILE DWGS.
2. MINIMUM VENT HEIGHT ELEVATION IS TO BE 2'-6" ABOVE THE NATURAL GROUND OR AS REQUIRED BY CHAPTER 19 SECTION 19-33 OF THE CITY OF HOUSTON CODE OF ORDINANCES, WHICHEVER IS HIGHER.
3. WHEN FLOODPROOFED VENTS ARE SPECIFIED BY THE EOR, REFER TO THE CONTRACT DOCUMENTS FOR CONSTRUCTION REQUIREMENTS.
4. DRAIN TO VENTED (ADJACENT) MH AT MIN 1% SLOPE. CONNECT TO MANHOLE WITH SPECIFIED CONNECTOR.
5. WHEN VENT CROSSES DRAINAGE DITCH, PROVIDE CEMENT STABILIZED SAND BEDDING
6. THE VENT IS TO BE INSTALLED WITHIN THE RIGHT OF WAY.
7. SEE COH STANDARD SPECIFICATIONS FOR PROTECTIVE COATING REQUIREMENTS FOR EXPOSED FRP PIPE.
8. THIS STANDARD DETAIL SETS THE MINIMUM REQUIREMENTS FOR THE MANHOLE VENT'S CONCRETE FOUNDATION AND VENT PIPE SIZE. THE EOR IS RESPONSIBLE FOR THE ADEQUACY AND DESIGN OF THE CONCRETE FOUNDATION AND VENT PIPE SIZE AND SHALL PROVIDE CONSTRUCTION DETAILS IN THE DRAWINGS.



CITY OF HOUSTON HOUSTON PUBLIC WORKS	
SANITARY SEWER MANHOLE VENT FOR SEALED MANHOLE (NOT TO SCALE)	
APPROVED BY: Richard Kamman CITY ENGINEER	APPROVED BY: Carol Haddock DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2021	DWG NO: 02082-06



TYPICAL MONOLITHIC SEWER MANHOLE



TYPICAL PIPE SEWER MANHOLE

THIS IS NOT A STANDARD DETAIL.
IT IS TO BE USED ONLY AS A GUIDE FOR MEASUREMENT PURPOSES.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING, CONSTRUCTION AND REAL ESTATE DIV	
SANITARY SEWER MANHOLE LINING PAYMENT LIMITS (NOT TO SCALE)	
APPROVED BY: Brandagni CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: OCT-01-2002	DWG NO: 02534

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

SANITARY SEWER DETAILS – SHEET 7 OF 7

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **355** OF 391

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02081–01

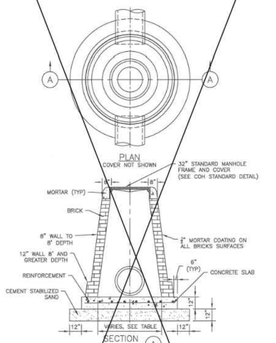


TABLE
SEWER SIZE VS MANHOLE SIZE

SEWER SIZE (INCHES)	MANHOLE BASE DIAMETER
42"	5'–0"
36"	4'–6"
30" AND LESS	4'–0"

STORM SEWER MANHOLE TYPE 'C' FOR 42" DIAMETER RCP AND SMALLER
NTS

COH IS PHASING OUT BRICK, NEW DETAILS TO BE POSTED END OF 2019

REFER TO COH STANDARD DETAIL 02082-12 "STORM SEWER TYPE 'C' PRECAST ROUND MANHOLE"

02081–03

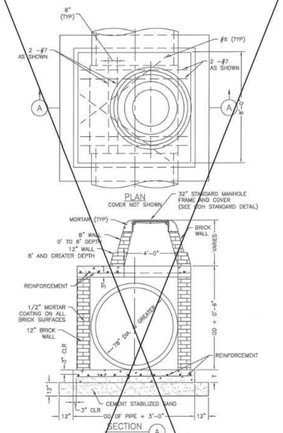


TABLE 1
PIPE DIAMETER VS. SLAB THICKNESS

PIPE DIAMETER (INCHES)	SLAB THICKNESS T (INCHES)
78	12
84	12
90	13
96	14
102	14
108	15

STORM SEWER MANHOLE TYPE 'C' FOR 78" DIAMETER RCP AND GREATER
NTS

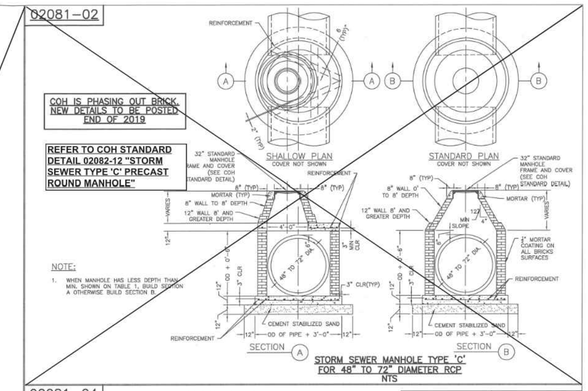
COH IS PHASING OUT BRICK, NEW DETAILS TO BE POSTED END OF 2019

REFER TO COH STANDARD DETAIL 02082-13 "STORM SEWER PRECAST BOX MANHOLE"

02081–02

COH IS PHASING OUT BRICK, NEW DETAILS TO BE POSTED END OF 2019

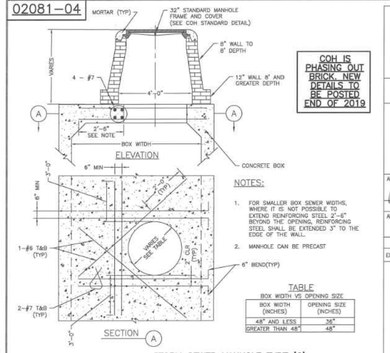
REFER TO COH STANDARD DETAIL 02082-12 "STORM SEWER TYPE 'C' PRECAST ROUND MANHOLE"



NOTE:
1. WHEN MANHOLE HAS LESS DEPTH THAN MIN. SHOWN ON TABLE 1, BUILD SECTION A OTHERWISE BUILD SECTION B

STORM SEWER MANHOLE TYPE 'C' FOR 48" TO 72" DIAMETER RCP
NTS

02081–04



NOTES:
1. FOR SMALLER BOX SEWER WIDTHS, WHERE IT IS NOT POSSIBLE TO EXTEND REINFORCING STEEL 2'–6" BEYOND THE OPENING, REINFORCING STEEL SHALL BE EXTENDED 3" TO THE EDGE OF THE WALL.
2. MANHOLE CAN BE PRECAST

TABLE
BOX WIDTH VS. OPENING SIZE

BOX WIDTH (INCHES)	OPENING SIZE (INCHES)
48" AND LESS	36"
GREATER THAN 48"	48"

STORM SEWER MANHOLE TYPE 'C' FOR PROPOSED CONCRETE BOX SEWER
NTS

COH IS PHASING OUT BRICK, NEW DETAILS TO BE POSTED END OF 2019

FIRM INFORMATION | ENGINEER'S SEAL

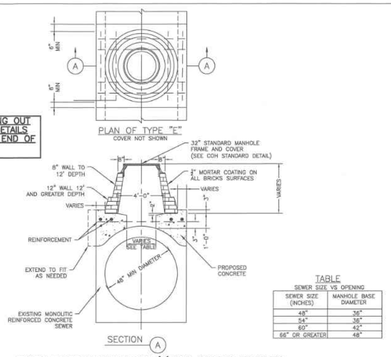
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02081–01 THROUGH 04

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

02081–05



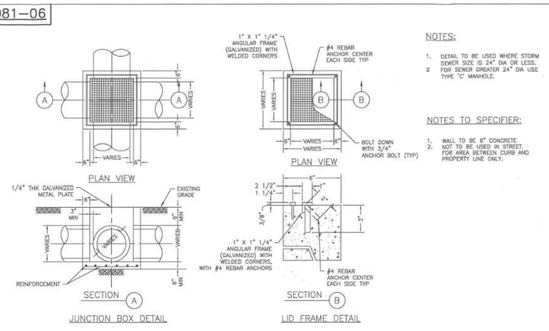
COH IS PHASING OUT BRICK, NEW DETAILS TO BE POSTED END OF 2019

TABLE
SEWER SIZE VS OPENING

SEWER SIZE (INCHES)	MANHOLE BASE DIAMETER
48"	36"
54"	38"
60"	42"
66" OR GREATER	48"

STORM SEWER MANHOLE TYPE 'E' FOR EXISTING MONOLITIC REINFORCED CONCRETE 48" DIAMETER AND GREATER
NTS

02081–06

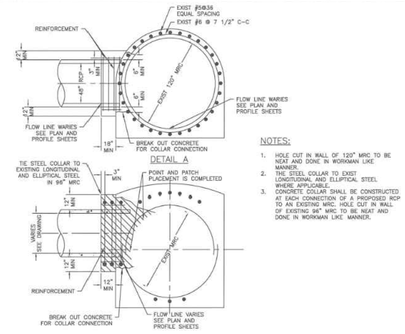


NOTES:
1. DETAIL TO BE USED WHERE STORM SEWER SIZE IS 24" DIA OR LESS.
2. FOR SEWER GREATER 24" DIA USE TYPE "C" MANHOLE.

NOTES TO SPECIFIER:
1. WALL TO BE 8" CONCRETE.
2. NOT TO BE USED IN STREET. FOR AREA BETWEEN CURB AND PROPERTY LINE ONLY.

STORM SEWER
JUNCTION BOX WITH LID OR GRATE TOP FOR MAXIMUM OF 24" DIAMETER STORM SEWE4R5
NTS

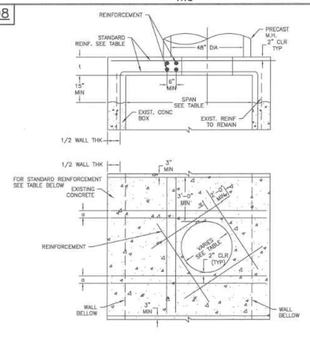
02081–07



NOTES:
1. HOLE CUT IN WALL OF 120° MRC TO BE NEAT AND DONE IN WORKMAN LIKE MANNER.
2. THE STEEL COLLAR TO EXIST LONGITUDINAL AND ELLIPTICAL STEEL WHERE APPLICABLE.
3. CONCRETE COLLAR SHALL BE CONSTRUCTED AT EACH CONNECTION OF A PROPOSED RCP TO AN EXISTING MRC. HOLE CUT IN WALL OF EXISTING 96" MRC TO BE NEAT AND DONE IN WORKMAN LIKE MANNER.

LATERAL CONNECTION TO EXISTING MONOLITHIC REINFORCED CONCRETE STORM SEWER
NTS

02081–08



PROPOSED MANHOLE ON EXISTING BOX STORM SEWER
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02081–05 THROUGH 08

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
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AMANI ENGINEERING, INC.
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HOUSTON, TEXAS 77074
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TBPE REG NO: F–4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER DETAILS – SHEET 1 OF 5

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **356** OF 391	

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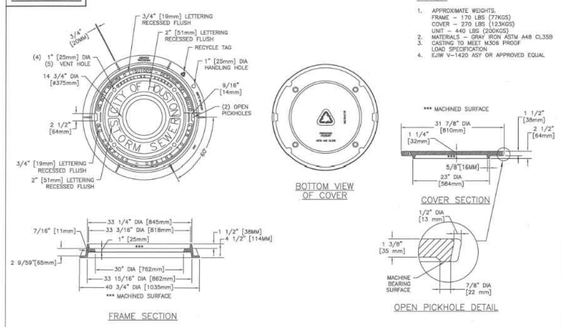
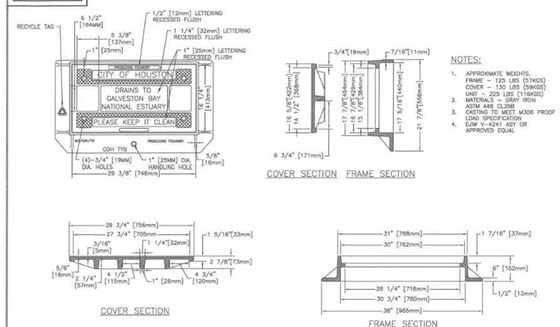
02084–02



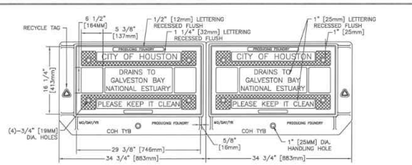
STORM SEWER MANHOLE FRAME AND COVER
NTS

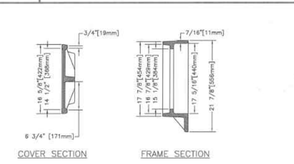
02084–03



STORM SEWER TYPE "B" INLET ASSEMBLY
NTS

02084–04





NOTES:
1. APPROXIMATE WEIGHTS: FRAME – 125 LBS (57KGS) COVER – 120 LBS (55KGS) I BEAM – 107 LBS (49KGS) UNIT – 597 LBS (271KGS)
2. MATERIALS – GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V-4243 ASY OR APPROVED EQUAL

STORM SEWER TYPE "BB" INLET DOUBLE ASSEMBLY
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084–02 THROUGH 04

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR

EFFECTIVE DATE: JUL–01–2019
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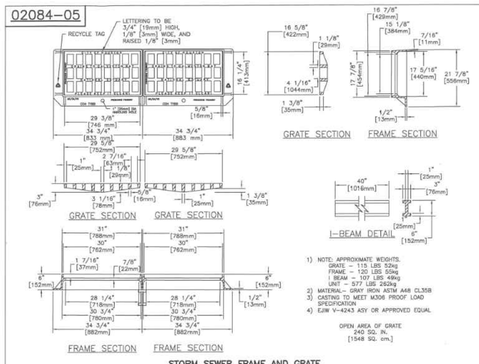
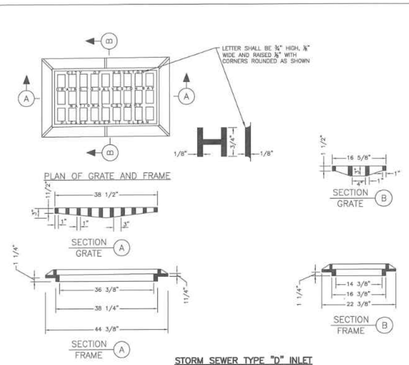
02084–05



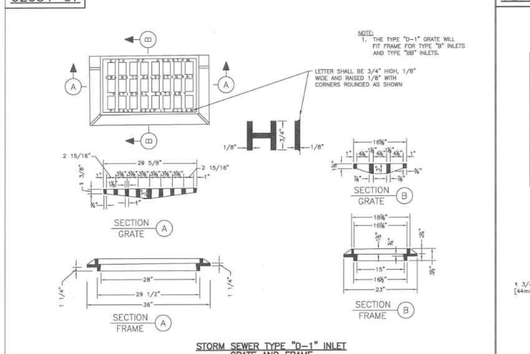
STORM SEWER FRAME AND GRATE FOR TYPE B–B INLET DOUBLE ASSEMBLY
NTS

02084–06



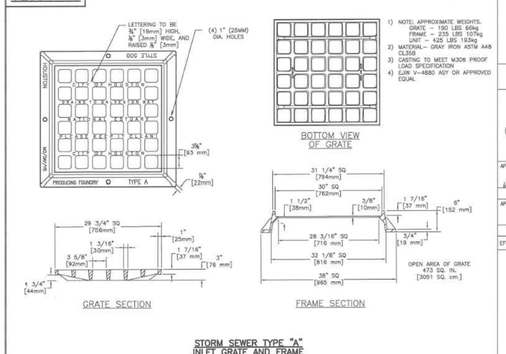
STORM SEWER TYPE "D" INLET GRATE AND FRAME
NTS

02084–07



STORM SEWER TYPE "D–1" INLET GRATE AND FRAME
NTS

02084–08



STORM SEWER TYPE "A" INLET GRATE AND FRAME
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084–05 THROUGH 08

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR

EFFECTIVE DATE: JUL–01–2019
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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER DETAILS – SHEET 2 OF 5

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **357** OF 391

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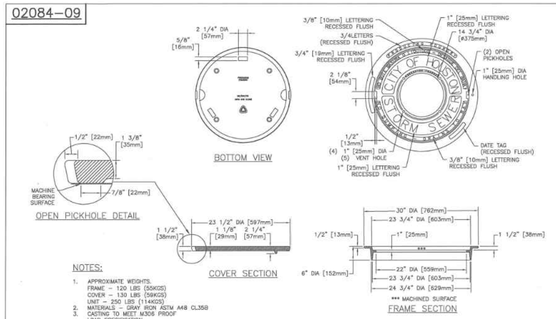
02084–09

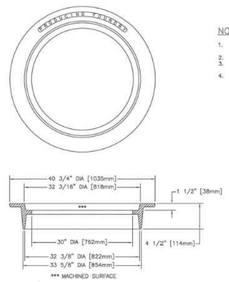


NOTES:

1. APPROXIMATE WEIGHTS.
   FRAME – 120 LBS (55KGS)
   COVER – 130 LBS (56KGS)
   UNIT – 250 LBS (114KGS)
2. MATERIAL: CAST IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V–1814 ASY OR APPROVED EQUAL

STORM SEWER TYPE "C–1, C–2, C–2A" AND "H–2" INLET FRAME AND COVER
NTS

02084–10

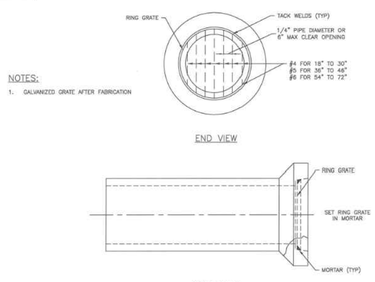


NOTES:

1. APPROXIMATE WEIGHTS.
   FRAME – 190 LBS (86KGS)
2. MATERIALS – GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V–1818 ASY OR APPROVED EQUAL

32" INVERTED MANHOLE FRAME
NTS

02084–11

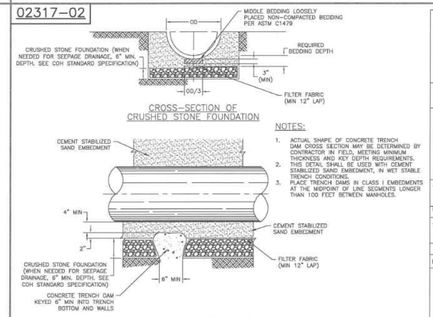


NOTES:

1. GALVANIZED GRATE AFTER FABRICATION

STORM SEWER
RING GRATE FOR OPEN END OF 18" TO 72" RCP STUBS TO DITCH
NTS

02317–02



NOTES:

1. ACTUAL SHAPE OF CONCRETE TRENCH DAM CROSS SECTION MAY BE DETERMINED BY CONTRACTOR IN FIELD, MEETING MINIMUM THICKNESS AND KEY DEPTH REQUIREMENTS.
2. THIS DETAIL SHALL BE USED WITH CEMENT STABILIZED SAND EMBEDMENT, IN WET STABLE TRENCH CONDITIONS.
3. PLACE TRENCH DAMS IN CLASS I EMBEDMENTS AT THE MIDPOINT OF LINE SEGMENTS LONGER THAN 100 FEET BETWEEN MANHOLES.

SANITARY OR STORM SEWER CRUSHED STONE FOUNDATION FOR WET STABLE TRENCH
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084–09 THROUGH 11
AND 02317–02

APPROVED BY: CITY ENGINEER — APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
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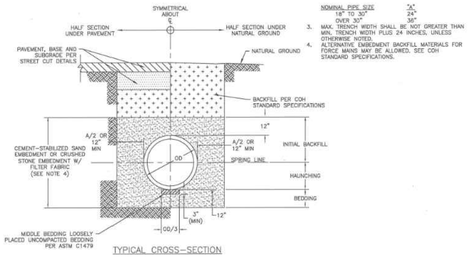
SHEET NO.

02317–03



NOTES:

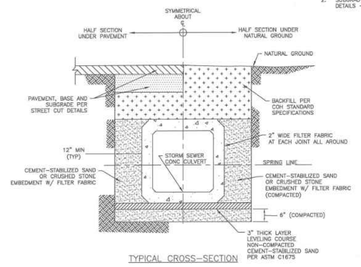
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD SPECIFICATION OR WHERE REQUIREMENTS IN OTHER CONDITIONS.
2. MIN. TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	30"

3. MAX. TRENCH WIDTH SHALL BE NOT GREATER THAN MIN. TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE APPROVED.
4. ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED, SEE COH STANDARD SPECIFICATIONS.

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317–05

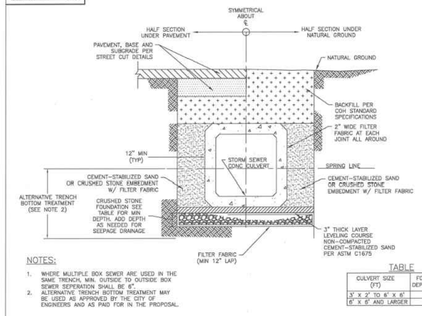


NOTES:

1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN. OUTSIDE TO OUTSIDE BOX SEWER SEPERATION SHALL BE 6".
2. SUBGRADE AND PAVEMENT FOR STREET CUT DETAILS – 02951.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317–06



NOTES:

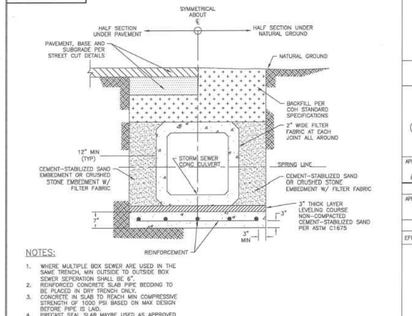
1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN. OUTSIDE TO OUTSIDE BOX SEWER SEPERATION SHALL BE 6".
2. ALTERNATIVE TRENCH BOTTOM TREATMENT MAY BE USED AS APPROVED BY THE CITY OF ENGINEERS AND AS PAID FOR IN THE PROPOSAL.

TABLE

CULVERT SIZE (IT)	FOUNDATION DEPTH(INCHES)
3' X 2' TO 8' X 6'	12
6' X 6' AND LARGER	18

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR WET STABLE TRENCH
NTS

02317–07



NOTES:

1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEWER SEPERATION SHALL BE 6".
2. REINFORCED CONCRETE SLAB PIPE BEDDING TO BE PLACED IN DRY TRENCH ONLY.
3. CONCRETE IN SLAB TO REACH MIN COMPRESSIVE STRENGTH OF 1000 PSI BASED ON MAX DESIGN LOAD AND FILL HEIGHT.
4. PRECAST SEAL SLAB MAYBE USED AS APPROVED BY CITY ENGINEER.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL WITH SEAL SLAB
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02317–03 THROUGH 07

APPROVED BY: CITY ENGINEER — APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
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STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER DETAILS – SHEET 3 OF 5

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **358** OF 391

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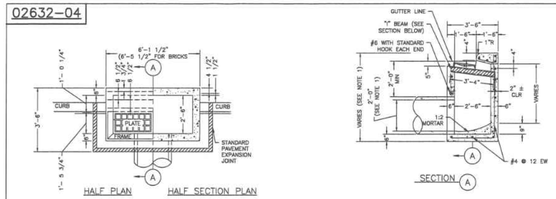
02632–04



GENERAL NOTES:

USE STANDARD CAST IRON FRAME & PLATES. LEAD WALL LEADS INLET AT LOCATION AND GRADE REQUIRED.

NOTES:

1. DIMENSION VARIES BASED ON PIPE DIAMETER AND WALL THICKNESS.
2. CENTER REINFORCING IN SLAB AND WALLS. CENTER STEEL BEAM ON INLET AND CAST INTO WALLS AS SHOWN.
3. WHEN TOP OF CURB TO FLOWLINE IS GREATER THAN 8 FEET USE TYPE "C" INLET.

ACCEPTABLE ALTERNATE STEEL BEAM SIZES: S6X17.5 W6X16 (GALVANIZED)

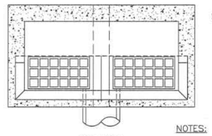
CURB BEAM BAR LIST:

NO	SIZE	LENGTH	SHAPE	LOC
4	#4	5'–10"	ST	HOR
7	#4	5'–10"	ST	VERT
7	#3	1'–6"	BT	

STORM SEWER TYPE "B–B" INLET
NTS

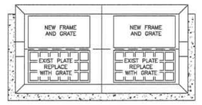
02632–05

STEP 1: EXIST TYPE "B" INLET



TOP VIEW

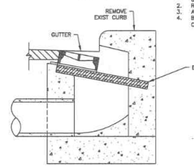
STEP 2:



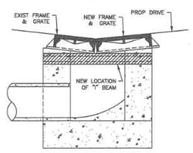
TOP VIEW

NOTES:

1. AFTER REMOVING EXIST CURB, RAISE EXIST FRAME TO GUTTER GRADE.
2. REPLACE EXIST PLATE WITH A GRATE.
3. ADD NEW FRAME AND GRATE NEXT TO EXIST FRAME.
4. BACKFILL INLET TO A POINT ONE FOOT BEHIND THE CURB WITH 1 SACK/TON CEMENT STABILIZED SAND.

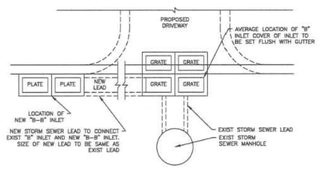


SIDE VIEW



SIDE VIEW

STEP 3: CONSTRUCT NEW TYPE "B–B" INLET ON CURB RETURN OF PROPOSED DRIVEWAY



STORM SEWER TYPE "B" INLET RELOCATION
NTS

FIRM INFORMATION | ENGINEER'S SEAL

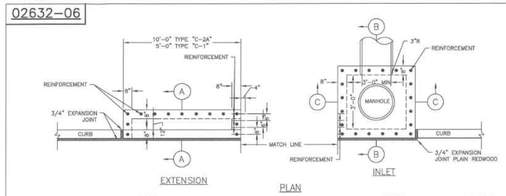
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02632–04 THROUGH 05

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

02632–06

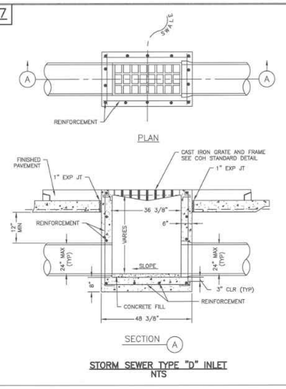


NOTES:

1. FOR TYPE "C–2A" INLETS PROVIDE A CENTER 8"X8" COLUMNS IN THE CURB LINE BETWEEN ALL EXTENSIONS.
2. WALLS TO BE 6" IF BUILT WITH REINFORCED CONCRETE.

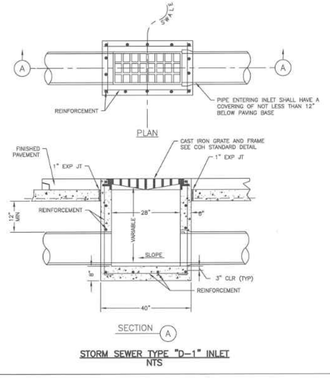
STORM SEWER TYPE "C–1", "C–2" AND "C–2A" INLET
NTS

02632–07



STORM SEWER TYPE "D" INLET
NTS

02632–08



STORM SEWER TYPE "D–1" INLET
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02632–06 THROUGH 08

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER DETAILS – SHEET 4 OF 5

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **359** OF 391

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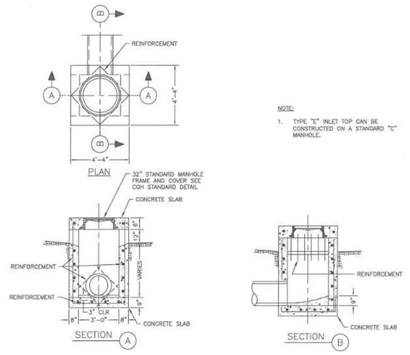
02632–09



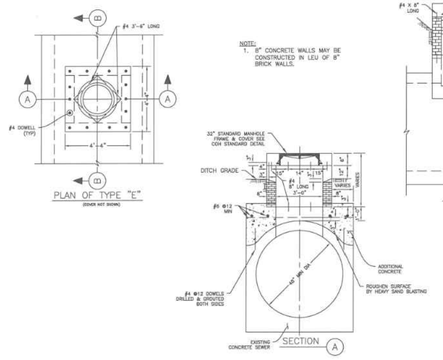
NOTE:

1. TYPE "E" INLET TOP CAN BE CONSTRUCTED ON A STANDARD "C" MANHOLE.

STORM SEWER TYPE "E" INLET
NTS

02632–10

COH IS PHASING OUT BRICK. NEW DETAILS TO BE POSTED END OF 2019



STORM SEWER TYPE "E" INLET ON EXIST MONOLITHIC CONC SEWERS OF 48" DIA & GREATER
NTS

FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02632–09
AND 02632–10

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL–01–2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

OTHON

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TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

**STORM SEWER DETAILS –
SHEET 5 OF 5**

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **360** OF 391

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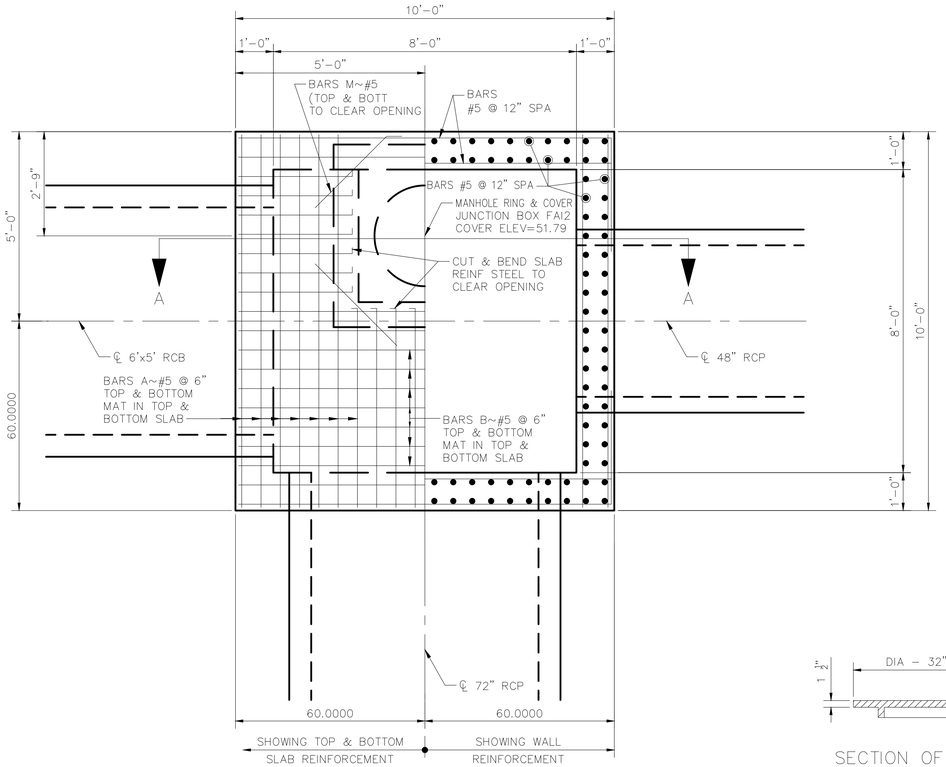
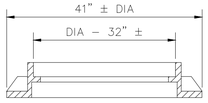
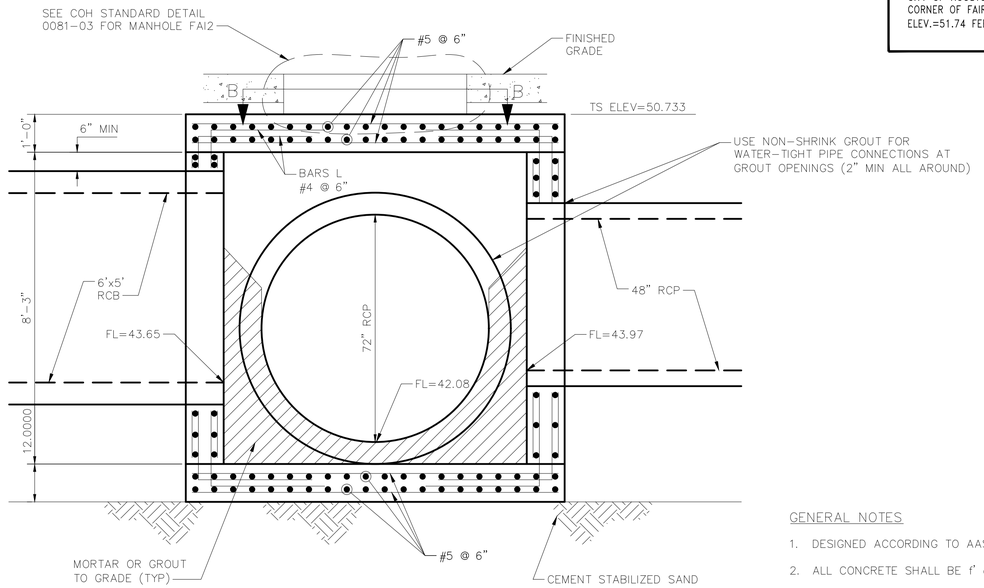


JUNCTION BOX FAI2
PLAN VIEW

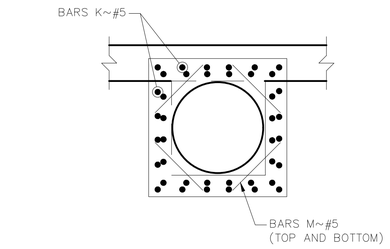
SECTION OF COVER



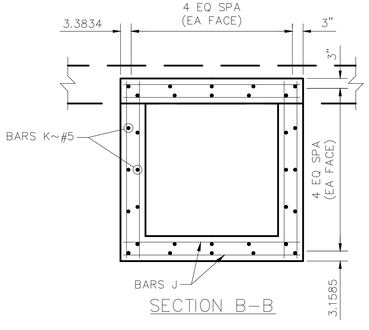
RING AND COVER DETAILS
APPROXIMATE WEIGHT = 440 LB



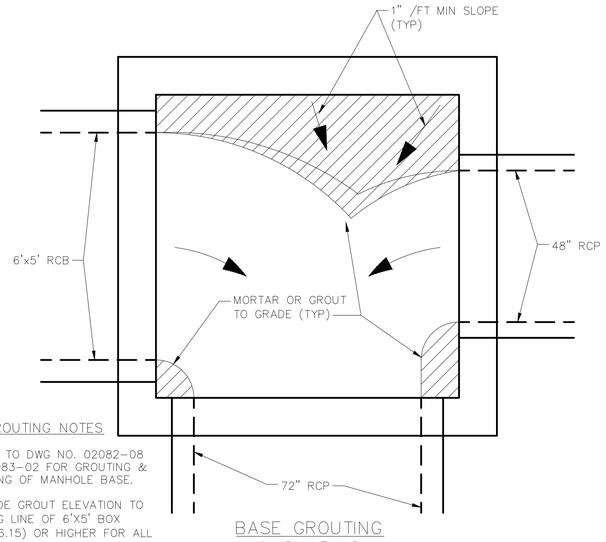
SECTION A–A



TOP OF MANHOLE



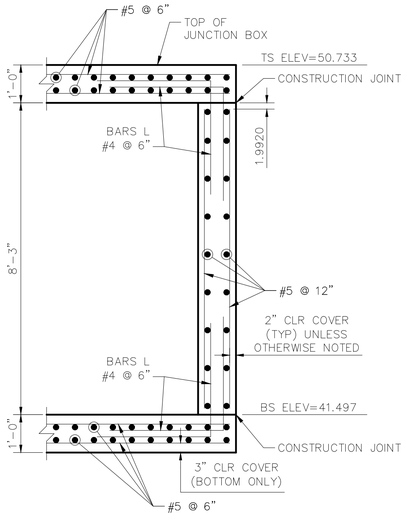
SECTION B–B



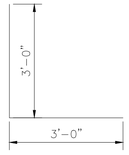
BASE GROUTING NOTES

1. REFER TO DWG NO. 02082–08 & 02083–02 FOR GROUTING & SHAPING OF MANHOLE BASE.
2. PROVIDE GROUT ELEVATION TO SPRING LINE OF 6'X5' BOX (EL=46.15) OR HIGHER FOR ALL PIPES.

BASE GROUTING
& SHAPING



TYPICAL
REINFORCING DETAIL



BARS L #4



BARS K #5

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

GENERAL NOTES

1. DESIGNED ACCORDING TO AASHTO LRFD SPECIFICATIONS.
2. ALL CONCRETE SHALL BE f' c=3500 PSI MIN.
3. ALL REINFORCING STEEL SHALL BE GRADE 60.
4. THE USE OF PERMANENT FORMS IS NOT ALLOWED.
5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL AND BLOCKOUTS, PIPES, OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR.
6. SEE DRAINAGE PLAN & PROFILE FOR LOCATION OF JUNCTION BOX.
7. PROVIDE EXTRA 2~#4 BARS FOR EACH RCB/RCP OPENING.
8. PROVIDE MORTAR OR GROUT CONFORMING TO TXDOT DMS–4675 "CEMENTITIOUS GROUTS AND MORTARS FOR MISCELLANEOUS APPLICATIONS".
9. TOTAL CONCRETE REQUIRED – 12.8 CY.

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SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

STORM SEWER
JUNCTION BOX DETAILS

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
N.T.S.	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **361** OF 391	

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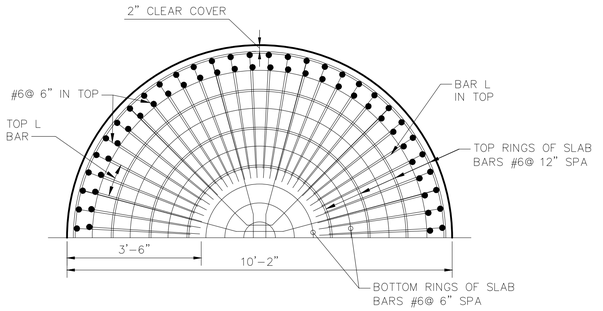
BENCHMARK:

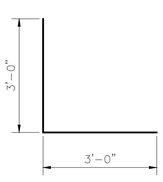
CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



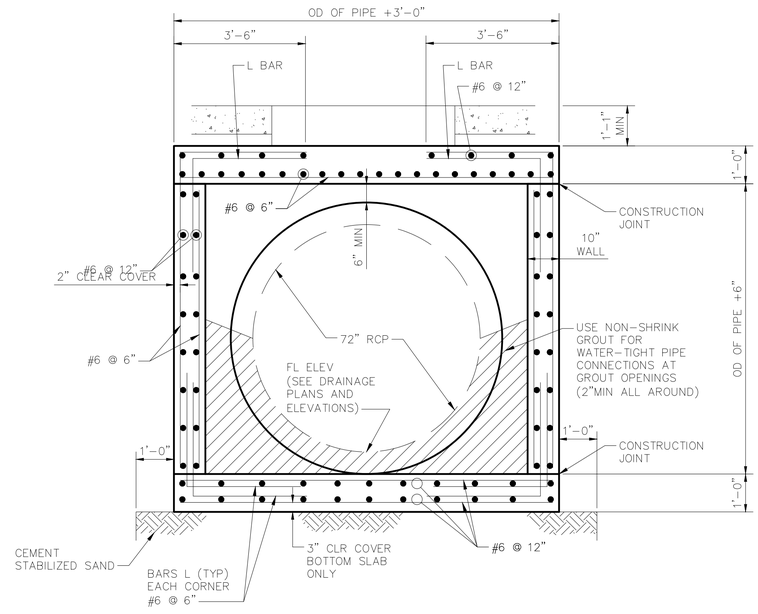
HALF PLAN OF TOP SLAB

GENERAL NOTES

1. DESIGNED TO THE MINIMUM FILL HEIGHT AS 1'-1".
2. ALL CONCRETE SHALL BE f'c=4000 PSI MIN.
3. ALL REINFORCING STEEL SHALL BE GRADE 60.
4. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL AND BLOCKOUTS, PIPES, OR OTHER REINFORCING STEEL, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR.
5. SEE DRAINAGE PLAN & PROFILE FOR LOCATION OF MANHOLE.
6. PROVIDE MORTAR OR GROUT CONFORMING TO TXDOT DMS-4675 "CEMENTITIOUS GROUTS AND MORTARS FOR MISCELLANEOUS APPLICATIONS".
7. REFER TO DRAINAGE PLANS FOR ELEVATIONS.
8. DESIGNED IN ACCORDANCE WITH ACI 350-01, ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES.



BARS L #5



SECTION THROUGH CENTERLINE

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED ENGINEER
07/29/2026

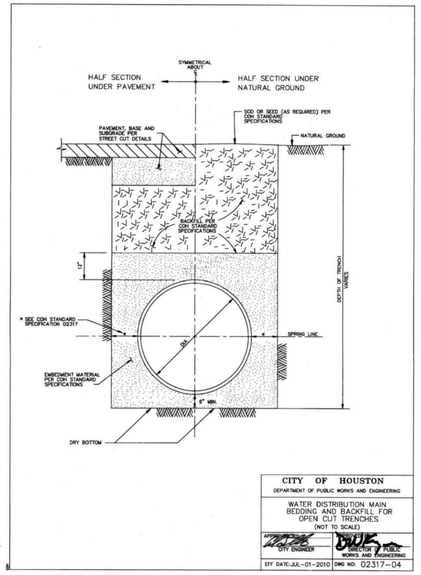
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

STORM SEWER MANHOLE DETAILS

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
N.T.S.
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **362** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\NSSI JUNCTION BOX.dwgMANHOLE Jun 17 , 2026 - 11:13AM Jgarza

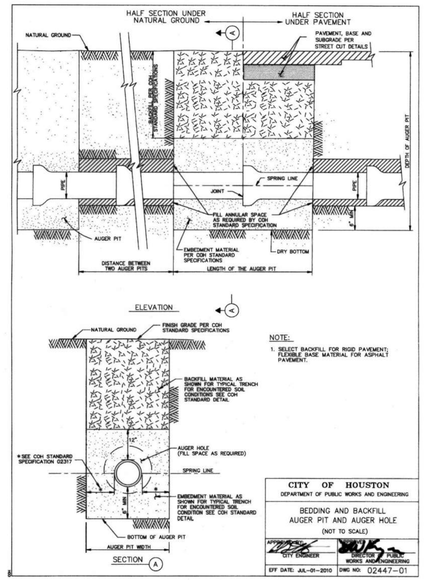


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER DISTRIBUTION MAIN
BEDDING AND BACKFILL FOR
OPEN CUT TRENCHES
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO. 02317-04



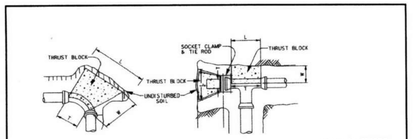
NOTE:
1. SELECT BACKFILL FOR RIGID PAVEMENT; FLEXIBLE BASE MATERIAL FOR ASPHALT PAVEMENT.

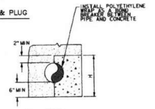
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

BEDDING AND BACKFILL
AUGER PIT AND AUGER HOLE
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO. 02447-01





PIPE
CROSS SECTION

MINIMUM BLOCKING DIMENSION IN INCHES

PIPE SIZE	90° BEND			45° BEND			TEE/PLUG		
	W	H	L	T	W	H	L	T	W	H	L	T
4"	6	12	14	10	6	8	11	8	6	10	12	12
6"	8	14	26	12	8	14	14	12	8	14	19	19
8"	10	16	40	16	10	18	20	16	10	18	26	26
10"	12	24	42	16	12	22	29	18	12	24	34	30
12"	14	36	60	30	14	26	50	22	14	26	40	40

CORRECTION FACTORS

SOIL TYPE	SOIL BEARING STRENGTH S_b (lb/ft²)	MULTIPLY "L" AND "H" BY
SOFT CLAY	1000	1.73
SILT	1500	1.41
SANDY SILT	3000	1.00
SAND	4000	0.87
SANDY CLAY	6000	0.71
HARD CLAY	9000	0.58

NOTES:
1. DEPTH "H" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE.
2. BLOCKING MUST BE PLACED AGAINST UNDISTURBED EARTH. WHERE THIS IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.
3. PROVIDE CONCRETE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 03315 - CONCRETE FOR UTILITY CONSTRUCTION.
4. BLOCKING DIMENSIONS SHOWN ARE BASED ON 3000 PSI SOIL BEARING STRENGTH AND 125 PSI INTERNAL WATER PRESSURE. FOR OTHER SOIL CONDITIONS, MULTIPLY DIMENSIONS "L" AND "H" BY THE APPROPRIATE CORRECTION FACTOR.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

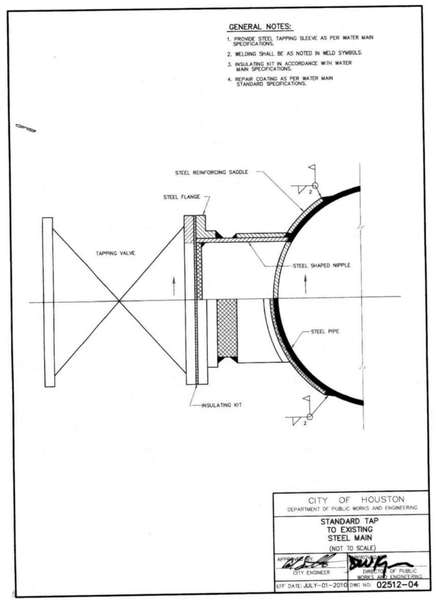
THRUST BLOCK DETAIL
FOR WATER LINES
(4-INCH TO 12 INCH)
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO. 02511-02

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

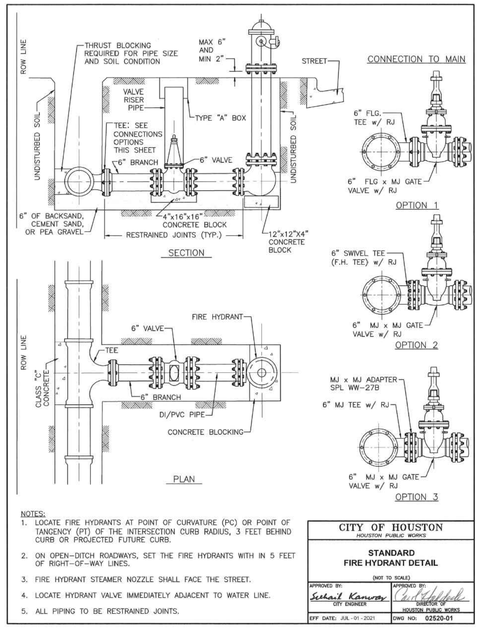


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD TAP
TO EXISTING
STEEL MAIN
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO. 02512-04



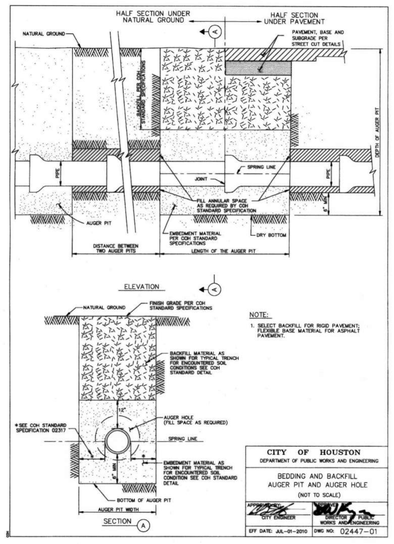
NOTES:
1. LOCATE FIRE HYDRANTS AT POINT OF CURVATURE (PC) OR POINT OF TANGENCY (PT) OF THE INTERSECTION CURB RADIUS, 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
2. ON OPEN-DITCH ROADWAYS, SET THE FIRE HYDRANTS WITH IN 5 FEET OF RIGHT-OF-WAY LINES.
3. FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
4. LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.
5. ALL PIPING TO BE RESTRAINED JOINTS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STANDARD
FIRE HYDRANT DETAIL
(NOT TO SCALE)

APPROVED BY: Sehail Kanwar, CITY ENGINEER — APPROVED BY: DIRECTOR, HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2021 DWG NO. 02520-01



NOTE:
1. SELECT BACKFILL FOR RIGID PAVEMENT; FLEXIBLE BASE MATERIAL FOR ASPHALT PAVEMENT.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

BEDDING AND BACKFILL
AUGER PIT AND AUGER HOLE
(NOT TO SCALE)

APPROVED: CITY ENGINEER — DIRECTOR, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO. 02447-01

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

**WATER LINE DETAILS –
SHEET 1 OF 3**

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **363** OF 391	

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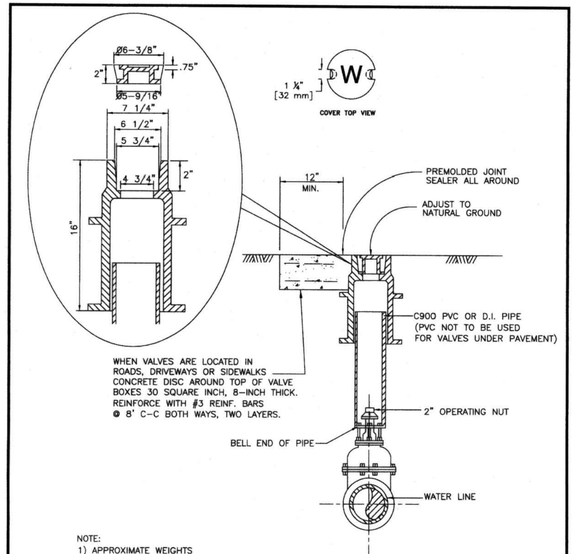


NOTE:
1) APPROXIMATE WEIGHTS
FRAME – 46 LBS
COVER – 10 LBS
2) MATERIAL – GRAY IRON ASTM A48 CL35B

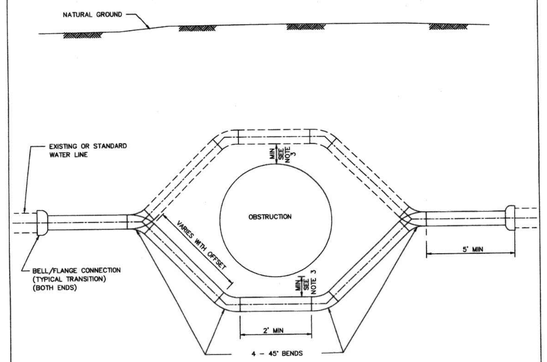
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

VALVE BOX DETAIL

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF. DATE: JULY 01, 2010	DWG. NO: 02085-03

NOTE:
1. MATERIALS AND COATINGS TO BE IN ACCORDANCE WITH WATER LINE STANDARD SPECIFICATIONS.
2. RESTRAIN EXISTING PIPING BEYOND STEEL SECTION AS REQUIRED TO PREVENT MOVEMENT.
3. AS PER DESIGN GUIDELINE.



PIPE OFFSET ALTERNATES

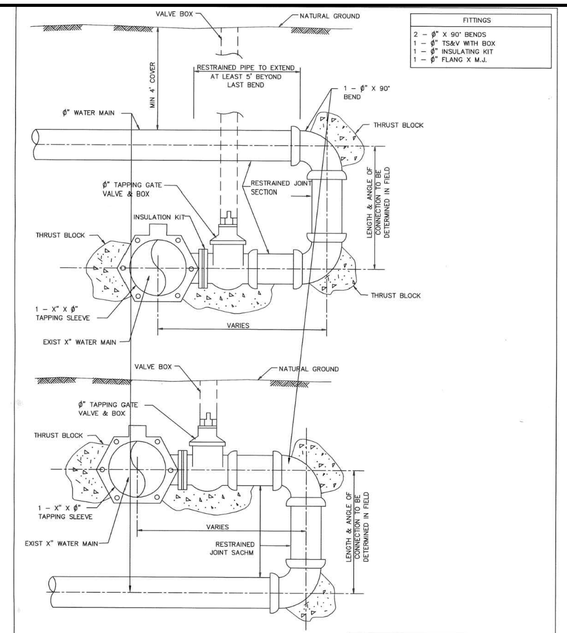
1. DUCTILE IRON PIPE PRESSURE 250 PSI WITH APPROVED RESTRAINED JOINTS.
2. PVC PIPE WITH INTEGRAL RESTRAINED JOINT SYSTEM, OR DUCTILE – IRON RESTRINED JOINT FITTINGS, EPOXY LINED AND COATED. USE 250 PSI AWWA C900 DR 14 FOR PVC RESTRAINED JOINTS.
3. PVC NOT ALLOWED FOR GREATER THAN 20 FT OF COVER OR FOR DIAMETER LARGER THAN 20 IN.
4. USE ONLY DUCTILE IRON AND PVC PRODUCTS LISTED ON OCE DIVISION APPROVED PRODUCTS LIST AND IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TYPICAL STEEL PIPE OFFSET SECTION FOR WATER LINES

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02511-01



FITTINGS
2 – 6" X 90° BENDS
1 – 6" TS&V WITH BOX
1 – 6" INSULATING KIT
1 – 6" FLANG X M.J.

GENERAL NOTES:

1. X" AND 6" DENOTE RUN AND BRANCH LINE SIZES RESPECTIVELY.
2. 90° BENDS ARE TO BE ROLLED TO PROVIDE CLEARANCE FOR VALVE BOX.
3. WATER MAIN ASSEMBLY FOR BACK TAP SAME FOR PROPOSED WATER MAIN UNDER EXISTING MAIN.
4. PROVIDE RESTRAINED JOINT PIPE AS SHOWN.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

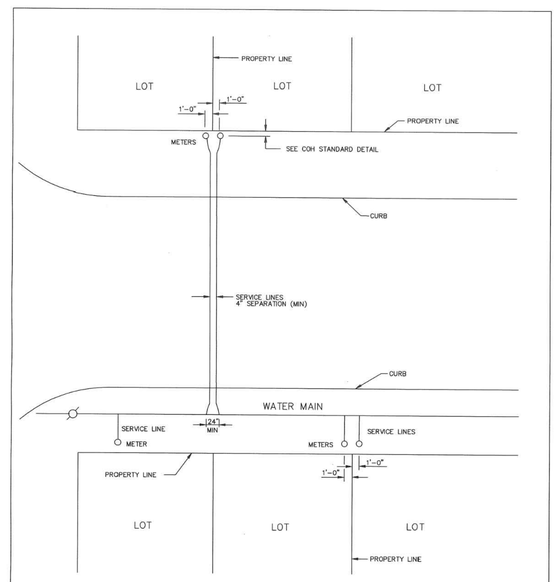
BACK TAP ON EXISTING LINE

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02512-03

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)



GENERAL NOTES:

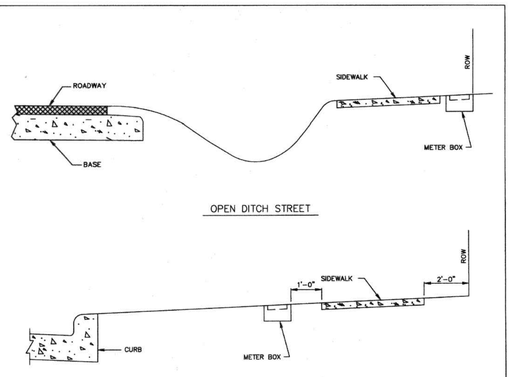
1. TWO SERVICE LINES MAY BE INSTALLED IN SAME TRENCH PROVIDING 4" CLEARANCE IS MAINTAINED.
2. ONE METER PER SERVICE LINE

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TYPICAL 3/4" THROUGH 2" SERVICE ARRANGEMENTS

(NOT TO SCALE)

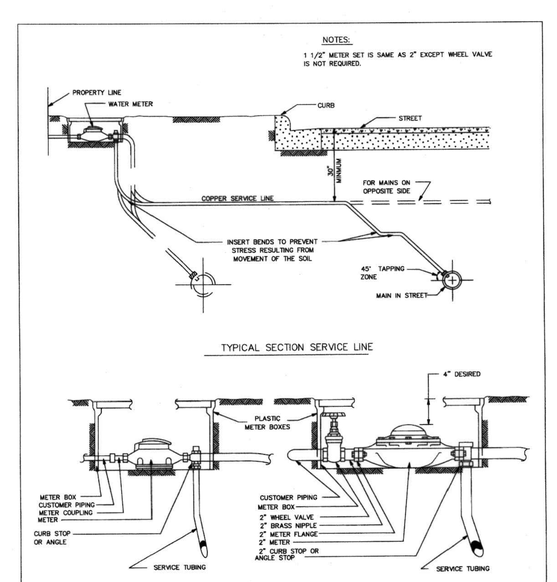
APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02512-01



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

LOCATION OF WATER METER BOX FOR 2" DIAMETER AND LESS

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02085-02



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

TYPICAL METER SETTINGS

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER	APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 02526-01

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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WATER LINE DETAILS – SHEET 2 OF 3

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **364** OF 391

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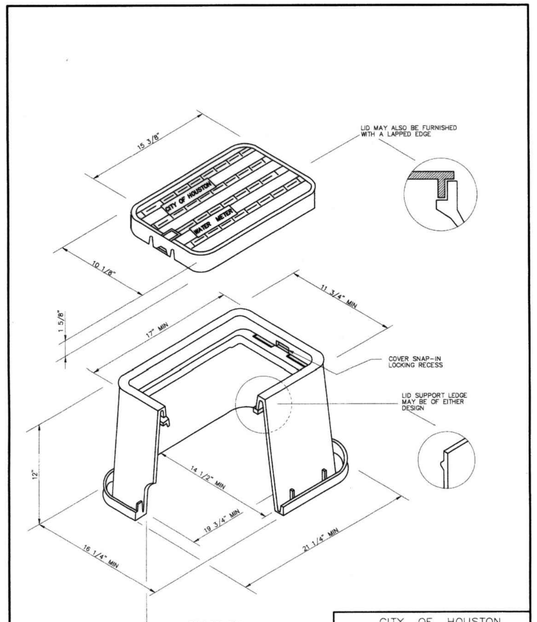
BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION.
ELEV.=51.74 FEET (NAVD88, GEO12A)



NOTE

1. LID MUST BE ABLE TO ACCEPT THE CITY'S AMR TRANSMITTING ENDPOINT.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD PLASTIC METER BOX FOR ⅝" AND 1" METERS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR, PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010 | DWG NO: 02085-01

PIPE TAPPING SCHEDULE				
WATER MAIN TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" ASBESTOS (EXISTING) CEMENT	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" AND UP CAST IRON OR DUCTILE IRON	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP ASBESTOS (EXISTING) CEMENT	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS – DUAL STRAP SADDLES
WBSS – WIDE BAND STRAP SADDLES
DWBSS – DUAL WIDE BAND STRAP SADDLES



SERVICE TAPS TO BE MADE IN THIS ZONE EXCEPT FOR PVC FASTTAP

BLOW-OFF & CHLORINATION TAPS ARE MADE IN VERTICAL POSITION

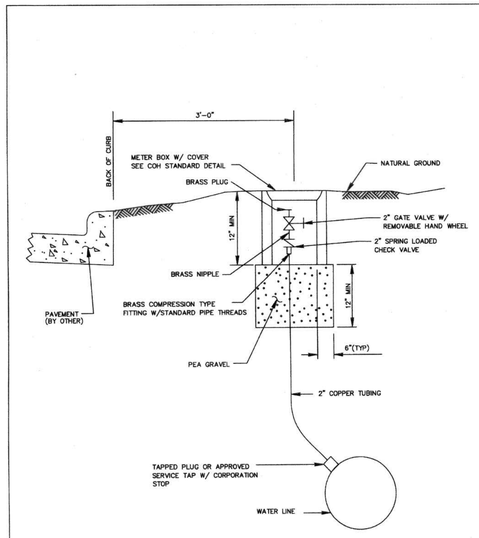


WIDE BAND SINGLE SADDLE OR DUAL SADDLES

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SERVICE TAPS
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010 | DWG NO: 02512-02



GENERAL NOTES:

1. PLACE GATE VALVE VERTICAL TO GROUND WITH END OF BRASS PLUG 3 INCHES FROM SURFACE
2. PLACE METER BOX CENTER AROUND GATE VALVE BOX WITH LONG SIDE PARALLEL TO VALVE.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

PERMANENT BLOW-OFF-DETAIL
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER | APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE:JULY-01-2010 | DWG NO: 02524-01

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TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

WATER LINE DETAILS – SHEET 3 OF 3

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **365** OF 391

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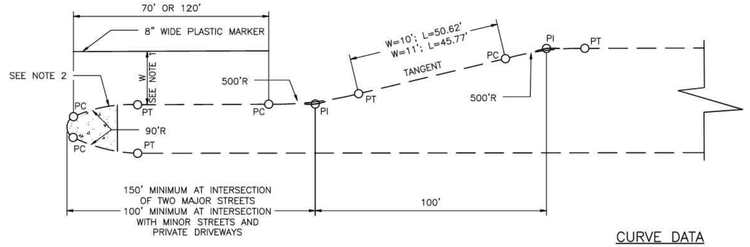


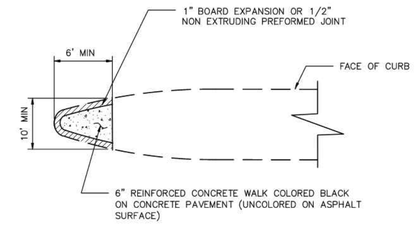
DETAIL OF LEFT TURN LANE

CURVE DATA

W=10' R=500' Δ = 5°42'38.14" L = 49.83' T=24.94'	W=11' R=500' Δ = 6°16'38.27" L = 54.78' T=27.42'

NOTES:

1. 10 FT FOR 80 FT ROW; 11 FT FOR 100 FT ROW.
2. FOR MEDIANS WITH BULLET NOSE CONFIGURATION, PAINT CURB WITH YELLOW REFLECTORIZED PAINT AROUND THE ESPLANADE NOSE TO THE PT OF THE 90 FT R. FOR MEDIANS WITHOUT BULLET NOSE CONFIGURATION, PAINT CURB FROM PC TO PT AND 30 FT BACK OF PC/PT.



ESPLANADE NOSE

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

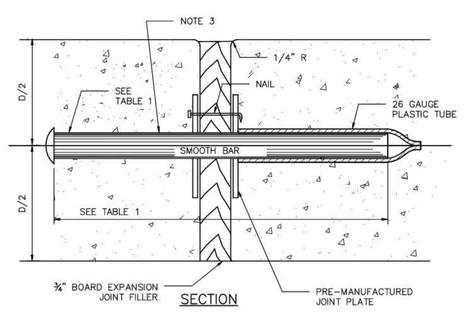
ESPLANADE NOSE AND LEFT TURN DETAILS

(SCALE: NOT TO SCALE)

APPROVED BY:

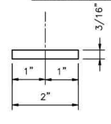
DocuSigned by: Suhail Kanwar — CITY ENGINEER
DocuSigned by: KHANG NGUYEN — CITY TRAFFIC ENGINEER
DocuSigned by: Carol Haddock — DIRECTOR OF HPW

EFF DATE: NOV-27-2023 | DWG NO: 02772-01



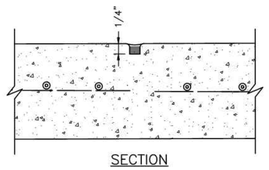
SECTION

DOWEL TYPE EXPANSION JOINT



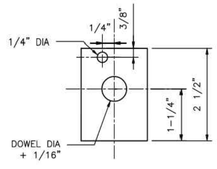
PLAN VIEW

JOINT PLATE



SECTION

CONTROL JOINT

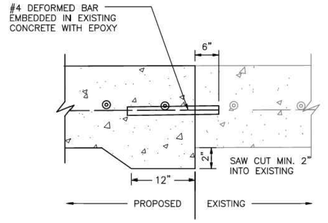


ELEVATION VIEW

JOINT PLATE

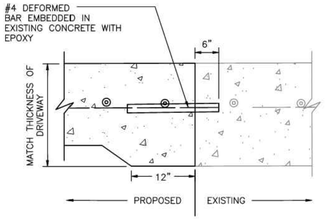
TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS		
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
4 1/2	1/2	18	12
5	1/2	18	12
6	3/4	18	12
7	1	18	12



SECTION

SIDEWALK TO EXISTING SIDEWALK



SECTION

SIDEWALK TO EXISTING DRIVEWAY

NOTES:

1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 3 FEET MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 5 FEET.
3. CENTER DOWEL HORIZONTALLY ON JOINT.
4. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN A 2 INCH MINIMUM COVER.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

SIDEWALK EXPANSION AND CONSTRUCTION JOINT DETAILS

(SCALE: NOT TO SCALE)

APPROVED BY:

DocuSigned by: Suhail Kanwar — CITY ENGINEER
DocuSigned by: KHANG NGUYEN — CITY TRAFFIC ENGINEER
DocuSigned by: Carol Haddock — DIRECTOR OF HPW

EFF DATE: NOV-27-2023 | DWG NO: 02752-02

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AMANI ENGINEERING, INC.
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HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 1 OF 17

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **366** OF 391

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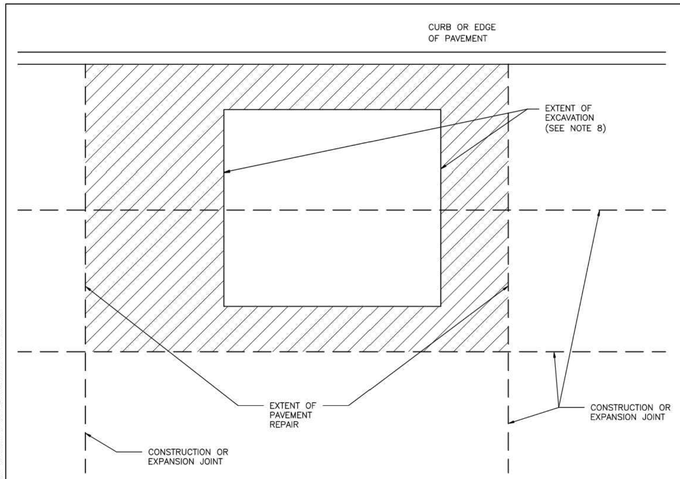
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORING THEIR USE ASSUMES RESPONSIBILITY FOR APPROPRIATE DESIGN AND SAFETY FEATURES. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR ADVERSE RESULTS OR DAMAGES RESULTING FROM ITS USE.



NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. REPLACE ENTIRE PANEL WIDTH AND LENGTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL WITHIN EXISTING PAVEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02951–PAVEMENT REPAIR AND RESTORATION) IF EXISTING REINFORCING IS BROKEN OFF.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
6. SPECIALTY PAVEMENTS (IE: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
7. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY OF HOUSTON STANDARD SPECIFICATIONS 02764–RAISED PAVEMENT MARKERS AND 02767–THERMOPLASTIC PAVEMENT MARKINGS.
8. EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02951–04 PAVEMENT REPAIR DETAIL FOR STREET CUTS (FLEX–BASE PAVEMENT & CONCRETE PAVEMENT).

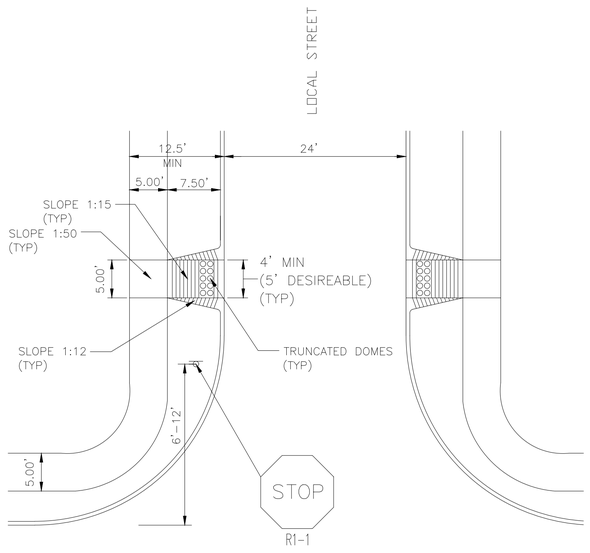
CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

STREET CUT FOR CONCRETE PAVEMENT REPLACEMENT/RESTORATION AGE OF PAVEMENT ≤ 5YRS
(SCALE: NOT TO SCALE)

APPROVED BY:

DocuSigned by: Sukul Kanwar — CITY ENGINEER
DocuSigned by: Hang Nguyen — CITY TRAFFIC ENGINEER
DocuSigned by: Carol Haddock — DIRECTOR OF HPW

EFF DATE: NOV–27–2023 | DWG NO: 02951–01



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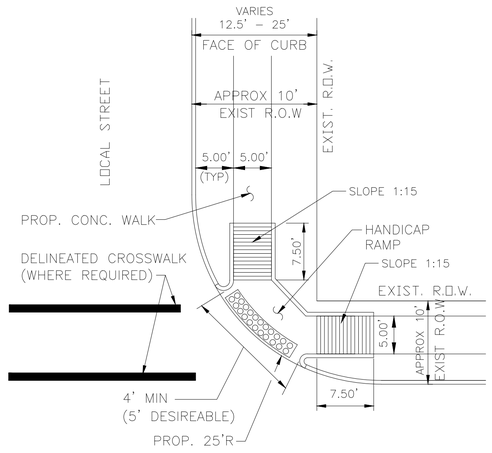

PROPOSED OTHON RAMP

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TEL: (713) 270–5700
TBPE REG NO: F–4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

**PAVEMENT DETAILS –
SHEET 2 OF 17**

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **367** OF 391

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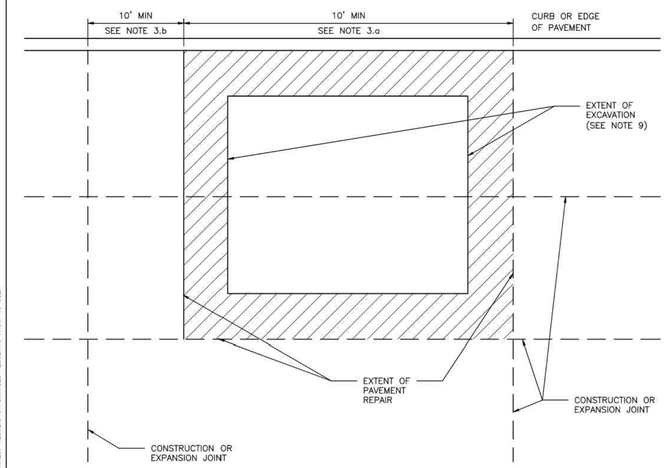

NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. WIDTH:
   REPLACE PANEL WIDTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. LENGTH:
   a. MINIMUM LENGTH OF PAVEMENT REPAIR ALONG TRAVEL WAY IS 10' FROM THE NEAREST JOINT.
   b. IF EXTENT OF PAVEMENT REPAIR IS LESS THAN 10' FROM EXISTING CONSTRUCTION OR EXPANSION JOINT, EXTEND PAVEMENT REPAIR TO EXISTING JOINT.
4. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF PANEL REPLACEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02951–PAVEMENT REPAIR AND RESTORATION) IF REINFORCING IS BROKEN OFF OR DOES NOT EXIST.
5. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
6. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
7. SPECIALTY PAVEMENTS (IE: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
8. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY OF HOUSTON STANDARD SPECIFICATIONS 02764–RAISED PAVEMENT MARKERS AND 02767–THERMOPLASTIC PAVEMENT MARKINGS.
9. EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02951–04 PAVEMENT REPAIR DETAIL FOR STREET CUTS (FLEX–BASE PAVEMENT & CONCRETE PAVEMENT).

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE ASSUMES RESPONSIBILITY FOR THEIR APPROPRIATENESS AND ACCEPTABILITY FOR A PARTICULAR PROJECT. ANY MODIFICATIONS MADE BY THE EOR SHALL BE CLEARLY IDENTIFIED AND SEALED. WHEN ACCEPTED, THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR ANY PROJECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

CITY OF HOUSTON HOUSTON PUBLIC WORKS STANDARD	
STREET CUT FOR CONCRETE PAVEMENT REPLACEMENT/RESTORATION AGE OF PAVEMENT > 5YRS (SCALE: NOT TO SCALE)	
APPROVED BY:	
DocuSigned by: Suhail Kanwar — CITY ENGINEER DocuSigned by: KHANG NGUYEN — CITY TRAFFIC ENGINEER	DocuSigned by: Carl Haddock — DIRECTOR OF HPW
EFF DATE: NOV–27–2023	DWG NO: 02951–02

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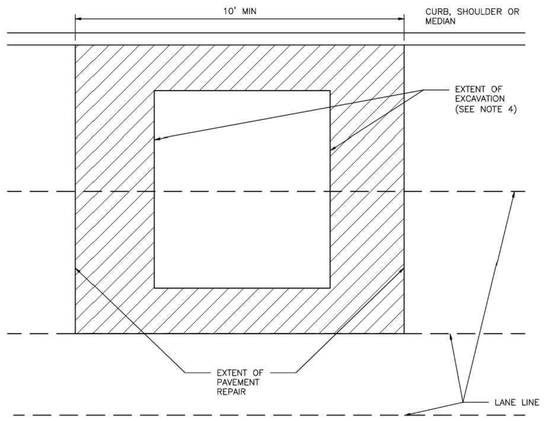

NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. FLEXIBLE BASE: REPLACE BASE TO SAME THICKNESS PLUS TWO INCHES (2") FOR EXTENT OF EXCAVATION. USE APPROVED BASE MATERIAL TYPE.*
3. SURFACE COURSE:
   3.1. WIDTH:
   SURFACE MILL AND OVERLAY FULL WIDTH OF LANE(S) TO NEAREST LANE DIVIDER BEYOND EDGE OF EXCAVATION.
   3.2. LENGTH:
   MINIMUM LENGTH OF SURFACE MILL ALONG TRAVEL WAY IS 10'.
   3.3. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY OF HOUSTON STANDARD SPECIFICATIONS 02764–RAISED PAVEMENT MARKERS AND 02767–THERMOPLASTIC PAVEMENT MARKINGS.
4. EXTENT OF EXCAVATION INCLUDES 18" OVER CUT AS SHOWN ON STANDARD DETAIL 02951–04 PAVEMENT REPAIR DETAIL FOR STREET CUTS (FLEX–BASE PAVEMENT AND CONCRETE PAVEMENT).
5. ADDITIONAL REQUIREMENTS FOR ASPHALT OVERLAY ON CONCRETE PAVEMENT:
   5.1. REPLACE CONCRETE FOR EXTENT OF EXCAVATION. REPLACE TO SAME THICKNESS PLUS TWO INCHES (2").
   5.2. WIDTH:
   5.2.1. IF EXCAVATION EXTENDS MORE THAN HALF OF A LANE, REPLACE ENTIRE LANE OF CONCRETE. OTHERWISE USE STANDARD DETAIL 02951–04 THROUGH 05.
   5.3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF CONCRETE REPLACEMENT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER CITY OF HOUSTON STANDARD SPECIFICATION SECTION 02951–PAVEMENT REPAIR AND RESTORATION.
   5.4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
   5.5. MAINTAIN CONCRETE EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

DISCLAIMER:
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CITY OF HOUSTON HOUSTON PUBLIC WORKS STANDARD	
STREET CUT FOR ASPHALT PAVEMENT REPLACEMENT/RESTORATION FOR PAVEMENT OF ALL AGES (SCALE: NOT TO SCALE)	
APPROVED BY:	
DocuSigned by: Suhail Kanwar — CITY ENGINEER DocuSigned by: KHANG NGUYEN — CITY TRAFFIC ENGINEER	DocuSigned by: Carl Haddock — DIRECTOR OF HPW
EFF DATE: NOV–27–2023	DWG NO: 02951–03

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AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 3 OF 17

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **368** OF 391	

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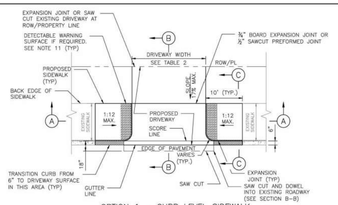
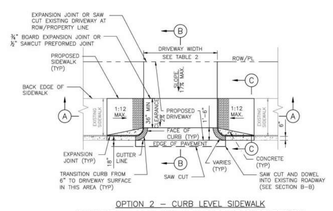
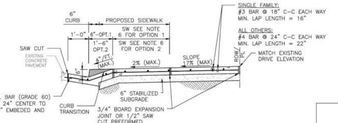


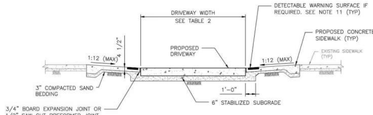
OPTION 1 – CURB LEVEL SIDEWALK
PLAN VIEW – DRIVEWAY WITHOUT CURB AT CURB RETURN



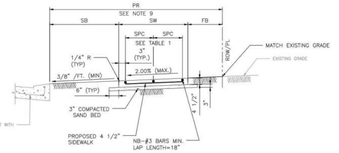
OPTION 2 – CURB LEVEL SIDEWALK
PLAN VIEW – DRIVEWAY WITH CURB AT CURB RETURN



SECTION B–B
TYPICAL DRIVEWAY SECTION THROUGH DRIVEWAY



SECTION A–A
PROPOSED SIDEWALK THROUGH DRIVEWAY



SECTION C–C
TYPICAL SIDEWALK SECTION

NOTES:

1. REPAIR, RECONSTRUCTION OR REPLACEMENT OF SIDEWALKS SHALL MEET PERMITTING REQUIREMENTS OF CODE OF ORDINANCES SECTION 40-552.
2. FOR REPAIR, RECONSTRUCTION, OR REPLACEMENT OF EXISTING SIDEWALKS:
   - 2.1. EXISTING SIDEWALKS LESS THAN OR EQUAL TO 20 FEET IN TOTAL LENGTH:
     - 2.1.1. THE PROPOSED SIDEWALK WIDTH WILL BE ALLOWED TO MATCH THE EXISTING SIDEWALK.
   - 2.2. EXISTING SIDEWALKS GREATER THAN 20 FEET IN TOTAL LENGTH:
     - 2.2.1. THE SIDEWALK WIDTH FOR THE ENTIRE PROPERTY WIDTH SHALL BE IMPROVED TO MEET WIDTH REQUIREMENTS ACCORDING TO THE LATEST INFRASTRUCTURE DESIGN MANUAL.
   - 2.3. 20 FOOT TOTAL LENGTH IS DEFINED AS:
     - 2.3.1. UP TO 10 FEET ON BOTH SIDES OF THE DRIVEWAY; OR
     - 2.3.2. UP TO 20 FEET WHEN SIDEWALK AFFECTED IS LOCATED ONLY ON ONE SIDE OF THE DRIVEWAY.
3. PROPOSED SIDEWALKS THAT DO NOT FALL WITHIN THE SCOPE DEFINED IN NOTE 2 SHALL BE DESIGNED ACCORDING TO ISM REQUIREMENTS AND CONSTRUCTED ACCORDING TO THE CONTRACT DRAWINGS.
4. DRIVEWAY WIDTH VARIES TO MATCH EXISTING DRIVE.
5. DRIVEWAY DETAIL TO PROVIDE FOR SIDEWALK TRANSITION FROM EXISTING BACK OF CURB TO PROPOSED DRIVEWAY EDGE.
6. DRIVEWAY WITH WIDTH >5' @ 2% CROSS SLOPE QUALIFIES AS PASSING SPACE. (SEE OPTION 1 AND OPTION 2 PLANS)
7. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
8. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.
9. REFER TO CONTRACT DRAWINGS FOR PEDESTRIAN REALM (PR), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.
10. DRIVEWAYS SHALL BE MINIMUM 6" THICK FOR SINGLE FAMILY AND DUPLEXES. DRIVEWAYS SHALL BE MINIMUM 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
11. DETECTABLE WARNING SURFACES:
    - 11.1. SIDEWALK SHALL HAVE A DETECTABLE WARNING SURFACE WHERE:
      - 11.1.1. SIDEWALK INTERSECTS TYPE C DRIVEWAYS (COMMERCIAL DRIVEWAYS) THAT ARE STOP, YIELD OR TRAFFIC SIGNAL CONTROLLED; OR
      - 11.1.2. SIDEWALK SLOPE IS GREATER THAN 1:20 AND INTERSECTS A TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY)
    - 11.2. DETECTABLE WARNING SURFACES ARE OPTIONAL WHERE SIDEWALKS INTERSECT TYPE A DRIVEWAYS (SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES) OR TYPE B DRIVEWAYS (SHARED ACCESS/SHARED DRIVEWAYS).
    - 11.3. REFER TO STANDARD DETAILS 02775-06 TO 02775-07 FOR DETECTABLE WARNING SURFACE STANDARDS.

TABLE 1

REINFORCING STEEL INFORMATION
FOR 4 ½ " THICK SIDEWALKS
EXPANSION JOINT SPACING = 40 FT
f'_c = 3,000 PSI AND f_y = 60,000 PSI
REFER TO CONTRACT DRAWINGS FOR SIDEWALKS WIDER THAN 6 FEET.

SIDEWALK THICKNESS (IN)	SIDEWALK WIDTH (FT)	LONGITUDINAL STEEL			TRANSVERSE STEEL #3 BARS SPACING (IN)
		#3 BARS			
		NO. OF BARS "NB"	SPACING "SPC" (IN)	END BAR SPACING (IN)	
4.5	5	3	27	3	48
4.5	6	4	22	3	48

TABLE 2

DRIVEWAY DESIGN CRITERIA (1)(2)

TRAFFIC TYPE	TYPE A DRIVEWAY (FOR SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES)				TYPE B DRIVEWAY (SHARED ACCESS/SHARED DRIVEWAY)				TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY)			
	WIDTH (FT)		RADIUS (FT)		WIDTH (FT)		RADIUS (FT)		WIDTH (FT)		RADIUS (FT)	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
ONE-WAY	10	12	4	10	$12^{(3)}$	$16^{(5)}$	$4^{(5)}$	$10^{(5)}$	15	20	10	20
TWO-WAY	$10^{(3)}$	$24^{(4)}$	4	10	$16^{(5)}$	24	4	10	24	35	10	20

(1) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLE 15.2.07.C.1.F FOR DRIVEWAYS THAT REQUIRE A VEHICLE SWEPT PATH ANALYSIS.
(2) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLES 15.2.07.C.1.G.(1) AND 15.2.07.C.1.G.(2) FOR TYPE 1 PAE AND TYPE 2 PAE REQUIREMENTS.
(3) THE MINIMUM WIDTH FOR JOINT ACCESS DRIVEWAY IS 12 FT.
(4) REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES FOR DRIVEWAY WIDTHS FOR NARROW LOTS.
(5) ONLY MURS AND COURTYARD STYLE DEVELOPMENTS ON CORNER LOTS CAN HAVE ONE-WAY DRIVEWAYS.
(6) REFER TO CHAPTER 42, SECTION 42-146 OF THE CODE OF ORDINANCES FOR EXCEPTIONS TO THE MINIMUM DRIVEWAY WIDTH FOR SHARED DRIVEWAYS.

APPROVED BY:	APPROVED BY:
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY:	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO: 02754-03

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE ELEVATION DIFFERENCE

FOR CITY OF HOUSTON USE ONLY
DRAWING SCALE
NOT TO SCALE

DISCLAIMER:
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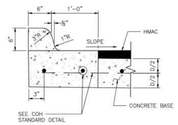
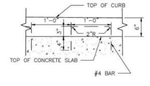
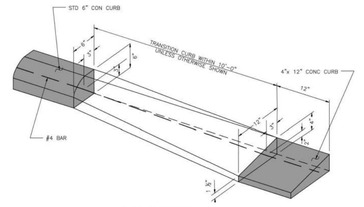


ESPLANADE CURB CONNECTED TO CONCRETE BASE



ALTERNATE CONCRETE CURB REINFORCEMENT

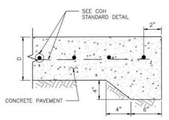


CURB TRANSITION
(SEE NOTES)

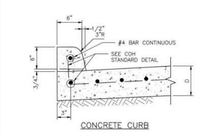
4"x12" MONOLITHIC AND TRANSITION CURB NOTES:

1. 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL SHIPLANDOCK, PEARVIL, NON-RESIDENTIAL STREETS, AND RESIDENTIAL STREETS.
2. TRANSITIONS FROM 6– INCH CONCRETE CURB TO 4–INCH x 12–INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 10 FEET, UNLESS OTHERWISE SHOWN. IF THIS 10–FEET TRANSITION CURB IS NOT POURED MONOLITHICALLY WITH THE PAVEMENT, THEN REINFORCING STEEL AS SHOWN IN "4–INCH x 12–INCH TRANSITION CURB" IS TO BE INSTALLED.

ESPLANADE CURB CONNECTED TO FLEXIBLE BASE

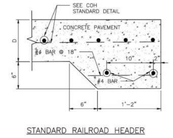


STANDARD CONCRETE PAVING HEADER

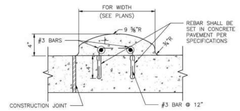


CONCRETE CURB

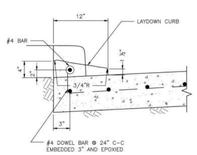
WHEN CONCRETE CURB IS TO BE PLACED EXISTING CONCRETE USE BASE
#4 BAR @ 18x10" LONG, DOWELED AND SET IN EPOXY GROUT.
SET #4 DOWEL BARS, 25" LONG AT 12" C–C WHEN PAVEMENT SECTION POURED.



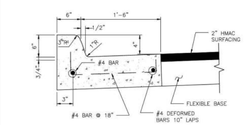
STANDARD RAILROAD HEADER



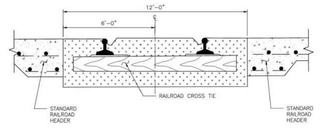
MOUNTABLE CURB



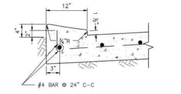
4–INCH x 12–INCH TRANSITION CURB
(SEE NOTES)



MONOLITHIC CURB AND GUTTER



STANDARD RAILROAD CROSSING – SINGLE TRACK



4–INCH x 12–INCH MONOLITHIC CURB
(SEE NOTES)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY:	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO: 02771-01

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

CURB, CURB AND GUTTER AND HEADER DETAILS

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 4 OF 17

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **369** OF 391

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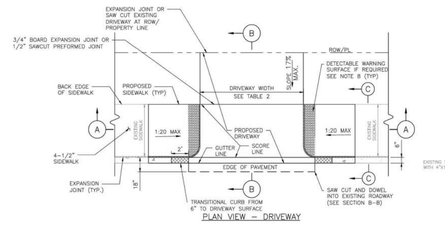
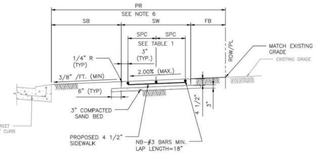


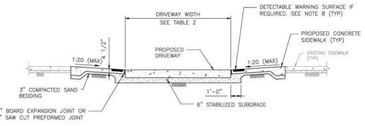
PLAN VIEW – DRIVEWAY



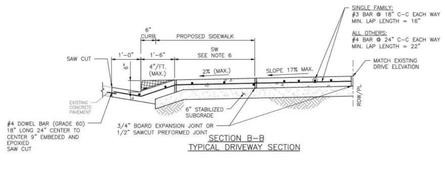
SECTION C–C
TYPICAL SIDEWALK SECTION

NOTES:

1. REPAIR, RECONSTRUCTION OR REPLACEMENT OF SIDEWALKS SHALL MEET PERMITTING REQUIREMENTS OF CODE OF ORDINANCES SECTION 40-552.
2. FOR REPAIR, RECONSTRUCTION, OR REPLACEMENT OF EXISTING SIDEWALKS:
   - 2.1. EXISTING SIDEWALKS LESS THAN OR EQUAL TO 20 FEET IN TOTAL LENGTH:
     - 2.1.1. THE PROPOSED SIDEWALK WIDTH WILL BE ALLOWED TO MATCH THE EXISTING SIDEWALK.
   - 2.2. EXISTING SIDEWALKS GREATER THAN 20 FEET IN TOTAL LENGTH:
     - 2.2.1. THE SIDEWALK WIDTH FOR THE ENTIRE PROPERTY WIDTH SHALL BE IMPROVED TO MEET WIDTH REQUIREMENTS ACCORDING TO THE LATEST INFRASTRUCTURE DESIGN MANUAL.
   - 2.3. 20 FOOT TOTAL LENGTH IS DEFINED AS:
     - 2.3.1. UP TO 10 FEET ON BOTH SIDES OF THE DRIVEWAY; OR
     - 2.3.2. UP TO 20 FEET WHEN SIDEWALK AFFECTED IS LOCATED ONLY ON ONE SIDE OF THE DRIVEWAY.
3. PROPOSED SIDEWALKS THAT DO NOT FALL WITHIN THE SCOPE DEFINED IN NOTE 2 SHALL BE DESIGNED ACCORDING TO IDM REQUIREMENTS AND CONSTRUCTED ACCORDING TO THE CONTRACT DRAWINGS.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS ("TAS") AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:20 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.
6. REFER TO CONTRACT DRAWINGS FOR PEDESTRIAN REALM (PR), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.
7. DRIVEWAYS SHALL BE MINIMUM 6" THICK FOR SINGLE FAMILY AND DUPLEXES. DRIVEWAYS SHALL BE MINIMUM 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
8. DETECTABLE WARNING SURFACES:
   - 8.1. SIDEWALK SHALL HAVE A DETECTABLE WARNING SURFACE WHERE SIDEWALK INTERSECTS TYPE C DRIVEWAYS (COMMERCIAL DRIVEWAYS) THAT ARE STOP, YIELD, OR TRAFFIC SIGNAL CONTROLLED.
   - 8.2. DETECTABLE WARNING SURFACES ARE OPTIONAL WHERE SIDEWALKS INTERSECT TYPE A DRIVEWAYS (SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES) OR TYPE B DRIVEWAYS (SHARED ACCESS/SHARED DRIVEWAYS).
   - 8.3. REFER TO STANDARD DETAILS 02775-06 TO 02775-07 FOR DETECTABLE WARNING SURFACE STANDARDS.



SECTION A–A
PROPOSED SIDEWALK THROUGH DRIVEWAY



SECTION B–B
TYPICAL DRIVEWAY SECTION

TABLE 1

REINFORCING STEEL INFORMATION
FOR 4 ½ " THICK SIDEWALKS
EXPANSION JOINT SPACING = 40 FT
f_c' = 3,500 PSI AND f_y = 60,000 PSI
REFER TO CONTRACT DRAWINGS FOR SIDEWALKS WIDER THAN 6 FEET.

SIDEWALK THICKNESS (IN)	SIDEWALK WIDTH (FT)	LONGITUDINAL STEEL #3 BARS			TRANSVERSE STEEL #3 BARS SPACING (IN)
		NO. OF BARS "NB"	SPACING "SPAC" (IN)	END BAR SPACING (IN)	
4.5	5	3	27	3	48
4.5	6	4	22	3	48

TABLE 2

DRIVEWAY DESIGN CRITERIA (1)(2)

TRAFFIC TYPE	TYPE A DRIVEWAY (FOR SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES)				TYPE B DRIVEWAY (SHARED ACCESS/SHARED DRIVEWAY)				TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY)			
	WIDTH (FT)		RADIUS (FT)		WIDTH (FT)		RADIUS (FT)		WIDTH (FT)		RADIUS (FT)	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
ONE-WAY	10	12	4	10	12(5)	16(5)	4(5)	10(5)	15	20	10	20
TWO-WAY	10(3)	24(4)	4	10	16(6)	24	4	10	24	35	10	20

(1) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLE 15.2.07.C.1.F FOR DRIVEWAYS THAT REQUIRE A VEHICLE SWEPT PATH ANALYSIS.
(2) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLES 15.2.07.C.1.G.(1) AND 15.2.07.C.1.G.(2) FOR TYPE 1 PAE AND TYPE 2 PAE REQUIREMENTS.
(3) THE MINIMUM WIDTH FOR JOINT ACCESS DRIVEWAY IS 12 FT.
(4) REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES FOR DRIVEWAY WIDTHS FOR NARROW LOTS.
(5) ONLY MURS AND COURTYARD STYLE DEVELOPMENTS ON CORNER LOTS CAN HAVE ONE-WAY DRIVEWAYS.
(6) REFER TO CHAPTER 42, SECTION 42-146 OF THE CODE OF ORDINANCES FOR EXCEPTIONS TO THE MINIMUM DRIVEWAY WIDTH FOR SHARED DRIVEWAYS.

APPROVED BY:	APPROVED BY:
Sukut Kanwar — CITY ENGINEER	kHANG NGUYEN — CITY TRAFFIC ENGINEER
APPROVED BY: Carl Haddock — DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF. DATE: NOV-27-2023	DWG NO: 02754-04

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

PROPOSED SIDEWALK THROUGH DRIVEWAY WITH MINIMAL ELEVATION DIFFERENCE

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE

NOT TO SCALE

DISCLAIMER:
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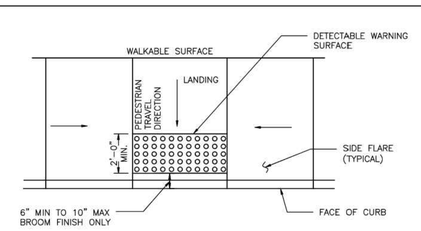
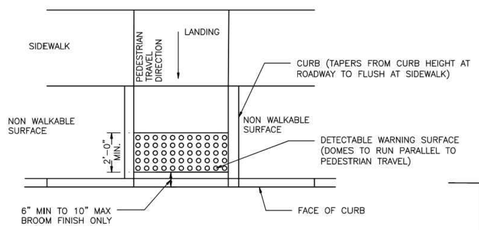
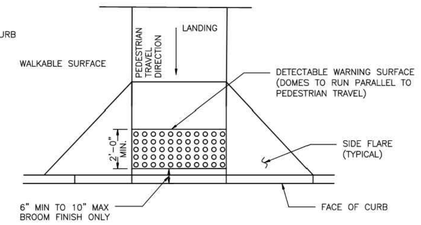


TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE





TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN

GENERAL NOTES FOR DETECTABLE WARNINGS:

1. DETECTABLE WARNING SURFACES MUST BE FULLY ADA COMPLIANT.
2. ALL NEW CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES. THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACE, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
3. DETECTABLE WARNING SURFACES MUST MAINTAIN A SLIP RESISTANCE WITH FA-VALUE OF EQUAL TO OR GREATER THAN 0.8.
4. DETECTABLE WARNING SURFACES MUST MAINTAIN A WATER ABSORPTION RATE OF LESS THAN 1%, DETECTABLE WARNING SHALL NOT ALLOW WATER TO ACCUMULATE.
5. DETECTABLE WARNINGS INSTALLED INTO FRESH CONCRETE SHALL BE WITHOUT VOIDS AND UTILIZING AN ACCEPTABLE ANCHORING SYSTEM.
6. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
7. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
8. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" MIN TO 10" MAX FROM THE DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
9. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
10. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

DETECTABLE WARNING CURB RAMP DETAILS

(SCALE: NOT TO SCALE)

APPROVED BY:	
Sukut Kanwar — CITY ENGINEER	Carl Haddock — DIRECTOR OF HPW
kHANG NGUYEN — CITY TRAFFIC ENGINEER	
EFF DATE: NOV-27-2023	DWG NO: 02775-06

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STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 5 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **370** OF 391	

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GENERAL PAVEMENT MARKING NOTES:

1. PRIOR TO START OF CONSTRUCTION, ALL EXISTING PAVEMENT MARKINGS WITHIN THE AREA OF CONSTRUCTION SHALL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CITY INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING ALL EXISTING PAVEMENT MARKINGS AND LANE CONFIGURATIONS WILL BE DUPLICATED AGAIN. THIS REVIEW CAN BE DONE IN CONJUNCTION WITH SIGN INVENTORY. THE CONTRACTOR IS HELD ACCOUNTABLE FOR EXISTING AND TEMPORARY CONSTRUCTION PAVEMENT MARKINGS THROUGHOUT THE PROJECT AND AT THE PROJECT'S COMPLETION.
2. ALL PAVEMENT MARKINGS SHALL CONFORM TO CITY OF HOUSTON STANDARDS AND SPECIFICATIONS AND GENERAL GUIDELINES OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
3. THE PERMANENT PAVEMENT MARKINGS MAY BE MODIFIED AS DIRECTED BY THE CITY TRAFFIC ENGINEER.
4. THE DESIGN SPEED FOR THE ROAD IS: ____. THE POSTED SPEED LIMIT IS: ____.
5. ALL LANE DIMENSIONS ARE FROM CENTER OF LANE LINE, CENTER OF DOUBLE LANE LINE, FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. THE PAVEMENT MARKING DRAWINGS ARE SCHEMATIC ONLY. THE CONTRACTOR SHALL FOLLOW ALL DIMENSIONS, DETAILS, AND STANDARDS WHEN INSTALLING PAVEMENT MARKINGS AND SYMBOLS.
7. THE FINAL LONGITUDINAL STRIPINGS SHALL BE 60 MIL (0.060") THICK HOT-SPRAYED THERMOPLASTIC PLACED OVER THE TEMPORARY STRIPING WITHIN 14 TO 30 CALENDAR DAYS AFTER COMPLETION OF THE FINAL PAVEMENT SURFACE, OR AS DIRECTED BY THE CITY TRAFFIC ENGINEER. ALL OTHER PAVEMENT MARKINGS SHALL BE APPLIED AT THE SAME TIME. TEMPORARY STRIPING SHALL BE WATER BASED PAINT.
8. ALL FINAL TRANSVERSE MARKINGS SHALL BE 90 MIL (0.090") HOT-SPRAYED THERMOPLASTIC. ALL PAVEMENT ARROWS AND LEGENDS SHALL ALSO BE 90 MIL (0.090") HOT-SPRAYED THERMOPLASTIC. PREFORMED THERMOPLASTIC APPLICATIONS MAY BE USED IF ONLY APPROVED BY THE CITY TRAFFIC ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF PAVEMENT MARKINGS OF FINAL SURFACE COURSE FOLLOWING CONTROL POINTS THAT HAVE BEEN SET NO MORE THAN 50 FEET APART ALONG THE LINES TO BE IMPLEMENTED. IN TANGENT SECTIONS OF A ROAD WHERE THE PAVEMENT MARKING PATTERN DOES NOT CHANGE, CONTROL POINTS CAN BE SET AT 200 FEET SPACING. THE LAYOUT AND INSPECTION OF ALL PAVEMENT MARKINGS SHALL BE APPROVED BY CITY OF HOUSTON REPRESENTATIVE PRIOR TO THE APPLICATION OF MATERIALS.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE FINAL SURFACE COURSE IS PLACED SO THAT THE STRIPING IS OFFSET NO MORE THAN ONE FOOT CLEAR OF THE CONSTRUCTION JOINT, UNLESS OTHERWISE DIRECTED BY THE CITY TRAFFIC ENGINEER.
11. ALL RAISED PAVEMENT MARKERS (RPMS) SHALL BE INSTALLED SO THAT THE REFLECTIVE FACE OF EACH MARKER IS FACING THE DIRECTION OF TRAFFIC AND IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW. TYPE C PAVEMENT MARKERS SHALL BE INSTALLED SO THAT THE CLEAR FACE OF EACH MARKER IS FACING THE APPROACHING TRAFFIC FLOW AND PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW.
12. ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED IN ACCORDANCE TO CITY OF HOUSTON STANDARD SPECIFICATION 02762. APPLYING OVER EXISTING PAVEMENT MARKINGS DOES NOT CONSTITUTE AS APPROVED OBLITERATION METHOD.
13. THE ENGINEER OF RECORD SHALL BE REQUIRED TO PRODUCE AS-BUILT OF PAVEMENT MARKING PLANS WITHIN 30 DAYS AFTER COMPLETION OF PAVEMENT MARKING IMPLEMENTATION.
14. BLUE RPMS MAY BE PLACED ADJACENT TO FIRE HYDRANTS WITH THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
15. FOR ALL CONSTRUCTION, ALL PAVEMENT MARKINGS AND SIGNING SHALL BE INSTALLED AND SHALL BE PAID BY THE PROJECT OWNER/DEVELOPER.
16. FINAL INSPECTION AND ACCEPTANCE OF PAVEMENT MARKINGS SHALL BE PERFORMED BY TRANSPORTATION & DRAINAGE OPERATION REPRESENTATIVE (713-803-3054).

Description and Application of Pavement Marking Lines

Line Series	Color	Description	Width Inches	Typical Applications
WB	White	Broken (10' stripe w/ 30' gap)	4"	- Lane lines between travel lanes in the same direction where changing of lanes is permitted.
WS	White	Solid	4"	- Edge lines to delineate the right edge of the roadway.
			6"	- Left edge of bicycle lane and lane lines between travel lanes in the same direction where changing of lanes is discouraged.
			12"	- Perpendicular crosswalk lines.
			24"	- Stop bars at intersections (signalized and unsignalized). - Hatching at high visibility crosswalks.
			12", 24"	- Diagonal hatching used in gores between same direction of travel lanes.
WG	White	Guide (2' stripe w/6' gap)	6"	- Guide lines through intersections. - Taper lines for turn lanes. - Guide lines for bicycle lanes.
YS	Yellow	Solid	4"	- Edge lines to delineate the left edge of a divided roadway, a one-way road, or ramp.
			12", 24"	- Diagonal hatching used in gores between opposing direction of travel lanes.
YDS	Yellow	Double Solid	4" - (4") - 4" (gap)	- Centerline that separates opposing travel lanes and delineation of median islands.
YDB	Yellow	Double Broken	4" - (4") - 4" (gap)	- Defines the edges of center reversible lanes that are used as TWLTLs during intermittent periods.
YB	Yellow	Broken (10' stripe w/ 30' gap)	4"	- Separates travel lanes in opposite directions where passing is permitted in both directions of travel.
YB (BIKE)	Yellow	Broken (3' stripe w/ 9' gap)	4"	- Separates bicycle travel lanes in opposite directions where passing is permitted in both directions of travel.
YSB	Yellow	Solid & Broken Broken (10' stripe w/ 30' gap)	4" - (4") - 4" (gap)	- Separates travel lanes in opposite directions where passing is permitted in one direction and prohibited in the opposite direction. - Used for edge of two-way left-turn lanes (TWLTL).
BICYCLE GREEN	Green	Solid Colored Pavement	Varies	- Ped/Bike crossing - Vehicle / Bike/ Conflict Area
YIELD LINE	White	Triangle	16" x 24"	- Mid-Block crossing.

Description and Application of Reflective Raised Pavement Markers (RPM)

RRPM Types	Color	COH Spec. Sec. 02764 Equivalent	Description
C	Clear	Type I-C	- Approach face that reflects white light, and the other side does not reflect.
R	Clear & Red	Type II-C-R	- Approach face that reflects white light, and the other side reflects red light.
A	Amber & Amber	Type II-A-A	- Approach face and the other side both reflect amber light.

Line Style Designation : YSB4 - A40/A40

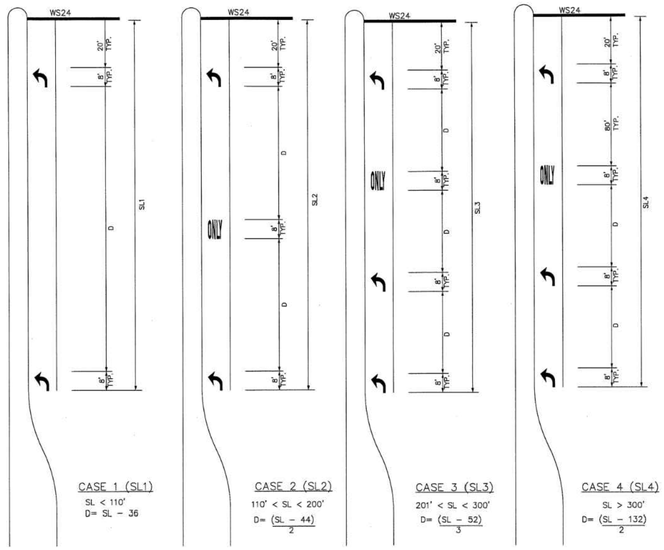
- Color
- Pattern
- Width of stripe
- RPM spacing
- RPM type
- RPM spacing
- RPM Type

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

GENERAL NOTES AND LEGENDS
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-01



CASE 1 (SL1)
SL < 110'
D= SL - 36

CASE 2 (SL2)
110' < SL < 200'
D= (SL - 44) / 2

CASE 3 (SL3)
201' < SL < 300'
D= (SL - 52) / 3

CASE 4 (SL4)
SL > 300'
D= (SL - 132) / 2

KEY (FOR TURN LANES ONLY):

SL = STORAGE LENGTH (FEET)

D = DISTANCE BETWEEN ARROWS AND/OR WORDS (FEET)

GENERAL NOTES:

1. ALL CASES AND DETAILS ALSO APPLY TO RIGHT-TURN LANES.
2. FOR DUAL-TURN LANES, DIMENSIONS SHALL BE THE SAME FOR EACH LANE.
3. SL DIMENSION IS FROM BACK OF STOP LINE TO END OF TURN LANE. NOTE: DO NOT INCLUDE TAPER LENGTH.
4. PAVEMENT ARROWS AND "ONLY" LEGEND MARKINGS ARE TYPICALLY USED AT ALL SIGNALIZED INTERSECTIONS AND AT ALL UNSIGNALIZED INTERSECTIONS THAT HAVE TURN LANES.
5. MINIMUM SL= 100'. SL MAY BE LESS THAN 100 FEET ONLY BY APPROVAL OF THE CITY TRAFFIC ENGINEER.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

LEFT/RIGHT-TURN "ONLY" AND ARROW SPACING
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-02

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS
– SHEET 6 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **371** OF 391	

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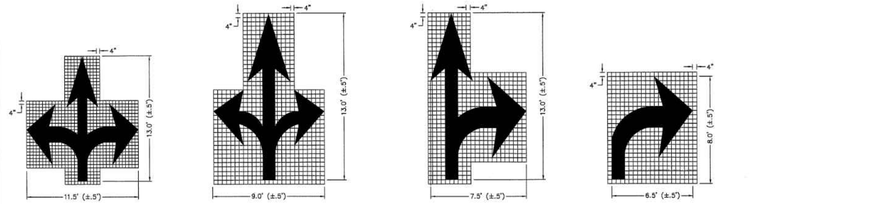

NOTES FOR PAVEMENT MARKINGS "SYMBOLS" AND "ARROWS":

1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED, UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.
2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION; SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS. SPECIAL PERMISSION NEEDED BY CITY TRAFFIC ENGINEER FOR REDUCTION BELOW ONE-THIRD OF STANDARD SIZES.
3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 30 FEET, OR AS INDICATED ON THE PLANS.
4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:
   - A. REGULATORY
     - STOP
     - RIGHT (LEFT) TURN ONLY, SYMBOL ARROWS.
   - B. WARNING
     - STOP AHEAD
     - SIGNAL AHEAD
     - SCHOOL
     - SCHOOL X-ING
     - PED X-ING
     - R X R (SEE SHEET 01510-08 DETAILS)
     - OTHER WORDS OR SYMBOLS MAY BE NECESSARY UNDER CERTAIN CONDITIONS. SPECIAL PERMISSION NEEDED BY CITY TRAFFIC ENGINEER FOR SPECIAL CONDITIONS.
5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LINES.
6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE, UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES (ALL-WAY STOP).
7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VII OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. SPACING BETWEEN STANDARD SIZE LETTERS SHOULD BE 4 INCHES (MIN). THE WIDTH OF NON-STANDARD SIZE LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES. APPROVAL BY CITY TRAFFIC ENGINEER. SPECIAL PERMISSION NEEDED FOR NON-STANDARD SIZE "LETTER" AND/OR "ARROWS".
9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. SINGLE TURN ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCOMPANIED STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".
10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED IN THE DESIGN PLANS.

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
STANDARD PAVEMENT MARKING – SYMBOLS (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-04



CITY OF HOUSTON HOUSTON PUBLIC WORKS	
STANDARD PAVEMENT MARKING – (WORDS) (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-03

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SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
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LICENSED
PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 7 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **372** OF 391	

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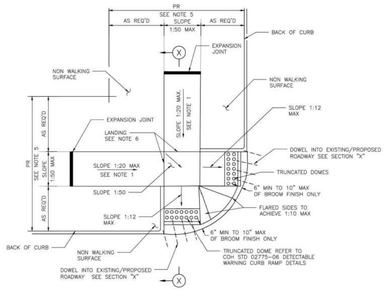
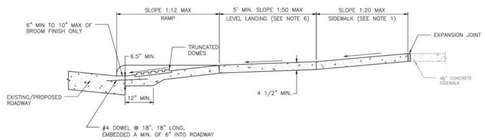
DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE ON A PROJECT ACCEPTS RESPONSIBILITY FOR ADDRESSING ALL SAFETY CONCERNS THAT ARE ASSOCIATED WITH SUCH USE. ANY REUSE OF THIS STANDARD ON OTHER PROJECTS WHATSOEVER, THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.



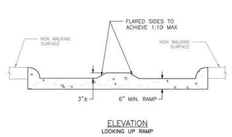
STREETS WITH NON- WALKING SURFACE BEHIND CURB
SEE NOTE-7



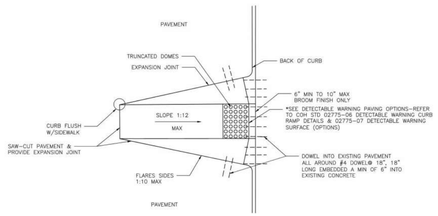
SECTION X-X

NOTES:

1. REPLACE EXISTING SIDEWALK FROM LEVEL LANDING AS NECESSARY TO ACHIEVE 1:20 SLOPE
2. BROOM FINISH IS MEASURED FROM FACE OF CURB.
3. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
4. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON UNLESS NOTED OTHERWISE.
5. REFER TO CONTRACT DRAWINGS FOR PEDESTRIAN REALM (PR) WIDTH.
6. MINIMUM 5'x5' LANDING PAD ACCORDING TO ADA REQUIREMENTS. WHEN THE APPROACHING SIDEWALK IS WIDER THAN 5', THE LANDING PAD AND RAMP WIDTH MUST MATCH THE SIDEWALK WIDTH.
7. FOR STREETS WITH WALKABLE SURFACES IMMEDIATELY BEHIND THE CURB A FLARE IS REQUIRED ON BOTH SIDES OF THE RAMP.



ELEVATION
LOOKING UP RAMP



CURB RAMP CONSTRUCTION FOR EXISTING PAVEMENT

APPROVED BY:	APPROVED BY:
Salud Ibanez	Hang Nguyen
CITY ENGINEER	CITY TRAFFIC ENGINEER

APPROVED BY:
Carl Haddock
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: NOV-27-2023	DWG NO: 02775-02

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

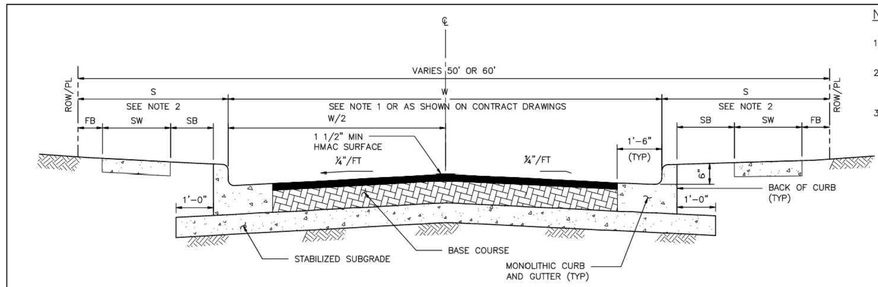
TYPICAL CURB RAMP DETAILS

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE
NOT TO SCALE

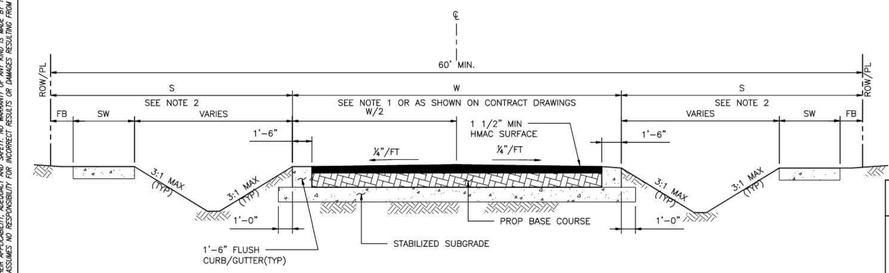
DocuSign Envelope ID: 9B122261-CF05-457B-9A65-2650F40B66D5

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE ON A PROJECT ACCEPTS RESPONSIBILITY FOR ADDRESSING ALL SAFETY CONCERNS THAT ARE ASSOCIATED WITH SUCH USE. ANY REUSE OF THIS STANDARD ON OTHER PROJECTS WHATSOEVER, THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.



HMAC PAVEMENT – CURB & GUTTER SECTION

(NOT APPLICABLE TO ETJ OF CITY OF HOUSTON)



HMAC PAVEMENT – DITCH SECTION

(NOT APPLICABLE TO ETJ OF CITY OF HOUSTON)

NOTES:

1. FOR TRAVEL WAY WIDTH (W) REFER TO IDM SECTION 10.3.03.A.
2. REFER TO CONTRACT DRAWINGS FOR "S" DIMENSION (S), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.
3. BASE COURSE SHALL BE:
   ALTERNATES:
   A) 6" (MIN) HOT MIX ASPHALTIC CONCRETE.
   B) 8" (MIN) CRUSHED CONCRETE.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

HOT MIX ASPHALTIC CONCRETE PAVEMENT DETAILS

(SCALE: NOT TO SCALE)

APPROVED BY:	
Salud Ibanez — CITY ENGINEER	Carl Haddock — DIRECTOR OF HPW
Hang Nguyen — CITY TRAFFIC ENGINEER	

EFF DATE: NOV-27-2023	DWG NO: 02741-01

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 8 OF 17

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **373** OF 391

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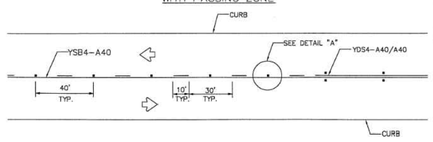
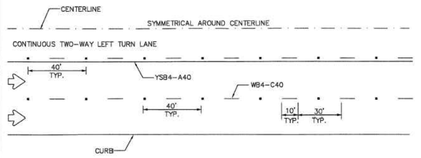
CENTERLINE & FOR ALL TWO LANE STREETS WITH PASSING ZONE

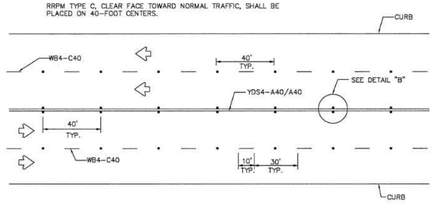


CENTERLINE & LANE LINES FOR TWO-WAY LEFT TURN LANE



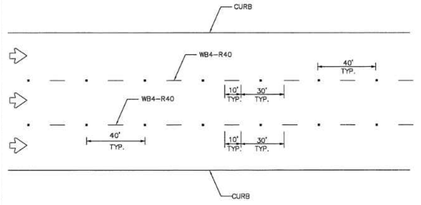
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY STREETS

RRPM TYPE C, CLEAR FACE TOWARD NORMAL TRAFFIC, SHALL BE PLACED ON 40-FOOT CENTERS.



LANE LINES FOR ONE-WAY MULTILANE STREET

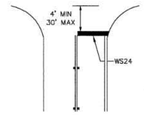
RRPM TYPE R SHALL HAVE CLEAR FACE TOWARD NORMAL TRAFFIC AND RED FACE TOWARD WRONG-WAY TRAFFIC.



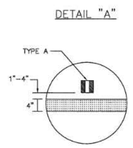
GENERAL NOTES:

1. EDGELINE ADJACENT TO CURB AND GUTTER IS NOT REQUIRED IN ALL CASES, HOWEVER SHALL BE PLACED AS DIRECTED BY CITY TRAFFIC ENGINEER.
2. THE TRAVELED WAY INCLUDES ONLY THAT PORTION OF THE ROADWAY USED FOR VEHICULAR TRAVEL AND NOT THE PARKING LANES, SIDEWALKS, BERMS AND SHOULDERS. THE TRAVELED WAYS SHALL BE MEASURED FROM THE INSIDE OF EDGELINE TO INSIDE OF EDGELINE OF A TWO LANE ROADWAY.
3. ALL RAISED PAVEMENT MARKERS PLACED IN BROKEN LINES SHALL BE PLACED IN LINE WITH AND MIDWAY BETWEEN THE STRIPES.
4. ON CONCRETE PAVEMENTS THE RAISED PAVEMENT MARKERS SHOULD BE PLACED TO ONE SIDE OF THE LONGITUDINAL JOINTS.
5. ALL PAVEMENT MARKING MATERIAL SHALL MEET THE REQUIRED MATERIAL SPECIFICATIONS AS SPECIFIED BY CITY OF HOUSTON STANDARD SPECIFICATIONS.

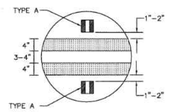
GUIDE FOR PLACEMENT OF STOP LINES & CENTERLINE



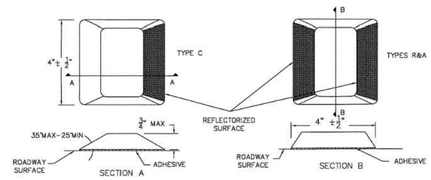
DETAIL "A"



DETAIL "B"



REFLECTIVE RAISED PAVEMENT MARKERS

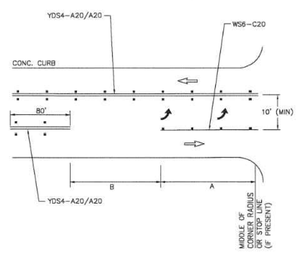


CITY OF HOUSTON
HOUSTON PUBLIC WORKS

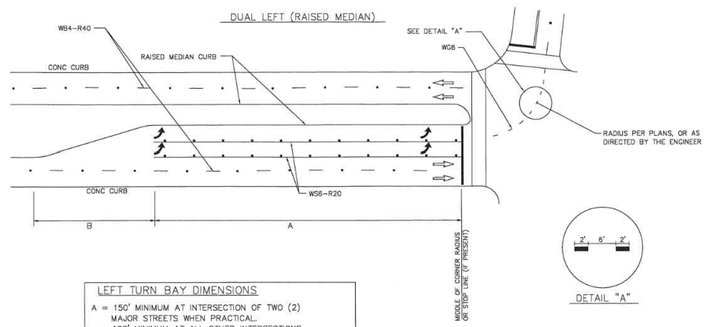
STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKERS FOR POSITION GUIDANCE
(NOT TO SCALE)

CITY TRAFFIC ENGINEER / CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-05

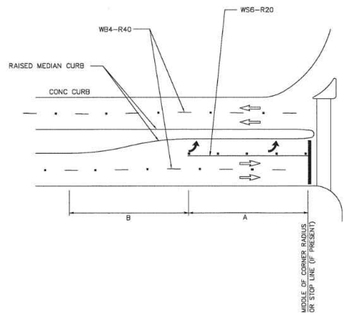
LEFT-TURN LANE



DUAL LEFT (RAISED MEDIAN)



LEFT-TURN LANE (RAISED MEDIAN)



LEFT TURN BAY DIMENSIONS

A = 150' MINIMUM AT INTERSECTION OF TWO (2) MAJOR STREETS WHEN PRACTICAL.
= 100' MINIMUM AT ALL OTHER INTERSECTIONS.

B = 100' MINIMUM ON STRAIGHT ROADWAYS.
*TAPER LENGTH MAY BE SHORTER IF IT IS ON A HORIZONTAL CURVE TO THE LEFT.
*TAPER LENGTH MAY BE LONGER IF CURVE IS TO THE RIGHT.

NOTE:
1. DIMENSIONS SHALL BE ADJUSTED AS DETERMINED BY CITY OF HOUSTON TRAFFIC ENGINEER.
2. REFER TO CITY OF HOUSTON DESIGN MANUAL (DWG No. 10.06-07) FOR DETAILS.

NOTES:

1. THE DIMENSIONS GIVEN FOR DUAL LEFT (RAISED MEDIAN) ON THIS SHEET ARE ALSO APPLICABLE FOR DUAL RIGHT-TURN LANES.
2. STORAGE LENGTHS LONGER THAN THE MINIMUMS LISTED ON THIS DRAWING MAY BE DETERMINED USING TRAFFIC ENGINEERING ANALYSIS.
3. FOR THE PLACEMENT OF PAVEMENT ARROWS AND WORDS SEE LEFT-TURN "ONLY" AND ARROW SPACING WORKSHEET.
4. REFER TO APPLICABLE STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKERS FOR POSITION GUIDANCE AND LEFT-TURN & RIGHT-TURN LANE STANDARD PAVEMENT MARKINGS WITH REFLECTIVE RAISED PAVEMENT MARKINGS.
5. REFER TO BICYCLE LANE PAVEMENT MARKINGS STANDARD FOR TYPE AND PLACEMENT.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

LEFT-TURN LANE & RIGHT-TURN LANE DESIGN WORKSHEET 1
(NOT TO SCALE)

CITY TRAFFIC ENGINEER / CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01510-11

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TEL: (713) 270-5700
TBPE REG NO: F-4528
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 9 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **374** OF 391	

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0 10 20 40

GENERAL NOTES

1. THE EXISTING SIGNS LOCATED ON PUBLIC CONSTRUCTION SITE ARE THE PROPERTY OF THE CITY OF HOUSTON. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN ING COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO THE TRAFFIC OPERATIONS CENTER (2200 PATTERSON). THE GENERAL TRAFFIC SUPERINTENDENT (832-395-6728/6756) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
2. AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS DIVISION OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT (832-395-6728/6756) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER ONLY CITY SIGNS AND POSTS IDENTIFIED BY TRAFFIC OPERATIONS DIVISION TO 2200 PATTERSON.
3. PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CITY INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
4. ALL GROUND MOUNTED STOP SIGNS, WARNING SIGNS, AND OTHER REGULATORY SIGNS SHALL USE AT A MINIMUM HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING.
5. ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
6. ALL OTHER SIGNS SHALL USE SUPER ENGINEER GRADE SHEETING.
7. ALL BLANKS TO BE INSTALLED SHALL BE OF THE 3000, 5000 OR 6000 SERIES ALUMINUM WITH A YEILD STRENGTH OF 3003-H14 ALLOY.
8. "T" DENOTES THICKNESS OF SIGN BLANKS.
9. ALL HOLES SHALL BE ⅜" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND / OR ROUGH EDGES.
10. SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL ON SHEET 01509-03.
11. ALL SIGN BLANK ARE TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.
12. ALL DETAILS ARE NOT TO SCALE.
13. ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND STANDARD HIGHWAY SIGNS LATEST EDITION.
14. REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED PER PLANS, SHALL BE AT THE CONTRACTOR'S EXPENSE.

TYPICAL GROUND SIGN INSTALLATION PERFORATED SQUARE METAL TUBING

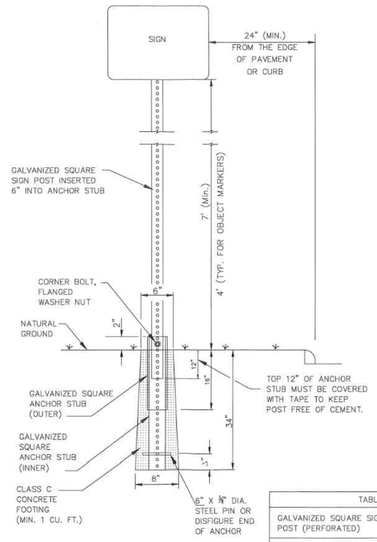
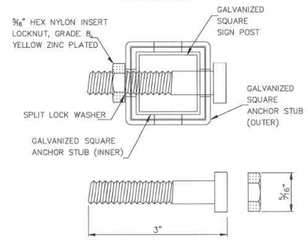
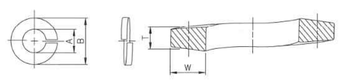


TABLE A	
GALVANIZED SQUARE SIGN POST (PERFORATED)	1-3/4" x 1-3/4" (14 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED) (INNER)	2" x 2" x 36" (14 GAUGE)
GALVANIZED SQUARE ANCHOR STUB (PERFORATED) (OUTER)	2½" x 2½" x 18" (14 GAUGE)

CORNER BOLT



⅝" SPLIT LOCK WASHER, HIGH ALLOY MECHANICAL DEPOSITED YELLOW SINK



NOMINAL WASHER SIZE	A INSIDE DIAMETER MAX	A INSIDE DIAMETER MIN	B OUTSIDE DIAMETER MAX	T MEAN SECTION (Thickness)	W SECTION WIDTH
⅝"	0.322"	0.314"	0.583"	0.078"	0.125"

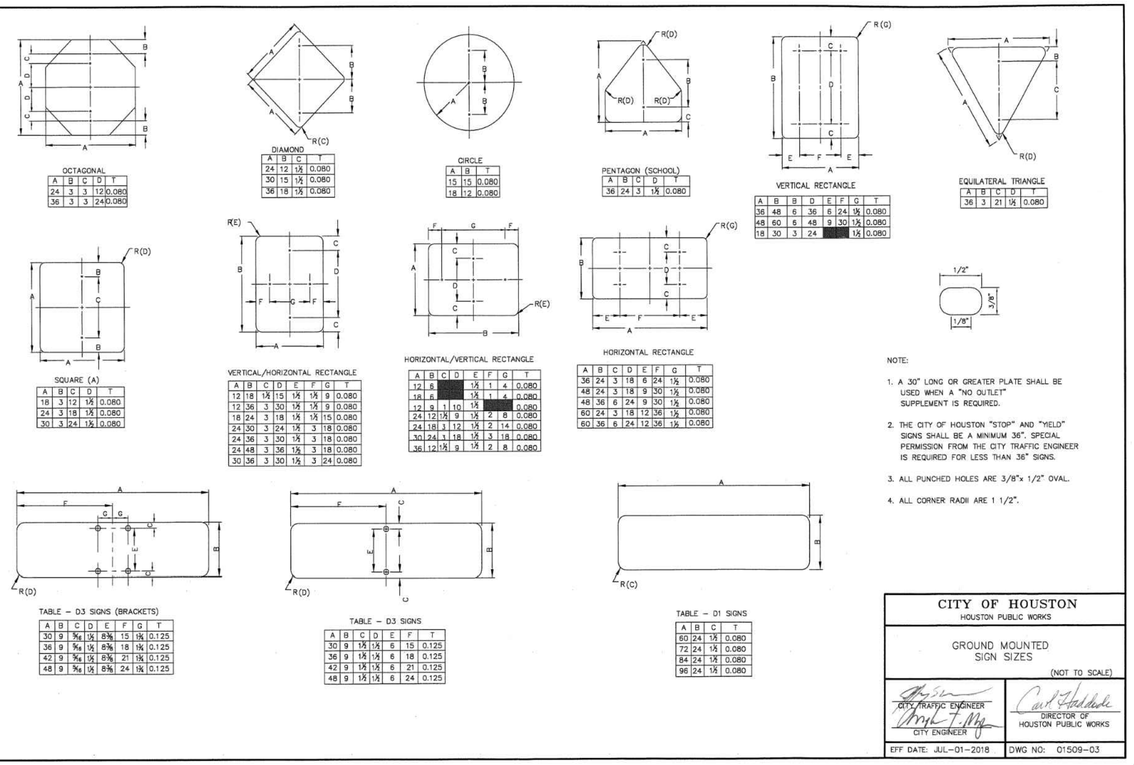
DIMENSIONS: ASME B18.21.1
MATERIAL: ALLOY STEEL PER ASME B18.211
FINISH: MECHANICAL ZINC PER ASME B695, CLASS 5, TYPE 2 (YELLOW)

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

GENERAL NOTES AND GROUND MOUNTING SIGN
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-29-2019 | DWG NO: 01509-01



OCTAGONAL				
A	B	C	D	T
24	3	3	12	0.080
36	3	3	24	0.080

DIAMOND			
A	B	C	T
24	12	1⅛	0.080
30	15	1⅛	0.080
36	18	1⅛	0.080

CIRCLE		
A	B	T
15	15	0.080
18	12	0.080

PENTAGON (SCHOOL)				
A	B	C	D	T
36	24	3	1⅛	0.080

VERTICAL RECTANGLE							
A	B	B	D	E	F	G	T
36	48	6	36	6	24	1⅛	0.080
48	60	6	48	9	30	1⅛	0.080
18	30	3	24			1⅛	0.080

EQUILATERAL TRIANGLE				
A	B	C	D	T
36	3	21	1⅛	0.080

SQUARE (A)				
A	B	C	D	T
18	3	12	1⅛	0.080
24	3	18	1⅛	0.080
30	3	24	1⅛	0.080

VERTICAL/HORIZONTAL RECTANGLE								
A	B	C	D	E	F	G	T
12	18	1⅛	15	1⅛	1⅛	9	0.080
12	36	3	30	1⅛	1⅛	9	0.080
18	24	3	18	1⅛	1⅛	15	0.080
24	30	3	24	1⅛	3	18	0.080
24	36	3	30	1⅛	3	18	0.080
24	48	3	36	1½	3	18	0.080
30	36	3	30	1½	3	24	0.080

HORIZONTAL/VERTICAL RECTANGLE								
A	B	C	D	E	F	G	T
12	6			1⅛	1	4	0.080
18	6			1½	1	4	0.080
12	9	1	10	1⅛			0.080
24	12	1½	9	1⅛	2	8	0.080
24	18	1	12	1⅛	2	14	0.080
30	24	1	18	1½	3	18	0.080
36	12	1½	9	1½	2	8	0.080

HORIZONTAL RECTANGLE							
A	B	C	D	E	F	G	T
36	24	3	18	6	24	1½	0.080
48	24	3	18	9	30	1½	0.080
48	36	6	24	9	30	1½	0.080
60	24	3	18	12	36	1½	0.080
60	36	6	24	12	36	1½	0.080

TABLE - D3 SIGNS (BRACKETS)							
A	B	C	D	E	F	G	T
30	9	¾	1⅛	8⅝	15	1⅛	0.125
36	9	¾	1⅛	8⅝	18	1⅛	0.125
42	9	¾	1⅛	8⅝	21	1⅛	0.125
48	9	¾	1⅛	8⅝	24	1⅛	0.125

TABLE - D3 SIGNS						
A	B	C	D	E	F	T
30	9	1⅛	1⅛	6	15	0.125
36	9	1⅛	1⅛	6	18	0.125
42	9	1⅛	1⅛	6	21	0.125
48	9	1⅛	1⅛	6	24	0.125

TABLE - D1 SIGNS			
A	B	C	T
60	24	1⅛	0.080
72	24	1⅛	0.080
84	24	1⅛	0.080
96	24	1⅛	0.080

NOTE:

1. A 30" LONG OR GREATER PLATE SHALL BE USED WHEN A "NO OUTLET" SUPPLEMENT IS REQUIRED.
2. THE CITY OF HOUSTON "STOP" AND "YIELD" SIGNS SHALL BE A MINIMUM 36". SPECIAL PERMISSION FROM THE CITY TRAFFIC ENGINEER IS REQUIRED FOR LESS THAN 36" SIGNS.
3. ALL PUNCHED HOLES ARE 3/8"x 1/2" OVAL.
4. ALL CORNER RADII ARE 1 1/2".

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

GROUND MOUNTED SIGN SIZES
(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER
DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-03

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD, STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 10 OF 17

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
VERT. 1"=2' HORIZ. 1"=20'
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **375** OF 391

C:\pw_working\othon-pw-01\jason.garza\dms22441\DETL_PVMT_10.dwgDETL_PVMT_06 Jun 17, 2026 - 11:39AM jgarza

WARNING SIGNS		
Right Angle Turn Curve	W1-1	30x30
Right Angle Turn With Speed Limit	W1-1a	36x36
Horizontal Curve	W1-2	30x30
Horizontal Curve With Speed Limit	W1-2a	36x36
Reverse Right Angle Turn	W1-3	30x30
Reverese Horizontal Curve	W1-4	30x30
Winding Road	W1-5	30x30
One Direction Large Arrow	W1-6	48x24
Two Direction Large Arrow	W1-7	48x24
Chevron Alignment	W1-8	18x24
Hairpin Curve	W1-11	30x30
Truck Rollover	W1-13	36x36
Cross Road	W2-1	30x30
Side Street T-Intersection (Symbol)	W2-2	30x30
T-Intersection (Symbol)	W2-4	30x30
Y-Intersection (Symbol)	W2-5	30x30
Roundabout (Symbol)	W2-6	30x30
Stop Ahead	W3-1	30x30
Signal Ahead	W3-3	30x30
Reduced Speed Limit Ahead	W3-5	36x36
Merge	W4-1	36x36
Lane Ends	W4-2	36x36
Added Lane	W4-3	36x36
Cross Traffic Does Not Stop (Plaque)	W4-4P	24x12
Road Narrows	W5-1	36x36
Narrow Bridge	W5-2	36x36
Divided Highway	W6-1	36x36
Divided Highway Ends	W6-2	36x36
Two Way Traffic (Symbol)	W6-3	36x36
Bump	W8-1	30x30
Dip	W8-2	30x30
Pavement Ends	W8-3	36x36
Soft Shoulder	W8-4	36x36
Truck Crossing	W8-6	36x36
Loose Gravel	W8-7	36x36
Rough Road	W8-8	36x36
Uneven Lanes	W8-11	36x36
Watch for ICE on Bridge	W8-13T	36x36
Shoulder Drop-Off (Symbol)	W8-17	30x30
Shoulder Drop-Off (Plaque)	W8-17P	24x18

WARNING SIGNS		
Flood Gauge	W8-19	12x72
No Shoulder	W8-23	36x36
Shoulder Ends	W8-25	36x36
Left Lane Ends	W9-1(1)	36x36
Right Lane Ends	W9-1(2)	36x36
Lane Ends Merge Left	W9-2(1)	36x36
Lane Ends Merge Right	W9-2(2)	36x36
Grade Crossing Advance Warning	W10-1	30Dia.
No Train Horn	W10-9	36x36
No Train Horn (Plaque)	W10-9P	30x24
Bicycle	W11-1	30x30
Pedestrian	W11-2	36x36
Emergency Vehicle	W11-8	30x30
Handicapped	W11-9	30x30
Truck	W11-10	30x30
Emergency Signal Ahead (Plaque)	W11-12P	36x30
Bicycle/Pedestrian	W11-15	30x30
Trail Crossing (Plaque)	W11-15P	24x18
Double Arrow	W12-1	30x30
Low Clearance With Arrows	W12-2	36x36
Low Clearance	W12-2a	78x24
Loaded Zoned Bridge	W12-5T	36x36
Advisory Speed (Plaque)	W13-1P	18x18
No Outlet	W14-2	24x24
No Outlet With Arrow	W14-2a	36x6
Share the Road (Plaque)	W16-1P	18x24
xx Feet (Plaque)	W16-2P	24x18
Next xx Feet (Plaque)	W16-4P	30x24
Supplemental Left Arrow (Plaque)	W16-5P(1)	24x18
Supplemental Right Arrow (Plaque)	W16-5P(2)	24x18
Diagonal Arrow (Plaque)	W16-7P	24x12
Ahead (Plaque)	W16-9P	24x12
When Flashing (Plaque)	W16-13P	24x18
Roundabout (Plaque)	W16-17	24x12
Speed Hump	W17-1	30x30
Type 3 Object Marker (Left)	OM3-L	12x36
Type 3 Object Marker (Right)	OM3-R	12x36
Type 3 Object Marker (Center)	OM3-C	12x36
Type 4 Object Marker	OM4-1	18x18

BICYCLE SIGNS		
Stop	R1 -1	18x18
Street Name	D3- 1	varies x 6
Yield	R1- 2	18x18x18
To Request Green Wait on Symbol	R10- 22	12x18
Yield to Pedestrian	R9- 6	18x18
No Parking Bike Lane	R7 - 9	12x18
Bike Route	D11-1	24x18
Bike Route to Downtown	D11-1c	24x18
Bike Sign Auxiliary Signs	M4-1, - M4-14	12x6
Bicycle Route Route Arrow Signs	M5-1,2; M6-1,2,3,4,5,6,7	12x9
Walk Your Bike (custom sign)	R9 - 8 CoH	12x18
Yield To Ped /Bike (custom sign)	R1 - 5 PB	36x36
Turning Vehicles Yield to Ped/Bike (custom sign)	R10 - 15 PB	36x36

SCHOOL SIGNS		
School	S1-1 (FYG)	36x36
xxx to xxx AM and PM (Plaque)	S4-1P	24x10
School (Plaque)	S4-3P (FYG)	24x8
When Flashing (Plaque)	S4-4P	24x10
Reduced School Speed Limit Ahead	S4-5a (FYG)	36x36
School Speed Limit xx When Flashing	S5-1 (FYG)	24x48
End School Zone	S5-2	24x30
End School Zone (Plaque)	S5-2aTP	24x10
Cell Phone Use Prohibited	S7-1T	24x18
Turn Arrow (Plaque)	SW16-5P (FYG)	24x12
Advance Turn Arrow (Plaque)	SW16-6P (FYG)	24x12
Diagonal Arrow (Plaque)	SW16-7P (FYG)	24x12
Ahead (Plaque)	S16-9P (FYG)	24x12
FYG - Fluorescent Yellow-Green Background Color		

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

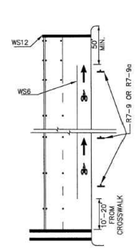
TYPICAL CITY OF HOUSTON SIGNS

(NOT TO SCALE)

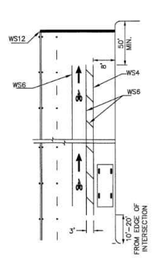
CITY TRAFFIC ENGINEER
CITY ENGINEER V

DIRECTOR OF HOUSTON PUBLIC WORKS

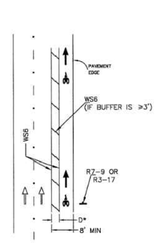
EFF DATE: JUL-01-2018 | DWG NO: 01509-06



STANDARD BIKE LANES
NO ON-STREET PARKING
ALONG BICYCLE LANE

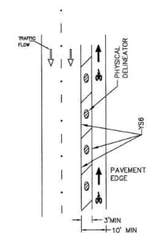


STANDARD BIKE LANES
ON-STREET PARKING
ALONG BICYCLE LANE

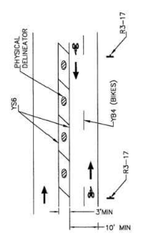


BUFFERED BIKE LANES

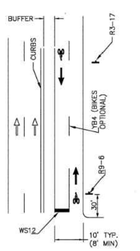
*DELINEATOR REQUIRED IF D<2'



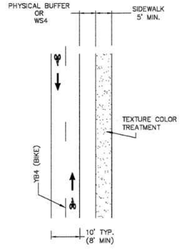
SEPARATED BIKE LANES
ONE-WAY (CONTRA-FLOW)



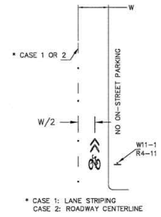
SEPARATED BIKE LANES
TWO-WAY



TWO-WAY SIDE PATH



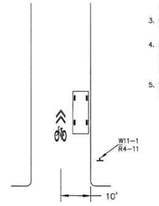
SIDEPATH WITH DEDICATED SIDEWALK



* CASE 1: LANE STRIPING
CASE 2: ROADWAY CENTERLINE

ROADWAY WITH SHARED LANE

- NEIGHBORHOOD BIKEWAY
- COLLECTOR/ THOROUGHFARE
- NO ON-STREET PARKING



ROADWAY WITH SHARED LANE

- NEIGHBORHOOD STREET
- NO CENTER LINE OR LANE MARKING
- ON STREET PARKING

NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE WHITE EXCEPT WHEN NOTED OTHERWISE ON PLANS.
2. PAVEMENT MARKINGS SHALL BE OF THE MATERIALS SPECIFIED AND SHALL BE IN CONFORMANCE WITH MATERIAL SPECIFICATIONS AS SPECIFIED BY CITY OF HOUSTON STANDARD SPECIFICATIONS.
3. EXACT SIGN PLACEMENT AND DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.
4. ADDITIONAL REFERENCES: TMUTCD (TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL) GUIDE FOR THE DEVELOPMENT OF BICYCLES FACILITIES, AASHTO, LATEST EDITION.
5. SHARED LANE MARKING SHALL BE IMPLEMENTED ONLY ON ROADWAY SEGMENT BUT NOT WITHIN THE FUNCTIONAL LIMITS OF AN INTERSECTION.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

BICYCLE LANE
PAVEMENT MARKINGS

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01510-09

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS
– SHEET 11 OF 17

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **376** OF 391

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REGULATORY SIGNS		
Stop	R1-1	36x36
Yield	R1-2	36x36x36
All Way Plaque	R1-3P	18x6
Yield Here to Pedestrians	R1-5a	36x48
Except Right Turn (Plaque)	R1-10P(1)	24x18
Except Buses (Plaque)	R1-10P(2)	24x18
Speed Limit	R2-1	30x36
Minimum Speed Limit (Plaque)	R2-4P	24x30
No Right Turns	R3-1	36x36
No Left Turns	R3-2	36x36
No U-Turns	R3-4	36x36
Left/Right Turn Only	R3-5	30x36
Thru Only	R3-5a	30x36
Left Turn/Thru	R3-6	30x36
Left/Right Lane Must Turn Left/Right	R3-7	36x36
Advance Intersection lane Control (Varies)	R3-8	Varies x 30
Two-Way Left Turn Only (Overhead)	R3-9a	30x36
Two-Way Left Turn Lane (Post Mounted)	R3-9b	24x36
BEGIN	R3-9cP	30x12
END	R3-9dP	30x12
Reversible Lane Control (Symbol)	R3-9e	108x48
Reversible Lane Control (Post Mounted)	R3-9f	36x54
Advance Reversible Lane Control Transition	R3-9g,9h	108x36
End Reversible Lane	R3-9i	108x48
Bike Lane	R3-17	24x18
Slower Traffic Keep Right	R4-3	24x30
Begin right Turn Lane Yield to Bikes	R4-4	36x30
Keep Right	R4-7	24x30
Keep Left	R4-8	24x30
Do Not Drive on Shoulder	R4-17	24x30
Do Not Pass on Shoulder	R4-18	24x30
Do Not Enter	R5-1	36x36
Wrong Way	R5-1a	42x30
No Trucks (Symbol)	R5-2(1)	24x24
No Thru Trucks (Text)	R5-2(2)	24x30
One Way (Long)	R6-1	54x18
One Way	R6-2	30x36
Roundabout Directional (2 Chevrons)	R6-4	30x24
Roundabout Circulation (Plaque)	R6-5P	30x30
Begin One Way	R6-6	30x36
End One Way	R6-7	30x36
Parking Restriction (Arrow)	R7-2 (1)	12x18
Parking Restriction (To Corner)	R7-2 (2)	12x18
Parking Restriction (Bus Zone)	R7-2 (3)	12x18

REGULATORY SIGNS		
Parking Restriction (Valet Zone)	R7-2 (4)	12x18
Parking Restriction (Peak Period)	R7-2 (5)	12x18
Parking Restriction (Emergency Veh. Only)	R7-2 (6)	12x18
Parking Restriction (Taxi Zone)	R7-2 (7)	12x18
Parking Restriction (No Stopping or Standing)	R7-2 (8)	12x18
Parking Restriction (Jitney Stop)	R7-2 (9)	12x18
Parking Restriction (Ped-Cab Zone)	R7-2 (10)	12x18
Parking Restriction (Limo Zone)	R7-2 (11)	12x18
Parking Restriction (Commercial Veh. Zone)	R7-2 (12)	12x18
Parking Restriction (Fed./City Authorized Veh.Only)	R7-2 (13)	12x18
Parking Restriction (U.S. Marshal Parking Only)	R7-2 (14)	12x18
Parking Restriction (Emergency)	R7-2 (15)	12x18
Parking Time Limit (Varies)	R7-108	12x18
Handicapped Parking	R7-8T	12x18
Tow Away Zone (Plaque)	R7-201P	12x6
Parking Meter (COH)	R7-110	12x18
On Tracks (Plaque)	R8-3eP	24x18
Cross Only At Crosswalks (Symbol)	R9-2	12x18
No Pedestrian Crossing (Symbol)	R9-3	18x18
No Pedestrian Crossing	R9-3a	12x18
Pedestrian Crossing	R9-8	36x18
Sidewalk Closed	R9-9	24x12
Sidewalk Closed-Use Other Side	R9-10	24x12
Sidewalk Closed Cross Here	R9-11a	24x12
Push Button For Pedestrian Crossing	R10-3e	9x15
Left on Green Arrow Only	R10-5	30x36
Stop Here on Red	R10-6	24x36
Do Not Block Intersection	R10-7	24x30
Left/Right Turn Signal	R10-10	30x36
No Turn on Red (Text)	R10-11a	36x48
Left Turn Yield on Green	R10-12	30x36
Crosswalk, Stop on Red	R10-23	24x30
Keep Off Median	R11-1	24x30
Road Closed	R11-2	48x30
Road Closed Local Traffic Only	R11-3a	60x30
Bridge Out Local Traffic Only	R11-3b	60x30
Road Closed to Thru Traffic	R11-4	60x30
Weight Limit xx Tons	R12-1	24x30
Axle Weight Limit xx Tons/Lbs	R12-2	24x30
No Trucks Over xx Tons/Lbs Empty Weight	R12-3	24x36
Weight Limit xx Tons per Axle xxTons Gross	R12-4	36x24
Load Zoned Bridge	R12aT	Varies x 36
Truck Route	R14-1	24x18
Grade Crossing (Crossbuck)	R15-1	48x9
Number of Tracks (Plaque)	R15-2P	27x18

CONSTRUCTION WORK SIGNS		
Right Angle Turn	CW1-1	36x36
Horizontal Curve	CW1-2	36x36
Reverse Right Angle Turns	CW1-3	36x36
Reverse Horizontal Curves	CW1-4	36x36
Reverse Curve (2 Lanes)	CW1-4b	36x36
Reverse Curve (More Than 2 Lanes)	CW1-4c	36x36
One-Direction Large Arrow	CW1-6	48x24
Upward Sloping Arrow	CW1-6aT	36x36
Chevron	CW1-8	18x24
Stop Ahead	CW3-1	36x36
Signal Ahead	CW3-3	36x36
Be Prepared to Stop	CW3-4	36x36
Road Narrows	CW5-1	36x36
Narrow Bridge	CW5-2	36x36
Two-Way Traffic Flow	CW6-3	36x36
Two-Way Traffic	CW6-4	12x18
Bump	CW8-1	36x36
Dip	CW8-2	36x36
Soft Shoulder	CW8-4	36x36
Truck Crossing	CW8-6	36x36
Rough Road	CW8-8	36x36
Uneven Lanes	CW8-11	36x36
Left Lane Ends	CW9-1(1)	36x36
Right Lane Ends	CW9-1(2)	36x36
Double Arrow	CW12-1	30x30
Advisory Speed (plaque)	CW13-1P	24x24
XX Feet (plaque)	CW16-2P	24x18
Ahead (Plaque)	CW16-3	24x12
Road Work Ahead	CW20-1	36x36
Detour Ahead	CW20-2	36x36
Road Closed Ahead	CW20-3	36x36
One Lane Road	CW20-4	36x36
Left Lane Closed	CW20-5(1)	36x36
Right Lane Closed	CW20-5(2)	36x36
Flagger (Symbol)	CW20-7	36x36
Narrow Lanes Ahead	CW20-8T	36x36
Shoulder Work Ahead	CW21-5	36x36
Utility Work Ahead	CW21-7	36x36
Double Reverse Curve (1 Lane)	CW24-1	36x36
Double Reverse Curve (2 Lanes)	CW24-1a	36x36
Double Reverse Curve (3 Lanes)	CW24-1b	36x36
End Road Work	G20-2	36x18
Detour With Arrows	M4-9	30x24
End Detour	M4-8a	24x18
Pedestrian Detour	M4-9b	30x24
Detour	M4-10	48x18

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

TYPICAL CITY OF HOUSTON SIGNS

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-05

SUMMARY OF SIGNS

SIGN POST SIZE (TABLE A)	SIGN AREA SQ. FT. (FOR INFORMATION ONLY, NOT REQUIRED FOR BID)	NUMBER OF POSTS (1 OR 2)	ROUND POST (DIMENSION NEEDED FROM CITY TRAFFIC ENGINEER)	SIGNAL MOUNT	SQUARE POST	DIMENSIONS	SIGN TEXT	SIGN NOMENCLATURE	SIGN NO.	PLAN SHEET NO.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

SUMMARY OF SMALL SIGNS

(NOT TO SCALE)

CITY TRAFFIC ENGINEER
CITY ENGINEER

DIRECTOR OF HOUSTON PUBLIC WORKS

EFF DATE: JUL-01-2018 | DWG NO: 01509-07

0 10 20 40

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713-223-4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

OTHON, INC. TBPE NO. F-1471

575 N. DAIRY ASHFORD RD. STE. 650 Houston, TX 77079 • TEL 713 975 8555

CONSULTING ENGINEERS www.othon.com

AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 12 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **377** OF 391	

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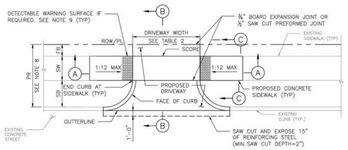
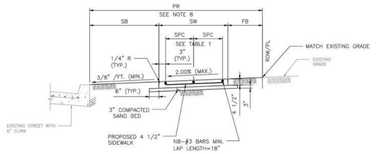
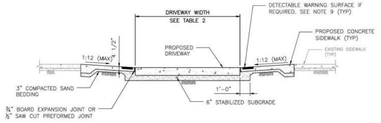


PLAN VIEW
DRIVEWAY



SECTION C–C
TYPICAL SIDEWALK SECTION

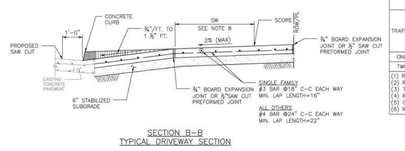


SECTION A–A
PROPOSED SIDEWALK THROUGH DRIVEWAY
WITH EXCESSIVE ELEVATION DIFFERENCE
WITH EXISTING SIDEWALK

TABLE 1

REINFORCING STEEL INFORMATION
FOR 4 ½ " THICK SIDEWALKS
EXPANSION JOINT SPACING = 40 FT
f'c = 3,500 PSI AND fy = 60,000 PSI
REFER TO CONTRACT DRAWINGS FOR SIDEWALKS WIDER THAN 6 FEET.

SIDEWALK THICKNESS (IN)	SIDEWALK WIDTH (FT)	LONGITUDINAL STEEL			TRANSVERSE STEEL #3 BARS SPACING (IN)
		#3 BARS			
		NO. OF BARS "NB"	SPACING "SPC" (IN)	END BAR SPACING (IN)	
4.5	5	3	27	3	48
4.5	6	4	22	3	48



SECTION B–B
TYPICAL DRIVEWAY SECTION

TABLE 2

DRIVEWAY DESIGN CRITERIA (1)(2)

TRAFFIC TYPE	TYPE A DRIVEWAY (FOR SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES)				TYPE B DRIVEWAY (SHARED ACCESS/SHARED DRIVEWAY)				TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY)			
	WIDTH (FT)		RADIUS (FT)		WIDTH (FT)		RADIUS (FT)		WIDTH (FT)		RADIUS (FT)	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
ONE-WAY	10	12	4	10	12(3)	16(3)	4(3)	10(3)	15	20	10	20
TWO-WAY	12(3)	24(4)	4	10	16(3)	24	4	10	24	35	10	20

(1) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLE 15.2.07.C.1.f FOR DRIVEWAYS THAT REQUIRE A VEHICLE SWEPT PATH ANALYSIS.
(2) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLES 15.2.07.C.1.G.(1) AND 15.2.07.C.1.G.(2) FOR TYPE 1 PAE AND TYPE 2 PAE REQUIREMENTS.
(3) THE MINIMUM WIDTH FOR JOINT ACCESS DRIVEWAY IS 12 FT.
(4) REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES FOR DRIVEWAY WIDTHS FOR NARROW LOTS.
(5) ONLY MURS AND COURTYARD STYLE DEVELOPMENTS ON CORNER LOTS CAN HAVE ONE-WAY DRIVEWAYS.
(6) REFER TO CHAPTER 42, SECTION 42-146 OF THE CODE OF ORDINANCES FOR EXCEPTIONS TO THE MINIMUM DRIVEWAY WIDTH FOR SHARED DRIVEWAYS.

NOTES:

1. REPAIR, RECONSTRUCTION OR REPLACEMENT OF SIDEWALKS SHALL MEET PERMITTING REQUIREMENTS OF CODE OF ORDINANCES SECTION 40-552.
2. FOR REPAIR, RECONSTRUCTION, OR REPLACEMENT OF EXISTING SIDEWALKS:
   - 2.1. EXISTING SIDEWALKS LESS THAN OR EQUAL TO 20 FEET IN TOTAL LENGTH:
     - 2.1.1. THE PROPOSED SIDEWALK WIDTH WILL BE ALLOWED TO MATCH THE EXISTING SIDEWALK.
   - 2.2. EXISTING SIDEWALKS GREATER THAN 20 FEET IN TOTAL LENGTH:
     - 2.2.1. THE SIDEWALK WIDTH FOR THE ENTIRE PROPERTY WIDTH SHALL BE RECONSTRUCTED WITH THE REQUIREMENTS ACCORDING TO THE LATEST INFRASTRUCTURE DESIGN MANUAL.
   - 2.3. 20 FOOT TOTAL LENGTH IS DEFINED AS:
     - 2.3.1. UP TO 10 FEET ON BOTH SIDES OF THE DRIVEWAY, OR
     - 2.3.2. UP TO 20 FEET WHEN SIDEWALK AFFECTED IS LOCATED ONLY ON ONE SIDE OF THE DRIVEWAY.
3. ALL JOINTS ALONG THE SIDEWALK SHALL BE CONSTRUCTED ACCORDING TO DRAWING 02752-02 AND SPECIFICATION 02752.
4. DRIVEWAYS SHALL BE MINIMUM 6" THICK FOR SINGLE FAMILY AND DUPLEXES. DRIVEWAYS SHALL BE MINIMUM 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
5. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
6. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
7. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.
8. REFER TO CONTRACT DRAWINGS FOR PEDESTRIAN REALM (PR), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.
9. DETECTABLE WARNING SURFACES:
   - 9.1. SIDEWALK SHALL HAVE A DETECTABLE WARNING SURFACE WHERE:
     - 9.1.1. SIDEWALK INTERSECTS TYPE C DRIVEWAYS (COMMERCIAL DRIVEWAYS) THAT ARE STOP, YIELD, OR TRAFFIC SIGNAL CONTROLLED; OR
     - 9.1.2. SIDEWALK SLOPE IS GREATER THAN 5% AND INTERSECTS A TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY)
   - 9.2. DETECTABLE WARNING SURFACES ARE OPTIONAL WHERE SIDEWALKS INTERSECT TYPE A DRIVEWAYS (SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES) OR TYPE B DRIVEWAYS (SHARED ACCESS/SHARED DRIVEWAYS).
   - 9.3. REFER TO STANDARD DETAILS 02775-06 TO 02775-07 FOR DETECTABLE WARNING SURFACE STANDARDS.

APPROVED BY:	APPROVED BY:
Salsabil Kanawaty	Kelvin Nguyen
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: Carl Haddock	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV-27-2023	DWG NO: 02754-01B

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

DRIVEWAY DETAIL WITH 6" CURBED STREETS

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE

NOT TO SCALE

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE ACCEPTS RESPONSIBILITY FOR ADDRESSING ALL SAFETY CONCERNS ASSOCIATED WITH THEIR USE IN EACH SPECIFIC APPLICATION. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

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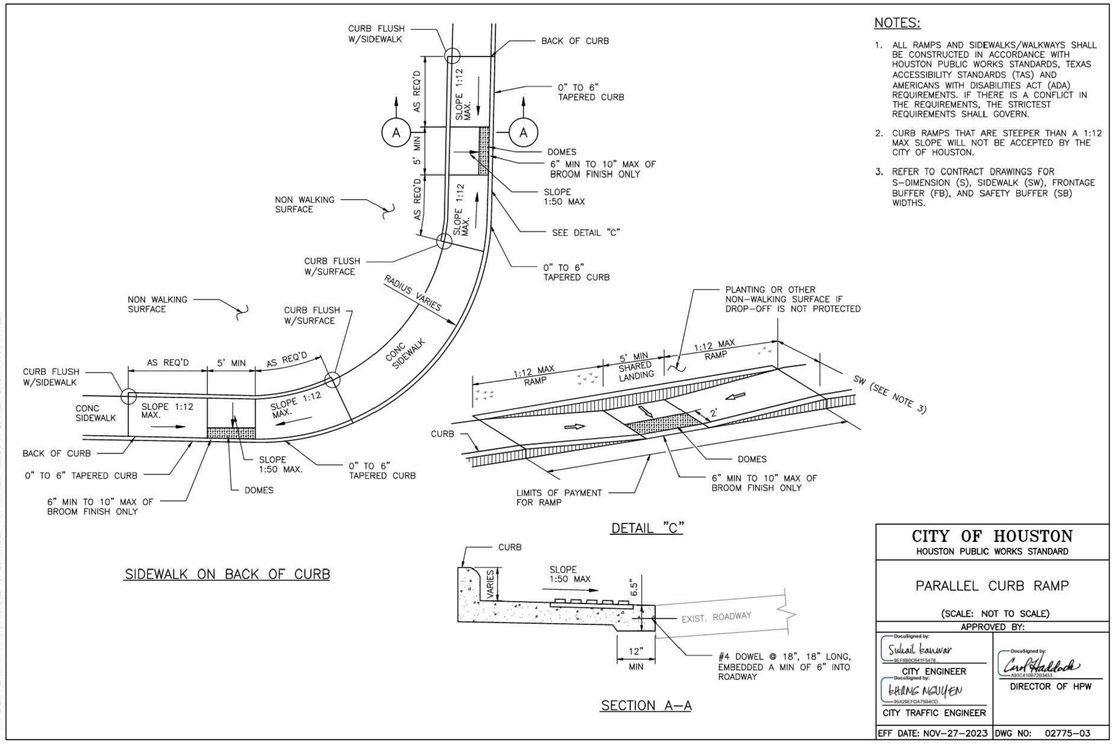

SIDEWALK ON BACK OF CURB

DETAIL "C"

SECTION A–A

NOTES:

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.
3. REFER TO CONTRACT DRAWINGS FOR S–DIMENSION (S), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

PARALLEL CURB RAMP

(SCALE: NOT TO SCALE)

APPROVED BY:	
Salsabil Kanawaty	Carl Haddock
CITY ENGINEER	DIRECTOR OF HPW
Kelvin Nguyen	
CITY TRAFFIC ENGINEER	
EFF DATE: NOV-27-2023	DWG NO: 02775-03

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TBPE REG NO: F-4528
STATE OF TEXAS MAUREEN GONZALEZ 143557 LICENSED PROFESSIONAL ENGINEER
SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723 07/29/2026

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 13 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **378** OF 391	

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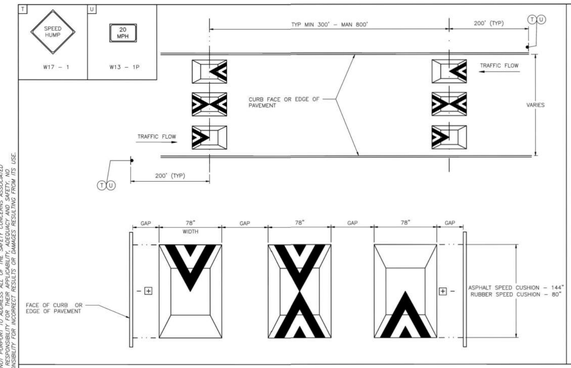
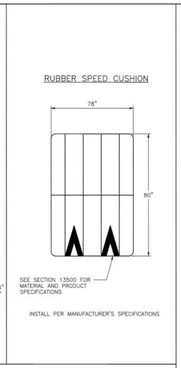
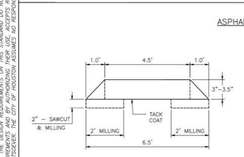




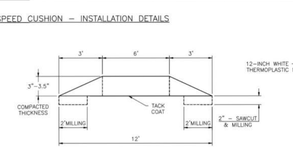
NOTES:

1. SPEED CUSHIONS AND ASSOCIATED SIGNS AND PAVEMENT MARKINGS WILL BE CONSTRUCTED AT LOCATIONS DESIGNED BY TRANSPORTATION AND DRAINAGE OPERATIONS (TDO) OR PER PLANS APPROVED BY TDO.
2. CONTRACTOR SHALL CONTACT THE CONSTRUCTION COORDINATOR BEFORE ANY STREET IS TEMPORARILY CLOSED FOR CONSTRUCTION.
3. THE TYPE OF SPEED CUSHION AND DISTANCE BETWEEN EACH CUSHION WILL BE DETERMINED BY TDO.
4. NO PART OF A SPEED CUSHION SHALL BE LOCATED IN FRONT OF DRIVEWAY APPROACH; RATHER THERE SHOULD BE A MINIMUM OF 6 FEET FROM THE EDGE OF A DRIVEWAY, WHEN PRACTICAL.
5. SPEED CUSHIONS SHOULD BE PLACED AS CLOSE AS POSSIBLE TO THE PROPERTY LINES INSTEAD OF MID – LOT LOCATION, WHERE PRACTICAL.
6. SPEED CUSHIONS SHOULD BE INSTALLED AT A RIGHT ANGLE TO THE CENTERLINE TANGENT OF THE ROADWAY.
7. TRAFFIC CONTROL CONSISTING OF SIGNS SHALL BE PROVIDED TO ADVISE ROADWAY USER OF SPEED CUSHIONS PRESENT. TRAFFIC SIGNS, AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
8. ALL SIGNS AND PAVEMENT MARKINGS WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
9. CONTRACTOR SHALL NOT OPEN SPEED CUSHIONS TO TRAFFIC UNTIL ALL REQUIRED WARNING SIGNS AND PAVEMENT MARKINGS ARE COMPLETED.
10. CONTRACTOR WILL MAINTAIN TEMPORARY MARKINGS UNTIL PERMANENT MARKINGS ARE INSTALLED.
11. CONTRACTOR SHALL COMPLETE THE CUSHION INSTALLATION TO FORM ONE COMPLETE HUMP BEFORE LEAVING THE JOB SITE.
12. CONTRACTOR SHALL WORK ONE HALF OF THE STREET AT A TIME AND MAINTAIN TWO – WAY TRAFFIC WITH CERTIFIED FLAGGER.
13. ASPHALT SPEED CUSHION SHALL BE CONSTRUCTED WITH TYPE D ASPHALT MIX PER CITY OF HOUSTON SPECIFICATIONS; A TACK COAT SHALL BE APPLIED PRIOR TO APPLICATION OF PAVEMENT MATERIAL.
14. ASPHALT SPEED CUSHIONS SHALL BE COMPACTED PER CITY OF HOUSTON SPECIFICATIONS AND SHAPE ACCORDING TO INSTALLATION DETAILS. COMPACTION SHALL REQUIRE UTILIZATION OF ALL NECESSARY SIZES AND TYPES OF ROLLERS TO ACCOMPLISH PROPER COMPACTION AND SHAPE.
15. ASPHALT SPEED CUSHIONS ARE TO BE CONSTRUCTED BETWEEN 3" – 3 ½" IN HEIGHT.
16. CONTRACTOR SHALL NOTIFY GARY DRABEK (832–395–2997) A MINIMUM OF TWO BUSINESS DAYS IN ADVANCE OF THE INSTALLATION OF SPEED CUSHIONS.

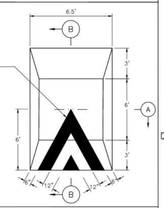
ASPHALT SPEED CUSHION – INSTALLATION DETAILS

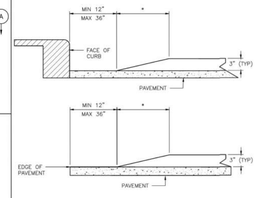


SECTION A – A



SECTION B – B





* RUBBER CUSHION – 12" TAPER, ASPHALT CUSHION – 12" TAPER.

TYPICAL SPEED CUSHIONS ARRANGEMENT FOR A GIVEN PAVEMENT WIDTH

PAVEMENT WIDTH (FT)	No OF CUSHIONS	GAP (IN)	CUSHION (IN)	GAP (IN)	CUSHION (IN)	GAP (IN)	CUSHION (IN)	GAP (IN)	CUSHION (IN)	GAP (IN)	CUSHION (IN)	GAP (IN)
16	2	12	78	12	78	12						
18	2	20	78	20	78	20						
20	2	30	78	24	78	30						
22	2	36	78	36	78	36						
24	3	15	78	12	78	12	78	15				
26	3	20	78	19	78	19	78	20				
28	3	27	78	24	78	24	78	27				
30	3	31	78	32	78	32	78	31				
32	4	18	78	12	78	12	78	12	78	18		
34	4	21	78	18	78	18	78	18	78	21		
36	4	24	78	24	78	24	78	24	78	24		
38	4	30	78	28	78	28	78	28	78	30		
40	4	33	78	34	78	34	78	34	78	33		
42	5	19	78	19	78	19	78	19	78	19	78	19
44	5	23	78	23	78	23	78	23	78	23	78	23

DISCLAIMER:
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APPROVED BY:	APPROVED BY:
Digitally signed by Salad Bawazir	Digitally signed by HANG HUIJIEN
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: Digitally signed by Carol Haddock	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV–27–2023	DWG NO: 13501–01

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

SPEED CUSHIONS ARRANGEMENT AND INSTALLATION

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE
NOT TO SCALE

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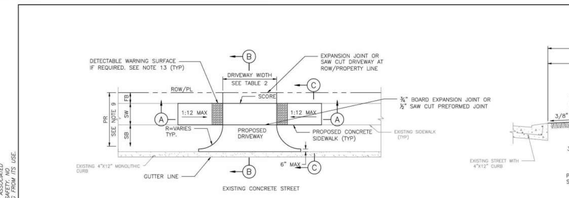
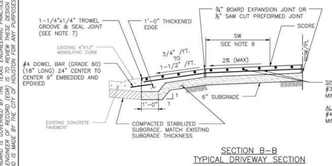
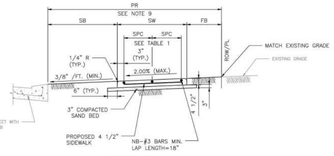


PLAN VIEW
DRIVEWAY

SECTION A–A
PROPOSED SIDEWALK THROUGH DRIVEWAY WITH EXCESSIVE GRADES



SECTION B–B
TYPICAL DRIVEWAY SECTION



SECTION C–C
TYPICAL SIDEWALK SECTION

NOTES:

1. REPAIR, RECONSTRUCTION OR REPLACEMENT OF SIDEWALKS SHALL MEET PERMITTING REQUIREMENTS OF CODE OF ORDINANCES SECTION 40–552.
2. FOR REPAIR, RECONSTRUCTION, OR REPLACEMENT OF EXISTING SIDEWALKS:
   2.1. EXISTING SIDEWALKS LESS THAN OR EQUAL TO 20 FEET IN TOTAL LENGTH:
      2.1.1. THE PROPOSED SIDEWALK WIDTH WILL BE ALLOWED TO MATCH THE EXISTING SIDEWALK.
   2.2. EXISTING SIDEWALKS GREATER THAN 20 FEET IN TOTAL LENGTH:
      2.2.1. THE SIDEWALK WIDTH FOR THE ENTIRE PROPERTY WIDTH SHALL BE IMPROVED TO MEET WIDTH REQUIREMENTS ACCORDING TO THE LATEST INFRASTRUCTURE DESIGN MANUAL.
   2.3. 20 FOOT TOTAL LENGTH IS DEFINED AS:
      2.3.1. UP TO 10 FEET ON BOTH SIDES OF THE DRIVEWAY; OR
      2.3.2. UP TO 20 FEET WHEN SIDEWALK ARE SET TO A LOCATION ONLY ON ONE SIDE OF THE DRIVEWAY.
3. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO TDM REQUIREMENTS, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
4. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY OR DUPLEXES.
5. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
6. THE OUTER DOWEL BARS ARE TO BE LOCATED 12" FROM END OF PROPOSED EDGE OF DRIVEWAY RETURN. EXTEND DOWEL 3" INCHES INTO PROPOSED DRIVEWAY AND BEND REMAINING BAR TO EXTEND TO RADIUS RETURN BOTH SIDES.
7. TROWEL GROOVE SEALANT SHALL BE LOW MODULUS SILICONE OR POLYURETHANE SEALANT.
8. ALL JOINTS ALONG THE SIDEWALK SHALL BE CONSTRUCTED ACCORDING TO DRAWING 02752–02 AND SPECIFICATION 02752.
9. REFER TO CONTRACT DRAWINGS FOR PEDESTRIAN REALM (PR), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.
10. CEMENT STABILIZED SAND 1.5 SACKS OF CEMENT PER TON OF DRY SAND.
11. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON STANDARDS (HCS) AND TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMENDED WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
12. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.
13. DETECTABLE WARNING SURFACES:
   13.1. SIDEWALK SHALL HAVE A DETECTABLE WARNING SURFACE WHERE;
      13.1.1. SIDEWALK INTERSECTS TYPE C DRIVEWAYS (COMMERCIAL DRIVEWAYS) THAT ARE STOP, YIELD OR TRAFFIC SIGNAL CONTROLLED; OR
      13.1.2. SIDEWALK SLOPE IS GREATER THAN 1:20 AND INTERSECTS A TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY)
   13.2. DETECTABLE WARNING SURFACES ARE OPTIONAL, WHERE SIDEWALKS INTERSECT TYPE A DRIVEWAYS (SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES) OR TYPE B DRIVEWAYS (SHARED ACCESS/SHARED DRIVEWAYS).
   13.3. REFER TO STANDARD DETAILS 02775–06 TO 02775–07 FOR DETECTABLE WARNING SURFACE STANDARDS.

TABLE 1

REINFORCING STEEL INFORMATION
FOR 4 & 7 THICK SIDEWALKS
EXPANSION JOINT SPACING = 40 FT
f'_c = 3,500 PSI AND f_y = 60,000 PSI
REFER TO CONTRACT DRAWINGS FOR SIDEWALKS WIDER THAN 6 FEET.

SIDEWALK THICKNESS (IN)	SIDEWALK WIDTH (FT)	LONGITUDINAL STEEL #3 BARS NO. OF BARS "NB"	#3 BARS SPACING "SPC" (IN)	#3 BARS END BAR SPACING (IN)	TRANSVERSE STEEL #3 BARS SPACING (IN)
4.5	5	3	27	3	48
4.5	6	4	22	3	48

TABLE 2

DRIVEWAY DESIGN CRITERIA (1)(2)

TRAFFIC TYPE	TYPE A DRIVEWAY (FOR SINGLE FAMILY RESIDENTIAL HOUSES OR DUPLEXES) WIDTH (FT) MIN	WIDTH (FT) MAX	RADIUS (FT) MIN	RADIUS (FT) MAX	TYPE B DRIVEWAY (SHARED ACCESS/SHARED DRIVEWAY) WIDTH (FT) MIN	WIDTH (FT) MAX	RADIUS (FT) MIN	RADIUS (FT) MAX	TYPE C DRIVEWAY (COMMERCIAL DRIVEWAY) WIDTH (FT) MIN	WIDTH (FT) MAX	RADIUS (FT) MIN	RADIUS (FT) MAX
ONE–WAY	10	12	4	10	12(3)	16(5)	4(5)	10(5)	15	20	10	20
TWO–WAY	10(3)	24(4)	4	10	16(5)	24	4	10	24	35	10	20

(1) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLE 15.2.07.C.1.F FOR DRIVEWAYS THAT REQUIRE A VEHICLE SWEPT PATH ANALYSIS.
(2) REFER TO INFRASTRUCTURE DESIGN MANUAL ARTICLES 15.2.07.C.1.G(1) AND 15.2.07.C.1.G(2) FOR TYPE 1 PAE AND TYPE 2 PAE REQUIREMENTS.
(3) THE MINIMUM WIDTH FOR JOINT ACCESS DRIVEWAY IS 12 FT.
(4) REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES FOR DRIVEWAY WIDTHS FOR NARROW LOTS.
(5) ONLY MURS AND COURTYARD STYLE DEVELOPMENTS ON CORNER LOTS CAN HAVE ONE–WAY DRIVEWAYS.
(6) REFER TO CHAPTER 42, SECTION 42–146 OF THE CODE OF ORDINANCES FOR EXCEPTIONS TO THE MINIMUM DRIVEWAY WIDTH FOR SHARED DRIVEWAYS.

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR). THE EOR IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR). THE EOR IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR). THE EOR IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR). THE EOR IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR). THE EOR IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR). THE EOR IS TO REVIEW SITE SPECIFIC DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THOSE ASPECTS CORRECTLY ADDRESSED. ACCESS AND SAFETY IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD (EOR).

APPROVED BY:	APPROVED BY:
Digitally signed by Salad Bawazir	Digitally signed by HANG HUIJIEN
CITY ENGINEER	CITY TRAFFIC ENGINEER
APPROVED BY: Digitally signed by Carol Haddock	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFF DATE: NOV–27–2023	DWG NO: 02754–01A

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

DRIVEWAY DETAIL WITH 4"x12" CURB FOR LOCAL RESIDENTIAL STREETS

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE
NOT TO SCALE

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AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
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HOUSTON, TEXAS 77074
TEL: (713) 270–5700
TBPE REG NO: F–4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 14 OF 17

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **379** OF 391	

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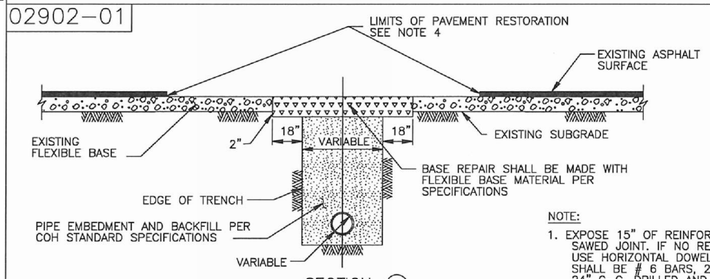
02902–01

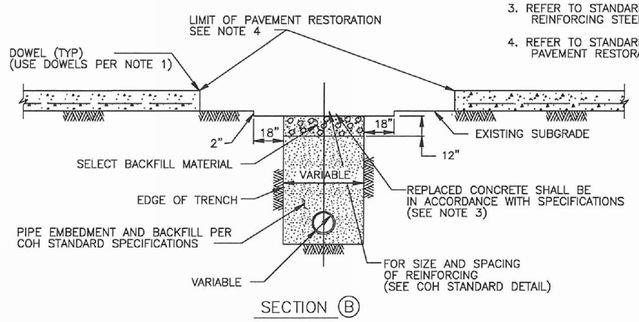


SECTION (A)

REPAIR OF FLEXIBLE BASE PAVEMENT

NOTE:

1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C–C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED WITH ASPHALT, REPLACE WITH 2" MIN HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02751–01 FOR REINFORCING STEEL REQUIREMENTS
4. REFER TO STANDARD DETAIL 02951–01 FOR PAVEMENT RESTORATION LIMITS.



SECTION (B)

REPAIR OF REINFORCED CONCRETE PAVEMENT

PAVEMENT REPAIR DETAILS FOR STREET CUTS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02775–08 THROUGH 02902–02

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR

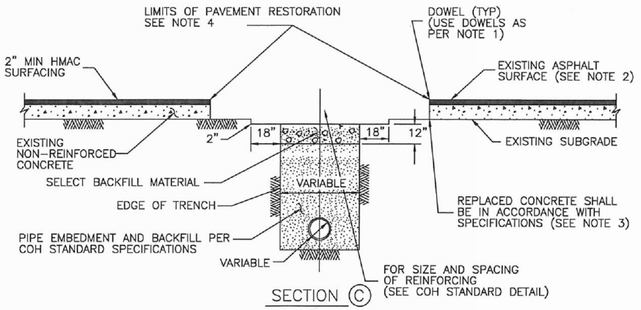
APPROVED BY:
DIRECTOR OF HOUSTON PUBLIC WORKS

EFFECTIVE DATE: JUL–01–2020

FOR CITY OF HOUSTON USE ONLY

SHEET NO.

02902–02

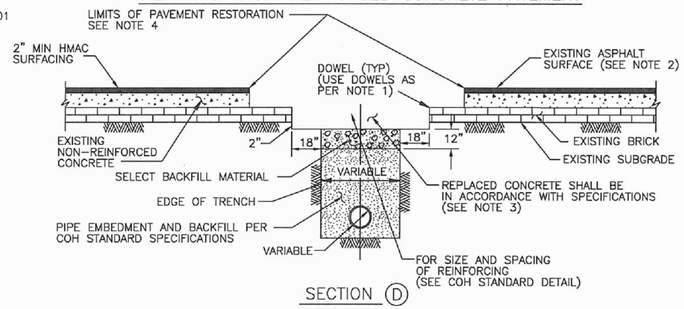


SECTION (C)

REPAIR OF NON–REINFORCED CONCRETE PAVEMENT

NOTE:

1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C–C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED REPLACE WITH SAME THICKNESS OF HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02751–01 FOR REINFORCING STEEL REQUIREMENT
4. REFER TO STANDARD DETAIL 02951–01 FOR PAVEMENT RESTORATION LIMITS.



SECTION (D)

REPAIR OF NON–REINFORCED CONCRETE PAVEMENT WITH BRICK

PAVEMENT REPAIR DETAILS FOR STREET CUTS – NON REINFORCED CONCRETE AND BRICK PAVEMENT
NTS

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STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS
– SHEET 15 OF 17

WBS NUMBER
WBS. NO. R–002011–0089–4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **380** OF 391

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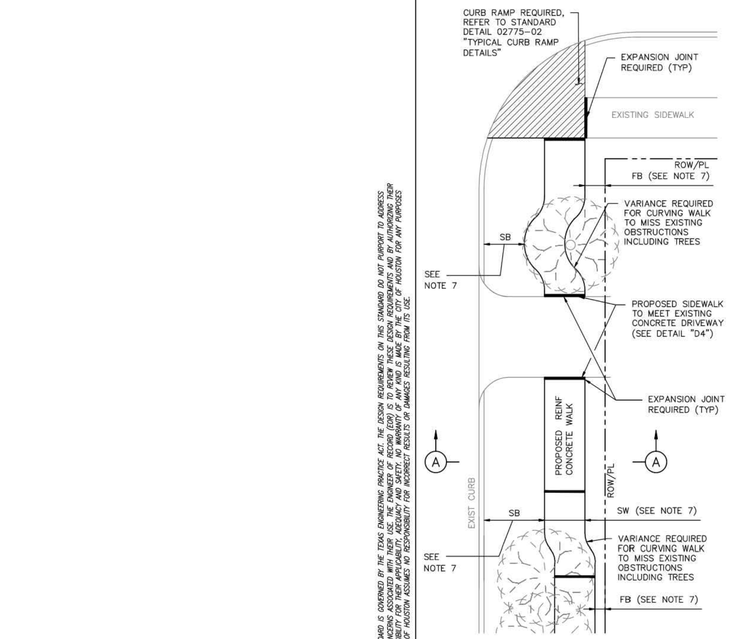
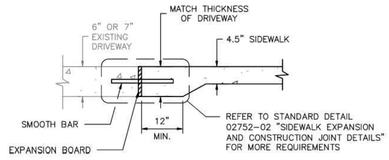


PLAN VIEW

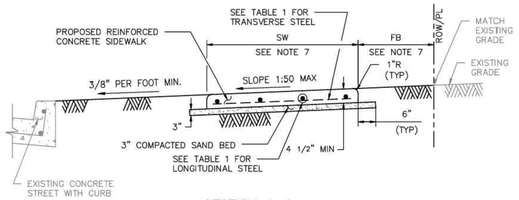


DETAIL D4
DRIVEWAY/SIDEWALK HEADER

TABLE 1

REINFORCING STEEL INFORMATION
FOR 4 ½ " THICK SIDEWALKS
EXPANSION JOINT SPACING = 40 FT
f_c' = 3,500 PSI AND fy = 60,000 PSI
REFER TO CONTRACT DRAWINGS FOR SIDEWALKS WIDER THAN 6 FEET.

SIDEWALK THICKNESS (IN)	SIDEWALK WIDTH (FT)	LONGITUDINAL STEEL			TRANSVERSE STEEL #3 BARS SPACING (IN)
		#3 BARS			
		NO. OF BARS	SPACING (IN)	END BAR SPACING (IN)	
4.5	5	3	27	3	48
4.5	6	4	22	3	48



SECTION A–A

NOTES:

1. 6X6 – W2.9XW2.9 WELDED WIRE FABRIC MAY BE USED IN LIEU OF THE REINFORCING STEEL GIVEN IN TABLE 1.
2. REINFORCED CONCRETE SIDEWALKS THRU DRIVEWAYS OPENINGS SHALL BE EITHER 6" THICK OR 7" THICK AS SPECIFIED ON 6" STABILIZED SUBGRADE. FOR THE REINFORCING STEEL REQUIREMENTS, SEE CITY OF HOUSTON STANDARD DETAILS 02754-01A, 02754-01B, 02754-03, AND 02754-04.
3. MAXIMUM SPACING FOR EXPANSION JOINTS SHALL BE 40 FEET.
4. CONTRACTOR SHALL CONSTRUCT SIDEWALK IN A MANNER NOT TO BLOCK THE NATURAL DRAINAGE FROM ADJACENT PROPERTY.
5. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
6. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON UNLESS NOTED OTHERWISE.
7. REFER TO CONTRACT DRAWINGS FOR SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

TYPICAL SIDEWALK LAYOUT AND DETAILS FOR STREETS WITH CURBS
(SCALE: NOT TO SCALE)

APPROVED BY:

DocuSigned by: Sukul Tanwar — CITY ENGINEER
DocuSigned by: HANG NGUYEN — CITY TRAFFIC ENGINEER
DocuSigned by: Carl Haddock — DIRECTOR OF HPW

EFF DATE: NOV-27-2023 | DWG NO: 02775-01

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORING THEIR SEAL AND SIGNATURE ON THE CONSTRUCTION PLANS ASSUMES ALL RESPONSIBILITY FOR THE DESIGN. THE USE OF THIS STANDARD IS AT THE SOLE RISK OF THE PARTY USING OR RELYING ON IT FOR ANY PURPOSE WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

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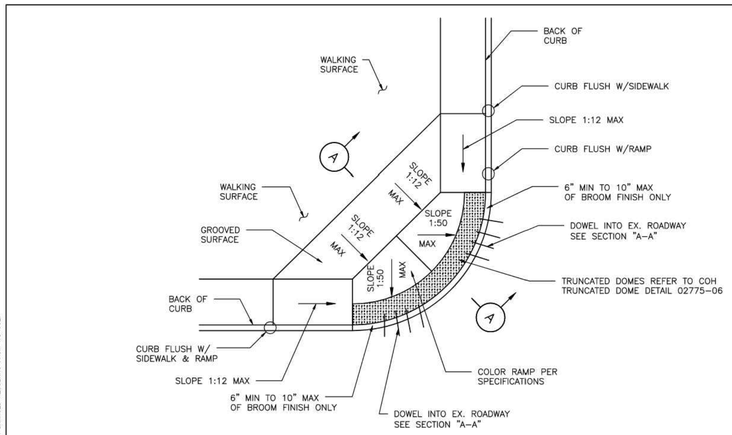
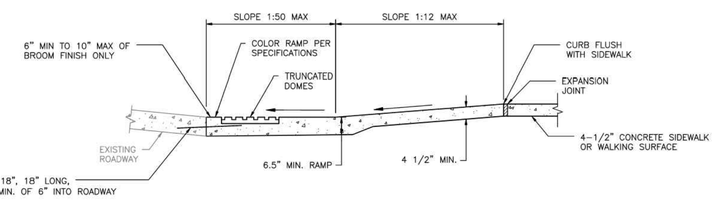


PLAN



SECTION A–A

NOTES:

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOUSTON PUBLIC WORKS STANDARDS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:12 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.
3. THIS STANDARD DETAIL SHALL BE USED ONLY IF THE ROADWAY GEOMETRIC DOESN'T ALLOW STANDARD DETAILS 02775-02, 02775-03, AND 02775-09 TO BE USED.
4. THIS STANDARD DETAIL SHALL NOT BE USED IN LIEU OF STANDARD DETAILS 02775-02, 02775-03, AND 02775-09 UNLESS APPROVED BY THE CITY.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS STANDARD

COMMERCIAL & HIGH DENSITY CONDITIONS CURB RAMP DETAILS
(SCALE: NOT TO SCALE)

APPROVED BY:

DocuSigned by: Sukul Tanwar — CITY ENGINEER
DocuSigned by: HANG NGUYEN — CITY TRAFFIC ENGINEER
DocuSigned by: Carl Haddock — DIRECTOR OF HPW

EFF DATE: NOV-27-2023 | DWG NO: 02775-05

DISCLAIMER:
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TBPE REG NO: F-4528

STATE OF TEXAS — MAUREEN GONZALEZ — 143557 — LICENSED PROFESSIONAL ENGINEER — 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 16 OF 17

WBS NUMBER	
WBS. NO. R-002011-0089-4	
DRAWING SCALE	
NONE	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **381** OF 391	

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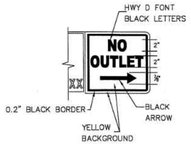
POST MOUNTED STREET NAME SIGN W/ NO OUTLET SIGN

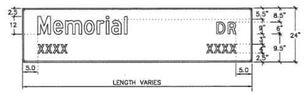




D3 - POST MOUNTED STREET NAME SIGN



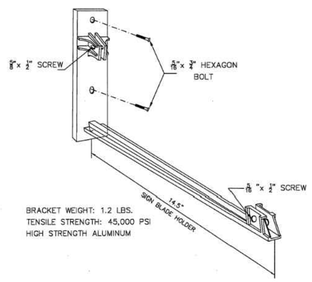
OVERHEAD STREET NAME SIGN DETAIL



D3 - STREET NAME SIGN

	POST-MOUNTED SIGN	OVERHEAD SIGN
HEIGHT	9"	24"
LENGTH	30" MIN. 48" MAX. 6" INCREMENTS OF LENGTH	10' MAX. 2' INCREMENT OF LENGTH
THICKNESS	0.125"	0.080"
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209)	
SIGN FACE MATERIALS	GREEN FILM OVER DIAMOND GRADE VIP SHEETING	
LEGENDS AND SYMBOLS	HIGHWAY GOTHIC SERIES D (USUAL) HIGHWAY GOTHIC SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK	
COLOR	LETTERS-WHITE REFLECTIVE BORDER-WHITE REFLECTIVE BACKGROUND-GREEN REFLECTIVE	

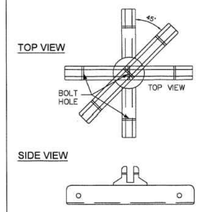
SIGNAL POLE MOUNTING DETAIL



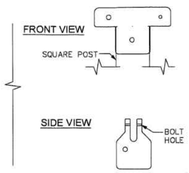
NOTES:

- TYPICAL SIGN PLATE SHOULD BE 30" MAX.
- LONGER SIGN PLATE MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER.

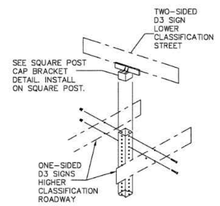
45°/90° CROSS PIECE SIGN BRACKET



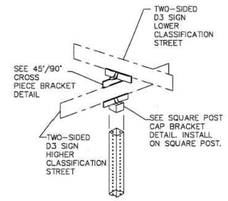
SQUARE POST CAP BRACKET DETAILS



D3 SIGNS GREATER THAN 42" PLATES IN LENGTH

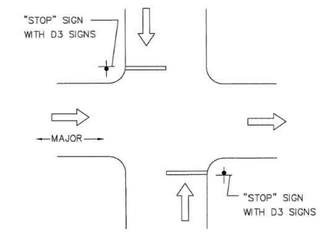


D3 SIGNS LESS THAN OR EQUAL TO 42" PLATES IN LENGTH

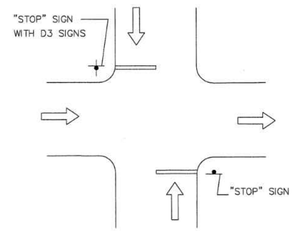


CITY OF HOUSTON HOUSTON PUBLIC WORKS	
STREET NAME SIGN AND SIGN MOUNTING (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01509-02

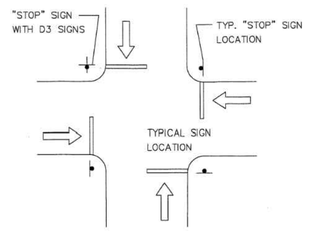
TYPICAL SIGN PLACEMENT



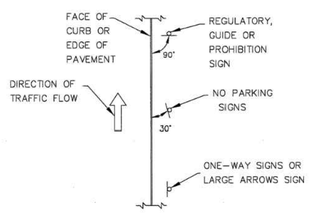
TWO-WAY STOP
AND ONE-WAY OPERATION
ON MAJOR/LOCAL INTERSECTION



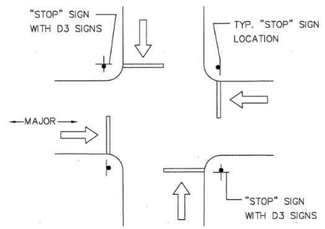
TWO-WAY STOP
AND ONE-WAY OPERATION
ON LOCAL/LOCAL INTERSECTION



FOUR-WAY STOP CONTROL
ON LOCAL/LOCAL INTERSECTION



MAST ARM INSTALLATION
REFER TO TRAFFIC SIGNAL DETAILS
FOR ADDITIONAL INFORMATION.



FOUR-WAY STOP CONTROL
ON MAJOR/LOCAL INTERSECTION

CITY OF HOUSTON HOUSTON PUBLIC WORKS	
TYPICAL SIGN PLACEMENT (NOT TO SCALE)	
CITY TRAFFIC ENGINEER CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2018	DWG NO: 01509-04

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AMANI ENGINEERING, INC.
8313 SOUTHWEST FREEWAY
SUITE 100
HOUSTON, TEXAS 77074
TEL: (713) 270-5700
TBPE REG NO: F-4528

STATE OF TEXAS
MAUREEN GONZALEZ
143557
LICENSED
PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P-5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

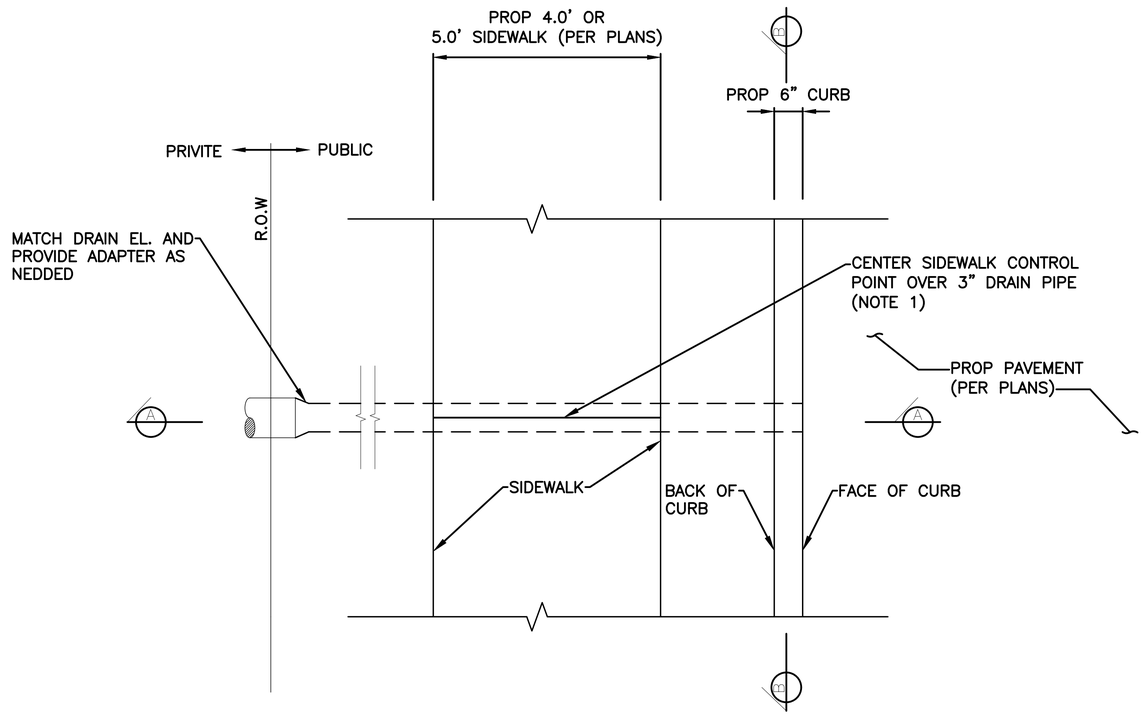
NEIGHBORHOOD SEWER
SYSTEM IMPROVEMENTS, AS069

PAVEMENT DETAILS – SHEET 17 OF 17

WBS NUMBER
WBS. NO. R-002011-0089-4
DRAWING SCALE
NONE
CITY OF HOUSTON PM
ROBERT MILES, P.E.
SHEET NO. **382** OF 391

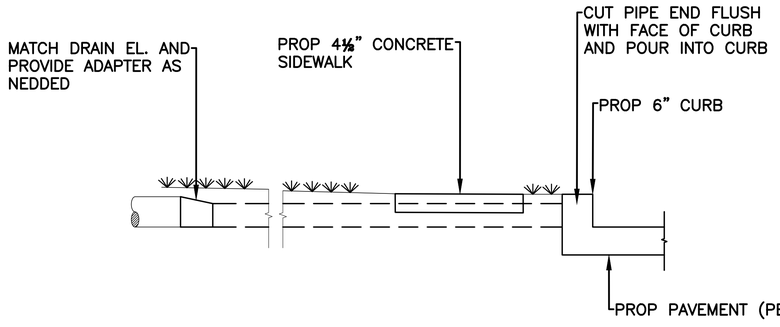
C:\pw_working\othon-pw-01\jason.garza\dms22441\DETL_PVMT_17.dwgDETL_PVMT_09 Jun 17 , 2026 - 11:40AM Jgarza

0 10 20 40

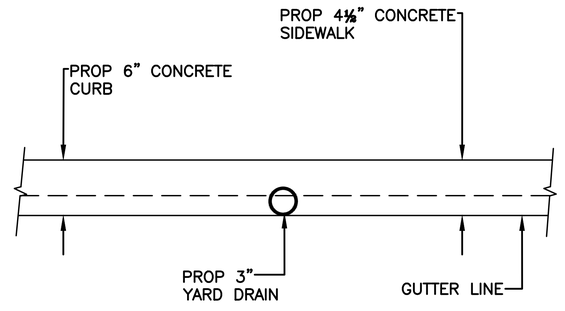


NOTES:

1. IN THE EVENT OF MULTIPLE YARD DRAINING IN CLOSE PROXIMITY, CENTER THE SIDEWALK JOINT AT THE CENTER OF THE ADJACENT DRAINS
2. 3" YARD DRAIN COUPLINGS SHALL BE SCHEDULE 40 PVC



SECTION A–A



SECTION B–B

YARD DRAIN DETAIL
N.T.S

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

REV.	DATE	DESCRIPTION	BY

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR EASEMENTS CALL THE LONE STAR NOTIFICATION 713–223–4567.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713–207–2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Signature does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

Centerpoint Energy Natural Gas Utilities Shown.
(Gas service lines are not shown.) This signature not to be used for conflict verification.
Signature valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities – not to be used for conflict verification.)
Signature valid for six months.

Date:

APPROVED FOR AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES ONLY. SIGNATURE VALID FOR ONE YEAR.

CABLE COMPANY

OTHON

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TBPE REG NO: F–4528

STATE OF TEXAS · MAUREEN GONZALEZ · 143557 · LICENSED PROFESSIONAL ENGINEER · 07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

YARD DRAIN DETAILS DRAWINS

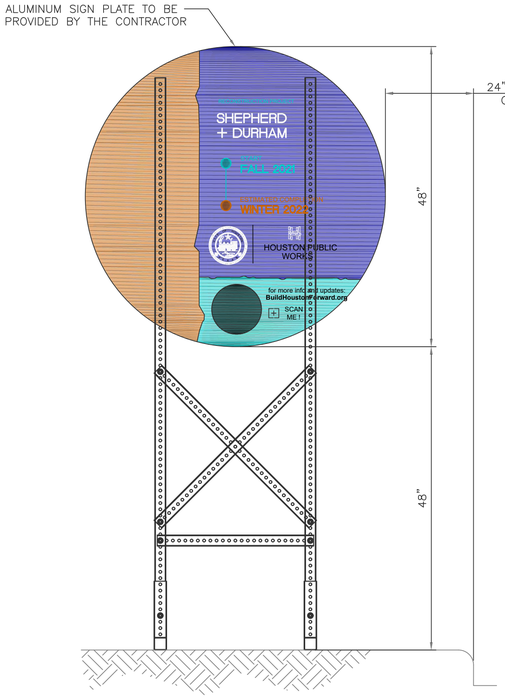
WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
VERT. 1"=2' HORIZ. 1"=20'	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **383** OF 391	

C:\pw_working\othon–pw–01\jason.garza\dms22441\YARD DRAIN DETAILS DRAWINS.dwgDETAIL 1 Jun 17 , 2026 – 2:05PM Jgarza

DocuSign Envelope ID: CB71C116-B716-4899-A5EE-0D2F2CC55AF6

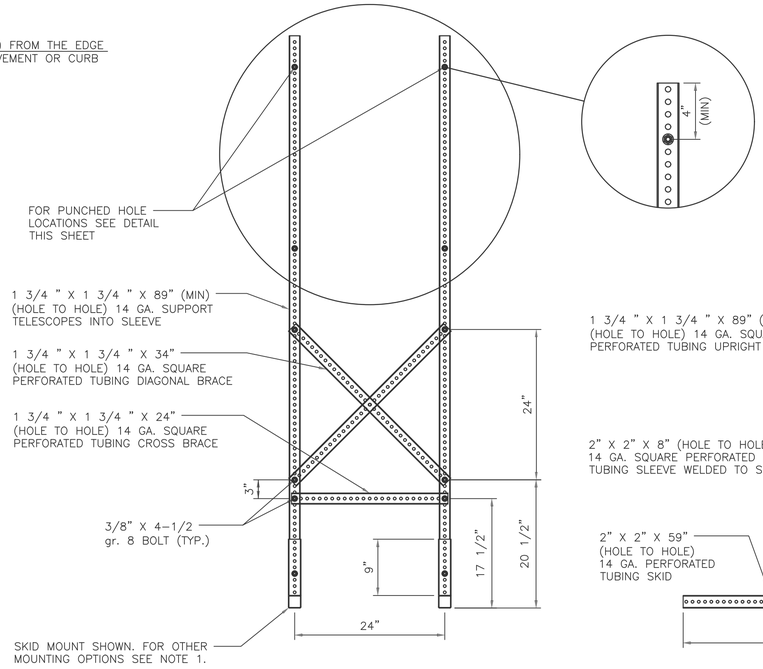
C:\pw_working\othon-pw-01\jason.garza\dms22441\CONSTRUCTION SIGN STANDARD.dwgDETL_MISC_02 Jun 17 , 2026 - 2:03PM Jgarza

DISCLAIMER:
THE USE OF THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE; ACCEPTS RESPONSIBILITY FOR THEIR APPLICABILITY; ADEQUACY AND SAFETY. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

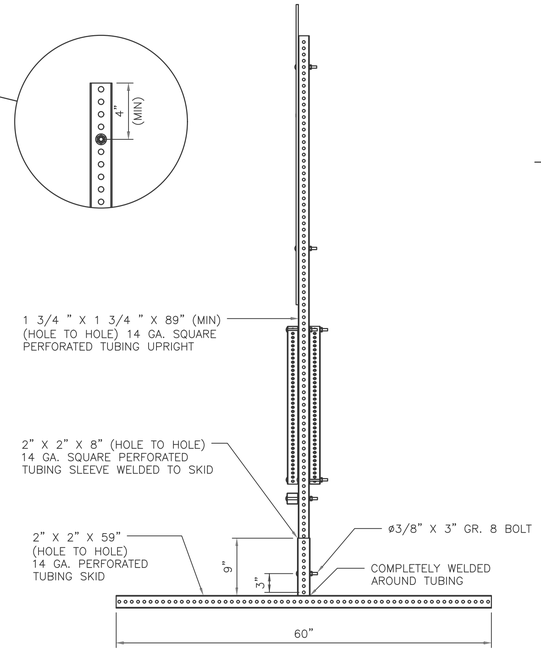


FRONT VIEW

PROJECT SIGN – 48"

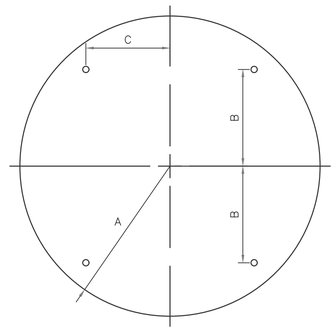


FRONT VIEW



SIDE VIEW

SKID MOUNTED SUPPORTS FOR 48" PROJECT SIGN



CIRCLE

A	B	C	T
24"	15"	12"	0.080"

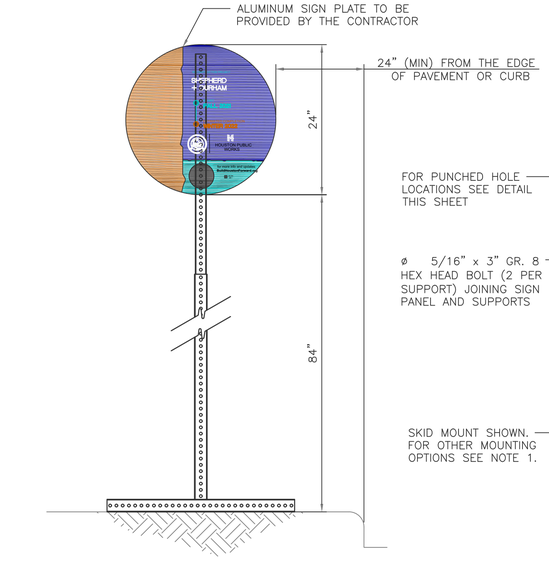
48" SIGN PLATE HOLE DETAIL

BENCHMARK:

CITY OF HOUSTON MONUMENT 5356/0215, LOCATED AT SOUTHWEST CORNER OF FAIRVIEW STREET AND HAZARD STREET INTERSECTION. ELEV.=51.74 FEET (NAVD88, GEO12A)

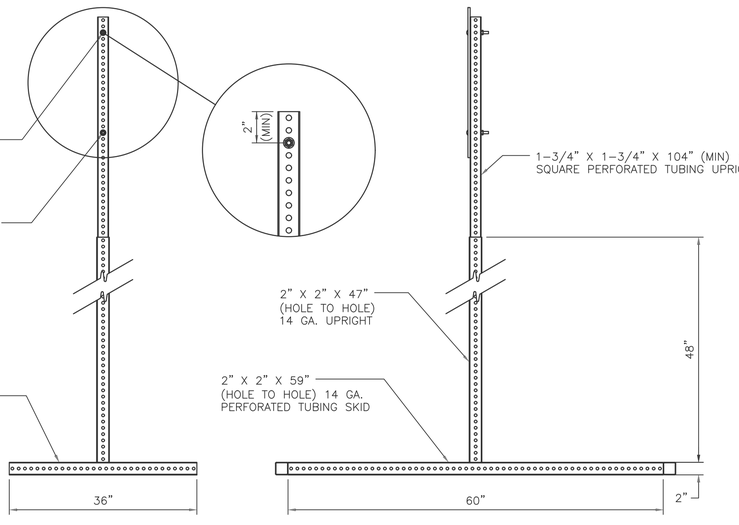
NOTES

1. ALLOWABLE POST INSTALLATION METHODS ARE: CONCRETE FOOTING, SURFACE MOUNTING, SKID MOUNTING AND PILE DRIVEN POSTS.
2. FOR POST INSTALLATION WITH CONCRETE FOOTING, REFER TO DETAIL 01554–01.
3. FOR SURFACE MOUNTED POST INSTALLATION, REFER TO DETAIL 01554–02.
4. FOR SKID MOUNTING REQUIREMENTS REFER TO SPECIFICATION 01582.
5. PILE DRIVEN POSTS MUST BE DRIVEN TO A MINIMUM DEPTH OF 4–FEET INTO EXISTING GROUND.
6. LAYOUT, TEXT SIZE, AND OVERALL DESIGN OF THE SIGN WILL BE THE RESPONSIBILITY OF THE BUILD HOUSTON COORDINATOR.
7. ALL SIGN POSTS, SIGN TUBING, AND SIGN FASTENERS SHALL BE GALVANIZED STEEL PER SPECIFICATION 01582.



FRONT VIEW

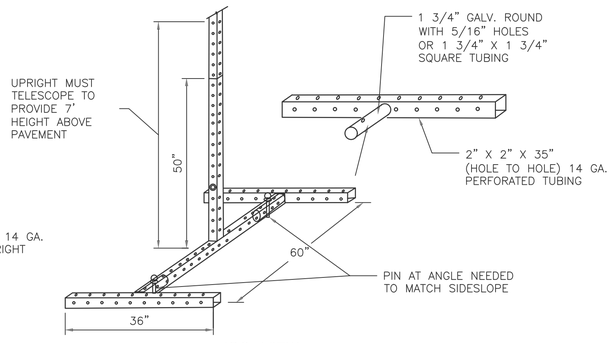
PROJECT SIGN – 24"



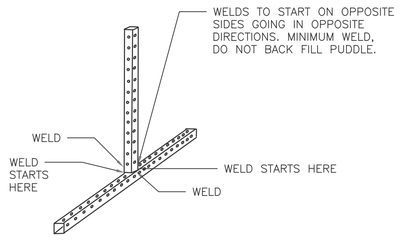
FRONT VIEW

SIDE VIEW

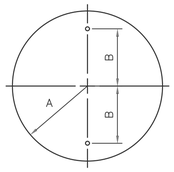
SKID MOUNTED SUPPORTS FOR 24" PROJECT SIGN



ISO VIEW



ISO VIEW



A	B	C
12"	8"	0.080"

24" SIGN PLATE HOLE DETAIL

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PROFESSIONAL ENGINEER
07/29/2026

SURVEYED BY: AMANI ENGINEERING, INC.
FB No. P–5723

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

NEIGHBORHOOD SEWER SYSTEM IMPROVEMENTS, AS069

CONSTRUCTION SIGN STANDARD

WBS NUMBER	
WBS. NO. R–002011–0089–4	
DRAWING SCALE	
N.T.S.	
CITY OF HOUSTON PM	
ROBERT MILES, P.E.	
SHEET NO. **384** OF 391	