

# Addendum 1

**City of Canton, Ohio**  
Purchasing Department  
218 Cleveland Ave. SW, 4<sup>th</sup> floor  
Canton, Ohio 44702

Construction Administration and Management: STA – Colonial Blvd. NE PID No.111059

**Item/Project**

Engineering Department

**Responsible Department**

4:00:00 PM, 7/7/2022

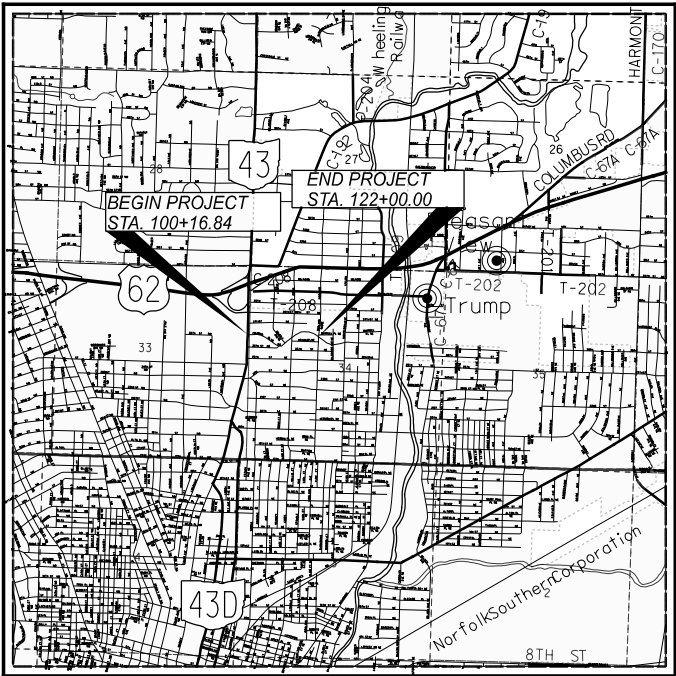
**Letters of Interest Due On or Before**

**GP1206 STA-Colonial Boulevard NE, Phase 1, PID 111059**  
**Engineering Department**

Final Tracings have been posted as part of this Addendum 1 for reference for the Construction Administration and Management: STA – Colonial Blvd. NE Project, PID No.111059.

Thank you.





LOCATION MAP

LATITUDE: 40°49'30" N LONGITUDE: 81°21'45" W



PORTION TO BE IMPROVED	-----	=====
INTERSTATE HIGHWAY	-----	=====
FEDERAL ROUTES	-----	=====
STATE ROUTES	-----	=====
COUNTY & TOWNSHIP ROADS	-----	=====
OTHER ROADS	-----	=====

DESIGN DESIGNATION

CURRENT ADT (2022)	-----	N/A
DESIGN YEAR ADT (2042)	-----	N/A
DESIGN HOURLY VOLUME (2042)	-----	N/A
DIRECTIONAL DISTRIBUTION	-----	N/A
TRUCKS (24 HOUR B&C)	-----	N/A
DESIGN SPEED	-----	25 MPH
LEGAL SPEED	-----	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		
07 - LOCAL ROAD (URBAN)		
NHS PROJECT	-----	NO

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

DBE GOAL

8%

UNDERGROUND UTILITIES

Contact Two Working Days  
Before You Dig

  
Before You Dig

OHIO811. 8-1-1, or 1-800-362-2764  
(Non members must be called directly)

PLAN PREPARED BY:



ENGINEER'S SEAL:

STATE OF OHIO

JENNIFER MARIE KELLEY  
E-79592

REGISTERED PROFESSIONAL ENGINEER

SIGNED:   
DATE: 2/10/2022

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

STA-COLONIAL BOULEVARD NE  
PHASE 1, G.P. 1206, TAG 624

CITY OF CANTON

STARK COUNTY

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	01/21/22	WQ-1.1	01/18/13			CITY OF CANTON STANDARD CONSTRUCTION DRAWINGS	800-2019 1/21/22
BP-4.1	07/19/13	WQ-1.2	01/15/16				832 10/19/18
BP-5.1	01/21/22						895 4/18/14
BP-7.1	01/21/22	RM-2.1	07/19/13			12 02/26/21 32 03/02/21	
						13 02/26/21 33 03/02/21	
						19 02/26/21 40 03/04/21	
CB-3	07/16/21	TC-41.20	10/18/13			21 02/26/21 41 03/04/21	
CB-3A	07/16/21	TC-41.30	10/18/13			24 02/26/21 42 03/04/21	
CB-6	01/21/22	TC-41.40	10/18/13			27 02/26/21 61 03/04/21	
		TC-41.50	10/18/13			28 02/26/21 62 03/04/21	
LA-1.1	10/15/10	TC-42.20	10/18/13			29 03/01/21 63 03/04/21	
LA-1.2	01/16/09	TC-52.10	10/18/13			30 03/01/21 64 03/04/21	
		TC-52.20	01/15/21				65 03/04/21
MH-3	07/16/21	TC-71.10	07/16/21				
DM-1.1	07/17/20						
DM-1.2	07/16/21						

FEDERAL PROJECT NUMBER

E191 (613)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

0.4 MILES OF ROADWAY RECONSTRUCTION ALONG COLONIAL BOULEVARD NE BETWEEN MARKET AVENUE AND ROWLAND AVENUE. THE PROJECT CONSISTS OF PAVEMENT RECONSTRUCTION, REPLACEMENT OF EXISTING SIDEWALK AND CURB, A NEW DUAL MINI-ROUNDABOUT AT GIBBS AVENUE NE, AND THE CONSTRUCTION OF A SHARED USE PATH IN THE BOULEVARD. ADA, LIGHTING, AND DRAINAGE FACILITIES WILL ALSO BE UPGRADED AS PART OF THIS PROJECT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	4.69 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.94 ACRES

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 12, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DAN J. MOEGLIN, P.E., S.I.  
CITY OF CANTON, CITY ENGINEER

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ TYLER CONVERSE  
CANTON WATER DEPARTMENT SUPERINTENDENT  
(FOR WATERLINE)

**CURVE 1**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 104+29.24  
Δ = 40°27'57" RT  
Dc = 13°28'53"  
R = 425.00'  
T = 156.65'  
L = 300.16'  
E = 27.95'

**CURVE 4**  
@ CONST. 26TH ST.  
P.I. = Sta. 13+07.54  
Δ = 54°33'59" LT  
Dc = 95°29'35"  
R = 60.00'  
T = 30.95'  
L = 57.14'  
E = 7.51'

**CURVE 2**  
@ EX. R/W COLONIAL BLVD.  
P.I. = Sta. 104+21.87  
Δ = 40°27'57" RT  
Dc = 14°08'50"  
R = 405.00'  
T = 149.27'  
L = 286.04'  
E = 26.63'

**CURVE 5**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 109+90.40  
Δ = 84°23'01" LT  
Dc = 38°11'50"  
R = 150.00'  
T = 135.97'  
L = 220.92'  
E = 52.46'

**CURVE 3**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 104+14.50  
Δ = 40°27'57" RT  
Dc = 14°52'55"  
R = 385.00'  
T = 141.90'  
L = 271.91'  
E = 25.32'

**CURVE 6**  
@ EX. R/W COLONIAL BLVD.  
P.I. = Sta. 109+94.41  
Δ = 84°23'01" LT  
Dc = 33°42'12"  
R = 170.00'  
T = 154.10'  
L = 250.37'  
E = 59.45'

**CURVE 7**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 109+98.41  
Δ = 84°23'01" LT  
Dc = 30°09'20"  
R = 190.00'  
T = 172.23'  
L = 279.83'  
E = 66.44'

LEGEND

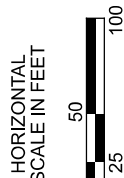
- BRICK PARKING AREA
- CONCRETE HEADER
- LIMITS OF PLANING AND RESURFACING

END WORK  
STA. 12+30.00  
@ EX. R/W 26TH ST.

- CENTERLINE INTERSECTIONS**
- (A) STA. 100+00.00 @ CONST. COLONIAL BLVD. WB = STA. 11+55.50 @ EX. R/W MARKET AVE.
- (B) STA. 100+00.00 @ EX. R/W COLONIAL BLVD. = STA. 11+75.00 @ EX. R/W MARKET AVE.
- (C) STA. 100+00.00 @ CONST. COLONIAL BLVD. EB = STA. 11+95.00 @ EX. R/W MARKET AVE.
- (D) STA. 108+55.00 @ EX. R/W COLONIAL BLVD. = STA. 13+59.83 @ CONST. 26TH ST.
- (E) STA. 108+42.60 @ CONST. COLONIAL BLVD. EB = STA. 13+39.83 @ CONST. 26TH ST.
- (F) STA. 109+31.60 @ EX. R/W COLONIAL BLVD = STA. 14+25.46 @ EX. R/W 26TH ST.
- (G) STA. 109+16.40 @ CONST. COLONIAL BLVD. EB = STA. 13+95.85 @ EX. R/W 26TH ST.

BENCHMARKS							DESCRIPTION
POINT NO.	STATION	OFFSET	ROADWAY	NORTHING	EASTING	ELEV.	
BM #1	114+14.09	34.99' LT.	EX. COLONIAL BLVD.	424327.767	2283641.424	1140.83	CHISELED X ON THE NORTH FLANGE BOLT OF HYDRANT AT THE NORTHWEST CORNER OF GIBBS AVE. AND COLONIAL BLVD.
BM #2	122+43.07	55.79' RT.	EX. COLONIAL BLVD.	424298.313	2284383.007	1144.63	ARROW FLANGE BOLT ON HYDRANT AT THE SOUTHWEST CORNER OF ROWLAND AVE. AND COLONIAL BLVD.

PRIMARY PROJECT CONTROL INFORMATION						
POINT NUMBER	GRID COORDINATES U.S. SURVEY FEET		GROUND COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING	NORTHING	EASTING		
CP #100	423948.1723	2285870.8819	423991.1522	2286102.6235	1059.304	IRON PIN
CP #101	424380.4373	2285883.8337	424423.4610	2286115.5766	1052.648	IRON PIN
CP #102	424082.2182	2284181.1296	424125.2117	2284412.6998	1145.688	IRON PIN
CP #103	424524.3183	2284191.9323	424567.3565	2284423.5036	1136.868	IRON PIN
CP #104	424512.0673	2282199.0368	424555.1044	2282430.4061	1116.256	IRON PIN
CP #105	424125.0436	2282190.2902	424168.0414	2282421.6586	1110.777	IRON PIN
CP #106	424092.4206	2285801.0955	424135.4151	2286032.8300	1057.163	IRON PIN
CP #107	424139.2128	2285273.9215	424182.2121	2285505.6026	1093.373	IRON PIN
CP #108	424147.8581	2284899.4112	424190.8582	2285131.0543	1124.721	IRON PIN
CP #109	424029.2252	2284572.4114	424072.2133	2284804.0213	1146.671	IRON PIN
CP #110	424155.3394	2284385.0170	424198.3402	2284616.6080	1148.161	IRON PIN
CP #111	424337.6084	2284201.5204	424380.6277	2284433.0927	1142.370	IRON PIN
CP #112	424388.9858	2283871.2867	424432.0103	2284102.8255	1138.582	IRON PIN
CP #113	424365.3271	2283580.6946	424408.3493	2283812.2041	1140.552	IRON PIN
CP #114	424160.6346	2283398.7088	424203.6360	2283630.1997	1138.478	IRON PIN
CP #115	424003.0206	2283036.8826	424046.0060	2283268.3369	1122.959	IRON PIN
CP #116	424321.5615	2282592.8351	424364.5792	2282824.2443	1117.523	IRON PIN
CP #117	424308.6743	2282195.9264	424351.6908	2282427.2954	1113.410	IRON PIN



SCHEMATIC PLAN  
STA. 100+00 TO STA. 111+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

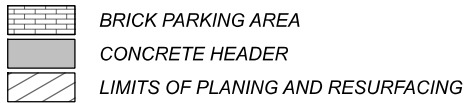
P.2

TOTAL

168

NOTE:  
FOR ROUNDABOUT CENTERLINE AND CURVE DATA SEE SHEET 89

## LEGEND

HORIZONTAL  
SCALE IN FEET  
0 50 100SCHEMATIC PLAN  
STA. 111+50 TO STA. 124+50

**CURVE 8**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 111+88.41  
 $\Delta = 06^{\circ}16'18''$  RT  
Dc =  $13^{\circ}58'28''$   
R = 410.00'  
T = 22.46'  
L = 44.88'  
E = 0.61'

**CURVE 9**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 112+13.49  
 $\Delta = 09^{\circ}49'39''$  LT  
Dc =  $11^{\circ}27'33''$   
R = 500.00'  
T = 42.99'  
L = 85.76'  
E = 1.84'

**CURVE 10**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 113+01.39  
 $\Delta = 29^{\circ}14'46''$  RT  
Dc =  $28^{\circ}38'52''$   
R = 200.00'  
T = 52.18'  
L = 102.09'  
E = 6.70'

**CURVE 11**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 113+06.43  
 $\Delta = 59^{\circ}05'29''$  RT  
Dc =  $64^{\circ}44'28''$   
R = 88.50'  
T = 50.16'  
L = 91.27'  
E = 13.23'

**CURVE 12**  
@ CONST. GIBBS AVE. S  
P.I. = Sta. 112+30.58  
 $\Delta = 22^{\circ}13'20''$  RT  
Dc =  $63^{\circ}39'43''$   
R = 90.00'  
T = 17.68'  
L = 34.91'  
E = 1.72'

**CURVE 13**  
@ CONST. GIBBS AVE. N  
P.I. = Sta. 114+74.64  
 $\Delta = 11^{\circ}47'00''$  LT  
Dc =  $38^{\circ}11'50''$   
R = 150.00'  
T = 15.48'  
L = 30.85'  
E = 0.80'

**CURVE 14**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 114+98.62  
 $\Delta = 04^{\circ}30'12''$  LT  
Dc =  $64^{\circ}44'28''$   
R = 88.50'  
T = 3.48'  
L = 6.96'  
E = 0.07'

**CURVE 15**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 114+98.62  
 $\Delta = 26^{\circ}05'07''$  LT  
Dc =  $64^{\circ}44'28''$   
R = 88.50'  
T = 20.50'  
L = 40.29'  
E = 2.34'

**CURVE 16**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 117+11.80  
 $\Delta = 38^{\circ}44'44''$  RT  
Dc =  $10^{\circ}25'03''$   
R = 550.00'  
T = 193.39'  
L = 371.93'  
E = 33.01'

**CURVE 17**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 119+83.01  
 $\Delta = 87^{\circ}57'10''$  RT  
Dc =  $10^{\circ}19'25''$   
R = 550.00'  
T = 535.52'  
L = 851.96'  
E = 216.23'

**CURVE 18**  
@ EX. R/W COLONIAL BLVD.  
P.I. = Sta. 119+92.69  
 $\Delta = 62^{\circ}26'07''$  RT  
Dc =  $10^{\circ}46'12''$   
R = 532.00'  
T = 322.41'  
L = 579.72'  
E = 90.07'

**CURVE 19**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 120+76.20  
 $\Delta = 35^{\circ}39'08''$  RT  
Dc =  $09^{\circ}54'46''$   
R = 578.00'  
T = 185.87'  
L = 359.66'  
E = 26.15'

**CURVE 20**  
@ CONST. ROWLAND AVE. N  
P.I. = Sta. 14+10.05  
 $\Delta = 31^{\circ}38'47''$  RT  
Dc =  $95^{\circ}29'35''$   
R = 100.00'  
T = 17.00'  
L = 33.14'  
E = 2.36'

**CURVE 21**  
@ CONST. WARRICK PL.  
P.I. = Sta. 10+47.65  
 $\Delta = 18^{\circ}06'03''$  LT  
Dc =  $57^{\circ}17'45''$   
R = 60.00'  
T = 15.93'  
L = 31.59'  
E = 1.26'

**CURVE 22**  
@ CONST. ROWLAND AVE. S  
P.I. = Sta. 15+88.74  
 $\Delta = 42^{\circ}47'45''$  LT  
Dc =  $95^{\circ}29'35''$   
R = 60.00'  
T = 23.51'  
L = 44.82'  
E = 4.44'

**CENTERLINE INTERSECTIONS**

(H) STA. 111+85.61 @ CONST. COLONIAL BLVD. WB =  
STA. 4+42.21 @ EX. R/W BEVERLY AVE.

(I) STA. 112+02.85 @ EX. R/W COLONIAL BLVD. =  
STA. 4+61.83 @ EX. R/W BEVERLY AVE.

(J) STA. 113+17.26 @ EX. R/W COLONIAL BLVD. =  
STA. 113+04.08 @ CONST. COLONIAL BLVD. WB

(K) STA. 113+66.72 @ EX. R/W COLONIAL BLVD. =  
STA. 14+08.32 @ CONST. GIBBS AVE. S

(L) STA. 114+28.47 @ EX. R/W COLONIAL BLVD. =  
STA. 13+73.72 @ EX. R/W GIBBS AVE.

(M) STA. 14+65.99 @ EX. R/W GIBBS AVE. =  
STA. 30+00.00 @ EX. R/W HAVANA PL.

(N) STA. 114+62.88 @ EX. R/W COLONIAL BLVD. =  
STA. 13+52.44 @ CONST. GIBBS AVE. N

(O) STA. 121+80.00 @ EX. R/W COLONIAL BLVD. =  
STA. 14+74.24 @ CONST. ROWLAND AVE. N

(P) STA. 121+77.10 @ CONST. COLONIAL BLVD. WB =  
STA. 14+51.24 @ CONST. ROWLAND AVE. N

(Q) STA. 14+28.15 @ EX. R/W ROWLAND AVE. =  
STA. 10+00.00 @ EX. R/W WARRICK PL.

(R) STA. 9+94.67 @ CONST. WARRICK PL. =  
STA. 14+12.00 @ CONST. ROWLAND AVE. N

(S) STA. 9+97.80 @ CONST. WARRICK PL. =  
STA. 14+12.66 @ EX. R/W ROWLAND AVE.

(T) STA. 122+03.40 @ CONST. COLONIAL BLVD. WB =  
STA. 14+60.16 @ EX. R/W ROWLAND AVE.

(U) STA. 122+21.07 @ EX. R/W COLONIAL BLVD. =  
STA. 14+88.26 @ EX. R/W ROWLAND AVE.

(V) STA. 122+39.11 @ CONST. COLONIAL BLVD. EB =  
STA. 15+16.98 @ EX. R/W ROWLAND AVE.

(W) STA. 122+88.00 @ EX. R/W COLONIAL BLVD. =  
STA. 15+12.60 @ CONST. ROWLAND AVE. S

(X) STA. 16+44.42 @ EX. R/W ROWLAND AVE. =  
STA. 37+24.38 @ EX. R/W HAVANA PL.

(Y) STA. 113+50.45 @ CONST. COLONIAL BLVD. WB =  
STA. 14+32.18 @ CONST. GIBBS AVE. S

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.3 168

**PROPOSED LEGEND**

- 1 ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (0.75" ROADWAY, 1.5" SHARED USE PATH)
- 2 ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (2.25")
- 3 ITEM 659 - SEEDING AND MULCHING
- 4 ITEM 204 - SUBGRADE COMPACTION  
ITEM 204 - PROOF ROLLING
- 5 ITEM 304 - AGGREGATE BASE (4")
- 6 ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- 7 ITEM 452 - 5.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- 8 ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN ( SEE DETAIL, THIS SHEET)
- 9 ITEM 609 - CURB, TYPE 3-B, AS PER PLAN (SEE DETAIL, SHEET 5)
- 10 ITEM 608 - 4" CONCRETE WALK
- 11 ITEM 301 - ASPHALT CONC. BASE, PG64-22 (6")
- 12 ITEM 407 - TACK COAT (APPLIED @ 0.06 GAL/SY IN FULL DEPTH PAVEMENT AREAS AND 0.09 GAL/SY IN RESURFACING AREAS)
- 13 ITEM 408 - PRIME COAT (APPLIED @ 0.40 GAL/SY)
- 14 ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS WITH 1" MAX. COMPACTED CONCRETE SAND ODOT 703.02 (ASTM C-33) SETTING BED W/ MORTAR OR  
ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: SIDEWALK BRICK PAVERS WITH 1" MAX. COMPACTED CONCRETE SAND ODOT 703.02 (ASTM C-33) SETTING BED W/ MORTAR
- 15 ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- 16 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3")

NOTE:  
IF MATERIAL THICKNESSES VARY BETWEEN THE STANDARD CONSTRUCTION DRAWINGS AND THE PLAN, REFER TO THE PAVEMENT BUILDUPS SHOWN ON THE TYPICAL SECTIONS (SHEETS 4-5).

**A** VARIES: 7.5' @ STA. 100+28.24 TO 5' @ STA. 100+48.24  
5': STA. 100+48.24 TO STA. 104+76.29  
4': STA. 104+76.29 TO STA. 105+34.35  
5.5': STA. 105+34.35 TO STA. 105+84.00  
5': STA. 105+84.00 TO STA. 107+70.50  
5.5': STA. 107+70.50 TO STA. 108+20.00  
5': STA. 108+20.00 TO STA. 111+19.73  
VARIES: 5' @ STA. 111+19.73 TO 10' @ STA. 111+39.73  
VARIES: 10.22' @ STA. 112+35.42 TO 13.17' @ STA. 113+29.03  
5': STA. 115+44.61 TO STA. 115+69.00  
VARIES: 7.5' @ 115+69.00 TO 5' @ STA. 117+08.00  
5': STA. 117+08.00 TO STA. 13+83.43 ROWLAND AVE. N

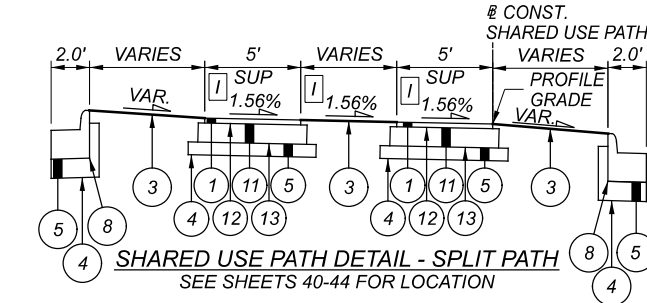
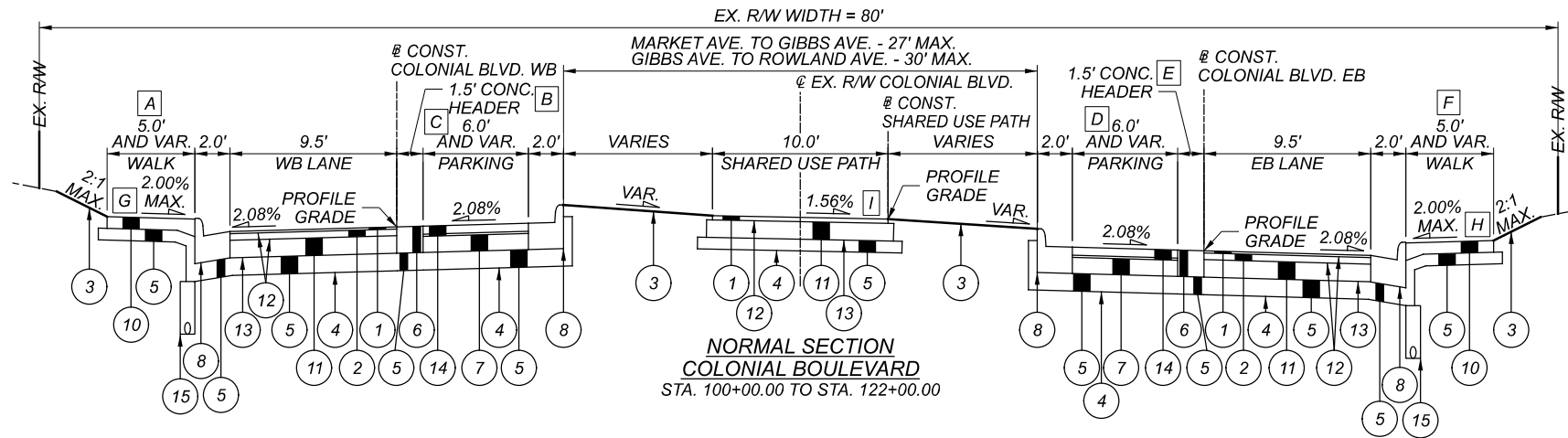
**B** 4.5': STA. 100+00.00 TO STA. 100+87.11  
VARIES: 4.5' @ STA. 100+87.11 TO 7.5' @ STA. 101+07.11  
1.5': STA. 101+07.11 TO STA. 101+29.89  
VARIES: 7.5' @ STA. 101+29.89 TO 4.5' @ STA. 101+49.89  
4.5': STA. 101+49.89 TO STA. 102+59.11  
VARIES: 4.5' @ STA. 102+59.11 TO 7.5' @ STA. 102+79.10  
1.5': STA. 102+79.10 TO STA. 103+62.91  
VARIES: 7.5' @ STA. 103+62.91 TO 4.5' @ STA. 103+82.88  
4.5': STA. 103+82.88 TO STA. 105+59.11  
VARIES: 4.5' @ STA. 105+59.11 TO 7.5' @ STA. 105+79.11  
1.5': STA. 105+79.11 TO STA. 106+01.89  
VARIES: 7.5' @ STA. 106+01.89 TO 4.5' @ STA. 106+21.89  
4.5': STA. 106+21.89 TO STA. 106+57.11  
VARIES: 4.5' @ STA. 106+57.11 TO 7.5' @ STA. 106+77.11  
1.5': STA. 106+77.11 TO STA. 107+22.89  
VARIES: 7.5' @ STA. 107+22.89 TO 4.5' @ STA. 107+42.89  
4.5': STA. 107+42.89 TO STA. 111+91.50  
0': STA. 111+91.50 TO STA. 116+04.24  
VARIES: 0' @ STA. 116+04.24 TO 7.5' @ STA. 116+24.21  
7.5': STA. 116+24.21 TO STA. 116+79.00  
1.5': STA. 116+79.00 TO STA. 117+70.89  
VARIES: 7.5' @ STA. 117+70.89 TO 4.5' @ STA. 117+90.87  
4.5': STA. 117+90.87 TO STA. 120+06.12  
VARIES: 4.5' @ STA. 120+06.12 TO 7.5' @ STA. 120+26.09  
1.5': STA. 120+26.09 TO STA. 120+71.91  
VARIES: 7.5' @ STA. 120+71.91 TO 4.5' @ STA. 120+91.88  
4.5': STA. 120+91.88 TO STA. 121+67.50

**C** 0': STA. 100+00.00 TO STA. 101+07.11  
6': STA. 101+07.11 TO STA. 101+29.89  
0': STA. 101+29.89 TO STA. 102+79.10  
6': STA. 102+79.10 TO STA. 103+62.91  
0': STA. 103+62.91 TO STA. 105+79.11  
6': STA. 105+79.11 TO STA. 106+01.89  
0': STA. 106+01.89 TO STA. 106+77.11  
6': STA. 106+77.11 TO STA. 107+22.89  
0': STA. 107+22.89 TO STA. 116+79.00  
6': STA. 116+79.00 TO STA. 117+70.89  
0': STA. 117+70.89 TO STA. 120+26.09  
6': STA. 120+26.09 TO STA. 120+71.91  
0': STA. 120+71.91 TO STA. 122+00.00

**D** 0': STA. 100+00.00 TO STA. 102+06.11  
6': STA. 102+06.11 TO STA. 102+51.89  
0': STA. 102+51.89 TO STA. 103+25.14  
6': STA. 103+25.14 TO STA. 103+49.86  
0': STA. 103+49.86 TO STA. 103+98.14  
6': STA. 103+98.14 TO STA. 104+22.86  
0': STA. 104+22.86 TO STA. 105+88.11  
6': STA. 105+88.11 TO STA. 106+10.89  
0': STA. 106+10.89 TO STA. 109+47.06  
6': STA. 109+47.06 TO STA. 109+69.94  
0': STA. 109+69.94 TO STA. 110+38.06  
6': STA. 110+38.06 TO STA. 110+83.92  
0': STA. 110+83.92 TO STA. 115+85.13  
6': STA. 115+85.13 TO STA. 116+09.36  
0': STA. 116+09.36 TO STA. 119+31.13  
6': STA. 119+31.13 TO STA. 119+79.87  
0': STA. 119+79.87 TO STA. 120+47.13  
6': STA. 120+47.13 TO STA. 121+19.87  
0': STA. 121+19.87 TO STA. 122+00.00

**E** 4.5': STA. 100+00.00 TO STA. 101+86.11  
VARIES: 4.5' @ STA. 101+86.11 TO 7.5' @ STA. 102+06.11  
1.5': STA. 102+06.11 TO STA. 102+51.89  
VARIES: 7.5' @ STA. 102+51.89 TO 4.5' @ STA. 102+71.89  
4.5': STA. 102+71.89 TO STA. 103+05.10  
VARIES: 4.5' @ STA. 103+05.10 TO 7.5' @ STA. 103+25.14  
1.5': STA. 103+25.14 TO STA. 103+49.86  
VARIES: 7.5' @ STA. 103+49.86 TO 4.5' @ STA. 103+69.90  
4.5': STA. 103+69.90 TO STA. 103+78.10  
VARIES: 4.5' @ STA. 103+78.10 TO 7.5' @ STA. 103+98.14  
1.5': STA. 103+98.14 TO STA. 104+22.86  
VARIES: 7.5' @ STA. 104+22.86 TO 4.5' @ STA. 104+42.90  
4.5': STA. 104+42.90 TO STA. 105+68.11  
VARIES: 4.5' @ STA. 105+68.11 TO 7.5' @ STA. 105+88.11  
1.5': STA. 105+88.11 TO STA. 106+10.89  
VARIES: 7.5' @ STA. 106+10.89 TO 4.5' @ STA. 106+30.89  
4.5': STA. 106+30.89 TO STA. 109+27.14  
VARIES: 4.5' @ STA. 109+27.14 TO 7.5' @ STA. 109+47.06  
1.5': STA. 109+47.06 TO STA. 109+69.94  
VARIES: 7.5' @ STA. 109+69.94 TO 4.5' @ STA. 109+89.86  
4.5': STA. 109+89.86 TO STA. 110+18.14  
VARIES: 4.5' @ STA. 110+18.14 TO 7.5' @ STA. 110+38.06  
1.5': STA. 110+38.06 TO STA. 110+83.92  
VARIES: 7.5' @ STA. 110+83.92 TO 4.5' @ STA. 111+03.89  
4.5': STA. 111+03.89 TO STA. 111+91.50  
0': STA. 111+91.50 TO STA. 115+65.07  
VARIES: 0' @ STA. 115+65.07 TO 7.5' @ STA. 115+85.13  
1.5': STA. 115+85.13 TO STA. 116+09.36  
VARIES: 7.5' @ STA. 116+09.36 TO 4.5' @ STA. 116+29.80  
4.5': STA. 116+29.80 TO STA. 119+11.10  
VARIES: 4.5' @ STA. 119+11.10 TO 7.5' @ STA. 119+31.13  
1.5': STA. 119+31.13 TO STA. 119+79.87  
VARIES: 7.5' @ STA. 119+79.87 TO 4.5' @ STA. 119+99.90  
4.5': STA. 119+99.90 TO STA. 120+27.10  
VARIES: 4.5' @ STA. 120+27.10 TO 7.5' @ STA. 120+47.13  
1.5': STA. 120+47.13 TO STA. 121+19.87  
VARIES: 7.5' @ STA. 121+19.87 TO 4.5' @ STA. 121+39.90  
4.5': STA. 121+39.90 TO STA. 121+67.50

**F** VARIES: 7.020' @ STA. 100+27.95 TO 5' @ STA. 100+47.98  
5': STA. 100+47.98 TO STA. 100+57.50  
4': STA. 100+57.50 TO STA. 101+29.00  
5': STA. 101+29.00 TO STA. 101+62.00  
4': STA. 101+62.00 TO STA. 101+85.50  
5': STA. 101+85.50 TO STA. 102+18.50  
4': STA. 102+18.50 TO STA. 102+71.33  
5': STA. 102+71.33 TO STA. 102+88.79  
4': STA. 102+88.79 TO STA. 103+45.56  
5': STA. 103+45.56 TO STA. 104+93.00  
4': STA. 104+93.00 TO STA. 105+30.22  
5': STA. 105+30.22 TO STA. 105+70.78  
4': STA. 105+70.78 TO STA. 106+07.00  
5': STA. 106+07.00 TO STA. 110+20.77  
4': STA. 110+20.77 TO STA. 111+17.00  
5': STA. 111+17.00 TO STA. 111+55.17  
VARIES: 5' @ STA. 111+55.17 TO 8' @ STA. 112+10.49  
10': STA. 114+97.94 TO STA. 115+43.46  
VARIES: 10' @ STA. 115+43.46 TO 5' @ STA. 115+65.42  
5': STA. 115+65.42 TO STA. 122+25.18



\*TREE LAWN SLOPE VARIES:  
VARIES: 2% @ STA. 30+26.37 (HAVANA PL.) TO 8% @ STA. 15+05.76 (GIBBS AVE. S)  
8%: STA. 15+05.76 TO STA. 15+52.50  
VARIES: 8% @ STA. 15+52.50 TO 2% @ STA. 15+59.50

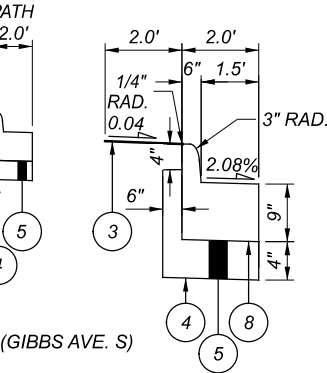
**G** NOTE: SEE INTERSECTION DETAIL SHEETS FOR WALK SLOPE TRANSITION AT RADIUS RETURNS

2.00%: STA. 100+45.54 TO STA. 111+56.23  
0.50%: STA. 112+35.42 TO STA. 113+81.11  
0.50%: STA. 115+28.10 TO STA. 115+91.98  
VARIES: 0.50% @ STA. 115+91.98 TO 2.00% STA. 115+98.46  
2.00%: STA. 115+98.46 TO STA. 118+10.99  
VARIES: 2.00% @ STA. 118+10.99 TO 0.50% @ STA. 118+17.59  
0.50%: STA. 118+17.59 TO STA. 118+36.36  
VARIES: 0.50% @ STA. 118+36.36 TO 2.00% @ STA. 118+42.96  
2.00%: STA. 118+42.96 TO STA. 118+58.04  
VARIES: 2.00% @ STA. 118+58.04 TO 0.50% @ STA. 118+64.64  
0.50%: STA. 118+64.64 TO STA. 119+02.37  
VARIES: 0.50% @ STA. 119+02.37 TO 2.00% @ STA. 119+08.96  
2.00%: STA. 119+08.96 TO STA. 119+24.04  
VARIES: 2.00% @ STA. 119+24.04 TO 0.50% @ STA. 119+30.63  
0.50%: STA. 119+30.63 TO STA. 119+61.10  
VARIES: 0.50% @ STA. 119+61.10 TO 2.00% @ STA. 119+67.69  
2.00%: STA. 119+67.69 TO STA. 119+90.31  
VARIES: 2.00% @ STA. 119+90.31 TO 0.50% @ STA. 119+96.90  
0.50%: STA. 119+96.90 TO STA. 120+91.98  
VARIES: 0.50% @ STA. 120+91.98 TO 2.00% @ STA. 120+98.58  
2.00%: STA. 120+98.58 TO STA. 121+36.73

**H** NOTE: SEE INTERSECTION DETAIL SHEETS FOR WALK SLOPE TRANSITION AT RADIUS RETURNS

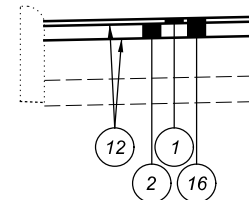
2.00%: STA. 100+45.39 TO STA. 103+66.44  
VARIES: 2.00% @ STA. 103+66.44 TO 0.50% @ STA. 103+74.13  
0.50%: STA. 103+74.13 TO STA. 104+06.32  
VARIES: 0.50% @ STA. 104+06.32 TO 2.00% @ STA. 104+14.01  
2.00%: STA. 104+14.01 TO STA. 104+35.99  
VARIES: 2.00% @ STA. 104+35.99 TO 0.50% @ STA. 104+43.68  
0.50%: STA. 104+43.68 TO STA. 105+30.22  
VARIES: 0.50% @ STA. 105+30.22 TO 2.00% @ STA. 105+37.91  
2.00%: STA. 105+37.91 TO STA. 105+63.78  
VARIES: 2.00% @ STA. 105+63.78 TO 0.50% @ STA. 105+70.78  
0.50%: STA. 105+70.78 TO STA. 107+90.59  
2.00%: STA. 108+82.17 TO STA. 112+82.16  
2.00%: STA. 114+97.94 TO STA. 120+30.92  
VARIES: 2.00% @ STA. 120+30.92 TO 0.50% @ STA. 120+38.46  
0.50%: STA. 120+38.46 TO STA. 122+09.76

**I** -1.56%: STA. 200+00.00 TO STA. 204+38.53  
-1.56%: STA. 300+00.00 TO STA. 302+90.88  
-1.56%: STA. 400+07.06 TO STA. 402+50.00  
VARIES: -1.56% @ STA. 402+50.00 TO 1.56% @ STA. 402+88.28  
-1.56%: STA. 500+07.00 TO STA. 502+98.63  
1.56%: STA. 600+00.00 TO STA. 601+10.00  
VARIES: 1.56% @ STA. 601+10.00 TO -1.56% @ STA. 601+60.00  
-1.56%: STA. 601+60.00 TO 602+87.38

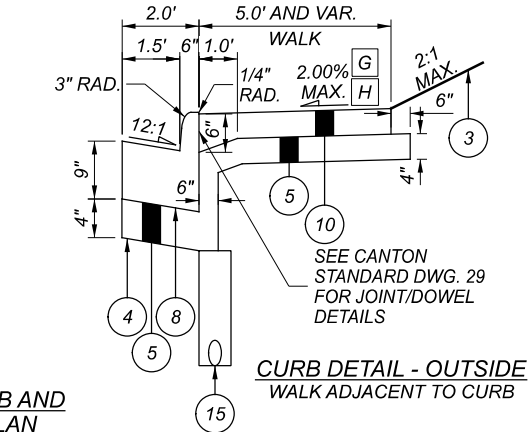


**ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN**

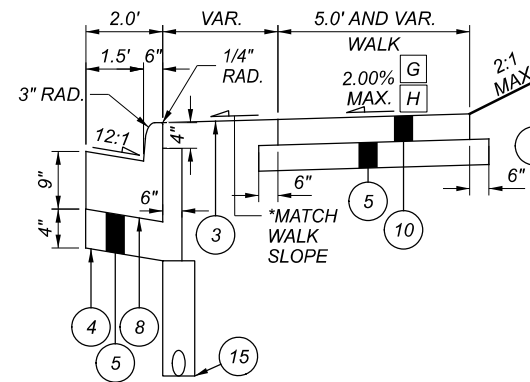
**SHARED USE PATH EDGE COURSE DETAIL**



**RESURFACING DETAIL**

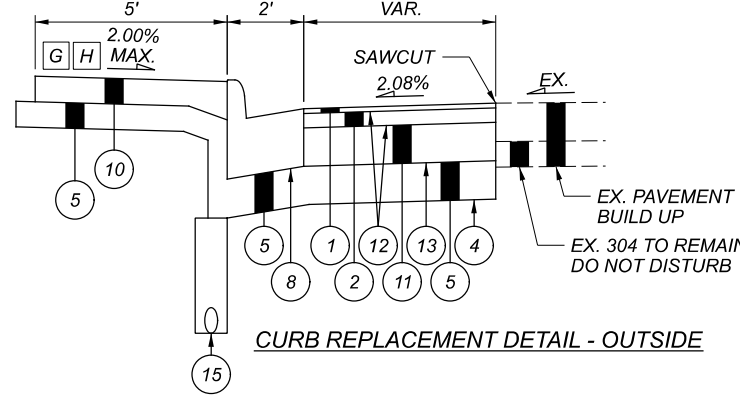


**CURB DETAIL - OUTSIDE WALK ADJACENT TO CURB**



**CURB DETAIL - OUTSIDE WALK WITH BUFFER DETAIL APPLIES:**

STA. 112+10.49 TO STA. 112+73.70, RT - COLONIAL BLVD.  
STA. 113+29.03 TO STA. 114+01.88, LT - COLONIAL BLVD.  
STA. 14+14.02 TO STA. 14+49.92, LT - GIBBS AVE. S  
STA. 14+95.32 TO STA. 15+90.00, LT - GIBBS AVE. S  
STA. 15+32.69 TO STA. 15+90.00, RT - GIBBS AVE. S  
STA. 12+10.00 TO STA. 12+90.48, LT - GIBBS AVE. N  
STA. 11+98.96, RT (GIBBS AVE. N) TO STA. 114+10.75, LT (COLONIAL BLVD.)  
STA. 114+25.98 TO STA. 114+92.53, RT - COLONIAL BLVD.  
STA. 15+54.82 TO STA. 15+67.02, RT - ROWLAND AVE. S



**CURB REPLACEMENT DETAIL - OUTSIDE**

DESIGN AGENCY

**[BI]**

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.4 168

PROPOSED LEGEND

- 1

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (0.75")
- 2

ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (2.25")
- 3

ITEM 659 - SEEDING AND MULCHING
- 4

ITEM 204 - SUBGRADE COMPACTION  
ITEM 204 - PROOF ROLLING
- 5

ITEM 304 - AGGREGATE BASE (6" UNDER PAVEMENT, 4" UNDER SIDEWALK)
- 6

ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- 7

ITEM 452 - 5.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- 8

ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN (SEE DETAIL, SHEET 4)
- 9

ITEM 609 - CURB, TYPE 3-B, AS PER PLAN (SEE DETAIL, THIS SHEET)
- 10

ITEM 608 - 4" CONCRETE WALK
- 11

ITEM 301 - ASPHALT CONC. BASE, PG64-22 (6")
- 12

ITEM 407 - TACK COAT (APPLIED @ 0.06 GAL/SY IN FULL DEPTH PAVEMENT AREAS AND 0.09 GAL/SY IN RESURFACING AREAS)
- 13

ITEM 408 - PRIME COAT (APPLIED @ 0.40 GAL/SY)
- 14

ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS WITH 1" MAX. COMPACTED CONCRETE SAND ODOT 703.02 (ASTM C-33) SETTING BED W/ MORTAR OR  
ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: SIDEWALK BRICK PAVERS WITH 1" MAX. COMPACTED CONCRETE SAND ODOT 703.02 (ASTM C-33) SETTING BED W/ MORTAR
- 15

ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- 16

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3")

EXISTING LEGEND

- A

3.25" ASPHALT
- B

6" BRICK
- C

4" SAND/GRAVEL BASE
- D

4" CONCRETE
- E

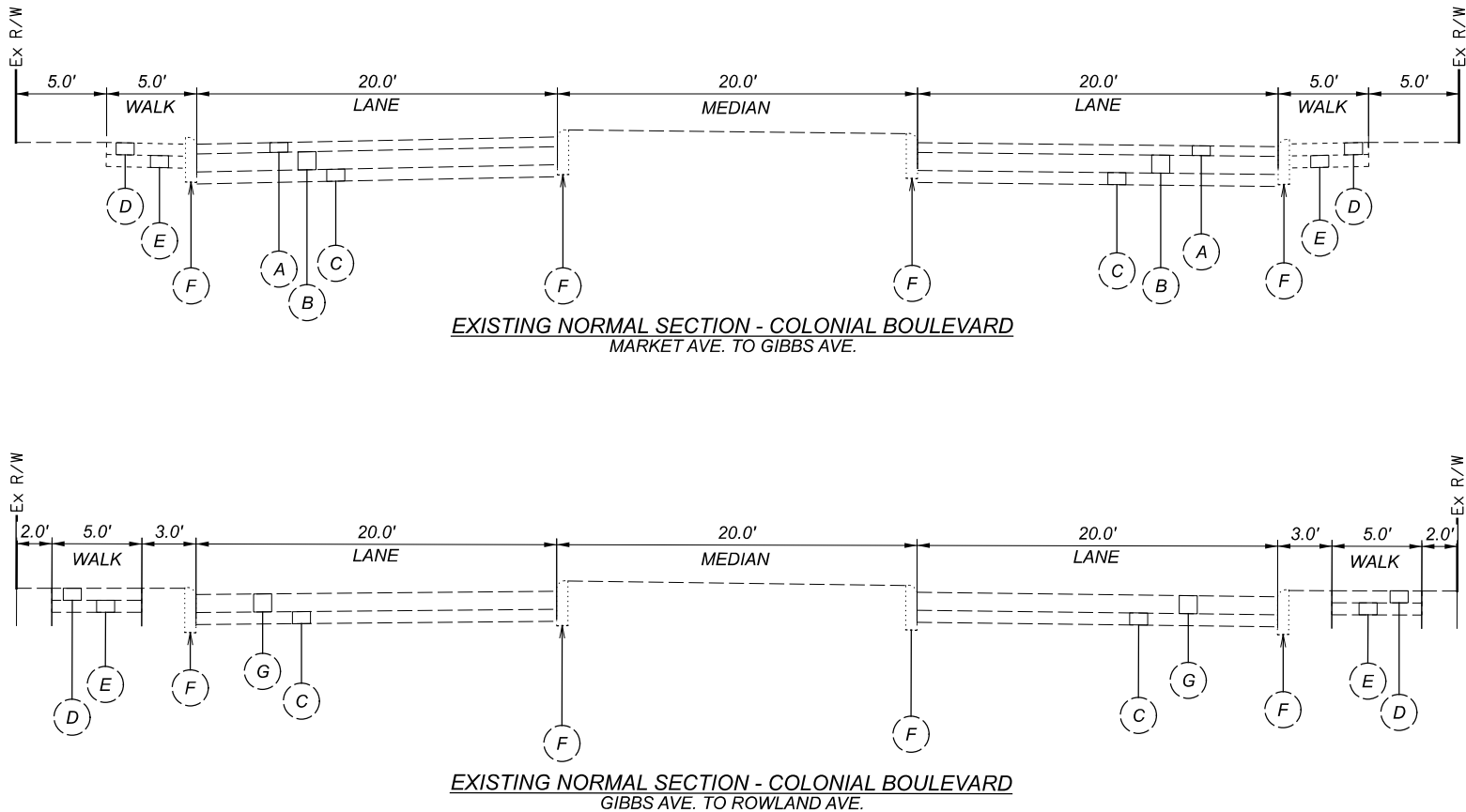
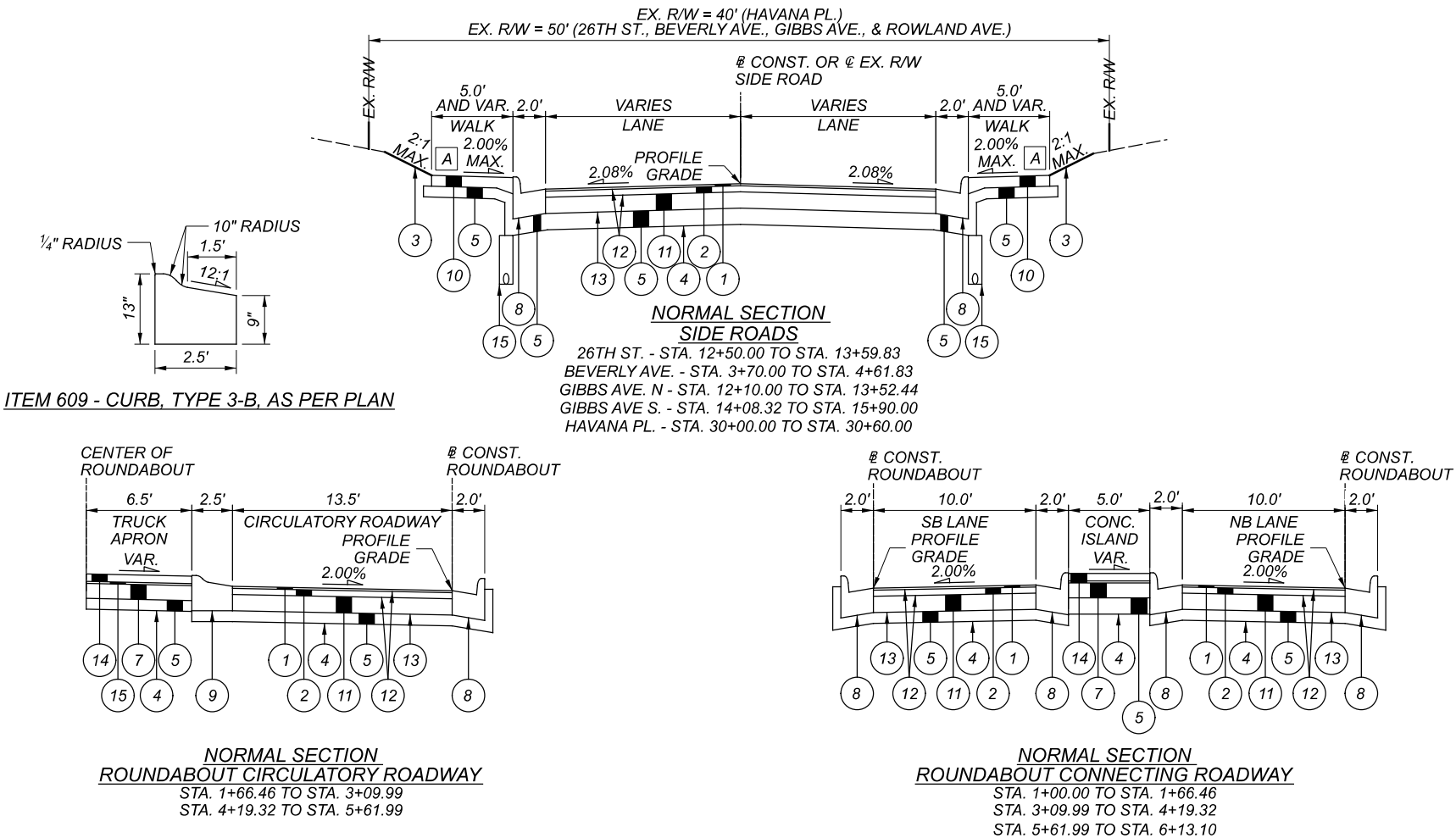
4" AGGREGATE BASE
- F

CONCRETE CURB
- G

6" ASPHALT

NOTE:  
IF MATERIAL THICKNESSES VARY BETWEEN THE STANDARD CONSTRUCTION DRAWINGS AND THE PLAN, REFER TO THE PAVEMENT BUILDUPS SHOWN ON THE TYPICAL SECTIONS (SHEETS 4-5).

A SEE INTERSECTION DETAIL FOR WALK SLOPE TRANSITION AT CURB RADIUS AND ALONG SIDE ROADS





I. PRECONSTRUCTION INCIDENTALS

PROJECT SPECIFICATIONS/REQUIREMENTS:

ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS/ REQUIREMENTS OF THE CITY OF CANTON AND THE 2019 EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS HEREIN AMENDED. IN THE CASE OF A CONFLICT BETWEEN THE CITY OF CANTON AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE CITY OF CANTON REQUIREMENTS WILL TAKE PRECEDENCE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

THE DEVELOPER/CONTRACTOR SHALL COMPLY WITH THE CITY OF CANTON SUPPLEMENTAL SPECIFICATION 01-00 PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS.

ADMINISTRATIVE REQUIREMENTS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY COMPLYING WITH ALL THE ADMINISTRATIVE DUTIES HEREIN CONTAINED.

THE CONTRACTOR SHALL DESIGNATE IN WRITING TO THE CITY AN EMPLOYEE RESPONSIBLE FOR CORRESPONDENCE, NOTIFICATIONS, AND SUBMITTALS PERTINENT TO THE PROJECT.

PRECONSTRUCTION MEETING:

A PRECONSTRUCTION MEETING WITH THE CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, THE CITY OF CANTON ENGINEERING DEPARTMENT AND THE CITY OF CANTON WATER DEPARTMENT IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

THE CITY ENGINEER WILL CONTACT THE CONTRACTOR TO ARRANGE A MEETING DATE. THE CITY ENGINEER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

IF THE PROPOSED PROJECT LAND-DISTURBANCE AREA IS ONE (1) OR MORE ACRES, A SEPARATE PRE-CONSTRUCTION MEETING IS ALSO REQUIRED. THIS MEETING SHALL OCCUR ON-SITE BETWEEN THE CONTRACTOR AND THE STARK SOIL & WATER CONSERVATION DISTRICT (SWCD). THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING THIS MEETING. NO LAND-DISTURBANCE ACTIVITIES SHALL START UNTIL SAID MEETING HAS OCCURRED AND APPROVAL HAS BEEN GRANTED BY STARK SWCD.

PROJECT SAFETY:

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. APPROPRIATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

UNDERGROUND UTILITIES:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT; HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC & PRIVATE) TO VERIFY THE EXISTENCE, LIMITS, AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

UTILITY NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS OF NOTICE RECEIPT, EXCLUDING SATURDAYS, SUNDAYS, AND OTHER LEGAL HOLIDAYS; STAKE, MARK, OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF PLANNED CONSTRUCTION.

LISTED BELOW ARE THE PRIMARY UTILITIES FOR THE CITY OF CANTON LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS:

SANITARY AND STORM SEWER CITY ENGINEER'S OFFICE 2436 30TH ST NE, BUILDING A CANTON, OHIO 44705 ATTN: DAN MOEGLIN 330-489-3381 DAN.MOEGLIN@CANTONOHIO.GOV	TELEPHONE AT&T 50 WEST BOWERY ST. AKRON, OHIO 44308 330-384-3055 ATTN: STEVE HYLTON SH1513@ATT.COM EMERGENCY NO. - 24 HRS 1-800-572-4545 OPT#4
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COMMUNICATIONS CABLE CHARTER (SPECTRUM) 5520 WHIPPLE AVE NW NORTH CANTON, OHIO 44720 ATTN: RON ICKES 216-392-7964 RON.ICKES@CHARTER.COM ATTN: TIM KLOTZ 330-238-6300 TIM.KLOTZ@CHARTER.COM	ELECTRIC AMERICAN ELECTRIC POWER [AEP] 301 CLEVELAND AVE SW P.O.BOX 24400 CANTON, OHIO 44701-4400 330-438-7739 ATTN: CLARKE SAUNDERS CANTONDISTRICTPPR@AEP.COM ATTN: KELLY HAER 330-316-2056 EMERGENCY NO. 1-800-672-2231
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TRAFFIC INTERCONNECT CITY ENGINEER'S OFFICE 2436 30TH ST NE, BUILDING A CANTON, OHIO 44705 ATTN: NICK LOUKAS 330-489-3381 NICK.LOUKAS@CANTONOHIO.GOV	WATER CANTON WATER DEPT. 2664 HARRISBURG RD NE CANTON, OHIO 44705 ATTN: DYLAN PEOPLES 330-438-6564 DYLAN.PEOPLES@CANTONOHIO.GOV ATTN: BRENT BURRIER 330-489-3308 BRENT.BURRIER@CANTONOHIO.GOV
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NATURAL GAS DIST./TRANS. DOMINION ENERGY OHIO [DEO] (330) 472-4209 (MALLERIE STRASSER) MALLERIE.STRASSER@DOMINIONENERGY.COM (330) 814-4776 (BRIAN KING) BRIAN.B.KING@DOMINIONENERGY.COM ATTN: 2nd FLOOR RELOCATION 320 SPRINGSIDE DR. AKRON, OHIO 44333 RELOCATION@DOMINIONENERGY.COM	
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OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764  
(CONTACT NON-MEMBERS DIRECTLY)

THE CITY ENGINEER'S OFFICE IS TO BE CONTACTED DIRECTLY FOR SANITARY AND STORM SEWER AND TRAFFIC INTERCONNECT FACILITIES LOCATION: 330-489-3381  
[UTILITY CONTACTS LAST UPDATED 1/18/2022]

EXPLORATORY BORINGS:

EXPLORATORY SOIL BORING INFORMATION IS NOT THE RESPONSIBILITY OF THE CITY OF CANTON. IT IS THE CONTRACTOR RESPONSIBILITY TO REVIEW ANY AND ALL INFORMATION AVAILABLE. IF DEVELOPER/CONTRACTOR REQUESTS TO DRILL AND/OR EXCAVATE WITHIN THE CITY'S R/W, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY NOTIFICATION, AS SPECIFIED, ALL TRAFFIC CONTROL, PREMIUM BACKFILL, AND COMPACTION AND RESTORATION, AS NECESSARY.

CONTINGENCY QUANTITIES:

WHEN SPECIFIED ON PLANS OR SPECIFICATIONS, CONTINGENCY QUANTITIES ARE TO BE PERFORMED ONLY UNDER DIRECTION OF THE CITY ENGINEER. THE CONTRACTOR SHALL NOT ORDER ANY CONTINGENCY MATERIAL OR PERFORM ANY WORK UNTIL DIRECTED BY THE ENGINEER. THE ACTUAL WORK LOCATION AND QUANTITIES FOR SUCH ITEMS SHALL BE DOCUMENTED BY THE CONTRACTOR AND THE ENGINEER.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING:

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED FROM MARKET AVE N TO GIBBS AVE NE.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE.

PROJECT SCHEDULE AND COMPLETION:

THE WORK EMBRACED IN THIS CONTRACT SHALL BE COMPLETED 400 CALENDAR DAYS AFTER THE NOTICE TO PROCEED (NTP).

THE CONTRACTOR MAY WORK THROUGH THE WINTER SHUTDOWN PERIOD (DECEMBER 1 TO APRIL 1) WITH APPROVAL OF THE ENGINEER.

II. CONSTRUCTION INCIDENTALS

PLAN DISCREPANCIES:

ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION OR THE CONTINUATION OF THE SAME.

FAILURE BY THE CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

CONSTRUCTION NOISE:

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

VERIFICATION OF UNDERGROUND UTILITIES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. THIS MAY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASIN, MANHOLE, JUNCTION CHAMBER, ETC.)

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT.

PROTECTION OF UTILITIES:

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS AS APPROVED BY THE OWNERS OF THE UTILITY AND THE CITY ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES; ANY POTENTIAL DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY.

THE CONTRACTOR SHOULD EXPECT AT A MINIMUM ONE SANITARY SEWER LATERAL, ONE ROOF DRAIN, ONE WATER SERVICE, AND ONE GAS SERVICE FOR EACH LOT. ANY OF THE ABOVE UTILITIES DAMAGED DUE TO THE CONTRACTOR'S WORK SHALL BE RESTORED TO THE UTILITY OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIFICATIONS.

MAINTENANCE OF UTILITY SERVICES:

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES.

WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. NO SHUT DOWN SHALL OCCUR WITHOUT WRITTEN CONSENT FROM THE CITY OF CANTON WATER DEPARTMENT. PROPERTY OWNERS AFFECTED BY APPROVED INTERRUPTED SERVICE SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE BY THE CONTRACTOR.

STORM SEWER AND SANITARY SEWER SERVICES SHALL BE MAINTAINED WITHOUT INTERRUPTION, UNLESS APPROVED BY THE CITY ENGINEER.

IN THE EVENT THAT CONSTRUCTION DISRUPTS THE FLOW OF A SANITARY SEWER, THE CONTRACTOR SHALL IMMEDIATELY RECTIFY THE DISRUPTED SEWER BY EITHER TEMPORARILY FLUMING WITH MATERIALS ACCEPTABLE TO THE ENGINEER OR BYPASSING WITH PUMPS. COST OF MAINTAINING AND REPAIR OF SANITARY SEWERS DISTURBED BY CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE NOTED IN PLANS OR SPECIFICATIONS.

OPEN TRENCH CONSTRUCTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION/TRENCHING PRACTICES FOR THE PROPOSED IMPROVEMENT, OR AS FURTHER SHOWN ON THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE LOCAL AND STATE SAFETY REGULATIONS, INCLUDING CODE OF FEDERAL REGULATIONS, PART 1926 (SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION), SUBPART P (EXCAVATIONS), FOR ALL APPLICABLE REQUIREMENTS AND RESPONSIBILITIES.

PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER IN WRITING OF THE PROJECT'S ASSIGNED "COMPETENT PERSON" IN OSHA EXCAVATION STANDARDS.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.6

168

II. CONSTRUCTION INCIDENTALS (CONT.)

TRENCH CLOSING AND TEMPORARY TOPPING:

THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE NECESSARY LEVELS OF PROTECTION AND SAFEGUARDING OF ALL OPEN TRENCHES, WHEN WORK IS EITHER COMPLETED AT THE END OF THE DAY OR SUSPENDED FOR ANY OTHER REASON.

FOR TRENCH SURFACE REQUIREMENTS, REFER TO NOTE 7 ON CITY STANDARD DRAWING NO. 19.

DUST CONTROL:

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 616 - WATER	15 MGAL
ITEM 616 - CALCIUM CHLORIDE	36 TON

PRESERVATION AND RESTORATION OF DISTURBED FEATURES:

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIGNS, SIDEWALKS, MAILBOXES, FENCES, RETAINING WALLS, LANDSCAPING ITEMS, OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO DISTURBANCE AND TO THE COMPLETE SATISFACTION OF THE CITY ENGINEER.

ALL COSTS ASSOCIATED WITH THE WORK, INCLUDING PROVIDING ALL MATERIALS, LABOR, EQUIPMENT, TESTING, AND ALL OTHER INCIDENTAL, MISCELLANEOUS AND RELATED ITEMS, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID.

RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, TOWNSHIP, COUNTY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR SPECIFICATIONS. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL FROM THE GOVERNING AGENCY AND ACQUISITION OF NECESSARY PERMITS.

TESTING OF UTILITIES:

ALL NEWLY CONSTRUCTED WATERLINES AND SANITARY SEWERS (INCLUDING LATERALS) MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS (AWWA, ETC.) PER THE OHIO ENVIRONMENTAL PROTECTION AGENCY, AND PER THE REQUIREMENTS OF THE CITY OF CANTON WATER AND ENGINEERING DEPARTMENTS.

SANITARY SEWERS SHALL BE TESTED BY CONTRACTOR IN ACCORDANCE WITH THE CITY OF CANTON'S SUPPLEMENTAL SPECIFICATIONS:

- 02-00 TESTING FOR EXCESSIVE DEFLECTION FOR NON-PRESSURE THERMOPLASTIC SEWER PIPE.
- 03-00 TESTING PRACTICES FOR LOW-PRESSURE AIR TESTING OF INSTALLED, NON-PRESSURE, THERMOPLASTIC SEWER PIPE.
- 04-01 STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE TEST.

SANITARY AND STORM SEWERS CONSTRUCTED WITH THIS PROJECT SHALL BE TELEVISED BY THE CONTRACTOR ONLY WHEN A PAY ITEM IS PROVIDED IN ACCORDANCE WITH THE CITY OF CANTON'S SUPPLEMENTAL SPECIFICATION:

- 05-01 SEWER TELEVISION INSPECTION AND DOCUMENTATION PROCEDURE.

SALVAGED ITEMS:

CASTINGS:  
WHEN DIRECTED BY THE CITY ENGINEER, ALL METAL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED ON SITE OR DELIVERED TO A LOCATION DESIGNATED BY THE CITY ENGINEER.

MISCELLANEOUS:  
ALL PRIVATE PROPERTY ITEMS DESIGNATED FOR REMOVAL & SALVAGE SHALL BE CAREFULLY REMOVED AND STORED ON SITE OR DELIVERED TO A LOCATION DESIGNATED BY THE CITY ENGINEER.

PAYMENT:  
PAYMENT FOR SALVAGING ITEMS AS DESIGNATED ON THE PLANS SHALL BE INCLUDED IN THE UNIT BIG PRICE PER UNIT OF THE SPECIFIED ITEM.

PLUG EXISTING CONDUIT:

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT TO BE ABANDONED.

BULKHEADS SHALL CONSIST OF BRICK AND/OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PAYMENT FOR PLUGGING OF EXISTING CONDUIT FOR ABANDONMENT SHALL BE INCLUDED IN THE UNIT BID OF THE VARIOUS 202 ITEMS OF THE PROJECT.

CONSTRUCTION LAYOUT:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT UTILIZING PERTINENT PLAN DATA. THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR STAKING HORIZONTAL OR VERTICAL CONTROL. CONSTRUCTION LAYOUT WITH ODOT 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING.

IN ADDITION TO THE REQUIREMENTS OF 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, THE CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO ESTABLISH THE EXISTING ROADWAY AND CURB ELEVATIONS. THE PRE-CONSTRUCTION SURVEY DATA COLLECTED SHALL BE SUFFICIENT FOR THE CONTRACTOR TO LAYOUT THE PROPOSED CURB AND PAVEMENT WITHIN 0.02± TOLERANCE OF THE EXISTING CURB AND PAVEMENT. THE CONTRACTOR MUST USE BEST JUDGEMENT AND/OR SEEK ENGINEER'S CONCURRENCE TO NOT PERPETUATE OBVIOUS SETTLEMENTS OR HEAVES FROM THE EXISTING PAVEMENT.

COST FOR THE PRELIMINARY SURVEY SHALL BE INCLUDED IN 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING.

AT THE CITY ENGINEER'S REQUEST, THE CONTRACTOR SHALL MAKE AVAILABLE ALL SURVEY FIELD NOTES FOR REVIEW.

ELEVATION DATUM:

ALL ELEVATIONS ARE BASED ON THE NAVD 1988 DATUM.

DEWATERING OPERATIONS:

WHEN DEEMED NECESSARY, THE CONTRACTOR MAY INSTALL DEWATERING EQUIPMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

THE PROPOSED LOCATION OF WELL POINTS, HEADER PIPE, ELECTRICAL DISTRIBUTION, GENERATORS AND DISCHARGE PIPES, ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF DEWATERING EQUIPMENT AS WELL AS PROPER WATER DISCHARGE PROCEDURES AS MAY BE REQUIRED PER STATE AND LOCAL GOVERNING AGENCIES.

INSTALLATION OF ALL ELECTRICAL EQUIPMENT, INCLUDING GROUNDING AND PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CONTRACTOR SHALL PROVIDE ALL COMBUSTIBLE ENGINE DRIVEN GENERATORS WITH "HOSPITAL GRADE" MUFFLERS. MUFFLERS SHALL BE RATED, AT A MAXIMUM OF 67 dB AT 23 FEET AWAY RUNNING FULL LOAD.

DOMINION ENERGY GAS LINES:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION ENERGY'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINIMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION ENERGY OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE, AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION ENERGY OHIO'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUSER (330-478-3757).

DEO = DOMINION ENERGY OHIO, 1-800-362-7557

INSPECTION:

FOLLOWING THE PRE-CONSTRUCTION MEETING(S) AND ESTABLISHMENT OF AN APPROVED SCHEDULE, THE CONTRACTOR SHALL GIVE A MINIMUM 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE IN WRITING ON A BI-WEEKLY BASIS. ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE SUBJECT TO INSPECTION BY THE CITY OF CANTON OR THEIR DESIGNATED REPRESENTATIVE. NO WORK SHALL BE PERFORMED WITHOUT AN AUTHORIZED INSPECTOR PRESENT, UNLESS OTHERWISE APPROVED.

EXISTING MONUMENTATION:

THE CONTRACTOR SHALL PRESERVE ALL CORNERSTONES, IRON PINS, CONCRETE MONUMENTS AND/OR ANY TYPE OF LAND MONUMENT. THE CONTRACTOR SHALL HAVE ALL MONUMENTS IN THE PROXIMITY OF THE WORK REFERENCED. THE CONTRACTOR SHALL REPLACE/RESET ANY DISTURBED OR DAMAGED MONUMENTS AND SHALL FURNISH A CERTIFICATION BY AN OHIO REGISTERED SURVEYOR THAT THE MONUMENTS HAVE BEEN RESTORED.

III. EARTHWORK / SITE WORK

EASEMENTS AND RIGHT-OF-WAY:

THE CONTRACTOR SHALL STAY WITHIN THE DESIGNATED PROPERTIES, EASEMENTS, AND/OR RIGHT-OF-WAY PROVIDED FOR THE PROJECT AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY UNLESS OTHERWISE APPROVED. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE CITY ENGINEER/PROPERTY OWNER.

SUITABILITY OF SITE:

THE CITY OF CANTON SHALL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE CONTRACTOR MUST APPRISE THEMSELVES OF ANY EXISTING SITE CONDITIONS WHICH MAY AFFECT THEIR BID OR THE PERFORMANCE OF THE REQUIRED WORK. THE CONTRACTOR SHALL PERFORM ANY INVESTIGATIONS AND/OR TESTING NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THEIR SATISFACTION ALL SITE CONDITIONS WHICH COULD AFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE, BUT NOT BE LIMITED TO, UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC.

REFER TO CITY STANDARD DRAWING NO.19 FOR ADD'L DETAILS.

REMOVAL/REPLACEMENT OF UNSUITABLE MATERIAL:

THE DEVELOPER/CONTRACTOR SHALL UNDERCUT AND REPLACE UNSUITABLE MATERIAL ENCOUNTERED DURING INSTALLATION OF THE PROPOSED UTILITIES AND ROADWAY IN ACCORDANCE WITH CITY STANDARD DRAWING NO.19.

IV. ROADWAY / DRIVE APPROACHES / WALK / CURB

PAVEMENT STANDARDS:

PAVEMENTS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH APPLICABLE CITY STANDARD DRAWINGS AND SPECIFICATIONS (AS LISTED BELOW) AND ODOT SPECIFICATIONS, UNLESS SPECIFIED OTHERWISE ON THE PLANS.

ASPHALT/CONCRETE:

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF BEGINNING WORK WHICH REQUIRES COMPACTION TESTING AND/OR PRE-POUR INSPECTION PRIOR TO PLACEMENT OF ASPHALT OR CONCRETE. WORK SHALL NOT PROCEED UNTIL TESTING AND/OR INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE CITY ENGINEER.

CITY SPECIFICATIONS:

"CITY OF CANTON SPECIFICATIONS FOR THE CONSTRUCTION, REPAIR, AND REPLACEMENT OF SIDEWALKS, CURBS, AND DRIVEWAYS"

RESTRICTED WORK SCHEDULE:

NO CONCRETE FINISH WORK FOR PERMANENT ASPHALT SHALL BE PLACED FROM NOVEMBER 15TH TO APRIL 15TH UNLESS WRITTEN APPROVAL IS GRANTED BY THE CITY ENGINEER.

V. SANITARY SEWERS / STORM SEWERS

REGULATORY REQUIREMENTS:

ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

SEWER STANDARDS:

ALL SANITARY/STORM SEWER CONDUITS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO APPLICABLE CITY STANDARD DRAWINGS AND SPECIFICATIONS (AS LISTED BELOW) AND ODOT SPECIFICATIONS EFFECTIVE AT THE TIME OF CONSTRUCTION, UNLESS SPECIFIED OTHERWISE ON THE PLANS. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE DISPOSAL SYSTEM ARE PROHIBITED.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN:

MANHOLE ADJUSTMENTS SHALL BE PERFORMED BY ONE OF THE FOLLOWING METHODS:

- METHOD A - AFTER THE SURFACE COURSE ASPHALT IS PLACED, ADJUSTMENTS SHALL BE MADE AS PER CITY OF CANTON STANDARD DRAWING #13. THIS ITEM SHALL INCLUDE ALL MATERIALS REQUIRED AS PER STANDARD DRAWING.
- METHOD B - PRIOR TO THE PLACEMENT OF THE INTERMEDIATE ASPHALT COURSE. CONCRETE SHALL NOT BE USED TO BACKFILL AROUND THE CASTING IN ORDER TO PREVENT REFLECTIVE CRACKING.

THIS ITEM SHALL INCLUDE THE PLACEMENT OF THE EXISTING CASTING. SEWER CASTING SHALL COMPLY WITH CITY OF CANTON STANDARD DRAWING #12. PAYMENT FOR THE CASTING WILL BE INCLUDED WITH THIS ITEM.

DRAINAGE CONDUIT CONTINGENCY:

IT MAY BE NECESSARY TO REPLACE PORTIONS OF EXISTING CONDUITS THAT ARE BEING TIED INTO PROPOSED MANHOLES OR CATCH BASINS. IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING CONNECTION IS SUBSTANDARD, THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN PROVIDED. IF NECESSARY, CONNECT WITH A MASONRY COLLAR AS PER ODOT, SCD DM-1.1.

ITEM 611 - 4" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 6" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 12" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 15" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 18" CONDUIT, TYPE B, 707.33	50 FT
ITEM 611 - 24" CONDUIT, TYPE B, 707.33	50 FT
ITEM 611 - 36" CONDUIT, TYPE B, 707.33	50 FT
ITEM 611 - 42" CONDUIT, TYPE B, 707.33	50 FT
ITEM 611 - 48" CONDUIT, TYPE B, 707.33	50 FT

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.7

TOTAL

168

V. SANITARY SEWERS / STORM SEWERS (CONT.)

SANITARY CONDUIT CONTINGENCY:

IT MAY BE NECESSARY TO REPLACE PORTIONS OF EXISTING SANITARY CONDUITS THAT ARE FOUND TO BE FAILING DURING THE COURSE OF THE PROJECT. IF IT IS DETERMINED BY THE ENGINEER THAT THE EXISTING CONDUIT IS SUBSTANDARD, THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN PROVIDED:

ITEM 611 - 4" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 6" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 8" CONDUIT, TYPE B, 707.33	100 FT
ITEM 611 - 10" CONDUIT, TYPE B, 707.33	100 FT

BYPASS PUMPING PLAN REQUIREMENTS:

THE CONTRACTOR SHALL SUBMIT A BYPASS PUMPING PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO MOBILIZATION. AT A MINIMUM, BYPASS PUMPING SHALL INCLUDE:

1. FULLY AUTOMATIC, SELF PRIMING PUMPS
2. PUMPS AND GENERATORS, IF APPLICABLE, SHALL BE CRITICALLY SILENCED.
3. ALL SUCTION AND DISCHARGE PIPING SHALL BE FREE OF LEAKS.

ITEM 611, CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 1 - CURB INLET CATCH BASIN NO. 3 & NO. 3A:

THIS ITEM SHALL CONSIST OF CONSTRUCTING A CURB INLET CATCH BASIN PER CITY OF CANTON STANDARD DRAWING #1 AT LOCATIONS SHOWN IN THE PLANS.

FOR CATCH BASIN NO. 3, CONSTRUCT WITH TWO GRATES AND THE INNER WIDTH SHALL BE 6'

THE CONTRACTOR SHALL INSTALL THE NEW DRAINAGE STRUCTURE FLUSH WITH ADJACENT CURB & GUTTER AND ASPHALT PAVEMENT. ALL EXISTING PIPES SHALL BE CONNECTED INTO IT AT SAME ELEVATIONS AND ORIENTATIONS UNLESS SPECIFICALLY CALLED OUT DIFFERENTLY IN THE PLANS.

ITEM 611, CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 4 - CURB INLET CATCH BASIN NO. 6:

THIS ITEM SHALL CONSIST OF CONSTRUCTING A CURB INLET CATCH BASIN PER CITY OF CANTON STANDARD DRAWING #4 AT LOCATIONS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL INSTALL THE NEW DRAINAGE STRUCTURE FLUSH WITH ADJACENT ASPHALT PAVEMENT. ALL EXISTING PIPES SHALL BE CONNECTED INTO IT AT SAME ELEVATIONS AND ORIENTATIONS UNLESS SPECIFICALLY CALLED OUT DIFFERENTLY IN THE PLANS.

ITEM 611, MANHOLE, MISC.: CITY OF CANTON SCD NO. 10 - PRE-CAST STORM MANHOLE, PRE-CAST STORM MANHOLE WITH 108" BASE ID AND 12" WEIR & PRE-CAST SANITARY MANHOLE:

THIS ITEM SHALL CONSIST OF CONSTRUCTING A PRE-CAST STORM OR SANITARY MANHOLE PER CITY OF CANTON STANDARD DRAWING #10 AT LOCATIONS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL INSTALL THE NEW DRAINAGE STRUCTURE FLUSH WITH ADJACENT ASPHALT PAVEMENT. ALL EXISTING PIPES SHALL BE CONNECTED INTO IT AT SAME ELEVATIONS AND ORIENTATIONS UNLESS SPECIFICALLY CALLED OUT DIFFERENTLY IN THE PLANS.

ITEM 202 - ABANDON MISC.: GROUT AND ABANDON 8" SANITARY SEWER

THIS ITEM SHALL CONSIST OF THE ABANDONMENT OF EXISTING SANITARY SEWER LINES AT LOCATIONS SHOWN IN THE PLANS WITH CONSTRUCTION OF BULKHEADS IN AN EXISTING 8" DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS- SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

ITEM 611 - 8" CONDUIT, TYPE B, AS PER PLAN (DEPTHS 12' TO 24')

THIS ITEM SHALL CONSIST OF CONSTRUCTING AND TESTING AN 8" CONDUIT, TYPE B, PVC SDR-26, AT THE LOCATIONS, GRADES, AND ELEVATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH "GENERAL NOTES SECTION V. SANITARY SEWERS / STORM SEWERS"

ITEM 611 - SANITARY LATERAL RECONNECTION

THIS ITEM SHALL CONSIST OF RECONNECTION OF REPLACED SERVICE LATERALS AT LOCATIONS AND ELEVATIONS SHOWN IN THE PLANS. THIS SHALL INCLUDE A MINIMUM REPLACEMENT LENGTH OF 10 FEET (UNLESS OTHERWISE NOTED IN THE PLANS), INCLUDING ALL WYES, BENDS, FITTINGS, AND COUPLINGS NECESSARY TO COMPLETE IN PLACE IN ACCORDANCE WITH "GENERAL NOTES SECTION V. SANITARY SEWERS / STORM SEWERS. SEE SHEET 15 FOR SANITARY SEWER DETAILS.

SEE SHEET 114 FOR SUMMARY OF SANITARY LATERAL LOCATIONS.

ITEM 611 - DRAINAGE STRUCTURE, MISC.: SANITARY SEWER BYPASS PUMPING

THIS ITEM SHALL CONSIST OF PROVIDING BYPASS PUMPING WHENEVER FLOW IN ANY SEWER IS DISRUPTED BY THE CONSTRUCTION OR REPLACEMENT OF NEW SEWER SEGMENTS, LATERALS, MANHOLES, OR ASSOCIATED ACTIVITIES IN ACCORDANCE WITH "GENERAL NOTES SECTION V. SANITARY SEWERS / STORM SEWERS"

VI. STORM WATER POLLUTION PREVENTION

FOR PROJECTS ONE (1) ACRE OR MORE OF TOTAL LAND-DISTURBANCE:

THE CONTRACTOR SHALL APPLY FOR AND OBTAIN AN OHIO EPA NPDES PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. SAID PERMIT REQUIRES THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWP3) TO ADDRESS CONSTRUCTION SITE STORM WATER RUNOFF AS WELL AS POST-CONSTRUCTION STORM WATER MANAGEMENT. THE SWP3 MUST BE REVIEWED AND APPROVED BY THE STARK COUNTY SOIL & WATER CONSERVATION DISTRICT (SWCD).

THE CONTRACTOR AND HIS REPRESENTATIVES SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE PERMIT AS WELL AS THE SWP3. ALL ACTIVITIES AND PRACTICES SHALL ALSO COMPLY WITH THE CURRENT EDITIONS OF THE CITY OF CANTON STORM WATER MANAGEMENT MANUAL AND THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL, AS APPLICABLE. SUCH PROJECTS ARE ALSO SUBJECT TO INSPECTION BY THE CITY OF CANTON AND/OR ITS AUTHORIZED REPRESENTATIVES (i.e. STARK SWCD) TO ENSURE COMPLIANCE WITH PERMIT AND SWP3 REQUIREMENTS AND LOCAL STORM WATER QUALITY REGULATIONS.

A PRE-CONSTRUCTION MEETING INITIATED BY THE CONTRACTOR IS REQUIRED ON-SITE WITH THE STARK SWCD PRIOR TO ANY LAND-DISTURBING ACTIVITIES. THE CONTRACTOR SHALL ABIDE BY ALL ORDERS ISSUED BY THE CITY AND/OR STARK SWCD PURSUANT TO INSPECTION OF THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT CO-PERMITTEE APPLICATION TO OHIO EPA PRIOR TO BEGINNING WORK ON THE PROJECT. AS APPLICABLE, THE CONTRACTOR SHALL OBTAIN A COPY OF THE SWP3 AND FAMILIARIZE HIMSELF WITH IT, IMPLEMENTING ALL ITEMS AND ABIDING BY ALL PERMIT REQUIREMENTS AND REGULATIONS.

POST-CONSTRUCTION STORM WATER TREATMENT:

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP's) FOR POST CONSTRUCTION STORM WATER TREATMENT.

MANUFACTURED WATER QUALITY STRUCTURE:

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE4.

VII. STREETScape

ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS

ROADWAY BRICK PAVERS SHOWN WITHIN THE DESIGNATED PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CANTON STANDARD DRAWING NO. 41.

PAYMENT OF ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS SHALL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT OF ROADWAY BRICK PAVERS AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT TO COMPLETE THE BRICK PAVERS, SETTING SAND, SEALANT, AND JOINT SAND IN ACCORDANCE WITH CITY STANDARDS.

ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: SIDEWALK BRICK PAVERS

SIDEWAK BRICK PAVERS SHOWN WITHIN THE ROUNDABOUT AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CANTON STANDARD DRAWING NO. 40.

PAYMENT OF ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: SIDEWALK BRICK PAVERS SHALL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT OF ROADWAY BRICK PAVERS AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT TO COMPLETE THE BRICK PAVERS, SETTING SAND, SEALANT, AND JOINT SAND IN ACCORDANCE WITH CITY STANDARDS.

VIII. WATER MAINS / SERVICES

1. ALL WATER MAINS, SERVICES AND APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED ACCORDING TO THE CITY OF CANTON WATER DEPARTMENT REQUIREMENTS AND SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EXCAVATION, BEDDING, BACKFILL, AND OTHER ITEMS NECESSARY FOR THE RELOCATION AND INSTALLATION OF THE WATER MAINS, SERVICES, AND APPURTENANCES. THESE COSTS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL THE ITEMS IN THE PROPOSAL.

~~2. FOR NEW DEVELOPMENTS INSIDE THE CITY, ALL WATER MAIN PIPE MATERIALS, FITTINGS, BENDS, VALVES, VALVE BOXES, MEGALUGS, GASKETS AND HYDRANTS WILL BE SUPPLIED BY THE CITY OF CANTON. THE CONTRACTOR WILL BE RESPONSIBLE FOR TRANSPORTING MATERIALS TO THE PROJECT SITE. BACKFILL, BEDDING, THRUST BLOCKING, ETC. AND ASSOCIATED LABOR IS THE RESPONSIBILITY OF THE CONTRACTOR.~~

3. MAINS - WATER MAINS SHALL BE CLASS 52 (8" AND UNDER), CLASS 53 (12") OR CLASS 54 (OVER 12") DUCTILE IRON, MEETING AWWA C151 WITH PUSH JOINTS. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS AND APPURTENANCES SHALL BE SHOP COATED WITH EITHER ASPHALTIC MATERIAL. IF THE COATING MATERIAL IS FOUND TO BE DAMAGED PRIOR TO THE PIPE TRENCH BEING BACKFILLED, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL APPROVED MATERIAL AS REQUIRED TO REPAIR AS DIRECTED. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIALS AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C104, OR THE LATEST REVISION.

4. ALL DUCTILE IRON PIPE, INCLUDING FITTINGS, BENDS, TEES, VALVES AND APPURTENANCES BURIED UNDERGROUND, SHALL BE ENCASED WITH 8 MIL. POLYETHYLENE FILM CONFORMING TO AWWA C105.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.8

TOTAL

168



VIII. WATER MAINS / SERVICES (CONT.)

5. PLASTIC PIPE LARGER THAN 2" SHALL BE JM EAGLE, ULTRA BLUE PVCO AWWA C909 PRESSURE PIPE, PRESSURE CLASS 235, OR APPROVED EQUAL AND INSTALLED PER MANUFACTURER RECOMMENDATION.
6. WHEN PLASTIC PIPE IS USED, A TRACER WIRE SHALL BE INSTALLED ON TOP OF THE PIPE.
- A.) THE TRACER WIRE SHALL BE #14 AWG COPPER CLAD STEEL WIRE WITH 30 MILS OF HIGH-DENSITY POLYETHYLENE (HDPE) INSULATION.  
B.) THE TRACER WIRE SHALL BE INSTALLED IN A CONTINUOUS FASHION WITH THE WIRE ON TOP OF THE WATER MAIN AND SECURE TO THE MAIN EVERY FIVE (5) FEET WITH TAPE.  
C.) THE TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT EVERY VALVE BOX AND/OR AS CALLED OUT IN THE DRAWINGS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT LEAST EVERY ONE THOUSAND (1,000) FEET.  
D.) IF THE WIRE COATING GETS DAMAGED, REPAIR DAMAGED COATING WITH ELECTRICAL TAPE.  
E.) THE TRACER WIRE SHALL PASS A CONTINUITY TEST BEFORE THE WATERLINE INSTALLATION IS ACCEPTED.
7. THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-6" FROM GROUND SURFACE TO THE BARREL OF THE PIPE.
8. PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT, IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER.
9. FITTINGS SHALL BE DUCTILE IRON AND BE RATED FOR 250 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C110 OR AWWA C153. FITTINGS SHALL INCLUDE, BUT NOT LIMITED TO BENDS, TEES, SLEEVES, COUPLINGS, CROSSES, REDUCERS AND CAPS.
10. ANY FITTINGS OR VALVES ADJACENT TO A TEE OR CROSS SHALL BE ANCHORED TO THE TEE OR CROSS WITH EITHER THE USE OF AN ANCHOR TEE OR ANCHOR CROSS AND/OR ANCHOR COUPLINGS.
11. VALVES - THE ITEMS COVERED BY THIS SPECIFICATION SHALL MEET ALL APPLICABLE AWWA C509 OR C515 STANDARDS AND THE FOLLOWING: ALL VALVES SHALL BE NON-RISING STEM, IRON BODY, RESILIENT WEDGE DISC. THE DESIGN OF THE THRUST COLLAR SHALL BE SUCH THAT THE THRUST COLLAR IS SEALED FROM LINE PRESSURE BY MEANS OF AN "O" RING SEAL. ALL VALVES SHALL BE FURNISHED WITH A TWO (2) INCH SQUARE OPERATING NUT, OPEN RIGHT. ALL VALVES SHALL BE FURNISHED WITH MECHANICAL JOINT END CONNECTIONS. THE STEM SHALL BE PROTECTED FROM EXTERNAL GRIT BY A WEATHER SHIELD AND AN UPPER "O" RING. STEM SHALL BE LUBRICATED. GATE COATING SHALL HAVE A MINIMUM THICKNESS OF 10 MILS. VALVE SHALL BE TESTED AT THE RATED WORKING PRESSURE OF 250 PSI WITH NO LEAKAGE. SHELL TEST OF 500 PSI SHALL BE APPLIED TO BODY WITH VALVE IN THE OPEN POSITION WITH NO LEAKAGE THROUGH THE METAL, STEM SEALS OR JOINTS. VALVE MUST HAVE TRADITIONAL STUFFING BOX. ALL BOLTING MATERIAL IN THE THRUST COLLAR AND BONNET SHALL BE #316 SS BOLTS. ALL VALVES WITH ACCESSORIES PACK (FLANGES, RUBBERS, NUTS, BOLTS)
12. ALL VALVE BOXES SHALL BE HEAVY DUTY, THREE (3) PIECE SCREW TYPE, WITH "WATER" LIDS.
13. FLUSHING AND DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C651.
14. ALL WATER LINE PRESSURE TESTING SHALL CONFORM TO AWWA C600.
15. WATER MAINS SHALL BE INSTALLED AND BACKFILLED PER O.D.O.T. ITEM 638.
16. WATER LINES LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER WATER MAINS SHALL BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL BE AS SPECIFIED, EXCEPT THAT SLAG WILL NOT BE PERMITTED.
17. ALL FITTINGS (BENDS, TEES, VALVES, DEAD ENDS, ETC.) SHALL BE RESTRAINED UTILIZING MEGALUGS, FIELD LOK GASKETS OR APPROVED EQUAL. POURED-IN-PLACE CONCRETE THRUST BLOCKS MAY ALSO BE REQUIRED AT/FOR EACH FITTING. THIS BLOCKING SHALL BE CAREFULLY PLACED TO ENSURE IT IS POSITIONED PROPERLY TO WITHSTAND THE RESULTANT FORCES AT EACH FITTING AND SHALL BEAR ON STABLE UNDISTURBED GROUND CAPABLE OF WITHSTANDING THE POTENTIAL LOADING. WHEN DIRECTED BY THE CITY, TIE RODS ARE TO BE 3/4 INCH DIAMETER. TWO TIE RODS ARE REQUIRED FOR AN 8 INCH PIPE, AND FOUR TIE RODS ARE REQUIRED FOR 12 INCH AND GREATER PIPE. THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FITTINGS.

VIII. WATER MAINS / SERVICES (CONT.)

18. IN ADDITION TO THE RESTRAINT OF ALL BENDS, FITTINGS, TEES, VALVES, DEAD ENDS, ETC. THE CONTRACTOR SHALL ALSO SECURE/RESTRAIN ALL JOINTS FOR AT LEAST THREE (3) PIPE JOINTS (50 LF MIN.) BEYOND EACH DEAD END, BEND, FITTING, VALVE, TEE, ETC. UTILIZING MEGALUGS, FIELD LOK GASKETS, OR APPROVED EQUALS. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PIPE.
19. THE CONTRACTOR SHALL PROVIDE 18" VERTICAL CLEARANCE BETWEEN PROPOSED WATERLINES AND ANY SANITARY OR STORM SEWERS. WHEN 18" CLEARANCE CANNOT BE OBTAINED:
- FOR STORM SEWERS, CONCRETE ENCASE THE STORM SEWER PIPE, 6 FT. ON EACH SIDE OF WATER MAIN.  
- OR SANITARY SEWERS, REPLACE THE SANITARY SEWER PIPE WITH PVC C900 PIPE, 10 FT. ON EACH SIDE OF THE WATER MAIN. APPROVED COUPLINGS SHALL BE USED TO TIE ONTO THE EXISTING SEWER.  
THE CONTRACTOR SHALL MAINTAIN TEN (10) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND SANITARY OR STORM SEWERS.
20. HYDRANTS - THE FIRE HYDRANT SETTING SHALL INCLUDE THE HYDRANT, ANCHOR TEE, VALVE, VALVE BOX, 6 INCH DUCTILE IRON (CLASS 52) PIPING AND ALL FITTINGS NEEDED FOR PROPER INSTALLATION TO FINAL GRADE. FIRE HYDRANTS SHALL BE MUELLER A423 MEETING THE CITY OF CANTON WATER DEPARTMENT STANDARDS AND REQUIREMENTS. ALL COSTS FOR THE 6" PIPING ASSOCIATED WITH THE INSTALLATION OF FIRE HYDRANTS SHALL BE INCLUDED WITH THE FIRE HYDRANT PAY ITEM. ALL HYDRANTS SHALL BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET. ALL FIRE HYDRANT THREADS SHALL BE LUBRICATED WITH A FOOD GRADE LUBRICANT AND OPERATED UPON INSTALLATION.
21. CUT-IN SLEEVES FOR TIE-IN TO EXISTING WATER MAINS SHALL BE SMITH BLAIR 441 SLEEVES WITH #316 SS BOLTS.
22. ALL WATER TAPS AND SERVICES MUST BE INSTALLED BEFORE ANY PAVEMENT FOR THE PROPOSED ROADWAY HAS BEEN PLACED. THE CONTRACTOR SHALL MAKE ALL SERVICE TAPS ON THE WATER MAIN.
23. PRIOR TO MAKING THE TAP, THE CONTRACTOR SHALL EXPOSE THE EXISTING CURB BOX AND VERIFY THE SIZE OF THE WATER SERVICE LINE ON THE OWNER'S SIDE. THE PROPOSED TAP AND SERVICE SHALL MATCH THE SIZE OF THE OWNER'S SERVICE LINE, WITH 1" BEING A MINIMUM. AN EXISTING 1¼" SERVICE SHALL BE REPLACED WITH A 1½" SERVICE AND TAP.
24. THE PROPOSED WATER SERVICES AND TAPS SHALL BE 1" UNLESS NOTED OTHERWISE ON THE PLANS OR DETERMINED OTHERWISE PER PREVIOUS NOTE.
25. MEASUREMENT FOR SERVICES IS ON A LUMP SUM BASIS. PAYMENT FOR "SHORT SIDE" AND "LONG SIDE" SERVICES INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR LOCATING THE WATER MAIN, TAP AND CORPORATION STOP INSTALLATION, SERVICE LINE INSTALLATION, CURB STOP AND ROADWAY BOX INSTALLATION, CONNECTION FROM CORPORATION STOP TO CURB STOP, AND CONNECTION TO THE OWNER'S SIDE SERVICE LINE. EXCAVATION, BEDDING, BACKFILL, AND COMPACTION ARE CONSIDERED INCIDENTAL TO THE SERVICE ITEMS IN THE PROPOSAL AND NO ADDITIONAL COMPENSATION WILL BE MADE FOR SUCH ITEMS.
26. FOR THE PURPOSE OF THESE PLANS AND PROPOSAL, A "SHORT SIDE" SERVICE IS CONSIDERED THE SERVICE LINE CONNECTING THE PROPOSED CURB STOP TO THE WATER MAIN ON THE SAME SIDE OF THE STREET BEFORE THE CENTERLINE OF THE ROADWAY. A "LONG SIDE" SERVICE IS CONSIDERED THE SERVICE LINE CONNECTING THE PROPOSED CURB STOP TO THE WATER MAIN ON THE OPPOSITE SIDE OF THE STREET PAST THE CENTERLINE OF THE ROADWAY. ANY CLARIFICATION ON WHETHER A SERVICE IS CONSIDERED "LONG" OR "SHORT" SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AS A PRE-BID QUESTION.
27. THE CONTRACTOR MAY ELECT TO OPEN CUT OR PUSH/BORE THE "SHORT SIDE" SERVICES. THE CHOSEN METHOD OF INSTALLATION IS CONSIDERED MEANS AND METHODS OF THE CONTRACTOR AND SHALL BE ACCOUNTED FOR IN THE BID ITEM FOR THE "SHORT SIDE" SERVICES. THE CONTRACTOR MAY ELECT TO OPEN CUT OR PUSH/BORE THE "LONG SIDE" SERVICES. THE CHOSEN METHOD OF INSTALLATION IS CONSIDERED MEANS AND METHODS OF THE CONTRACTOR AND SHALL BE ACCOUNTED FOR IN THE BID ITEM FOR THE "LONG SIDE" SERVICES.

VIII. WATER MAIN / SERVICES (CONT.)

- ~~28. IF OPEN CUTTING A "LONG SIDE" SERVICE WOULD RESULT IN ADDITIONAL COMPENSATION, THE CONTRACTOR SHALL SUBMIT A GOST PROPOSAL TO THE ENGINEER PRIOR TO RECEIVING PERMISSION TO OPEN CUT UNLESS A BID ITEM FOR SUCH WORK WAS INCLUDED IN THE PROPOSAL. IN WHICH CASE, THE EXISTING BID ITEM WILL BE USED FOR COMPENSATION OF ANY OPEN CUT SERVICE AND INCLUDE PAYMENT FOR ALL LABOR, MATERIALS, AND ITEMS OF WORK AS COVERED FOR A TYPICAL SERVICE. ADDITIONAL RESTORATION ITEMS SUCH AS AGGREGATE BASE AND ASPHALT WILL BE PAID USING EXISTING BID ITEMS AS WELL.~~
29. THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN IN SERVICE, ANY EXISTING WATER MAINS AND/OR SERVICES EXPOSED DURING CONSTRUCTION. IF THE CONTRACTOR BREAKS A WATER MAIN AND/OR SERVICE, HE SHALL BE RESPONSIBLE TO REPAIR THE BREAK, AT HIS OWN EXPENSE, AND WILL NOT BE COMPENSATED FOR ANY DOWNTIME.
30. ANY WATER SERVICE LINE THAT IS BROKEN, CUT OR OTHERWISE DAMAGED, SHALL BE REPLACED FROM THE CORPORATION STOP TO THE CURB STOP WITH A SINGLE PIECE OF HDPE TUBING, CTS, PE4710. NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED.
31. SERVICE BRANCHES WILL BE INSTALLED AS PER O.D.O.T ITEM 638.16, WITH THE FOLLOWING EXCEPTIONS:
- 1.) WHEN A SERVICE BRANCH IS DISTURBED FOR LOWERING, RAISING, EXTENDING OR SHORTENING ON THE PROPERTY SIDE ON THE SERVICE STOP, IT SHALL BE REPLACED WITH NEW MATERIALS FROM THE CORPORATION STOP TO THE SERVICE STOP.
32. IN A STREET IMPROVEMENT, NO EXISTING WATER CURB BOX WILL BE LEFT IN THE PAVEMENT, CURB AND GUTTER OR SIDEWALK. THE CURB BOX WILL BE MOVED TO A SUITABLE LOCATION DETERMINED BY THE CANTON WATER DEPARTMENT. WHEN THE CURB BOX IS MOVED, ALL NEW MATERIAL WILL BE USED FROM THE CORPORATION STOP TO THE CURB STOP WHICH IS A SINGLE PIECE OF HDPE TUBING CTS, PE4710. NO SPLICING OF THE SERVICE LINE WILL BE PERMITTED. A NEW TAP (CORPORATION STOP) AND CURB STOP AND BOX MAY ALSO BE REQUIRED. THE DETERMINATION WILL BE MADE BY THE CANTON WATER DEPARTMENT.
33. POLYETHYLENE WATER MAIN AND SERVICE TUBING 2" AND UNDER SHALL BE COPPER TUBE SIZE, SDR 9, WITH A MINIMUM PRESSURE CLASS OF 200 PSI AND MEET STANDARDS ASTM-D2737 PE4710 AND AWWA C901. THE ACCEPTABLE TUBING IS CP CHEM PERFORMANCE PIPE DRISCOPEX 5100-ULTRA-LINE, CHARTER PLASTICS INC. BLUE ICE, ENDOT ENDOPURE AND ADS POLYFLEX.
- ~~34. ANY COMMERCIAL OR INDUSTRIAL WATER SERVICE MUST HAVE SITE AND PLUMBING PLANS SUBMITTED TO THE CANTON BUILDING DEPARTMENT FOR APPROVAL. THE CANTON BUILDING DEPARTMENT WILL DISTRIBUTE THE PLANS TO THE APPROPRIATE DEPARTMENTS FOR REVIEW AND COMMENTS. CORRECTIONS MUST BE MADE AND RESUBMITTED. PRICE ESTIMATES WILL NOT BE ISSUED AND SERVICE TAPS WILL NOT BE MADE UNTIL THE PLANS HAVE BEEN APPROVED BY THE CANTON WATER DEPARTMENT.~~
- ~~35. REGARDLESS OF THE SERVICE LINE SIZE, THE WATER SERVICE FROM THE CURB BOX TO THE FACILITY, MUST BE INSTALLED BY A CITY OF CANTON LICENSED PLUMBER. A CITY OF CANTON PLUMBING PERMIT MUST BE ISSUED TO THE PLUMBER INSTALLING THE SERVICE LINE BEFORE THE WATER SERVICE CAN BE INSTALLED.~~
36. THE PROPOSED FACILITIES SHALL MAINTAIN A MINIMUM 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.
37. A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL SHALL BE MAINTAINED AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL CONDITIONS OF FLOW.
38. BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS.
39. ALL WATER MAINS WILL BE INSTALLED UNDER THE PAVEMENT WITH A MINIMUM OF 3 FEET FROM THE EDGE OF PAVEMENT OR THE CURB AND/OR GUTTER. IN EXISTING STREETS, A SAW CUT WILL BE MADE TO ENSURE A CLEAN EDGE.
40. WHEN AN EXISTING WATER MAIN MUST BE SHUT DOWN TO PERFORM REQUIRED WORK, THE CONTRACTOR SHALL NOTIFY THE PROPERTIES TO BE AFFECTED A MINIMUM OF 24 HOURS IN ADVANCE OF SAID SHUT DOWN. THE WORK WILL BE SCHEDULED AND COORDINATED TO MINIMIZE THE TIME THE MAIN IS OUT OF SERVICE.

VIII. WATER MAIN / SERVICES (CONT.)

41. THE CONTRACTOR SHALL NOTIFY THE CITY 48 HOURS IN ADVANCE OF ANY SHUT DOWN OF AN EXISTING MAIN. THE CONTRACTOR WILL NOT OPERATE ANY VALVES. VALVES WILL BE OPERATED BY CANTON WATER DEPARTMENT PERSONNEL ONLY. VALVES DAMAGED BY THE CONTRACTOR'S OPERATION WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
42. ALL VALVE BOXES WILL BE ADJUSTED TO FINAL GRADE OF SURROUNDING PAVEMENT OR FINISHED SURFACE TREATMENTS WHEN THE PROJECT IS COMPLETED.
43. ANY DIGGING WITHIN THE RIGHT-OF-WAY OF ANY STREET REQUIRES A ROAD OPENING PERMIT. PLEASE CONTACT THE APPROPRIATE GOVERNMENTAL ENTITY FOR INFORMATION REGARDING THE PERMITTING PROCESS AND/OR FEES DUE.
44. THE CONTRACTOR SHALL REPLACE ANY TRAFFIC SIGNAL LOOP DETECTOR WIRE DAMAGED DURING THE WATERLINE INSTALLATION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
45. THE CONTRACTOR SHALL REPLACE ANY ROADWAY PAVEMENT MARKINGS DAMAGED OR REMOVED DURING THIS PROJECT. THE PAVEMENT MARKINGS SHALL BE PER THE GOVERNING AUTHORITY'S SPECIFICATIONS. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
46. THE CONTRACTOR SHALL REPLACE ANY PRIVATE IRRIGATION SYSTEMS AND/OR UNDERGROUND ELECTRIC FENCES THAT ARE DAMAGED OR REMOVED DURING THE WATERLINE CONSTRUCTION. THIS COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THE PROPOSAL.
47. VALVES THAT ARE CALLED OUT TO BE ABANDONED SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO ABANDON EXISTING WATER VALVES. THIS ITEM SHALL ALSO INCLUDE ANY NECESSARY EXCAVATION AND BACKFILL REQUIRED. VALVES SHALL BE CLOSED AND HAVE THE TOP 6" OF THE CASTING REMOVED. VALVES IN PAVEMENT SHALL BE FILLED WITH CONCRETE WITH THE TOP 6" MATCHING THE EXISTING PAVEMENT COMPOSITION. VALVES IN YARD AREA SHALL BE FILLED WITH SAND.
48. FIRE HYDRANTS THAT ARE CALLED OUT TO BE REMOVED SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO REMOVE THE FIRE HYDRANT, HYDRANT VALVE AND PLUG THE HYDRANT TEE.
49. FOR WATERLINES CALLED OUT TO BE ABANDONED, THE CONTRACTOR SHALL PLUG AND ABANDON THE EXISTING WATERLINE WITH A DUCTILE IRON PLUG OR AS DIRECTED BY THE CANTON WATER DEPARTMENT.
50. REMOVAL OF ANY EXISTING THRUST BLOCKS WILL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT COST.
- IX. POST CONSTRUCTION INCIDENTALS**
- AS BUILT DRAWINGS:**
- AS-BUILT REPRODUCIBLE MYLARS SHALL BE PROVIDED TO THE CITY OF CANTON BY THE DESIGN ENGINEER AT THE COMPLETION OF THE PROJECT. AS-BUILT INFORMATION CONSISTS OF POST-CONSTRUCTION FIELD SURVEY DATA OF THE LOCATION, FLOWLINE ELEVATIONS, AND TOP-OF-GRATE/RIM ELEVATIONS FOR ALL STORM AND SANITARY STRUCTURES CONSTRUCTED AND/OR IMPACTED BY THE PROJECT.
- THE CONTRACTOR SHALL DOCUMENT IN WRITING ANY AND ALL INFORMATION PERTAINING TO ANY CONSTRUCTION THAT DEVIATES FROM THESE PLANS AND SHALL MAKE SUCH DOCUMENTATION AVAILABLE TO THE DESIGN ENGINEER AND THE CITY ENGINEER.
- FOR PRIVATE PROJECTS, THE CONSTRUCTION BOND WILL NOT BE RELEASED UNTIL THE AS-BUILT DRAWINGS HAVE BEEN ACCEPTED.

**PROPOSED MONUMENTATION:**

THE CONTRACTOR'S SURVEYOR SHALL NOTIFY THE CITY ENGINEER IN WRITING UPON THE COMPLETION OF MONUMENTS BEING SET AS PER PLAN OR RECORD PLAT.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.9

168

X. MISCELLANEOUS GENERAL NOTES

ROUNDING:

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN.

WORK LIMITS:

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ITEM SPECIAL - MISCELLANEOUS METAL:

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE, AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND THE CITY OF CANTON STANDARD DRAWINGS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - MISCELLANEOUS METAL 10,000 POUNDS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE, AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM 201 - CLEARING AND GRUBBING:

REMOVE ALL TREES, STUMPS, AND SHRUBS/BUSHES SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID ITEM 201 - CLEARING AND GRUBBING. SOME TREES MARKED FOR REMOVAL MAY HAVE ALREADY BEEN CUT DOWN, IN WHICH CASE THE CONTRACTOR SHALL REMOVE THE REMAINING STUMP.

DRINKING WATER PROTECTION:

THIS PROJECT IS LOCATED WITHIN A PUBLIC DRINKING WATER PROTECTION AREA, FROM ST. ELMO AVENUE NE TO MAPLE AVENUE NE. USE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. DO NOT STORE FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. MAINTAIN A SPILL KIT ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. IMMEDIATELY MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. REPORT ALL SPILLS OR EVENTS TO THE CITY OF CANTON WATER SUPERINTENDENT, TYLER CONVERSE AT 330-498-3315. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), CONTACT THE STARK COUNTY EMERGENCY MANAGEMENT (330-451-3911 OR [SCLEPC@STARKCOUNTYOHIO.GOV](mailto:SCLEPC@STARKCOUNTYOHIO.GOV)) AND THE OHIO EPA'S SPILLS HOTLINE (800-282-9378) FOR CLEANUP OF THE SPILL.

ITEM 608 - CONCRETE STEPS, BY TYPE, AS PER PLAN

AT LOCATIONS WHERE EXISTING PRIVATE CONCRETE STEPS ARE ADJACENT TO THE PROPOSED SIDEWALK, THE CONTRACTOR SHALL FORM THE SIDEWALK UP TO THE STEPS. REMAINING STAIR RISERS SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING RM-2.1, MAINTAINING A MINIMUM RISER HEIGHT OF 4" AND A MAXIMUM RISER HEIGHT OF 7". IF IT IS DETERMINED BY THE ENGINEER THAT THE REMAINING STAIR RISERS DO NOT CONFORM TO SCD RM-2.1, THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN PROVIDED, IF NECESSARY, TO REMOVE AND RECONSTRUCT THE EXISTING CONCRETE STEPS.

THE EXISTING CONCRETE STEPS AND RAILINGS SHALL BE REMOVED PRIOR TO PLACING THE PROPOSED. THE EXCAVATION, FORM PLACEMENT, CONCRETE, FINISHING FOR THE CONCRETE STEPS AND RAILING INSTALLATION SHALL BE AS PER THE 2019 CONSTRUCTION MATERIALS SPECIFICATIONS SECTION 202 FOR THE STEP REMOVALS AND SECTION 608 FOR THE CONCRETE STEPS. PAYMENT FOR THE STEPS SHALL BE FULL COMPENSATION FOR STEP REMOVAL, RAILING REMOVAL, EXCAVATION, BACKFILL, CONCRETE, CUTTING/SAWING, BASE COURSE MATERIAL, EXPANSION JOINT MATERIALS, REINFORCING STEEL, HAND RAILING AND ANY INCIDENTALS REQUIRED TO COMPLETE THE INSTALLATION AS SPECIFIED. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LINEAR FOOT PRICE OF ITEM 608 - CONCRETE STEPS, BY TYPE, AS PER PLAN.

ITEM 608 - CONCRETE STEPS, TYPE A, AS PER PLAN 20 FT  
ITEM 608 - CONCRETE STEPS, TYPE B, AS PER PLAN 20 FT

ITEM 202 - REMOVAL MISC.: LANDSCAPING ITEMS

THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE PRIVATE LANDSCAPING ITEMS LABELED AS "TAKE" AS SHOWN ON THE PLANS AND DISPOSE OF ALL MATERIALS PROPERLY. THE FOLLOWING LOCATIONS HAVE BEEN ESTABLISHED AS REQUIRING LANDSCAPING ITEM REMOVAL:

LOCATION	DESCRIPTION
COLONIAL BLVD./MARKET AVE. MEDIAN	LANDSCAPE AREA W/ SEG. RET. WALL, FLOWERS, SHRUBS, LARGE PRIVATE SIGN "COLONIAL HEIGHTS ESTABLISHED 1916"
703 COLONIAL BLVD. NE	LANDSCAPE BLOCKS
705 COLONIAL BLVD. NE	LANDSCAPE TIMBER WALL ALONG EAST SIDE DRIVE & LANDSCAPE AREA W/ GRAVEL PATH, FLOWERS, BUSHES, ROCKS, MISC. ITEMS
710 COLONIAL BLVD. NE	LANDSCAPE AREA W/ FLOWERS, ROCKS, MISC. ITEMS
909 COLONIAL BLVD. NE	LANDSCAPE AREA W/ BLOCKS AROUND TREE
1012 COLONIAL BLVD. NE	LANDSCAPE AREA W/ 2 BUSHES, ADDRESS STONE, SPOTLIGHT, MISC. ITEMS
2612 GIBBS AVE. NE / 2618 GIBBS AVE. NE	BOULDER
COLONIAL BLVD./GIBBS AVE. MEDIAN	LANDSCAPE AREA W/ SEG. RET. WALL, FLOWERS, SHRUBS, LARGE PRIVATE SIGN "COLONIAL HEIGHTS ESTABLISHED 1916"

A LUMP SUM QUANTITY FOR ITEM 202- REMOVAL MISC.: LANDSCAPING ITEMS HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE REMOVAL OF THE EXISTING LANDSCAPING ITEMS LISTED ABOVE.

ITEM 202 - REMOVAL MISC.: STEPS AND RAILING

THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE 2 STEPS AND 3' OF RAILING ON EACH SIDE OF THE STEPS LOCATED AT 803 COLONIAL BLVD. NE AND DISPOSE OF ALL MATERIALS PROPERLY. CARE SHALL BE TAKEN SO AS TO NOT DAMAGE THE REMAINING STEPS AND REMAINING PORTION OF THE RAILING.

A LUMP SUM QUANTITY FOR ITEM 202 - REMOVAL MISC.: STEPS AND RAILING HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 644 - PAVEMENT MARKING, MISC.: SPEED TABLE MARKING

THIS ITEM SHALL INCLUDE INSTALLING SPEED TABLE MARKINGS AT THE LOCATIONS SHOWN IN THE PLANS. SPEED TABLE MARKINGS SHALL BE IN COMPLIANCE WITH THE DETAILS SHOWN IN SECTION 3B.25 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), FIGURE 3B-29 AND FIGURE 3B-30.

PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 644 PAVEMENT MARKING, MISC.: SPEED TABLE MARKING INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED.

SURVEYING PARAMETERS:

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS  
MONUMENT TYPE: (B)

VERTICAL POSITIONING

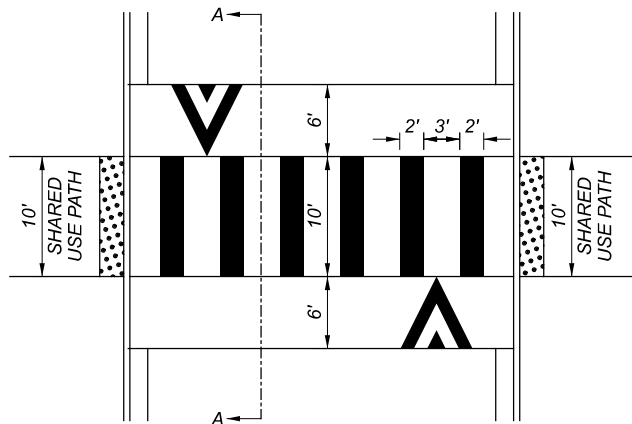
ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID 12A

HORIZONTAL POSITIONING

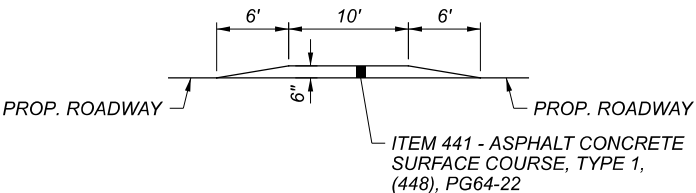
REFERENCE FRAME: NAD83 (2011)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE (3401)  
COMBINED SCALE FACTOR: 0.99989863  
PROJECT ADJUSTMENT FACTOR: 1.00010138  
(PROJECT ADJUSTMENT FACTOR = 1 / COMBINED SCALE FACTOR)  
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.



SPEED TABLE DETAIL



SECTION A-A

NOTES:  
1.) INLETS ARE REQUIRED ON THE UPHILL SIDE OF A SPEED TABLE.  
2.) ALL SIGNING AND STRIPING SHALL CONFORM TO THE LATEST EDITION OF THE OMUTCD.

ABBREVIATION LEGEND:

# = BASELINE  
C = CENTERLINE  
F = FLOW LINE  
P = PROPERTY LINE  
PI = POINT OF INTERSECTION  
Δ = ANGLE OF INTERSECTION  
Dc = DEGREE OF CURVATURE  
R = RADIUS  
T = TANGENT LENGTH  
L = LENGTH OF CURVE  
E = EXTERNAL DISTANCE  
eMAX = MAXIMUM SUPERELEVATION  
PC = PT OF CURVATURE  
PT = PT OF TANGENCY  
PRC = PT OF REV. CURVATURE  
PCC = PT OF COMP. CURVATURE  
NC = NORMAL CROWN  
PVI = PT OF VERT. INTERSECTION  
V.C. = VERTICAL CURVE  
SSD = STOPPING SIGHT DISTANCE  
GR. BRK = GRADE BREAK  
CONST. = CONSTRUCTION  
R/W = RIGHT OF WAY  
EX = EXISTING  
PR = PROPOSED  
BM = BENCHMARK  
STA. = STATION  
LT. = LEFT  
RT. = RIGHT  
L.F. = LEFT FORWARD  
R.F. = RIGHT FORWARD  
NB = NORTHBOUND  
SB = SOUTHBOUND  
EB = EASTBOUND  
WB = WESTBOUND  
DND = DO NOT DISTURB  
TBR = TO BE REMOVED  
TBRBO = TO BE REMOVED BY OTHERS  
ATG = ADJUST TO GRADE  
RTG = RECONSTRUCT TO GRADE  
REL = TO BE RELOCATED  
TYP. = TYPICAL  
VAR. = VARIES  
MIN. = MINIMUM  
MAX. = MAXIMUM  
LB = POUNDS  
SY = SQUARE YARDS  
CY = CUBIC YARDS  
FT = FEET  
PVMT = PAVEMENT  
SHLD = SHOULDER  
ASPH. = ASPHALT  
CONC. = CONCRETE  
E/P = EDGE OF PAVEMENT  
E/S = EDGE OF SHOULDER  
F/C = FACE OF CURB  
B/C = BACK OF CURB  
C/G = CURB AND GUTTER  
INV. = INVERT  
ELEV. = ELEVATION  
T/G = TOP OF GRATE  
T/C = TOP OF COVER  
CB = CATCH BASIN  
MH = MANHOLE  
UD = UNDERDRAIN  
CMP = CORRUGATED METAL PIPE  
RCP = REINFORCED CONCRETE PIPE

CONVENTIONAL SYMBOLS

County Line	-----	Edge of Shoulder (Ex)	-----
Township Line	-----	Edge of Shoulder ( Pr )	-----
Section Line	-----	Ditch / Creek (Ex)	-----
Corporation Line	----- or -----	Ditch / Creek (Pr)	-----
Fence Line (Ex)	-----x-----x----- (Pr) -----x-----x-----	Tree Line (Ex)	-----
Center Line	-----	Ownership Hook Symbol	Example -----
Right of Way (Ex)	----- Ex R/W -----	Property Line Symbol	Example -----
Right of Way (Pr)	----- R/W -----	Break Line Symbol	Example -----
Standard Highway Ease.(Ex)	----- Ex SH -----	Tree (Pr) , Tree (Ex) , Shrub (Ex)	-----
Standard Highway Ease.(Pr)	----- SH -----	Tree (Remove) , Shrub (Remove)	-----
Temporary Right of Way	----- TMP -----	Evergreen (Ex) , Stump	-----
Channel Ease. (Pr)	----- CH -----	Evergreen (Remove) , Stump (Remove)	-----
Utility Ease. (Ex)	----- Ex U -----	Wetland (Pr) , Grass (Pr) , Aerial Target	-----
Railroad	----- or -----	Post (Ex) , Mailbox (Ex) , Mailbox (Pr)	-----
Guardrail (Ex)	----- (Pr) -----	Light (Ex) , Telephone Marker (Ex)	-----
Construction Limits	----- . ----- . ----- . ----- . -----	Fire Hydrant (Ex) , Water Meter (Ex)	-----
Edge of Pavement (Ex)	-----	Water Valve (Ex) , Utility Valve Unknown (Ex.)	-----
Edge of Pavement (Pr)	-----	Telephone Pole (Ex) , Power Pole (Ex)	-----
		Light Pole (Ex)	-----

ITEM CONDUIT, MISC.: 8-INCH SANITARY SEWER RECONSTRUCTION BY THE CURED IN PLACE PIPE (CIPP) PROCESS

DESCRIPTION  
SUBMITTALS  
JOB CONDITIONS  
MATERIALS AND TECHNICAL REQUIREMENTS  
CIPP PROCESS  
FIELD QUALITY CONTROL  
WARRANTY AND ACCEPTANCE  
TESTING AND REFERENCES  
METHOD OF MEASUREMENT AND PAYMENT

DESCRIPTION

THE WORK SHALL CONSIST OF ALL DESIGN, MATERIALS, TRANSPORTATION, EQUIPMENT, AND LABOR NECESSARY TO RECONSTRUCT DETERIORATED SECTIONS OF THE SANITARY SEWERS IDENTIFIED IN THE CONTRACT DOCUMENTS BY MEANS OF THE CURED IN PLACE PIPE (CIPP) PROCESS.

THE WORK REQUIRED BY THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO:

- CLEANING AND TELEVISION INSPECTION OF EXISTING SEWERS.
- REHABILITATION OF THE EXISTING SEWERS WITHOUT EXCAVATION.
- REINSTATEMENT OF ALL LATERAL CONNECTIONS WITHOUT EXCAVATION.
- TELEVISIONING AND RECORDING THE SEWER SECTIONS AFTER REHABILITATION HAS BEEN COMPLETED.
- MAKE ANY AND ALL CORRECTIONS TO THE FINISHED PRODUCT, PER THIS SPECIFICATION (THIS WILL CONTINUE UNTIL PRODUCT MEETS THIS SPECIFICATION, WHOLLY).
- TELEVISIONING AND RECORDING THE SEWER SECTIONS THAT NEEDED CORRECTIVE ACTIONS (THIS WILL CONTINUE UNTIL PRODUCT MEETS THIS SPECIFICATION, WHOLLY).

WHEN COMPLETE, THE REHABILITATED SECTION(S) SHALL:

- EXTEND FROM ONE MANHOLE TO THE NEXT MANHOLE IN A MONOLITHIC, CONTINUOUS LENGTH.
- PROVIDE A MINIMUM FLOW CAPACITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING PIPE.
- YIELD THREE-DIMENSIONAL, CROSS-LINKING STRENGTH IN TENSION, COMPRESSION, AND FLEXURAL MODULUS (SEE MECHANICAL PROPERTIES) WHICH IS STRUCTURALLY SOUND.
- PROVIDE A SERVICE LIFE OF 50 YEARS WHICH IS SUPPORTED BY DOCUMENTED, INDEPENDENT TEST ANALYSIS.

THE SEWER PIPE SHALL BE REHABILITATED USING THE METHOD AND MATERIALS AS DESCRIBED BY ASTM D5813 (CURRENT ACTIVE STANDARD), "STANDARD SPECIFICATION FOR CURED-IN-PLACE THERMOSETTING RESIN SEWER PIPING SYSTEMS", ASTM F1216 (CURRENT ACTIVE STANDARD), "STANDARD PRACTICE FOR REHABILITATION OF EXISTING PIPELINES AND CONDUITS BY THE INVERSION AND CURING OF A RESIN-IMPREGNATED TUBE," AND NASSCO.

SUBMITTALS

FURNISH MANUFACTURER'S PRODUCT DATA, TEST REPORTS, AND MATERIAL CERTIFICATIONS AS REQUIRED. RECEIVE, CHECK, APPROVE AS REQUIRED, AND SUBMIT ALL ITEMS LISTED HEREIN BY THE TIME INDICATED, ACCOMPANIED BY A TRANSMITTAL LETTER. KEEP AN ACCURATE RECORD OF THE DATE OF SUBMITTAL AND THE DATE RECEIVED ON THE PROJECT.

INSTALLER QUALIFICATIONS

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT A COPY OF CERTIFICATE OF INSTALLER QUALIFICATIONS WITH A MATERIAL LIST TO THE CITY OF CANTON. INSTALLATION OF THE SEWER PIPE LINING SYSTEM SHALL BE PERFORMED BY AN EXPERIENCED CONTRACTOR FULLY LICENSED AND APPROVED BY THE LINING PROCESS MANUFACTURER. THE CONTRACTOR SHALL HAVE A MINIMUM OF FIVE (5) YEARS OF EXPERIENCE IN SUCH WORK AND SHALL HAVE SATISFACTORILY COMPLETED TEN (10) PROJECTS OF SIMILAR SIZE AND TYPE FOR AT LEAST THREE (3) DIFFERENT UTILITIES OR AGENCIES. SUBMIT COPY OF MANUFACTURER'S LICENSEE CERTIFICATE. SUBMIT LIST OF TEN (10) SIMILAR REGIONAL JOBS WITHIN THE PAST FIVE (5) YEARS AS WELL. PROVIDE PROJECT INFORMATION SUCH AS LENGTH OF PROJECT, PIPE DIAMETER, DATE COMPLETE, AND PROJECT COST.

MATERIAL CERTIFICATION

WRITTEN CERTIFICATION IS REQUIRED FROM THE MANUFACTURER THAT ALL MATERIALS USED IN THE WORK WERE MANUFACTURED AND TESTED IN ACCORDANCE WITH THE APPROPRIATE ASTM SPECIFICATION, AND IS BEING USED OR INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

PIPE LINER

FOLLOWING TELEVISIONING OF THE SEWER SEGMENT, FURNISH TO THE ENGINEER AND THE CITY'S REPRESENTATIVE THE LINER THICKNESS AND COMPUTATIONS FOR EACH MANHOLE TO MANHOLE SECTION, AND THE LINER MANUFACTURER'S DETAILED INSTALLATION PROCEDURES. EACH TUBE SHALL BE DESIGNED TO WITHSTAND INTERNAL AND/OR EXTERNAL LOADS AS DICTATED BY THE SITE AND PIPE CONDITIONS.

RESINS

THE RESIN MANUFACTURER SHALL PROVIDE THE CONTRACTOR WITH THEIR RECOMMENDED CURING CONDITIONS AND THE CONTRACTOR SHALL SUBMIT THE SAME TO THE CITY REPRESENTATIVE FOR APPROVAL.

TESTING

WHEN SO DIRECTED AND PRIOR TO THE USE OF ANY MATERIALS, AT CONTRACTOR'S EXPENSE, THE RESULTS OF TESTING OF THE PROPOSED MATERIALS BY AN APPROVED LABORATORY IN CONFORMANCE WITH THESE SPECIFICATIONS. REMOVE ANY MATERIAL NOT MEETING THE REQUIREMENTS OF THESE SPECIFICATIONS. SUBSTITUTE ACCEPTABLE MATERIALS FOR REJECTED ITEMS AT OWN EXPENSE. TESTING BY AN INDEPENDENT LABORATORY SHALL VERIFY THAT THE PRODUCTS TO BE USED MEET ALL MINIMUM STRENGTH STANDARDS AS SET FORTH IN ASTM F-1216, TABLE 1. TESTING SHALL ALSO VERIFY THAT ANY PRODUCT TO BE USED ON THE PROJECT MEETS THE MINIMUM CHEMICAL RESISTANCE REQUIREMENTS AS ESTABLISHED IN ASTM F-1743, TABLE 2, WHERE THE TESTING IS IN ACCORDANCE WITH SECTION 7.2.1 OF ASTM F-1743.

PRE-REHABILITATION VIDEO RECORDINGS AND LOGS

THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF THE PRE-REHABILITATION VIDEO RECORDINGS AND LOGS TO THE CITY REPRESENTATIVE THAT DOCUMENT EXISTING CONDITIONS AFTER THE CONTRACTOR HAS CLEANED THE SEWER LINE BUT BEFORE CIPP LINING.

LATERAL STATUS DETERMINATION REPORT

THE CONTRACTOR SHALL SUBMIT A LATERAL STATUS DETERMINATION REPORT FOR EACH MANHOLE TO MANHOLE SECTION FOR APPROVAL BY THE CITY REPRESENTATIVE. NO CIPP LINER INSTALLATION SHALL BE PERFORMED UNTIL WRITTEN APPROVAL OF THIS REPORT IS ISSUED BY THE CITY'S REPRESENTATIVE.

INSTALLATION PROCEDURES

THE CONTRACTOR SHALL SUBMIT THE CIPP LINER MANUFACTURER'S DETAILED INSTALLATION PROCEDURES

CURING CYCLE AND COOLING RATE

THE CONTRACTOR SHALL SUBMIT THE RESIN MANUFACTURER'S RECOMMENDED CURING CYCLE AS WELL AS THE RECOMMENDED COOLING RATE.

CURE LOGS

THE CONTRACTOR SHALL SUBMIT A COPY OF THE CURE LOGS FOR EACH MANHOLE TO MANHOLE INSTALLATION. EACH CURE LOG SHALL CLEARLY INDICATE THE PROJECT NAME, CAPITAL IMPROVEMENT PROJECT (CIP) NUMBER, AND THE MANHOLE SECTION THAT WAS LINED.

POST-REHABILITATION VIDEO RECORDINGS AND LOGS

THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF THE FINAL TELEVISION INSPECTION THAT SHOW THE REHABILITATED SEWER ALONG WITH REINSTATED SERVICE CONNECTIONS.

JOB CONDITIONS

COORDINATE WITH OTHER TRADES TO PREVENT DELAYS, OMISSIONS, OR ERRORS.

ENVIRONMENTAL REQUIREMENTS

1. DO NOT WORK IN RAIN, SNOW, OR IN PRESENCE OF WATER. DO NOT WORK IN TEMPERATURES BELOW THE MANUFACTURER'S RECOMMENDED TEMPERATURE TO OBTAIN PROPER CURING. THE LINER SHALL BE INSTALLED DURING WEATHER CONDITIONS DEEMED ACCEPTABLE TO THE LINER MANUFACTURER.

2. COMPLETE SEWER CLEANING, TELEVISION INSPECTION, AND POINT REPAIR PRIOR TO DELIVERY OF THE MATERIAL FOR THE LINER.

3. THE CITY'S SANITARY SEWER SYSTEM IS SUSCEPTIBLE TO SIGNIFICANT INCREASES IN WASTEWATER FLOW RATES DURING PERIODS OF WET WEATHER. THE CONTRACTOR SHALL SCHEDULE HIS WORK TO COINCIDE WITH PERIODS OF DRY WEATHER AND SHALL NOT BE PERMITTED TO PERFORM THE LINING WORK DURING PERIODS OF ANTICIPATED RAINFALL OR SNOWFALL.

4. CONTRACTOR MAY BE REQUIRED TO MONITOR STYRENE ODORS AS NECESSARY IN BUSINESSES AND RESIDENCES TO ENSURE THAT CONCENTRATION LEVELS ARE UNDER RECOMMENDED LIMITS.

CONTRACTOR SHALL HAVE THE CITY'S APPROVAL PRIOR TO CONNECTION OF HIS WATER SUPPLY LINES TO ANY FIRE HYDRANT. PROVIDE THE NECESSARY GATE VALVES, BACKFLOW PREVENTERS, AND FLOW METER FOR EACH HYDRANT CONNECTION AS REQUIRED BY THE CITY OF CANTON. ALL EQUIPMENT, FITTINGS, AND VALVES SHALL BE IN ACCORDANCE WITH THE CITY OF CANTON'S STANDARDS.

DELIVERY, STORAGE, AND HANDLING

DELIVERY

DELIVER MATERIALS IN A SUFFICIENT QUANTITY TO EFFECTIVELY SPAN THE DISTANCE FROM THE INLET TO THE OUTLET OF THE RESPECTIVE MANHOLES IN ONE CONTINUOUS RUN.

DELIVER MATERIAL TO JOB SITE IN A COVERED TRUCK TO MINIMIZE EXPOSURE TO SUNLIGHT AND TO MAINTAIN THE TEMPERATURE OF THE PRODUCT WITHIN MANUFACTURER'S RECOMMENDATION TO AVOID CURING. COORDINATE DELIVERY OF MATERIAL WITH OTHER TRADES TO AVOID DELAYS.

STORAGE OF MATERIALS

MATERIAL SHALL BE STORED IN THE DELIVERY TRUCK IN ORDER TO MINIMIZE EXPOSURE TO SUNLIGHT AND TO MINIMIZE THE TEMPERATURE OF THE PRODUCT TO WITHIN MANUFACTURER'S RECOMMENDATION TO AVOID CURING.

NO MATERIAL SHALL BE STORED IN THE OPEN OR IN CONTACT WITH THE GROUND.

TEMPERATURE LOGS OF LINER FROM TIME OF WET-OUT TO INSTALLATION SHALL BE GIVEN TO THE CITY REPRESENTATIVE ON SITE AT THE TIME OF INSTALLATION.

HANDLING

HANDLE ALL PRODUCTS WITH CARE. ONLY SOUND, UNDAMAGED PRODUCTS SHALL BE USED.

TUBE INSTALLATION FORCES OR PRESSURES SHALL BE LIMITED SO AS NOT TO STRETCH THE TUBE LONGITUDINALLY BY MORE THAN 5 PERCENT OF THE ORIGINAL LENGTH.

MATERIALS AND TECHNICAL REQUIREMENTS

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION OF THE CONTRACTOR'S EXPERIENCE TO THE CITY OF CANTON.

THE CIPP INSTALLATION PROCESS SHALL BE AN INVERSION TYPE METHOD AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

ALL MATERIALS USED IN THE REHABILITATION PROCESS SHALL BE OF THE BEST QUALITY IN ACCORDANCE WITH ASTM F1216 (CURRENT ACTIVE STANDARD) AND TO THE SATISFACTION OF THE ENGINEER. ANY MATERIALS NOT APPROVED BY THE ENGINEER SHALL BE REJECTED PRIOR TO THE REHABILITATION OF THE SEWER. THE REJECTED MATERIALS SHALL BE REPLACED WITH APPROVED MATERIALS AT THE CONTRACTOR'S EXPENSE.

TUBE

THE TUBE SHALL BE FABRICATED FROM A FLEXIBLE FELT OR FIBER MATERIALS WHICH, WHEN CURED, ARE CHEMICALLY RESISTANT TO INTERNAL EXPOSURE OF SEWAGE CONTAINING NORMAL LEVELS OF HYDROGEN SULFIDE, CARBON MONOXIDE, CARBON DIOXIDE, METHANE, TRACES OF MERCATANS AND DILUTE SULFURIC ACID AND MEET THE REQUIREMENTS OF ASTM F1216 (CURRENT ACTIVE STANDARD), SECTION 5.1. THE MATERIALS MUST ALSO WITHSTAND SATURATION WITH MOISTURE AND EXTERNAL EXPOSURE TO SOIL BACTERIA. PROJECTED CHANGES IN GROUND WATER LEVEL, TEMPERATURE, AND OTHER LOADING FACTORS SHALL CAUSE NO SIGNIFICANT CHANGES IN THE SERVICE CHARACTERISTICS OR SERVICE LIFE OF THE REHABILITATED PIPE.

THE TUBE SHALL BE MANUFACTURED AND FABRICATED UNDER QUALITY CONTROLLED CONDITIONS SET BY THE MANUFACTURER TO A SIZE THAT, WHEN INSTALLED WILL FIT TIGHTLY AGAINST THE INTERNAL CIRCUMFERENCE AND LENGTH OF THE ORIGINAL CONDUIT AND PROVIDE THE REQUIRED THICKNESS WHEN CURED. ALLOWANCE FOR LONGITUDE AND CIRCUMFERENTIAL STRETCHING OF THE TUBE DURING INVERSION, BENDS, AND CHANGES IN PIPE SIZE SHALL BE MADE BY THE CONTRACTOR. THE WALL THICKNESS OF THE FINISHED PRODUCT SHALL NOT BE LESS THAN THE MINIMUM REQUIRED BY ASTM F 1216, APPENDIX XI. DETERMINE THE LENGTH OF THE TUBE TO EFFECTIVELY CARRY OUT THE INSERTION AND SEAL THE TUBE AT THE INLET AND OUTLET OF THE RESPECTIVE MANHOLES. VERIFY THE LENGTHS IN THE FIELD BEFORE CUTTING THE TUBE TO LENGTH. INDIVIDUAL TUBE RUNS CAN BE MADE OVER ONE OR MORE MANHOLE TO MANHOLE SECTIONS AS DETERMINED IN THE FIELD AND APPROVED.

THE TUBES SHALL BE DESIGNED TO WITHSTAND NEGOTIATION OF OFFSETS, PIECES OF GAPS, ANGLES (NO MORE THAN 45 DEGREES) AND GRADES WITHOUT DAMAGE TO THE TUBE DURING THE INVERSION PROCESS. SEAMS IN THE TUBE SHALL BE STRONGER THAN THE NON-SEAMED FELT MATERIAL. THE CONTRACTOR SHALL DESIGN THE LENGTH OF THE TUBE TO EFFECTIVELY CARRY OUT INVERSION AND SEALING AT END POINTS. THE TUBE SHALL CONTINUOUSLY SPAN FROM MANHOLE TO MANHOLE WITH NO INTERMEDIATE SEAMS. THE GRADE AND LENGTH OF PIPE SEGMENTS ARE GIVEN ON THE PLAN, BASED ON EXISTING RECORD INFORMATION. THE CONTRACTOR SHALL VERIFY THESE MEASUREMENTS BEFORE DESIGNING AND RECONSTRUCTING THE PIPE.

PRIOR TO THE BEGINNING OF WORK ON THE CIPP PROCESS THE CONTRACTOR SHALL SUBMIT THE PROPOSED TUBE THICKNESS FOR EACH MANHOLE TO MANHOLE SECTION, INCLUDING ALL DESIGN CALCULATIONS INDICATING HOW THE TUBE THICKNESS DIMENSIONS WERE OBTAINED.

THE COLOR OF THE INTERIOR PIPE WALL OF THE CIPP AFTER INSTALLATION SHALL BE A RELATIVELY LIGHT REFLECTIVE COLOR THAT ALLOWS A CLEAR DETAILED EXAMINATION WITH CLOSED CIRCUIT TELEVISIONING EQUIPMENT TO BE MADE.

RESIN/CATALYST

UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL FURNISH A POLYESTER RESIN AND COMPATIBLE CATALYST SYSTEM AS SPECIFIED BY THE RESIN MANUFACTURER; THAT IS COMPATIBLE WITH THE APPROVED LINER AND INVERSION PROCESS. THE RESIN SHALL NOT CONTAIN FILLERS OR ADDITIVES, EXCEPT THOSE REQUIRED FOR VISCOSITY CONTROL, FIRE RETARDANCE, MODULUS ENHANCEMENT, CHEMICAL RESISTANCE, OR EXTENSION OF POT LIFE. THIXOTROPIL AGENTS THAT WILL NOT INTERFERE WITH VISUAL INSPECTION MAY BE ADDED FOR VISCOSITY CONTROL. RESINS MAY CONTAIN PIGMENTS, DYES, OR COLORS THAT DO NOT INTERFERE WITH THE REQUIRED CURED-IN-PLACE PIPE (CIPP) STRUCTURAL PROPERTIES.

MINIMUM STRUCTURAL PROPERTY	MINIMUM VALUE	TEST METHOD
FLEXURAL STRENGTH	4,500 PSI	ASTM D 790
FLEXURAL MODULUS	250,000 PSI	ASTM D 790

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.10A

TOTAL

168



DESIGN CRITERIA

THE LINER THICKNESS SHALL BE CALCULATED AND DESIGNED BASED UPON THE PHYSICAL CONDITION OF THE EXISTING PIPE TO BE LINED IN ACCORDANCE WITH ASTM F-1216, APPENDIX XI AND THE FOLLOWING:

1. ALL PIPES SHALL BE SUBJECTED TO A SOIL LOAD OF 120 POUNDS PER CUBIC FOOT (LB/CF) AND BASED ON THE MAXIMUM SEWER DEPTH AT EACH SECTION TO BE LINED. SEE PLANS FOR THE MAXIMUM SEWER DEPTHS. ASSUME THE GROUNDWATER TABLE TO BE AT THE SURFACE. ALL PIPELINES SHALL BE DESIGNED TO CARRY HS-20 LOADS AT THE MAXIMUM SEWER DEPTH AT EACH SECTION.
2. ASSUME A FULLY DETERIORATED GRAVITY PIPE CONDITION AND FACTOR OF SAFETY OF 2.0.

EQUIPMENT

ALL EQUIPMENT REQUIRED FOR THE INSTALLATION AND CURING OF THE RESIN IMPREGNATED FLEXIBLE TUBE, INCLUDING CABLES, SLEEVES, ROLLERS, COMPRESSORS, GENERATORS, PUMPS, VALVES, GAUGES, AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

CIPP PROCESS

THE CONTRACTOR SHALL ADHERE TO THE FOLLOWING PROCEDURES AND CONDUCT THE CIPP INSTALLATION PROCESS IN ACCORDANCE WITH ASTM F1216 (CURRENT ACTIVE STANDARD), UNLESS MODIFIED OR ALTERNATE PROCEDURES ARE OTHERWISE APPROVED BY THE CITY'S REPRESENTATIVE PRIOR TO TUBE INVERSION. THE CONTRACTOR SHALL VERIFY EXISTING PIPE SIZES PRIOR TO ORDERING MATERIALS AND SHALL MAKE ALLOWANCES IN DETERMINING THE FELT TUBE LENGTH AND CIRCUMFERENCE FOR STRETCH DURING INSTALLATION AND SHRINKAGE DURING CURING AND COOL DOWN. THE CONTRACTOR SHALL VERIFY THE LENGTHS IN THE FIELD BEFORE THE FELT TUBE IS CUT AND IMPREGNATED. INDIVIDUAL INSTALLATION RUNS MAY INCLUDE ONE OR MORE MANHOLE-TO-MANHOLE SECTIONS AS APPROVED BY THE ENGINEER.

OWNER AND RESIDENT NOTIFICATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESIDENT NOTIFICATION WHICH SHALL INCLUDE THREE (3) SEPARATE NOTICES. THE INITIAL NOTIFICATION SHALL CONTAIN GENERAL INFORMATION ABOUT THE PROJECT AND THE CURED-IN- PLACE PIPE PROCESS USING GRAPHICS AS NECESSARY TO ILLUSTRATE THE PROCEDURE. OTHER INFORMATION TO BE INCLUDED SHALL BE THE PROJECT NAME, DESCRIPTION OF THE WORK TO BE PERFORMED, TIME FRAMES FOR THE WORK, AND PRECAUTIONS TO TAKE DURING THE COURSE OF THE PROJECT (KEEPING WATER IN THE TRAP, KEEPING TOILET LIDS DOWN, ETC.) THE CONTRACTOR SHALL LIST THE SUPERINTENDENT ON THE JOB ALONG WITH ITS MOBILE TELEPHONE NUMBER AS THE PRIMARY CONTACT. SECONDARY CONTACT INFORMATION SHALL BE THE COMPANY NAME, ADDRESS, AND TELEPHONE NUMBER. THIS INITIAL RESIDENT NOTIFICATION SHALL BE SUBMITTED FOURTEEN (14) DAYS PRIOR TO THE BEGINNING OF WORK FOR APPROVAL BY THE CITY REPRESENTATIVE. UPON APPROVAL, THE CONTRACTOR SHALL IMMEDIATELY DISTRIBUTE THIS INFORMATION TO ALL RESIDENTS AFFECTED BY THE WORK.

THE SECOND RESIDENT NOTIFICATION SHALL ALERT RESIDENTS TO ANY UTILITY DISRUPTIONS AND TO ADVISE MINIMAL WATER USAGE. THIS NOTIFICATION SHALL PROVIDE THE BEGINNING DATE AND TIME OF THE DISRUPTION, THE LENGTH OF THE DISRUPTION, AND THE ENDING DATE AND TIME OF THE DISRUPTION. CONTACT INFORMATION SHALL BE REPEATED ON THIS NOTIFICATION. THE SECOND RESIDENT NOTIFICATION SHALL BE DISTRIBUTED BY THE CONTRACTOR TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF THE WORK. THE THIRD RESIDENT NOTIFICATION SHALL INFORM RESIDENTS THAT WORK ON THEIR PORTION OF THE SEWER IS COMPLETE AND THEY MAY RESUME NORMAL WATER USAGE. THE CONTRACTOR SHALL DISTRIBUTE THIS NOTICE IMMEDIATELY UPON COMPLETION OF THE WORK.

ROOT CUTTING AND CLEANING OF SEWER LINE

THE SEWER MUST BE PROPERLY CLEANED OF DEBRIS AND ROOTS PRIOR TO LINING TO PERMIT PROPER INSTALLATION OF THE LINER. THE TERM "CLEAN" SHALL MEAN THE REMOVAL OF SAND, GRAVEL, DIRT, ROOTS, GREASE, AND ALL OTHER SOLIDS OR SEMISOLID MATERIAL FROM THE INTERIOR FACE OF THE SEWER LINE. THE PERFORMANCE AND RESULTS OF THE SEWER CLEANING AND ROOT CUTTING OPERATIONS MUST BE ACCEPTABLE TO THE ENGINEER AND THE CITY'S REPRESENTATIVE BEFORE LINING IS PERFORMED.

THE CONTRACTOR MAY BE REQUIRED TO UTILIZE SPECIAL CLEANING TOOLS IN ORDER TO CLEAN THE SEWERS. SPECIAL TOOLS ARE DEFINED AS ANY TYPE OF TOOL, EQUIPMENT, HEAD, OR ATTACHMENT WHICH IS NOT OF THE WATER JET/NOZZLE AND/OR VACUUM/PUMP TYPE SYSTEM (REGARDLESS OF SIZE/CAPACITY/CONFIGURATION). SPECIAL TOOLS MAY INCLUDE, BUT ARE NOT LIMITED TO ROOT CUTTER; LUMBERJACK; CHAIN CUTTER; IMPACT AUGER; PORCUPINE; TAP CUTTER. SPECIAL TOOLS WOULD ALSO INCLUDE MANNED ENTRY REQUIRED REMOVE UNUSUALLY LARGE OR HEAVY MATERIALS FROM THE PIPE AND MANHOLE THAT CANNOT BE REMOVED BY A WATER JET/NOZZLE AND/OR VACUUM/PUMP TYPE SYSTEMS. CONTRACTOR SHALL INFORM THE ENGINEER OF THE INTENT TO USE SPECIAL TOOLS ON A CASE-BY-CASE BASIS PRIOR TO BEGINNING SAID WORK. DATES, TIMES, AND DURATIONS OF USED SHALL BE DOCUMENTED IN DETAIL. ALL COSTS ASSOCIATED WITH SPECIAL PIPE CLEANING TOOLS SHALL BE INCIDENTAL TO THE CIPP PROCESS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CUT AND REMOVE ROOTS AND CLEAN AND REMOVE DEBRIS OUT OF THE SEWER LINE IN ACCORDANCE WITH NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES (NASSCO) AND ASTM SPECIFICATIONS FOR SEWER COLLECTION SYSTEM REHABILITATION PRIOR TO REHABILITATION. THE CONTRACTOR IS RESPONSIBLE FOR HAULING AND DISPOSING OF THE DEBRIS REMOVED FROM THE SEWER.

TELEVISION INSPECTION (PRECONSTRUCTION)

THE CONTRACTOR SHALL INSPECT BY CLOSED CIRCUIT TV THE SECTION OF PIPE TO BE REHABILITATED AND SHALL RECORD THE LOCATIONS OF ALL OBSTRUCTIONS AND SERVICE TAPS. THE CONTRACTOR SHALL SUPPLY TWO DVDS AND/OR CDS OF THE PRE-REHABILITATED SEWER WITH MEASURED INCREMENTS ON THE TAPE TO THE ENGINEER AFTER THE TELEVISION IS COMPLETE AND BEFORE LINING IS PERFORMED. IF THE INSPECTION INDICATES THAT ROOT CUTTING, CLEANING, AND/OR REPAIR OF THE SEWER ARE REQUIRED PRIOR TO LINING, THE CONTRACTOR SHALL PERFORM ADDITIONAL TELEVISED INSPECTION OF THE SEWER AFTER ALL CLEANING AND/OR REPAIR IS COMPLETED AND BEFORE LINING IS PERFORMED. IF THE ROOT CUTTING, CLEANING, AND/OR REPAIR CYCLE MUST BE REPEATED MULTIPLE TIMES PRIOR TO LINING, THE CONTRACTOR SHALL TELEWISE THE SEWER AFTER EACH ROOT CUTTING, CLEANING, AND/OR REPAIR CYCLE IS COMPLETED.

SEWER OBSTRUCTIONS

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE LINE OF OBSTRUCTIONS, SOLIDS, DROPPED JOINTS, PROTRUDING SERVICES, INFILTRATION, OR COLLAPSED PIPE THAT WILL PREVENT THE INVERSION OF THE TUBE WITHOUT EXCAVATION. PROTRUDING SERVICES SHALL BE TRIMMED WITHOUT EXCAVATION BY APPROVED MECHANICAL METHODS, SUCH AS ROBOTICAL EQUIPMENT.

BYPASSING SEWAGE

THE CONTRACTOR SHALL BYPASS THE SEWAGE AROUND THE SECTIONS OF SEWER THAT ARE TO BE REHABILITATED. THE BYPASS SHALL BE MADE BY PLUGGING AN EXISTING UPSTREAM MANHOLE, IF NECESSARY, AND PUMPING THE SEWAGE INTO A DOWNSTREAM MANHOLE, OR ADJACENT SYSTEM. THE PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE FLOW. THE CONTRACTOR SHALL SUBMIT A BYPASS PLAN WITH A BACKUP CONTINGENCY TO THE CITY OF CANTON FOR APPROVAL PRIOR TO STARTING CONSTRUCTION. DURING THE BYPASS OPERATION, THE CONTRACTOR MUST HAVE A REPRESENTATIVE ON SITE 24 HOURS A DAY TO MAINTAIN THE PUMPS. ADDITIONAL BYPASS REQUIREMENTS ARE OUTLINED. WASTEWATER FLOW BETWEEN THE UNCURED LINER AND HOST PIPE WILL NOT BE PERMITTED.

STAGING

THE CONTRACTOR SHALL DELIVER THE UNCURED RESIN IMPREGNATED TUBE TO THE SITE, PROVIDE ALL EQUIPMENT REQUIRED TO PLACE AND INVERT THE TUBE INTO THE CONDUIT, AND CURE IT ONCE IN PLACE. THE TUBE SHALL BE IMPREGNATED WITH RESIN NOT MORE THAN 24 HOURS BEFORE THE PROPOSED TIME OF INSTALLATION AND STORED OUT OF DIRECT SUNLIGHT AT A TEMPERATURE PER THE MANUFACTURER'S RECOMMENDATIONS. THE IMPREGNATED TUBE SHALL BE TRANSPORTED TO THE SITE IN A SUITABLE LIGHT-PROOF CONTAINER WITH THE TEMPERATURE MAINTAINED PER THE MANUFACTURER'S RECOMMENDATIONS. ANY MATERIAL NOT PROPERLY PREPARED SHALL BE REJECTED AND REPLACED WITH ACCEPTABLE MATERIAL AT THE CONTRACTOR'S EXPENSE.

TUBE INVERSION

THE TUBE SHALL BE INVERTED INTO THE HOST PIPE FROM A SUITABLE PLATFORM LOCATED ABOVE THE MANHOLE OR ANY OTHER ACCESS POINT BY METHODS APPROVED BY THE MANUFACTURER AND PROVEN THROUGH PREVIOUS SUCCESSFUL INSTALLATIONS. FOR TUBES 24-INCHES AND GREATER, THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE (ONCE LINING OPERATIONS ARE COMPLETED, THE ENTIRE TOP MANHOLE SECTIONS (CONE, CORBEL, GRADE RINGS, AND CASTING). CONTRACTOR MAY LEAVE THE TOP MANHOLE SECTION INTACT FOR INSTALLATION OF TUBES 24-INCHES THROUGH 30-INCHES WITH THE OWNER'S APPROVAL. INVERT THE TUBE (TURNED INSIDE-OUT) WITH WATER. HYDROSTATIC PRESSURE SHALL BE USED TO INFLATE THE TUBE, MOLDING IT AGAINST THE WALLS OF THE HOST PIPE WITH ADEQUATE PRESSURE TO PRODUCE DIMPLES AT SERVICE LATERAL CONNECTIONS AND FLARED ENDS AT THE MANHOLES. THE USE OF AIR PRESSURE TO INVERT THE TUBE SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OF AKRON. INSTALLATION METHODS INVOLVING PULLING THE LINER INTO THE SEWERS WILL NOT BE ACCEPTED. A POLYETHYLENE PRE-LINER SHALL BE UTILIZED ON BRICK SEWERS AND SEWERS WITH ACTIVE I&I THAT HAVE THE POTENTIAL TO NEGATIVELY IMPACT THE CURING PROCESS. THE CONTRACTOR SHALL SUBMIT PROPOSED PRE-LINER LOCATIONS TO THE CITY OF AKRON FOR REVIEW AND APPROVAL.

CLEAN POTABLE WATER AT AN AMBIENT TEMPERATURE SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR HAS TWO OPTIONS TO CHOOSE FROM AS THE SOURCE OF A CLEAN WATER SUPPLY FOR THE PROJECT.

1) THE CONTACTOR'S FIRST OPTION IS TO HAVE THE WATER DELIVERED TO THE SITE IN A TANK TRUCK. IF THIS OPTION IS CHOSEN, THE COSTS ASSOCIATED WITH DELIVERING THE WATER TO THE SITE SHALL BE PAID BY THE CONTRACTOR. COMPENSATION FOR ALL LABOR, MATERIAL, AND ALL OTHER COSTS ASSOCIATED WITH OBTAINING THE WATER AND DELIVERING IT TO THE SITE SHALL BE INCLUDED IN THE COST OF ITEM 624 - MOBILIZATION.

2) THE CONTRACTOR'S SECOND OPTION IS TO USE WATER FROM THE CITY OF CANTON. THE WATER IS USUALLY PROVIDED FROM THE HYDRANT NEAREST TO THE INVERSION PLATFORM. THERE WILL BE A DEPOSIT FEE FOR THE INSTALLATION OF A METER AT EACH SITE. A SITE MAY REQUIRE MORE THAN ONE METER SET. THE COST FOR THE WATER WILL BE BILLED AT THE NORMAL CUSTOMER RATE. A BILL FOR WATER USAGE WILL BE SENT TO THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE CITY OF CANTON WATER DEPARTMENT AT (330) 489-3308. THE COST OF THE DEPOSIT, SET FEE, AND WATER USAGE SHALL BE INCLUDED IN THE COST OF ITEM 611 - CONDUIT, MISC.:8-INCH SANITARY SEWER RECONSTRUCTION BY THE CIPP PROCESS.

THE TUBE SHALL BE INVERTED AT A RATE SUFFICIENT TO CAUSE CONTROLLED INVERSION OF THE TUBE INTO THE CONDUIT. THE INVERSION RATE SHALL NOT EXCEED 32 FEET PER MINUTE (10 METERS/MINUTE). THE TUBE OR THE TAG ROPE SHALL BE SUITABLY RESTRAINED TO PREVENT INVERSION RATES IN EXCESS OF THAT STIPULATED ABOVE. THE INVERSION HEAD SHALL BE SUCH THAT, ALLOWING FOR MINOR IMPACT, AT NO TIME THE HOOP TENSION IN THE FELT SHALL EXCEED 500 PSI OR THE HOOP STRESS IN THE POLYURETHANE MEMBRANE EXCEED 8,000 PSI. THE TUBE SHALL BE INVERTED IN SUCH A MANNER THAT NO DAMAGE (CUTS, SCRAPES, OR GOUGES) IS DONE TO THE TUBE.

THE INVERSION EQUIPMENT SHALL REQUIRE ONLY THE TEMPORARY CLOSING (18 HOURS OR LESS) OF NO MORE THAN ONE LANE OF TRAFFIC. THE CONTRACTOR MUST FIT THIS WORK INTO THE OVERALL MAINTENANCE OF TRAFFIC SCHEME AND ALSO MUST MAINTAIN AN OPEN LANE OF TRAFFIC AT ALL TIMES. THE ENTIRE INVERSION PROCESS SHALL NOT CAUSE ANY DISRUPTION IN SERVICE OF ANY ADJACENT UTILITIES.

INITIAL CURING

BEFORE BEGINNING THE CURING PROCESS, THE CONTRACTOR SHALL VISUALLY INSPECT AND VERIFY THAT THE TUBE IS OF SUFFICIENT LENGTH AND EXTENDS INTO THE DOWNSTREAM MANHOLE OR STRUCTURE. THE CONTRACTOR SHALL SUPPLY SUITABLE HEAT SOURCE AND WATER RECIRCULATION EQUIPMENT CAPABLE OF DELIVERING HOT WATER TO THE FAR END OF THE TUBE TO QUICKLY AND UNIFORMLY RAISE THE WATER TEMPERATURE IN THE ENTIRE TUBE ABOVE THE TEMPERATURE REQUIRED TO COMMENCE THE EXOTHERMIC REACTION OF THE RESIN. THE DURATION OF THE CURING PERIOD, AND THE WATER TEMPERATURE NECESSARY DURING THE CURING PERIOD, SHALL BE AS STATED IN THE MANUFACTURER'S RECOMMENDATIONS. TEMPERATURE GAUGES SHALL BE INSTALLED AT ALL MANHOLES WITHIN THE SECTIONS BEING LINED. THESE TEMPERATURE GAUGES SHALL BE PLACED BETWEEN THE TUBE AND THE HOST PIPE.

THE HEAT SOURCE SHALL BE FITTED WITH SUITABLE GAUGES TO MONITOR THE TEMPERATURE OF THE INCOMING AND OUTGOING WATER SUPPLY TO ENSURE UNIFORM TEMPERATURE IS ACHIEVED THROUGHOUT THE LENGTH OF THE TUBE. ANOTHER SUCH GAUGE SHALL BE PLACED BETWEEN THE TUBE AND THE HOST PIPE IN THE DOWNSTREAM MANHOLE AT OR NEAR THE BOTTOM TO DETERMINE THE TEMPERATURE DURING CURE. THE WATER TEMPERATURE IN THE PIPE DURING THE CURE PERIOD SHALL BE AS RECOMMENDED BY THE RESIN MANUFACTURER.

THE INITIAL CURE PERIOD SHALL BE DEEMED COMPLETE WHEN THE MANUFACTURER'S RECOMMENDED TEMPERATURE IS UNIFORM, AS DETERMINED BY THE WATER TEMPERATURE MONITORS, IS ACHIEVED THROUGHOUT THE LENGTH OF THE TUBE AND THE EXPOSED PORTIONS OF THE TUBE APPEAR TO BE HARD AND SOUND BY VISUAL INSPECTION. THE CURE PERIOD SHALL BE OF A DURATION RECOMMENDED BY THE RESIN MANUFACTURER AND MAY REQUIRE CONTINUOUS RECIRCULATION OF THE WATER TO MAINTAIN THE TEMPERATURE.

FINAL CURING/COOL DOWN

THE POST CURE PERIOD SHALL COMMENCE WITH THE HEAT SOURCE SHUT DOWN, BUT CONTINUED RECIRCULATION OF THE WATER IS REQUIRED TO MAINTAIN A TEMPERATURE IN THE TUBE RECOMMENDED BY THE MANUFACTURER DURING THE INITIAL EXOTHERMIC REACTION PERIOD. HOT WATER MAY BE BLED OUT OF THE SYSTEM AND REPLACED BY CLEAN WATER AT AN AMBIENT TEMPERATURE TO CONTROL POST CURE WATER TEMPERATURE. A MINIMUM PERIOD OF POST CURE (RECOMMENDED BY THE MANUFACTURER) SHALL BE MAINTAINED UNDER AN INVERSION HEAD TO PROVIDE A MINIMUM HOOP TENSION IN THE TUBE FELT. THE ENDS OF (43°C). CARE SHALL BE TAKEN IN THE RELEASE OF THE STATIC HEAD SO THAT A VACUUM WILL NOT BE DEVELOPED THAT COULD DAMAGE THE NEWLY REHABILITATED PIPE.

FINISH

THE NEW PIPE SHALL BE CUT OFF IN THE MANHOLE AT A SUITABLE LOCATION. AT INTERMEDIATE MANHOLES (BETWEEN THE LINER INSERTION AND TERMINATION MANHOLES), THE UPPER ONE-HALF OF THE LINER SHALL BE NEATLY CUT AND REMOVED TO PROVIDE A SMOOTH, CONTINUOUS AND ACCESSIBLE CHANNEL WITHIN THESE MANHOLES, UNLESS OTHERWISE DIRECTED BY THE CITY REPRESENTATIVE. THE FINISHED PRODUCT SHALL BE CONTINUOUS OVER THE LENGTH OF PIPE RECONSTRUCTED AND BE FREE FROM DRY SPOTS, DELAMINATION, AND LIFTS.

SEALING PIPE IN MANHOLES (INCLUDING INTERMEDIATE MANHOLES)

THE CURED-IN-PLACE LINER SHALL MAKE A TIGHT SEAL AT THE MANHOLE OPENING WITH NO ANNULAR GAPS. END SEALS SHALL BE UTILIZED AT THE ENDS OF ALL PIPE RUNS AND SHALL BE INSIGNIA TYPE BY LMK, OR EQUAL. THIS PROCEDURE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT SECTION.

THE CURED-IN-PLACE LINER SHALL BE CUT SMOOTH TO THE TOP OF BENCH AND AT ALL PIPE OPENINGS OF ALL INTERMEDIATE MANHOLES. CONTRACTOR SHALL VERIFY THAT THE LINER MAKES A TIGHT SEAL WITH NO ANNULAR GAPS.

LEAKAGE TESTING

AFTER THE INSTALLATION PROCEDURES HAVE BEEN PERFORMED AND CURING IS COMPLETE, BUT BEFORE ANY SERVICE CONNECTIONS ARE REINSTATED, CONDUCT A LEAKAGE TEST ON THE SEWER LINE TO DETERMINE IF IT IS WATERTIGHT. PERFORM THE LEAKAGE TEST IN ACCORDANCE WITH THE CITY OF AKRON SPECIFICATIONS.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.10B

168

LATERAL STATUS DETERMINATION

THE EXACT LOCATION, ACTIVITY, AND NUMBER OF SERVICE CONNECTIONS OR SIDE SEWERS SHALL BE VERIFIED DURING THE INITIAL TELEVISION INSPECTION(S). THE CONTRACTOR SHALL PHYSICALLY ASCERTAIN WHETHER A LATERAL SEWER IS ACTIVE OR INACTIVE BY POSITIVELY IDENTIFYING FLOW FROM A CONNECTION OR POSITIVELY CONFIRMING INACTIVITY FROM A CONNECTION. THE ACTIVITY OF THE LATERALS SHALL BE VERIFIED BY MEANS INCLUDING BUT NOT LIMITED TO DYE TESTING, SMOKE TESTING, AND CCTV INSPECTION. THE CONTRACTOR SHALL NOT PROCEED WITH PIPELINE REHABILITATION UNLESS WORK HAS BEEN COMPLETED ON ALL LATERAL STATUS DETERMINATIONS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT A WRITTEN TESTING PROGRAM TO THE CITY OF CANTON WHICH WILL OUTLINE THE PROPOSED APPROACH TO THE INVESTIGATION, DESCRIBING HOW THE LATERALS WILL BE TESTED, AND PROVIDE INFORMATION ON THE EQUIPMENT TO BE USED. NO LATERAL STATUS INVESTIGATION WORK MAY BE PERFORMED UNTIL THE CONCEPT AND METHODS OF THIS TESTING ARE APPROVED.

AFTER COMPLETING FIELD TESTING, SUBMIT A WRITTEN REPORT OF THE FINDINGS FOR REVIEW AND FINAL DETERMINATION OF THE STATUS OF EACH SERVICE. WHERE LATERAL STATUS IS UNABLE TO BE CONFIRMED, THE CITY WILL MAKE THE FINAL LATERAL STATUS DETERMINATION BASED ON THE GATHERED INFORMATION. THE REPORT SHALL CONTAIN THE FOLLOWING INFORMATION AS A MINIMUM:

- 1) LOCATION OF THE LATERAL (FOOTAGE, CLOCK POSITION, STREET ADDRESS OF STRUCTURE SERVED BY LATERAL).
- 2) STATUS OF LATERAL (ACTIVE, INACTIVE, BULKHEADED, FILLED WITH DEBRIS, INCONCLUSIVE).
- 3) RECOMMENDED ACTION (REINSTATE, DO NOT REINSTATE)
- 4) IF DYE TESTING IS PERFORMED, INDICATE WHERE THE DYE WAS INTRODUCED INTO THE SYSTEM AND HOW MUCH WATER WAS USED TO FLUSH THE DYE (ADDRESS OF STRUCTURE AND LOCATION WITHIN STRUCTURE) AND THE LOCATION WHERE THE DYE WAS CONFIRMED, EVEN IF IT FLOWS INTO AN ADJACENT SEWER, INDICATE WHICH BUILDINGS THAT HAVE UNCONFIRMED DISCHARGE LOCATIONS.
- 5) WEATHER CONDITIONS AT THE TIME OF LATERAL STATUS DETERMINATION.

SUBMIT ANY VIDEO RECORDINGS AND LOGS THAT PROVIDE EVIDENCE TO ACCOMPANY THE LATERAL STATUS DETERMINATION TESTING ALONG WITH THE WRITTEN REPORT.

SERVICE CONNECTIONS

THE CONTRACTOR SHALL RECONNECT OR REESTABLISH ONLY THOSE LATERALS OR SIDE SEWERS THAT ARE ACTIVE OR FOR WHICH INACTIVITY CANNOT BE CONFIRMED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY FIELD LOCATE ALL EXISTING SERVICE CONNECTIONS OR SIDE SEWERS AND ESTABLISH MEANS FOR ACCESS FOR FLOW CONTROL.

AFTER THE PIPE HAS BEEN REHABILITATED, ALL EXISTING SERVICE CONNECTIONS SHALL BE RECONNECTED, AS APPROVED BY THE CITY REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATIONS OF ALL BRANCH SERVICE CONNECTIONS PRIOR TO INSTALLING THE CIPP. LOCATION OF ALL THE SERVICE CONNECTIONS SHALL BE MADE BY THROUGH INSPECTION OF THE PRE-CONSTRUCTION CD OR DVD RECORDING. THE RECONSTRUCTION OF SERVICES SHALL BE PERFORMED, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, WITHOUT EXCAVATION. THE CONTRACTOR SHALL HAVE TWO COMPLETE WORKING CUTTING UNITS PLUS SPARE KEY COMPONENTS ON-SITE BEFORE INSTALLATION OF EACH SECTION OF LINER BEGINS. THE RECONSTRUCTION SHALL BE PERFORMED FROM THE INTERIOR OF THE PIPELINE BY MEANS OF A TELEVISION CAMERA DIRECTED CORING DEVICE. ALL RECUT SERVICE CONNECTIONS SHALL BE FREE OF BURRS, FRAYED EDGES, OR ANY OBSTRUCTION PREVENTING FREE WASTEWATER FLOW. ALL CONNECTIONS SHALL BE COATED WITH AN APPROVED SEALER TO ENSURE WATER TIGHTNESS, PER ASTM F1417 OR C969. THE SEAL SHALL BE MADE BY A RESIN MIXTURE COMPATIBLE WITH THE CIPP MATERIAL.

TELEVISION INSPECTION (POST-CONSTRUCTION)

AFTER THE REHABILITATION IS COMPLETE, THE CONTRACTOR SHALL SUPPLY TWO CDS OR DVDS OF THE REHABILITATED SECTIONS OF THE SEWER, INCLUDING SERVICE LATERAL CONNECTIONS, WITH MEASURED INCREMENTS ON THE TAPE TO THE ENGINEER. UTILIZE A RADIAL VIEW CAMERA TO ALLOW PROPER INSPECTION OF SERVICE LATERAL RECONNECTIONS.

CORRECTIVE ACTIONS

IF AFTER THE POST-CONSTRUCTION TELEVISION INSPECTION, AND BEFORE SUBSTANTIAL COMPLETION, IT IS DETERMINED THAT THE FINISHED PRODUCT DOES NOT MEET THE REQUIREMENTS OF THIS SPECIFICATION, THE CONTRACTOR WILL MAKE REPAIRS TO THE NEWLY REHABILITATED PIPE IN A MANNER MUTUALLY AGREED UPON BY THE CITY REPRESENTATIVE, LINER MANUFACTURER, AND THE CONTRACTOR, AT THE CONTRACTOR'S OWN EXPENSE. UPON COMPLETION OF THESE CORRECTIVE MEASURES, IN ACCORDANCE WITH THIS SPECIFICATION, THE CONTRACTOR WILL COMPLETE THE POST-CONSTRUCTION TELEVISION INSPECTION OF THE ENTIRE SECTION OF REHABILITATED PIPE. THIS WILL CONTINUE UNTIL THE FINISH PRODUCT MEETS THE ENTIRE REQUIREMENTS OF THIS SPECIFICATION.

FIELD QUALITY CONTROL

THE REHABILITATED PIPE SHALL BE CONTINUOUS (WITHOUT JOINTS) OVER THE ENTIRE LENGTH OF AN INSERTION RUN BETWEEN TWO MANHOLES. THE LINER SHALL BE AS FREE AS COMMERCIALLY PRACTICABLE FROM VISUAL DEFECTS SUCH AS FOREIGN INCLUSIONS, DRY SPOTS, PINHOLES, AND DELAMINATION. THE LINER SURFACE SHALL BE FREE OF LEAKS, CRACKS, AND CRAZING WITH A SMOOTH FINISH. SOME MINOR WAVINESS THAT, IN THE OWNER'S OPINION, WILL NOT APPRECIABLY DECREASE THE FLOW CROSS SECTION OR AFFECT THE FLOW CHARACTERISTICS SHALL BE PERMISSIBLE.

ANY DEFECTS IN THE PRODUCT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN A MANNER MUTUALLY AGREED UPON BY THE OWNER AND CONTRACTOR. THE CONTRACTOR SHALL RE-INSPECT THESE REPAIRS BEFORE THE WARRANTY PERIOD EXPIRES. DURING THE WARRANTY PERIOD, ANY DEFECTS THAT ARE DISCOVERED THAT WILL AFFECT THE INTEGRITY OR STRENGTH OF THE PRODUCT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN A MANNER MUTUALLY AGREED UPON BY THE OWNER AND THE CONTRACTOR. THESE REPAIRS SHALL BE GRANTED A THREE (3) YEAR EXTENDED WARRANTY PERIOD BY THE CONTRACTOR FROM THE DATE OF REPAIR. THE CONTRACTOR SHALL RE- INSPECT THESE REPAIRS PRIOR TO THE EXPIRATION OF THE THREE (3) YEAR EXTENDED WARRANTY PERIOD.

TESTING

SAMPLING AND TESTING FOR EACH INSTALLED CIPP LENGTH SHALL BE IN ACCORDANCE WITH ASTM F-1216 AND/OR F-1743. THE CONTRACTOR IS TO PROVIDE TWO (2) TEST SAMPLES TO THE CITY; THE CITY WILL RETAIN A LABORATORY TO PERFORM THESE TESTS. ALL SAMPLES SHALL BE LABELED BEFORE SHIPMENT FOR TESTING. THE OWNER ALSO RETAINS THE RIGHT TO TEST COUPONS RETRIEVED FROM THE SEWER AND TURNED OVER TO THE CITY. IF THE CONTRACTOR PERFORMS INDEPENDENT TESTS FOR THEIR PURPOSES, ADDITIONAL SAMPLES SHALL BE PROVIDED BY THE CONTRACTOR FOR THAT USE.

FINAL INSTALLED LINER THICKNESS

1. THE REQUIRED STRUCTURAL CIPPL WALL THICKNESS SHALL BE DETERMINED BASED ON THE FOLLOWING:

- A. IN ACCORDANCE WITH ASTM F1216, APPENDIX X1, DESIGN CONSIDERATIONS FOR A FULLY DETERIORATED HOST PIPE, FOR A CIRCULAR HOST PIPE WITH 5% OVALITY OR LESS.
- B. A SAFETY FACTOR OF 2.0.
- C. A MINIMUM SERVICE LIFE OF 50 YEARS UNDER CONTINUOUS SERVICE.
- D. A MODULUS OF SOIL REACTION OF 900 PSI.
- E. A SOIL DENSITY OF 130 LBS/FT3.
- F. A POISSON'S RATIO OF 0.3.
- G. AN ENHANCEMENT FACTOR OF 7.
- H. A GROUNDWATER ELEVATION OVER THE PIPE EQUIVALENT TO SURFACE GRADE.
- I. IN NO CASE SHALL NON-WOVEN, UNREINFORCED LINERS BE THINNER THAN 7.5 MM. IN NO CASE SHALL FIBERGLASS REINFORCED LINERS BE THINNER THAN 3.5 MM.

2. THE FLEXURAL MODULUS AND FLEXURAL STRENGTH USED IN THE DESIGN SHALL BE THE VALUES AS RATED FOR THE SPECIFIED SERVICE LIFE AND AS SUBMITTED IN THE SHOP DRAWING SUBMITTALS. WHEN FILLED RESINS AREPROPOSED, COMPLEMENTARY DATA OF THE SAME DATA FOR UNFILLED RESIN SHALL BE PROVIDED.

3. THE LINER THICKNESS OF EACH PIPE SEGMENT SHALL BE DETERMINED BY THE CONTRACTOR AND SUBMITTED PER THE SHOP DRAWING SUBMITTALS.

NON-COMPLIANCE

IN THE EVENT THAT THE FLAT PLATE SAMPLES DO NOT MEET THE REQUIRED FLEXURAL STRENGTH OF 4,500 PSI AND FLEXURAL MODULUS OF ELASTICITY OF 250,000 PSI AS OUTLINED IN THIS SPECIFICATION, ACTUAL INSTALLED SAMPLES MUST BE TAKEN. THE INSTALLED SAMPLES SHALL BE TAKEN AS DIRECTED BY THE CITY AND IN ACCORDANCE WITH ALL APPLICABLE ASTM REQUIREMENTS. FROM THESE SAMPLES, THE INSTALLED THICKNESS SHALL BE DETERMINED BY TAKING AN AVERAGE OF AT LEAST 10 THICKNESS MEASUREMENTS. INSTALLED SAMPLES SHALL THEN BE PREPARED FOR RE-TESTING IN ACCORDANCE WITH THIS SPECIFICATION.

ANY LINER INSTALLATION NOT MEETING SPECIFIED STRENGTHS SHALL HAVE THE DEFECTIVE SECTIONS OF LINER REMOVED AND REPLACED WITH A PRODUCT ACCEPTABLE TO THE CITY AT THE TOTAL EXPENSE OF THE CONTRACTOR. THE RE-INSPECTION REQUIREMENTS, AS LISTED ABOVE, SHALL APPLY TO THIS RE-INSTALLED SECTION OF LINE.

WARRANTY AND ACCEPTANCE

THE CONTRACTOR SHALL WARRANT ALL WORK TO BE FREE OF DEFECTS IN WORKMANSHIP OR MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBFINAL ACCEPTANCE OF THE REHABILITATED SEWER. ANY REPAIRS MADE DUE TO DEFECTS IN THE PRODUCT SHALL BE GRANTED A THREE (3) YEAR EXTENDED WARRANTY PERIOD BY THE CONTRACTOR FROM THE DATE OF REPAIR. THE CONTRACTOR SHALL RE-INSPECT THESE REPAIRS PRIOR TO THE EXPIRATION OF THE THREE (3) YEAR EXTENDED WARRANTY PERIOD.

METHOD OF MEASUREMENT AND PAYMENT

ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH RECONSTRUCTING THE SEWER BY THE CIPP PROCESS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER RECONSTRUCTION BY THE CIPP PROCESS, UNLESS NOTED OTHERWISE HEREIN. BEGIN THE PROCESS AT MANHOLE S-9 AND CONTINUE THROUGH MANHOLE S-15. SUSPEND THE PROCESS BETWEEN S-15 AND S-12. RESUME PROCESS AT MANHOLE S-12 AND END THE PROCESS AT MANHOLE S-14. AS CALLED OUT IN THE PLANS, NOTE THERE IS A HORIZONTAL BEND AT APPROXIMATELY STA. 117+58.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER RECONSTRUCTION BY THE CIPP PROCESS. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 611 - CONDUIT, MISC.: 8-INCH SANITARY SEWER RECONSTRUCTION BY THE CIPP PROCESS

510 FT

ITEM 611 - MANHOLE, MISC.: MANHOLE REHABILITATION

DESCRIPTION  
SPECIFICATIONS AND MATERIALS  
EQUIPMENT  
WEATHER LIMITATIONS  
APPLICATION  
QUALITY CONTROL  
DOCUMENTATION  
ACCEPTANCE  
METHOD OF MEASUREMENT  
BASIS OF PAYMENT

DESCRIPTION

THIS SPECIFICATION INCLUDES ALL WORK, MATERIALS AND EQUIPMENT REQUIRED FOR THE STRUCTURAL REHABILITATION OF MANHOLE STRUCTURES INCLUDING CIRCULAR AND NON-CIRCULAR CONSTRUCTION. THE PURPOSE IS TO ELIMINATE INFILTRATION, REPAIR VOIDS, RESTORE STRUCTURAL INTEGRITY AND PROVIDE CORROSION PROTECTION BY THE APPLICATION OF A SPRAY-APPLIED MONOLITHIC RESIN LINER TO THE WALL AND BENCH SURFACES OF BRICK/CONCRETE STRUCTURES OR STRUCTURES PRODUCED WITH ANY OTHER MASONRY CONSTRUCTION MATERIAL. THESE STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO MANHOLES, SPECIAL STRUCTURES, WET WELLS, LIFT STATIONS AND PUMP STATIONS.

SPECIFICATIONS AND MATERIALS

PLUGGING AND REPAIR MATERIALS

THIS SPECIFICATION INCLUDES ALL WORK, MATERIALS AND EQUIPMENT REQUIRED FOR THE STRUCTURAL REHABILITATION

PLUGGING AND REPAIR MATERIALS SHOULD NOT BE USED UNLESS THEIR MANUFACTURER PROVIDES INFORMATION AS TO ITS SUITABILITY AND PROCEDURES FOR TOPCOATING WITH THE APPROVED COATING. PROJECT SPECIFIC SUBMITTALS SHOULD BE PROVIDED INCLUDING APPLICATION, CURE TIME AND SURFACE PREPARATION PROCEDURES WHICH PERMIT OPTIMUM BOND STRENGTH WITH THE APPROVED COATING.

REPAIR MATERIALS SHALL BE USED TO FILL VOIDS, STRUCTURALLY REINFORCE AND/OR REBUILD SURFACES, ETC. AS DETERMINED NECESSARY BY THE PROTECTIVE COATING APPLICATOR. REPAIR MATERIALS MUST BE COMPATIBLE WITH THE SPECIFIED COATING AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

THE FOLLOWING PRODUCTS MAY BE ACCEPTED AND APPROVED AS COMPATIBLE REPAIR BASECOAT MATERIALS FOR APPROVED TOPCOATING FOR USE WITHIN THE SPECIFICATIONS:

A) 100% SOLIDS, SOLVENT-FREE GROUT SPECIFICALLY FORMULATED FOR APPROVED TOPCOATING COMPATIBILITY. THE GROUT MANUFACTURERS SHALL PROVIDE INSTRUCTIONS FOR TROWEL OR SPRAY APPLICATION AND FOR APPROVED TOPCOATING PROCEDURES.

B) FACTORY BLENDED, RAPID SETTING, HIGH EARLY STRENGTH, NON-SHRINK REPAIR MORTAR THAT CAN BE TROWELED OR PNEUMATICALLY SPRAY APPLIED MAY BE APPROVED IF SPECIFICALLY FORMULATED TO BE SUITABLE FOR APPROVED TOPCOATING. SUCH REPAIR MORTARS SHOULD NOT BE USED UNLESS THEIR MANUFACTURER PROVIDES INFORMATION AS TO ITS SUITABILITY FOR TOPCOATING WITH THE APPROVED TOPCOATING. PROJNET SPECIFIC SUBMITTALS SHOULD BE PROVIDED INCLUDING APPLICATION, CURE TIME AND SURFACE PREPARATION PROCEDURES WHICH PERMIT OPTIMUM BOND STRENGTH WITH THE APPROVED COATING.

C) IN CASE OF EXCESSIVE INFILTRATION, A HYDRAULIC CEMENT OR PLUG MAY BE USED TO STOP THE FLOW OF THE INFILTRATION. HYDRAULIC CEMENT SHALL CURE SUFFICIENTLY PRIOR TO ANY TOPCOATING. MANUFACTURER'S INCLUDE STRONG, SIKKA, PRECO OR APPROVED EQUAL. THE HYDRAULIC CEMENT SHALL BE COMPATIBLE WITH THE SPRAY APPLIED RESIN COATING.

STRUCTURAL REPAIRS

LOOSE OR PROTRUDING BRICK, MORTAR AND CONCRETE SHALL BE REMOVED USING A MASONS HAMMER AND CHISEL. ALL STRUCTURAL REPAIRS NECESSARY TO COMPLETE THE LINING PROCESS SHALL BE MADE WITH A NON-SHRINK GROUT COMPATIBLE WITH THE LINING SYSTEM MANUFACTURER'S RECOMMENDATIONS. THIS MATERIAL SHALL BE APPLIED TO PATCH CRACKS, FILL VOIDS, MAKE STRUCTURAL REPAIRS, AND BUILD-UP DETERIORATED MANHOLE OR WET WELL SURFACES BACK TO ORIGINAL THICKNESS. ALL REPAIR AND/OR PATCHING MATERIALS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MATERIAL USAGE.

LINING MATERIALS

THE LINING MATERIALS SHALL BE A SELF-PRIMING MONOLITHIC SYSTEM THAT ELIMINATES INFILTRATION, IS DESIGNED AND MANUFACTURED TO PROVIDE CHEMICAL RESISTANCE TO HYDROGEN SULFIDE AND BE THIRD-PARTY TESTED AND CERTIFIED FOR A DESIGN LIFE OF NO LESS THAN 50 YEARS. THE APPROVED LINING SYSTEMS AND MANUFACTURERS ARE:

- A) ARMOUR 1000 BY OBIC
- B) SPRAYWALL BY SPRAYROQ

EQUIPMENT

EQUIPMENT FOR INSTALLATION OF LINING MATERIALS SHALL BE HIGH QUALITY GRADE AND BE AS RECOMMENDED BY THE MANUFACTURER. THE EQUIPMENT UTILIZED SHALL BE SPECIALIZED EQUIPMENT WHICH SHALL REDUCE THE AMOUNT OF TIME THE MANHOLE OR WET WELL IS OUT OF SERVICE. IT IS THE INTENT THAT WHATEVER METHOD OF LINING IS APPROVED, THAT THE DOWN TIME FOR A STANDARD MANHOLE IS KEPT TO A MAXIMUM OF 3 HOURS.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.10C

168

WEATHER LIMITATIONS

APPLICATION TEMPERATURES: NO LINING SHALL BE MADE TO ANY MANHOLE OR WET WELL WHEN AMBIENT TEMPERATURE IS SURFACE TEMPERATURE IS BELOW 55° FAHRENHEIT.

APPLICATION

BYPASSING SEWAGE

UNLESS OTHERWISE NOTED ON THE PLAN SHEET AND/OR IN THE BID DOCUMENTS THE CONTRACTOR SHALL BYPASS THE SEWAGE AROUND EXISTING MANHOLES OR WET WELLS THAT ARE TO BE LINED; AN EXISTING UPSTREAM MANHOLE SHALL BE PLUGGED AND THE SEWAGE SHALL BE PUMPED INTO A DOWNSTREAM MANHOLE OR ADJACENT SYSTEM. USE OF ANY INVERT "FLOW-THROUGH" DEVICE SHALL BE LIMITED TO AN AS-NEEDED BASIS, AND ONLY UPON THE WRITTEN APPROVAL OF THE ENGINEER. THE BYPASS SYSTEM SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE EXISTING PEAK FLOWS (SEE ITEM 51). UNDER NO CIRCUMSTANCES WILL THE DUMPING OF RAW SEWAGE ON PRIVATE PROPERTY OR IN STREETS BE PERMITTED.

SURFACE PREPARATION

ALL MANHOLE OR WET WELL SURFACE PREPARATION SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS FOR THE INTENDED SUBSTRATE - REFER TO APPENDIX A AND B OF THIS ITEM FOR SPECIFIC PRODUCT REQUIREMENTS. NEW PRECAST CONCRETE MANHOLES OR WET WELLS SHALL NOT BE LINED PRIOR TO 28 DAYS FOLLOWING THEIR MANUFACTURE DATE. ALL WATER USED SHALL BE CLEAN AND POTABLE.

PLUGGING ACTIVE WATER

THE CONTRACTOR SHALL STOP ALL ACTIVE WATER INFILTRATION IN SAID MANHOLES OR WET WELLS BY TROWELING, INJECTING AND/OR PUMPING A QUICK SETTING NON-SHRINKING CEMENTITIOUS GROUT OR POLYURETHANE CHEMICAL GROUT INTO ANY DISLODGED SECTION JOINTS, PIPE CONNECTIONS, CRACKS OR SPALLED AREAS GREATER THAN 3/4".

THIS MATERIAL AND PROCEDURE SHALL BE FOR THE STOPPING OF ACTIVE WATER ONLY. ANY AREAS THAT REQUIRE STRUCTURAL REPAIR SHALL UTILIZE THE NON-SHRINKING GROUT AS SPECIFIED ABOVE. ALL EXCESS MATERIAL SHALL BE REMOVED FROM INTERNAL WALL SURFACES.

STRUCTURAL REPAIRS

AFTER ALL ACTIVE INFILTRATION HAS BEEN STOPPED THE CONTRACTOR SHALL UTILIZE A NON-SHRINKING GROUT TO STRUCTURALLY REPAIR OR BUILD-UP ANY DETERIORATED MANHOLE OR WET WELL SURFACE BACK TO THE ORIGINAL SURFACE THICKNESS. THE CONTRACTOR SHALL REPAIR ANY DISLODGED SECTION JOINTS, PIPE CONNECTIONS, CRACKS OR SPALLED AREAS GREATER THAN 3/4".

APPLICATION OF THE LINING SYSTEM

ALL PIPE INVERTS SHALL BE PLUGGED WITH A REMOVABLE PLUG TO PROTECT THE PIPES FROM LINING OVER-SPRAY. THE CONTRACTOR SHALL APPLY THE LINING SYSTEM PER THE MANUFACTURER'S RECOMMENDATIONS. THE MINIMUM TOTAL LINING SYSTEM THICKNESS SHALL BE 250 MILS FOR OBIC AND 500 MILS FOR SPRAYROQ. THE INTERIOR SURFACE SHALL BE CONSIDERED TO INCLUDE THE ENTIRE AREA FROM THE INSIDE TOP OF THE MANHOLE OR WET WELL CASTING TO THE BENCH/INVERT. IN CASES WHERE MOISTURE OR TEMPERATURE IS A CONCERN A PROPANE-FIRED HEATER SHALL BE UTILIZED TO ASSIST IN REDUCTION OF CURING TIME. NO SOLVENTS SHALL BE USED.

LINING REPAIR PROCEDURE

AFTER THE APPLICATION OF THE LINING SYSTEM, IT SHALL BE VISUALLY INSPECTED TO IDENTIFY ANY DEFECTS SUCH AS PINHOLES, BUG HOLES, ETC. IF ANY DEFECTS OR DEFICIENCIES ARE FOUND THEY SHALL BE REPAIRED PER THE MANUFACTURER'S RECOMMENDATIONS.

QUALITY CONTROL

COMPLETED MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C1244, AS APPLICABLE.

DOCUMENTATION

THE CONTRACTOR SHALL BE A CERTIFIED APPLICATOR OF THE LINING SYSTEM, AND PROVIDE DOCUMENTATION FROM THE MANUFACTURER THAT ALL EMPLOYEES ARE ALSO CERTIFIED. THE CONTRACTOR SHALL HAVE PERFORMED SIMILAR WORK ON AT LEAST 200 MANHOLES, WET WELLS, OR A COMBINATION THEREOF. THE CONTRACTOR SHALL PROVIDE A LIST OF FIVE (5) PROJECT REFERENCES INCLUDING THE FOLLOWING INFORMATION: PROJECT OWNER, DESCRIPTION, LOCATION, SCOPE, QUANTITY LINED, START AND COMPLETION DATES. CONTRACTORS NOT MEETING THE ABOVE CREDENTIALS SHALL SUBMIT IN WRITING THEIR PAST EXPERIENCE IN MANHOLE LINING TO BE CONSIDERED.

ACCEPTANCE

ALL LINED MANHOLES OR WET WELLS SHALL BE GUARANTEED AGAINST MATERIAL DELAMINATION AND ALL OTHER DEFECTS IN WORKMANSHIP AND MATERIALS FOR A MINIMUM OF FIVE (5) YEARS AFTER THE COMPLETION OF THE LINING, BUT IN NO CASE SHALL BE LESS THAN THE MANUFACTURER'S PUBLISHED STANDARD WARRANTY. ANY DEFECT OR FAILURE SHALL BE REPAIRED WITHIN FOUR (4) WEEKS FROM THE DATE OF NOTIFICATION, AT NO ADDITIONAL COST TO THE CITY.

THE CONTRACTOR SHALL PROVIDE A FINAL WRITTEN REPORT DETAILING THE LOCATION, DATE OF INSTALLATION, DESCRIPTION OF THE LINING FOR EACH MANHOLE OR WET WELL LINED, TESTING RESULTS AND A COPY OF THE MANUFACTURER'S STANDARD PUBLISHED WARRANTY.

METHOD OF MEASUREMENT

THE NUMBER OF MANHOLES TO BE PAID FOR UNDER ITEM 611 - MANHOLE, MISC.: MANHOLE REHABILITATION SHALL BE THE NUMBER OF MANHOLES LINED. MANHOLES IDENTIFIED IN THIS PLAN TO BE LINED ARE AS FOLLOWS: S-9, S-13, AND S-14.

BASIS OF PAYMENT

PAYMENT WILL BE MADE AT CONTRACT PRICE FOR ITEM 611 - MANHOLE, MISC.: MANHOLE REHABILITATION. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 611 - MANHOLE, MISC.: MANHOLE REHABILITATION 3 EACH

ITEM SPECIAL - CCTV SEWER INSPECTION

DESCRIPTION  
SUBMITTALS  
MATERIALS AND TECHNICAL REQUIREMENTS  
CCTV PROCESS  
METHOD OF MEASUREMENT AND PAYMENT

DESCRIPTION

THIS SECTION SPECIFIES THE REQUIREMENTS FOR INTERNAL TELEVISION AND MANHOLE INSPECTION OF SEWERS IN ACCORDANCE WITH NASSCO-PACP STANDARDS.

THE CONTRACTOR SHALL PERFORM INSPECTION OF SEWERS USING A COLOR CLOSED CIRCUIT TELEVISION CAMERA (CCTV) INSPECTION DEVICE AND DOCUMENT THE INSPECTION ON A DIGITAL RECORDER. ALL INSPECTION VIDEO SHALL BE IN MPEG FILE FORMAT AND SAVED ON PORTABLE HARD DRIVES FOR SUBMITTAL. EACH INSPECTED SEWER REACH, MANHOLE TO MANHOLE, SHOULD HAVE AN ASSOCIATED MPEG FILE. INSPECTION LOGS, WHICH SHALL INCLUDE PIPE SEGMENT AND MANHOLE ASSET ID'S, AND DIGITAL PHOTOGRAPHS (.JPG FILES) SHALL ACCOMPANY THE VIDEO INSPECTIONS FOR EACH SEWER REACH (MANHOLE TO MANHOLE) INSPECTED. THE NATURE OF THE INSPECTIONS SHALL BE TO VERIFY THE CLEANING OF THE SEWERS.

CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFICATIONS TO EQUIPMENT AND/OR INSPECTION PROCEDURES TO ACHIEVE REPORT MATERIAL OF ACCEPTABLE QUALITY. NO WORK SHALL COMMENCE PRIOR TO APPROVAL OF THE MATERIAL BY THE ENGINEER AND THE CITY. ONCE ACCEPTED, THE REPORT MATERIAL SHALL SERVE AS A STANDARD FOR THE REMAINING WORK.

THE CONTRACTOR SHALL HAVE A MINIMUM OF FIVE (5) YEARS OF EXPERIENCE IN SUCH WORK NECESSARY TO SUCCESSFULLY MEET THIS SPECIFICATION AND PROVIDE REFERENCES FOR FIVE (5) SEWER INSPECTION PROJECTS INVOLVING CCTV INSPECTION IN ACCORDANCE WITH NASSCO-PACP STANDARDS. PROVIDE LIST AND REFERENCES FOR ALL PACP PROJECTS WITHIN THE LAST 5 YEARS. PROVIDE SAMPLE VIDEO AND DATABASE SUBMITTAL FILES FOR 3 PROJECTS FOR REVIEW BY THE ENGINEER AND THE CITY PRIOR TO PERFORMING SUCH WORK. PROVIDE COPIES OF OPERATOR CERTIFICATES THAT WILL BE ON THE PROJECT. OPERATORS MUST HAVE A MINIMUM OF 3 YEAR'S PACP EXPERIENCE.

SUBMITTALS

VIDEO/DATABASE SAMPLE SUBMITTAL

A SAMPLE VIDEO/DATABASE SUBMITTAL OF ALL FILES MUST BE RECEIVED AND APPROVED BY THE CITY/ENGINEER BEFORE CONTRACTOR WILL BE PERMITTED TO PERFORM WORK, IN ORDER TO ENSURE COMPATIBILITY WITH THE CITY'S SEWER DATABASE PROGRAM, AND REDUCE COORDINATION EFFORTS IN DELIVERING THE DATA TO THE ENGINEER DURING THE PROJECT.

THE CONTRACTOR MAY BE REQUIRED TO COORDINATE WITH THE CITY TO ENSURE THAT THE SUBMITTALS ARE IN A COMPATIBLE FORMAT.

FIRST SUBMITTAL IS DUE IMMEDIATELY AFTER THE FIRST WEEK OF POST CCTV. SHOULD THE FIRST SUBMITTAL NOT BE COMPATIBLE, A SUBSEQUENT (SECOND) SUBMITTAL IS DUE WITHIN 5 WORKING DAYS FROM NOTIFICATION BY THE ENGINEER. SHOULD THE SECOND SUBMITTAL NOT BE COMPATIBLE, ALL WORK BY THE CONTRACTOR WILL BE STOPPED UNTIL A COMPATIBLE SUBMITTAL IS RECEIVED AND APPROVED BY THE CITY/ENGINEER. SUCH A WORK STOPPAGE WILL NOT BE GROUNDS FOR A CHANGE ORDER AND/OR EXTENSION OF CONTRACT TIME.

DATA DOWNLOADS/SUBMITTALS

THE CONTRACTOR SHALL PROVIDE THE ONSITE REPRESENTATIVE WITH TWO (2) COPIES OF DVDS OR PORTABLE HARD DRIVES WITH INSPECTION DATA CONSISTING OF CCTV VIDEO, DATABASE FILES, INSPECTION REPORTS, AND MANHOLE INSPECTION FILES..

FINAL SUBMITTAL UPON COMPLETION OF THE CONTRACT WORK, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH TWO (2) COPIES OF DVDS OR PORTABLE HARD DRIVES WITH INSPECTION DATA CONSISTING OF CCTV VIDEO, DATABASE FILES, INSPECTION REPORTS, AND MANHOLE INSPECTION FILES. ALL ASSET ID'S WITHIN THE FILES, AND USED TO IDENTIFY THE FILES, SHALL BE UPDATED PER THE INSTRUCTION OF THE CITY/ENGINEER.

MATERIALS AND TECHNICAL REQUIREMENTS

TELEVISION CAMERA FOR REMOTE CCTV AND MONITOR

THE CAMERA(S) SHALL BE OPERATIVE IN 100 PERCENT HUMIDITY/SUBMERGED CONDITIONS. THE CCTV CAMERA EQUIPMENT WILL PROVIDE A VIEW OF THE PIPE AHEAD OF THE EQUIPMENT AND OF FEATURES TO THE SIDE AND REAR OF THE EQUIPMENT THROUGH TURNING AND ROTATION OF THE LENS OR THROUGH TURNING AND ROTATION VIA VIEWING SOFTWARE. THE CAMERA OR VIEWING SOFTWARE SHALL BE CAPABLE OF TILTING AT RIGHT ANGLES ALONG THE AXIS OF THE PIPE WHILE PANNING THROUGH A FULL CIRCLE ABOUT THE CIRCUMFERENCE OF THE PIPE. THE LIGHTS ON THE CAMERA SHALL ALSO BE CAPABLE OF PANNING 90-DEGREES TO THE AXIS OF THE PIPE. IF THE EQUIPMENT PROVES TO BE UNSATISFACTORY, IT SHALL BE REPLACED WITH ADEQUATE EQUIPMENT.

THE TELEVISION CAMERA, ELECTRONIC SYSTEMS AND MONITOR SHALL PROVIDE AN IMAGE THAT MEETS THE FOLLOWING SPECIFICATIONS:

- WITH THE MONITOR CONTROL CORRECTLY ADJUSTED, THE SIX COLORS - YELLOW, CYAN, GREEN, MAGENTA, RED, AND BLUE, PLUS BLACK AND WHITE SHALL BE CLEARLY RESOLVED WITH THE PRIMARY COLORS IN ORDER OF DECREASING LUMINANCE.
- THE PICTURE SHALL SHOW NO CONVERGENCE OR DIVERGENCE OVER THE WHOLE OF THE PICTURE. THE MONITOR SHALL BE AT LEAST 13 INCHES DIAGONALLY ACROSS THE PICTURE TUBE.
- THE LIVE PICTURE ON THE CCTV MONITOR SHALL BE CAPABLE OF REGISTERING A MINIMUM OF 600 LINES HORIZONTAL RESOLUTION AND BE A CLEAR, STABLE IMAGE WITH NO INTERFERENCE.

LIGHTING INTENSITY SHALL BE REMOTE CONTROLLED AND SHALL BE ADJUSTED TO MINIMIZE REFLECTIVE GLARE. LIGHTING AND CAMERA QUALITY SHALL PROVIDE A CLEAR, IN-FOCUS PICTURE OF THE ENTIRE INSIDE PERIPHERY OF THE SEWERS AND LATERALS FOR ALL CONDITIONS EXCEPT SUBMERGENCE. UNDER IDEAL CONDITIONS (NO FOG IN THE SEWER) THE CAMERA LIGHTING SHALL ALLOW A CLEAR PICTURE UP TO FIVE PIPE DIAMETER LENGTHS AWAY FOR THE ENTIRE PERIPHERY OF THE SEWER. THE LIGHTING SHALL PROVIDE UNIFORM LIGHT FREE FROM SHADOWS OR HOT SPOTS.

INADEQUATE LIGHTING, SEWER GAS, FOG, MIST, SPRAY, WET OR SUBMERGED CAMERA LENS, HIGH FLOW LEVELS, FAST FLOW VELOCITIES, EXCESSIVE CAMERA MOVEMENT, SMALL WINDOW OF VIEWABLE AREA, BYPASSING DEFECTS AND CONNECTIONS WITHOUT STOPPING/PANNING, POOR VIDEO QUALITY, OR POOR AUDIO QUALITY WILL BE JUST CAUSE FOR THE CITY TO REQUIRE THE SEWER TO BE RE-TELEVIEWED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

CAMERA FOCAL DISTANCE SHALL BE REMOTELY ADJUSTABLE THROUGH A RANGE OF 6 INCHES TO INFINITY.

THE MONITOR AND SOFTWARE SHALL ALSO BE ABLE TO CAPTURE AND SAVE SCREEN IMAGES OF TYPICAL SEWER DETAILS AND ALL DEFECTS.

VIDEO RECORDINGS

THE VIDEO AND AUDIO RECORDINGS OF THE SEWER INSPECTIONS SHALL BE MADE USING DIGITAL VIDEO EQUIPMENT (.MPEG, .MPG ONE FILE FOR EACH REACH INSPECTION) FOR SUBMISSION ON PORTABLE HARD DRIVES. A VIDEO ENHANCER MAY BE USED IN CONJUNCTION WITH, BUT NOT IN LIEU OF, THE REQUIRED EQUIPMENT. THE DIGITAL RECORDING EQUIPMENT SHALL CAPTURE SEWER INSPECTION, WITH EACH SEWER REACH INSPECTION RECORDED AS AN INDIVIDUAL MOVIE FILE (.MPEG, .MPG).

THE AUDIO PORTION OF THE COMPOSITE VIDEO SHALL BE SUFFICIENTLY FREE FROM ELECTRICAL INTERFERENCE AND BACKGROUND NOISE TO PROVIDE COMPLETE INTELLIGIBILITY OF THE ORAL REPORT. AUDIO SHALL BE RECORDED BY THE OPERATING TECHNICIAN ON THE INSPECTION VIDEO AS THE SEWER IS INSPECTED AND SHALL INCLUDE THE SEWER LOCATION, IDENTIFICATION OF BEGINNING AND TERMINATING MANHOLES INCLUDING LOCATION (ADDRESS OR CROSS STREETS), INSPECTION DIRECTION, LENGTH OF INSPECTION, SIDE SEWER IDENTIFICATION, FLOW INFORMATION, COMPLETE DESCRIPTIONS OF THE SEWER LINE CONDITIONS AS THEY ARE ENCOUNTERED, DESCRIPTION OF THE REHABILITATION WORK, REASON FOR TERMINATION, AND OTHER RELEVANT COMMENTARY TO THE INSPECTIONS. IN ADDITION, THE AUDIO REPORTS SHALL INCLUDE THE DISTANCE TRAVELED ON THE SPECIFIC RUN, A DESCRIPTION OF ABNORMAL CONDITIONS IN THE SEWER AND SIDE SEWER CONNECTIONS AS THEY ARE ENCOUNTERED, EXPLANATIONS FOR PAUSING, BACKING UP, OR STOPPING THE SURVEY, AND THE FINAL MEASURED CENTER TO CENTER DISTANCES BETWEEN CONSECUTIVE MANHOLES. AUDIO DUBBING AFTER THE INSPECTION IS PROHIBITED.

THE REACHES SHALL BE DOCUMENTED ON THE VIDEO IN SEQUENTIAL ORDER, FROM UPSTREAM TO DOWNSTREAM, WHEREVER POSSIBLE. THE IMAGES RECORDED ON THE CCTV VIDEO SHALL BE THE SAME IMAGES THAT ARE REQUIRED TO BE DISPLAYED ON THE CCTV MONITOR.

IF INSPECTION IS COMPLETED WITH LIVE FEED, THE EQUIPMENT USED FOR THE INSPECTION MUST PROVIDE FOR SIMULTANEOUS MONITORING OF THE IN-SEWER INSPECTION BY THE CITY'S REPRESENTATIVE.

THE INSPECTION VIDEO SHOULD BE NAMED BY THE CITY'S SEWER SEGMENT ASSET ID NUMBER, AS SHOWN ON THE MAPS PROVIDED.

TYPED LABELS SHALL BE ATTACHED TO THE FACE OF EACH PORTABLE HARD DRIVE FOR BOTH THE CCTV. THE TYPED INDEX LABELS SHALL INCLUDE THE FOLLOWING INFORMATION:

- CONTENT
- CONTRACTOR NAME
- CONTRACT AREA
- SURVEY DATE RANGE

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.10D

168



CCTV PROCESS

THE CCTV CAMERA SHALL BE POSITIONED AS CLOSE TO THE SPRING LINE AS POSSIBLE WHILE MAINTAINING THE REQUIRED EQUIPMENT STABILITY. THE CAMERA OR VIEWING SOFTWARE SHALL PAN THE PERIPHERY OF THE MANHOLE FROM CASTING TO INVERT. AT THE DISCRETION OF THE CITY, IF WATER LEVELS PREVENT ADEQUATE TELEVISING OF THE SEWER, THEN CONDUCTING THE WORK DURING LOW FLOW PERIODS OR OTHER METHODS DETAILED IN THE CONTRACT DOCUMENTS SHOULD BE IMPLEMENTED. THE INSPECTION WILL BE DONE ONE SEWER SECTION AT A TIME AND THE SECTION BEING INSPECTED WILL BE ISOLATED FROM THE REMAINDER OF THE SEWER SYSTEM. THE CAMERA SHALL BE MOVED THROUGH THE SEWER IN EITHER DIRECTION AT A UNIFORM SLOW RATE BY MEANS OF CABLE WINCHES AT EACH MANHOLE. IN NO CASE WILL THE VIDEO CAMERA TRAVEL AT A SPEED GREATER THAN 30 FEET PER MINUTE. WHEN SEWER CONDITIONS PREVENT FORWARD MOVEMENT OF THE CAMERA, THE CONTRACTOR SHALL WITHDRAW THE CAMERA AND TELEVISE THE LINE FROM THE OPPOSITE DIRECTION.

CONTRACTOR SHALL ONLY PERFORM INSPECTION WORK WHEN THE FLOW DEPTH IS 50% OF THE PIPE DIAMETER OR LESS, WHEN MEASURED AT THE CENTERLINE OF THE SEWER, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THIS IS TO ENSURE THAT ENOUGH OF THE PIPE CAN BE OBSERVED ABOVE THE FLOW LINE DURING THE CCTV INSPECTION FOR THE CITY'S REQUIREMENTS. THE CITY RESERVES THE RIGHT TO NOT ACCEPT INSPECTION DATA IF THIS CRITERIA IS NOT MET. FLOW DEPTH IS BASED ON THE CENTERLINE OF THE SEWER. ACTUAL DEPTH OF FLOW AND VELOCITY MAY VARY DEPENDING ON SLOPE, DEBRIS ACCUMULATION, AND OTHER OBSTRUCTIONS. SEWER LINE FLOWS SHALL AT NO TIME EXCEED 50% OF THE PIPE DIAMETER DURING THE TELEVISION INSPECTION. TELEVISING THE SEWER WHEN FLOWS ARE MORE THAN 50% OF THE PIPE DIAMETER OR TELEVISING WHEN THE CAMERA IS BELOW THE WATER SURFACE SHALL BE CAUSE FOR CITY'S REPRESENTATIVE TO REQUIRE CONTRACTOR TO RE-TELEVISE THE SEWER AT NO ADDITIONAL COST TO THE PROJECT. SOME SEWERS MAY HAVE NORMAL/DRY WEATHER FLOW DEPTHS IN EXCESS OF 50% OF THE PIPE DIAMETER. THE CONTRACTOR MAY COORDINATE WITH THE CITY REPRESENTATIVE IN ORDER TO REQUEST PERMISSION TO PERFORM INSPECTION WHEN FLOW DEPTHS EXCEED 50% OF THE PIPE DIAMETER. SUCH REQUESTS AND GRANTING OF PERMISSION WILL BE DONE ON-SITE IN THE FIELD, ON A CASE-BY-CASE BASIS.

THE INSPECTION WORK SHALL BE PERFORMED AND DOCUMENTED PER NASSCO-PACP.

THE CONTRACTOR SHALL NOT CONDUCT INSPECTION WORK UNLESS THE CITY'S FIELD REPRESENTATIVE HAS BEEN NOTIFIED. THE CONTRACTOR SHALL COORDINATE WITH THE REPRESENTATIVE SUFFICIENTLY IN ADVANCE OF ANY ACTIVITIES (A MINIMUM OF 48 HOURS) TO ENSURE APPROPRIATE PERSONNEL HAVE BEEN NOTIFIED.

AT THE CONTRACTOR'S DISCRETION OR DIRECTION OF THE CITY, THE CAMERA SHALL BE STOPPED OR BACKED UP (WHEN CONDITIONS ALLOW) TO VIEW AND ANALYZE CONDITIONS THAT APPEAR TO BE UNUSUAL OR UNCOMMON FOR A SOUND SEWER. THE LENS AND LIGHTING SHALL BE READJUSTED, IF NEED BE, IN ORDER TO ENSURE A CLEAR, DISTINCT, AND PROPERLY LIGHTED FEATURE.

TEMPORARY BYPASS PUMPING SHALL BE PERFORMED ACCORDING TO ITEM 611 - DRAINAGE STRUCTURE, MISC.: BY-PASS PUMPING COMPLETE.

CONTRACTOR SHALL EXPECT TO PERFORM MANNED ENTRY OF MANHOLES AND PIPES IN ORDER TO DEPLOY AND OPERATE INSPECTION AND CLEANING EQUIPMENT.

LINEAR MEASUREMENT

PRIOR TO COMMENCING INSPECTIONS, THE CONTRACTOR SHALL DEMONSTRATE COMPLIANCE WITH THE LINEAR MEASUREMENT TOLERANCE SPECIFIED BELOW:

1. THE EQUIPMENT SHALL MEASURE THE LOCATION OF THE CAMERA UNIT IN 1-FOOT INCREMENTS FROM THE BEGINNING (UPSTREAM END) OF EACH CONTINUOUS SECTION. THIS FOOTAGE LOCATION MUST BE DISPLAYED ON THE CCTV MONITOR AND RECORDED ON THE DIGITAL MEDIA AND INSPECTION LOGS.
2. THE ACCURACY OF THE MEASURED LOCATION SHALL BE WITHIN + 0.5% OF THE ACTUAL LENGTH OF THE SEWER REACHES BEING SURVEYED, OR 1 FOOT, WHICHEVER IS GREATER.

CCTV AND MONITOR DISPLAY

THE IMAGES DISPLAYED ON THE CCTV MONITORS WILL BE A VIEW OF THE PIPE ABOVE THE WATER SURFACE AS SEEN BY THE CCTV CAMERA AS THE UNIT IS CONVEYED THROUGH THE SEWER. THE CAMERA LIGHTING SHALL BE FIXED IN INTENSITY PRIOR TO COMMENCING THE SURVEY AND THE WHITE BALANCE SET TO THE COLOR TEMPERATURE EMITTED. IN ORDER TO ENSURE COLOR CONSTANCY, IDEALLY NO VARIATION IN ILLUMINATION SHALL TAKE PLACE DURING THE SURVEY.

THE VIDEO EQUIPMENT SHALL BE CHECKED USING AN APPROVED TEST CARD WITH A COLOR BAR PRIOR TO COMMENCING EACH DAY'S SURVEY. THE CAMERA SHALL BE POSITIONED CENTRALLY AND PARALLEL TO THE TEST CARD AT A DISTANCE WHERE THE FULL TEST CARD JUST FILLS THE MONITOR SCREEN. THE CARD SHALL BE ILLUMINATED EVENLY AND UNIFORMLY WITHOUT ANY REFLECTION.

DATA DISPLAYS

THE CCTV IMAGES SHALL INCLUDE AN INITIAL DATA DISPLAY THAT IDENTIFIES THE SEWER REACH BEING SURVEYED AND A SURVEY STATUS DISPLAY THAT PROVIDES CONTINUOUSLY UPDATED INFORMATION ON THE LOCATION OF THE SURVEY UNIT AS THE SURVEY IS BEING PERFORMED. THESE DATA DISPLAYS SHALL BE IN ALPHANUMERIC FORM. THE SIZE AND POSITION OF THE DATA SHALL NOT INTERFERE WITH THE MAIN SUBJECT OF THE MONITOR PICTURE.

THE ON-SCREEN DISPLAY SHOULD BE WHITE DURING INSPECTIONS WHERE THE BACKGROUND BEHIND THE DISPLAY IS DARK AND, CONVERSELY, BLACK WHERE THE BACKGROUND IS LIGHT.

AT THE BEGINNING OF EACH REACH OF SEWER BEING INSPECTED, THE FOLLOWING INFORMATION SHALL BE ELECTRONICALLY GENERATED AND DISPLAYED ON THE CCTV MONITORS AS WELL AS INCLUDED IN THE AUDIO TRACK:

1. DATE OF SURVEY
2. CONTRACT AREA
3. MANHOLE NUMBER ASSET ID TO MANHOLE NUMBER ASSET ID (IN ORDER OF INSPECTION)
4. SEWER SEGMENT ASSET ID
5. DIRECTION OF SURVEY (UPSTREAM OR DOWNSTREAM)
6. TIME OF START OF SURVEY

DURING INSPECTIONS, THE FOLLOWING INFORMATION SHALL BE ELECTRONICALLY GENERATED, AUTOMATICALLY UPDATED, AND DISPLAYED ON THE CCTV MONITORS:

1. SURVEY UNIT LOCATION IN THE SEWER LINE IN FEET AND TENTHS OF FEET FROM ADJUSTED ZERO.
2. SEWER DIAMETER
3. SEWER SEGMENT ASSET ID

PHOTOGRAPHS

CCTV INSPECTION. DURING CCTV INSPECTIONS, SCREEN CAPTURES WILL BE TAKEN FROM THE MONITOR IMAGES AND SAVED ELECTRONICALLY BY THE IN-SEWER INSPECTION CREW OF TYPICAL CONDITIONS EVERY 200 FEET AND AT ALL DEFECTS, MANHOLES (PLAN ON TAKING AT LEAST 3 PICTURES PER MANHOLE TO BE USED FOR INTERNAL INSPECTION), BENDS, AND SERVICE LATERAL CONNECTIONS. THE SCREEN CAPTURE SHALL HAVE THE REACH (IDENTIFIED BY THE SEWER SEGMENT ASSET ID OR MANHOLE ASSET ID), SURVEY DIRECTION, FOOTAGE, AND DATE WHEN PHOTOGRAPH WAS TAKEN. THE ANNOTATION SHALL BE CLEARLY VISIBLE AND IN CONTRAST TO ITS BACKGROUND, SHALL HAVE A FIGURE SIZE NO GREATER THAN 1/4-INCH, AND SHALL BE TYPE-PRINTED. THE ANNOTATION SHALL BE POSITIONED ON THE FRONT OF THE PHOTOGRAPH SO AS TO NOT INTERFERE WITH THE SUBJECT OF THE PHOTOGRAPH. THE IMAGE OF THE SEWER SHALL FILL THE PHOTOGRAPHIC IMAGE. PHOTOGRAPHS MUST CLEARLY AND ACCURATELY SHOW WHAT IS DISPLAYED ON THE MONITOR, WHICH SHALL BE IN PROPER ADJUSTMENT. WHERE SIGNIFICANT FEATURES EXIST WITHIN 6-FEET OF EACH OTHER, ONE PHOTOGRAPH SHALL BE MADE TO RECORD THESE FEATURES. WHERE THERE IS A CONTINUOUS FEATURE, PHOTOGRAPHS SHALL NOT BE TAKEN AT INTERVALS OF LESS THAN 6-FEET UNLESS ABSOLUTELY NECESSARY TO SHOW A CHANGE IN THE FEATURE.

PROPER LIGHTING SHALL BE PROVIDED AND ENSURED FOR DIFFERENT CONDITIONS (PIPE INTERIOR, MANHOLE INTERIOR, ETC.). FAILURE TO PROVIDE THE PROPER AMOUNT OF LIGHT (INSUFFICIENT OR EXCESSIVE) WHICH RESULTS IN POOR PICTURE QUALITY WILL BE GROUNDS FOR THE CONTRACTOR TO REMOBILIZE AND REACQUIRE THE PICTURES IN QUESTION AT NO ADDITIONAL COST TO THE CITY/ENGINEER.

THE IMAGES SHALL BE KEPT ELECTRONICALLY, COPIED TO A CD, AND SUBMITTED WITH THE INSPECTION VIDEOS AND LOGS.

METHOD OF MEASUREMENT AND PAYMENT

ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH CCTV SEWER INSPECTION SHALL BE INCIDENTAL TO THE BID PRICE FOR ITEM 611 CONDUIT, MISC.: 8-INCH SANITARY SEWER RECONSTRUCTION BY THE CURED-IN-PLACE (CIPP) PROCESS.

CCTV CONTRACTORS: (FOR ALL SEWERS TO BE RECONSTRUCTED BY ANY METHOD)

IN ADDITION TO 551.12(C), PLEASE PROVIDE THE FOLLOWING INFORMATION TO THE CITY OF AKRON PRIOR TO SUBFINAL ACCEPTANCE ON ONE LABELED (PROJECT NAME INCLUDING AEB FILE NUMBER, PROJECT CONTRACTOR'S NAME, AND CCTV CONTRACTOR'S NAME) PORTABLE HARD DRIVE OR THUMB DRIVE:

A. DATABASE FILE WITH ALL INSPECTION EVENTS AND DEFECT RECORDS IN MICROSOFT ACCESS (.MDB) (GRANITE NATIVE EXPORT DATABASE, PACP 4.2 SCHEMA-COMPLIANT DATABASE, OR APPROVED EQUAL)

B. VIDEO FILE: MPEG (.MPG) OR WINDOWS MEDIA FILE (.WMV). ONE VIDEO FILE PER PIPE INSPECTION.

C. INSPECTION REPORT: ONE REPORT IN ADOBE ACROBAT PDF FORMAT PER PIPE INSPECTION. REPORT SHOULD INCLUDE:

- I. INSPECTION HEADER INFO (WHO, WHAT, WHERE, WHEN)
- II. DEFECT LOG
- III. PHOTOS OF DEFECTS

D. DEFECT PHOTOS: SCREEN CAPTURES FROM THE VIDEO (.JPG)

E. PLEASE USE THE "ASSET ID'S" PROVIDED IN THE PLANS WHEN REFERENCING "START MANHOLE,""END MANHOLE,"AND "PIPE SEGMENT" IN THE INSPECTION DATABASE AND FILENAMES. IF ASSET ID'S ARE NOT SHOWN ON THE PLANS, PLEASE CONTACT SCOTT DAVENPORT WITH SEWER MAINTENANCE AT 330-375-2769, PRIOR TO CONDUCTING THE CCTV INSPECTIONS.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.10E

TOTAL

168

MAINTAINING TRAFFIC:

THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO AND THROUGH THE PROJECT AS DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AS WELL AS THE FOLLOWING:

1. CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE-HALF HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS SHALL REQUIRE DRUMS AT A MINIMUM SPACING OF FIFTY (50) FEET.
2. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, AND SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS, AND INCIDENTALS RELATED THERETO.
3. ONLY DURING OFF-PEAK PERIODS (i.e. ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
4. A QUANTITY OF 200 CU. YD. OF ITEM 410 - TRAFFIC COMPACTED SURFACE, TYPE B SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS, AND OTHER LOCATIONS PRIOR TO RESURFACING, AS DIRECTED BY THE ENGINEER. A QUANTITY OF 4 MGAL OF ITEM 616 - WATER SHALL BE APPLIED TO THE SUBGRADE.
5. PRIOR TO OPENING TO TRAFFIC, EACH LANE SHALL BE IN A SAFE AND PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.
6. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES.
7. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL RESIDENCES AND BUSINESSES DURING CONSTRUCTION. IN THE EVENT THAT A DRIVE ACCESS NEEDS TO BE CLOSED, THE CONTRACTOR SHALL GIVE NOTICE OF CLOSURE AND DURATION TO THE PROPERTY OWNER 24 HOURS IN ADVANCE. CONTRACTOR SHALL ARRANGE FOR ALTERNATE PARKING AND REASONABLE ACCESS FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES.
8. ALL OPEN TRENCHES AND EXCAVATIONS MUST BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS.

RESIDENTIAL AND BUSINESS AREAS:

THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL RESIDENCES AND BUSINESSES DURING CONSTRUCTION. IN THE EVENT THAT A DRIVE ACCESS NEEDS CLOSED, THE CONTRACTOR SHALL ARRANGE FOR ALTERNATE PARKING AND REASONABLE ACCESS, INCLUDING THE USE OF HIGH-EARLY STRENGTH CONCRETE, FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES.

EXISTING STREET NAME AND TRAFFIC CONTROL SIGNS:

WHERE WORK REQUIRES THE MOVEMENT OF EXISTING SIGNS (STOP SIGNS, SPEED LIMIT SIGNS, NO PARKING SIGNS, ETC.), THE CONTRACTOR IS REQUIRED TO MAINTAIN THE FUNCTION OF ALL TRAFFIC CONTROL SIGNS. ALL SIGNS REMOVED BY THE CONTRACTOR SHALL BE STORED ON SITE AND REINSTALLED BY THE CONTRACTOR.

NEW STREET NAME AND TRAFFIC CONTROL SIGNS:

ALL STREET NAME AND TRAFFIC CONTROL SIGNS SHALL COME COMPLETE AND BE MADE IN ACCORDANCE WITH THE CITY OF CANTON SIGN AND PAINT DEPARTMENT SPECIFICATIONS. GENERALLY, ALL SIGNS SHALL HAVE HI-INTENSITY SHEETING AND BE MADE WITH .080 50/52 ALUMINUM. STREET NAME SIGNS SHALL BE MADE WITH WHITE UPPER AND LOWER CASE LETTERING ON GREEN BACKGROUND USING 9" BLANKS, BE DOUBLE SIDED WITH RADIUS CORNERS AND HAVE 6" NAME AND 3" SUFFIXES. ALL SIGN RELATED HARDWARE IS TO BE INCLUDED, SUCH AT 6" HEAVY DUTY U-CHANNEL CAPS AND STREET NAME CROSSES.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE:

A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS, AND OTHER EQUIPMENT MAY NOT BE PARKED ON THE MAIN ROAD, BUT MAY BE PARKED ON SIDE STREETS, WITH THE ENGINEER'S APPROVAL, WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE, THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE RW, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG A SIDE STREET, ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER HAS BEEN GRANTED.

WINTER SHUTDOWN PERIOD:

IF FINAL PAVING IS NOT PERFORMED PRIOR TO THE WINTER SHUTDOWN PERIOD (NOVEMBER 15TH THROUGH APRIL 15TH), THE CONTRACTOR SHALL WEDGE/RAMP AROUND ALL CASTINGS TO ALLOW FOR SNOW PLOWING.

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

SEQUENCE OF CONSTRUCTION:

A ROAD CLOSURE FOR THRU-TRAFFIC IS ANTICIPATED WHEN RECONSTRUCTING THE ROADWAY FOR EACH PHASE, WITH LOCAL TRAFFIC MAINTAINED AT ALL TIMES DURING CONSTRUCTION. PER CITY STANDARDS, THE CONTRACTOR SHALL GIVE NOTICE OF CLOSURE AND DURATION TO THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE FOR THOSE PROPERTY OWNERS AFFECTED BY DRIVE CLOSURES, AND THE CONTRACTOR SHALL ARRANGE FOR ALTERNATIVE PARKING AND REASONABLE ACCESS.

PHASE 1:  
COMPLETE CLOSURE OF WESTBOUND SIDE WITH ONE-WAY TRAFFIC AND PARKING MAINTAINED ON EASTBOUND SIDE EXISTING PAVEMENT.

PHASE 2:  
COMPLETE CLOSURE OF EASTBOUND SIDE WITH ONE-WAY TRAFFIC AND PARKING MAINTAINED ON WESTBOUND SIDE COMPLETED PAVEMENT.

DESIGN AGENCY



DESIGNER

BSS

REVIEWER

KMK 02-10-22

PROJECT ID

111059

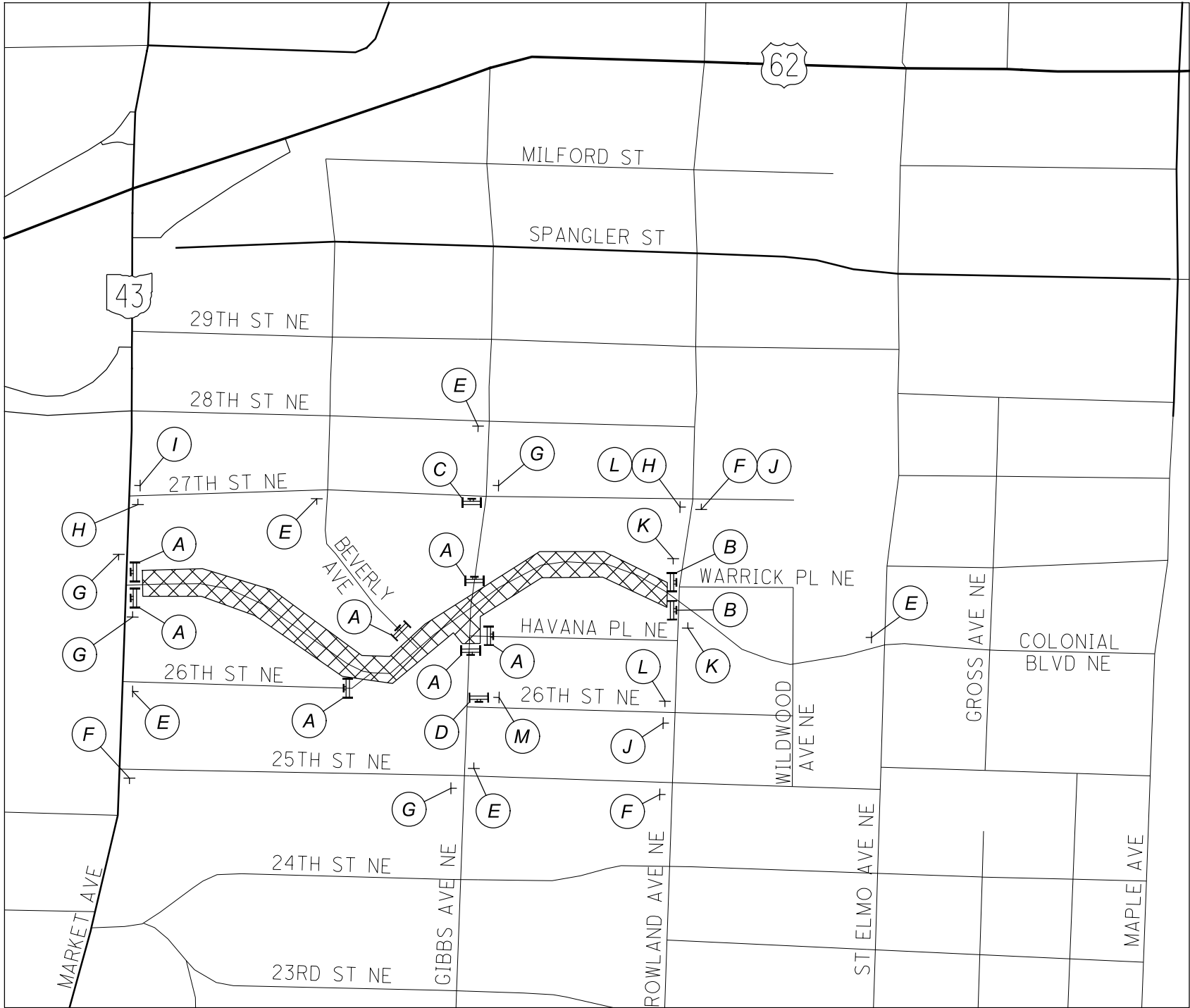
SHEET

P.11

TOTAL

168





LEGEND

- TYPE III BARRICADE
- TEMPORARY SIGN SUPPORT
- WORK ZONE

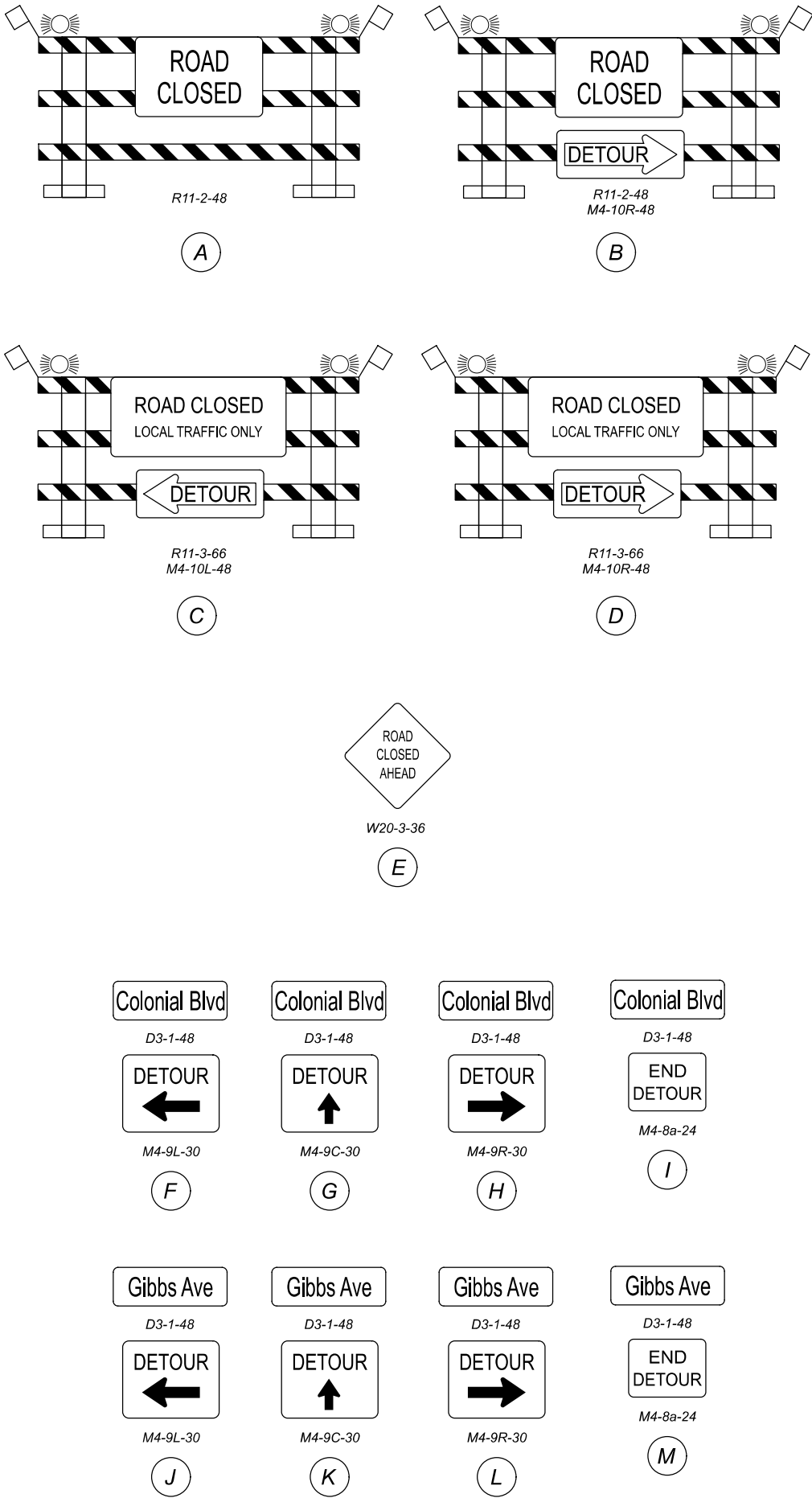
NOTES:

1. INSTALLATION AND REMOVAL OF ALL SIGNS AND BARRICADES TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 DETOUR SIGNING.
2. ACCESS TO ALL DRIVEWAYS SHALL BE MAINTAINED, EXCEPT FOR SHORT PERIODS WITH ADVANCE NOTIFICATION TO THE PROPERTY OWNER.

ROAD WILL BE  
CLOSED MMM-DD  
FOR XX DAYS  
INFO:

W20-H13-60

PLACE NOTICE OF CLOSURE SIGNS  
7 DAYS PRIOR TO CLOSURE



SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	10	17	18	19	20	20A	93	116	152			01/MPO/PV							
	LS											LS		201	11000	LS		ROADWAY	
		12,720					304					13,024		202	23000	13,024	SY	PAVEMENT REMOVED	
				24,866								24,866		202	30000	24,866	SF	WALK REMOVED	
				8,901								8,901		202	32000	8,901	FT	CURB REMOVED	
				2,366								2,366		202	35100	2,366	FT	PIPE REMOVED, 24" AND UNDER	
				6								6		202	58000	6	EACH	MANHOLE REMOVED	
				25								25		202	58100	25	EACH	CATCH BASIN REMOVED	
	LS											LS		202	98000	LS		REMOVAL MISC.: LANDSCAPING ITEMS	10
	LS											LS		202	98000	LS		REMOVAL MISC.: STEPS AND RAILING	10
			2,297									2,297		203	10000	2,297	CY	EXCAVATION	
												1,252		203	20000	1,252	CY	EMBANKMENT	
		11,965		1,252			1,041					15,611		204	10000	15,611	SY	SUBGRADE COMPACTION	
		7		2								9		204	45000	9	HOUR	PROOF ROLLING	
				19,167								19,167		608	10000	19,167	SF	4" CONCRETE WALK	
							6,525					6,525		608	13000	6,525	SF	6" CONCRETE WALK	
	20											20		608	40001	20	FT	CONCRETE STEPS, TYPE A, AS PER PLAN	10
	20											20		608	41001	20	FT	CONCRETE STEPS, TYPE B, AS PER PLAN	10
									32			32		623	38500	32	EACH	MONUMENT ASSEMBLY	
																		EROSION CONTROL	
			2									2		659	00100	2	EACH	SOIL ANALYSIS TEST	
			568									568		659	00300	568	CY	TOPSOIL	
			5,111									5,111		659	10000	5,111	SY	SEEDING AND MULCHING	
			256									256		659	14000	256	SY	REPAIR SEEDING AND MULCHING	
			256									256		659	15000	256	SY	INTER-SEEDING	
												0.72		659	20000	0.72	TON	COMMERCIAL FERTILIZER	
			0.72									1.06		659	31000	1.06	ACRE	LIME	
			1.06									29		659	35000	29	MGAL	WATER	
			29									LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
												36,000		832	30000	36,000	EACH	EROSION CONTROL	
																		DRAINAGE	
						4,353						4,353		605	06020	4,353	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
100					8							108		611	00100	108	FT	4" CONDUIT, TYPE B, 707.33	
						402						402		611	00410	402	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
100												100		611	00900	100	FT	6" CONDUIT, TYPE B, 707.33	
100					1,071							1,171		611	04400	1,171	FT	12" CONDUIT, TYPE B, 707.33	
100					1,147							1,247		611	05900	1,247	FT	15" CONDUIT, TYPE B, 707.33	
50					20							70		611	07400	70	FT	18" CONDUIT, TYPE B, 707.33	
					57							57		611	08900	57	FT	21" CONDUIT, TYPE B, 707.33	
50					606							656		611	10400	656	FT	24" CONDUIT, TYPE B, 707.33	
					667							667		611	11900	667	FT	27" CONDUIT, TYPE B, 707.33	
50												50		611	16400	50	FT	36" CONDUIT, TYPE B, 707.33	
50												50		611	19400	50	FT	42" CONDUIT, TYPE B, 707.33	
50												50		611	20900	50	FT	48" CONDUIT, TYPE B, 707.33	
					3							3		611	98690	3	EACH	CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 1 - CURB INLET CATCH BASIN NO. 3	8
					35							35		611	98690	35	EACH	CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 1 - CURB INLET CATCH BASIN NO. 3A	8
					2							2		611	98690	2	EACH	CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 4 - CURB INLET CATCH BASIN NO. 6	8
					6							6		611	99655	6	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	7
					18							18		611	99690	18	EACH	MANHOLE, MISC.: CITY OF CANTON SCD NO. 10 - PRE-CAST STORM MANHOLE	8
					1							1		611	99690	1	EACH	MANHOLE, MISC.: CITY OF CANTON SCD NO. 10 - PRE-CAST STORM MANHOLE WITH 108" BASE ID AND 12" WEIR	8
	10,000											10,000		SPECIAL	61199820	10,000	LB	MISCELLANEOUS METAL	10
					1							1		895	10040	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	
																		PAVEMENT	
		2,144										2,144		254	01000	2,144	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3")	
		1,617					2	48				1,667		301	46000	1,667	CY	ASPHALT CONCRETE BASE, PG64-22	
		1,303	447				84	21				1,855		304	20000	1,855	CY	AGGREGATE BASE	
		1,401					2					1,403		407	20000	1,403	GAL	NON-TRACKING TACK COAT	
		3,879										3,879		408	10000	3,879	GAL	PRIME COAT	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.13

TOTAL

168

MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 2022-02-11 TIME: 2:25:21 PM USER: jennifer.kelley  
\\10.120.112.5\share\121798\_STA-Colonial7.0\_Production\Worksheets\111059400-Engineering\Roadway\Sheets\111059\_GG002.dgn

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8	10C	10D	17	18	20	20A	93	116	144			01/MPO/PV							
																	PAVEMENT (CONT.)		
			313				1					314	441	50000	314	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22		
			601									601	441	50200	601	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)		
							284					284	452	10010	284	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
			1,485									1,485	452	13010	1,485	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
			784									784	452	19200	784	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: 5.5" NON-REINFORCED CONCRETE PAVEMENT		
			663									663	452	19200	663	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS	8	
			122									122	452	19200	122	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.:SIDEWALK BRICK PAVERS	8	
				4,208								4,208	608	52000	4,208	SF	CURB RAMP		
			120									120	608	53020	120	SF	DETECTABLE WARNING		
				9,099								9,099	609	12001	9,099	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	4	
				233								233	609	22001	233	FT	CURB, TYPE 3-B, AS PER PLAN	5	
																	WATER WORK		
								32				32	638	98000	32	EACH	WATER WORK, MISC.: 1" WATER SERVICE CONNECTION, COMPLETE, SHORT SIDE	9	
								17				17	638	98000	17	EACH	WATER WORK, MISC.: 1" WATER SERVICE CONNECTION, COMPLETE, LONG SIDE	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 1.5" WATER SERVICE CONNECTION, COMPLETE, LONG SIDE	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 2" CURB STOP, COMPLETE	9	
								11				11	638	98000	11	EACH	WATER WORK, MISC.: 6" GATE VALVE	9	
								4				4	638	98000	4	EACH	WATER WORK, MISC.: 8" GATE VALVE	9	
								2				2	638	98000	2	EACH	WATER WORK, MISC.: 12" GATE VALVE	9	
								15				15	638	98000	15	EACH	WATER WORK, MISC.: 6" 11.25 DEGREE BEND	9	
								4				4	638	98000	4	EACH	WATER WORK, MISC.: 6" 22.5 DEGREE BEND	9	
								25				25	638	98000	25	EACH	WATER WORK, MISC.: 6" 45 DEGREE BEND	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 8" 11.25 DEGREE BEND	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 8" 22.5 DEGREE BEND	9	
								11				11	638	98000	11	EACH	WATER WORK, MISC.: 8" 45 DEGREE BEND	9	
								4				4	638	98000	4	EACH	WATER WORK, MISC.: 12" 45 DEGREE BEND	9	
								2				2	638	98000	2	EACH	WATER WORK, MISC.: 6" X 6" X 6" TEE	9	
								2				2	638	98000	2	EACH	WATER WORK, MISC.: 6" X 6" X 8" TEE	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 8" X 8" X 8" TEE	9	
								3				3	638	98000	3	EACH	WATER WORK, MISC.: 12" X 12" X 6" TEE	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 6" X 4" REDUCER	9	
								1				1	638	98000	1	EACH	WATER WORK, MISC.: 4" CUT-IN SLEEVE	9	
								3				3	638	98000	3	EACH	WATER WORK, MISC.: 6" CUT-IN SLEEVE	9	
								3				3	638	98000	3	EACH	WATER WORK, MISC.: 8" CUT-IN SLEEVE	9	
								2				2	638	98000	2	EACH	WATER WORK, MISC.: 12" CUT-IN SLEEVE	9	
								3				3	638	98000	3	EACH	WATER WORK, MISC.: 4" PLUG	9	
								5				5	638	98000	5	EACH	WATER WORK, MISC.: 6" PLUG	9	
								3				3	638	98000	3	EACH	WATER WORK, MISC.: 8" PLUG	9	
								2				2	638	98000	2	EACH	WATER WORK, MISC.: 12" PLUG	9	
								7				7	638	98000	7	EACH	WATER WORK, MISC.: FIRE HYDRANT ASSEMBLY	9	
								4				4	638	98000	4	EACH	WATER WORK, MISC.: FIRE HYDRANT REMOVED	9	
								16				16	638	98000	16	EACH	WATER WORK, MISC.: EXISTING VALVE ABANDONED	9	
								100				100	638	98600	100	FT	WATER WORK, MISC.: 2" WATER MAIN HIGH DENSITY POLYETHYLENE PIPE CTS SDR 9	9	
								5				5	638	98600	5	FT	WATER WORK, MISC.: 4" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	9	
								2,665				2,665	638	98600	2,665	FT	WATER WORK, MISC.: 6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	9	
								236				236	638	98600	236	FT	WATER WORK, MISC.: 8" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS	9	
								391				391	638	98600	391	FT	WATER WORK, MISC.: 12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, PUSH-ON JOINTS AND FITTINGS	9	
								80				80	638	98600	80	FT	WATER WORK, MISC.: INSULATING FILL	9	
																	SANITARY SEWER		
							2					2	202	58000	2	EACH	MANHOLE REMOVED		
							264					264	202	98700	264	FT	ABANDON MISC.: GROUT AND ABANDON 8" SANITARY SEWER	8	
100												100	611	00100	100	FT	4" CONDUIT, TYPE B, 707.33		
100												100	611	00900	100	FT	6" CONDUIT, TYPE B, 707.33		
100												100	611	01800	100	FT	8" CONDUIT, TYPE B, 707.33		

## GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

PROJECT ID

SHEET	TOTAL
P.14	16

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	8	10C	10D	11	12	19	20A	133	134	144		01/MPO/PV							
							289					289	611	01801	289	FT	SANITARY SEWER (CONT.)		8
	100											100	611	03100	100	FT	10" CONDUIT, TYPE B, 707.33		
							9					9	611	97200	9	EACH	CONDUIT, MISC.: SANITARY LATERAL RECONNECTION		8
		510										510	611	97400	510	FT	CONDUIT, MISC.: 8-INCH SANITARY SEWER RECONSTRUCTION BY THE CIPP PROCESS		10A
							13					13	611	99655	13	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN		7
			3									3	611	99690	3	EACH	MANHOLE, MISC.: MANHOLE REHABILITATION		10C
							2					2	611	99690	2	EACH	MANHOLE, MISC.: CITY OF CANTON SCD NO. 10 - PRE-CAST SANITARY MANHOLE		8
	LS											LS	611	99920	LS		DRAINAGE STRUCTURE, MISC.: SANITARY SEWER BYPASS PUMPING		8
																	LIGHTING		
										96		96	625	00450	96	EACH	CONNECTION, FUSED PULL APART		
										24		24	625	10481	24	EACH	LIGHT POLE, DECORATIVE, AS PER PLAN (NOSTALGIA)		141
										24		24	625	14501	24	EACH	LIGHT POLE FOUNDATION, AS PER PLAN (NOSTALGIA)		141
										7,758		7,758	625	22990	7,758	FT	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE		
										3,312		3,312	625	23410	3,312	FT	NO. 12 AWG POLE AND BRACKET CABLE		
										4,977		4,977	625	25409	4,977	FT	CONDUIT, 2", 725.051, AS PER PLAN		141
										48		48	625	27401	48	EACH	LUMINAIRE, POST TOP, AS PER PLAN (TYPE III, 55 WATT, LED, 240 VOLT) (NOSTALGIA)		141
										1,581		1,581	625	29002	1,581	FT	TRENCH, 24" DEEP		
										875		875	625	29400	875	FT	TRENCH IN PAVED AREA		
										1,579		1,579	625	36010	1,579	FT	UNDERGROUND WARNING/MARKING TAPE		
										19		19	625	30700	19	EACH	PULL BOX, 725.08, 18"		
										24		24	625	32000	24	EACH	GROUND ROD		
										1		1	625	34001	1	EACH	POWER SERVICE, AS PER PLAN		141
																	TRAFFIC CONTROL		
								252				252	630	02100	252	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
								699				699	630	03100	699	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
								75				75	630	08520	75	FT	STREET NAME SIGN SUPPORT, NO. 3 POST		
								18				18	630	08600	18	EACH	SIGN POST REFLECTOR		
								562.6				562.6	630	80100	562.6	SF	SIGN, FLAT SHEET		
								7				7	630	80500	7	EACH	SIGN, DOUBLE FACED, STREET NAME		
								44				44	630	84900	44	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		
								28				28	630	86002	28	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
								8				8	630	87500	8	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL		
									0.04			0.04	644	00300	0.04	MILE	CENTER LINE		
									43			43	644	00500	43	FT	STOP LINE		
									512			512	644	00621	512	FT	CROSSWALK LINE, 12", AS PER PLAN		135
									380			380	644	00631	380	FT	CROSSWALK LINE, 24", AS PER PLAN		135
									125			125	644	01510	125	FT	DOTTED LINE, 6"		
									8			8	644	50100	8	EACH	PAVEMENT MARKING, MISC.: SPEED TABLE MARKING		10
									31			31	646	10600	31	FT	TRANSVERSE/DIAGONAL LINE		
																	LANDSCAPING		
						4						4	661	40080	4	EACH	DECIDUOUS TREE, 2" CALIPER		
						100						100	662	31000	100	GAL	LANDSCAPE WATERING		
																	MAINTENANCE OF TRAFFIC		
				200								200	410	11000	200	CY	TRAFFIC COMPACTED SURFACE, TYPE B		
					LS							LS	614	12420	LS		DETOUR SIGNING		
15				4								19	616	10000	19	MGAL	WATER		
36												36	616	20000	36	TON	CALCIUM CHLORIDE		
																	INCIDENTALS		
												LS	614	11000	LS		MAINTAINING TRAFFIC		
												18	619	16010	18	MNTH	FIELD OFFICE, TYPE B		
												LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
												LS	624	10000	LS		MOBILIZATION		

PAVEMENT CALCULATIONS																								
STATION RANGE			ROUTE	SIDE	LENGTH L (FT)	AVERAGE WIDTH W (FT)	SURFACE AREA A (SF) A=LxW	EDGE COURSE AREAS		202	204	204	254	301	304	407	408	441	441	452	452	452	452	608
								4" BEYOND	10" BEYOND	PAVEMENT REMOVED	SUBGRADE COMPACTION	PROOF ROLLING	PAVEMENT PLANING, ASPHALT CONCRETE (3")	ASPHALT CONCRETE BASE, PG64-22 (6")	AGGREGATE BASE (4")	NON-TRACKING TACK COAT	PRIME COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (0.75" OR 1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (2.25")	NON-REINFORCED CONCRETE PAVEMENT, MISC.: 5.5" NON- REINFORCED CONCRETE PAVEMENT	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS	NON-REINFORCED CONCRETE PAVEMENT, MISC.: SIDEWALK BRICK PAVERS	DETECTABLE WARNING
100+45.50	TO	111+56.23	COLONIAL WB (FULL DEPTH)	LT	1110.73	9.50	10551.94				1172.44	0.59		195.41	130.27	140.69	468.97	24.43	73.28					
100+45.50	TO	112+31.48	COLONIAL EB (FULL DEPTH)	RT	1185.98	9.50	11266.81				1251.87	0.63		208.64	139.10	150.22	500.75	26.08	78.24					
111+56.23	TO	113+34.90	COLONIAL WB (FULL DEPTH)	LT			2220.34				246.70	0.12		41.12	27.41	29.60	98.68	5.14	15.42					
112+31.48	TO	113+21.04	COLONIAL EB (FULL DEPTH)	RT			1177.16				130.80	0.07		21.80	14.53	15.70	52.32	2.72	8.17					
115+08.94	TO	116+66.35	COLONIAL WB (FULL DEPTH)	LT			1801.19				200.13	0.10		33.36	22.24	24.02	80.05	4.17	12.51					
115+01.80	TO	116+45.22	COLONIAL EB (FULL DEPTH)	RT			1680.92				186.77	0.09		31.13	20.75	22.41	74.71	3.89	11.67					
116+66.35	TO	121+40.12	COLONIAL WB (FULL DEPTH)	LT	473.77	9.50	4500.82				500.09	0.25		83.35	55.57	60.01	200.04	10.42	31.26					
116+45.22	TO	121+44.50	COLONIAL EB (FULL DEPTH)	RT	499.28	9.50	4743.16				527.02	0.26		87.84	58.56	63.24	210.81	10.98	32.94					
121+40.12	TO	122+48.19	COLONIAL EB/WB (FULL DEPTH)	LT/RT			3373.22				374.80	0.19		62.47	41.64	44.98	149.92	7.81	23.43					
100+59.00	TO	100+86.50	COLONIAL U-TURN AREA	LT/RT			648.57				72.06	0.04		12.01	8.01	8.65	28.83	1.50	4.50					
104+95.50	TO	105+58.51	COLONIAL U-TURN AREA	LT/RT			1263.14				140.35	0.07		23.39	15.59	16.84	56.14	2.92	8.77					
108+20.50	TO	109+04.50	COLONIAL U-TURN AREA	LT/RT			2104.61				233.85	0.12		38.97	25.98	28.06	93.54	4.87	14.62					
111+71.50	TO	112+55.62	COLONIAL U-TURN AREA	LT/RT			1509.85				167.76	0.08		27.96	18.64	20.13	67.10	3.50	10.49					
118+14.31	TO	118+80.49	COLONIAL U-TURN AREA	LT/RT			1372.03				152.45	0.08		25.41	16.94	18.29	60.98	3.18	9.53					
100+25.50	TO	100+59.00	COLONIAL WB CONC. HEADER	LT			119.36				13.26	0.01			1.47						13.26			
100+25.50	TO	100+59.00	COLONIAL EB CONC. HEADER	RT			119.36				13.26	0.01			1.47						13.26			
100+68.17	TO	105+11.98	COLONIAL WB CONC. HEADER	LT			1784.34				198.26	0.10			22.03						198.26			
100+72.22	TO	105+12.45	COLONIAL EB CONC. HEADER	RT			1783.21				198.13	0.10			22.01						198.13			
105+42.02	TO	108+40.50	COLONIAL WB CONC. HEADER	LT			1201.52				133.50	0.07			14.83						133.50			
105+41.57	TO	108+40.50	COLONIAL EB CONC. HEADER	RT			1277.35				141.93	0.07			15.77						141.93			
108+84.49	TO	111+91.50	COLONIAL WB CONC. HEADER	LT			1224.05				136.01	0.07			15.11						136.01			
108+84.49	TO	111+91.50	COLONIAL EB CONC. HEADER	RT			1312.84				145.87	0.07			16.21						145.87			
116+04.24	TO	118+30.41	COLONIAL WB CONC. HEADER	LT			932.43				103.60	0.05			11.51						103.60			
115+65.07	TO	118+31.26	COLONIAL EB CONC. HEADER	RT			1077.23				119.69	0.06			13.30						119.69			
118+64.23	TO	121+67.50	COLONIAL WB CONC. HEADER	LT			1270.75				141.19	0.07			15.69						141.19			
118+63.72	TO	121+67.50	COLONIAL EB CONC. HEADER	RT			1019.06				113.23	0.06			12.58						113.23			
101+07.11	TO	101+29.89	COLONIAL WB PARKING AREA	LT	22.78	6.00	136.66				15.18	0.01			1.69					15.18		15.18		
102+06.11	TO	102+51.89	COLONIAL EB PARKING AREA	RT	45.78	6.00	274.66				30.52	0.02			3.39					30.52		30.52		
102+79.10	TO	103+62.91	COLONIAL WB PARKING AREA	LT	87.02	6.00	522.14				58.02	0.03			6.45					58.02		58.02		
103+25.14	TO	103+49.86	COLONIAL EB PARKING AREA	RT	23.78	6.00	142.67				15.85	0.01			1.76					15.85		15.85		
103+98.14	TO	104+22.86	COLONIAL EB PARKING AREA	RT	23.78	6.00	142.67				15.85	0.01			1.76					15.85		15.85		
105+79.11	TO	106+01.89	COLONIAL WB PARKING AREA	LT	22.78	6.00	136.66				15.18	0.01			1.69					15.18		15.18		
105+88.11	TO	106+10.89	COLONIAL EB PARKING AREA	RT	22.78	6.00	136.66				15.18	0.01			1.69					15.18		15.18		
106+77.11	TO	107+22.89	COLONIAL WB PARKING AREA	LT	45.78	6.00	274.66				30.52	0.02			3.39					30.52		30.52		
109+47.06	TO	109+69.94	COLONIAL EB PARKING AREA	RT	24.98	6.00	149.85				16.65	0.01			1.85					16.65		16.65		
110+38.06	TO	110+83.92	COLONIAL EB PARKING AREA	RT	50.05	6.00	300.28				33.36	0.02			3.71					33.36		33.36		
115+85.13	TO	116+09.47	COLONIAL EB PARKING AREA	RT	23.85	6.00	143.07				15.90	0.01			1.77					15.90		15.90		
116+79.00	TO	117+70.89	COLONIAL WB PARKING AREA	LT	94.67	6.00	568.02				63.11	0.03			7.01					63.11		63.11		
119+31.13	TO	119+79.87	COLONIAL EB PARKING AREA	RT	47.11	6.00	282.67				31.41	0.02			3.49					31.41		31.41		
120+26.09	TO	120+71.91	COLONIAL WB PARKING AREA	LT	47.34	6.00	284.05				31.56	0.02			3.51					31.56		31.56		
120+47.13	TO	121+19.87	COLONIAL EB PARKING AREA	RT	70.31	6.00	421.87				46.87	0.02			5.21					46.87		46.87		
TOTALS CARRIED TO SHEET 17										0	7,251	4	0	893	806	643	2,143	112	335	436	1,458	436	0	0

PAVEMENT CALCULATIONS																								
STATION RANGE			ROUTE	SIDE	LENGTH L (FT)	AVERAGE WIDTH, W (FT)	SURFACE AREA, A (SF) A=LxW	EDGE COURSE AREAS		202	204	204	254	301	304	407	408	441	441	452	452	452	452	608
								4" BEYOND	10" BEYOND	PAVEMENT REMOVED	SUBGRADE COMPACTION	PROOF ROLLING	PAVEMENT PLANING, ASPHALT CONCRETE (3")	ASPHALT CONCRETE BASE, PG64-22 (6")	AGGREGATE BASE (4")	NON-TRACKING TACK COAT	PRIME COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (0.75" OR 1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (2.25")	NON-REINFORCED CONCRETE PAVEMENT, MISC.: 5.5" NON- REINFORCED CONCRETE PAVEMENT	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	NON-REINFORCED CONCRETE PAVEMENT, MISC.: ROADWAY BRICK PAVERS	NON-REINFORCED CONCRETE PAVEMENT, MISC.: SIDEWALK BRICK PAVERS	DETECTABLE WARNING
4+19.32	TO	5+61.99	N. ROUNDABOUT CIRC. ROADWAY				2269.02				252.11	0.13		42.02	28.01	30.25	100.85	5.25	15.76					
1+66.46	TO	3+09.99	S. ROUNDABOUT CIRC. ROADWAY				2269.02				252.11	0.13		42.02	28.01	30.25	100.85	5.25	15.76					
3+09.99	TO	4+19.32	NB ROUNDABOUT CONN. ROADWAY				1023.68				113.74	0.06		18.96	12.64	13.65	45.50	2.37	7.11					
1+66.46	TO	5+61.99	SB ROUNDABOUT CONN. ROADWAY				1071.56				119.06	0.06		19.84	13.23	14.29	47.62	2.48	7.44					
1+11.22	TO	1+38.32	ROUNDABOUT CONN. ROADWAY ISLAND				184.17				20.46	0.01			2.27					20.46				20.46
3+66.98	TO	3+94.76	ROUNDABOUT CONN. ROADWAY ISLAND				192.98				21.44	0.01			2.38					21.44				21.44
			N. ROUNDABOUT CENTRAL ISLAND				1017.88				113.10	0.06			12.57					113.10		113.10		
			S. ROUNDABOUT CENTRAL ISLAND				1017.88				113.10	0.06			12.57					113.10		113.10		
3+14.12	TO	3+56.98	ROUNDABOUT BORDER BRICKS				161.50				17.94	0.01			1.99					17.94				17.94
3+66.98	TO	4+34.97	ROUNDABOUT BORDER BRICKS				292.27				32.47	0.02			3.61					32.47				32.47
5+50.91	TO	1+01.22	ROUNDABOUT BORDER BRICKS				261.92				29.10	0.01			3.23					29.10				29.10
100+16.84	TO	100+45.50	MARKET AVE. (INT. AREA)	LT/RT			1468.78				163.20	0.08		27.20	18.13	19.58	65.28	3.40	10.20					
12+50.00	TO	13+30.34	26TH ST. (INT. AREA)	LT/RT			3140.72				348.97	0.17		58.16	38.77	41.88	139.59	7.27	21.81					
3+70.00	TO	4+32.25	BEVERLY AVE. (INT. AREA)	LT/RT			1929.44				214.38	0.11		35.73	23.82	25.73	85.75	4.47	13.40					
30+08.77	TO	30+60.00	HAVANA PL. (INT. AREA)	LT/RT			1296.06				144.01	0.07		24.00	16.00	17.28	57.60	3.00	9.00					
30+10.89	TO	30+29.89	HAVANA PL. (TRAFFIC DIVIDER)	LT			92.33				10.26	0.01			1.14						10.26			
12+00.00	TO	12+90.15	GIBBS AVE. N. (INT. AREA)	LT/RT			1942.99				215.89	0.11		35.98	23.99	25.91	86.36	4.50	13.49					
12+72.86	TO	12+88.65	GIBBS AVE. N. (TRAFFIC DIVIDER)	CL			73.50				8.17	0.01			0.91						8.17			
14+88.81	TO	15+90.00	GIBBS AVE. S. (INT. AREA)	LT/RT			2521.82				280.20	0.14		46.70	31.13	33.62	112.08	5.84	17.51					
14+90.33	TO	15+05.88	GIBBS AVE. S. (TRAFFIC DIVIDER)	CL			71.37				7.93	0.01			0.88						7.93			
12+30.00	TO	12+50.00	26TH ST. (RESURFACING)	LT/RT	20.00	29.60	592.08						65.79			11.84		1.37	4.11					
3+40.00	TO	3+70.00	BEVERLY AVE. (RESURFACING)	LT/RT	30.00	29.72	891.66						99.07			17.83		2.06	6.19					
30+60.00	TO	30+94.00	HAVANA PL. (RESURFACING)	LT/RT	34.00	24.08	818.77						90.97			16.38		1.90	5.69					
122+00.00	TO	123+25.00	COLONIAL/ROWLAND (RESURFACING)	LT/RT			16984.87						1887.21			339.70		39.32	117.95					
100+34.00	TO	100+50.50	SHARED USE PATH	LT/RT			196.27	9.64	24.10		24.49	0.02		4.08	2.54	1.37	9.79	0.91						20.00
100+68.50	TO	105+13.51	SHARED USE PATH	LT/RT			4509.35	431.05	1077.63		620.78	0.32		103.46	60.99	32.94	248.31	20.88						40.00
105+40.50	TO	108+26.04	SHARED USE PATH	LT/RT			2924.95	289.82	724.56		405.50	0.21		67.58	39.69	21.43	162.20	13.54						20.00
109+01.72	TO	111+75.00	SHARED USE PATH	LT/RT			2715.37	285.63	714.08		381.05	0.20		63.51	37.05	20.01	152.42	12.57						
115+28.87	TO	118+35.50	SHARED USE PATH	LT/RT			3072.31	205.37	513.43		398.42	0.20		66.40	40.47	21.85	159.37	14.22						20.00
118+59.49	TO	121+49.00	SHARED USE PATH	LT/RT			2987.19	264.53	661.32		405.39	0.21		67.56	40.14	21.68	162.16	13.83						20.00
100+51.00	TO	100+68.00	SPEED TABLE	LT/RT			410.89											5.42						
105+14.00	TO	105+40.00	SPEED TABLE	LT/RT			643.06											8.42						
114+06.54	TO	114+21.32	SPEED TABLE	LT/RT			633.66											8.83						
118+36.00	TO	118+59.00	SPEED TABLE	LT/RT			933.40											13.29						
100+00.00	TO	122+50.00	COLONIAL MAINLINE & SIDE ROADS	LT/RT						12719.17														
TOTALS CARRIED FROM THIS SHEET										12,720	4,714	3	2,144	724	497	758	1,736	201	266	348	27	227	122	120
TOTALS CARRIED FROM SHEET 16										0	7,251	4	0	893	806	643	2,143	112	335	436	1,458	436	0	0
TOTALS CARRIED TO GENERAL SUMMARY										12,720	11,965	7	2,144	1,617	1,303	1,401	3,879	313	601	784	1,485	663	122	120

PAVEMENT QUANTITIES

DESIGN AGENCY

[

BI

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DESIGNER  
JMK

REVIEWER  
KMK 02-10-22

PROJECT ID  
111059

SHEET  
P.17

TOTAL  
168

REF. NO.	SHEET NO.	STATION		SIDE	608
					4" CONCRETE WALK
		FROM	TO		SF
W-1	23	100+28.24	100+29.91	LT	70.96
W-2	23	100+27.95	100+30.80	RT	90.63
W-3	23	100+48.24	101+33.50	LT	426.32
W-4	23	100+45.39	101+29.00	RT	369.21
W-5	23	101+74.50	102+10.19	LT	179.00
W-6	23	101+62.00	101+85.50	RT	94.00
W-7	24	102+38.50	102+67.80	LT	160.48
W-8	23	102+18.50	102+64.33	RT	183.33
W-9	24	102+96.46	103+37.89	RT	151.98
W-10	24	102+97.87	103+74.35	LT	430.32
W-11	24	103+74.13	104+06.32	RT	161.42
W-12	24	104+03.69	104+44.71	LT	205.74
W-13	24	104+37.91	105+31.32	RT	389.55
W-14	24	104+76.29	105+11.14	LT	150.91
W-15	24	105+40.86	106+26.50	LT	477.49
W-16	24	105+70.78	107+94.57	RT	1099.05
W-17	24	106+58.50	107+47.50	LT	445.00
W-18	25	12+74.16 26TH ST.	12+75.27 26TH ST.	LT	27.84
W-19	25	12+50.00 26TH ST.	12+62.33 26TH ST.	LT	68.55
W-20	25	12+50.00 26TH ST.	12+72.08 26TH ST.	RT	110.39
W-21	25	12+93.05 26TH ST.	12+96.26 26TH ST.	RT	49.55
W-22	25	13+10.71 26TH ST.	108+84.88	RT	294.46
W-23	25	109+00.09	109+03.47	RT	20.30
W-24	25	107+77.50	111+39.73	LT	1648.19
W-25	25	109+30.53	110+01.31	RT	453.56
W-26	25	110+26.69	111+17.00	RT	436.87
W-27	25	111+56.00	111+63.50	RT	37.70
W-28	25	111+62.57	111+67.32	LT	81.56
W-29	25	3+70.00 BEVERLY AVE.	3+90.00 BEVERLY AVE.	RT	125.98
W-30	25	3+70.00 BEVERLY AVE.	3+90.00 BEVERLY AVE.	LT	156.25
W-31	25	112+22.07	112+61.26	LT	542.39
W-32	25	111+81.49	15+04.19 GIBBS AVE. S	RT	1009.19
W-33	26	113+03.09	113+37.06	LT	419.86
W-34	26	15+26.78 GIBBS AVE. S	15+49.00 GIBBS AVE. S	RT	118.86
W-35	26	15+75.00 GIBBS AVE. S	15+90.00 GIBBS AVE. S	RT	75.00
W-36	26	15+84.50 GIBBS AVE. S	15+90.00 GIBBS AVE. S	LT	27.50
W-37	26	30+34.63 HAVANA PL.	15+52.50 GIBBS AVE. S	LT	419.01
W-38	26	30+52.63 HAVANA PL.	30+60.00 HAVANA PL.	RT	44.24
W-39	26	30+53.53 HAVANA PL.	30+60.00 HAVANA PL.	LT	38.84
W-40	26	113+70.92	12+21.94 GIBBS AVE. N	RT	1247.16
W-41	26	30+35.75 HAVANA PL.	115+19.36	RT	1401.81
W-42	26	12+10.00 GIBBS AVE. N	12+54.80 GIBBS AVE. N	LT	205.15
W-43	26	12+72.59 GIBBS AVE. N	115+28.10	LT	158.93
W-44	26	115+44.61	115+91.98	LT	305.01
W-45	26	115+43.46	116+63.27	RT	618.87
W-46	26	116+97.73	117+66.31	RT	320.13
W-47	26	116+26.07	117+87.36	LT	920.05
W-48	27	118+17.55	118+36.33	LT	100.11
W-49	27	118+14.69	118+70.39	RT	262.97
W-50	27	118+64.62	119+02.36	LT	201.26
W-51	27	119+30.63	119+61.10	LT	162.47
W-52	27	119+01.61	119+97.54	RT	447.69
W-53	27	119+96.90	120+91.98	LT	507.08
W-54	27	120+38.46	121+36.73	RT	461.95
W-55	27	121+24.02	121+36.73	LT	119.64
W-56	27	14+06.35 ROWLAND AVE. N	14+30.26 ROWLAND AVE. N	RT	99.07
W-57	27	121+56.11	122+22.37	RT	335.20
TOTALS CARRIED TO GENERAL SUMMARY					19167

REF. NO.	SHEET NO.	STATION		SIDE	204	204	304	608	609	609
					SUBGRADE COMPACTION	PROOF ROLLING	AGGREGATE BASE	CURB RAMP	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	CURB, TYPE 3-B, AS PER PLAN
		FROM	TO		SY	HOUR	CY	SF	FT	FT
CR-1	23	100+22.79	100+48.24	LT				196.40		
CR-2	23	100+27.78	100+43.85	LT				105.52		
CR-3	23	100+29.13	100+38.89	RT				59.79		
CR-4	23	100+24.65	100+45.38	RT				150.34		
CR-5	25	107+95.54	108+13.84	RT				120.32		
CR-6	25	12+64.63 26TH ST.	12+82.82 26TH ST.	LT				120.50		
CR-7	25	108+16.50	108+23.50	RT				42.00		
CR-8	25	108+26.04	108+39.00	CL				133.48		
CR-9	25	12+96.25 26TH ST.	13+10.70 26TH ST.	RT				112.35		
CR-10	25	108+84.86	109+00.08	RT				109.41		
CR-11	25	108+86.00	109+01.72	CL				160.69		
CR-12	25	108+91.40	109+01.68	RT				67.88		
CR-13	25	3+90.00 BEVERLY AVE.	4+19.45 BEVERLY AVE.	RT				298.22		
CR-14	25	111+39.73	111+67.15	LT				278.48		
CR-15	25	111+45.72	111+57.72	LT				77.00		
CR-16	25	111+69.00	111+76.00	RT				42.00		
CR-17	25	111+63.50	111+81.49	RT				113.69		
CR-18	25	3+90.00 BEVERLY AVE.	4+13.93 BEVERLY AVE.	LT				257.91		
CR-19	26	15+02.78 GIBBS AVE. S	15+24.65 GIBBS AVE. S	RT				155.00		
CR-20	26	15+08.69 GIBBS AVE. S	15+14.84 GIBBS AVE S.	LT				68.32		
CR-21	26	30+34.63 HAVANA PL.	30+52.63 HAVANA PL.	RT				126.03		
CR-22	26	30+34.20 HAVANA PL.	30+53.53 HAVANA PL.	LT				135.86		
CR-23	26	12+61.49 GIBBS AVE. N	12+68.46 GIBBS AVE. N	RT				73.04		
CR-24	26	12+54.95 GIBBS AVE. N	12+73.92 GIBBS AVE. N	LT				117.93		
CR-25	26	115+26.46	115+44.23	LT				111.30		
CR-26	26	115+29.03	115+35.74	LT				39.00		
CR-27	26	115+30.28	115+42.29	RT				77.00		
CR-28	26	115+21.66	115+45.31	RT				253.00		
CR-29	27	13+83.43 ROWLAND AVE. N	14+07.82 ROWLAND AVE. N	RT				114.37		
CR-30	27	121+36.73	121+55.81	LT				119.23		
CR-31	27	121+43.07	121+49.97	LT				67.67		
CR-32	27	121+42.81	121+50.03	RT				67.65		
CR-33	27	121+36.73	121+56.11	RT				108.59		
CR-34	27	15+54.94 ROWLAND AVE. S	15+67.02 ROWLAND AVE. S	RT				127.06		
C-1	23	100+20.24	3+70.00 BEVERLY AVE.	LT	333.26	0.17	57.41		1199.74	
C-2	23	100+20.43	12+50.00 26TH ST.	RT	231.70	0.12	39.91		834.11	
C-3	23	100+27.00	100+51.00	LT	12.91	0.01	2.22		46.46	
C-4	23	100+27.00	100+51.00	RT	12.91	0.01	2.22		46.46	
C-5	23	100+68.00	105+14.01	LT	130.62	0.07	22.50		470.24	
C-6	23	100+68.00	105+14.01	RT	126.64	0.06	21.82		455.91	
C-7	24	105+40.00	108+39.00	LT	87.86	0.04	15.13		316.28	
C-8	24	105+40.00	108+39.00	RT	87.51	0.04	15.07		315.03	
C-9	25	12+50.00 26TH ST.	15+90.00 GIBBS AVE. S	RT	193.58	0.10	33.35		696.88	
C-10	25	108+86.00	111+90.00	LT	84.36	0.04	14.53		303.70	
C-11	25	108+86.00	111+90.00	RT	93.12	0.05	16.04		335.22	
C-12	26	3+70.00 BEVERLY AVE.	12+00.00 GIBBS AVE. N	LT	124.24	0.06	21.40		447.26	
C-13	26	112+27.09	113+25.58	LT	38.26	0.02	6.59		137.72	
C-14	26	112+27.09	113+25.58	RT	31.92	0.02	5.50		114.93	
C-15	26	15+90.00 GIBBS AVE. S	30+60.00 HAVANA PL.	LT	44.15	0.02	7.61		158.95	
C-16	26	30+60.00 HAVANA PL.	15+65.65 ROWLAND AVE. S	RT	246.60	0.12	42.48		887.76	
C-17	26	12+10.00 GIBBS AVE. N STA.	13+83.43 ROWLAND AVE. N	LT	225.26	0.11	38.81		810.95	
C-18	26	SOUTH ROUNDABOUT CENTRAL ISLAND			38.75	0.02	5.56			116.24
C-19	26	1+11.22 ROUNDABOUT	1+38.32 ROUNDABOUT	CL	21.54	0.01	3.71		77.55	
C-20	26	3+66.98 ROUNDABOUT	3+94.76 ROUNDABOUT	CL	22.10	0.01	3.81		79.56	
C-21	26	NORTH ROUNDABOUT CENTRAL ISLAND			38.75	0.02	5.56			116.24
C-22	26	115+08.25	118+36.00	LT	99.20	0.05	17.09		357.13	
C-23	26	115+08.25	118+36.00	RT	97.79	0.05	16.85		352.05	
C-24	27	118+58.99	121+66.00	LT	93.15	0.05	16.05		335.34	
C-25	27	118+58.99	121+66.00	RT	88.70	0.04	15.28		319.33	
TOTALS CARRIED TO GENERAL SUMMARY					2605	2	447	4208	9099	233

EARTHWORK		
SHEET NO.	203	203
	EXCAVATION	EMBANKMENT
	CY	CY
45	24	7
46	93	24
47	71	43
48	75	38
49	75	27
50	77	40
51	64	43
52	23	25
53	22	34
54	23	37
55	26	33
56	27	34
57	37	40
58	86	30
59	124	15
60	86	28
61	40	49
62	53	44
63	129	37
64	11	24
65	47	26
66	41	28
67	27	36
68	29	72
69	36	76
70	48	74
71	72	47
72	76	41
73	57	40
74	0	0
75	0	0
76	34	28
77	134	51
78	132	28
79	172	23
80	155	17
81	71	13
TOTALS CARRIED TO GENERAL SUMMARY		2297 1252

**SEEDING AND MULCHING**  
THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 - SEEDING AND MULCHING 5111 SY

ITEM 659 - TOPSOIL 568 CY  
(5111 SY) X (111 CY/1000 SY OF SEEDING AND MULCHING)

ITEM 659 - SOIL ANALYSIS TEST 2 EACH  
(568 CY) X (1 TEST/10000 CY OF TOPSOIL) (2 TEST MIN.)

ITEM 659 - REPAIR SEEDING AND MULCHING 256 SY  
(5111 SY) X (0.05 OF SEEDING AND MULCHING)

ITEM 659 - INTER-SEEDING 256 SY  
(5111 SY) X (0.05 OF SEEDING AND MULCHING)

ITEM 659 - COMMERCIAL FERTILIZER 0.72 TON  
(5111 SY) X (1 TON/7410 SY OF SEEDING AND MULCHING)  
+ (256 SY) X (1 TON/11110 SY OF INTER-SEEDING)

ITEM 659 - LIME 1.06 ACRE  
(5111 SY) X (1 ACRE / 4840 SY OF SEEDING AND MULCHING)

ITEM 659 - WATER 29 MGAL  
(5111 SY) X (2 X 0.0027 MGAL/SY OF SEEDING AND MULCHING)  
+ (256 SY) X (0.0027 MGAL/SY OF INTER-SEEDING)

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ESTIMATED QUANTITIES - ROADWAY

DESIGN AGENCY



DESIGNER

REVIEWER

REF. NO.	SHEET NO.	STATION		SIDE	202	202	661	662
					WALK REMOVED	CURB REMOVED	DECIDUOUS TREE, 2" CALIPER	LANDSCAPE WATERING
		FROM	TO		SF	FT	EACH	GALLON
T-1	26	114+07.00		LT			1	25
T-2	26	114+65.00		RT			1	25
T-3	26	114+90.00		RT			1	25
T-4	26	114+78.00		LT			1	25
R-1	23	100+28.13	30+70.00 BEVERLY AVE.	LT	5787.54			
R-2	23	100+27.95	12+50.00 26TH ST.	RT	4176.67			
R-3	23	100+20.24	3+70.00 BEVERLY AVE.	LT		1202.93		
R-4	23	100+37.32	105+11.13	LT		490.61		
R-5	23	100+37.32	105+11.13	RT		479.77		
R-6	23	100+20.43	12+50.00 26TH ST.	RT		845.65		
R-7	24	102+91.29	103+03.85	LT	12.76			
R-8	24	105+48.13	108+50.42	LT		313.74		
R-9	24	105+48.13	108+50.42	RT		313.58		
R-10	25	109+01.17	111+72.18	LT		272.36		
R-11	25	109+01.17	111+72.18	RT		293.41		
R-12	25	12+50.00 26TH ST.	15+90.00 GIBBS AVE. S	RT		712.88		
R-13	25	12+50.00 26TH ST.	15+90.00 GIBBS AVE. S	RT	3670.02			
R-14	26	3+70.00 BEVERLY AVE.	12+00.00 GIBBS AVE. N	LT		424.15		
R-15	26	3+70.00 BEVERLY AVE.	114+26.87	LT	1319.07			
R-16	26	112+28.28	113+75.42	LT		158.48		
R-17	26	112+28.28	113+75.42	RT		158.96		
R-18	26	15+90.00 GIBBS AVE. S	30+60.00 HAVANA PL.	LT	773.78			
R-19	26	15+90.00 GIBBS AVE. S	30+60.00 HAVANA PL.	LT		150.76		
R-20	26	13+38.86 GIBBS AVE. N	11+99.00 GIBBS AVE. N	RT	629.04			
R-21	26	12+10.00 GIBBS AVE. N	121+55.30	LT	4023.45			
R-22	26	30+60.00 HAVANA PL.	122+35.28	RT	4473.09			
R-23	26	30+60.00 HAVANA PL.	122+42.59	RT		877.11		
R-24	26	12+10.00 GIBBS AVE. N	121+55.23	LT		827.83		
R-25	26	114+89.46	118+27.48	LT		356.84		
R-26	26	114+89.46	118+27.48	RT		343.31		
R-27	27	118+50.99	121+74.17	LT		339.82		
R-28	27	118+50.99	121+74.17	RT		329.22		
R-29	24	103+98.63	104+01.26	LT		9.43		
TOTALS CARRIED TO GENERAL SUMMARY					24866	8901	4	100

REF. NO.	SHEET NO.	STATION		SIDE	202	202	202
					PIPE REMOVED, 24" AND UNDER	MANHOLE REMOVED	CATCH BASIN REMOVED
		FROM	TO		FT	EACH	EACH
R-29	105	100+55.42		LT			1
R-30	105	100+54.58		LT			1
R-31	105	100+52.68		RT			1
R-32	105	100+54.62		RT			1
R-33	106	104+95.69		LT			1
R-34	106	104+95.68		RT			1
R-35	107	12+62.32 26TH STREET		LT			1
R-36	107	12+61.66 26TH STREET		RT			1
R-37	107	110+65.97		RT		1	
R-38	107	110+73.61		RT			1
R-39	107	4+06.98 BEVERLY AVE.		RT			1
R-40	107	111+61.66		LT			1
R-41	107	111+52.49		RT		1	
R-42	107	111+62.54		RT			1
R-43	107	4+08.96 BEVERLY AVE.		LT			1
R-44	108	15+06.02 GIBBS AVE.		RT			1
R-45	108	15+08.93 GIBBS AVE.		LT			1
R-46	108	113+65.21				1	
R-47	108	30+09.85 HAVANA PL		LT		1	
R-48	108	30+30.26 HAVANA PL		RT			1
R-49	108	30+30.66 HAVANA PL		LT			1
R-50	108	30+16.81 HAVANA PL		LT			1
R-51	108	114+11.67		LT			1
R-52	108	117+07.95		RT			1
R-53	108	117+25.41		LT			1
R-54	108	114+87.04		RT		1	
R-55	109	119+73.73		LT			1
R-56	109	119+78.73		RT			1
R-57	109	122+34.40		RT			1
R-58	109	119+81.11		RT			1
R-59	106	105+19.88		LT		1	
R-29 TO R-30	105	100+55.42	100+54.58	LT	17		
R-30 TO R-31	105	100+54.58	100+52.68	LT/RT	21		
R-31 TO D-2	105	100+52.68	102+90.90	RT	6		
R-32 TO D-2	105	100+54.62	102+90.90	RT	13		
R-33 TO D-9	106	104+95.69	105+19.88	LT	36		
R-34 TO D-9	106	104+95.68	105+19.88	RT/LT	39		
R-35 TO D-13	107	12+62.32 26TH STREET	12+55.89 26TH STREET	LT/RT	15		
R-36 TO D-13	107	12+61.66 26TH STREET	12+55.89 26TH STREET	RT	11		
R-37 TO D-13	107	110+65.97	12+55.89 26TH STREET	RT/RT	294		
R-38 TO R-37	107	110+73.61	110+65.97	RT	28		
R-41 TO R-37	107	111+52.49	110+65.97	RT	87		
R-42 TO R-41	107	111+62.54	111+52.49	RT	31		
R-43 TO R-39	107	4+08.96 BEVERLY AVE.	4+06.98 BEVERLY AVE.	LT/RT	27		
R-39 TO R-40	107	4+06.98 BEVERLY AVE.	111+61.66	RT/LT	30		
R-40 TO R-41	107	111+61.66	111+52.49	LT/RT	31		
R-46 TO R-41	107-108	113+65.21	111+52.49	RT	213		
R-51 TO R-46	108	114+11.67	113+65.21	LT	53		
R-45 TO R-44	108	15+08.93 GIBBS AVE.	15+06.02 GIBBS AVE.	RT/LT	28		
R-44 TO R-46	108	15+06.02 GIBBS AVE.	113+65.21	LT/RT	92		
R-48 TO R-47	108	30+30.26 HAVANA PL	30+09.85 HAVANA PL	RT/LT	26		
R-49 TO R-47	108	30+30.66 HAVANA PL	30+09.85 HAVANA PL	LT	19		
R-50 TO R-47	108	30+16.81 HAVANA PL	30+09.85 HAVANA PL	LT	10		
R-47 TO R-46	108	30+09.85 HAVANA PL	113+65.21	LT/RT	69		
R-54 TO R-46	108	114+87.04	113+65.21	RT	122		
D-40 TO R-54	108	117+04.55	114+87.04	RT	212		
R-52 TO D-40	108	117+07.95	111+61.66	RT	7		
R-53 TO D-40	108	117+25.41	111+61.66	LT/RT	56		
D-47 TO D-40	108-109	119+75.27	111+61.66	RT	261		
R-55 TO D-47	109	119+73.73	119+75.27	LT/RT	53		
R-56 TO D-47	109	119+78.73	119+75.27	RT	6		
R-58 TO D-47	109	119+81.11	119+75.27	RT	13		
R-57 TO D-50	109	122+34.40	122+51.75	RT	13		
R-33 TO R-59	106	104+95.69	105+19.88	LT	36		
R-34 TO R-59	106	104+95.68	105+19.88	RT/LT	39		
R-59 TO D-13	106	105+19.88	12+55.89 26TH STREET	RT/LT	352		
TOTALS CARRIED TO GENERAL SUMMARY					2366	6	25

NOTE:  
STATIONING IS REFERENCED TO @ EX. R/W  
COLONIAL BLVD. UNLESS OTHERWISE NOTED.





STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Sheet PAPER:SIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:40:40 PM USER: jennifer.kelley \\10.120.112.51\share\121798\_STA-COLONIAL\7.0\_Production\Worksheets\111059\400-Engineering\Roadway\Sheets\111059\_G0005.dgn

REF. NO.	STATION	SIDE	611	611	611	611	611	611	895
			CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 1 - CURB INLET CATCH BASIN NO. 3	CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 1 - CURB INLET CATCH BASIN NO. 3A	CATCH BASIN, MISC.: CITY OF CANTON SCD NO. 4 - CURB INLET CATCH BASIN NO. 6	MANHOLE, MISC.: CITY OF CANTON SCD NO. 10 - PRE-CAST STORM MANHOLE	MANHOLE, MISC.: CITY OF CANTON SCD NO. 10 - PRE-CAST STORM MANHOLE WITH 108" BASE ID AND 12" WEIR	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4
			EACH	EACH	EACH	EACH	EACH	EACH	EACH
D-1	100+22.85	RT						1	
D-2	100+51.58	RT						1	
D-2A	102+90.90	RT				1			
D-3	100+50.00	RT		1					
D-4	100+50.00	LT		1					
D-5	103+00.00	LT		1					
D-6	103+00.00	RT		1					
D-7	105+00.00	LT		1					
D-8	105+00.00	RT		1					
D-9	105+38.11	RT				1			
D-10	106+65.00	LT		1					
D-11	107+85.87	LT		1					
D-12	107+86.06	LT				1			
D-12A	108+19.13	LT				1			
D-13	12+55.89 26TH ST.	RT						1	
D-14	12+52.00 26TH ST.	LT		1					
D-15	12+62.00 26TH ST.	RT		1					
D-16	109+00.00	LT		1					
D-16A	109+00.00	LT				1			
D-17	109+02.00	RT		1					
D-17A	12+89.20 26TH ST.	RT				1			
D-18	110+60.00	LT				1			
D-18A	109+78.49	LT				1			
D-19	110+60.00	LT		1					
D-20	110+75.00	RT		1					
D-21	111+85.00	LT				1			
D-22	111+85.00	RT		1					
D-23	4+15.00 BEVERLY AVE.	LT		1					
D-24	3+80.00 BEVERLY AVE.	LT		1					
D-25	3+80.00 BEVERLY AVE.	RT		1					
D-26	113+28.16	RT		1					
D-26A	113+51.86	RT				1			
D-27	113+75.06	LT				1			
D-28A	15+08.46 GIBBS AVE. S	RT		1					
D-28B	15+71.99 GIBBS AVE. S	RT		1					
D-29A	14+97.44 GIBBS AVE. S	LT			1				
D-29B	15+82.00 GIBBS AVE. S	LT		1					
D-30	30+57.00 HAVANA PL.	RT		1					
D-30A	30+57.00 HAVANA PL.	LT				1			
D-31	30+57.00 HAVANA PL.	LT		1					
D-32	114+08.18	RT		1					
D-33	114+18.98	LT		1					
D-33A	113+94.03	RT				1			
D-34	12+50 GIBBS AVE. N	RT		1					
D-35	12+50 GIBBS AVE. N	LT		1					
D-36	114+63.22	RT		1					
D-37	114+62.88	CL				1			
D-38	115+65.77	RT				1			
D-39	115+67.52	RT		1					
D-40	117+04.55	RT						1	
D-41	117+07.52	RT	1						
D-42	117+26.37	LT		1					
D-43	118+44.18	RT				1			
D-44	118+46.27	RT	1						
D-45	119+81.14	LT			1				
D-46	119+81.89	RT	1						
D-47	119+75.27	RT						1	
D-48	121+10.29	RT				1			
D-49	121+10.50	RT		1					
D-50	122+51.75	RT						1	
D-51	122+21.00	RT		1					
D-52	111+21.67	RT							1
D-52A	111+85.00	CL				1			
D-53	119+33.13	LT		1					
D-54	120+29.15	LT		1					
TOTALS CARRIED TO GENERAL SUMMARY			3	35	2	18	1	6	1

REF. NO.	REF. NO.	STATION		SIDE	611	611	611	611	611	611	611
					4" CONDUIT, TYPE B, 707.33	12" CONDUIT, TYPE B, 707.33	15" CONDUIT, TYPE B, 707.33	18" CONDUIT, TYPE B, 707.33	21" CONDUIT, TYPE B, 707.33	24" CONDUIT, TYPE B, 707.33	27" CONDUIT, TYPE B, 707.33
		FROM	TO		FT	FT	FT	FT	FT	FT	FT
D-3	D-2	100+50.00	100+51.58	RT		15					
D-4	D-2	100+50.00	100+51.58	LT/RT		48					
D-2A	D-2	102+90.90	100+51.58	RT			239				
D-6	D-2A	103+00.00	102+90.90	RT		12					
D-5	D-2A	103+00.00	102+90.90	LT/RT		55					
D-14	D-13	12+52.00 26TH ST.	12+55.89 26TH ST.	LT/RT		18					
D-15	D-13	12+62.00 26TH ST.	12+55.89 26TH ST.	RT		14					
D-11	D-12	107+85.87	107+86.06	LT			54				
D-10	D-11	106+65.00	107+85.87	LT		121					
D-8	D-9	105+00.00	105+38.11	RT			37				
D-7	D-9	105+00.00	105+38.11	LT/RT			67				
D-9	D-12	105+38.11	107+86.06	RT			247				
D-12	D-12A	107+86.06	108+19.13	LT			36				
D-12A	D-17A	108+19.13	12+89.20 26TH ST.	LT			44				
D-17A	D-13	12+89.20 26TH ST.	12+55.89 26TH ST.	RT							34
D-17	D-17A	109+02.00	12+89.20 26TH ST.	RT/RT		83					
D-16A	D-17A	109+00.00	12+89.20 26TH ST.	LT/RT							110
D-16	D-16A	109+00.00	109+00.00	LT		8					
D-18A	D-16A	109+78.49	109+00.00	LT							67
D-18	D-18A	110+60.00	109+78.49	LT							70
D-20	D-18	110+75.00	110+60.00	RT/LT		56					
D-19	D-18	110+60.00	110+60.00	LT		8					
D-52	D-18	111+21.67	110+60.00	RT/LT							64
D-52		111+21.67		RT/LT						40	
D-52A	D-52	111+85.00	111+21.67	RT							64
D-21	D-52A	111+85.00	111+85.00	LT							27
D-22	D-52A	111+85.00	111+85.00	RT		30					
D-23	D-21	4+15.00 BEVERLY AVE.	111+85.00	LT/LT		35					
D-25	D-21	3+80.00 BEVERLY AVE.	111+85.00	RT/LT		54					
D-24	D-25	3+80.00 BEVERLY AVE.	3+80.00 BEVERLY AVE.	LT/RT		30					
D-27	D-21	113+75.06	111+85.00	LT							191
D-33	D-27	114+18.98	113+75.06	LT		47					
D-33A	D-27	113+94.03	113+75.06	RT/LT							40
D-26A	D-33A	113+51.86	113+94.03	RT					57		
D-26	D-26A	113+28.16	113+51.86	RT		35					
D-28A	D-26A	15+08.46 GIBBS AVE. S	113+51.86	RT/RT			50				
D-29A	D-28A	14+97.44 GIBBS AVE. S	15+08.46 GIBBS AVE. S	RT		19					
D-28B	D-28A	15+71.99 GIBBS AVE. S	15+08.46 GIBBS AVE. S	RT			66				
D-29B	D-28B	15+82.00 GIBBS AVE. S	15+71.99 GIBBS AVE. S	LT/RT			26				
	D-29B		15+71.99 GIBBS AVE. S	LT/RT			9				
D-30A	D-26A	30+57.00 HAVANA PL.	113+51.86	LT/RT			81				
D-31	D-30A	30+57.00 HAVANA PL.	30+57.00 HAVANA PL.	LT	8	6					
	D-31	30+57.00 HAVANA PL.	30+57.00 HAVANA PL.	LT							
D-30	D-30A	30+57.00 HAVANA PL.	30+57.00 HAVANA PL.	RT/LT			18				
D-35	D-37	12+50 GIBBS AVE. N	114+62.88	LT		104					
D-34	D-35	12+50 GIBBS AVE. N	12+50 GIBBS AVE. N	RT/LT		24					
D-37	D-33A	114+62.88	113+94.03	RT						70	
D-36	D-37	114+63.22	114+62.88	RT		11					
D-32	D-33A	114+08.18	113+94.03	RT		28					
D-38	D-37	115+65.77	114+62.88	RT						103	
D-39	D-38	115+67.52	115+65.77	RT		10					
D-40	D-38	117+04.55	115+65.77	LT/RT						133	
D-42	D-40	117+26.37	117+04.55	LT/RT			61				
D-41	D-40	117+07.52	117+04.55	RT		11					
D-43	D-40	118+44.18	117+04.55	RT						134	
D-44	D-43	118+46.27	118+44.18	RT		16					
D-47	D-43	119+75.27	118+44.18	RT						126	
D-46	D-47	119+81.89	119+75.27	RT		12					
D-45	D-47	119+81.14	119+75.27	LT/RT		59					
D-54	D-45	120+29.15	119+81.14	LT		51					
D-53	D-45	119+33.13	119+81.14	LT		51					
D-49	D-48	121+10.50	121+10.29	RT			8				
	D-48		121+10.29	RT				10			
D-48		121+10.29		RT				10			
D-51	D-49	122+21.00	121+10.50	RT			104				
TOTALS CARRIED TO GENERAL SUMMARY					8	1071	1147	20	57	606	667

NOTE: STATIONING IS REFERENCED TO & EX. R/W COLONIAL BLVD. UNLESS OTHERWISE NOTED.

ESTIMATED QUANTITIES - DRAINAGE

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.20

TOTAL

168


REF. NO.	STATION		605	611	FOR INFORMATION ONLY	
			4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	UNDERDRAIN BENDS AND BRANCHES	
	FROM	TO			PLUG	4" X 4" TEE
UD-1	100+50.00 LT	102+95.00 LT	237.3	10	1	
UD-2	100+50.00 RT	102+95.00 RT	233	10	1	
UD-3	103+00.00 LT	104+95.00 LT	200.9	10	1	
UD-4	103+00.00 RT	104+95.00 RT	169.4	10	1	
UD-5	105+00.00 LT	106+60.00 LT	154.7	10	1	
UD-6	105+00.00 RT	108+13.88 RT	304.1	10	1	
UD-7	106+65.00 LT	107+80.87 LT	105.9	10	1	
UD-8	12+62.00 26TH ST. RT	108+97.00 RT	102.9	10	1	
UD-9	107+85.87 LT	108+95.00 LT	87.9	10	1	
UD-10	109+02.00 RT	114+03.18 RT	190.6	10	1	
UD-11	109+00.00 LT	110+55.00 LT	115.2	10	1	
UD-12	110+60.00 LT	3+85.00 BEVERLY AVE. RT	137.4	10	1	
UD-13	110+75.00 RT	111+80.00 RT	98.3	10	1	
UD-14	111+85.00 RT	14+80.90 GIBBS AVE. S RT	129.7	10	1	
UD-15	4+15.00 BEVERLY AVE. LT	114+11.64 LT	207.1	10	1	
UD-16	15+00.82 GIBBS AVE. S RT	15+66.99 GIBBS AVE. S RT	51.3	10	1	
UD-17	15+71.99 GIBBS AVE. S RT	15+90.00 GIBBS AVE. S RT	9.5	10	1	
UD-18	15+00.82 GIBBS AVE. S RT	15+77.00 GIBBS AVE. S LT	74.7	32.1	1	1
UD-19	15+08.02 GIBBS AVE. S LT	30+52.00 HAVANA PL. RT	62		1	
UD-20	114+08.18 RT	30+52.00 HAVANA PL. LT	66.1	10	1	
UD-21	114+12.86 RT	114+63.22 RT	43.7	10	1	
UD-22	114+18.98 LT	12+54.82 GIBBS AVE. N RT	107	10	1	
UD-23	12+00.00 GIBBS AVE. N RT	12+50.00 GIBBS AVE. N RT	44	10	1	
UD-24	12+10.00 GIBBS AVE. N LT	12+50.00 GIBBS AVE. N LT	27.1	10	1	
UD-25	12+55.00 GIBBS AVE. N LT	117+26.37 LT	257.1	10	1	
UD-26	114+68.22 RT	115+67.52 RT	87.2	10	1	
UD-27	115+72.68 RT	117+07.52 RT	116.7	10	1	
UD-28	117+02.52 RT	118+46.27 RT	115	10	1	
UD-29	117+31.37 LT	119+33.13 LT	204.6	10	1	
UD-30	118+51.27 RT	119+81.89 RT	112.1	10	1	
UD-32	119+38.13 LT	119+81.14 LT	36.1	10	1	
UD-33	119+81.14 LT	120+24.15 LT	36.1	10	1	
UD-34	119+81.89 RT	121+05.50 RT	105.3	10	1	
UD-35	120+29.15 LT	13+83.43 ROWLAND AVE. RT	167.4	10	1	
UD-36	121+10.50 RT	122+16.42 RT	89.6	10	1	
UD-37	122+21.00 RT	122+41.80 RT	15.5	10	1	
UD-38	12+52.00 26TH ST. LT	12+80.50 26TH ST. LT	23	10	1	
UD-39	3+85.00 BEVERLY AVE. LT	4+15.00 BEVERLY AVE. LT	20	10	1	
UD-40	14+84.60 GIBBS AVE. S RT	15+00.82 GIBBS AVE. S RT	7.7	10	1	
TOTALS CARRIED TO GENERAL SUMMARY			4353	402	39	1

REF. NO.	STATION	SIDE	202	202	611	611	611	611
			MANHOLE REMOVED	ABANDON, MISC.: GROUT AND ABANDON 8" SANITARY SEWER	8" CONDUIT, TYPE B, AS PER PLAN	MANHOLE , NO. 3	CONDUIT, MISC.: SANITARY LATERAL RECONNECTION	MANHOLE ADJUSTED TO GRADE, AS PER PLAN
			EACH	FT	EACH	EACH	EACH	EACH
S-1	100+16.00	RT						1
S-2	100+32.00	LT						1
S-3	102+77.00	LT						1
S-4	104+23.00	LT						1
S-5	105+71.00	LT						1
S-6	12+80.00 26TH ST.	RT						1
S-7	108+76.00	LT						1
S-8	111+02.00	LT						1
S-9	114+43.29	LT						1
S-10	30+01.00 HAVANA PL.	LT						1
S-12	118+43.08	RT			289	1		
S-13	120+42.97	RT						1
S-14	122+22.72	RT						1
S-15	115+75.00	RT		70		1		
R-50	116+46.57	RT	1	194				1
R-60	118+43.08	RT	1					
SL-1	10+42.87	LT					1	
SL-2	11+08.90	RT					1	
SL-3	11+66.22	LT					1	
SL-4	11+78.86	RT					1	
SL-5	11+79.01	LT					1	
SL-6	12+12.04	LT					1	
SL-7	12+23.04	RT					1	
SL-8	12+12.04	LT					1	
SL-9	12+23.04	RT					1	
TOTALS CARRIED TO GENERAL SUMMARY			2	264	289	2	9	13

NOTE:  
STATIONING IS REFERENCED TO @ EX. R/W  
COLONIAL BLVD. UNLESS OTHERWISE NOTED.

ESTIMATED QUANTITIES - UNDERDRAINS & SANITARY

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.20A

TOTAL

168

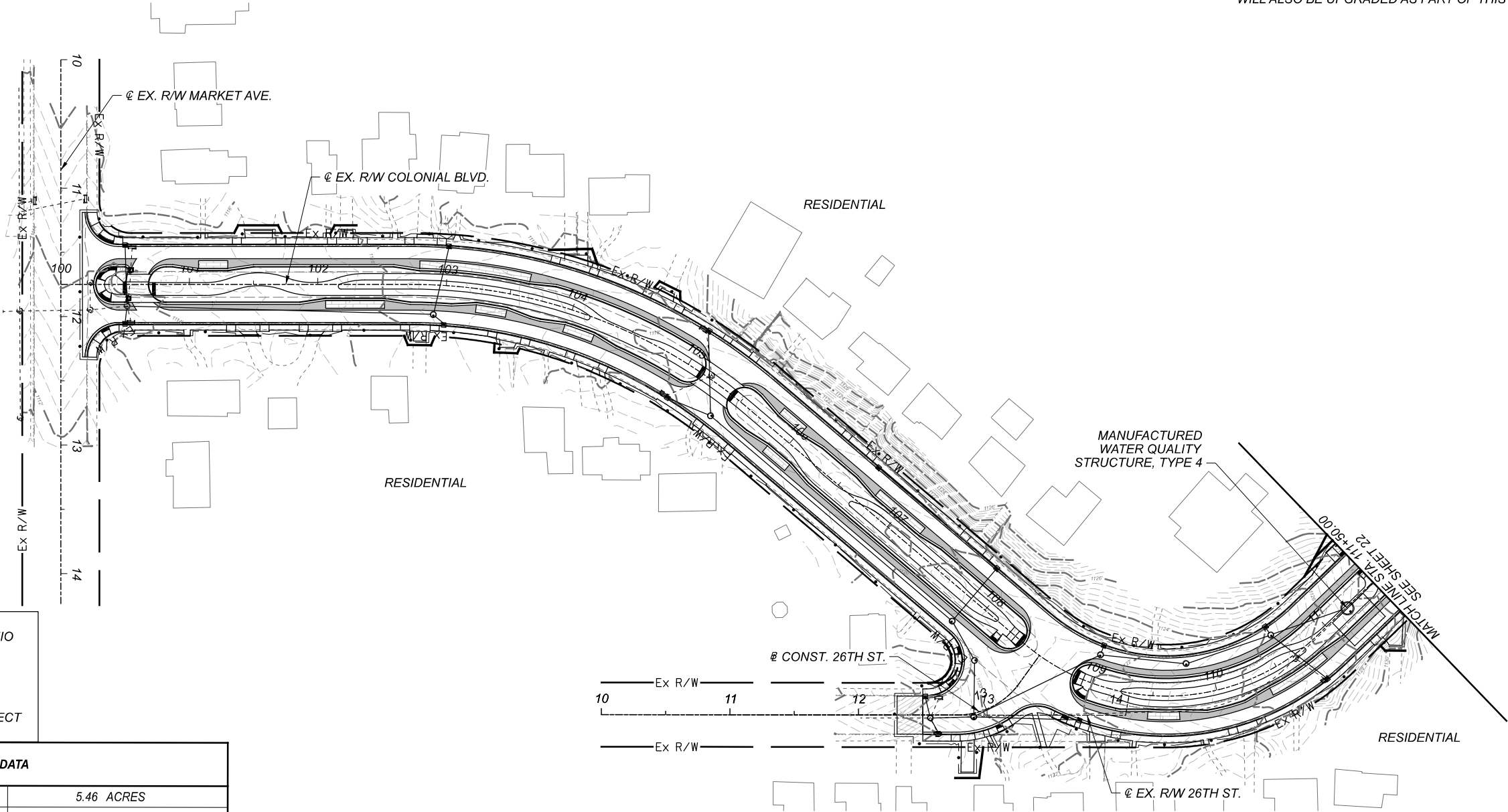
USGS QUADRANT: CANTON EAST, OHIO  
N4045.0-W8115.0/7.5

\*LATITUDE: 40°49'30" N  
LONGITUDE: 81°21'45" W

\*APPROXIMATE CENTER OF THE PROJECT

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY):	5.46 ACRES
PROJECT EARTH DISTURBED AREA:	4.69 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.94 ACRES
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	3.87 ACRES
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE:	4.12 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.78
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.79
POST CONSTRUCTION BMP:	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4
IMMEDIATE RECEIVING WATERS:	LOCAL DITCHES
SUBSEQUENT RECEIVING WATERS:	MIDDLE BRANCH OF NIMISHILLEN CREEK

BMP TYPE	BMP LOCATIONS								EDA TREATMENT CREDIT (ACRES)
	STATIONING		SIDE	WIDTH (FT)	LATITUDE/LONGITUDE				
	BEGIN	END			BEGIN		END		
MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	111+21.67	N/A	RT	N/A	40.825115	-81.361928	N/A	N/A	5.02
							TREATMENT PROVIDED	5.02	
							TREATMENT REQUIRED	0.92	



PROJECT DESCRIPTION

0.4 MILES OF ROADWAY RECONSTRUCTION ALONG COLONIAL BOULEVARD NE BETWEEN MARKET AVENUE AND ROWLAND AVENUE. THE PROJECT CONSISTS OF PAVEMENT RECONSTRUCTION, REPLACEMENT OF EXISTING SIDEWALK AND CURB, A NEW DUAL MINI-ROUNDBOUT AT GIBBS AVENUE NE, AND THE CONSTRUCTION OF A SHARED USE PATH IN THE BOULEVARD. ADA, LIGHTING, AND DRAINAGE FACILITIES WILL ALSO BE UPGRADED AS PART OF THIS PROJECT.



PROJECT SITE PLAN  
STA. 100+00 TO STA. 111+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

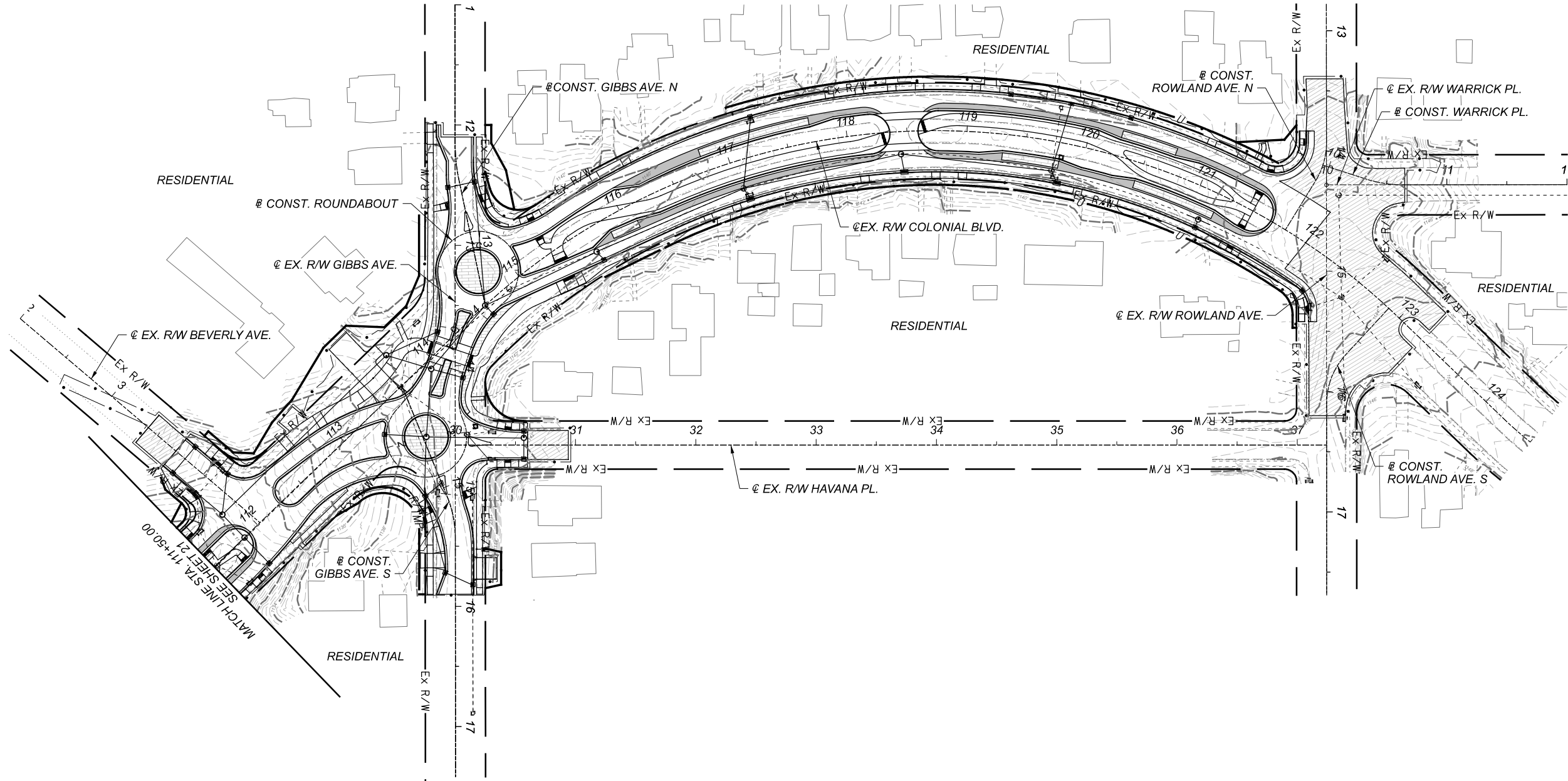
P.21

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Plan 2 [Sheet] PAPER: 11x17 (in) DATE: 2022-02-10 TIME: 10:53:15 PM USER: Jennifer.Kelley  
\\NO1201125\blshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Drainage\Sheets\11059\_DE001.dgn



PROJECT DESCRIPTION

0.4 MILES OF ROADWAY RECONSTRUCTION ALONG COLONIAL BOULEVARD NE BETWEEN MARKET AVENUE AND ROWLAND AVENUE. THE PROJECT CONSISTS OF PAVEMENT RECONSTRUCTION, REPLACEMENT OF EXISTING SIDEWALK AND CURB, A NEW DUAL MINI-ROUNDABOUT AT GIBBS AVENUE NE, AND THE CONSTRUCTION OF A SHARED USE PATH IN THE BOULEVARD. ADA, LIGHTING, AND DRAINAGE FACILITIES WILL ALSO BE UPGRADED AS PART OF THIS PROJECT.



PROJECT SITE PLAN  
STA. 111+50 TO STA. 124+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.22

TOTAL

168

## CROSS REFERENCES:

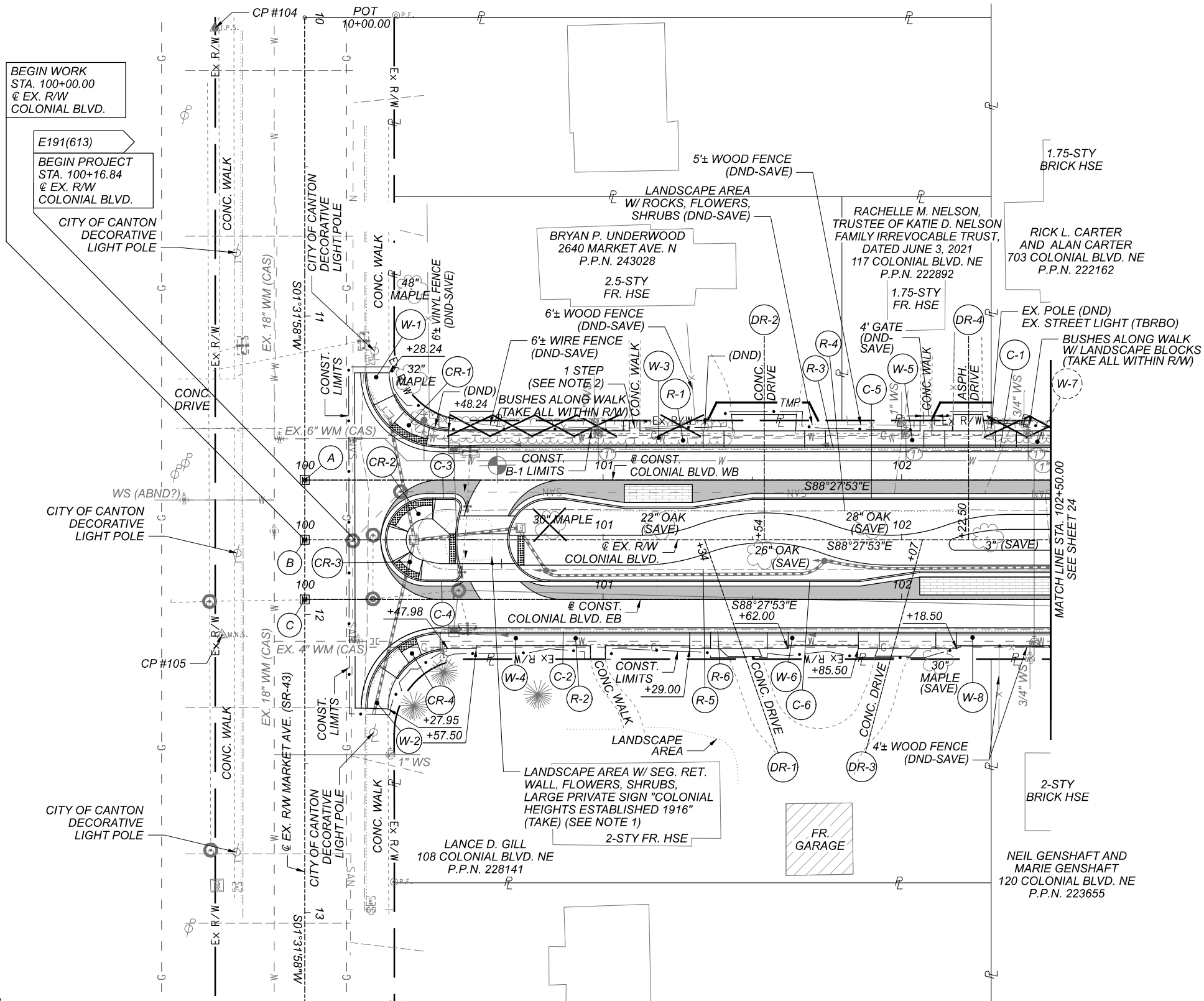
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

## NOTES:

1.) PRIOR TO CONSTRUCTION, THE CITY OF CANTON SHALL COORDINATE WITH THE COLONIAL HEIGHTS NEIGHBORHOOD ASSOCIATION (CHNA) FOR THE REMOVAL AND REPLACEMENT OF THE EXISTING PRIVATE SIGNS LOCATED AT THE BOULEVARD ENTRANCES WITHIN THE EXISTING RIGHT OF WAY.

2.) AT LOCATIONS WHERE EXISTING PRIVATE CONCRETE STEPS ARE ADJACENT TO THE PROPOSED SIDEWALK, THE CONTRACTOR SHALL FORM THE SIDEWALK UP TO THE STEPS. REMAINING STAIR RISERS SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING RM-2.1, MAINTAINING A MINIMUM RISER HEIGHT OF 4" AND A MAXIMUM RISER HEIGHT OF 7". IF IT IS DETERMINED BY THE ENGINEER THAT THE REMAINING STAIR RISERS DO NOT CONFORM TO SCD RM-2.1, THE STEPS SHALL BE REMOVED AND RECONSTRUCTED, UNDER THE DIRECTION OF THE ENGINEER.

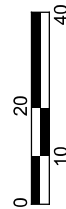
3.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.



## LEGEND

- BRICK PARKING AREA  
CONCRETE HEADER  
ITEM 608 - DETECTABLE WARNING

- CENTERLINE INTERSECTIONS**  
A STA. 100+00 @ CONST. COLONIAL BLVD. WB = STA. 11+55 @ EX. R/W MARKET AVE.  
B STA. 100+00 @ EX. R/W COLONIAL BLVD. = STA. 11+75 @ EX. R/W MARKET AVE.  
C STA. 100+00 @ CONST. COLONIAL BLVD. EB = STA. 11+95 @ EX. R/W MARKET AVE.

HORIZONTAL  
SCALE IN FEETPLAN - COLONIAL BOULEVARD  
STA. 100+00 TO STA. 102+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

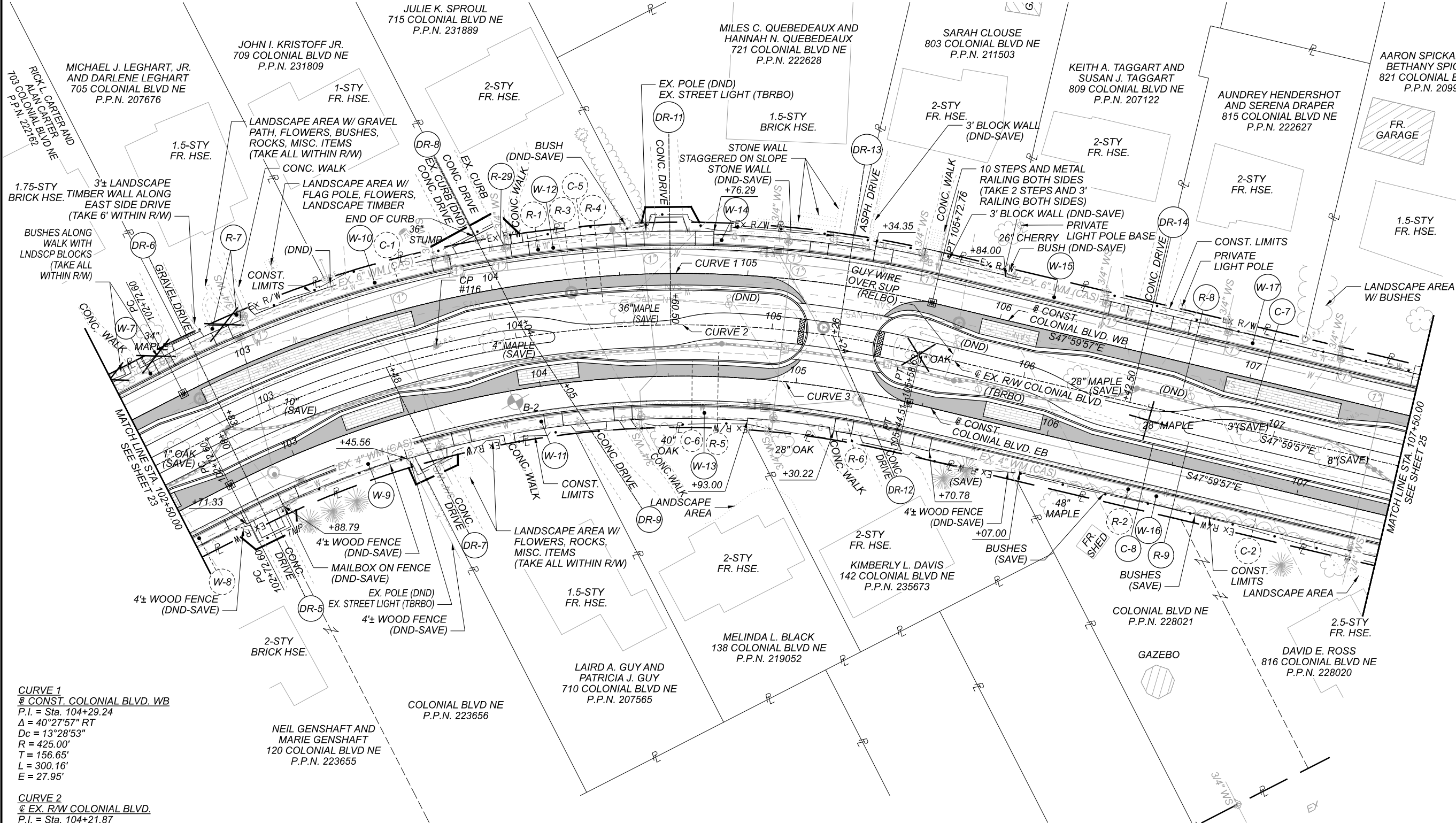
PROJECT ID

111059

SHEET

TOTAL

P.23 168



**CURVE 1**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 104+29.24  
 $\Delta = 40^\circ 27' 57''$  RT  
 $D_c = 13^\circ 28' 53''$   
 $R = 425.00'$   
 $T = 156.65'$   
 $L = 300.16'$   
 $E = 27.95'$

**CURVE 2**  
@ EX. R/W COLONIAL BLVD.  
P.I. = Sta. 104+21.87  
 $\Delta = 40^\circ 27' 57''$  RT  
 $D_c = 14^\circ 08' 50''$   
 $R = 405.00'$   
 $T = 149.27'$   
 $L = 286.04'$   
 $E = 26.63'$

**CURVE 3**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 104+14.50  
 $\Delta = 40^\circ 27' 57''$  RT  
 $D_c = 14^\circ 52' 55''$   
 $R = 385.00'$   
 $T = 141.90'$   
 $L = 271.91'$   
 $E = 25.32'$

**NOTES:**

1.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.

**LEGEND**

	BRICK PARKING AREA
	CONCRETE HEADER
	ITEM 608 - DETECTABLE WARNING

**CROSS REFERENCES:**

SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



PLAN - COLONIAL BOULEVARD  
STA. 102+50 TO STA. 107+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.24 168



# STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: II059\_CP3 PAPERSIZE: ITxII (in.) DATE: 2022-03-23 TIME: 4:32:34 PM USER: jennifer.kelley  
\\VJ020.IJ2\hishore\121798\_STA-Columbia\7.0\_Production\Worksheets\II059\_400-Engineering\Roadway\_Sheet\II059\_CP003.dgn

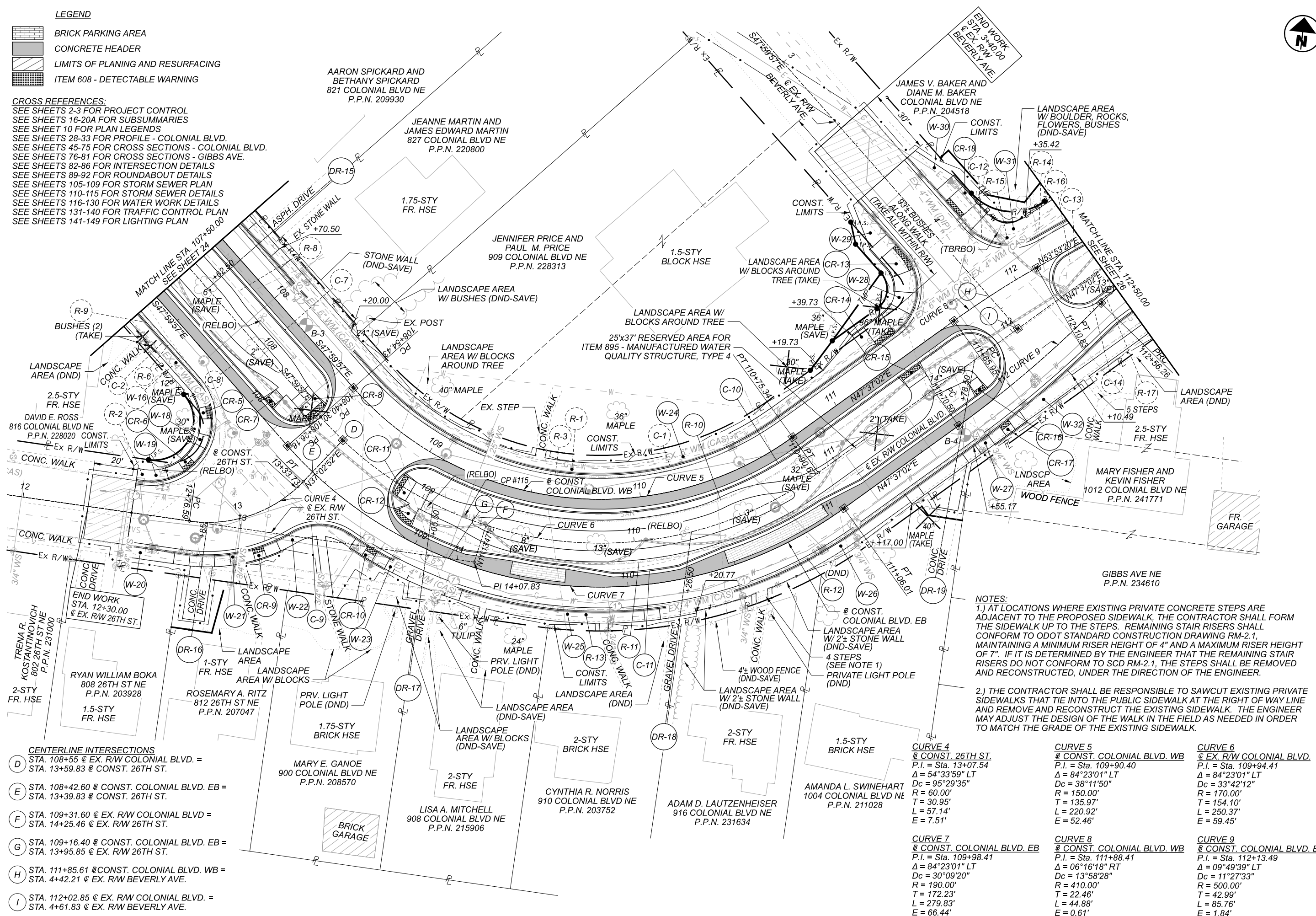
LEGEND



BRICK PARKING AREA  
CONCRETE HEADER  
LIMITS OF PLANING AND RESURFACING  
ITEM 608 - DETECTABLE WARNING

CROSS REFERENCES:

SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



NOTES:

7.) AT LOCATIONS WHERE EXISTING PRIVATE CONCRETE STEPS ARE ADJACENT TO THE PROPOSED SIDEWALK, THE CONTRACTOR SHALL FORM THE SIDEWALK UP TO THE STEPS. REMAINING STAIR RISERS SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING RM-2.1, MAINTAINING A MINIMUM RISER HEIGHT OF 4" AND A MAXIMUM RISER HEIGHT OF 7". IF IT IS DETERMINED BY THE ENGINEER THAT THE REMAINING STAIR RISERS DO NOT CONFORM TO SCD RM-2.1, THE STEPS SHALL BE REMOVED AND RECONSTRUCTED, UNDER THE DIRECTION OF THE ENGINEER.

2.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.

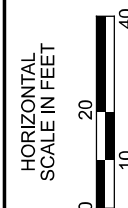
<u>CURVE 4</u> <u>@ CONST. 26TH ST.</u> P.I. = Sta. 13+07.54 $\Delta = 54^{\circ}33'59"$ LT Dc = 95°29'35" R = 60.00' T = 30.95' L = 57.14' E = 7.51'	<u>CURVE 5</u> <u>@ CONST. COLONIAL BLVD. WB</u> P.I. = Sta. 109+90.40 $\Delta = 84^{\circ}23'01"$ LT Dc = 38°11'50" R = 150.00' T = 135.97' L = 220.92' E = 52.46'	<u>CURVE 6</u> <u>@ EX. R/W COLONIAL BLVD.</u> P.I. = Sta. 109+94.41 $\Delta = 84^{\circ}23'01"$ LT Dc = 33°42'12" R = 170.00' T = 154.10' L = 250.37' E = 59.45'
<u>CURVE 7</u> <u>@ CONST. COLONIAL BLVD. EB</u> P.I. = Sta. 109+98.41 $\Delta = 84^{\circ}23'01"$ LT Dc = 30°09'20" R = 190.00' T = 172.23' L = 279.83' E = 66.44'	<u>CURVE 8</u> <u>@ CONST. COLONIAL BLVD. WB</u> P.I. = Sta. 111+88.41 $\Delta = 06^{\circ}16'18"$ RT Dc = 13°58'28" R = 410.00' T = 22.46' L = 44.88' E = 0.61'	<u>CURVE 9</u> <u>@ CONST. COLONIAL BLVD. EB</u> P.I. = Sta. 112+13.49 $\Delta = 09^{\circ}49'39"$ LT Dc = 11°27'33" R = 500.00' T = 42.99' L = 85.76' E = 1.84'

DESIGN AGENCY



DESIGNER	JMK
REVIEWER	KMK 02-10
PROJECT ID	111059
SHEET	TOTAL
P.25	1

PLAN - COLONIAL BOULEVARD  
STA. 107+50 TO STA. 112+50



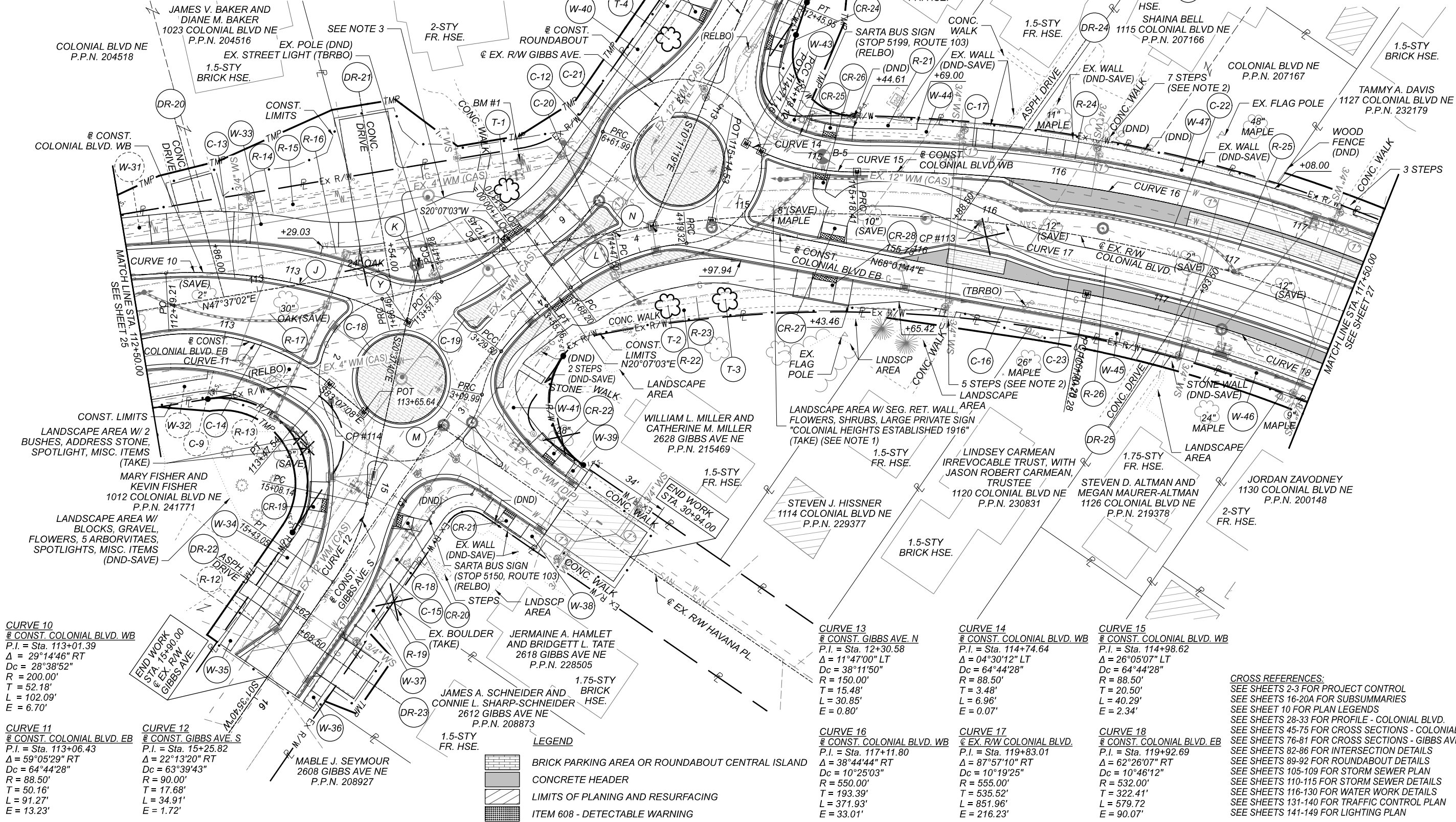
## NOTES:

1.) PRIOR TO CONSTRUCTION, THE CITY OF CANTON SHALL COORDINATE WITH THE COLONIAL HEIGHTS NEIGHBORHOOD ASSOCIATION (CHNA) FOR THE REMOVAL AND REPLACEMENT OF THE EXISTING PRIVATE SIGNS LOCATED AT THE BOULEVARD ENTRANCES WITHIN THE EXISTING RIGHT OF WAY.

2.) AT LOCATIONS WHERE EXISTING PRIVATE CONCRETE STEPS ARE ADJACENT TO THE PROPOSED SIDEWALK, THE CONTRACTOR SHALL FORM THE SIDEWALK UP TO THE STEPS. REMAINING STAIR RISERS SHALL CONFORM TO ODOT STANDARD CONSTRUCTION DRAWING RM-2.1, MAINTAINING A MINIMUM RISER HEIGHT OF 4" AND A MAXIMUM RISER HEIGHT OF 7". IF IT IS DETERMINED BY THE ENGINEER THAT THE REMAINING STAIR RISERS DO NOT CONFORM TO SCD RM-2.1, THE STEPS SHALL BE REMOVED AND RECONSTRUCTED, UNDER THE DIRECTION OF THE ENGINEER.

3.) BEGIN WALK SLOPE TRANSITION TO MEET BACK OF CURB AT SPEED TABLE AT STA. 113+81.11, 25.30' LT (@ EX. R/W COLONIAL BLVD.)

4.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.



## CENTERLINE INTERSECTIONS

- J STA. 113+17.26 @ EX. R/W COLONIAL BLVD. = STA. 113+04.08 @ CONST. COLONIAL BLVD. WB
- K STA. 113+66.72 @ EX. R/W COLONIAL BLVD. = STA. 14+08.32 @ CONST. GIBBS AVE. S
- L STA. 114+28.47 @ EX. R/W COLONIAL BLVD. = STA. 13+73.72 @ EX. R/W GIBBS AVE.
- M STA. 14+65.99 @ EX. R/W GIBBS AVE. = STA. 30+00.00 @ EX. R/W HAVANA PL.
- N STA. 114+62.88 @ EX. R/W COLONIAL BLVD. = STA. 13+52.44 @ CONST. GIBBS AVE. N
- Y STA. 113+50.45 @ CONST. COLONIAL BLVD. WB = STA. 14+32.18 @ CONST. GIBBS AVE. S



HORIZONTAL  
SCALE IN FEET

0 20 40

PLAN - COLONIAL BOULEVARD  
STA. 112+50 TO STA. 117+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

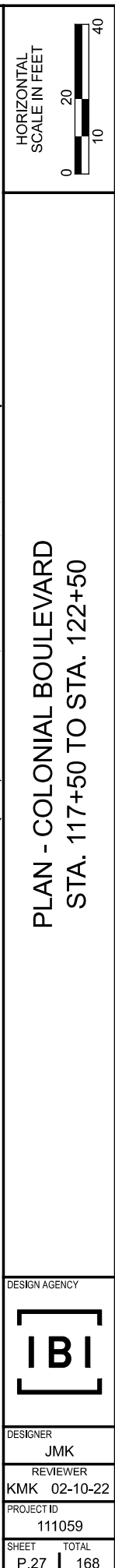
SHEET



TOTAL

P.26 168



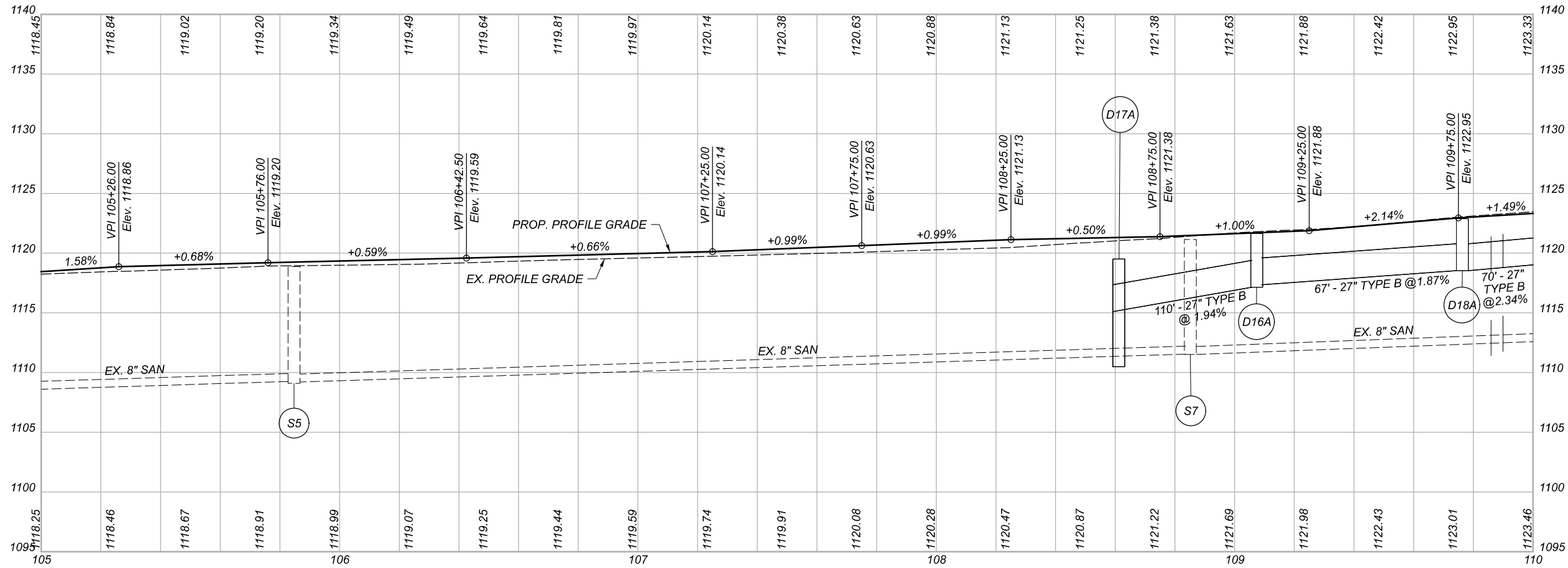
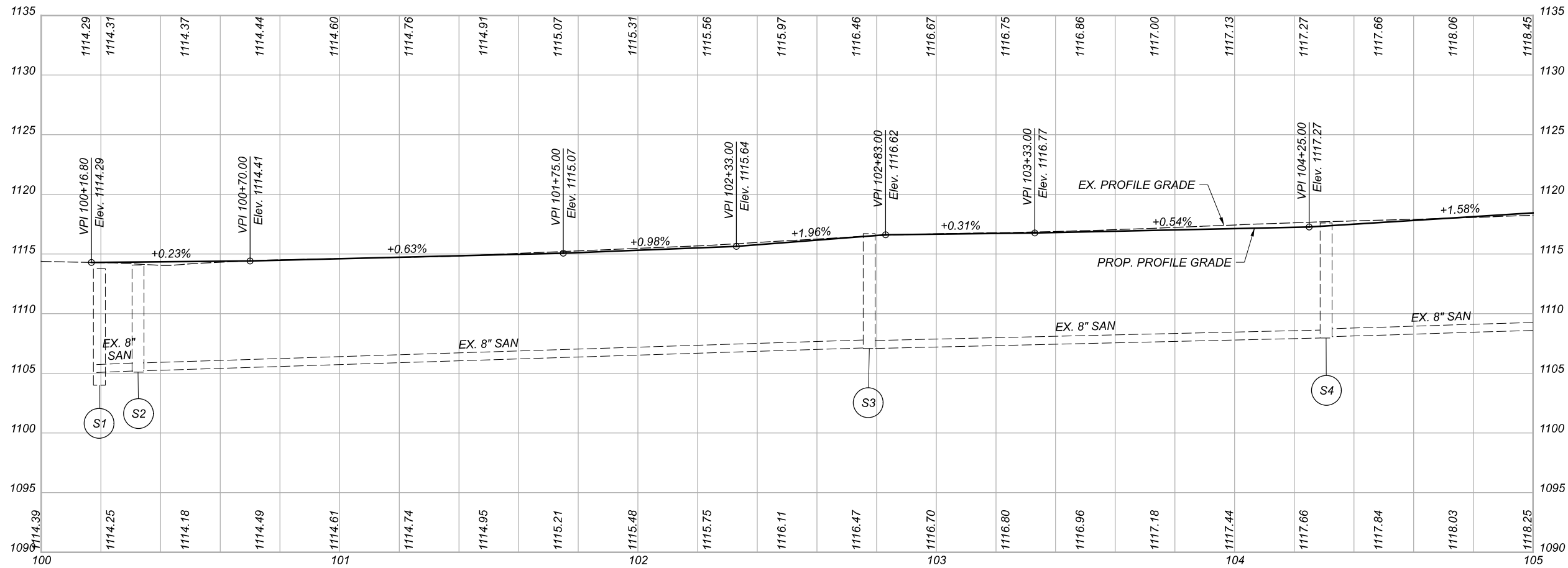
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 \\V0120\J25\Ibshare\21738\_STA-Colonial 7.0\_Production\Worksheets\III059400-Engineering\Roadway\Sheets\III059\_CP005.dgn



<div style="text-align: center;"> <h1>PLAN - COLONIAL BOULEVARD</h1> <h2>STA. 117+50 TO STA. 122+50</h2> </div>		<div style="text-align: center;">  <p>HORIZONTAL SCALE IN FEET</p> <p>0 10 20 40</p> </div>
<div style="text-align: center;">  </div>		
<div style="text-align: center;"> <p>DESIGNER</p> <p><b>JKM</b></p> </div>		
<div style="text-align: center;"> <p>REVIEWER</p> <p><b>KMK 02-10-22</b></p> </div>		
<div style="text-align: center;"> <p>PROJECT ID</p> <p><b>111059</b></p> </div>		
<div style="text-align: center;"> <p>SHEET</p> <p><b>P 27</b></p> </div>		<div style="text-align: center;"> <p>TOTAL</p> <p><b>168</b></p> </div>

STA-COLONIAL BOULEVARD NE - PHASE 1

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FOR SANITARY STRUCTURE INFORMATION SEE SHEET 115

PROFILE SHEET - COLONIAL BOULEVARD WB  
STA. 100+00 TO STA. 110+00

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

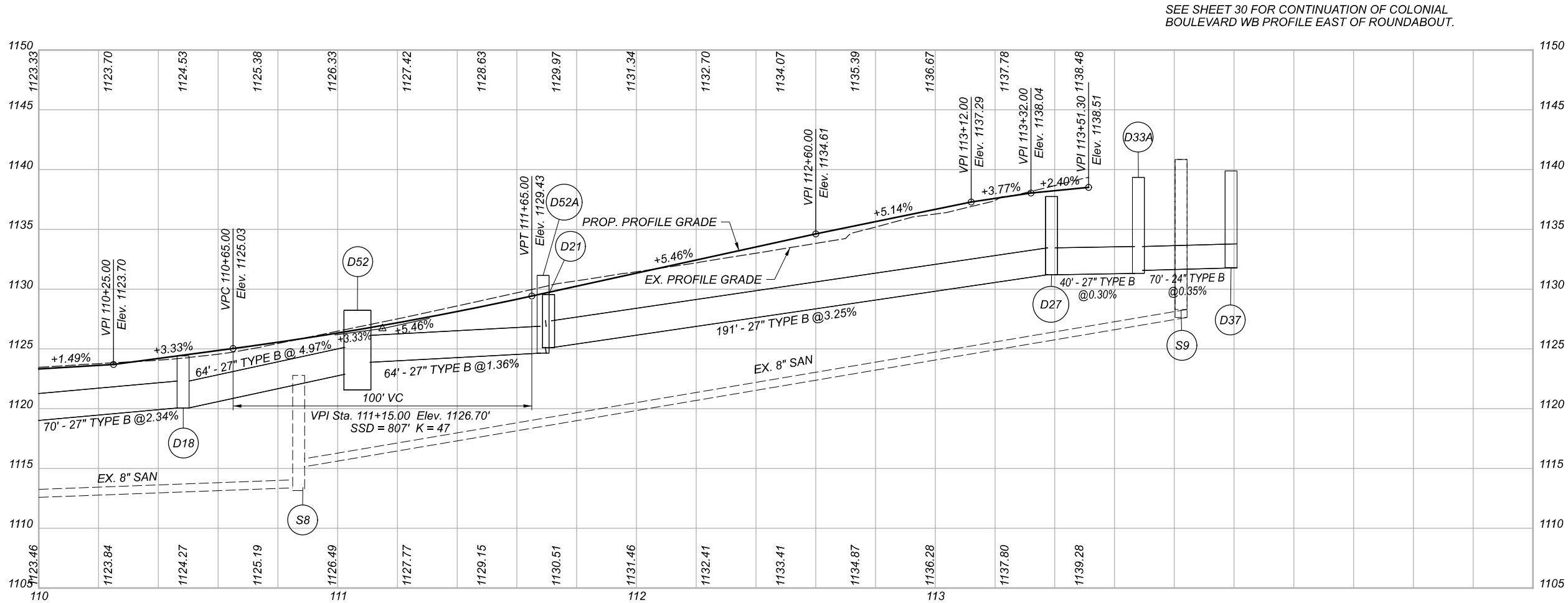
111059

SHEET

P.28

TOTAL

168

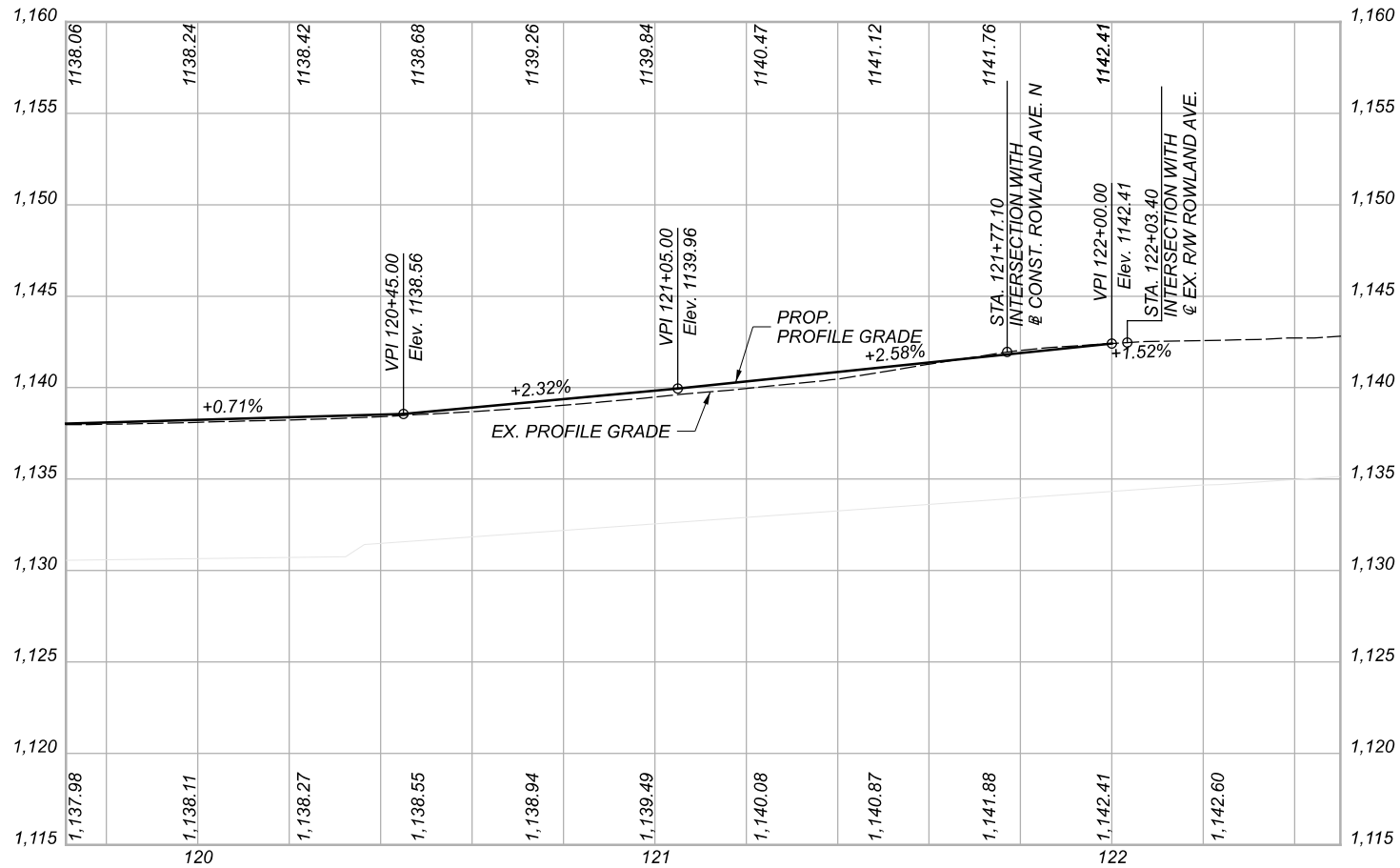
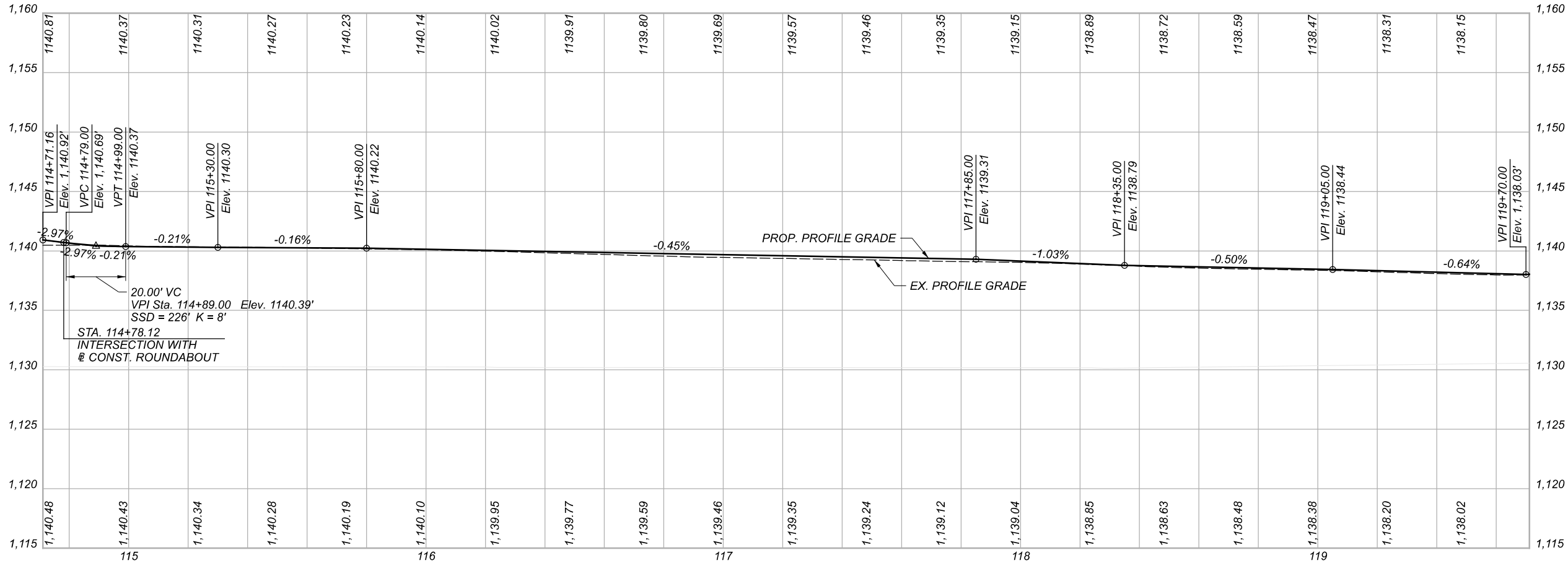


FOR SANITARY STRUCTURE INFORMATION SEE SHEET 115

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Profile 1 (Sheet) PAPERSIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 9:09:26 AM USER: Jennifer.Kelley  
\\NO1201125\ibshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_GF003.dgn

SEE SHEET 29 FOR CONTINUATION  
OF COLONIAL BOULEVARD WB  
PROFILE WEST OF ROUNDABOUT.



FOR SANITARY STRUCTURE INFORMATION SEE SHEET 115

PROFILE SHEET - COLONIAL BOULEVARD WB  
STA. 114+71.16 TO STA. 122+00

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

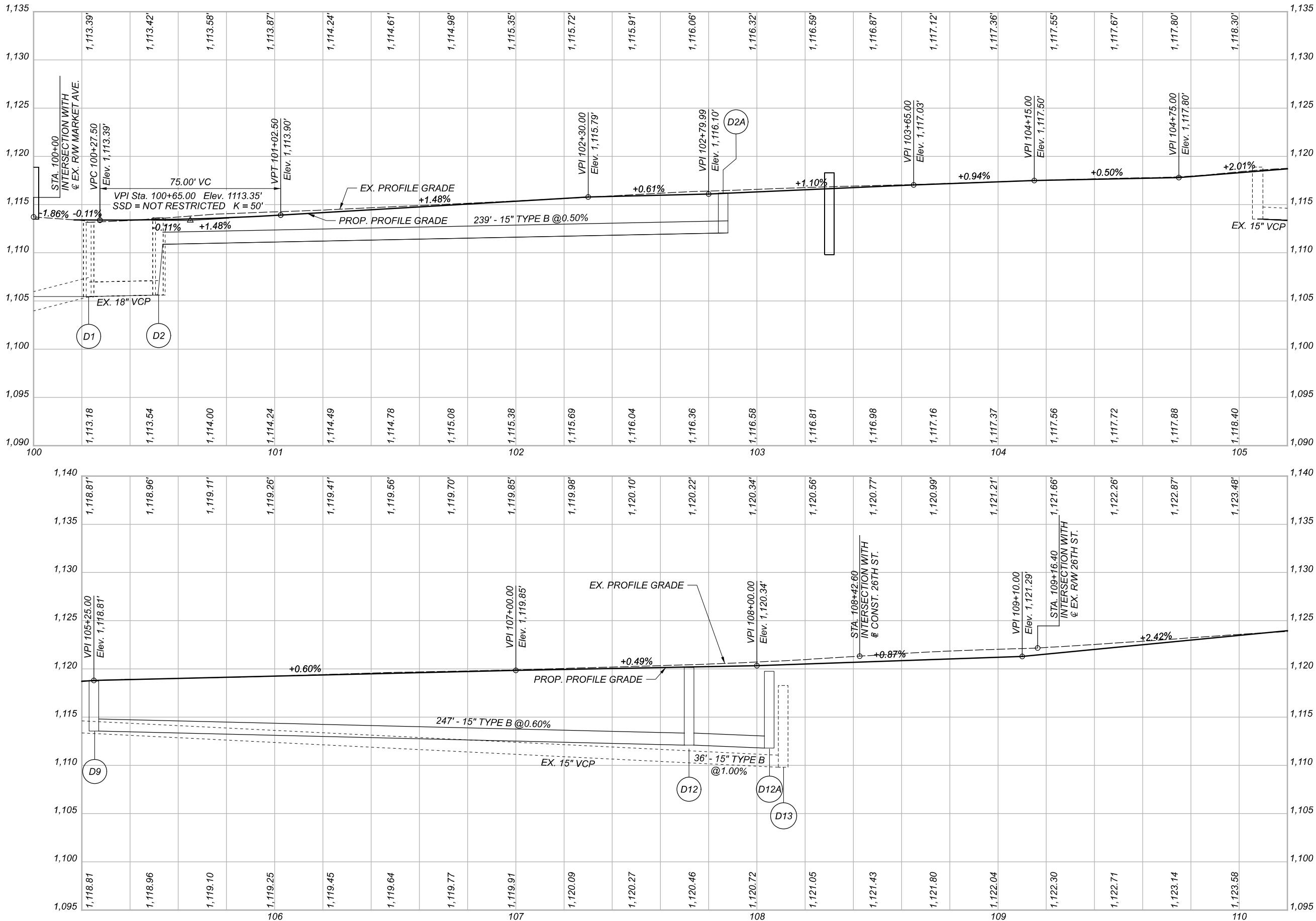
P.30

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Profile IISheet1 PAPER:SIZE: 17x11(in.) DATE: 2022-03-21 TIME: 3:04:33 PM USER: Jennifer.Kelley  
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FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115

PROFILE SHEET - COLONIAL BOULEVARD EB  
STA. 100+00 TO STA. 110+00

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.31

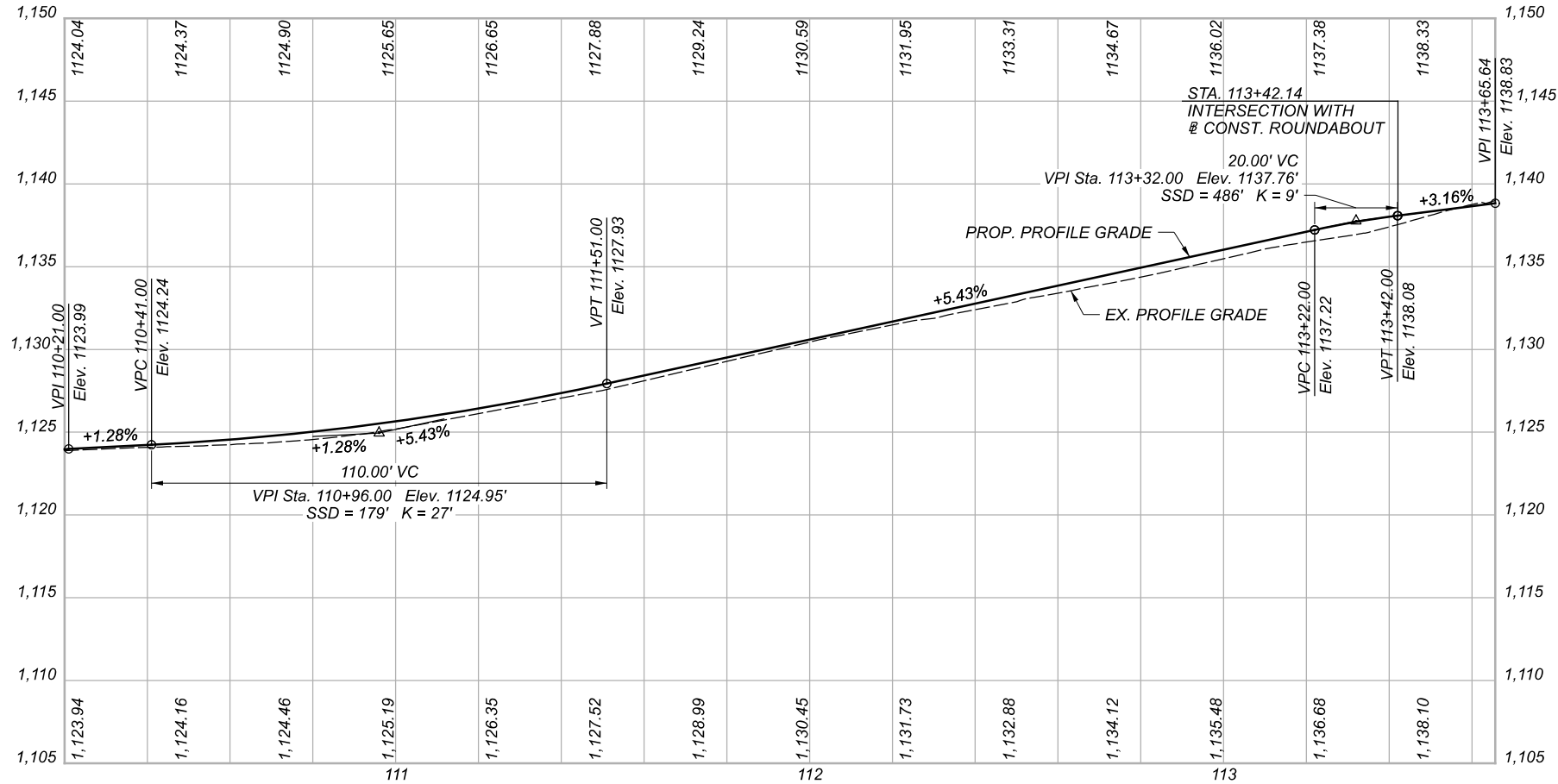
TOTAL

168



STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Profile\_3 [Sheet1] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 9:37:14 AM USER: Jennifer.Kelley  
\\NO1201125\ibshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_GF002.dgn



SEE SHEET 33 FOR CONTINUATION OF COLONIAL BOULEVARD EB PROFILE EAST OF ROUNDABOUT.

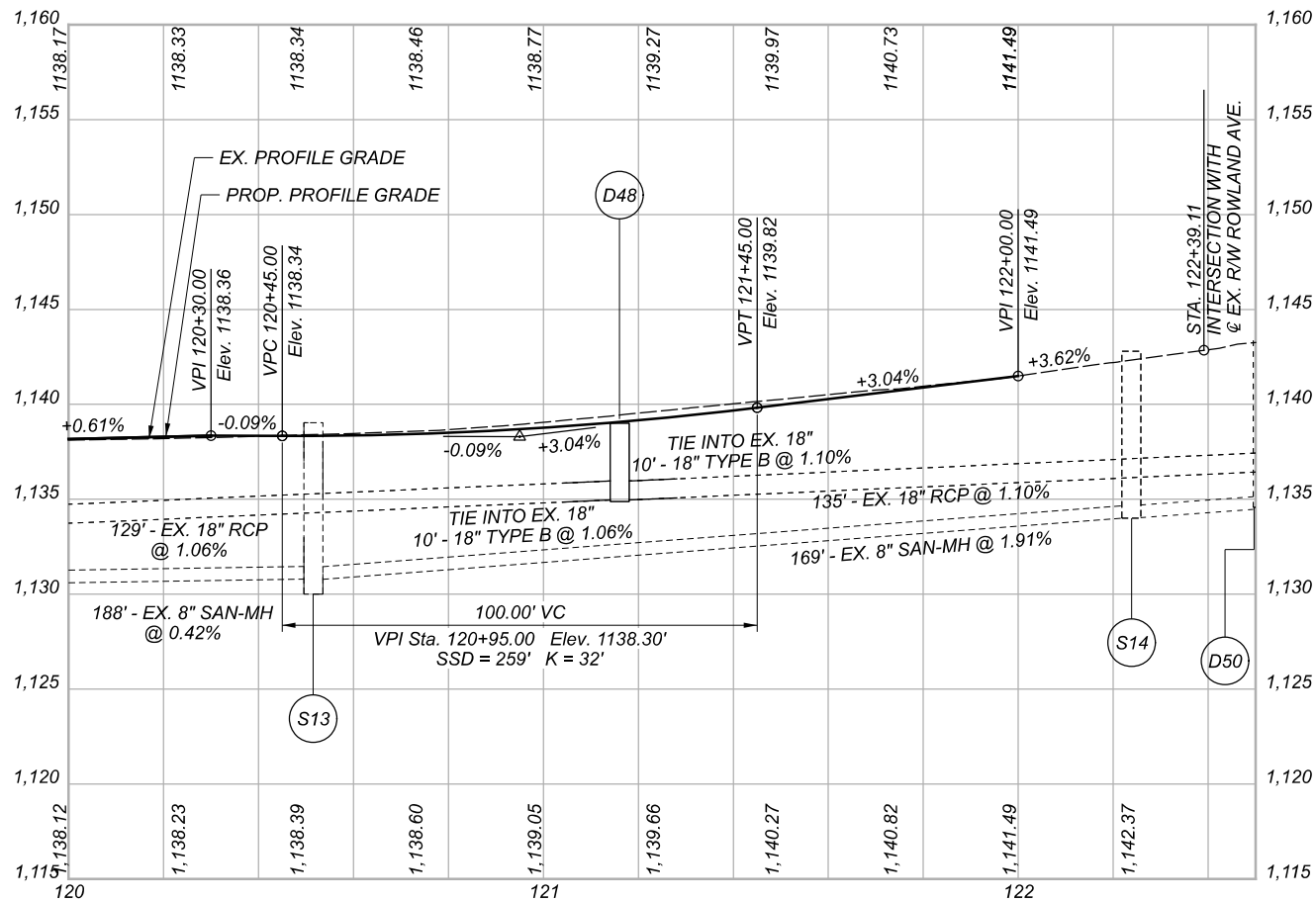
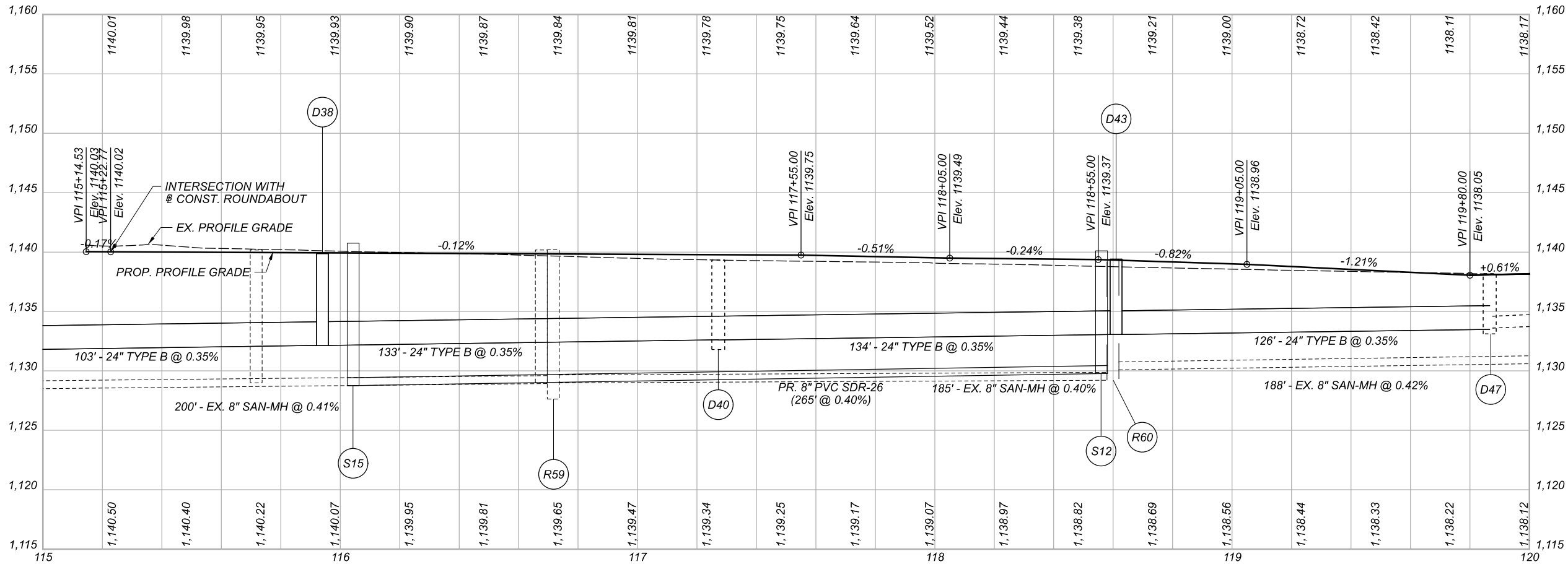
PROFILE SHEET - COLONIAL BOULEVARD EB  
STA. 110+00 TO STA. 113+65.64

DESIGN AGENCY	
[IB]	
DESIGNER	
JMK	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.32	168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Profile 1-3 (Sheet) PAPER: 11x17 (in.) DATE: 2022-02-10 TIME: 11:51:51 PM USER: Jennifer.kelley  
\\NO120125\blshare\21798\_STA-Colonial\17.0\_Production\Worksheets\11059\_400-Engineering\Roadway\Sheets\11059\_GF004.dgn

SEE SHEET 32 FOR CONTINUATION  
OF COLONIAL BOULEVARD EB  
PROFILE WEST OF ROUNDABOUT.



PROFILE SHEET - COLONIAL BOULEVARD EB  
STA. 115+14.53 TO STA. 122+00

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

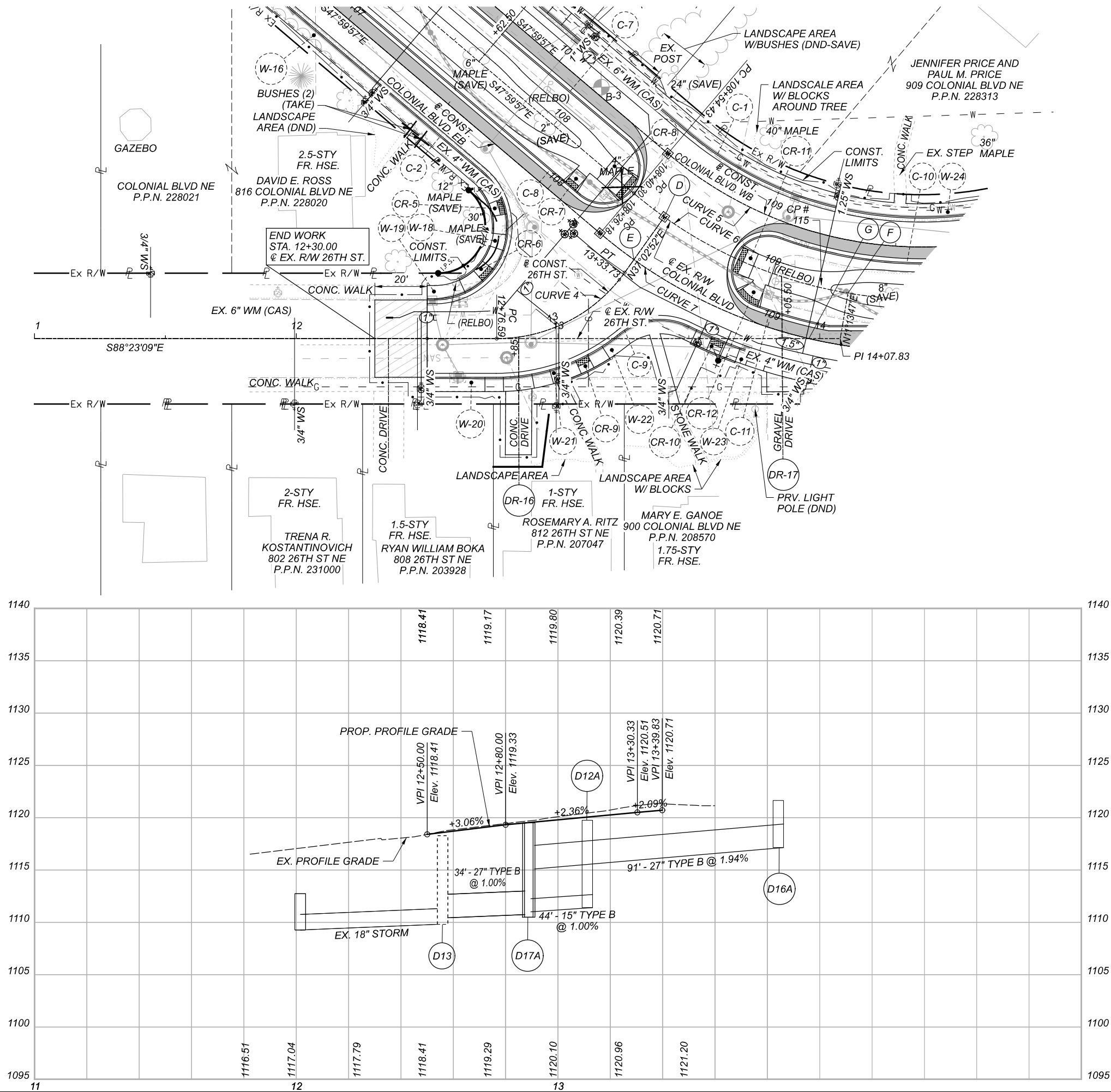
SHEET

P.33

TOTAL

168

FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115



NOTES:  
1.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.

- LEGEND
- BRICK PARKING AREA
  - CONCRETE HEADER
  - LIMITS OF PLANING AND RESURFACING
  - ITEM 608 - DETECTABLE WARNING

CURVE 4  
@ CONST. 26TH ST.  
P.I. = Sta. 13+07.54  
 $\Delta = 54^{\circ}33'59''$  LT  
Dc = 95'29'35"  
R = 60.00'  
T = 30.95'  
L = 57.14'  
E = 7.51'

CURVE 5  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 109+90.40  
 $\Delta = 84^{\circ}23'01''$  LT  
Dc = 38'11'50"  
R = 150.00'  
T = 135.97'  
L = 220.92'  
E = 52.46'

CURVE 6  
@ EX. R/W COLONIAL BLVD.  
P.I. = Sta. 109+94.41  
 $\Delta = 84^{\circ}23'01''$  LT  
Dc = 33'42'12"  
R = 170.00'  
T = 154.10'  
L = 250.37'  
E = 59.45'

CURVE 7  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 109+98.41  
 $\Delta = 84^{\circ}23'01''$  LT  
Dc = 30'09'20"  
R = 190.00'  
T = 172.23'  
L = 279.83'  
E = 66.44'

CENTERLINE INTERSECTIONS

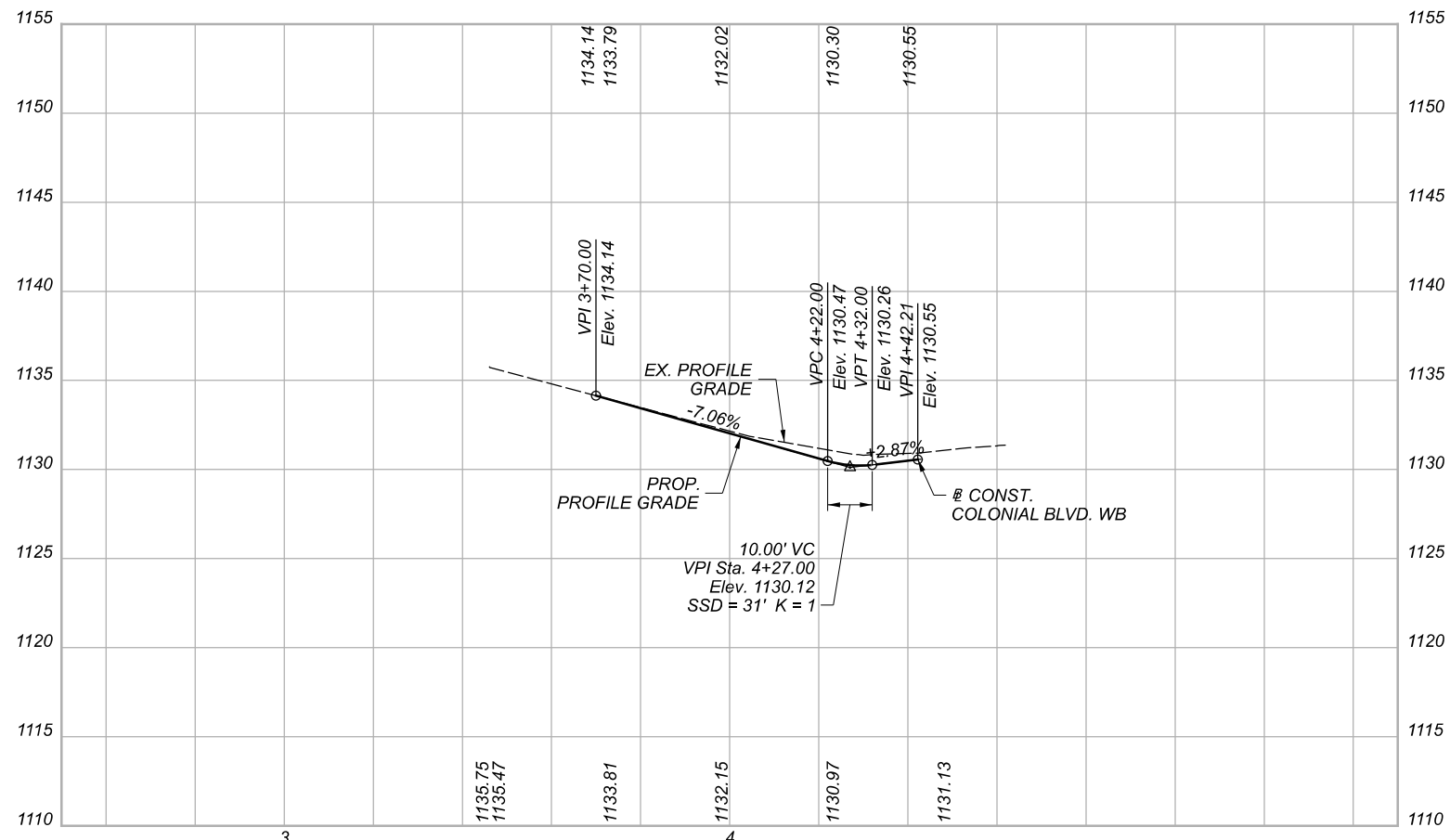
(D) STA. 108+55 @ EX. R/W COLONIAL BLVD. = STA. 13+59.83 @ CONST. 26TH ST.

(E) STA. 108+42.60 @ CONST. COLONIAL BLVD. EB = STA. 13+39.83 @ CONST. 26TH ST.

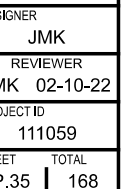
(F) STA. 109+31.60 @ EX. R/W COLONIAL BLVD = STA. 14+25.46 @ EX. R/W 26TH ST.

(G) STA. 109+16.40 @ CONST. COLONIAL BLVD. EB = STA. 13+95.85 @ EX. R/W 26TH ST.

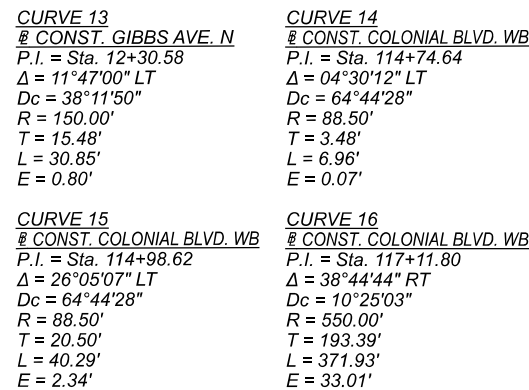
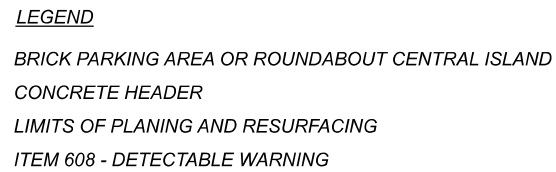
CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 23-27 FOR PLAN - COLONIAL BLVD.  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 23-27 FOR PLAN - COLONIAL BLVD.  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
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SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



MODEL: II059, GP301 PAPERSIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 11:24:30 PM USER: jennifer.kelley  
\\10.120.102.5\Bishore\121798\_STA-Colonial\7.0-Production\Worksheets\II059\_400-Engineering\Roadway\Sheets\II059\_GP301.dgn



CENTERLINE INTERSECTIONS

(L) STA. 114+28.47 @ EX. R/W COLONIAL BLVD. =  
STA. 13+73.72 @ EX. R/W GIBBS AVE.

(N) STA. 114+62.88 @ EX. R/W COLONIAL BLVD. =  
STA. 13+52.44 @ CONST. GIBBS AVE. N

**CROSS REFERENCES:**  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 23-27 FOR PLAN - COLONIAL BLVD.  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



# PLAN AND PROFILE

DESIGN AGENCY



DESIGNER

.IMK

REVIEWED

REVIEWER  
KMAK 02 10

KIMK 02-10

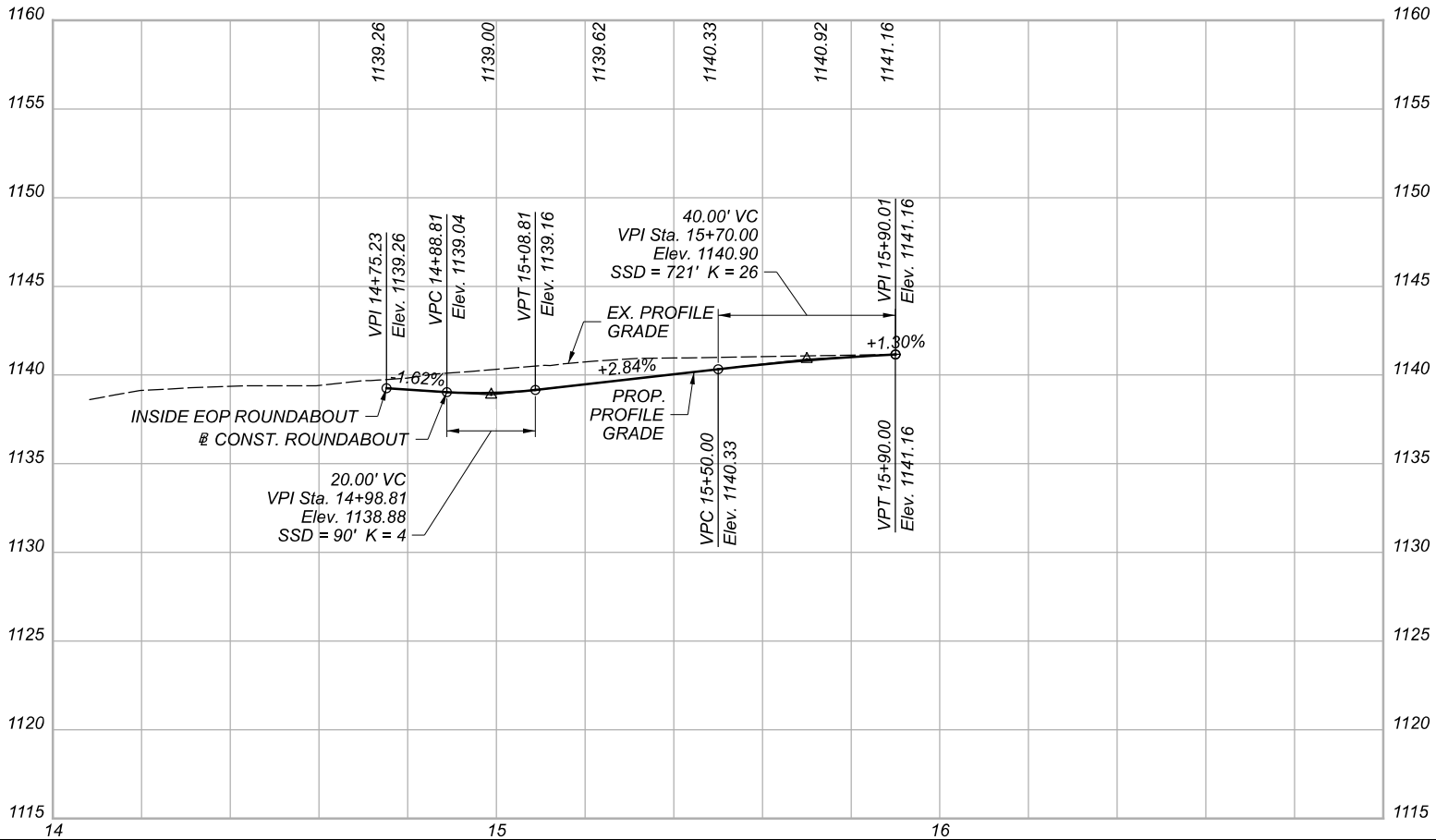
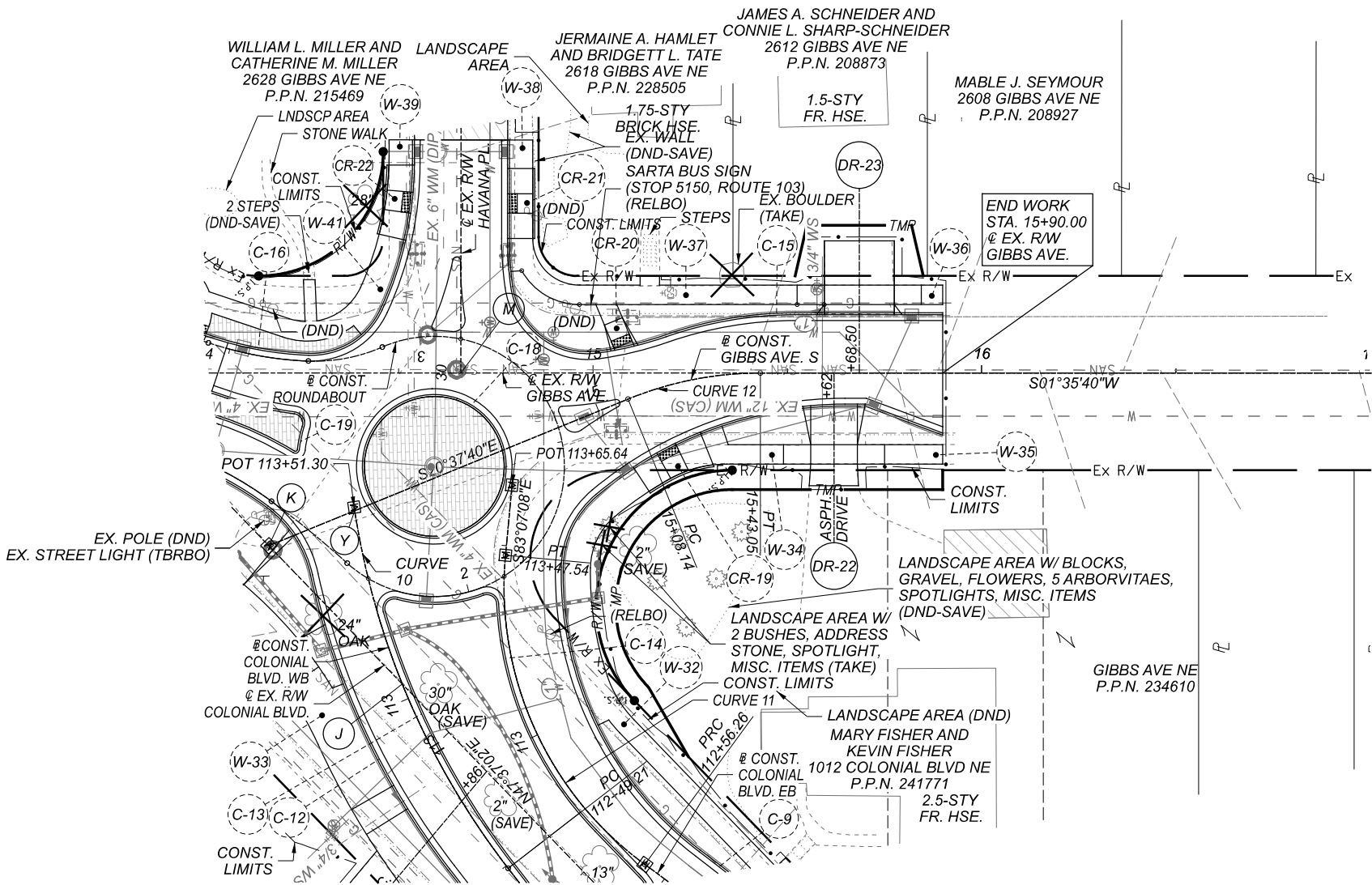
PROJECT ID

111059

SHEET	TOTAL
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P.36 1





NOTES:  
1.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.

LEGEND

- BRICK PARKING AREA OR ROUNDABOUT CENTRAL ISLAND
- CONCRETE HEADER
- LIMITS OF PLANING AND RESURFACING
- ITEM 608 - DETECTABLE WARNING

**CURVE 10**  
@ CONST. COLONIAL BLVD. WB  
P.I. = Sta. 113+01.39  
 $\Delta = 29^\circ 14' 46''$  RT  
 $D_c = 28^\circ 38' 52''$   
 $R = 200.00'$   
 $T = 52.18'$   
 $L = 102.09'$   
 $E = 6.70'$

**CURVE 11**  
@ CONST. COLONIAL BLVD. EB  
P.I. = Sta. 113+06.43  
 $\Delta = 59^\circ 05' 29''$  RT  
 $D_c = 64^\circ 44' 28''$   
 $R = 88.50'$   
 $T = 50.16'$   
 $L = 91.27'$   
 $E = 13.23'$

**CURVE 12**  
@ CONST. GIBBS AVE. S  
P.I. = Sta. 15+25.82  
 $\Delta = 22^\circ 13' 20''$  RT  
 $D_c = 63^\circ 39' 43''$   
 $R = 90.00'$   
 $T = 17.68'$   
 $L = 34.91'$   
 $E = 1.72'$

CENTERLINE INTERSECTIONS

- (J) STA. 113+17.26 @ EX. R/W COLONIAL BLVD. = STA. 113+04.08 @ CONST. COLONIAL BLVD. WB
- (K) STA. 113+66.72 @ EX. R/W COLONIAL BLVD. = STA. 14+08.32 @ CONST. GIBBS AVE. S
- (M) STA. 14+65.99 @ EX. R/W GIBBS AVE. = STA. 30+00.00 @ EX. R/W HAVANA PL.
- (Y) STA. 113+50.45 @ CONST. COLONIAL BLVD. WB = STA. 14+32.18 @ CONST. GIBBS AVE. S

CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 23-27 FOR PLAN - COLONIAL BLVD.  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
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SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



PLAN AND PROFILE  
GIBBS AVENUE SOUTH

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

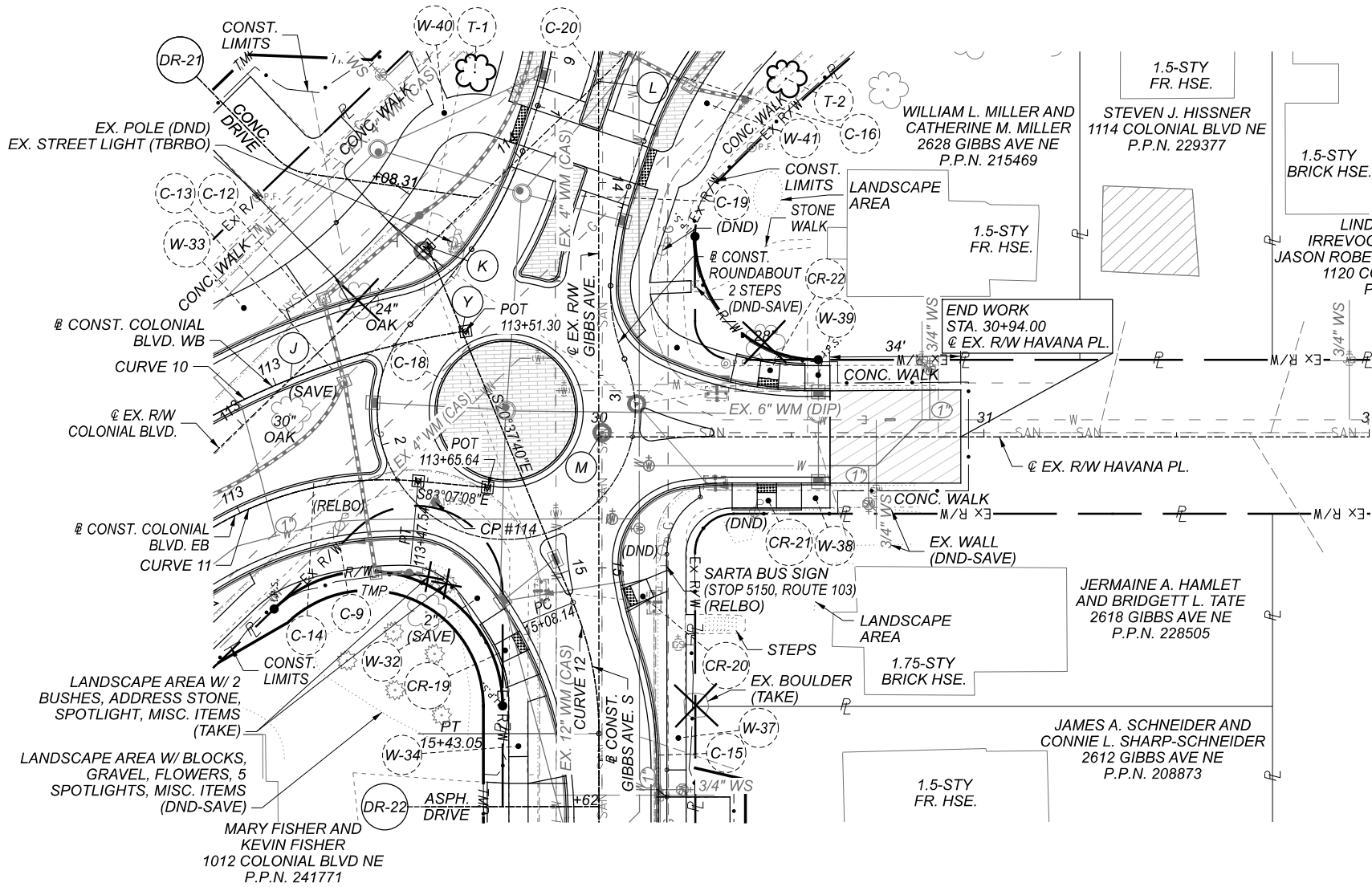
111059

SHEET

P.37

TOTAL

168



**NOTES:**  
1.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.

**LEGEND**

	BRICK PARKING AREA OR ROUNDABOUT CENTRAL ISLAND
	CONCRETE HEADER
	LIMITS OF PLANING AND RESURFACING
	ITEM 608 - DETECTABLE WARNING

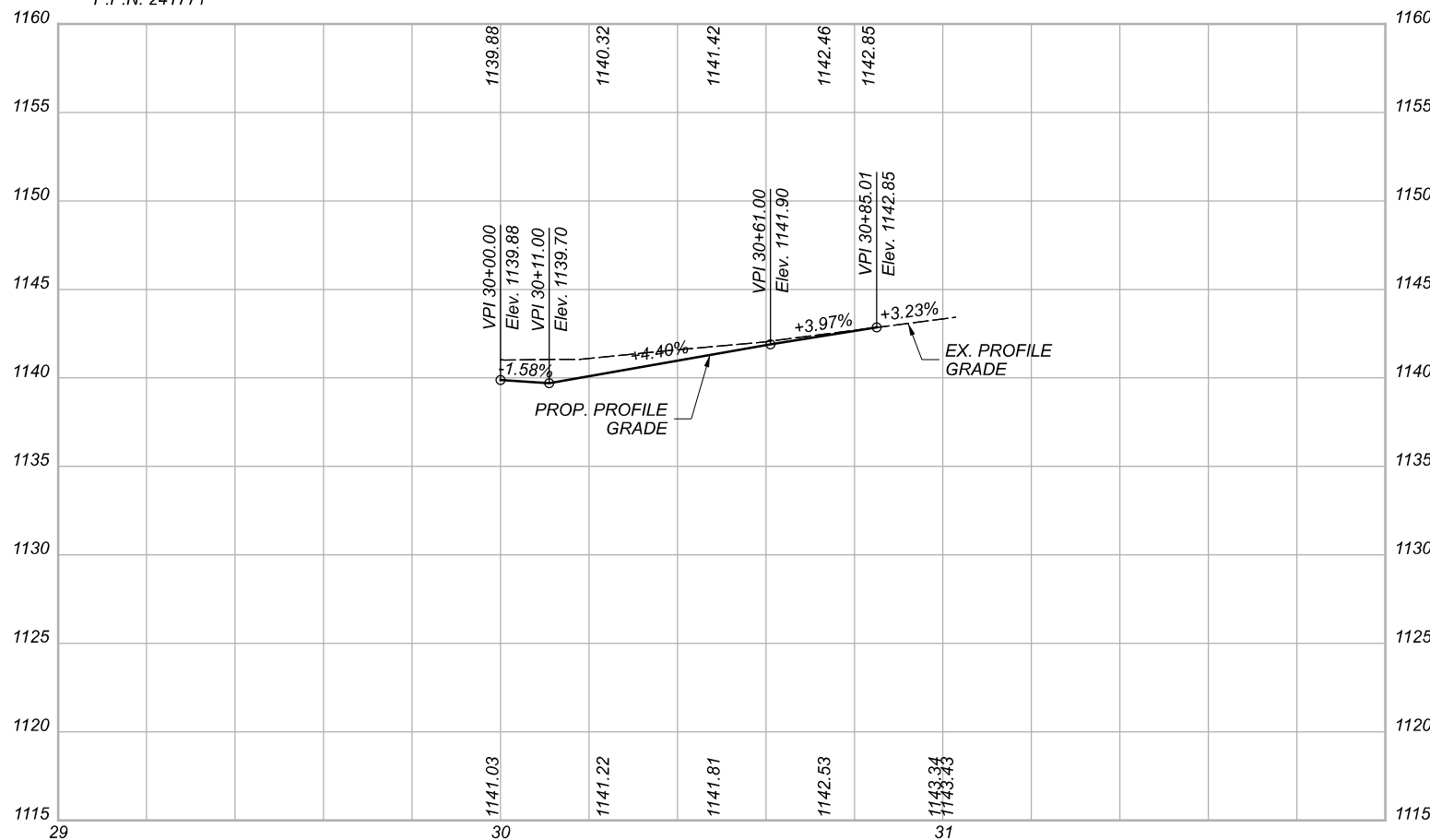
CURVE 10	CURVE 11	CURVE 12
P.I. = Sta. 113+01.39	P.I. = Sta. 113+06.43	P.I. = Sta. 15+25.82
$\Delta = 29^{\circ}14'46''$ RT	$\Delta = 59^{\circ}05'29''$ RT	$\Delta = 22^{\circ}13'20''$ RT
$D_c = 28^{\circ}38'52''$	$D_c = 64^{\circ}44'28''$	$D_c = 63^{\circ}39'43''$
$R = 200.00'$	$R = 88.50'$	$R = 90.00'$
$T = 52.18'$	$T = 50.16'$	$T = 17.68'$
$L = 102.09'$	$L = 91.27'$	$L = 34.91'$
$E = 6.70'$	$E = 13.23'$	$E = 1.72'$

**CENTERLINE INTERSECTIONS**

- (J) STA. 113+17.26 @ EX. R/W COLONIAL BLVD. =  
STA. 113+04.08 @ CONST. COLONIAL BLVD. WB
- (K) STA. 113+66.72 @ EX. R/W COLONIAL BLVD. =  
STA. 14+08.32 @ CONST. GIBBS AVE. S
- (L) STA. 114+28.47 @ EX. R/W COLONIAL BLVD. =  
STA. 13+73.72 @ EX. R/W GIBBS AVE.
- (M) STA. 14+65.99 @ EX. R/W GIBBS AVE. =  
STA. 30+00.00 @ EX. R/W HAVANA PL.
- (Y) STA. 113+50.45 @ CONST. COLONIAL BLVD. WB =  
STA. 14+32.18 @ CONST. GIBBS AVE. S

**CROSS REFERENCES:**

SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 23-27 FOR PLAN - COLONIAL BLVD.  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

HORIZONTAL  
SCALE IN FEETPLAN AND PROFILE  
HAVANA PLACE

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

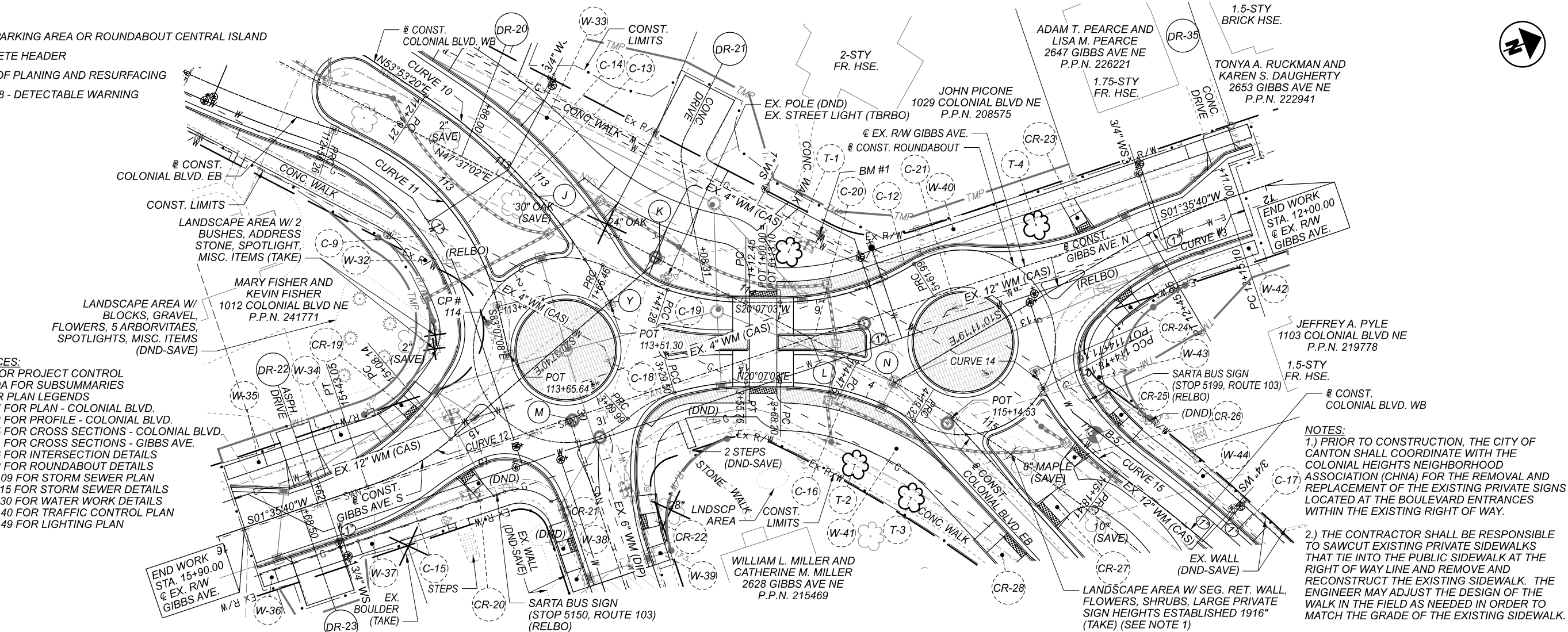
P.38 168

## LEGEND

	BRICK PARKING AREA OR ROUNDABOUT CENTRAL ISLAND
	CONCRETE HEADER
	LIMITS OF PLANING AND RESURFACING
	ITEM 608 - DETECTABLE WARNING

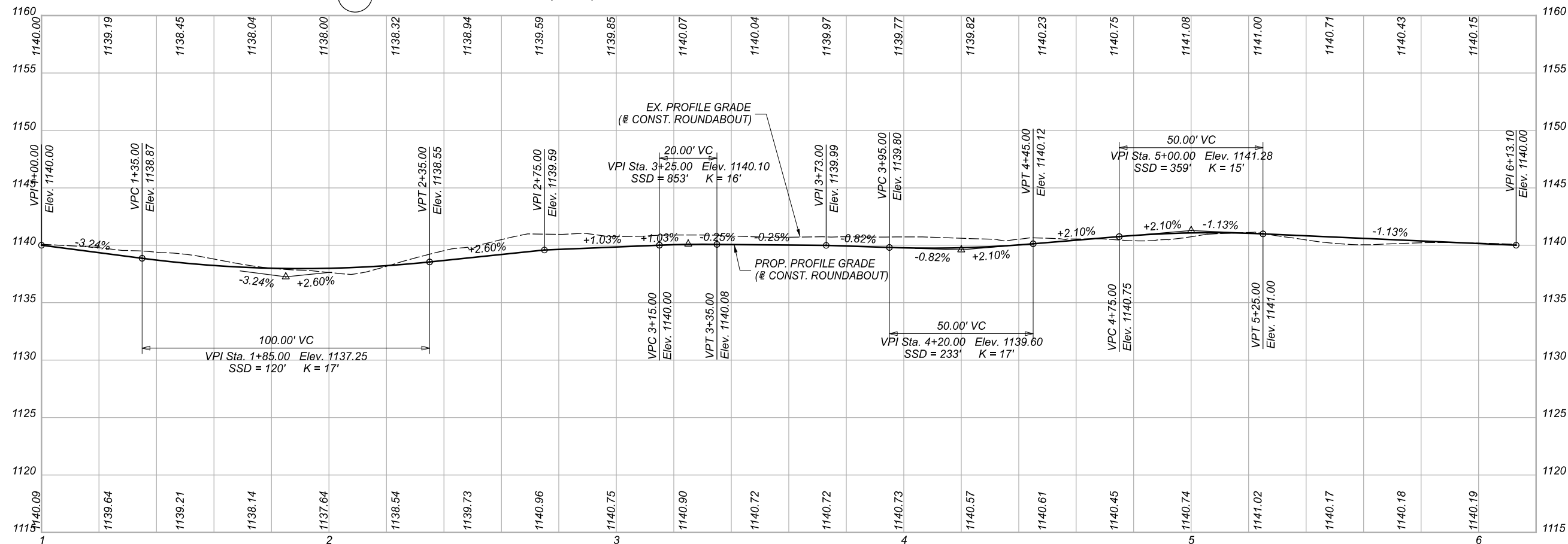
## CROSS REFERENCES:

SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 23-27 FOR PLAN - COLONIAL BLVD.  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN



## NOTES:

- 1.) PRIOR TO CONSTRUCTION, THE CITY OF CANTON SHALL COORDINATE WITH THE COLONIAL HEIGHTS NEIGHBORHOOD ASSOCIATION (CHNA) FOR THE REMOVAL AND REPLACEMENT OF THE EXISTING PRIVATE SIGNS LOCATED AT THE BOULEVARD ENTRANCES WITHIN THE EXISTING RIGHT OF WAY.
- 2.) THE CONTRACTOR SHALL BE RESPONSIBLE TO SAWCUT EXISTING PRIVATE SIDEWALKS THAT TIE INTO THE PUBLIC SIDEWALK AT THE RIGHT OF WAY LINE AND REMOVE AND RECONSTRUCT THE EXISTING SIDEWALK. THE ENGINEER MAY ADJUST THE DESIGN OF THE WALK IN THE FIELD AS NEEDED IN ORDER TO MATCH THE GRADE OF THE EXISTING SIDEWALK.

HORIZONTAL  
SCALE IN FEETPLAN AND PROFILE  
ROUNDABOUT

DESIGN AGENCY



DESIGNER

BSS

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

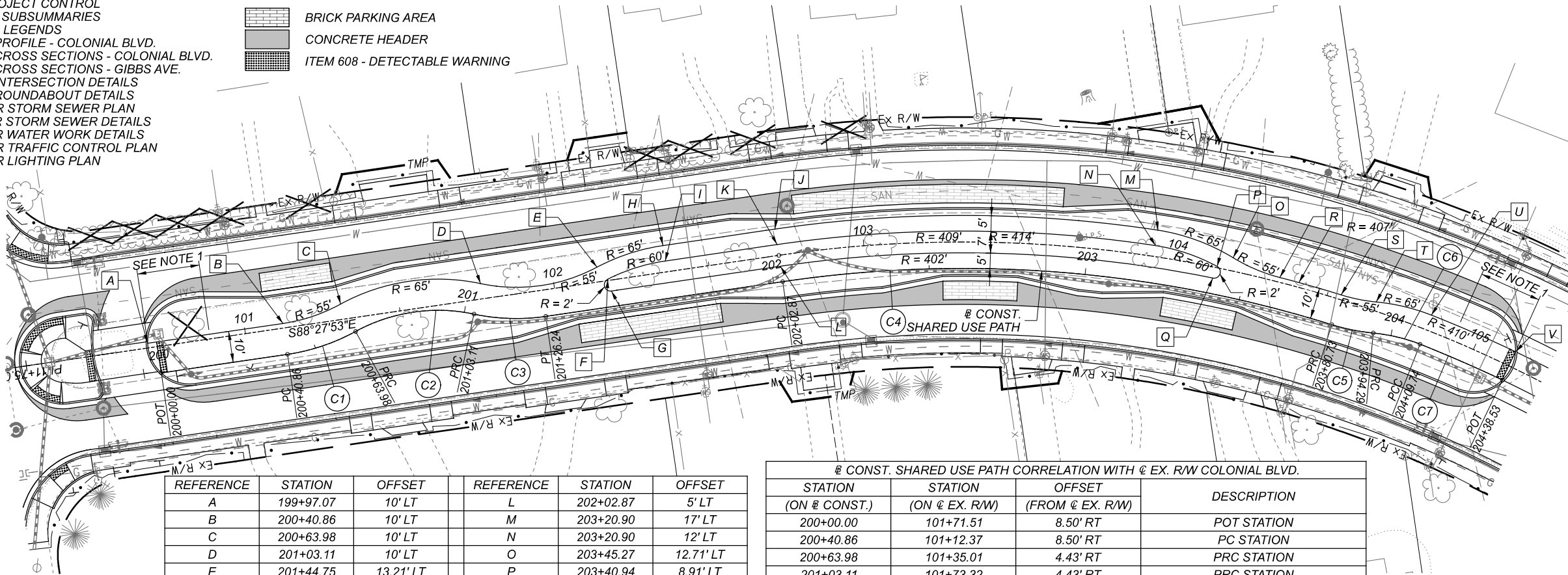
TOTAL

P.39 168

CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

LEGEND

- BRICK PARKING AREA  
CONCRETE HEADER  
ITEM 608 - DETECTABLE WARNING



CURVE 1  
P.I. = Sta. 200+52.54  
 $\Delta = 20^\circ 23' 01''$  LT  
 $D_c = 88^\circ 08' 50''$   
 $R = 65.00'$   
 $T = 11.69'$   
 $L = 23.12'$   
 $E = 1.04'$

CURVE 2  
P.I. = Sta. 200+84.42  
 $\Delta = 40^\circ 46' 02''$  RT  
 $D_c = 104^\circ 10' 27''$   
 $R = 55.00'$   
 $T = 20.44'$   
 $L = 39.13'$   
 $E = 3.67'$

CURVE 3  
P.I. = Sta. 201+14.80  
 $\Delta = 20^\circ 23' 01''$  LT  
 $D_c = 88^\circ 08' 50''$   
 $R = 65.00'$   
 $T = 11.69'$   
 $L = 23.12'$   
 $E = 1.04'$

CURVE 4  
P.I. = Sta. 202+93.32  
 $\Delta = 25^\circ 42' 03''$  RT  
 $D_c = 14^\circ 27' 01''$   
 $R = 396.50'$   
 $T = 90.45'$   
 $L = 177.86'$   
 $E = 10.19'$

CURVE 5  
P.I. = Sta. 203+87.54  
 $\Delta = 11^\circ 57' 22''$  LT  
 $D_c = 88^\circ 08' 50''$   
 $R = 65.00'$   
 $T = 6.81'$   
 $L = 13.56'$   
 $E = 0.36'$

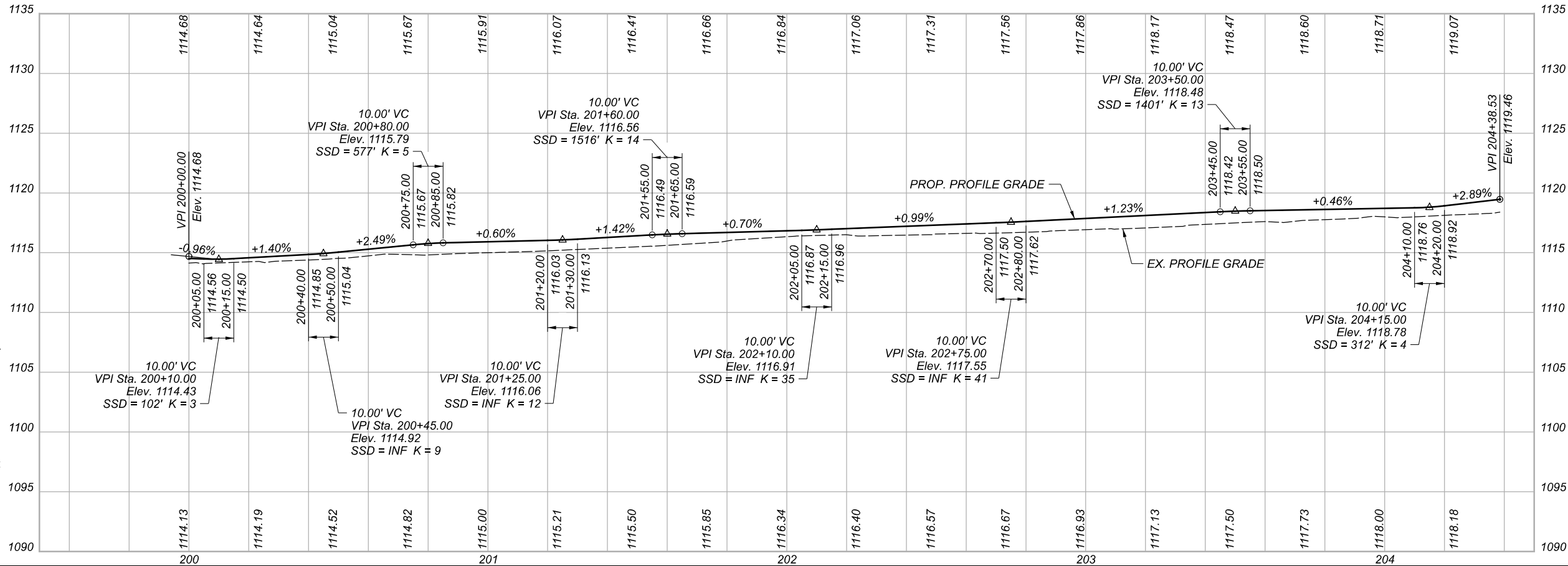
CURVE 6  
P.I. = Sta. 204+02.07  
 $\Delta = 16^\circ 05' 17''$  RT  
 $D_c = 104^\circ 10' 27''$   
 $R = 55.00'$   
 $T = 7.77'$   
 $L = 15.44'$   
 $E = 0.55'$

CURVE 7  
P.I. = Sta. 204+24.14  
 $\Delta = 04^\circ 07' 33''$  RT  
 $D_c = 14^\circ 19' 50''$   
 $R = 399.81'$   
 $T = 14.40'$   
 $L = 28.79'$   
 $E = 0.26'$

REFERENCE	STATION	OFFSET	REFERENCE	STATION	OFFSET
A	199+97.07	10' LT	L	202+02.87	5' LT
B	200+40.86	10' LT	M	203+20.90	17' LT
C	200+63.98	10' LT	N	203+20.90	12' LT
D	201+03.11	10' LT	O	203+45.27	12.71' LT
E	201+44.75	13.21' LT	P	203+40.94	8.91' LT
F	201+47.58	8.90' LT	Q	203+40.37	5' LT
G	201+48.21	5' LT	R	203+60.84	10' LT
H	201+66.62	17' LT	S	203+80.73	10' LT
I	201+66.62	12' LT	T	203+94.29	10' LT
J	202+02.87	17' LT	U	204+09.74	10' LT
K	202+02.87	12' LT	V	204+38.37	10' LT

# CONST. SHARED USE PATH CORRELATION WITH # EX. R/W COLONIAL BLVD.			
STATION (ON # CONST.)	STATION (ON # EX. R/W)	OFFSET (FROM # EX. R/W)	DESCRIPTION
200+00.00	101+71.51	8.50' RT	POT STATION
200+40.86	101+12.37	8.50' RT	PC STATION
200+63.98	101+35.01	4.43' RT	PRC STATION
201+03.11	101+73.32	4.43' RT	PRC STATION
201+26.24	101+95.96	8.5' RT	PT STATION
202+02.87	102+72.60	8.5' RT	PC STATION
203+80.73	104+54.26	8.5' RT	PRC STATION
203+94.29	104+67.97	6.86' RT	PRC STATION
204+09.74	104+83.47	5.00' RT	PCC STATION
204+38.53	105+12.62	5.00' RT	POT STATION

NOTE:  
1.) TRANSITION PATH SLOPE OVER A  
DISTANCE OF 20 FEET TO TIE INTO  
BACK OF CURB ELEVATION ALONG  
NORTH EDGE OF SHARED USE PATH.



PLAN AND PROFILE - SHARED USE PATH  
STA. 200+00 TO STA. 204+38.53

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.40

TOTAL

168

**STA-COLONIAL BOULEVARD NE - PHASE 1**

MODEL: II059\_QF609 PAPERSIZE: 7x11in. DATE: 2022-02-10 TIME: 8:51:28 AM USER: jennifer\_kelley  
\\V101201215\1bshare\21798\_STA-Colonial\7.0-Production\Worksheets\II059\_400-Engineering\Roadway\Sheets\II059\_QP602.dgn

**CURVE 8**  
P.I. = Sta. 300+08.52  
 $\Delta = 02^{\circ}26'30''$  RT  
 $D_c = 14^{\circ}19'50''$   
 $R = 399.81'$   
 $T = 8.52'$   
 $L = 17.04'$   
 $E = 0.09'$





**CURVE 11**  
*P.I.* = Sta. 302+56.01  
 $\Delta = 18^\circ 56' 40''$  LT  
*Dc* =  $88^\circ 08' 50''$   
*R* = 65.00'  
*T* = 10.84'  
*L* = 21.49'  
*E* = 0.90'

**CURVE 9**  
***P.I. = Sta. 300+64.94***  
 ***$\Delta = 18^{\circ}56'41''$  RT***  
 ***$D_c = 104^{\circ}10'27''$***   
 ***$R = 55.00'$***   
 ***$T = 9.18'$***   
 ***$L = 18.19'$***   
 ***$E = 0.76'$***

**CURVE 12**  
*P.I.* = Sta. 302+75.84  
 $\Delta = 18^\circ 56' 40''$  RT  
 $D_c = 104^\circ 10' 27''$   
 $R = 55.00'$   
 $T = 9.18'$   
 $L = 18.19'$   
 $E = 0.76'$

**CURVE 10**  
***P.I. = Sta. 300+84.80***  
 ***$\Delta = 18^{\circ}56'40''$  LT***  
 ***$D_c = 88^{\circ}08'50''$***   
 ***$R = 65.00'$***   
 ***$T = 10.84'$***   
 ***$L = 21.49'$***   
 ***$E = 0.90'$***

LEGEND

- |                                                                                   |                                   |
|-----------------------------------------------------------------------------------|-----------------------------------|
|  | BRICK PARKING AREA                |
|  | CONCRETE HEADER                   |
|  | LIMITS OF PLANING AND RESURFACING |
|  | ITEM 608 - DETECTABLE WARNING     |

**NOTE:**

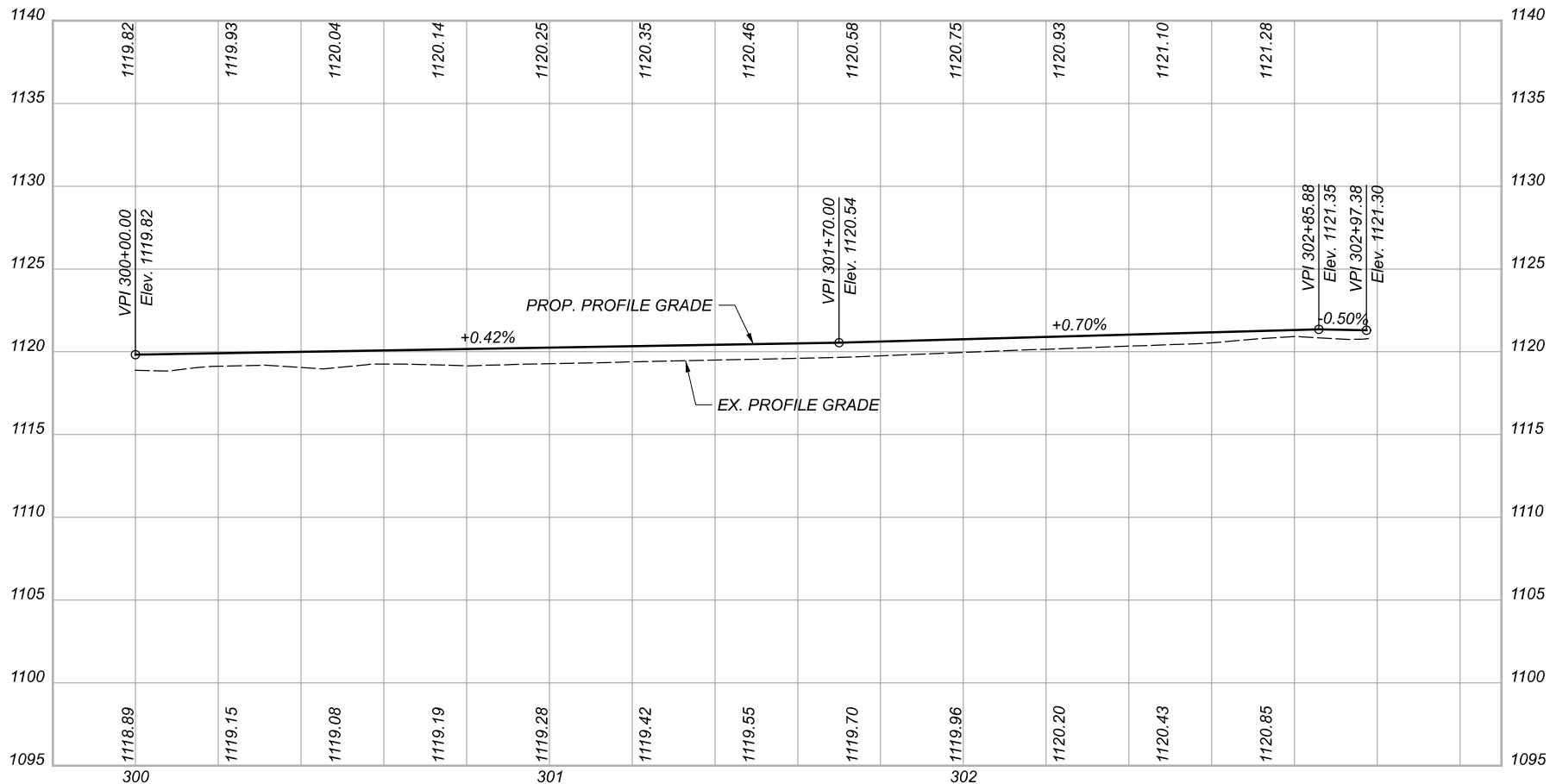
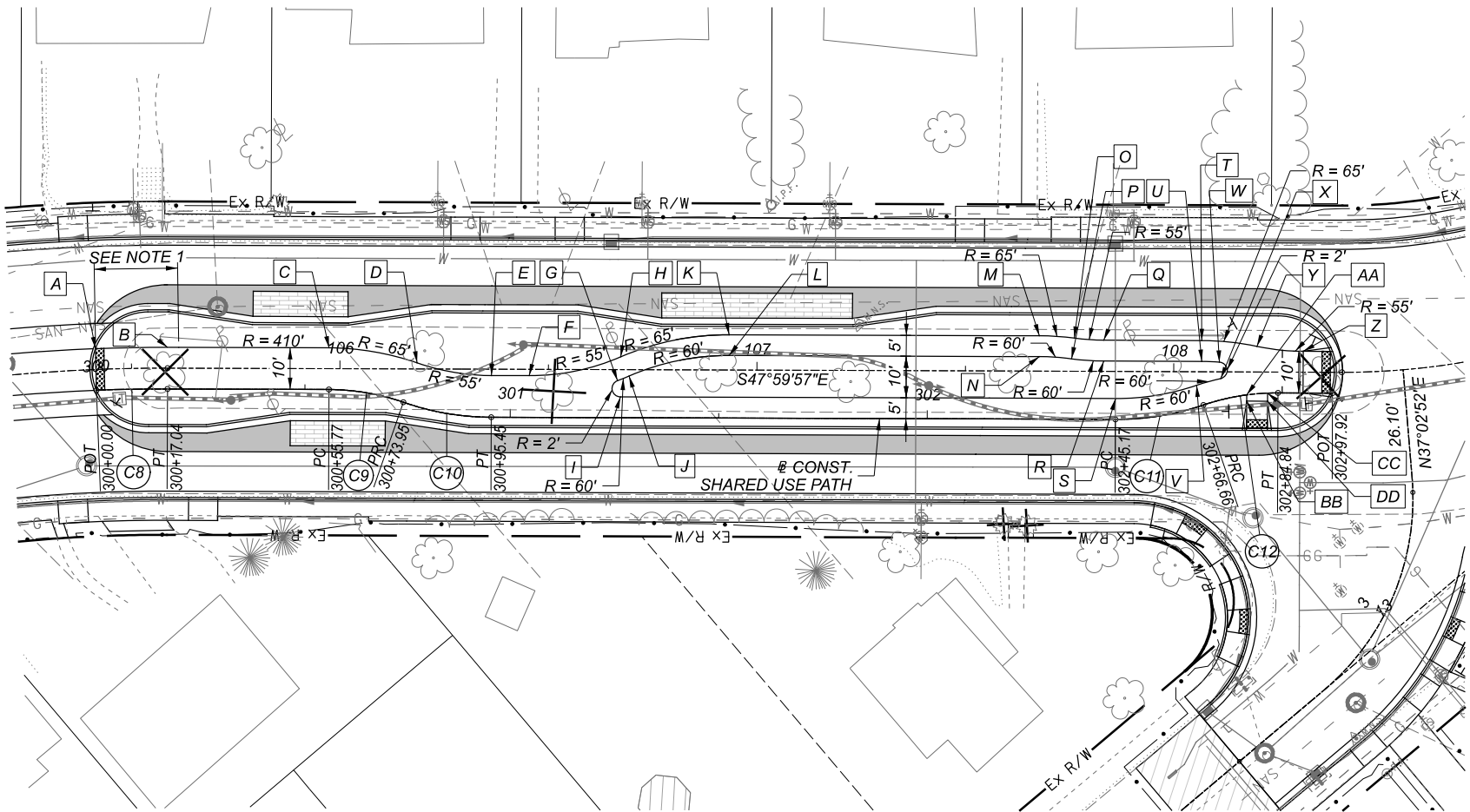
1.) TRANSITION PATH SLOPE OVER A DISTANCE OF 20 FEET TO TIE INTO BACK OF CURB ELEVATION ALONG NORTH EDGE OF SHARED USE PATH

CROSS REFERENCES:

SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

② CONST. SHARED USE PATH CORRELATION WITH ④ EX. R/W COLONIAL BLVD.			
STATION (ON ② CONST.)	STATION (ON ④ EX. R/W)	OFFSET (FROM ④ EX. R/W)	DESCRIPTION
300+00.00	105+41.38	5.00' RT	
300+17.04	105+58.63	5.00' RT	POT STATION
300+55.77	105+97.36	5.00' RT	PT STATION
300+73.95	106+15.22	5.00' RT	PC STATION
300+73.95	106+15.22	7.98' RT	PRC STATION
300+95.45	106+36.32	11.50' RT	PT STATION
302+45.17	107+86.04	11.50' RT	PC STATION
302+66.66	108+07.14	7.98' RT	PRC STATION
302+84.84	108+25.00	5.00' RT	PT STATION
302+97.92	108+38.08	5.00' RT	POT STATION

REFERENCE	STATION	OFFSET	REFERENCE	STATION	OFFSET
A	300+00.15	10' LT	P	302+34.60	14.5' LT
B	300+17.04	10' LT	Q	302+42.33	19' LT
C	300+55.77	10' LT	R	302+42.33	14' LT
D	300+73.95	10' LT	S	302+45.17	5' LT
E	300+95.45	10' LT	T	302+70.29	14.93' LT
F	301+04.49	10' LT	U	302+69.19	10.12' LT
G	301+25.70	8.87' LT	V	302+66.66	5' LT
H	301+26.48	14.58' LT	W	302+72.66	8.91' LT
I	301+26.40	5' LT	X	302+72.15	5' LT
J	301+28.47	10' LT	Y	302+80.62	11.34' LT
K	301+52.45	20' LT	Z	302+90.88	10' LT
L	301+52.45	15' LT	AA	302+77.32	@
M	302+26.87	20' LT	BB	302+77.11	1.47' RT
N	302+26.87	15' LT	CC	302+82.34	@
O	302+35.24	19.46' LT	DD	302+82.25	1.94' RT



HORIZONTAL  
SCALE IN FEET



A horizontal scale bar with alternating black and white segments. The segments are labeled 0, 10, 20, and 40, indicating a total length of 40 feet.

PLAN AND PROFILE - SHARED USE PATH  
STA. 300+00 TO STA. 302+97.92

DESIGN AGENCY



DESIGNER

.IMK

REVIEWER  
KMK 02-10-22

PROJECT ID

11105

SHEET	TOTAL
P.41	16



**CURVE 13**  
P.I. = Sta. 400+14.11  
 $\Delta = 09^\circ 13' 09''$  LT  
 $D_c = 32^\circ 44' 26''$   
 $R = 175.00'$   
 $T = 14.11'$   
 $L = 28.16'$   
 $E = 0.57'$




**CURVE 16**  
P.I. = Sta. 401+41.65  
 $\Delta = 49^\circ 10' 25''$  LT  
 $D_c = 32^\circ 05' 55''$   
 $R = 178.50'$   
 $T = 81.67'$   
 $L = 153.20'$   
 $E = 17.80'$

**CURVE 14**  
P.I. = Sta. 400+32.80  
 $\Delta = 09^\circ 39' 26''$  RT  
 $D_c = 104^\circ 10' 27''$   
 $R = 55.00'$   
 $T = 4.65'$   
 $L = 9.27'$   
 $E = 0.20'$

**CURVE 17**  
P.I. = Sta. 402+79.22  
 $\Delta = 90^\circ 00' 00''$  LT  
 $D_c = 21^\circ 58' 19''$   
 $R = 15.00'$   
 $T = 15.00'$   
 $L = 23.56'$   
 $E = 6.21'$

**CURVE 15**  
P.I. = Sta. 400+48.82  
 $\Delta = 19^\circ 52' 24''$  LT  
 $D_c = 88^\circ 08' 50''$   
 $R = 65.00'$   
 $T = 11.39'$   
 $L = 22.55'$   
 $E = 0.99'$

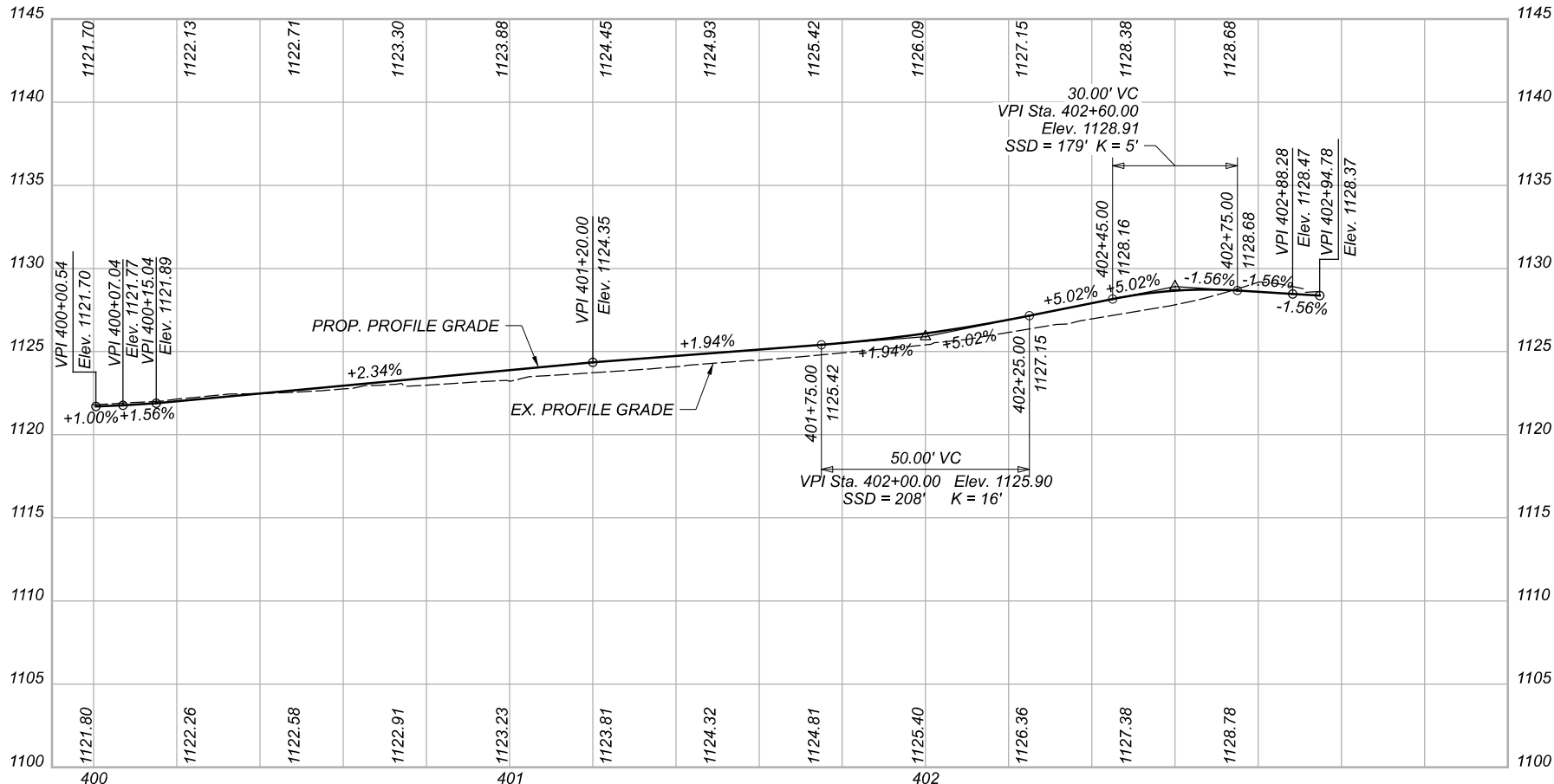
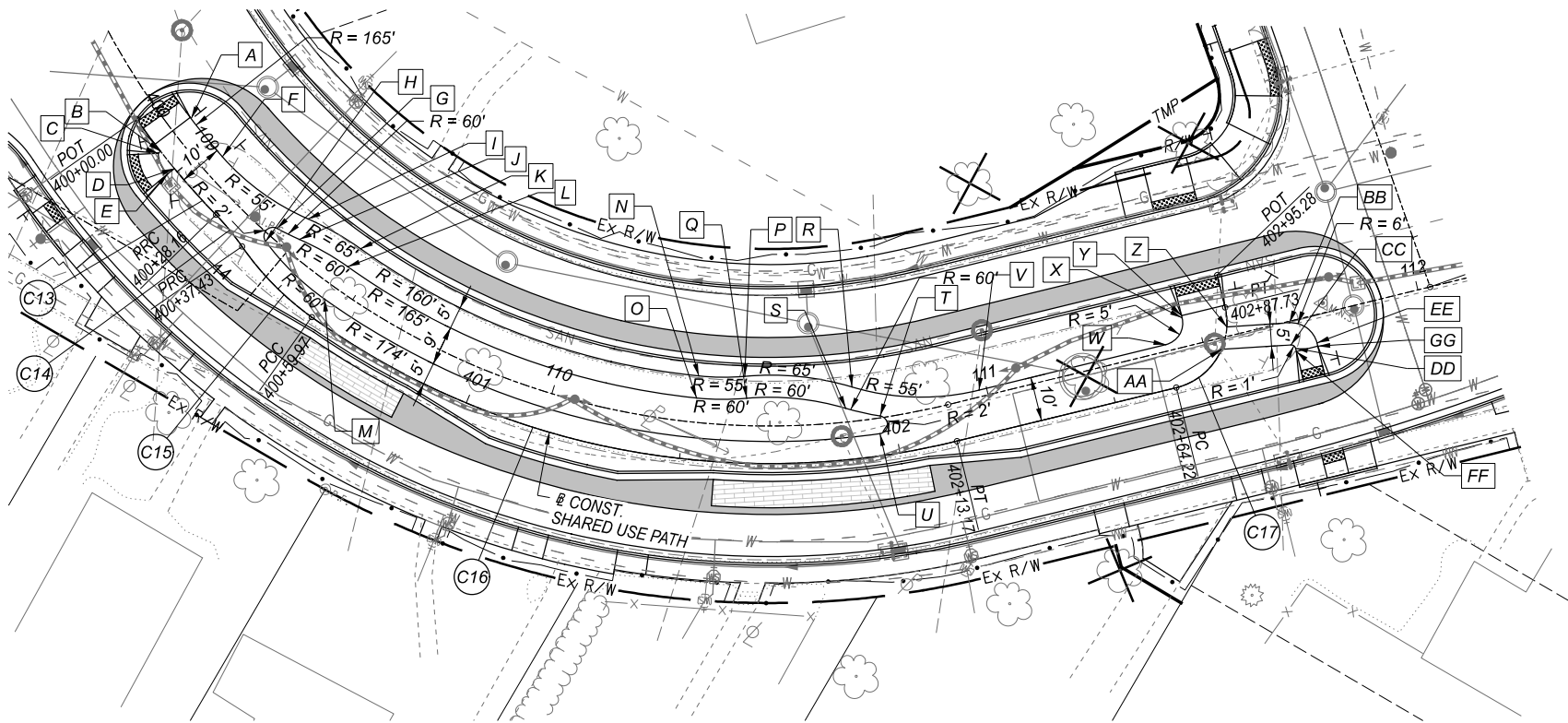
LEGEND

-  BRICK PARKING AREA  
 CONCRETE HEADER  
 ITEM 608 - DETECTABLE WARNING

CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

CONST. SHARED USE PATH CORRELATION WITH EX. R/W COLONIAL BLVD.			
STATION (ON CONST.)	STATION (ON EX. R/W)	OFFSET (FROM EX. R/W)	DESCRIPTION
400+00.00	108+87.11	5.00' RT	POT STATION
400+28.16	109+14.46	5.00' RT	PRC STATION
400+37.43	109+23.38	6.02' RT	PRC STATION
400+59.97	109+44.77	8.50' RT	PCC STATION
402+13.17	110+90.67	8.50' RT	PT STATION
402+64.22	111+41.72	8.50' RT	PC STATION
402+87.78	111+56.72	6.50' LT	PT STATION
402+95.28	111+56.72	14.00' LT	POT STATION

REFERENCE	STATION	OFFSET	REFERENCE	STATION	OFFSET
A	400+07.44	10' LT	R	401+90.93	16.24' LT
B	400+09.10		S	401+88.83	11.63' LT
C	400+09.10	0.66' RT	T	401+96.79	8.91' LT
D	400+14.11		U	401+96.17	5' LT
E	400+14.05	2' RT	V	402+20.73	10' LT
F	400+19.28	10' LT	W	402+64.22	10' LT
G	400+38.77	8.81' LT	X	402+87.78	10' LT
H	400+39.73	5' LT	Y	402+88.28	10' LT
I	400+41.91	15.69' LT	Z	402+83.33	
J	400+44.74	11.22' LT	AA	402+78.07	
K	400+59.97	19' LT	BB	402+84.22	14.13' RT
L	400+59.97	14' LT	CC	402+81.70	14.87' RT
M	400+59.97	5' LT	DD	402+81.42	16.02' RT
N	401+52.43	19' LT	EE	402+82.29	20.64' RT
O	401+52.43	14' LT	FF	402+81.10	16.33' RT
P	401+64.07	19.64' LT	GG	402+82.00	20.91' RT
Q	401+64.74	14.68' LT			



PLAN AND PROFILE - SHARED USE PATH  
STA. 400+00 TO STA. 402+95.28

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.42

TOTAL

168

**CURVE 18**  
P.I. = Sta. 500+15.36  
 $\Delta = 78^{\circ}37'44''$  RT  
 $D_c = 212^{\circ}57'28''$   
 $R = 10.00'$   
 $T = 8.19'$   
 $L = 13.72'$   
 $E = 2.93'$

**CURVE 21**  
P.I. = Sta. 500+99.21  
 $\Delta = 12^{\circ}58'50''$  LT  
 $D_c = 88^{\circ}08'50''$   
 $R = 65.00'$   
 $T = 7.39'$   
 $L = 14.73'$   
 $E = 0.42'$




**CURVE 19**  
P.I. = Sta. 500+24.51  
 $\Delta = 00^{\circ}46'20''$  RT  
 $D_c = 10^{\circ}41'22''$   
 $R = 536.00'$   
 $T = 3.61'$   
 $L = 7.22'$   
 $E = 0.01'$

**CURVE 22**  
P.I. = Sta. 501+92.43  
 $\Delta = 16^{\circ}13'00''$  RT  
 $D_c = 10^{\circ}36'02''$   
 $R = 540.50'$   
 $T = 77.00'$   
 $L = 152.98'$   
 $E = 5.46'$

**CURVE 20**  
P.I. = Sta. 500+39.60  
 $\Delta = 23^{\circ}34'46''$  RT  
 $D_c = 104^{\circ}10'27''$   
 $R = 55.00'$   
 $T = 11.48'$   
 $L = 22.63'$   
 $E = 1.19'$

**CURVE 23**  
P.I. = Sta. 502+73.85  
 $\Delta = 09^{\circ}34'57''$  LT  
 $D_c = 88^{\circ}08'50''$   
 $R = 65.00'$   
 $T = 5.45'$   
 $L = 10.87'$   
 $E = 0.23'$

LEGEND

-  BRICK PARKING AREA
-  CONCRETE HEADER
-  ITEM 608 - DETECTABLE WARNING

NOTE:

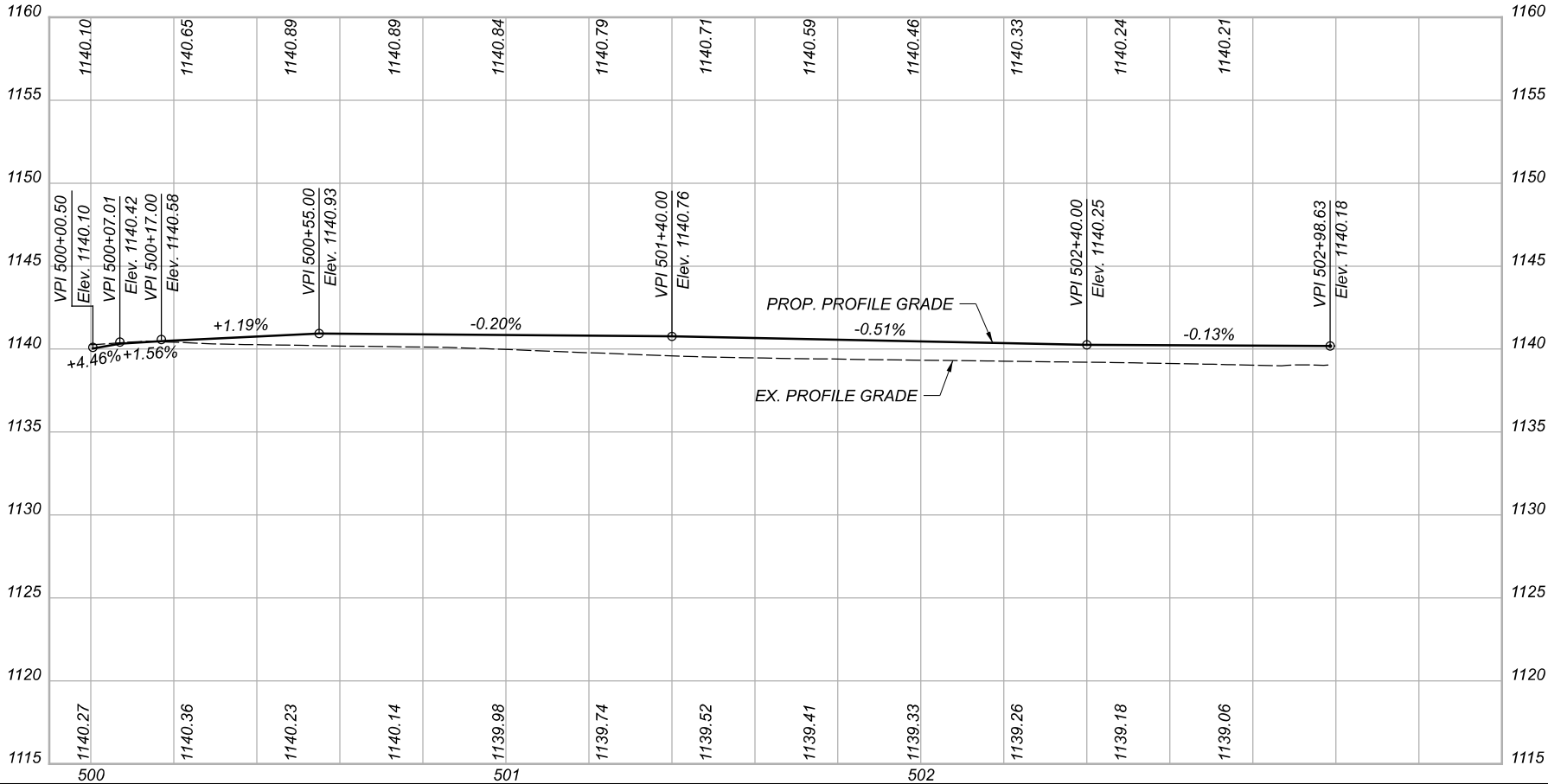
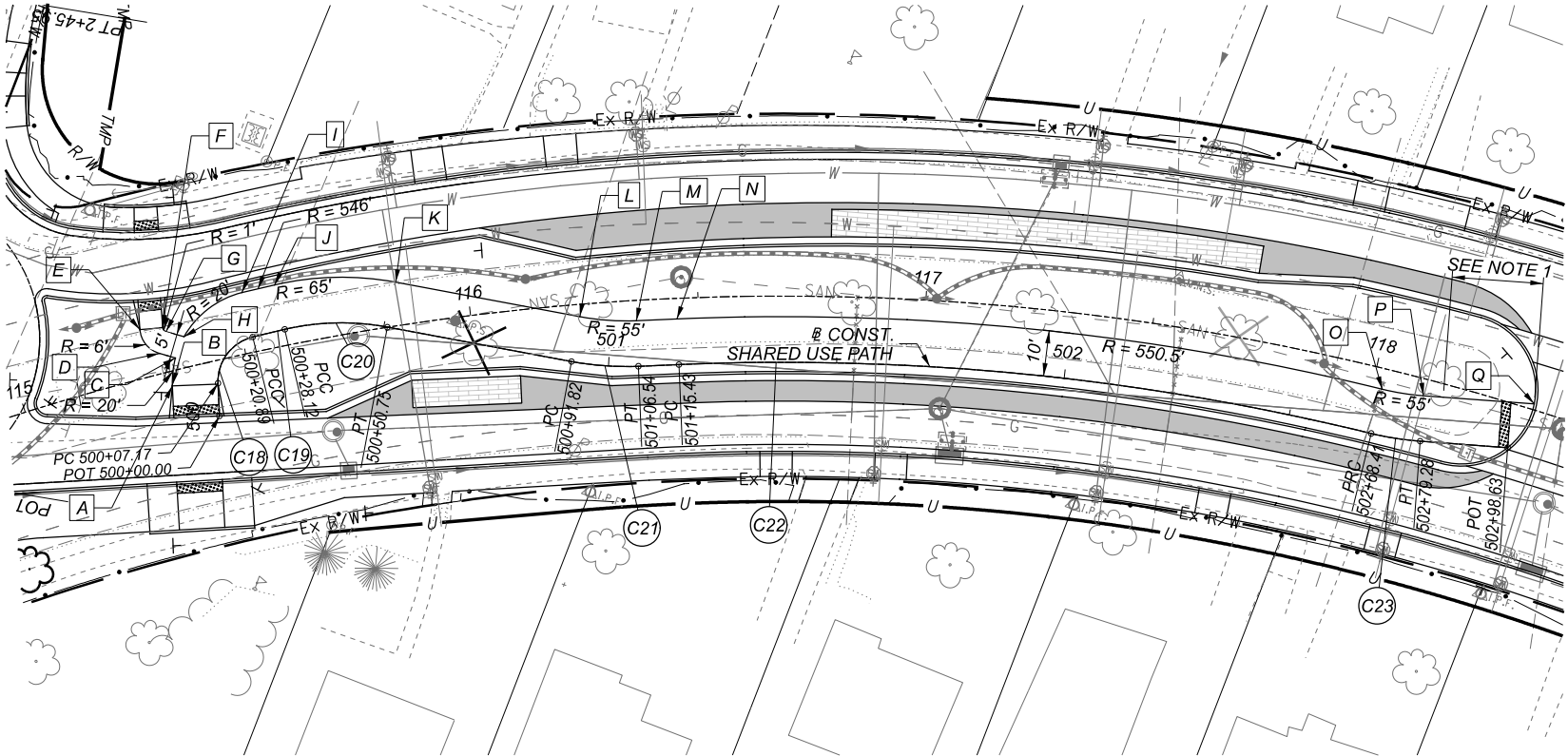
1.) TRANSITION PATH SLOPE OVER A DISTANCE OF 20 FEET TO TIE INTO  
BACK OF CURB ELEVATION ALONG NORTH EDGE OF SHARED USE PATH.

CROSS REFERENCES:

SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

@ CONST. SHARED USE PATH CORRELATION WITH @ EX. R/W COLONIAL BLVD.			
STATION (ON @ CONST.)	STATION (ON @ EX. R/W)	OFFSET (FROM @ EX. R/W)	DESCRIPTION
500+00.00	115+41.28	12.01' RT	POT STATION
500+07.17	115+42.63	4.96' RT	PC STATION
500+20.89	115+52.27	3.29' LT	PCC STATION
500+28.12	115+59.44	3.51' LT	PCC STATION
500+50.75	115+81.58	0.03' LT	PT STATION
500+91.82	116+21.19	12.33' RT	PC STATION
501+06.54	116+36.09	14.43' RT	PT STATION
501+15.43	116+45.22	14.50' RT	PC STATION
502+68.41	118+02.30	14.50' RT	PRC STATION
502+79.28	118+13.39	13.48' RT	PT STATION
502+98.53	118+32.64	9.57' RT	POT STATION

REFERENCE	STATION	OFFSET	REFERENCE	STATION	OFFSET
A	500+07.00	10' LT	J	500+28.12	10' LT
B	500+07.17	10' LT	K	500+50.75	10' LT
C	500+10.17	10' LT	L	500+91.82	10' LT
D	500+10.21	13.61' LT	M	501+06.54	10' LT
E	500+11.56	19.38' LT	N	501+15.43	10' LT
F	500+12.49	15.07' LT	O	502+68.41	10' LT
G	500+12.31	14.03' LT	P	502+79.28	10' LT
H	500+12.69	10' LT	Q	503+03.63	10' LT
I	500+20.89	10' LT			



HORIZONTAL  
SCALE IN FEET

0 20 40

PLAN AND PROFILE - SHARED USE PATH  
STA. 500+00 TO STA. 502+98.63

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.43

TOTAL

168

**CURVE 24**  
P.I. = Sta. 600+25.71  
 $\Delta = 18^{\circ}59'13''$  RT  
 $Dc = 104^{\circ}10'27''$   
 $R = 55.00'$   
 $T = 9.20'$   
 $L = 18.23'$   
 $E = 0.76'$

**CURVE 28**  
P.I. = Sta. 601+92.82  
 $\Delta = 25^{\circ}15'03''$  LT  
 $Dc = 88^{\circ}08'50''$   
 $R = 65.00'$   
 $T = 14.56'$   
 $L = 28.65'$   
 $E = 1.61'$

**CURVE 25**  
P.I. = Sta. 600+85.56  
 $\Delta = 10^{\circ}22'51''$  RT  
 $Dc = 10^{\circ}14'26''$   
 $R = 559.50'$   
 $T = 50.82'$   
 $L = 101.37'$   
 $E = 2.30'$

**CURVE 29**  
P.I. = Sta. 602+27.50  
 $\Delta = 04^{\circ}20'26''$  RT  
 $Dc = 10^{\circ}32'31''$   
 $R = 543.50'$   
 $T = 20.60'$   
 $L = 41.17'$   
 $E = 0.39'$

**CURVE 26**  
P.I. = Sta. 601+41.20  
 $\Delta = 10^{\circ}34'40''$  RT  
 $Dc = 104^{\circ}10'27''$   
 $R = 55.00'$   
 $T = 5.09'$   
 $L = 10.15'$   
 $E = 0.24'$

**CURVE 30**  
P.I. = Sta. 602+57.80  
 $\Delta = 17^{\circ}00'56''$  LT  
 $Dc = 88^{\circ}08'50''$   
 $R = 65.00'$   
 $T = 9.72'$   
 $L = 19.30'$   
 $E = 0.72'$

**CURVE 27**  
P.I. = Sta. 601+67.94  
 $\Delta = 21^{\circ}45'49''$  RT  
 $Dc = 104^{\circ}10'27''$   
 $R = 55.00'$   
 $T = 10.57'$   
 $L = 20.89'$   
 $E = 1.01'$

**CURVE 31**  
P.I. = Sta. 602+77.49  
 $\Delta = 20^{\circ}49'53''$  RT  
 $Dc = 104^{\circ}10'27''$   
 $R = 55.00'$   
 $T = 10.11'$   
 $L = 20.00'$   
 $E = 0.92'$

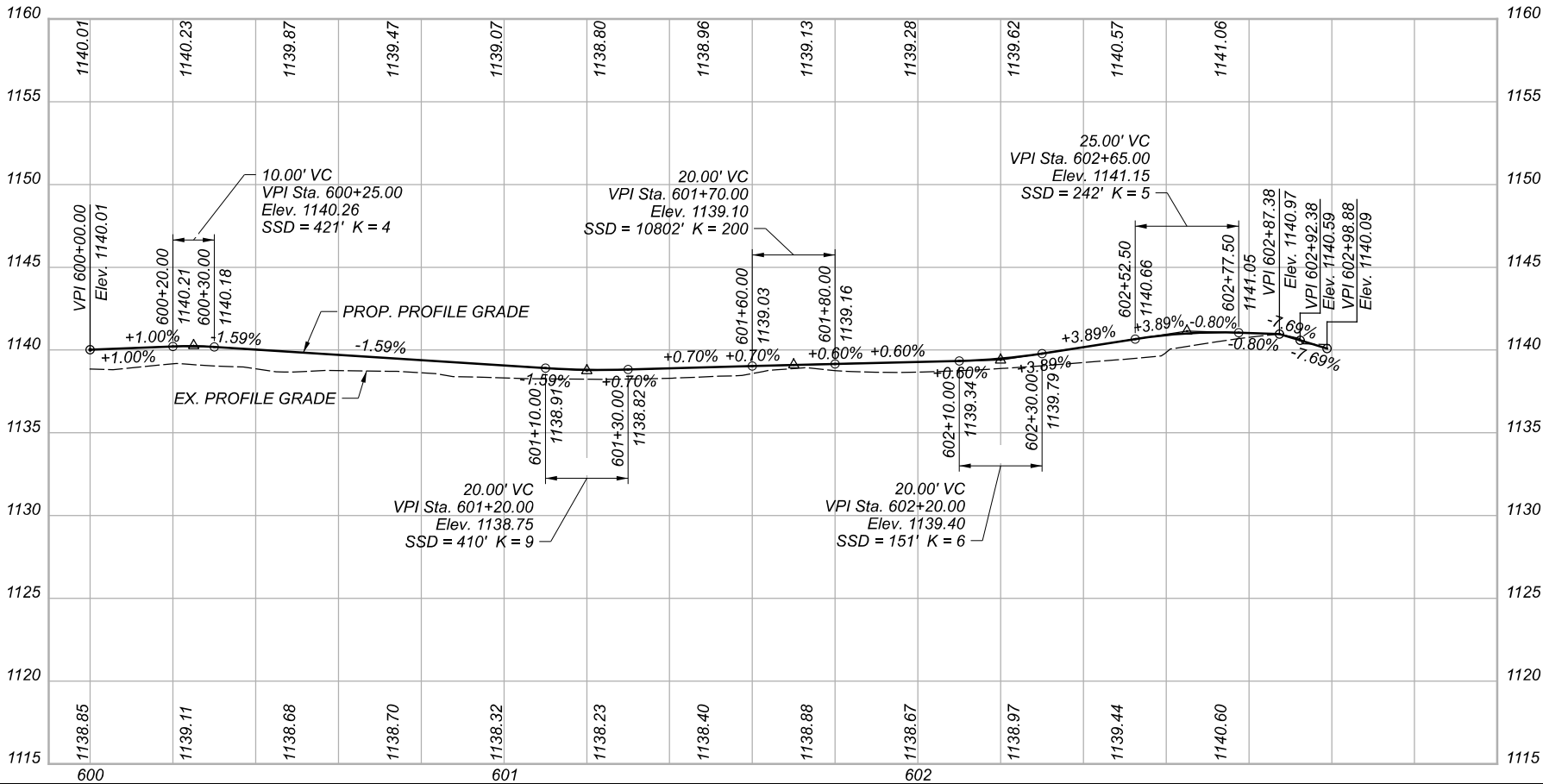
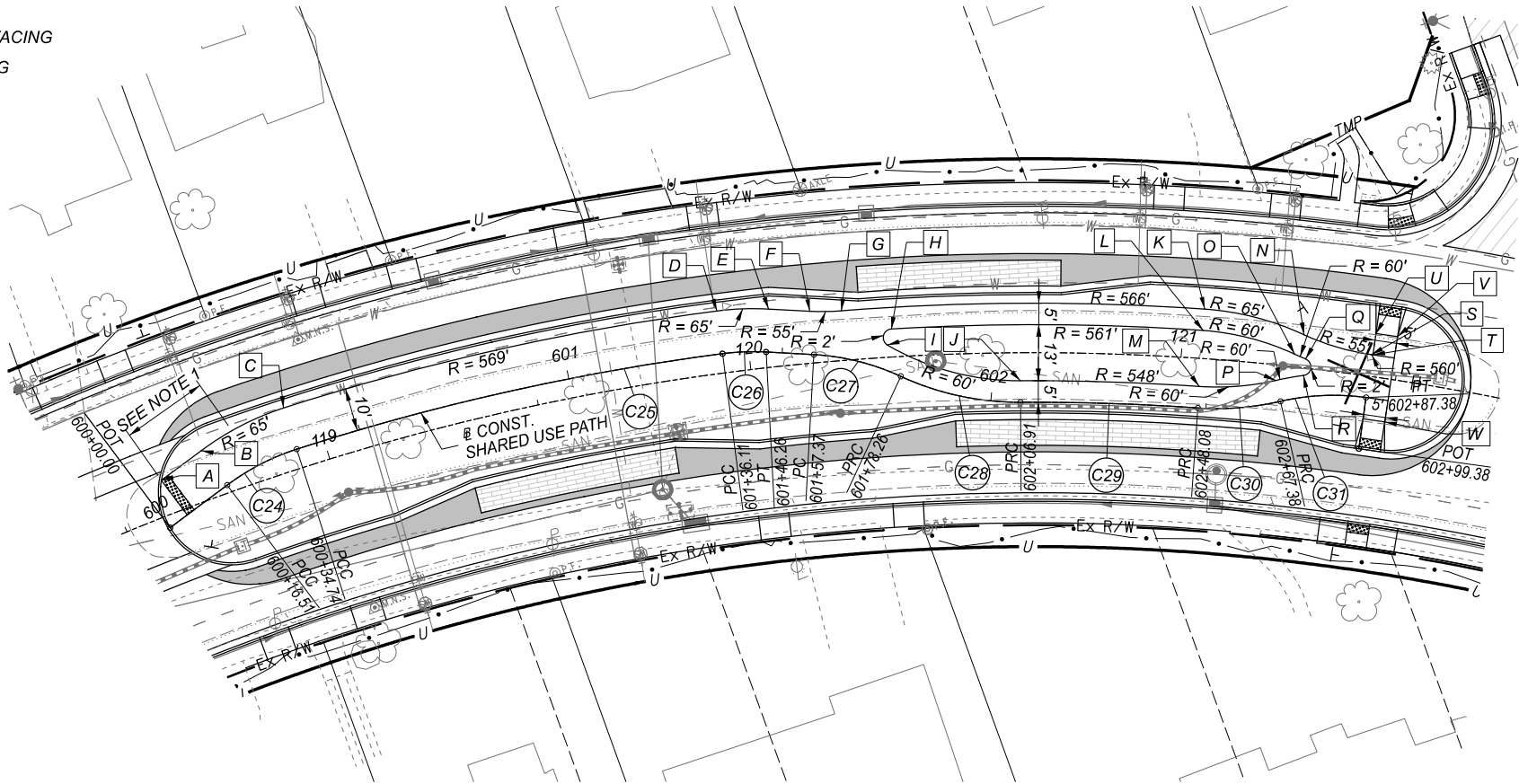
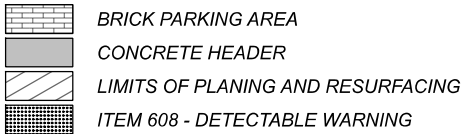
**NOTE:**  
1.) TRANSITION PATH SLOPE OVER A DISTANCE OF 20 FEET TO TIE INTO  
BACK OF CURB ELEVATION ALONG NORTH EDGE OF SHARED USE PATH.

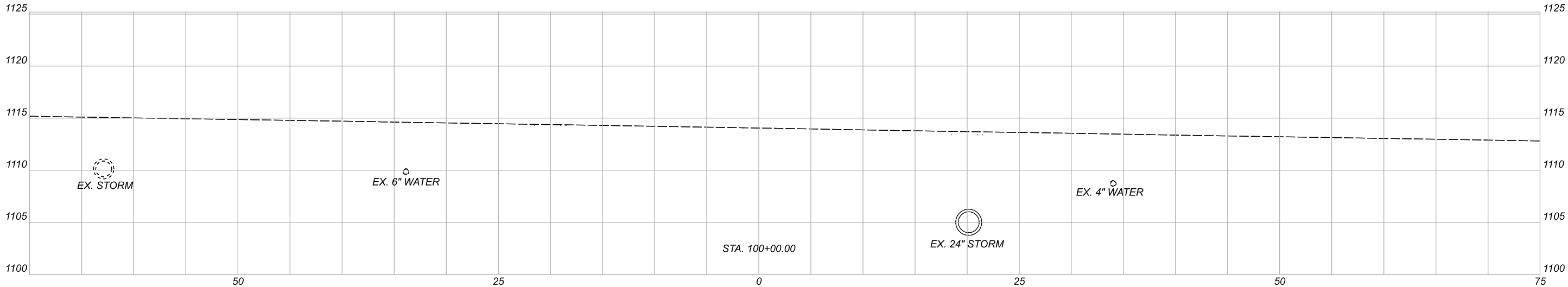
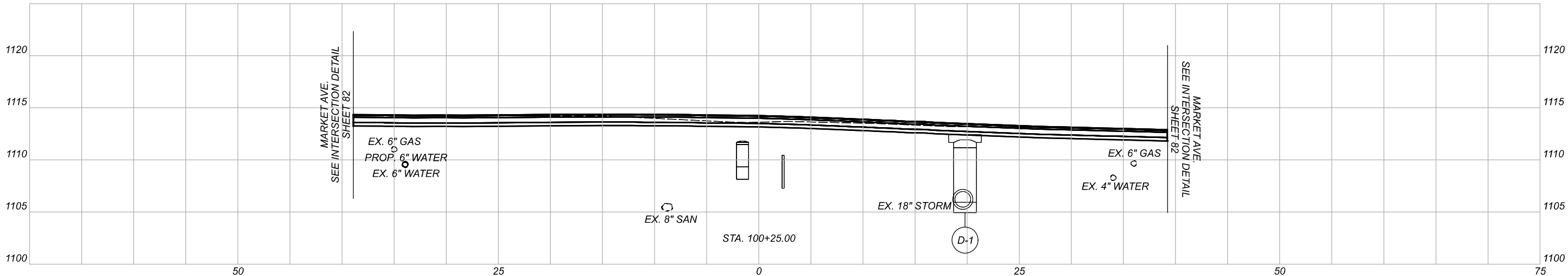
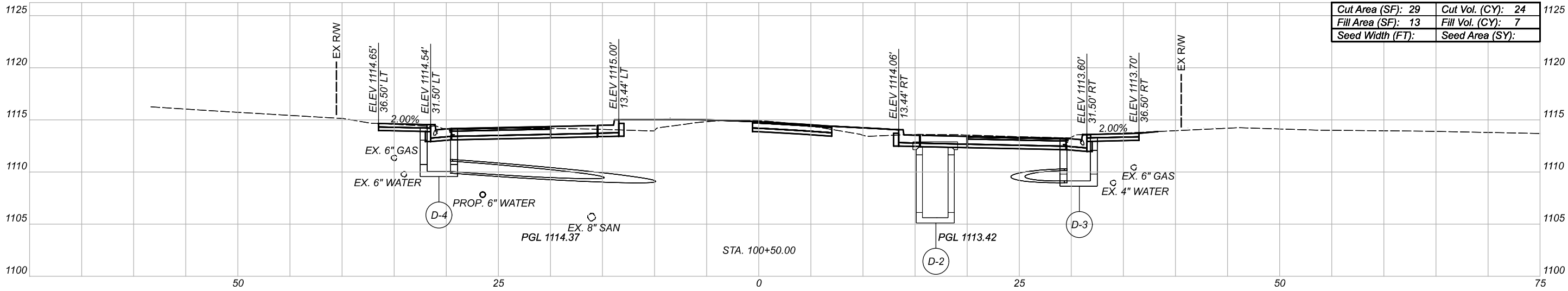
**CROSS REFERENCES:**  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-86 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 105-109 FOR STORM SEWER PLAN  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

# CONST. SHARED USE PATH CORRELATION WITH # EX. R/W COLONIAL BLVD.			
STATION (ON # CONST.)	STATION (ON # EX. R/W)	OFFSET (FROM # EX. R/W)	DESCRIPTION
600+00.00	118+59.69	2.85' RT	POT STATION
600+16.51	118+75.56	1.80' LT	PC STATION
600+34.74	118+93.40	4.50' LT	PCC STATION
601+36.11	119+93.95	4.50' LT	PCC STATION
601+46.26	120+03.98	3.66' LT	PT STATION
601+57.37	120+14.90	1.92' LT	PC STATION
601+78.26	120+34.66	4.59' RT	PRC STATION
602+06.91	120+62.63	11.50' RT	PRC STATION
602+48.08	121+04.68	11.50' RT	PRC STATION
602+67.38	121+23.99	8.32' RT	PRC STATION
602+87.38	121+43.84	5.00' RT	PT STATION
602+99.38	121+43.84	17.00' RT	POT STATION

REFERENCE	STATION	OFFSET	REFERENCE	STATION	OFFSET
A	600+04.93	10' LT	M	602+48.08	5' LT
B	600+16.51	10' LT	N	602+74.35	14.41' LT
C	600+34.74	10' LT	O	602+72.19	10.17' LT
D	601+36.11	10' LT	P	602+67.38	5' LT
E	601+46.26	10' LT	Q	602+74.22	8.75' LT
F	601+55.83	10' LT	R	602+73.38	5' LT
G	601+62.24	10.75' LT	S	602+87.23	10' LT
H	601+72.60	9.38' LT	T	602+87.38	10' LT
I	601+72.93	5.57' LT	U	602+87.38	15' LT
J	602+06.91	5' LT	V	602+87.38	15.87' LT
K	602+48.08	23' LT	W	602+92.40	5.07' LT
L	602+48.08	18' LT			

**LEGEND**





FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
.	24	7

CROSS SECTIONS - COLONIAL BLVD.  
STA. 100+00 TO STA. 100+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

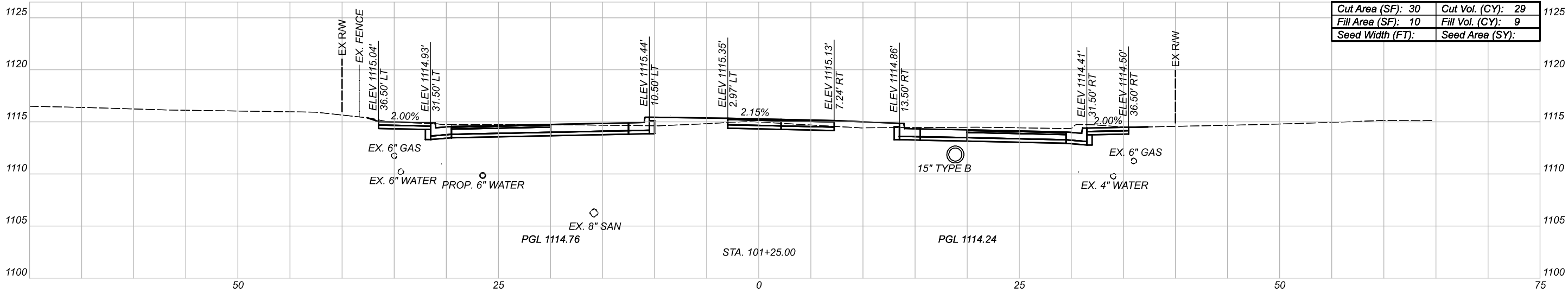
111059

SHEET TOTAL

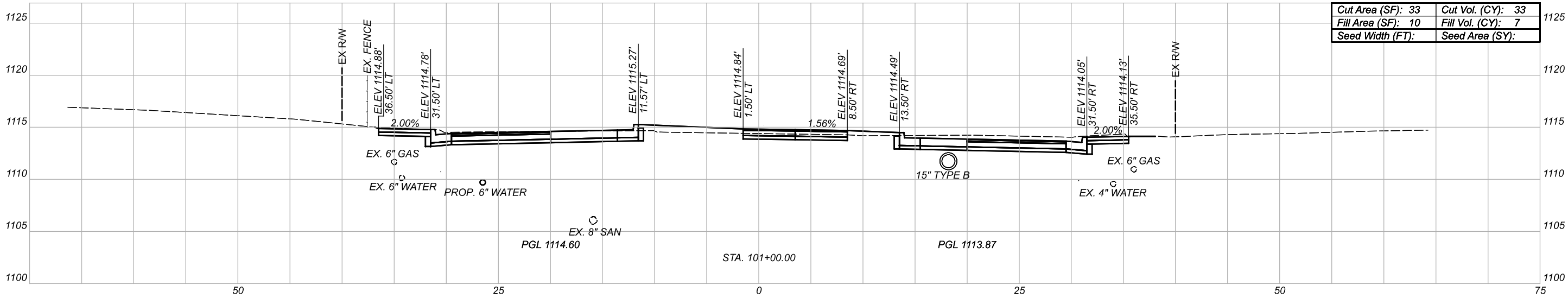
P.45 168

STA-COLONIAL BOULEVARD NE - PHASE 1

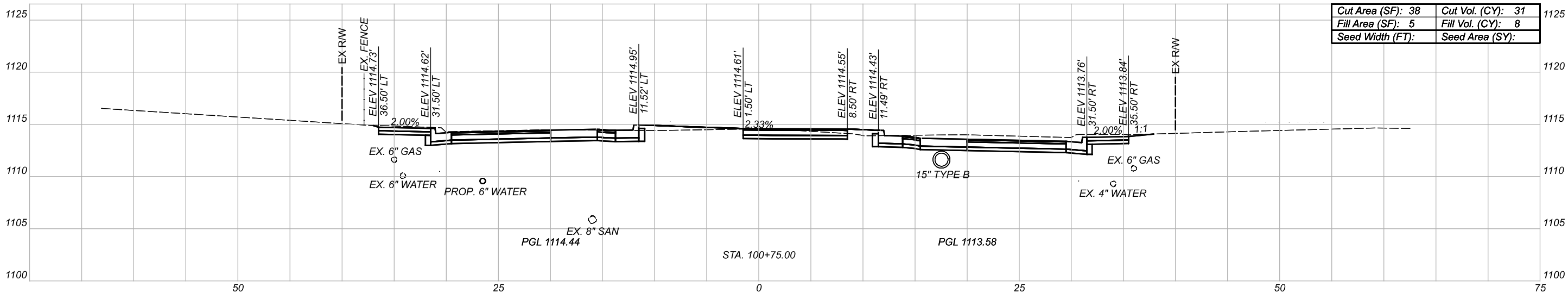
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Seed Width (FT):	Seed Area (SY):



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Seed Width (FT):	Seed Area (SY):

FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals			111059	
Seeding	Cut	Fill	SHEET	TOTAL
.	93	24	P.46	168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 100+75 TO STA. 101+25

DESIGN AGENCY

[BI]

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

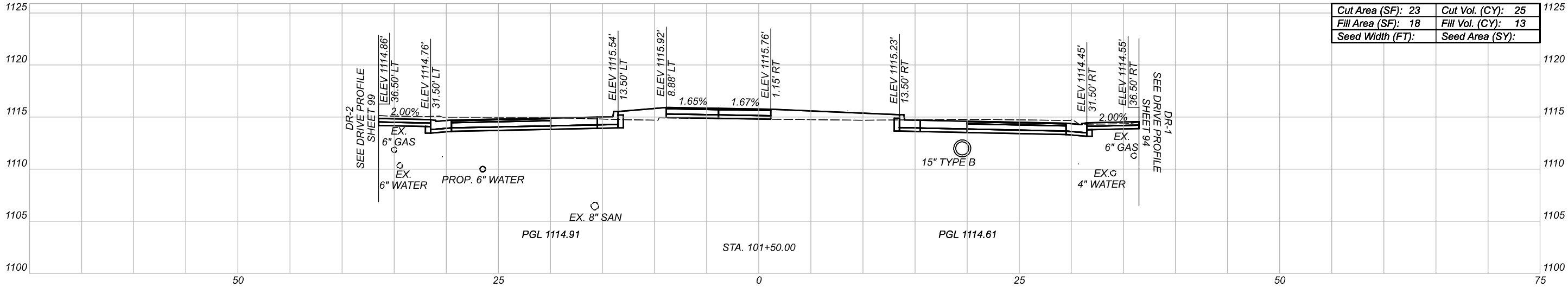
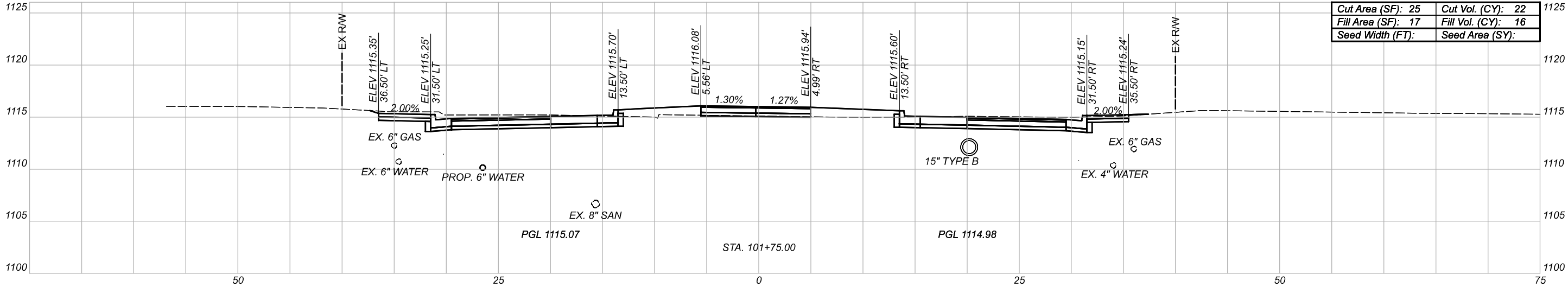
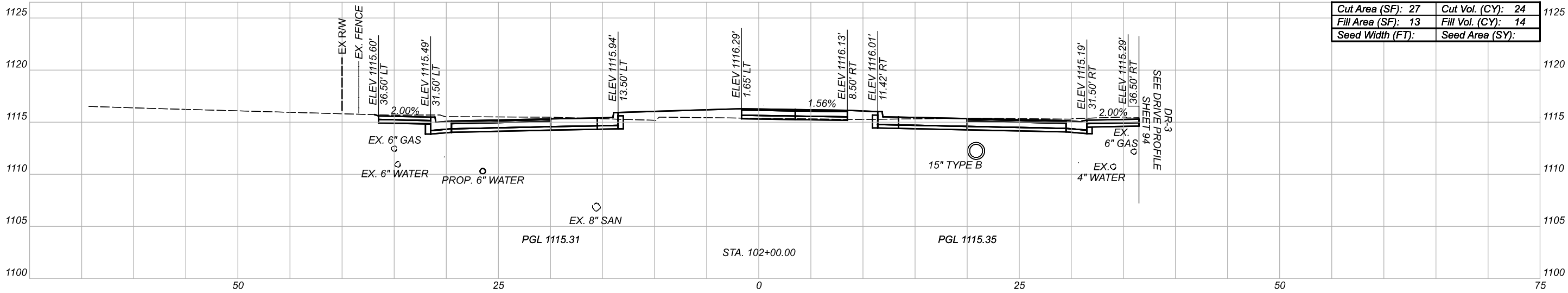
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STA-COLONIAL BOULEVARD NE - PHASE 1

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\\NO1201125\\bshare\\21798\_STA-Colonial\\7.0\_Production\\Worksheets\\11059\_400-Engineering\\Roadway\\Sheets\\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

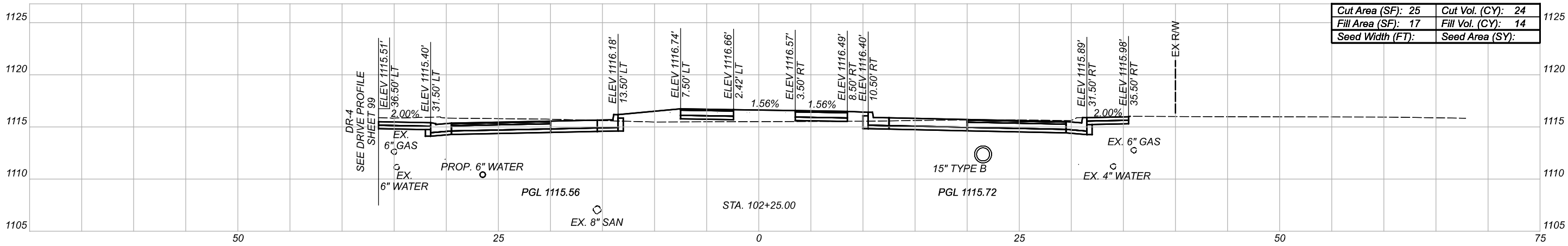
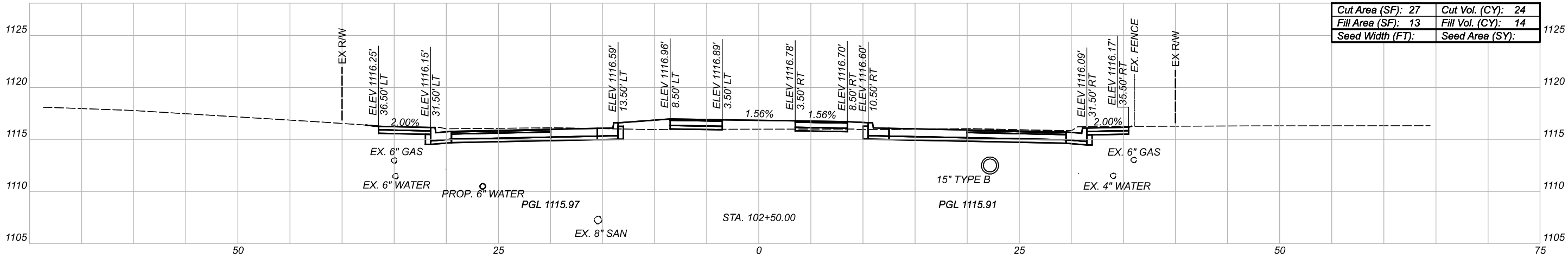
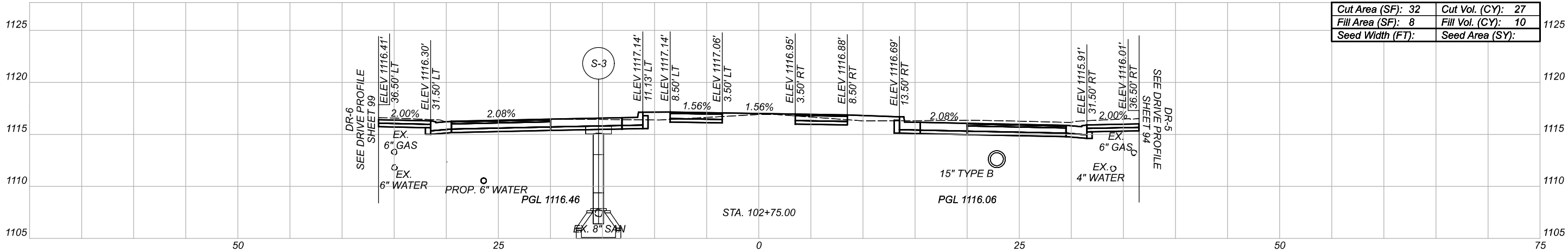
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CROSS SECTIONS - COLONIAL BLVD.  
STA. 101+50 TO STA. 102+00

DESIGN AGENCY	[BI]
DESIGNER	
REVIEWER	JMK
PROJECT ID	111059
PROJECT ID	111059
PROJECT ID	111059

STA-COLONIAL BOULEVARD NE - PHASE 1

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\\NO1201125\1bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
.	75	38

DESIGN AGENCY

[BI]

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.48

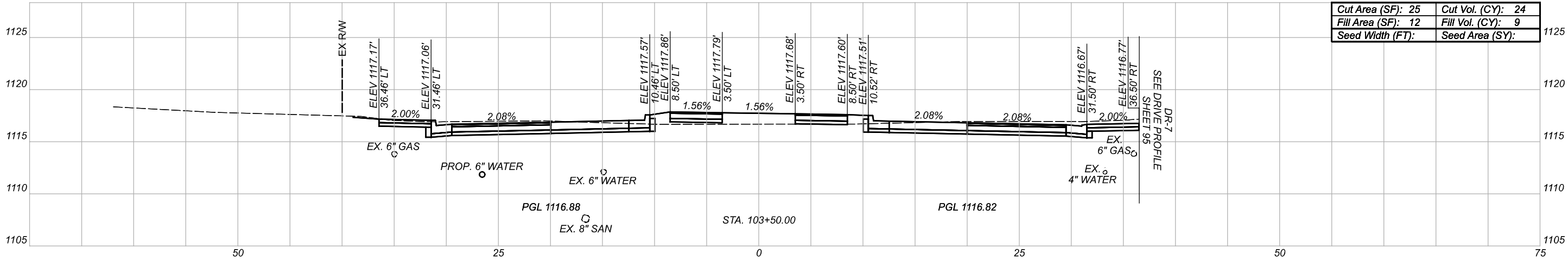
TOTAL

168

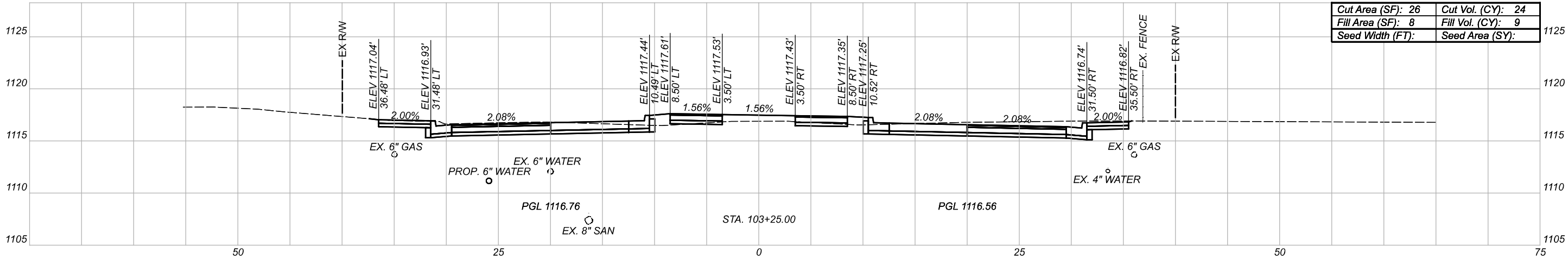
CROSS SECTIONS - COLONIAL BLVD.  
STA. 102+25 TO STA. 102+75

STA-COLONIAL BOULEVARD NE - PHASE 1

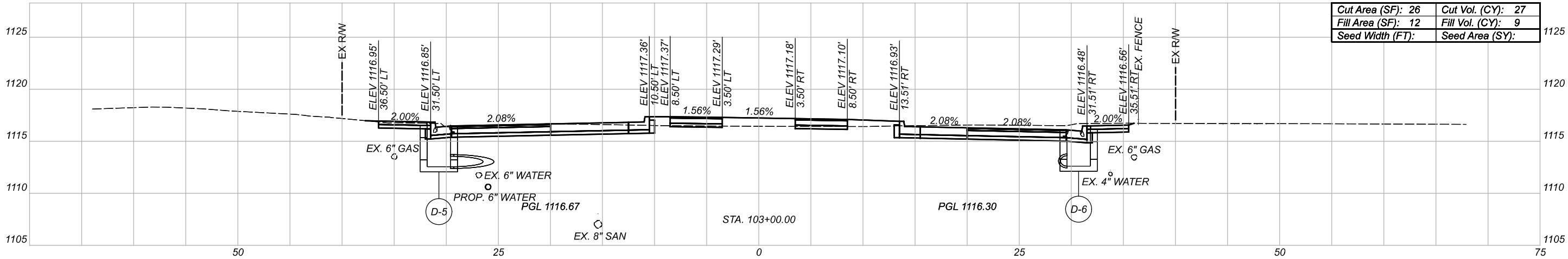
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Seed Width (FT):		Seed Area (SY):	



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Fill Area (SF):	12	Fill Vol. (CY):	9
Seed Width (FT):		Seed Area (SY):	

FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
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CROSS SECTIONS - COLONIAL BLVD.  
STA. 103+00 TO STA. 103+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

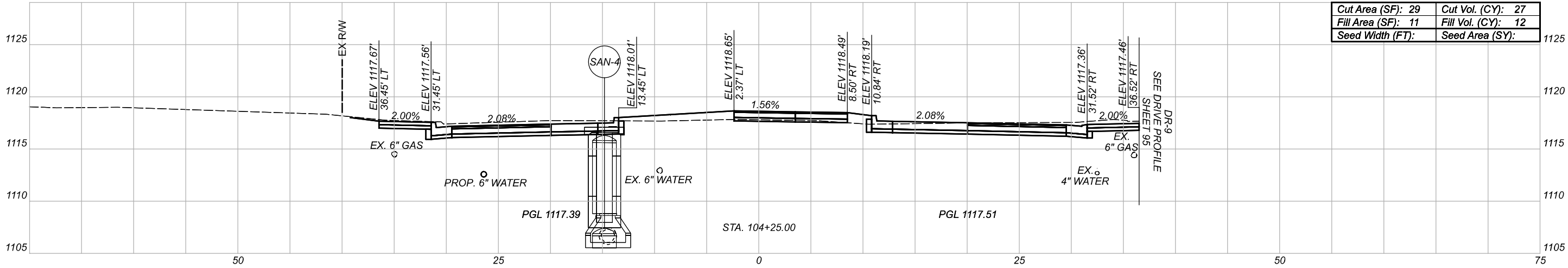
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TOTAL

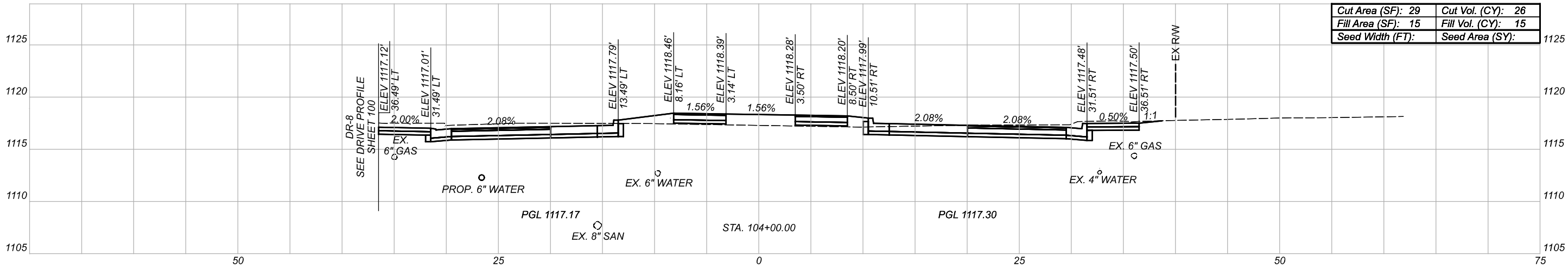
168

STA-COLONIAL BOULEVARD NE - PHASE 1

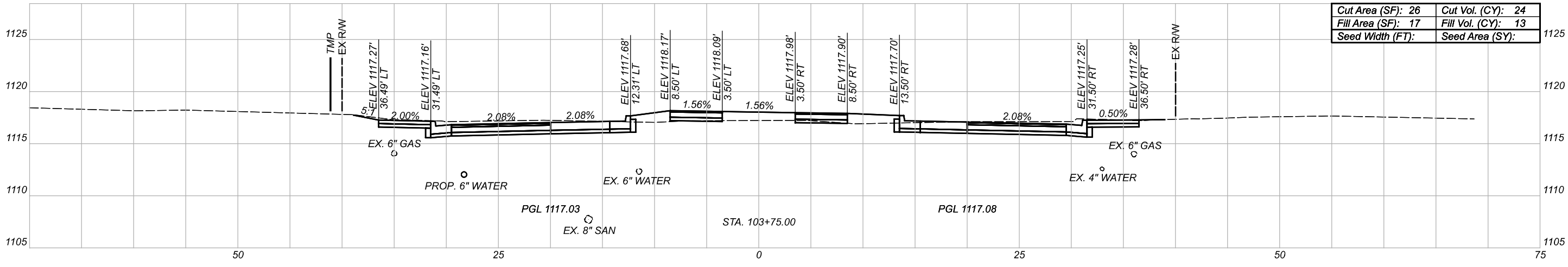
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\\101201125\1bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



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Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	26	Cut Vol. (CY):	24
Fill Area (SF):	17	Fill Vol. (CY):	13
Seed Width (FT):		Seed Area (SY):	

FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
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DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

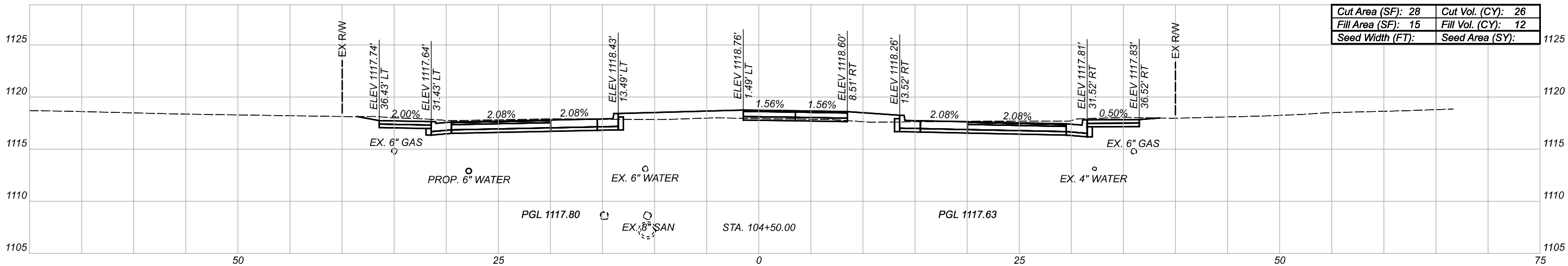
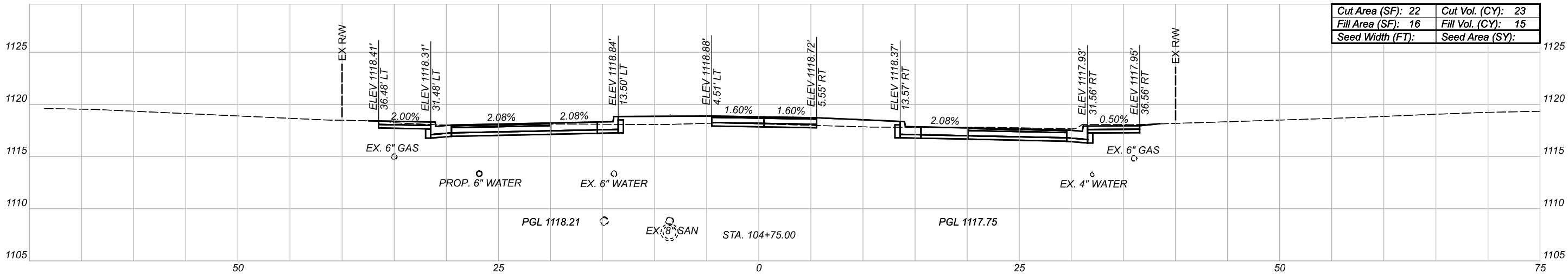
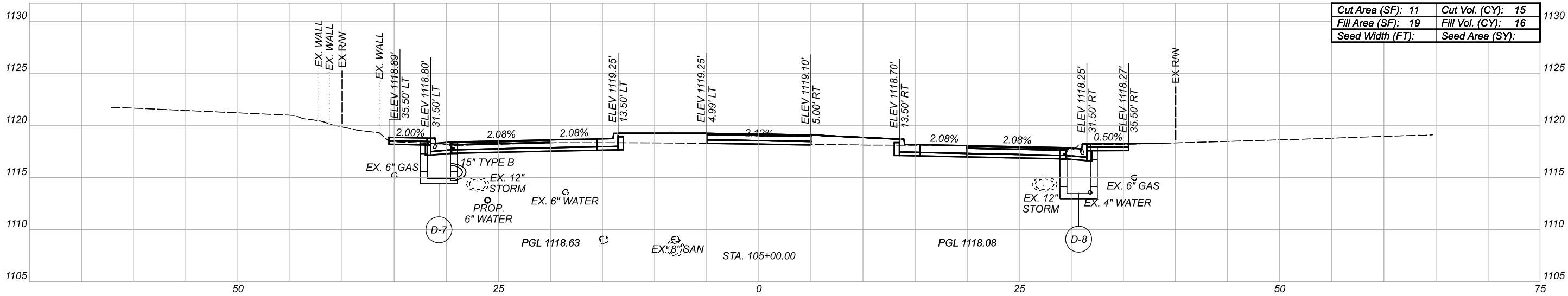
SHEET

P.50

TOTAL

168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 103+75 TO STA. 104+25



FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
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DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

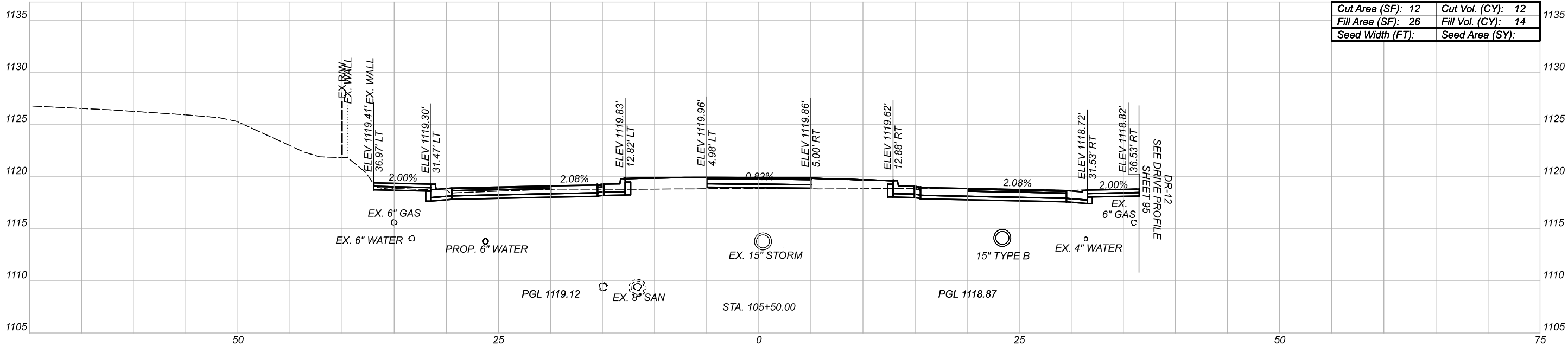
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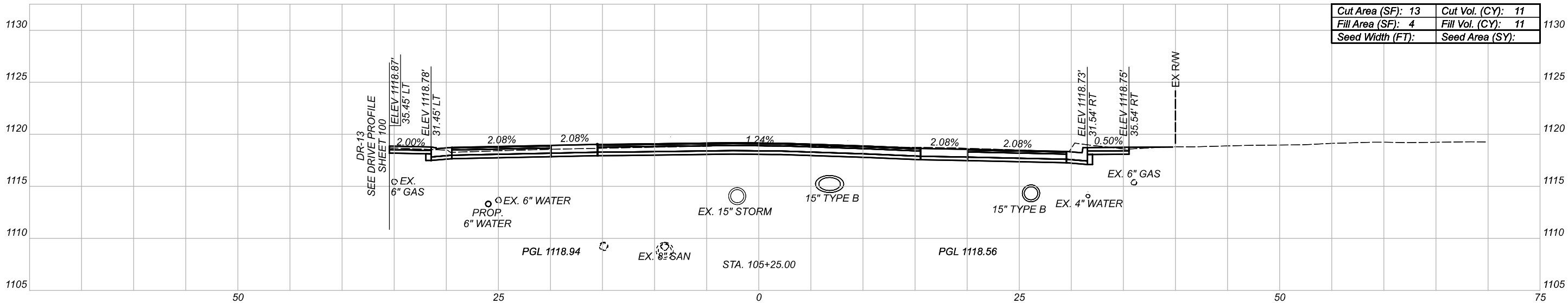
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CROSS SECTIONS - COLONIAL BLVD.  
STA. 104+50 TO STA. 105+00





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Seed Width (FT):		Seed Area (SY):	

Sheet Totals		
Seeding	Cut	Fill
·	23	25

FOR SEEDING QUANTITIES SEE SHEET 18

CROSS SECTIONS - COLONIAL BLVD.  
STA. 105+25 TO STA. 105+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

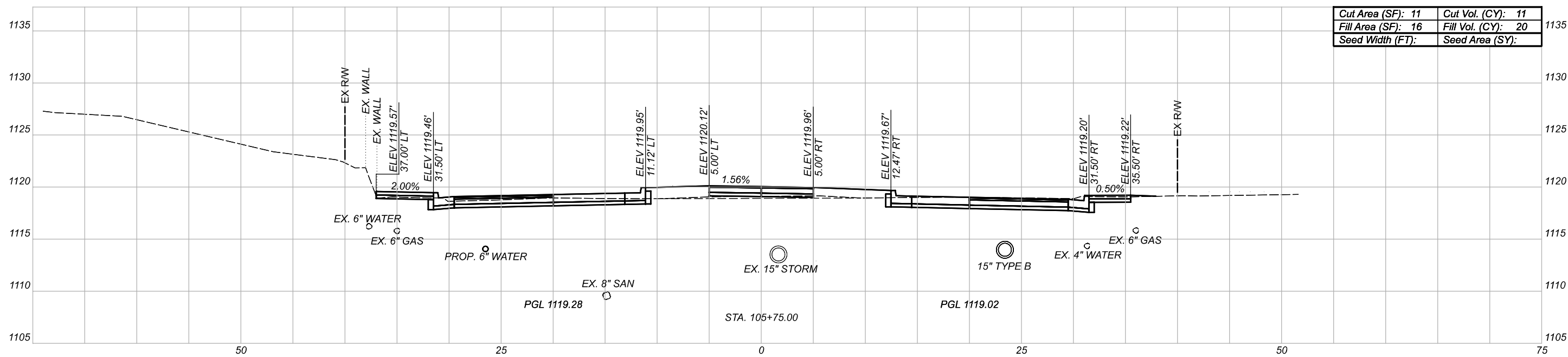
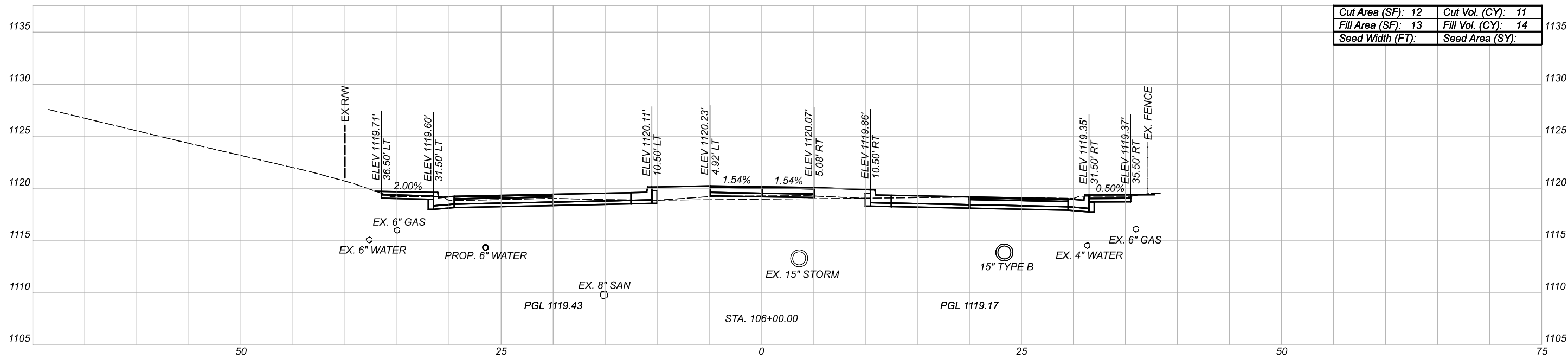
P.52

TOTAL

168


# STA-COLONIAL BOULEVARD NE - PHASE 1

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\\N102012152\bsbare\121798\_STA-Colonial\7.0-Production\Worksheets\11059\_400-Engineering\Roadway\Sheets\11059\_XS001.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

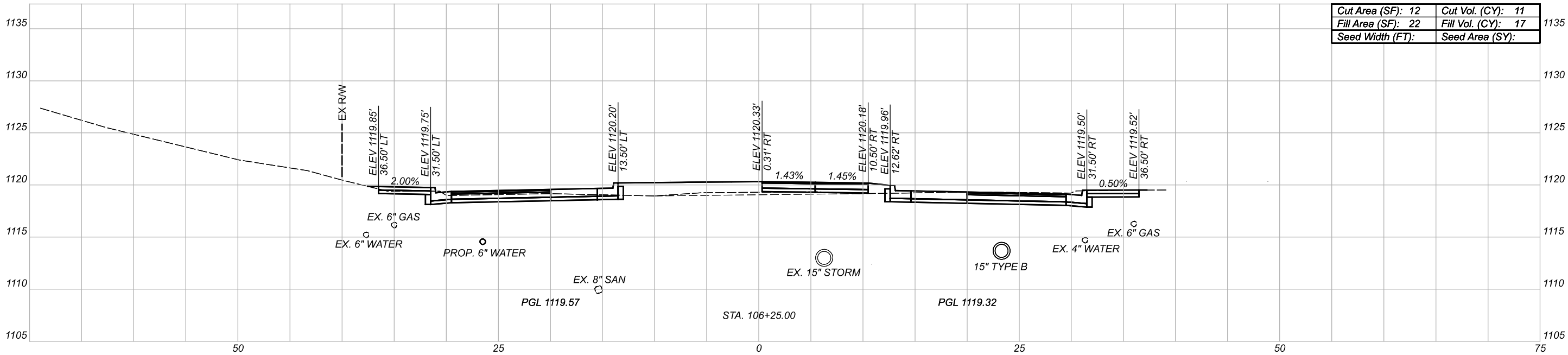
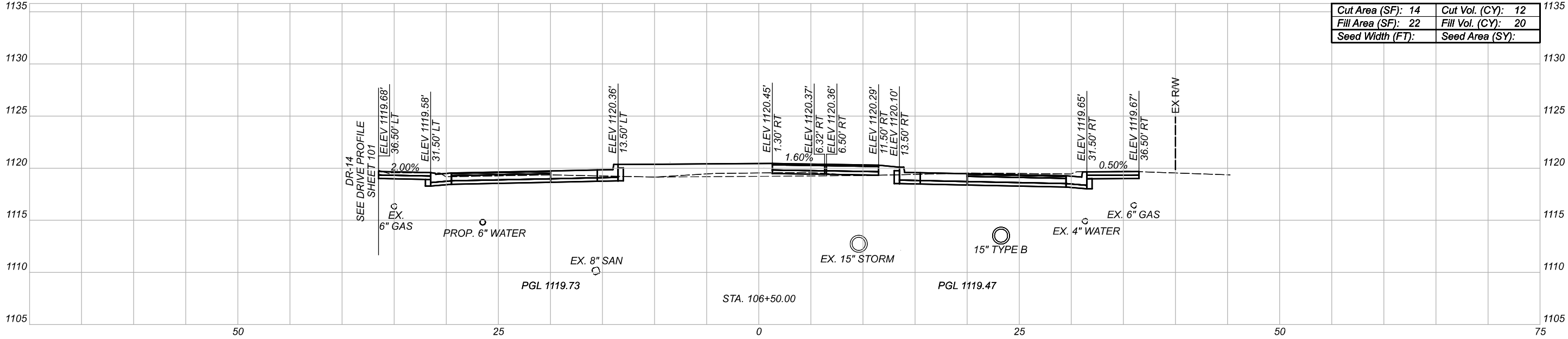
Sheet Totals		
Seeding	Cut	Fertilizer
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DESIGN AGENCY	
	
DESIGNER	
JMK	
REVIEWER	
KMK	02-10-22
PROJECT ID	
111059	
SHEET	TOTAL
P.53	168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 105+75 TO STA. 106+00

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 106+25.00 [Sheet:1] PAPER:SIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:24:24 PM USER: Jennifer.kelley  
\\101201125\1bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400--Engineering\Roadway\Sheets\11059\_X500.dgn

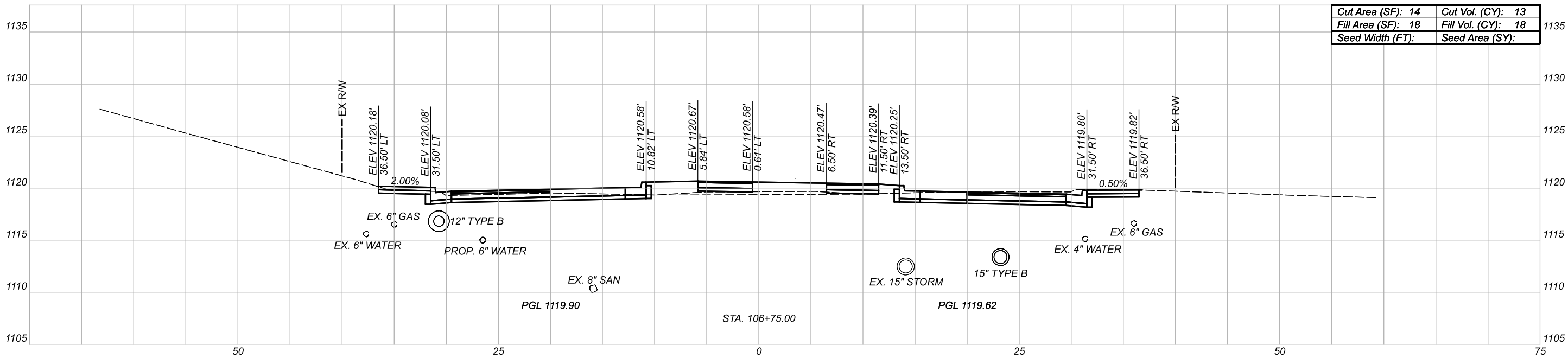
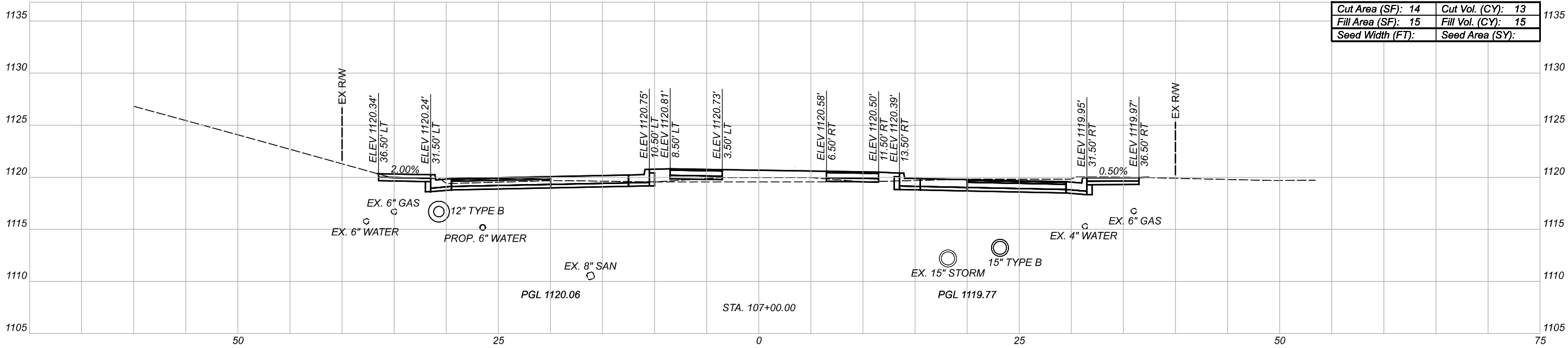


FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	23	37

DESIGN AGENCY	
[IBI]	
DESIGNER	
JMK	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.54	168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 106+25 TO STA. 106+50



FOR SEEDING QUANTITIES SEE SHEET 18

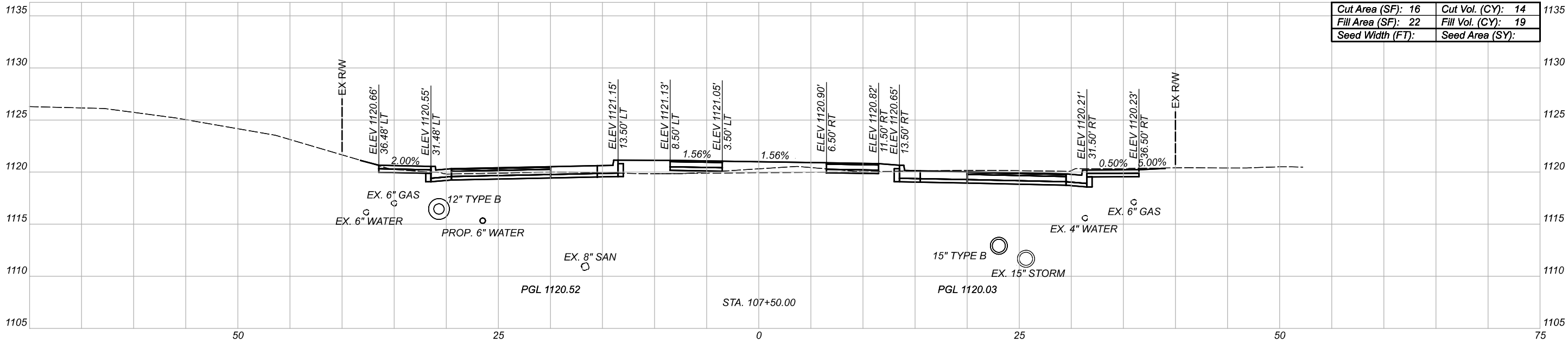
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Seeding	Cut	Fill
.	26	33

DESIGN AGENCY	
[IBI]	
DESIGNER	
JMK	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.55	168

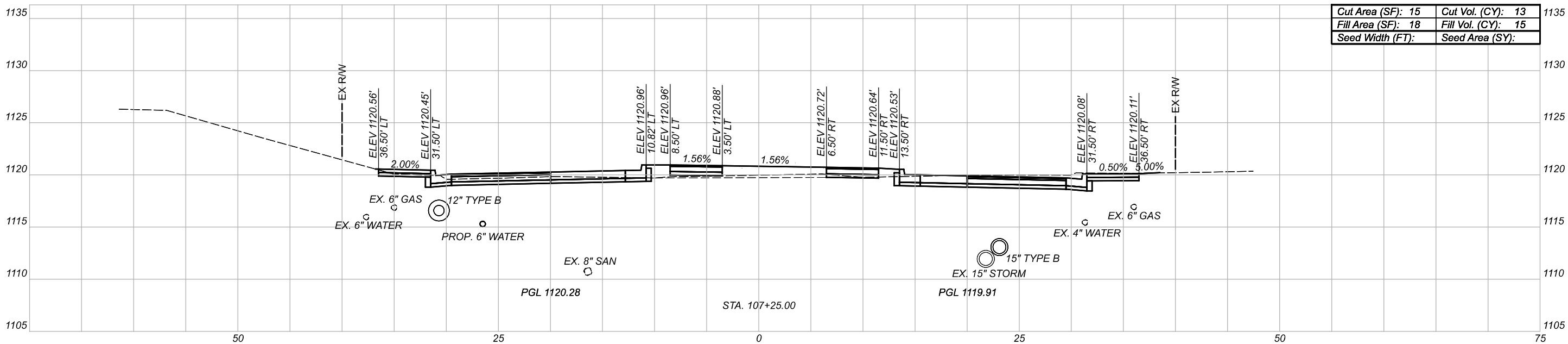
CROSS SECTIONS - COLONIAL BLVD.  
STA. 106+75 TO STA. 107+00

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 107+25.00 [Sheet1] PAPER SIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:21:31 PM USER: jennifer.keiley  
\\NO1201125\lshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



Cut Area (SF):	16	Cut Vol. (CY):	14
Fill Area (SF):	22	Fill Vol. (CY):	19
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	15	Cut Vol. (CY):	13
Fill Area (SF):	18	Fill Vol. (CY):	15
Seed Width (FT):		Seed Area (SY):	

Sheet Totals		
Seeding	Cut	Fill
.	27	34

FOR SEEDING QUANTITIES SEE SHEET 18

CROSS SECTIONS - COLONIAL BLVD.  
STA. 107+25 TO STA. 107+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

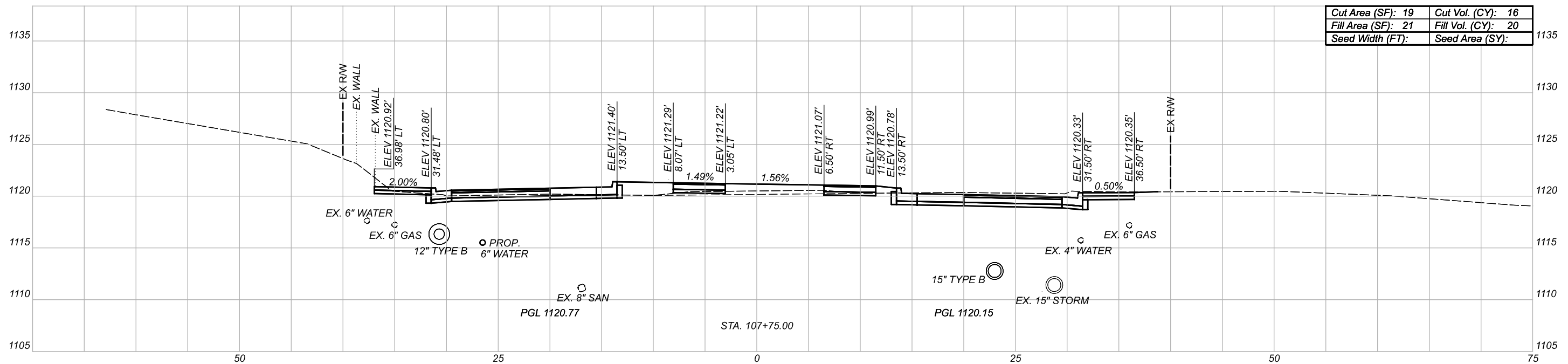
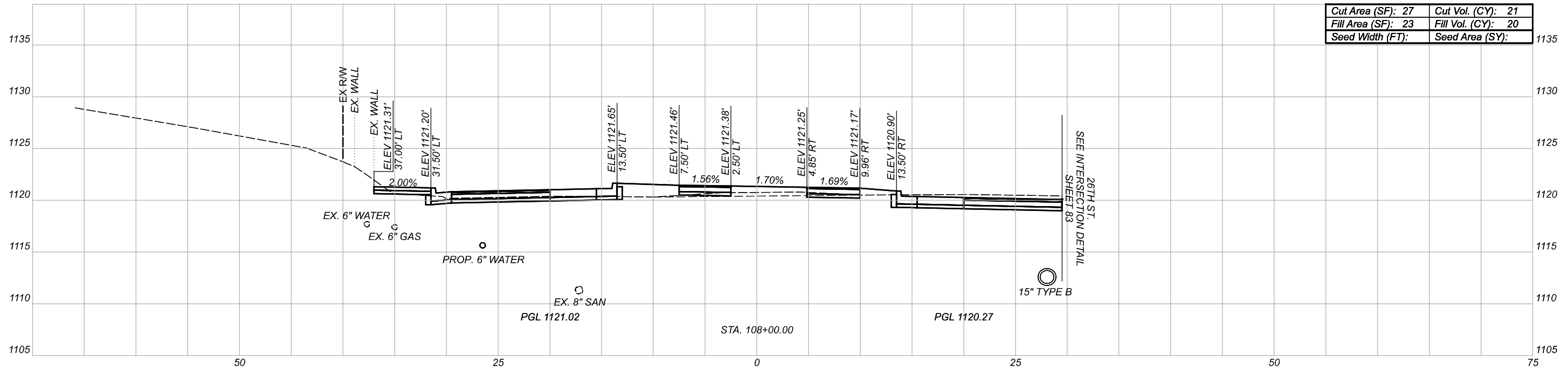
P.56

TOTAL

168


# STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX\_COLONIAL - 107x75.00 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:21:35 PM USER: jennifer.kelley  
\\N102012152\bsbare\121798\_STA-Colonial\7.0-Production\Worksheets\11059\_400-Engineering\Roadway\Sheets\11059\_XS001.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	37	40

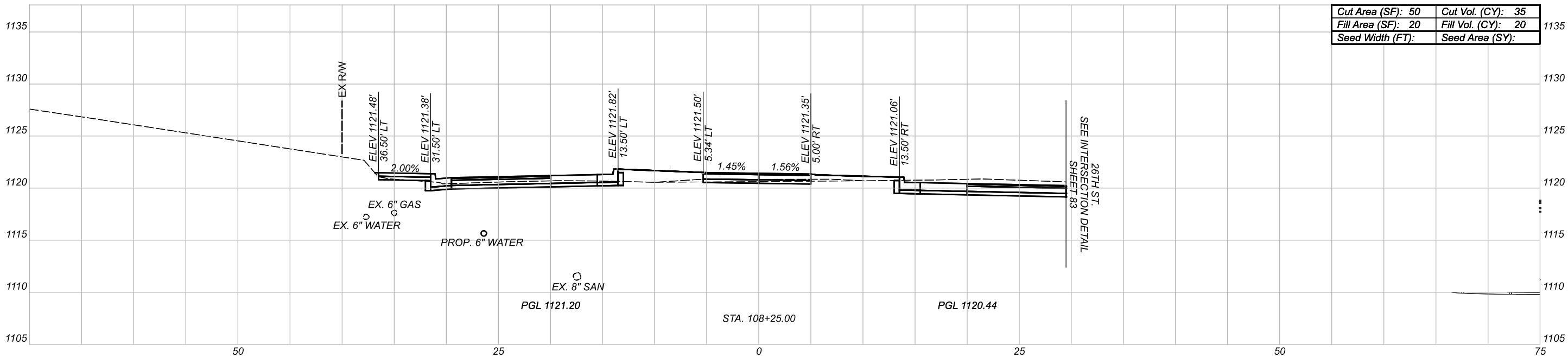
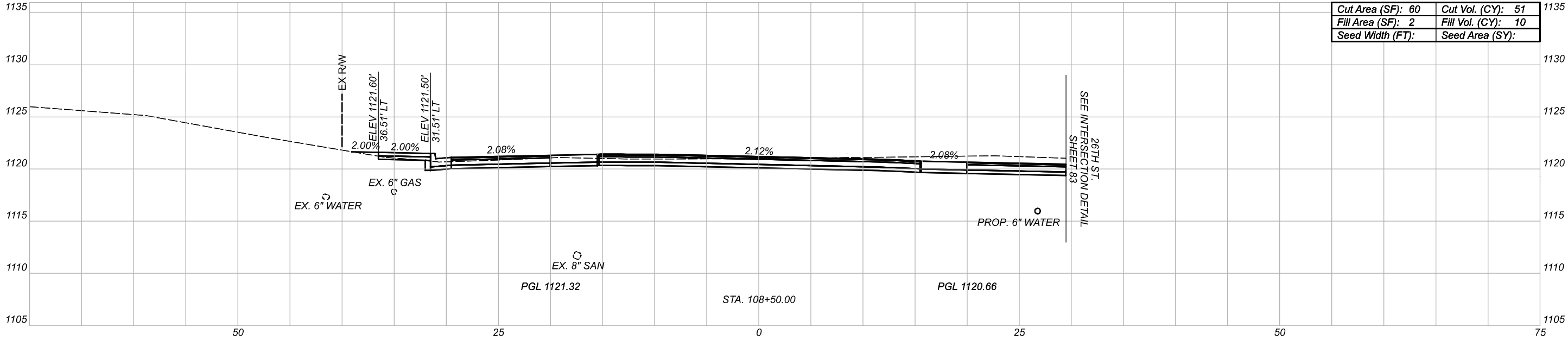
DESIGN AGENCY	
	
DESIGNER	
JMK	
REVIEWER	
KMK	02-10-22
PROJECT ID	
111059	
SHEET	TOTAL
P.57	168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 107+75 TO STA. 108+00



STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 108+25.00 [Sheet1] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:52:14 AM USER: jennifer.kelley  
\\NO1201125\lshare\N21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
·	86	30

DESIGN AGENCY

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DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

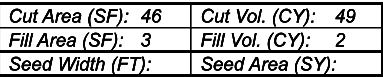
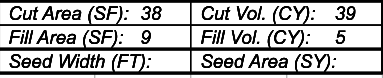
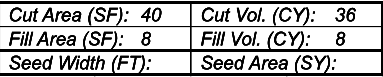
P.58

TOTAL

168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 108+25 TO STA. 108+50

STA-COLONIAL BOULEVARD NE - PHASE 1

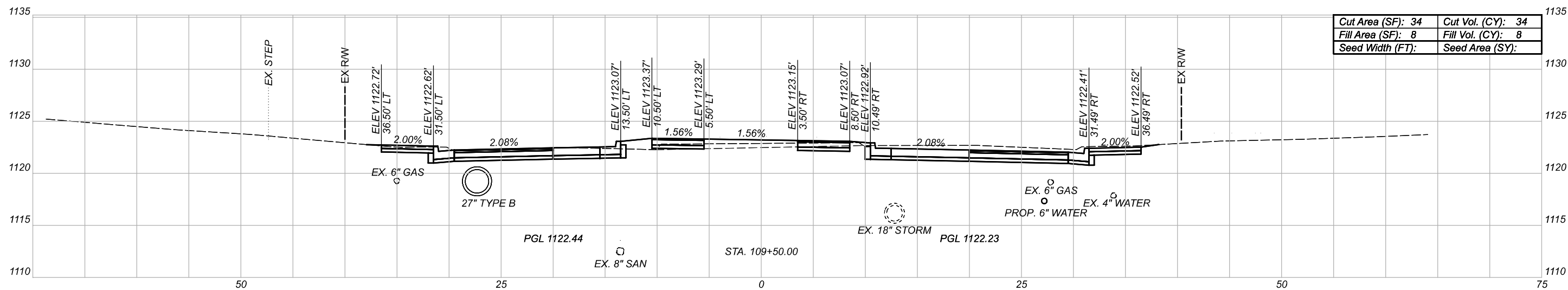
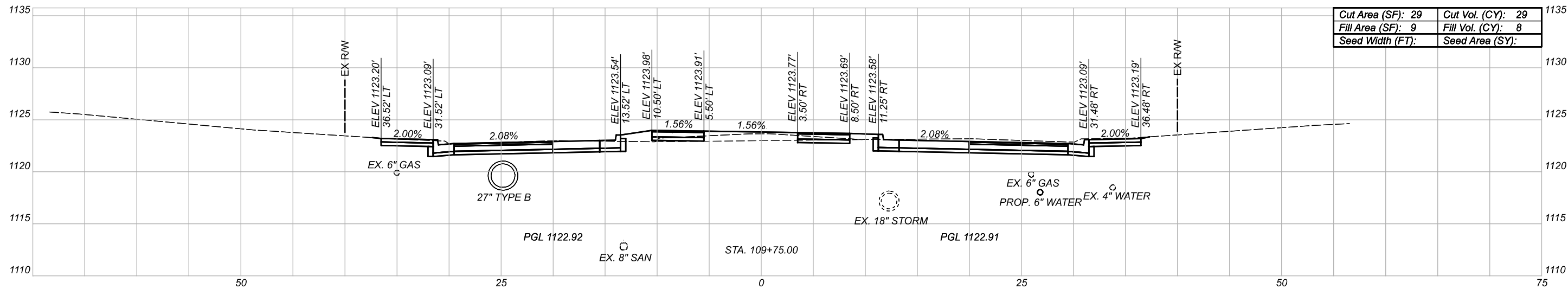
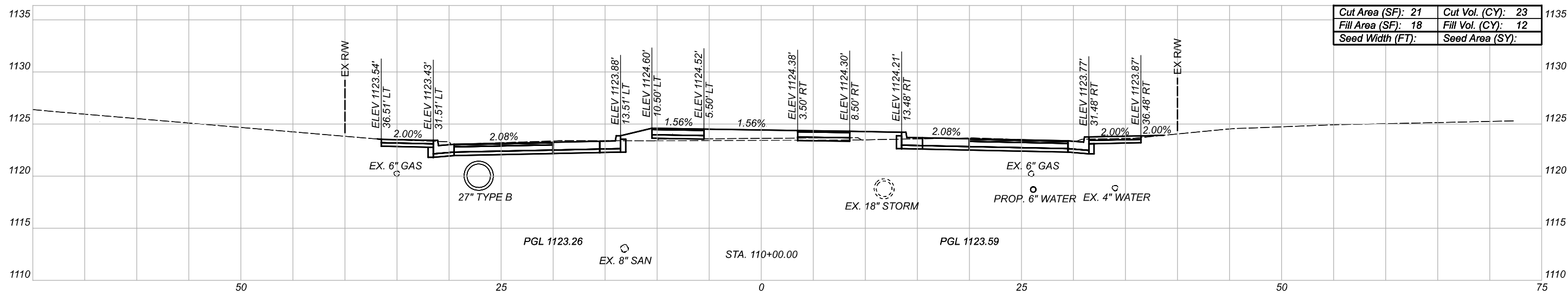


Sheet Totals			111059	
Seeding	Cut	Fill	SHEET	TOTAL
.	124	15	P.59	168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 108+75 TO STA. 109+25

# STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX\_COLONIAL - 109+50.00 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:52:19 AM USER: jennifer.kelley  
\\V102012\51bsbare\21798\_STA-Colonial\T.O.Production\Worksets\11059.400-Engineer\ing.Roadway\Sheets\11059.XS001.dgn




Cut Area (SF): 21	Cut Vol. (CY): 23
Fill Area (SF): 18	Fill Vol. (CY): 12
Seed Width (FT):	Seed Area (SY):

Cut Area (SF): 29	Cut Vol. (CY): 29
Fill Area (SF): 9	Fill Vol. (CY): 8
Seed Width (FT):	Seed Area (SY):

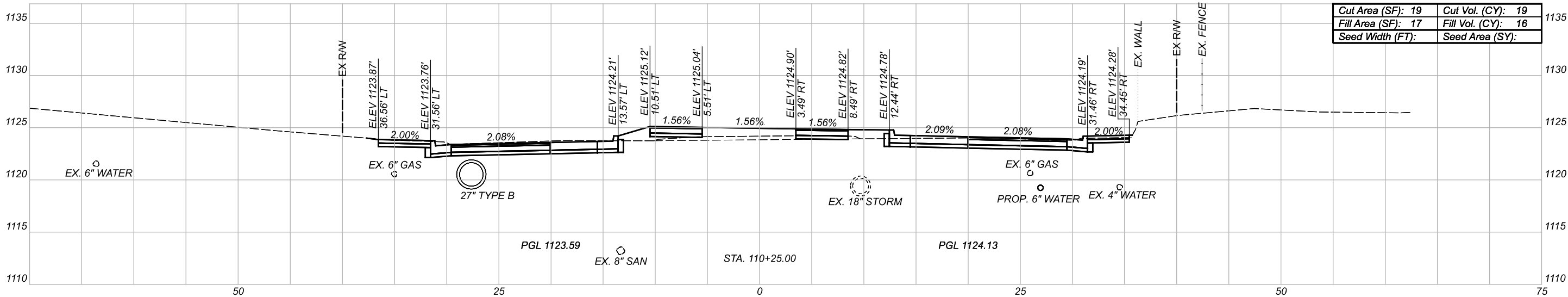
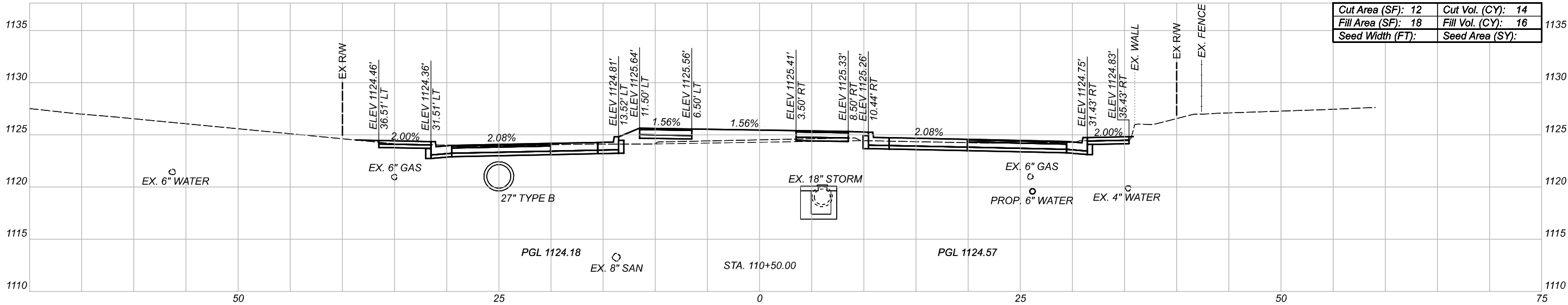
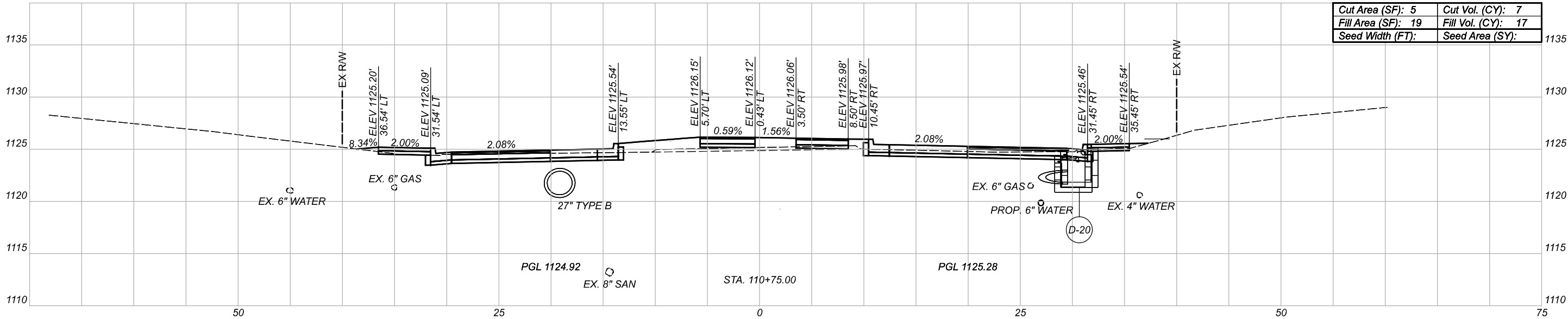
Cut Area (SF): 34	Cut Vol. (CY): 34
Fill Area (SF): 8	Fill Vol. (CY): 8
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	F
.	86	2

DESIGN AGENCY	
	
DESIGNER	
JMK	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.60	168

FOR SEEDING QUANTITIES SEE SHEET 18

CROSS SECTIONS - COLONIAL BLVD.  
STA. 109+50 TO STA. 110+00



CROSS SECTIONS - COLONIAL BLVD.  
STA. 110+25 TO STA. 110+75

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

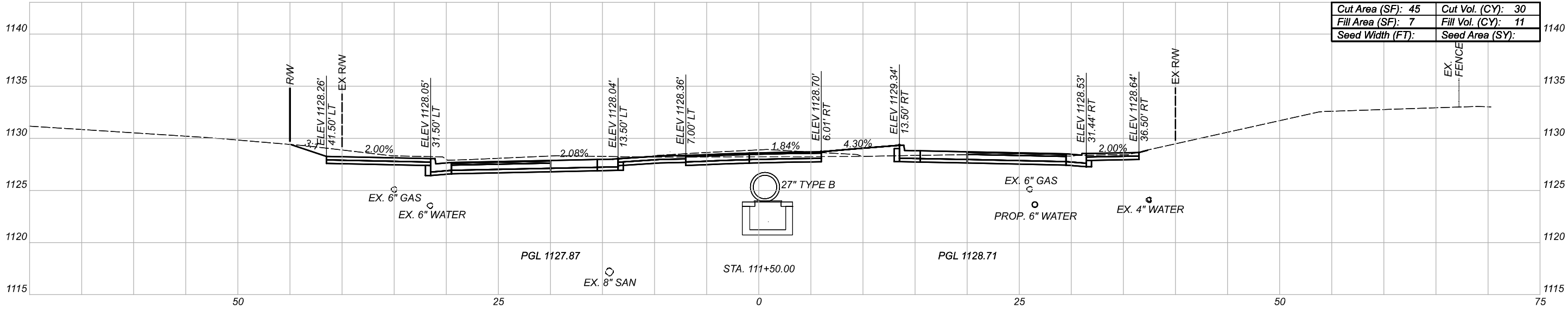
PROJECT ID

111059

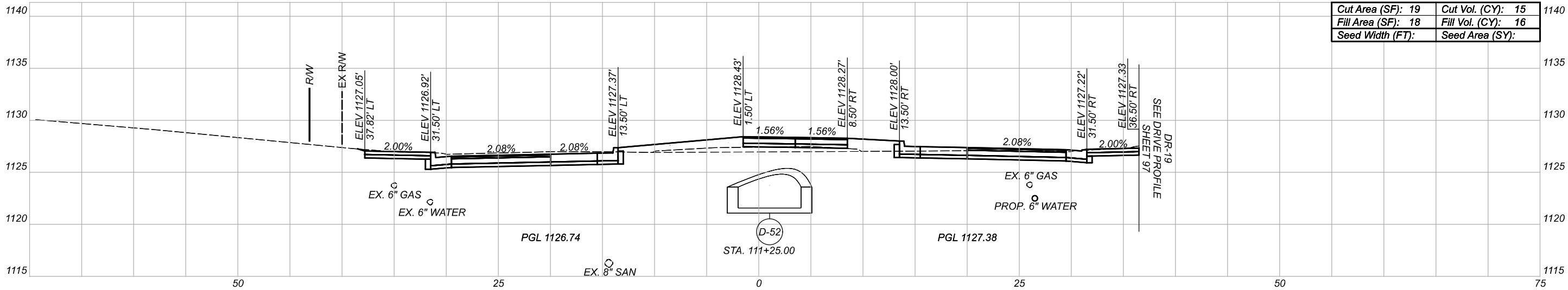
FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
.	40	49

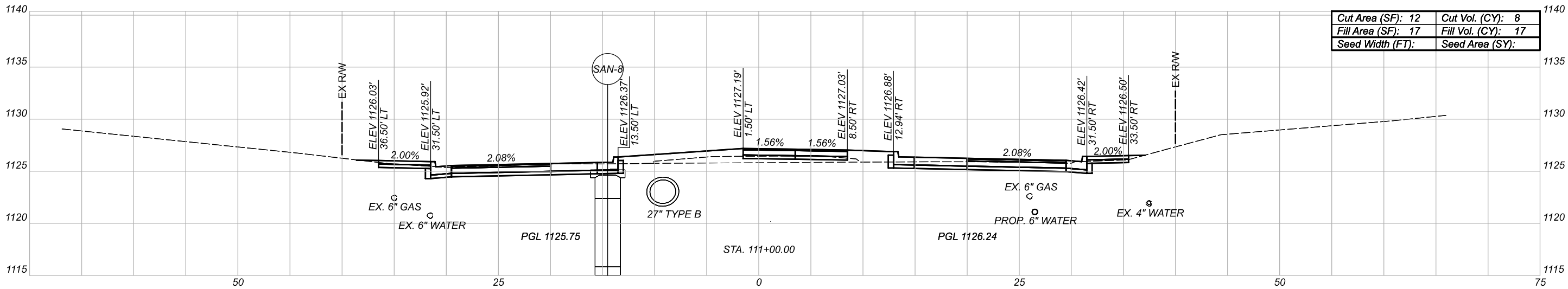
SHEET	TOTAL
P.61	168



Cut Area (SF):	45	Cut Vol. (CY):	30
Fill Area (SF):	7	Fill Vol. (CY):	11
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	19	Cut Vol. (CY):	15
Fill Area (SF):	18	Fill Vol. (CY):	16
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	12	Cut Vol. (CY):	8
Fill Area (SF):	17	Fill Vol. (CY):	17
Seed Width (FT):		Seed Area (SY):	

FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
·	53	44

CROSS SECTIONS - COLONIAL BLVD.  
STA. 111+00 TO STA. 111+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

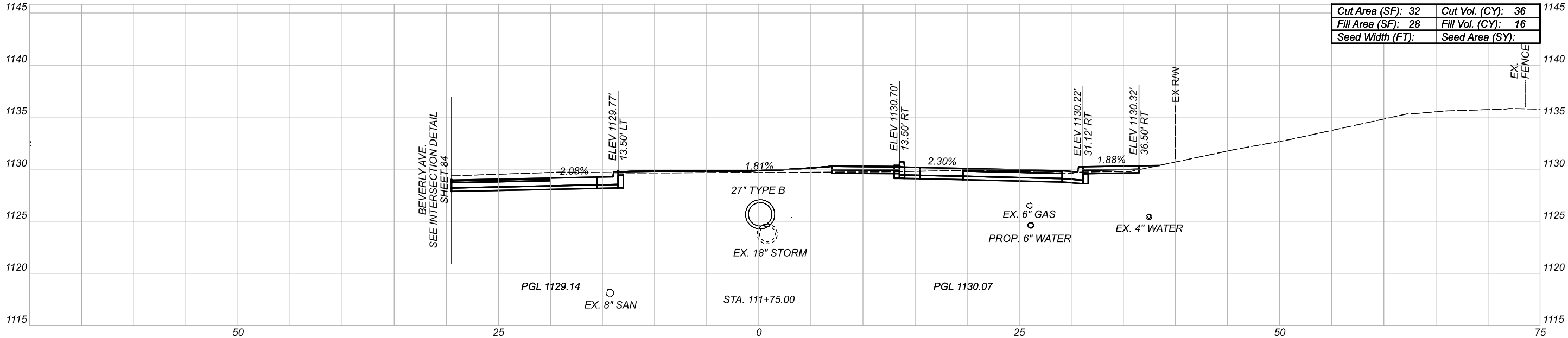
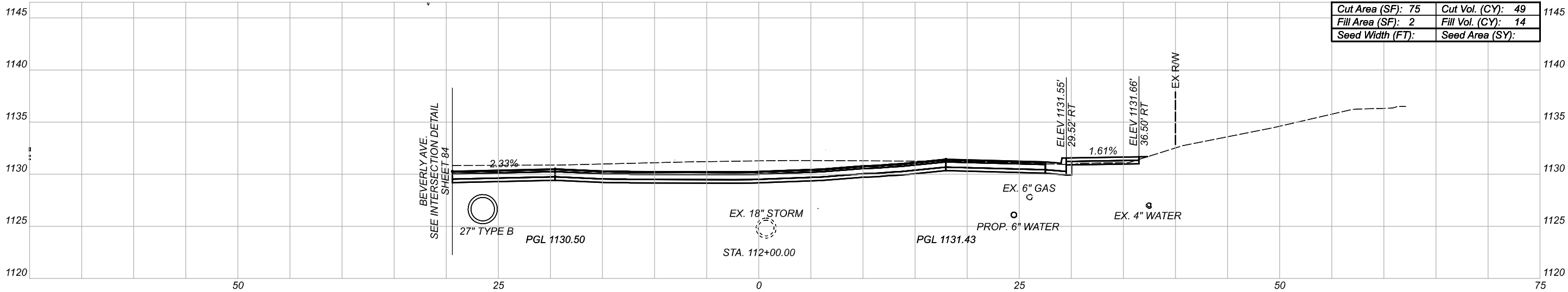
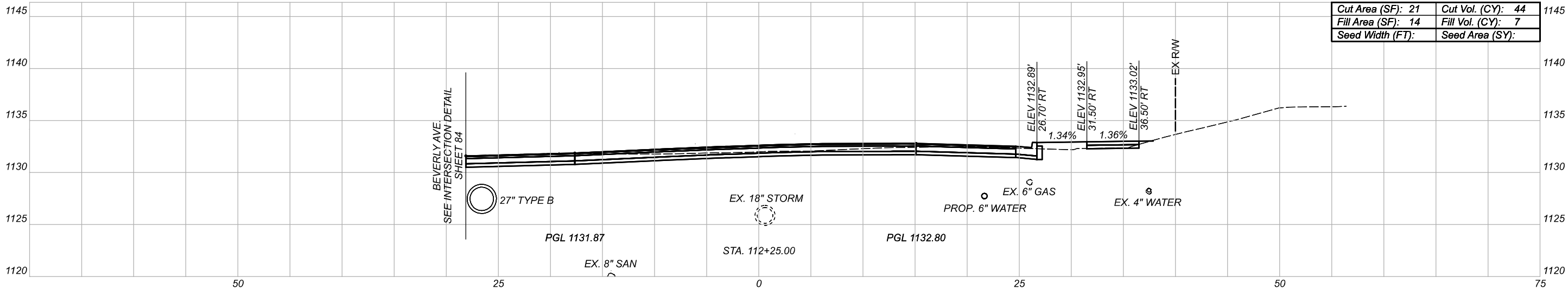
P.62

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 111+75.00 (Sheet1) PAPER SIZE: 11x17 (in.) DATE: 2022-03-21 TIME: 2:24:55 PM USER: Jennifer.Kelley  
\\NO1201125\1bshare\N21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	129	37

DESIGN AGENCY

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DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.63

TOTAL

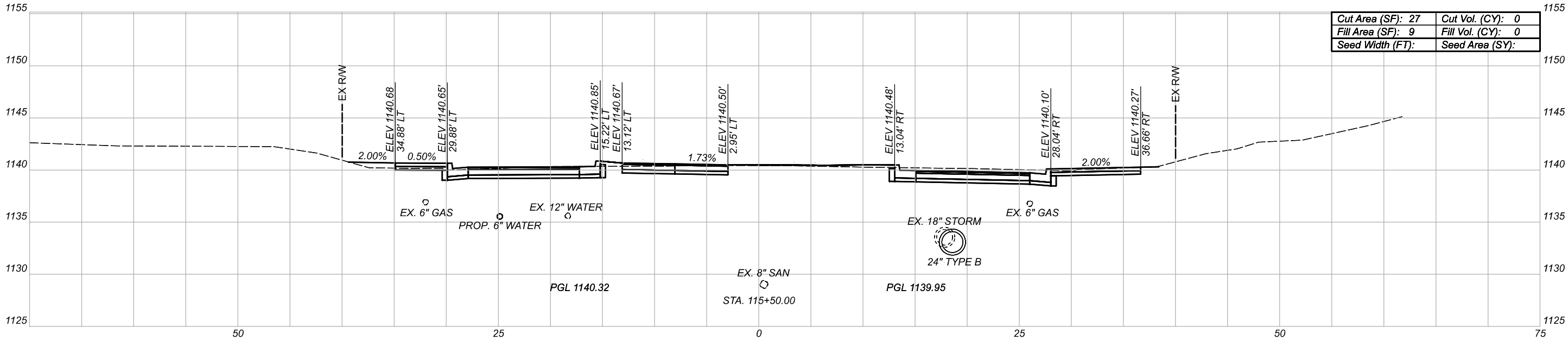
168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 111+75 TO STA. 112+25

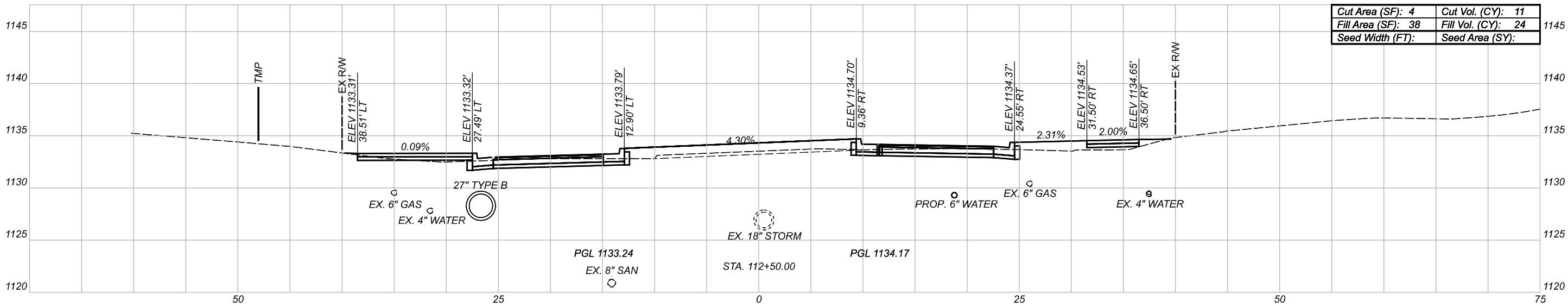


STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 112+50.00 [Sheet] PAPER: 17x11 (in.) DATE: 2022-02-10 TIME: 8:52:31 AM USER: Jennifer.Kelley  
\\NO120112.5\Bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



Cut Area (SF):	27	Cut Vol. (CY):	0
Fill Area (SF):	9	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	4	Cut Vol. (CY):	11
Fill Area (SF):	38	Fill Vol. (CY):	24
Seed Width (FT):		Seed Area (SY):	

Sheet Totals		
Seeding	Cut	Fill
·	11	24

FOR SEEDING QUANTITIES SEE SHEET 18

CROSS SECTIONS - COLONIAL BLVD.  
STA. 112+50 TO STA. 115+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

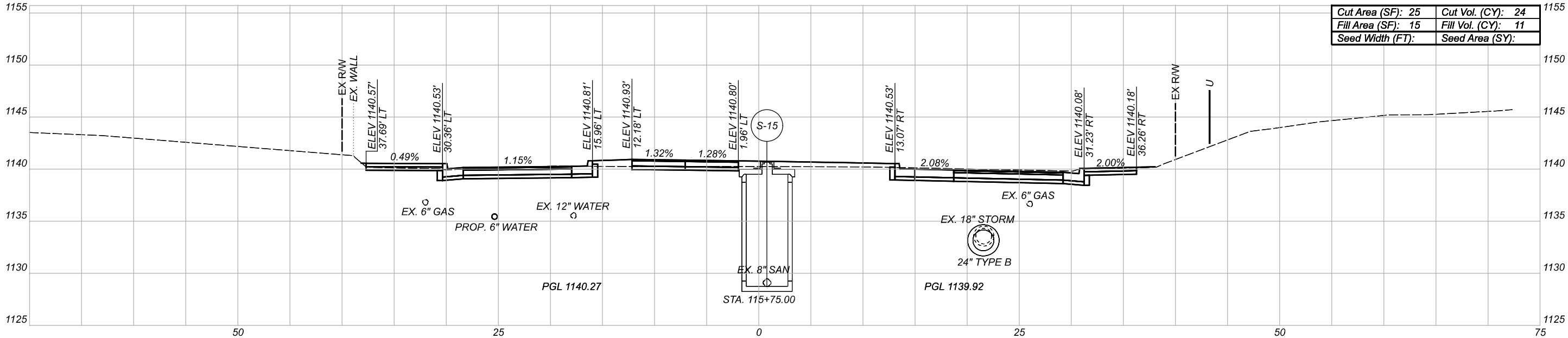
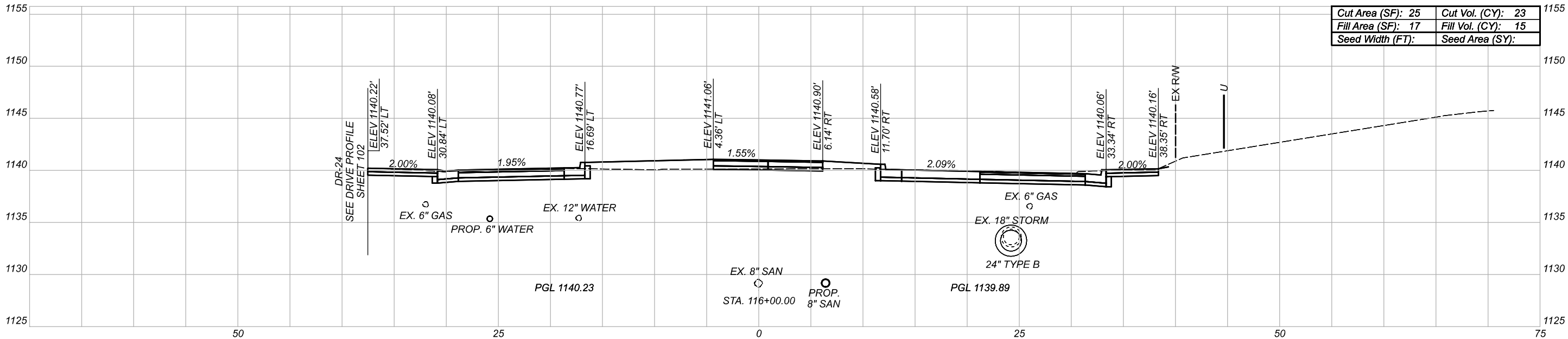
P.64

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 115+75.00 [Sheet1] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 11:51:29 PM USER: Jennifer.Kelley  
\\NO120112.5\1bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	47	26

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.65

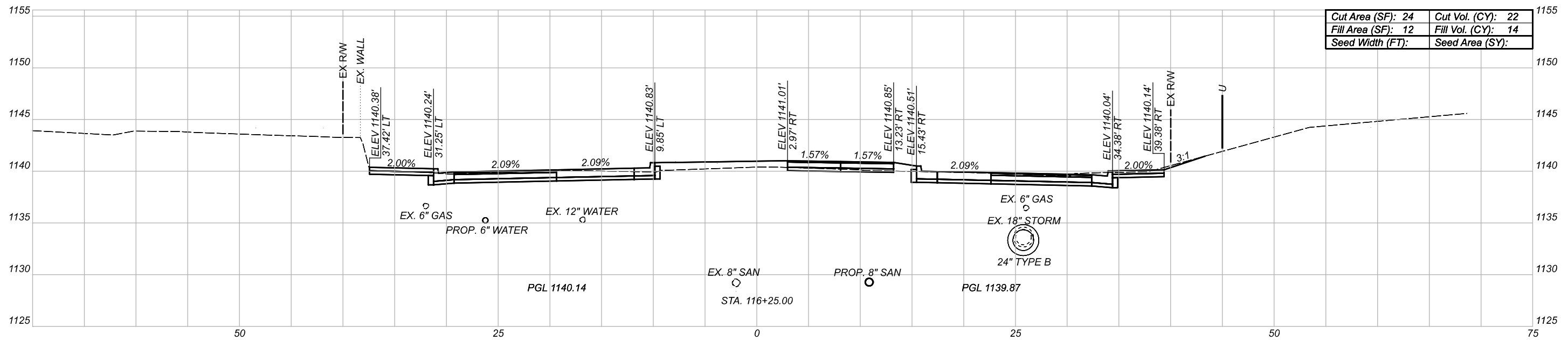
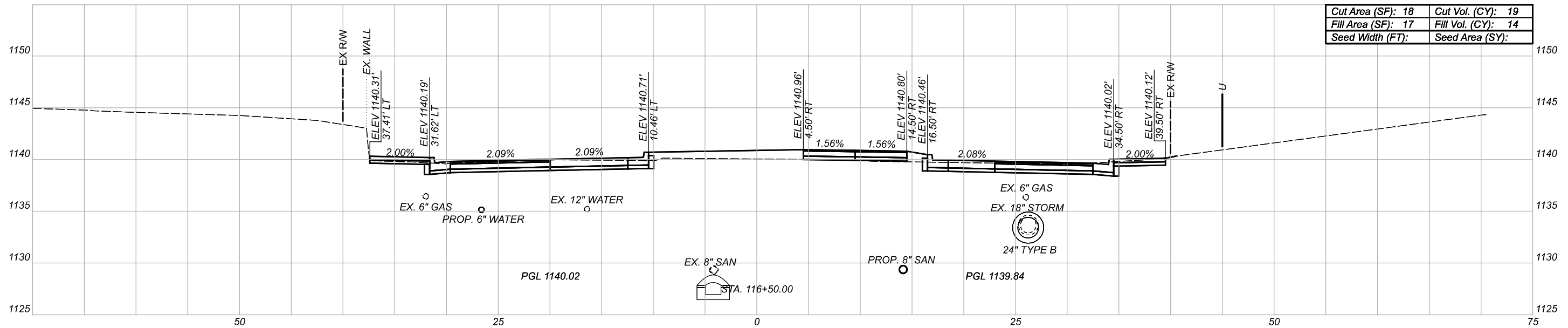
TOTAL

168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 115+75 TO STA. 116+00


## STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX\_COLONIAL - i16x25.00 [Sheet] PAPERSIZE: ITxII (in.) DATE: 2022-02-10 TIME: 15:13:38 PM USER: jennifer.kelley  
\\V012012\15\binare\121798\_STA-Colonial\7.0-Production\Worksheets\11059\_400-Engineering Roadway Sheets\11059\_XS001.dgn



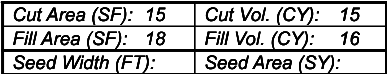
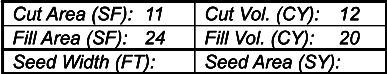
FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	41	28

DESIGN AGENCY 	
DESIGNER <b>JMK</b>	
REVIEWER <b>KMK 02-10-22</b>	
PROJECT ID <b>111059</b>	
SHEET <b>P.66</b>	TOTAL <b>168</b>

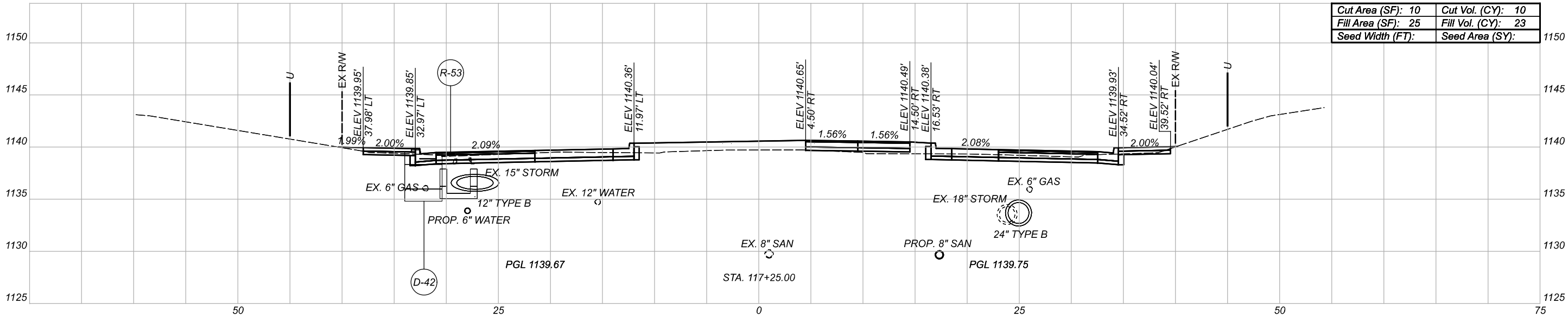
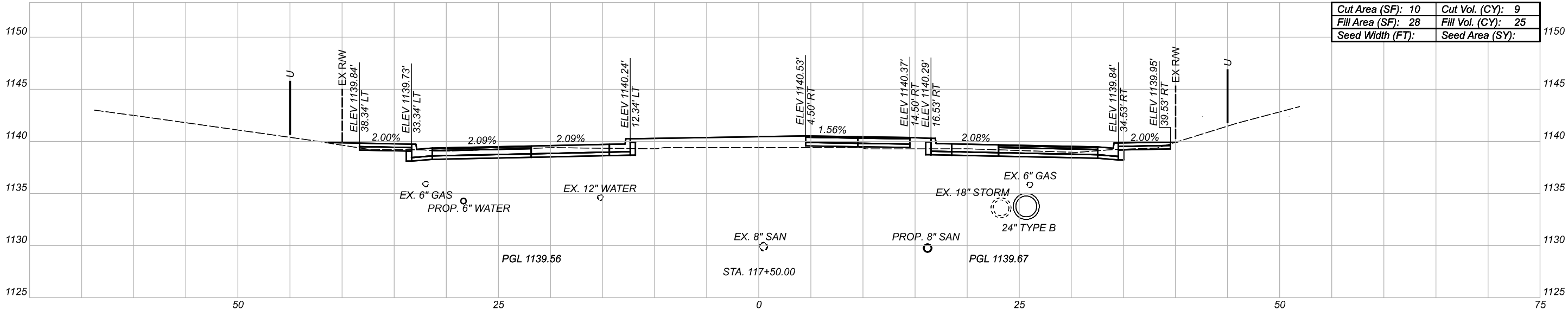
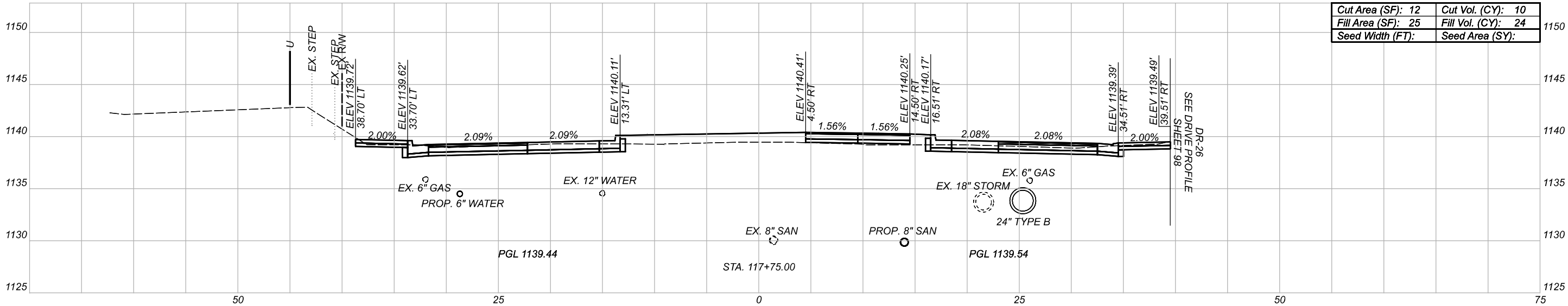
CROSS SECTIONS - COLONIAL BLVD.  
STA. 116+25 TO STA. 116+50

MODEL: CLX. COLONIAL - 116+75.00 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 11:41:40 PM USER: jennifer\_kelley  
\\10.120.112.5\ibshare\121798\_STA-Colonial\7.0\_Production\Worksets\110591400-Engineering\Roadway\Sheets\11059145001.dgn



Sheet Totals		
Seeding	Cut	F
.	27	3

CROSS SECTIONS - COLONIAL BLVD.  
STA. 116+75 TO STA. 117+00



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	29	72

CROSS SECTIONS - COLONIAL BLVD.  
STA. 117+25 TO STA. 117+75

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

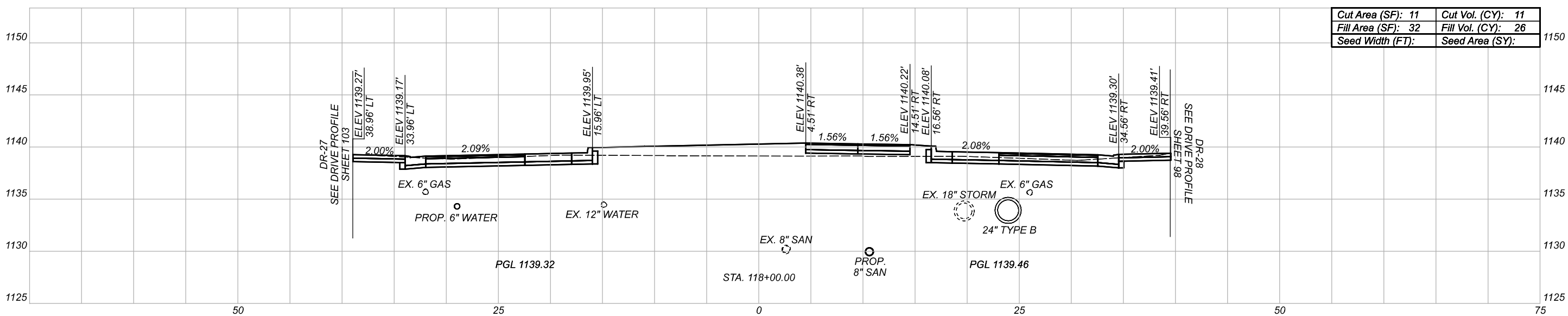
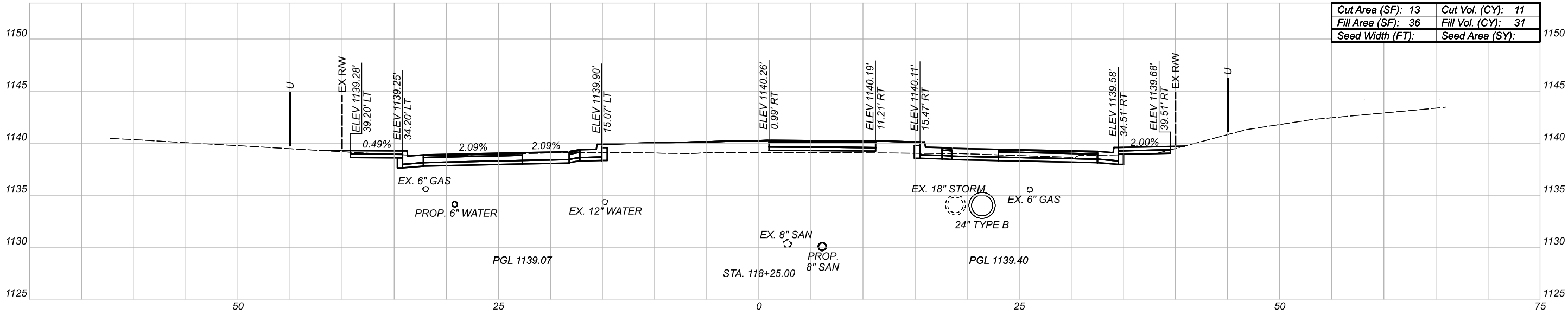
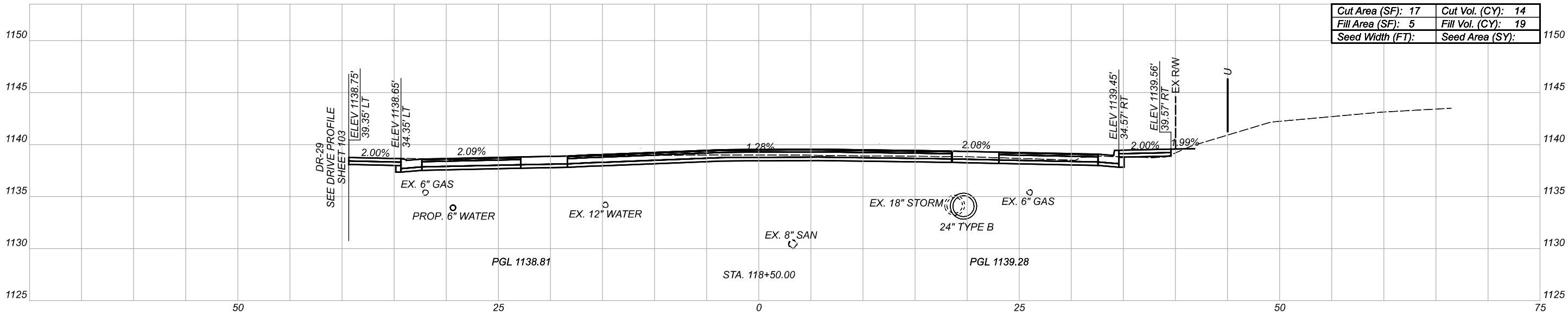
P.68

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 118+00.00 [Sheet] PAPER: 17x11 (in.) DATE: 2022-02-10 TIME: 11:45 PM USER: jennifer-kelley  
\\NO1201125\\bshare\\21798\\STA-Colonial\\7.0\_Production\\Worksheets\\11059\\400-Engineering\\Roadway\\Sheets\\11059\_X500.dgn



CROSS SECTIONS - COLONIAL BLVD.  
STA. 118+00 TO STA. 118+50

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

Sheet Totals		
Seeding	Cut	Fill
·	36	76

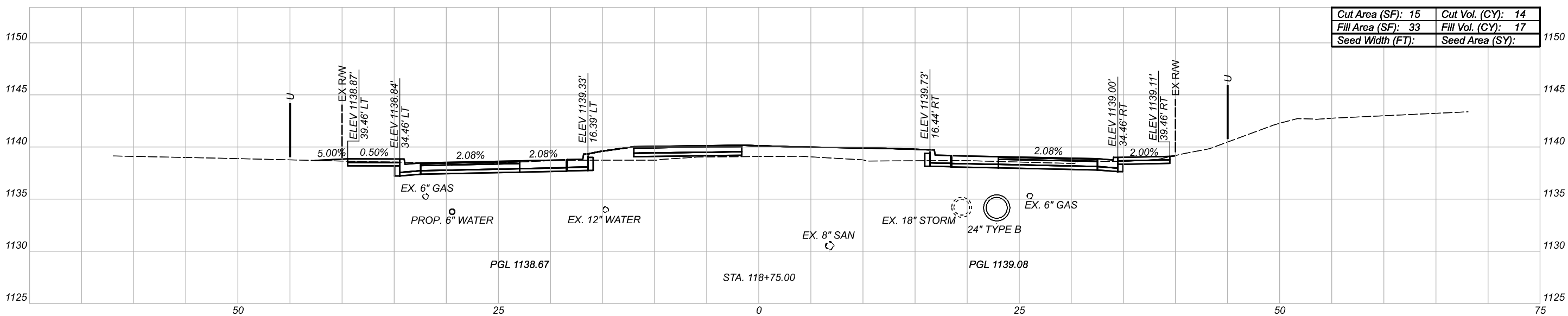
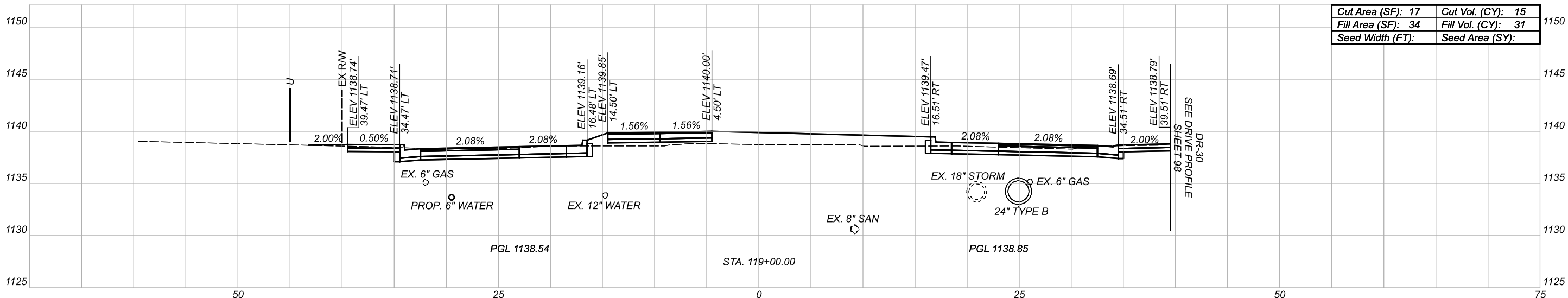
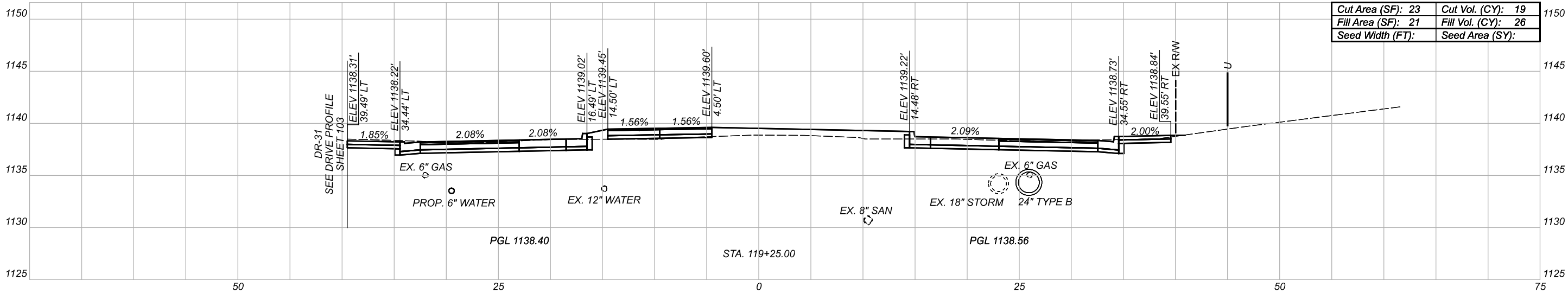
FOR SEEDING QUANTITIES SEE SHEET 18

SHEET	TOTAL
P.69	168



STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 118+75.00 [Sheet1] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:52:46 AM USER: jennifer.kelley  
\\NO1201125\lshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	48	74

DESIGN AGENCY

[BI]

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.70

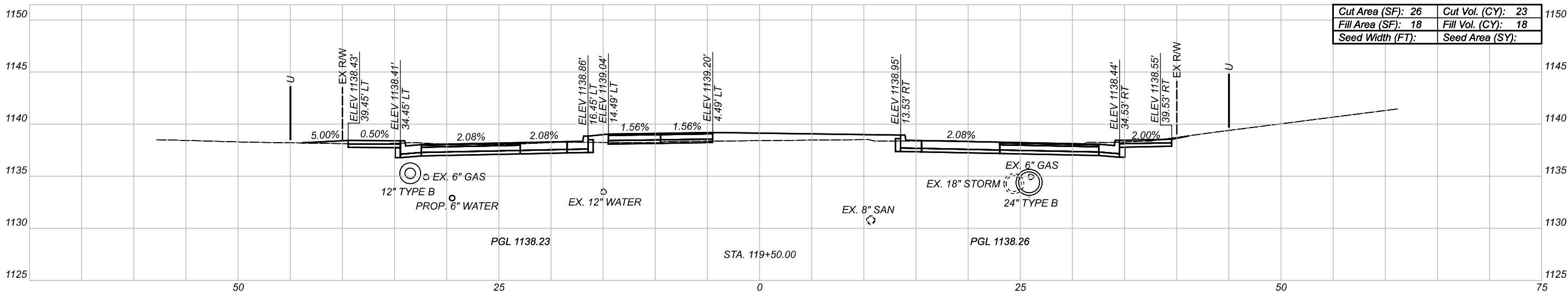
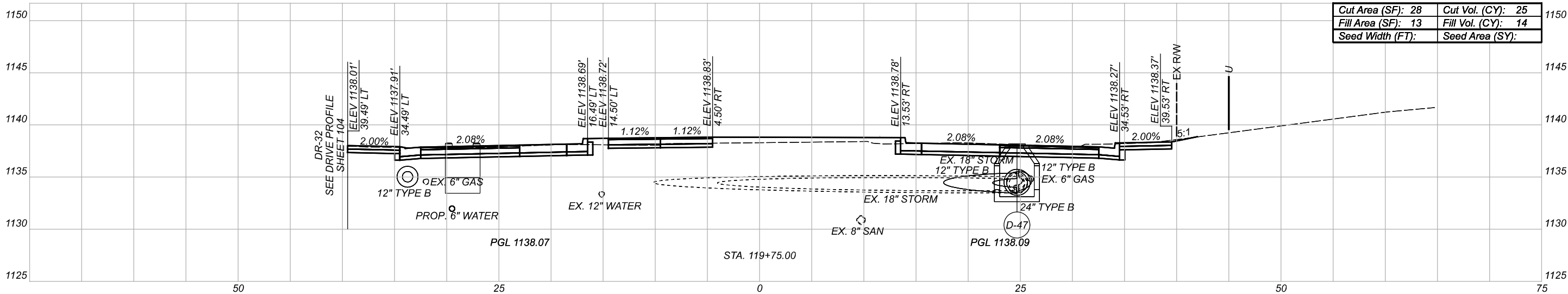
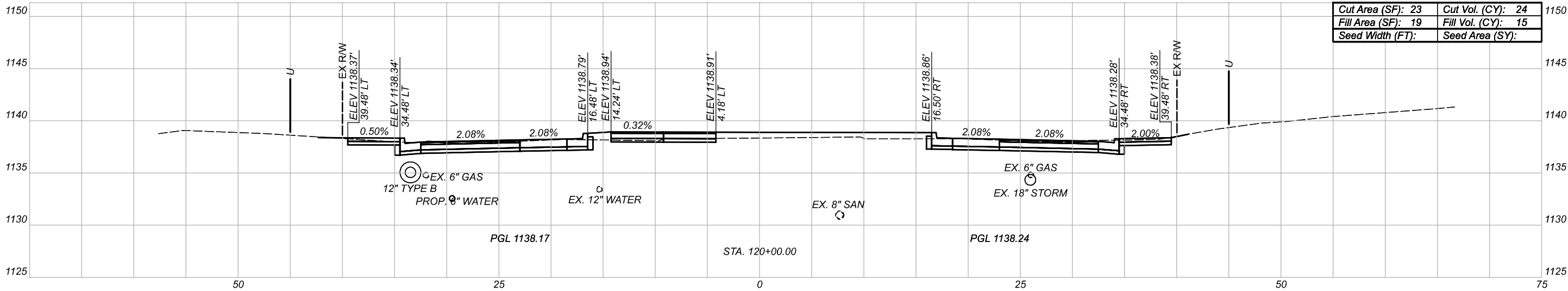
TOTAL

168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 118+75 TO STA. 119+25

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 119+50.00 [Sheet] PAPER: 17x11 (in.) DATE: 2022-02-10 TIME: 8:52:49 AM USER: jennifer.kelley  
\\10.120.112.5\1share\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
.	72	47	P.71	168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 119+50 TO STA. 120+00

DESIGN AGENCY



DESIGNER

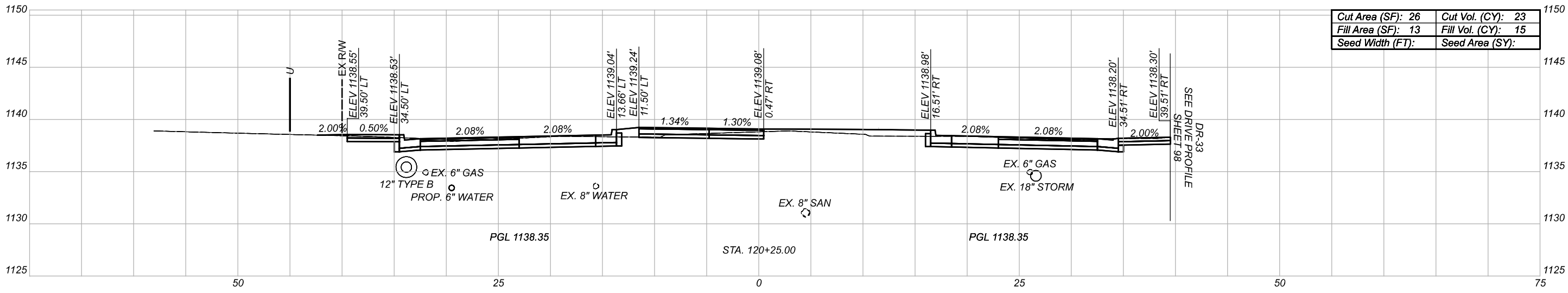
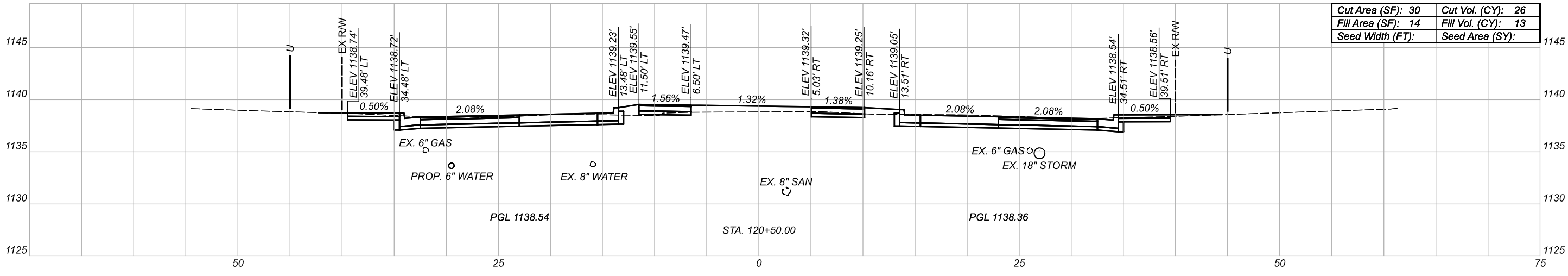
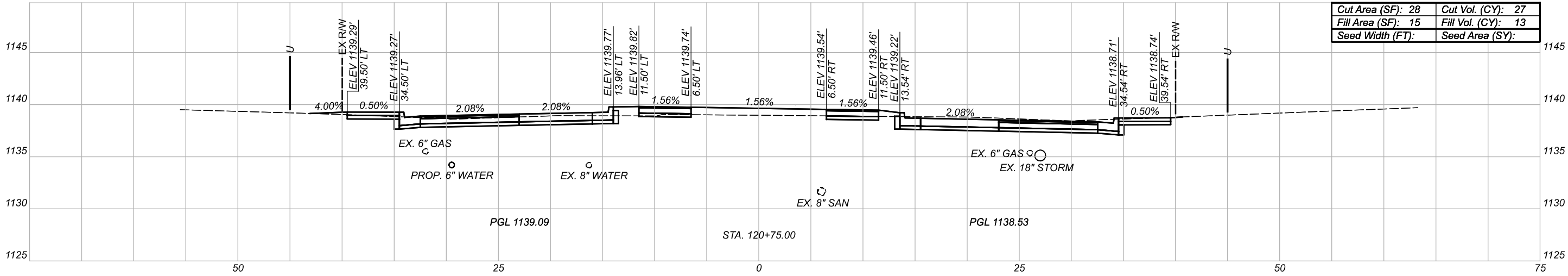
JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	76	41

DESIGN AGENCY

[BI]

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.72

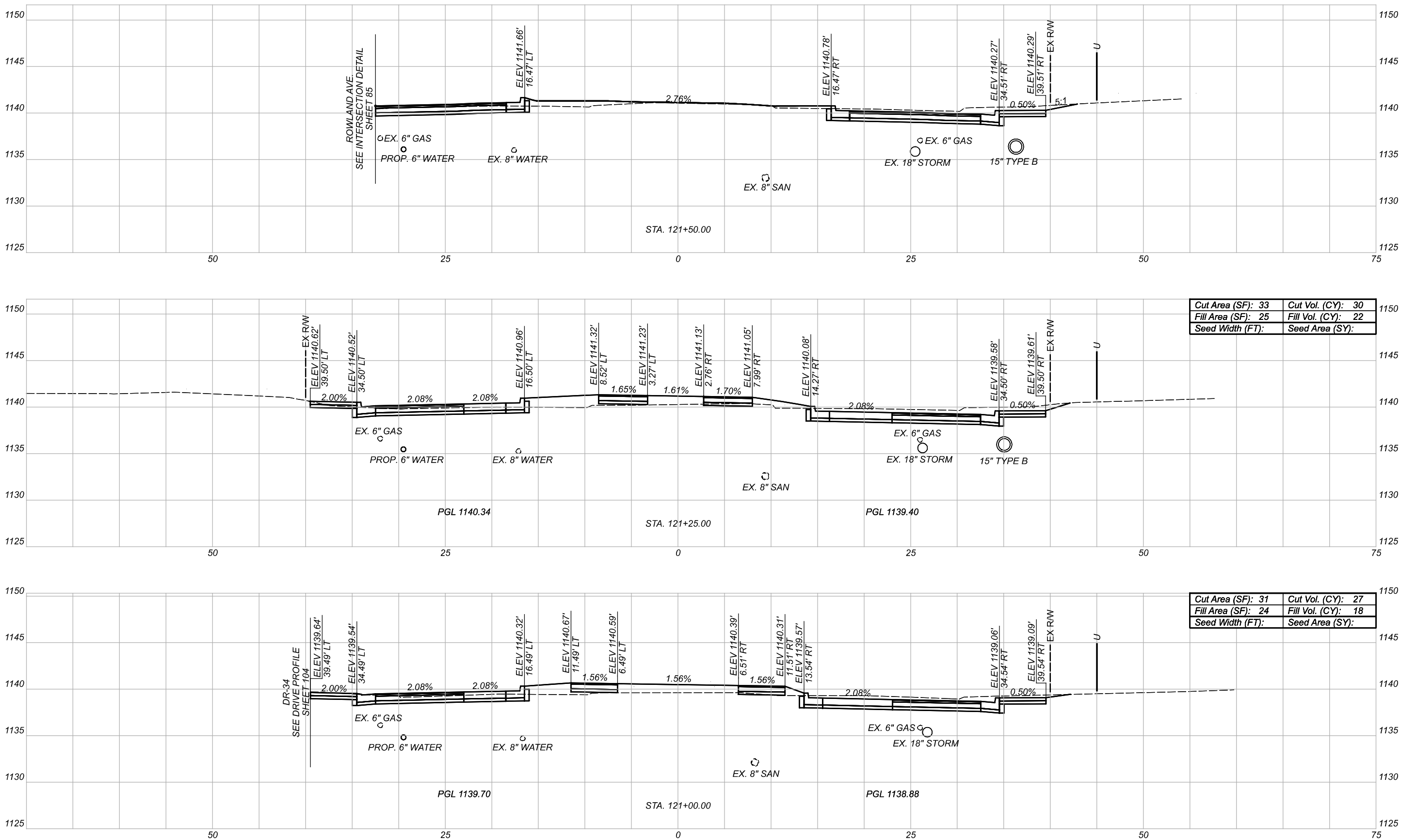
TOTAL

168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 120+25 TO STA. 120+75

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 121+00.00 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:22:25 PM USER: Jennifer.kelley  
\\NO1201125\1bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\_400-Engineering\Roadway\Sheets\11059\_X500.dgn



Cut Area (SF):	33	Cut Vol. (CY):	30
Fill Area (SF):	25	Fill Vol. (CY):	22
Seed Width (FT):		Seed Area (SY):	

Cut Area (SF):	31	Cut Vol. (CY):	27
Fill Area (SF):	24	Fill Vol. (CY):	18
Seed Width (FT):		Seed Area (SY):	

Sheet Totals		
Seeding	Cut	Fill
·	57	40

FOR SEEDING QUANTITIES SEE SHEET 18

CROSS SECTIONS - COLONIAL BLVD.  
STA. 121+00 TO STA. 121+50

DESIGN AGENCY

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DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

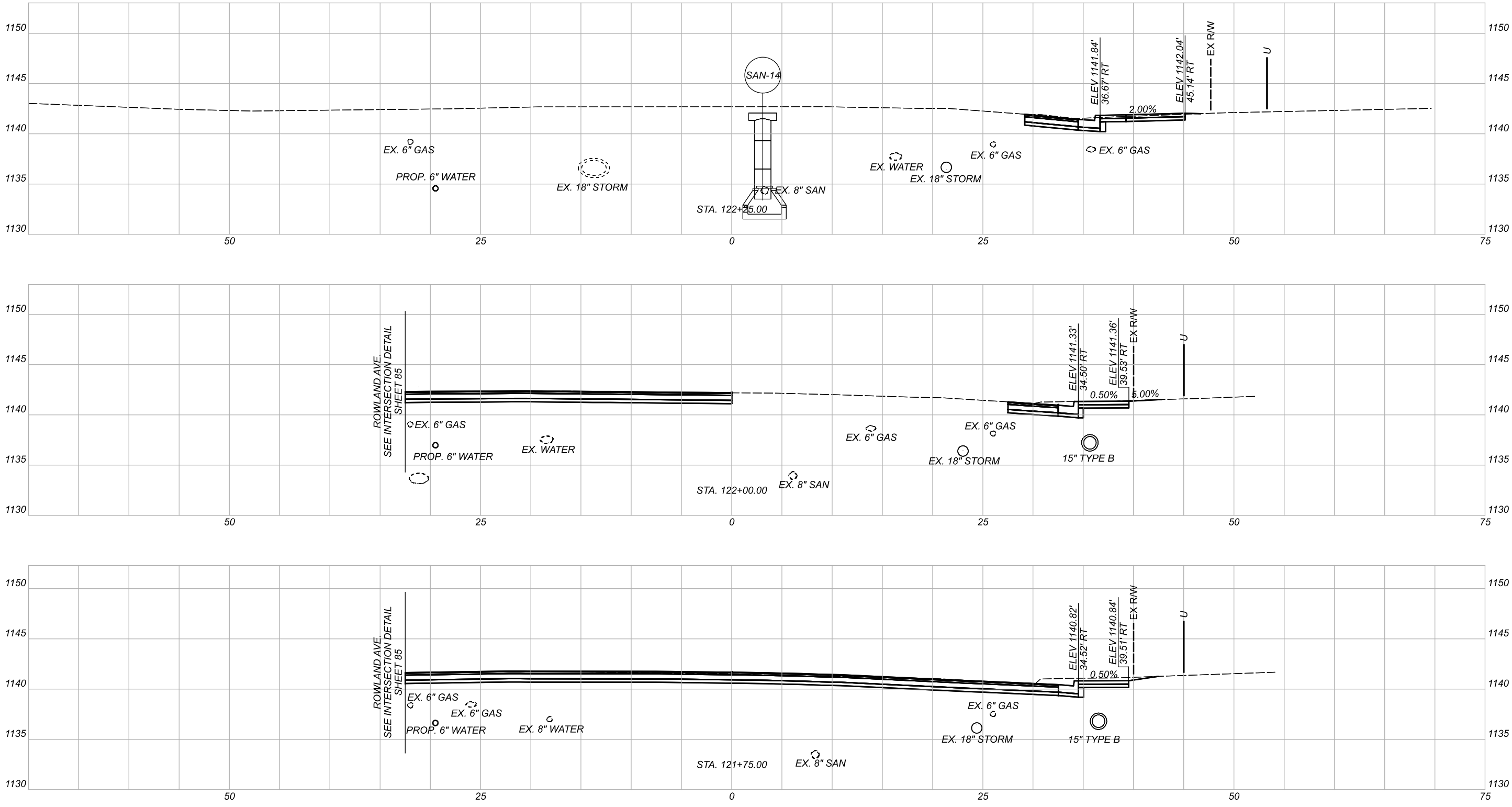
P.73

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 121+75.00 [Sheet1] PAPER SIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:22:29 PM USER: jennifer.kelley  
\\NO1201125\lshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\_400-Engineering\Roadway\Sheets\11059\_X500.dgn



CROSS SECTIONS - COLONIAL BLVD.  
STA. 121+75 TO STA. 122+25

DESIGN AGENCY

[BI]

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.74

TOTAL

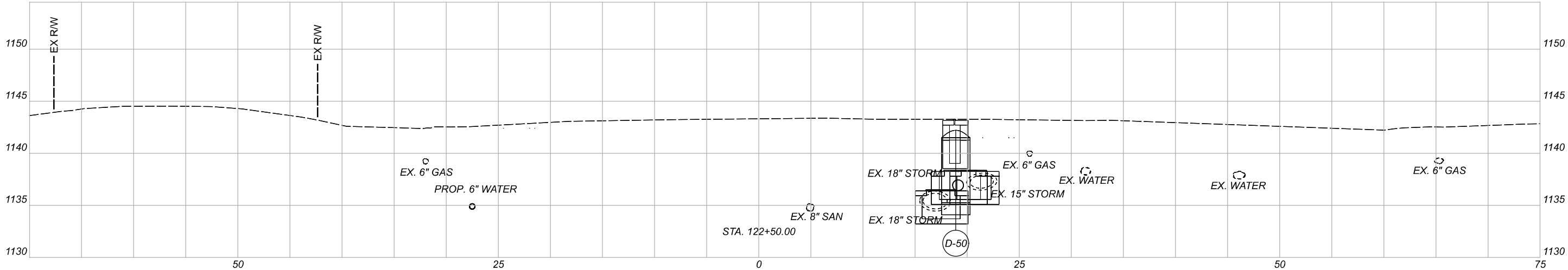
168

FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
.	0	0

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-COLONIAL - 122+50.00 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:53:00 AM USER: Jennifer-Kelley  
\\NO1201125\1share\N21798\STA-Colonial\170\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X500.dgn



FOR SEEDING QUANTITIES SEE SHEET 18  
FOR STRUCTURE INFORMATION SEE SHEET 115

Sheet Totals		
Seeding	Cut	Fill
.	0	0

DESIGN AGENCY

[

IBI

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DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.75

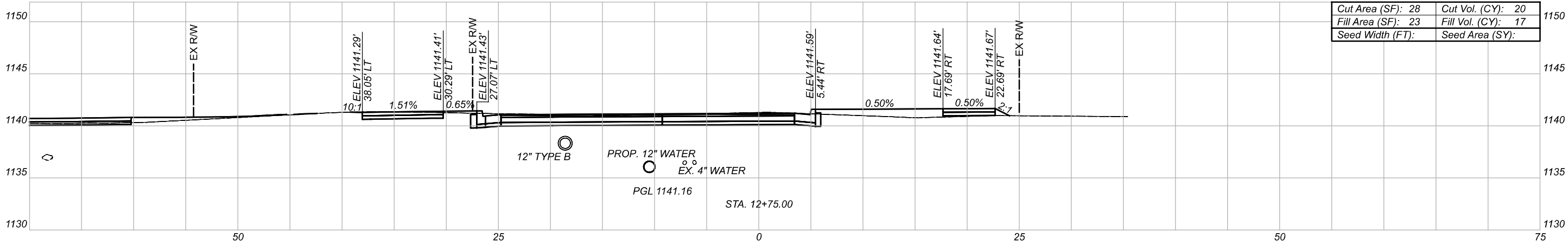
168

CROSS SECTIONS - COLONIAL BLVD.  
STA. 122+50

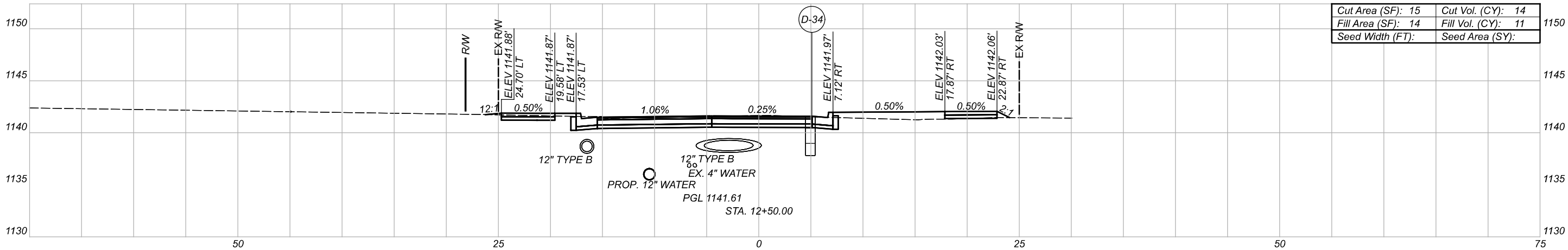


STA-COLONIAL BOULEVARD NE - PHASE 1

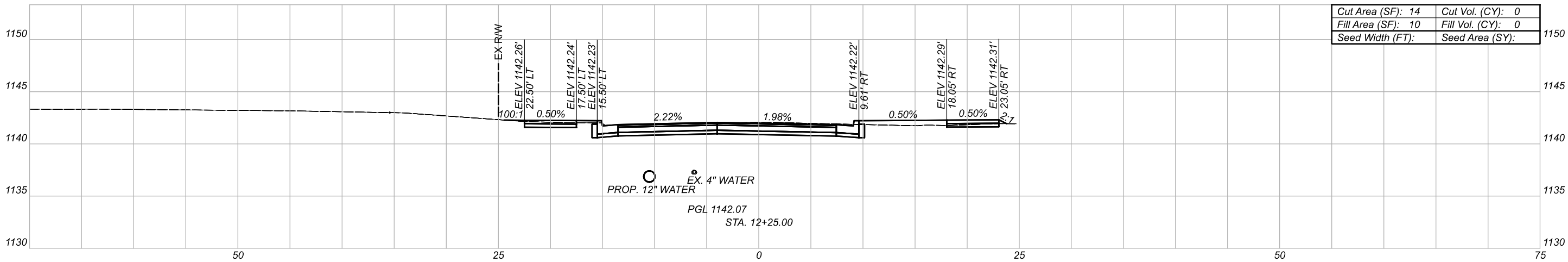
MODEL: CLX-01BBS - 12+25.00-[Sheet1] PAPER SIZE: 11x17 (in.) DATE: 2022-02-10 TIME: 8:53:11 AM USER: Jennifer.Kelley  
\\NO1201125\1share\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\_400-Engineering\Roadway\Sheets\11059\_X5002.dgn



Cut Area (SF): 28	Cut Vol. (CY): 20
Fill Area (SF): 23	Fill Vol. (CY): 17
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 15	Cut Vol. (CY): 14
Fill Area (SF): 14	Fill Vol. (CY): 11
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 14	Cut Vol. (CY): 0
Fill Area (SF): 10	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

CROSS SECTIONS - GIBBS AVE.  
STA. 12+25 TO STA. 12+75



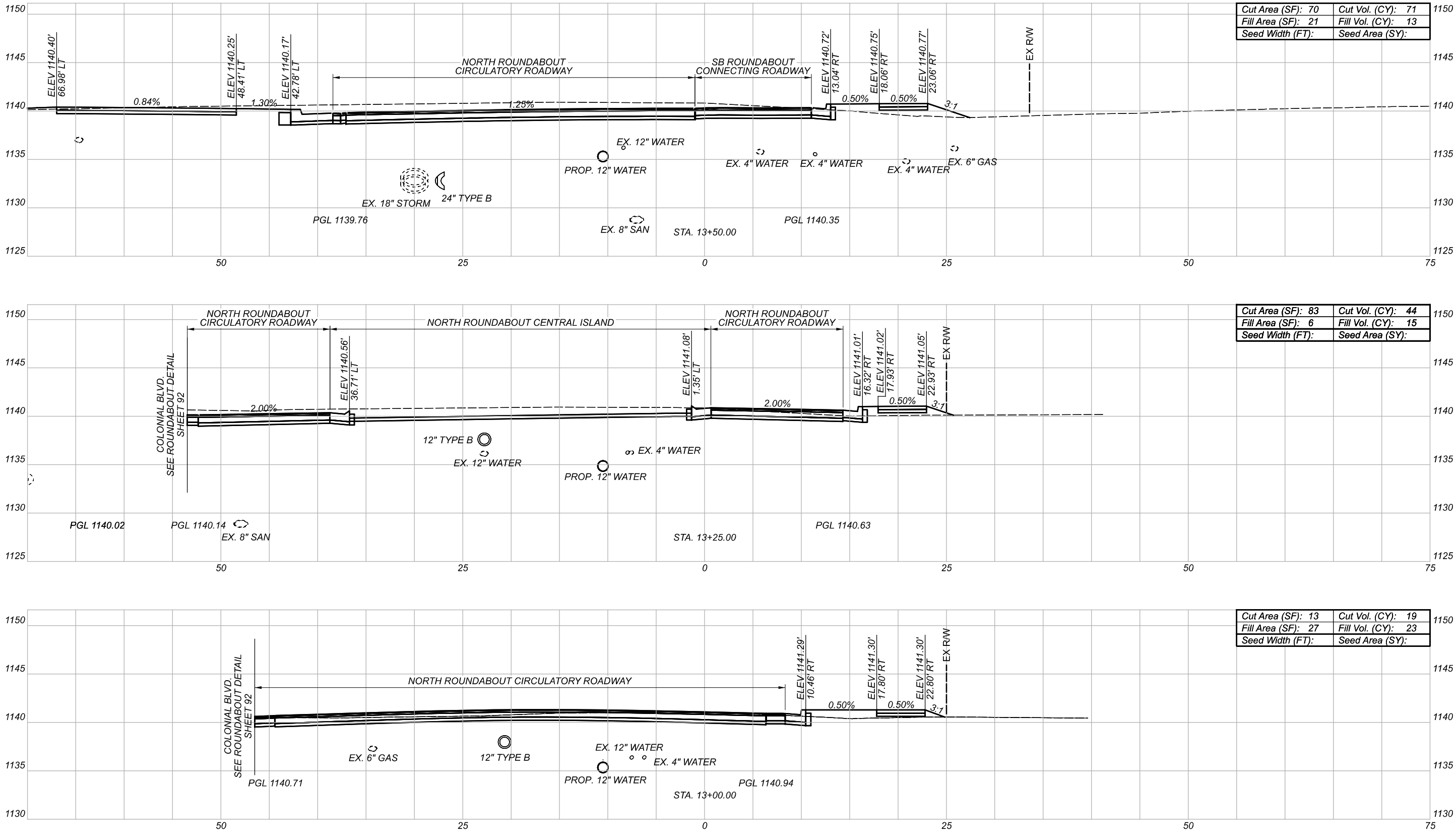
DESIGNER  
JMK

REVIEWER  
KMK 02-10-22

PROJECT ID  
111059

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
•	34	28	P.76	168

FOR SEEDING QUANTITIES SEE SHEET 18



Cut Area (SF):	70	Cut Vol. (CY):	71
Fill Area (SF):	21	Fill Vol. (CY):	13
Seed Width (FT):		Seed Area (SY):	

Cut Area (SF):	83	Cut Vol. (CY):	44
Fill Area (SF):	6	Fill Vol. (CY):	15
Seed Width (FT):		Seed Area (SY):	

Cut Area (SF):	13	Cut Vol. (CY):	19
Fill Area (SF):	27	Fill Vol. (CY):	23
Seed Width (FT):		Seed Area (SY):	

Sheet Totals		
Seeding	Cut	Fill
·	134	51

FOR SEEDING QUANTITIES SEE SHEET 18

CROSS SECTIONS - GIBBS AVE.  
STA. 13+00 TO STA. 13+50

DESIGN AGENCY

[

IBI

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DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

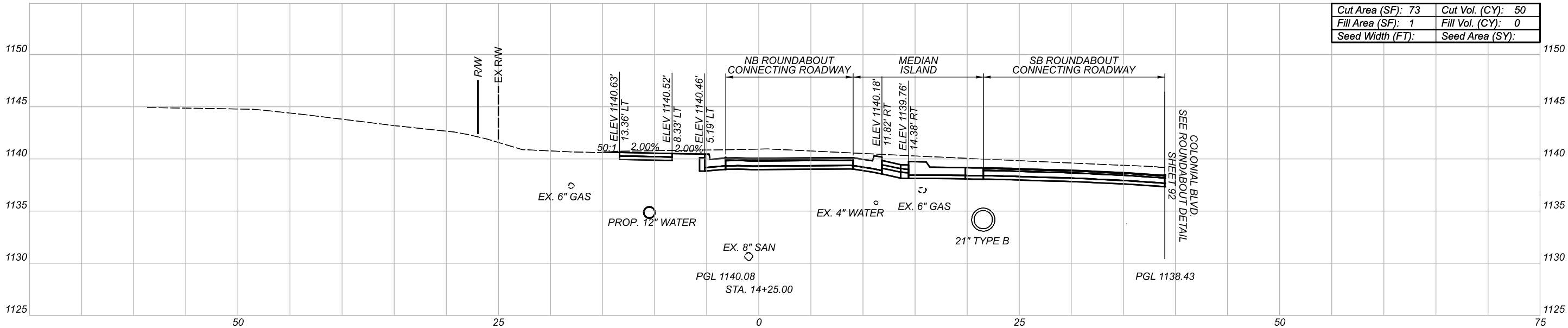
111059

SHEET

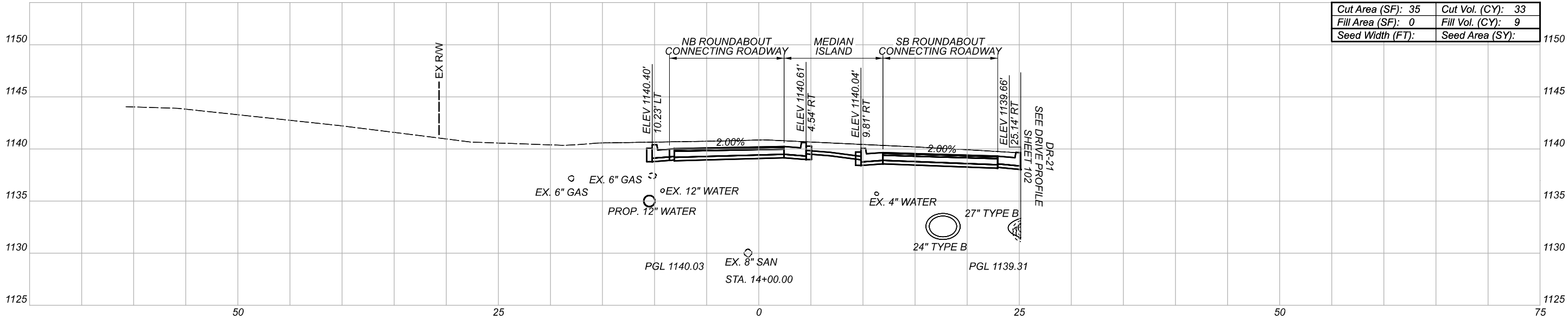
P.77

TOTAL

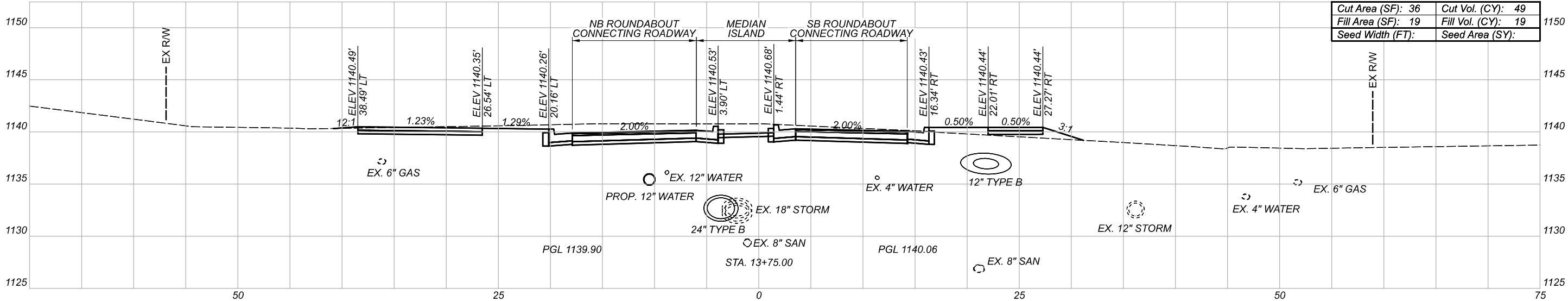
168



Cut Area (SF):	73	Cut Vol. (CY):	50
Fill Area (SF):	1	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	35	Cut Vol. (CY):	33
Fill Area (SF):	0	Fill Vol. (CY):	9
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	36	Cut Vol. (CY):	49
Fill Area (SF):	19	Fill Vol. (CY):	19
Seed Width (FT):		Seed Area (SY):	

FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals			111059	
Seeding	Cut	Fill	SHEET	TOTAL
.	132	28	P.78	168

CROSS SECTIONS - GIBBS AVE.  
STA. 13+75 TO STA. 14+25

DESIGN AGENCY



DESIGNER

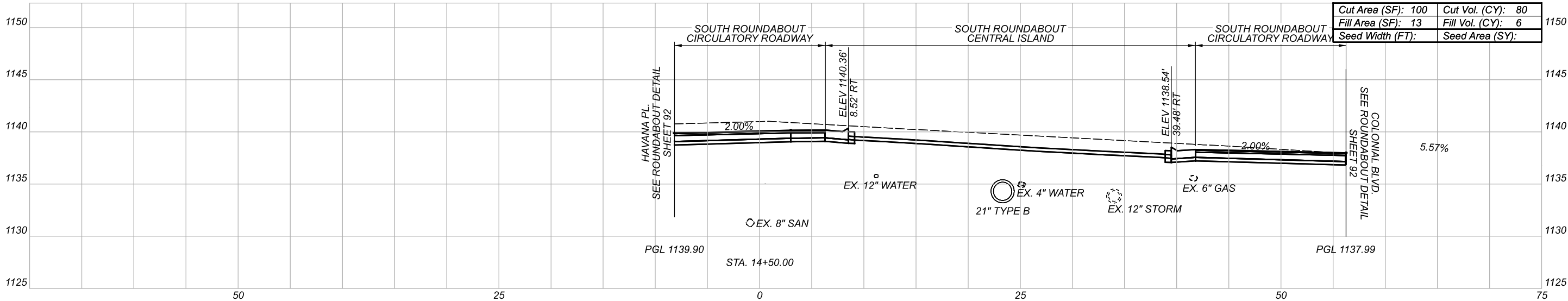
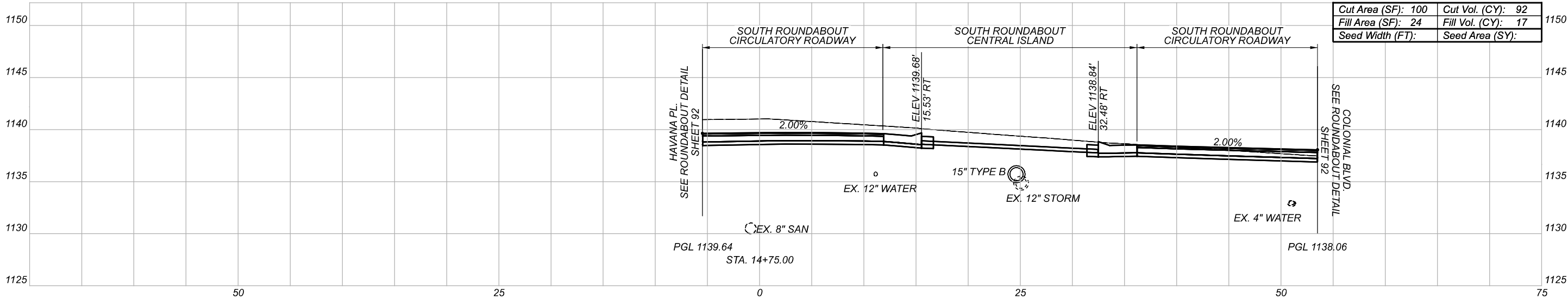
JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	172	23

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

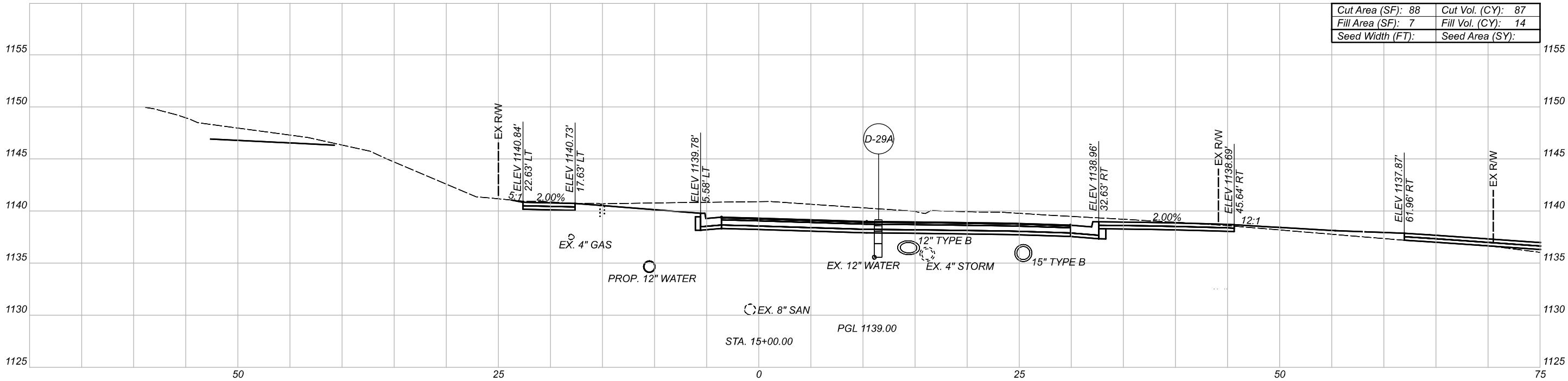
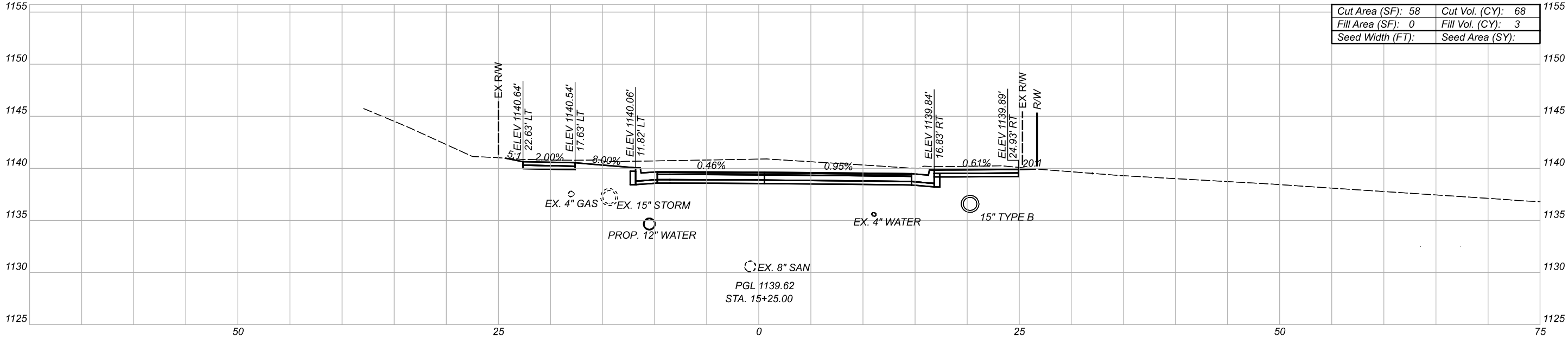
SHEET TOTAL

P.79 168

CROSS SECTIONS - GIBBS AVE.  
STA. 14+50 TO STA. 14+75

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: CLX-01BBS - I5+00.00-[Sheet1] PAPER SIZE: 11x17(in.) DATE: 2022-03-21 TIME: 2:22:56 PM USER: jennifer.kelley  
\\NO1201125\1bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_X5002.dgn



FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
·	155	17

DESIGN AGENCY

IBI

DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.80

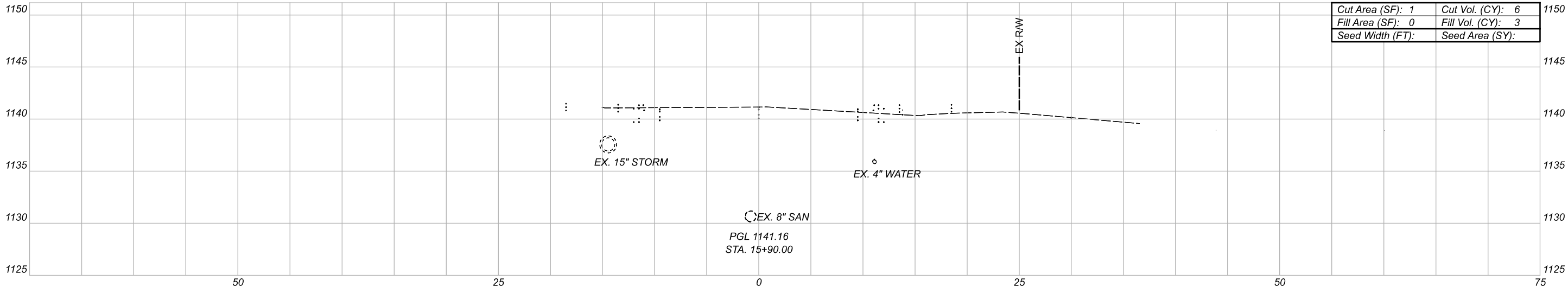
TOTAL

168

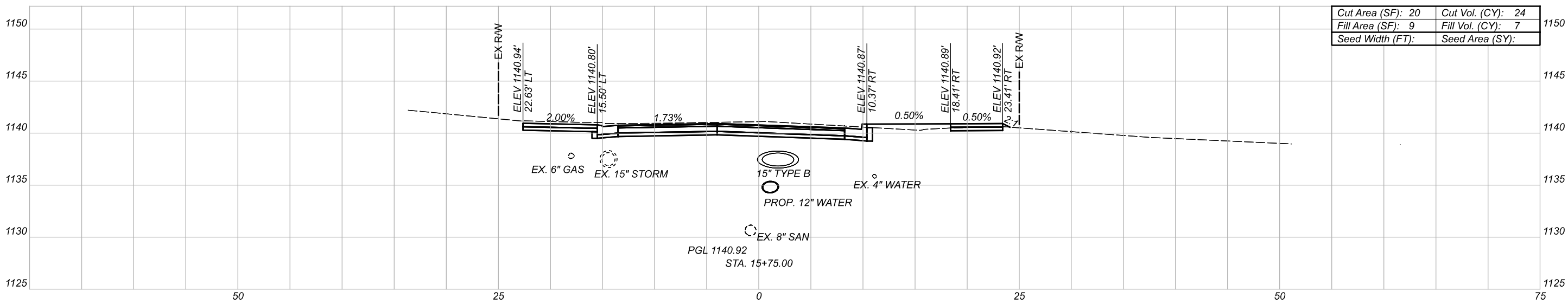
CROSS SECTIONS - GIBBS AVE.  
STA. 15+00 TO STA. 15+25

STA-COLONIAL BOULEVARD NE - PHASE 1

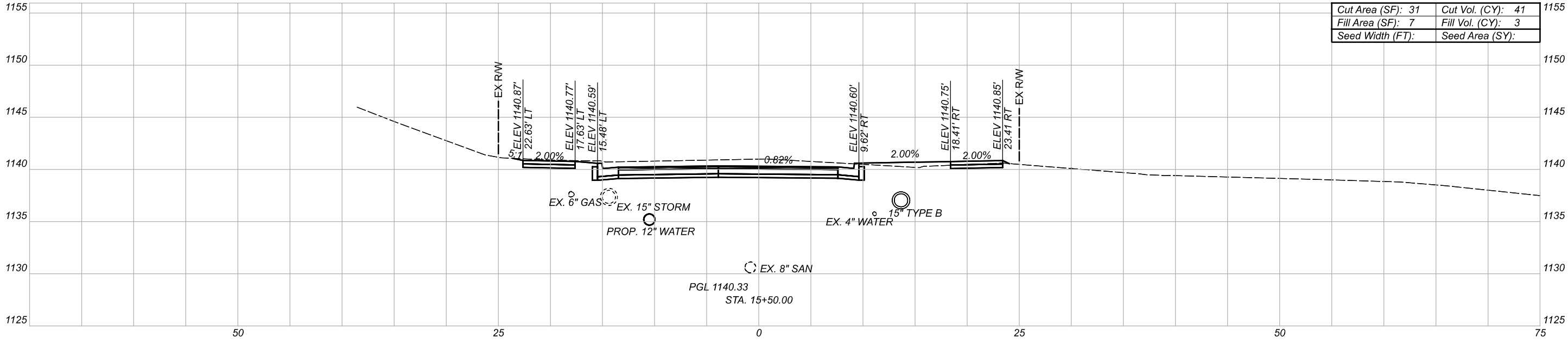
MODEL: CLX-01BBS - I5+50.00-[Sheet1] PAPER SIZE: 17x11(in.) DATE: 2022-02-10 TIME: 8:53:23 AM USER: Jennifer.Kelley  
\\NO1201125\Bshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_XS002.dgn



Cut Area (SF):	1	Cut Vol. (CY):	6
Fill Area (SF):	0	Fill Vol. (CY):	3
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	20	Cut Vol. (CY):	24
Fill Area (SF):	9	Fill Vol. (CY):	7
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	31	Cut Vol. (CY):	41
Fill Area (SF):	7	Fill Vol. (CY):	3
Seed Width (FT):		Seed Area (SY):	

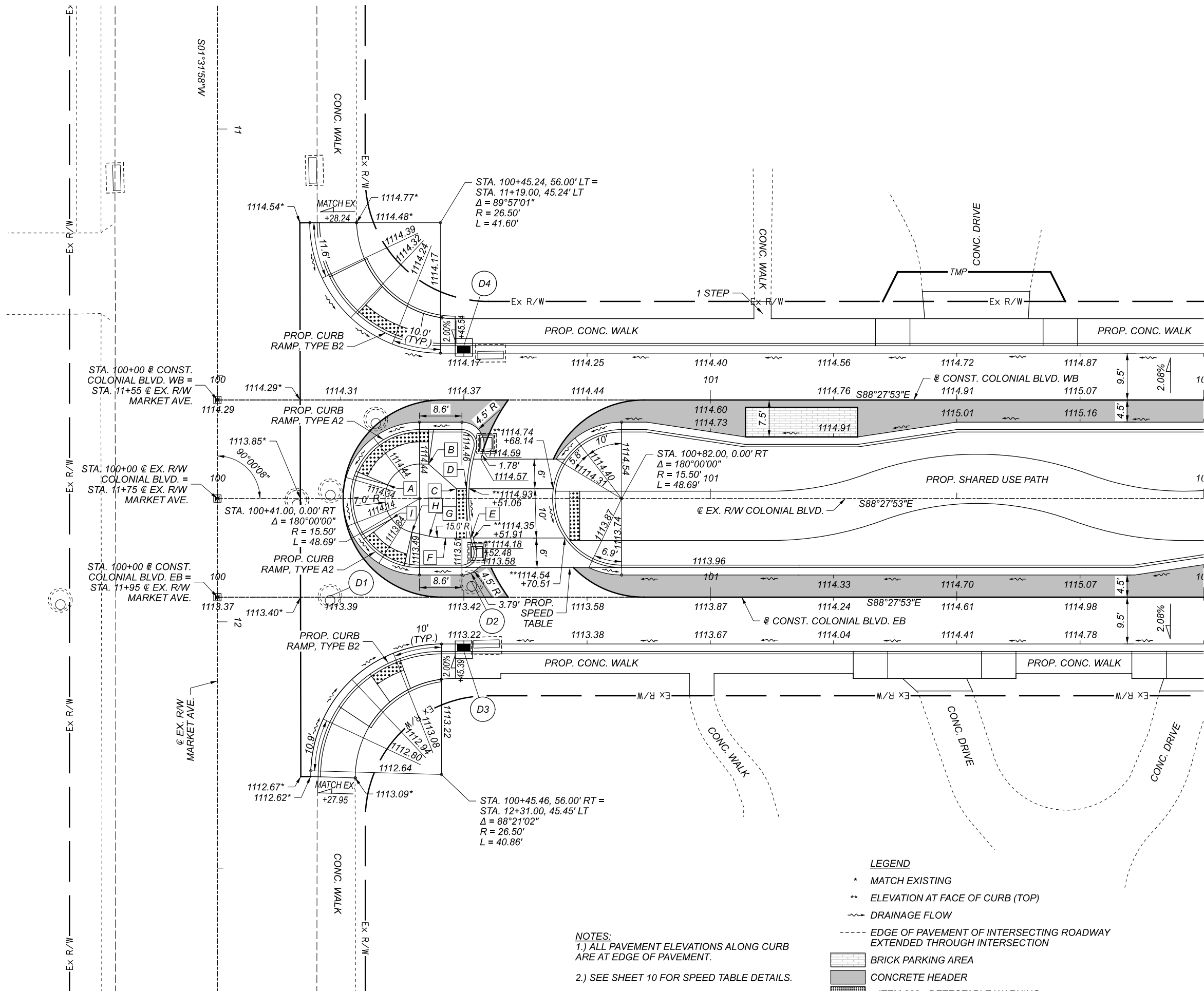
FOR SEEDING QUANTITIES SEE SHEET 18

Sheet Totals		
Seeding	Cut	Fill
.	71	13

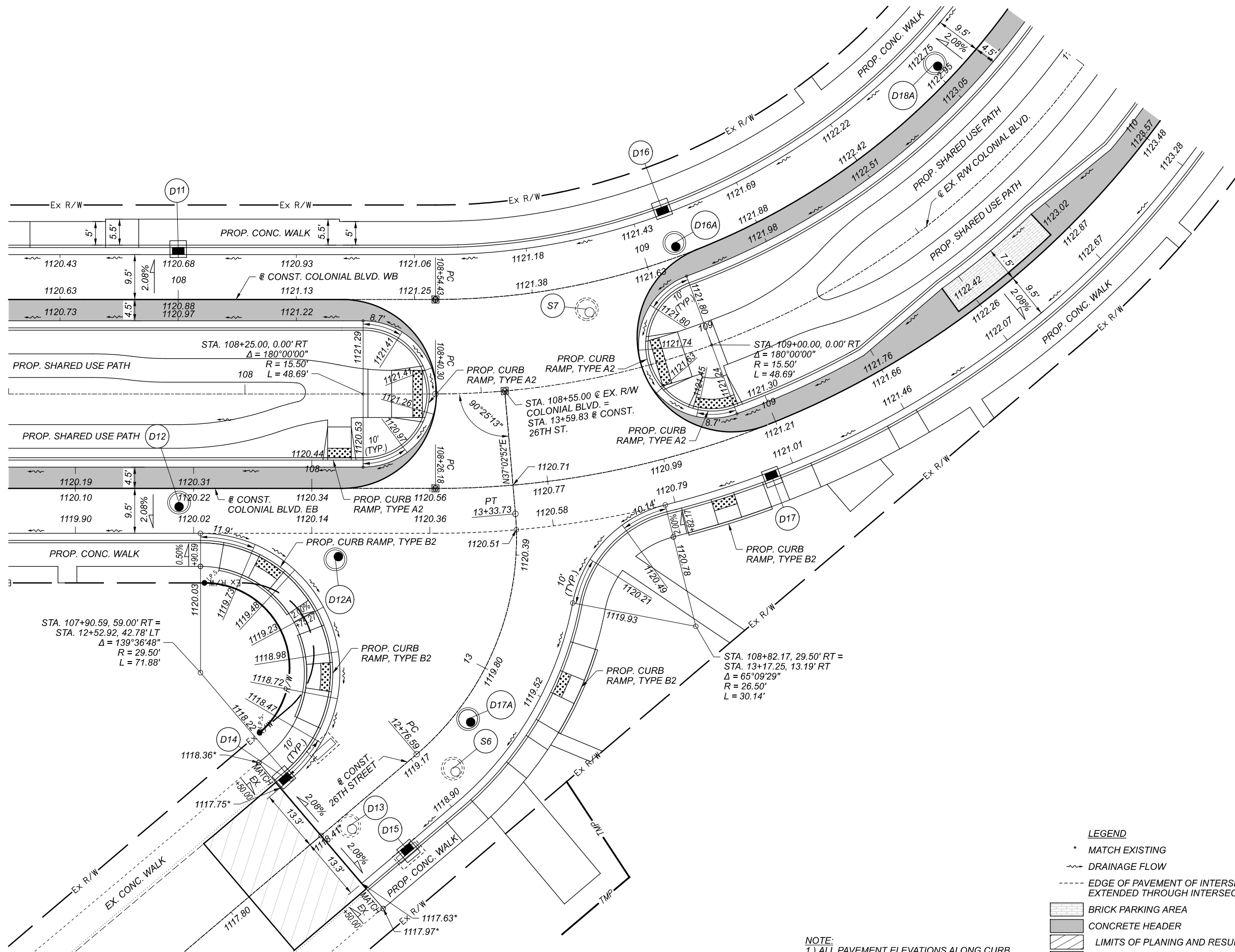
DESIGN AGENCY	
[IBI]	
DESIGNER	
JMK	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.81	168

CROSS SECTIONS - GIBBS AVE.  
STA. 15+50 TO STA. 15+90

- [A] STA. 100+34.57, 2.77' LT  
[B] STA. 100+42.85, 7.00' LT  
[C] STA. 100+48.50, 2.00' LT  
[D] STA. 100+50.56, 2.00' LT  
[E] STA. 100+51.40, 8.00' RT  
[F] STA. 100+46.31, 8.00' RT  
[G] STA. 100+42.99, 7.63' RT  
[H] STA. 100+39.45, 6.83' RT  
[I] STA. 100+35.34, 4.12' RT





HORIZONTAL  
SCALE IN FEETINTERSECTION DETAIL  
26TH STREET & COLONIAL BOULEVARD

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

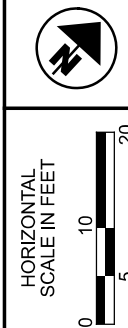
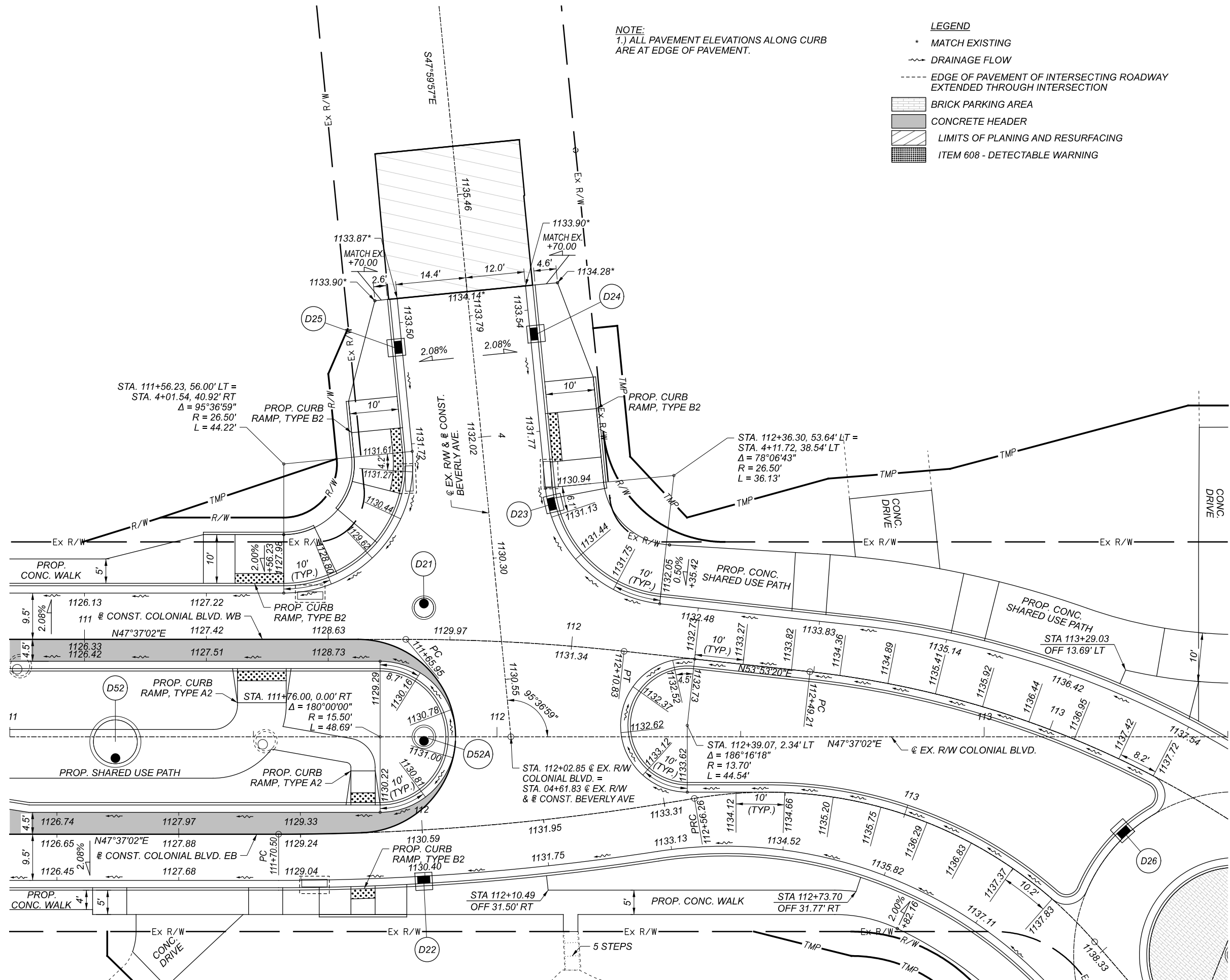
SHEET

P.83

TOTAL  
168

# STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Plan [Sheet] PAPERSIZE: T111(in) DATE: 2022-02-10 TIME: 8:53:34 AM USER: jennifer.kelley  
\\10.20.12.5\ibshare\121798\_STA-Colonial\7.0-Production\Worksheets\11059\400-Engineering\Roadway\Sheets\11059\_GS300.dgn



INTERSECTION DETAIL  
BEVERLY AVENUE & COLONIAL BOULEVARD

DESIGN AGENCY

DESIGNER  
J. A. K.

REVIEWER

PROJECT ID

SHEET	TOTAL
P.84	168

## LEGEND

\* MATCH EXISTING

~ DRAINAGE FLOW

----- EDGE OF PAVEMENT OF INTERSECTING ROADWAY  
EXTENDED THROUGH INTERSECTION

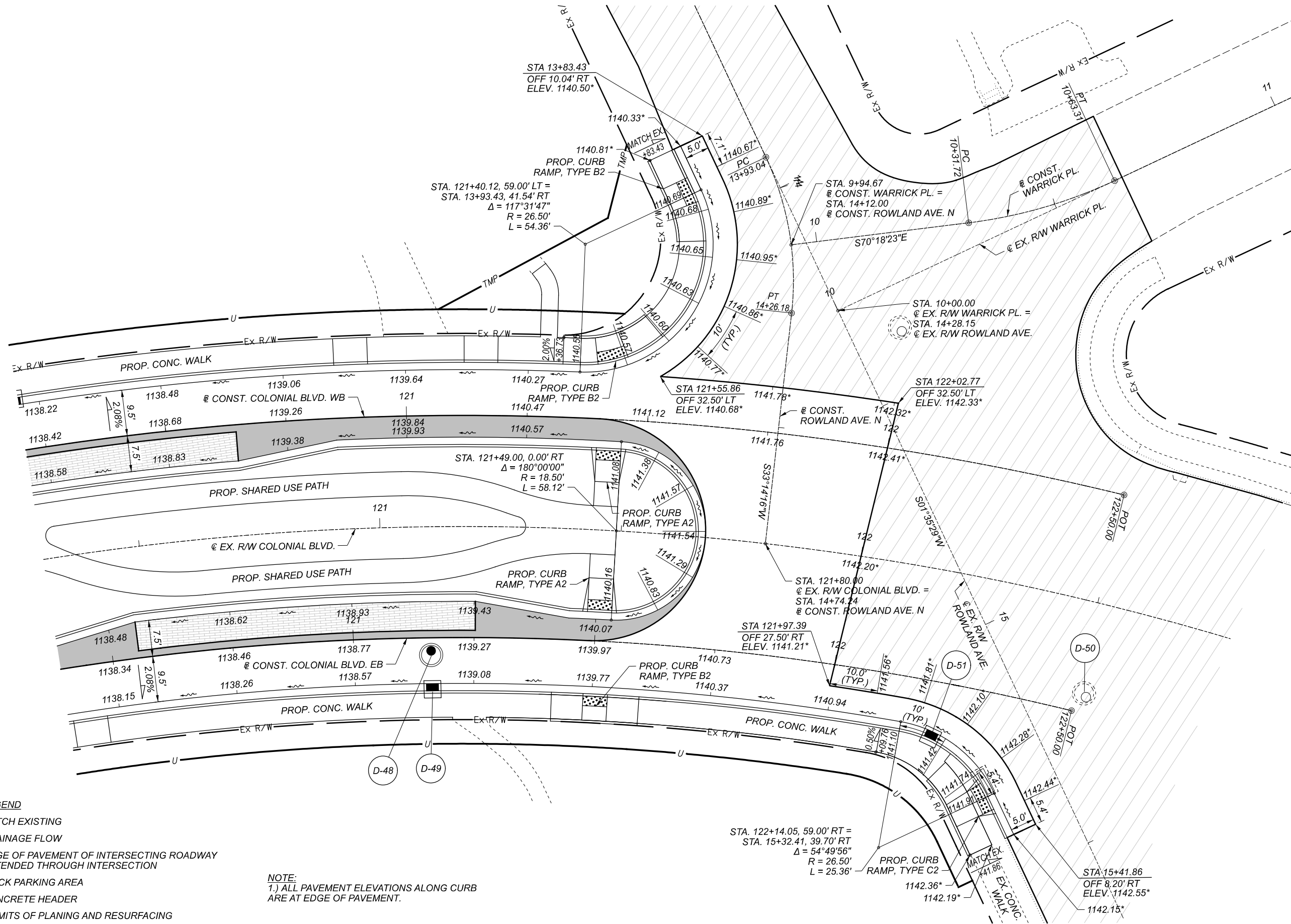
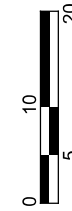
BRICK PARKING AREA

CONCRETE HEADER

LIMITS OF PLANING AND RESURFACING

ITEM 608 - DETECTABLE WARNING

## NOTE:

1.) ALL PAVEMENT ELEVATIONS ALONG CURB  
ARE AT EDGE OF PAVEMENT.HORIZONTAL  
SCALE IN FEETINTERSECTION DETAIL  
ROWLAND AVENUE & COLONIAL BOULEVARD

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

KMK 02-10-22

PROJECT ID

111059

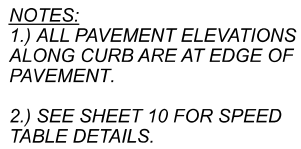
SHEET

P.85

TOTAL

168

MODEL: Plan 4 [Sheet] PAPER SIZE: 17x11(in.) DATE: 2022-02-10 TIME: 8:53:41 AM USER: jennifer.kelley  
\\10.120.112.5\ibshare\21798\_STA-Colonial\7.0\_Prodution\Worksheets\1059-400-Engineering\Roadway\Sheets\1059\_0500.dgn



BULLNOSE DETAIL

STA. 104+00 TO STA. 106+50 AND STA. 117+00 TO STA. 119+50



DESIGNER	
JMK	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.86	168

SNW1  
P.I. Sta. = 700+83.70  
 $\Delta = 25^\circ 24' 30''$  RT  
Dc = 30'23.44"  
R = 188.50'  
T = 42.49'  
L = 83.59'  
E = 4.73'

SNW2  
P.I. Sta. = 701+36.61  
 $\Delta = 41^\circ 07' 27''$  LT  
Dc = 181'53.29"  
R = 31.50'  
T = 11.82'  
L = 22.61'  
E = 2.14'

SSW1  
P.I. Sta. = 400+46.38  
 $\Delta = 53^\circ 45' 22''$  RT  
Dc = 62'37.06"  
R = 91.50'  
T = 46.38'  
L = 85.85'  
E = 11.08'

SSW2  
P.I. Sta. = 400+97.97  
 $\Delta = 49^\circ 10' 23''$  RT  
Dc = 216'12.38"  
R = 26.50'  
T = 12.13'  
L = 22.74'  
E = 2.64'

SSW3  
P.I. Sta. = 401+45.36  
 $\Delta = 39^\circ 49' 35''$  RT  
Dc = 56'26.57"  
R = 101.50'  
T = 36.77'  
L = 70.55'  
E = 6.45'

SSE1  
P.I. Sta. = 500+54.77  
 $\Delta = 19^\circ 13' 53''$  LT  
Dc = 57'35.01"  
R = 99.50'  
T = 16.86'  
L = 33.40'  
E = 1.42'

SSE2  
P.I. Sta. = 500+80.47  
 $\Delta = 11^\circ 26' 18''$  RT  
Dc = 62'37.06"  
R = 91.50'  
T = 9.16'  
L = 18.27'  
E = 0.46'

SSE3  
P.I. Sta. = 501+11.05  
 $\Delta = 89^\circ 55' 19''$  RT  
Dc = 266'29.31"  
R = 21.50'  
T = 21.47'  
L = 33.74'  
E = 8.88'

SNE1  
P.I. Sta. = 800+14.30  
 $\Delta = 67^\circ 15' 40''$  LT  
Dc = 266'29.31"  
R = 21.50'  
T = 14.30'  
L = 25.24'  
E = 4.32'

SNE2  
P.I. Sta. = 800+45.33  
 $\Delta = 24^\circ 45' 48''$  LT  
Dc = 62'37.06"  
R = 91.50'  
T = 20.09'  
L = 39.55'  
E = 2.18'

- CENTERLINE INTERSECTIONS**
- (H) STA. 111+85.61 @ CONST. COLONIAL BLVD. WB = STA. 4+42.21 @ EX. R/W BEVERLY AVE.
- (I) STA. 112+02.85 @ EX. R/W COLONIAL BLVD. = STA. 4+61.83 @ EX. R/W BEVERLY AVE.
- (J) STA. 113+17.26 @ EX. R/W COLONIAL BLVD. = STA. 113+04.08 @ CONST. COLONIAL BLVD. WB
- (K) STA. 113+66.72 @ EX. R/W COLONIAL BLVD. = STA. 14+08.32 @ CONST. GIBBS AVE. S
- (L) STA. 114+28.47 @ EX. R/W COLONIAL BLVD. = STA. 13+73.72 @ EX. R/W GIBBS AVE.
- (M) STA. 14+65.99 @ EX. R/W GIBBS AVE. = STA. 30+00.00 @ EX. R/W HAVANA PL.
- (N) STA. 114+62.88 @ EX. R/W COLONIAL BLVD. = STA. 13+52.44 @ CONST. GIBBS AVE. N
- (Y) STA. 113+50.45 @ CONST. COLONIAL BLVD. WB = STA. 14+32.18 @ CONST. GIBBS AVE. S

**BASELINE CORRELATION**

- (A) STA. 112+32.93, 23.53' RT @ EX. R/W COLONIAL BLVD. = STA. 400+00.00 REF LINE SSW
- (B) STA. 112+33.40, 27.30' LT @ EX. R/W COLONIAL BLVD. = STA. 700+00.00 REF LINE SNW
- (C) STA. 113+74.48, 8.42' RT @ EX. R/W COLONIAL BLVD. = STA. 1+41.28 @ CONST. ROUNDABOUT = STA. 701+47.41 REF LINE SNW
- (D) STA. 13+07.96, 11.48' RT @ EX. R/W GIBBS AVE. = STA. 5+39.84 @ CONST. ROUNDABOUT = STA. 200+00.00 REF LINE NNW
- (E) STA. 12+29.70, 5.50' RT @ EX. R/W GIBBS AVE. = STA. 200+79.53 REF LINE NNW
- (F) STA. 12+31.06, 13.50' LT @ EX. R/W GIBBS AVE. = STA. 300+00.00 REF LINE NNE
- (G) STA. 116+03.98, 28.91' LT @ EX. R/W COLONIAL BLVD. = STA. 301+63.42 REF LINE NNE

- (H) STA. 115+45.76, 25.36' RT @ EX. R/W COLONIAL BLVD. = STA. 600+78.74 REF LINE NSE
- (I) STA. 114+66.50, 8.67' RT @ EX. R/W COLONIAL BLVD. = STA. 4+09.93 @ CONST. ROUNDABOUT = STA. 600+00.00 REF LINE NSE
- (J) STA. 14+26.77, 3.10' LT @ EX. R/W GIBBS AVE. = STA. 3+29.50 @ CONST. ROUNDABOUT = STA. 800+00.00 REF LINE SNE
- (K) STA. 30+53.87, 10.50' LT @ EX. R/W HAVANA PL. = STA. 800+64.79 REF LINE SNE
- (L) STA. 30+34.63, 10.50' RT @ EX. R/W HAVANA PL. = STA. 501+35.94 REF LINE SSE
- (M) STA. 15+90.00, 13.50' LT @ EX. R/W GIBBS AVE. = STA. 500+00.00 REF LINE SSE
- (N) STA. 15+90.00, 13.81 RT @ EX. R/W GIBBS AVE. = STA. 402+05.60 REF LINE SSW

**NOTES:**

- 1.) FOR CENTERLINE CURVE DATA, SEE SHEETS 2-3.
- 2.) FOR SPEED TABLE DETAILS, SEE SHEET 10.
- 3.) FOR COLONIAL WEST SPLITTER ISLAND DETAILS, SEE SHEET 84.
- 4.) ALL ELEVATIONS AT 10' INTERVALS UNLESS OTHERWISE NOTED.
- 5.) ALL ELEVATIONS AT EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

NNW1  
P.I. Sta. = 200+27.18  
 $\Delta = 33^\circ 05' 21''$  LT  
Dc = 62'37.06"  
R = 91.50'  
T = 27.18'  
L = 52.84'  
E = 3.95'

NNW2  
P.I. Sta. = 200+60.40  
 $\Delta = 08^\circ 41' 21''$  RT  
Dc = 57'35.01"  
R = 99.50'  
T = 7.56'  
L = 15.09'  
E = 0.29'

NNE1  
P.I. Sta. = 300+23.80  
 $\Delta = 29^\circ 09' 29''$  LT  
Dc = 62'37.06"  
R = 91.50'  
T = 23.80'  
L = 46.56'  
E = 3.04'

NNE2  
P.I. Sta. = 300+62.86  
 $\Delta = 74^\circ 18' 51''$  LT  
Dc = 266'29.31"  
R = 21.50'  
T = 16.29'  
L = 27.89'  
E = 5.48'

NNE3  
P.I. Sta. = 300+91.52  
 $\Delta = 21^\circ 08' 05''$  LT  
Dc = 62'37.06"  
R = 91.50'  
T = 17.07'  
L = 33.75'  
E = 1.58'

NNE4  
P.I. Sta. = 301+35.83  
 $\Delta = 05^\circ 38' 56''$  RT  
Dc = 10'13.50"  
R = 560.04'  
T = 27.63'  
L = 55.21'  
E = 0.68'

NSE1  
P.I. Sta. = 600+04.90  
 $\Delta = 20^\circ 56' 22''$  RT  
Dc = 216'12.38"  
R = 26.50'  
T = 4.90'  
L = 9.68'  
E = 0.45'

RA1  
P.I. Sta. = 1+26.99  
 $\Delta = 18^\circ 03' 19''$  RT  
Dc = 62'37.06"  
R = 91.50'  
T = 14.54'  
L = 28.83'  
E = 1.15'

RA2  
P.I. Sta. = 1+53.88  
 $\Delta = 05^\circ 22' 40''$  RT  
Dc = 21'21.35"  
R = 268.24'  
T = 12.60'  
L = 25.18'  
E = 0.30'

RA3  
P.I. Sta. = 2+18.56  
 $\Delta = 245^\circ 28' 45''$  LT  
Dc = 171'01.56"  
R = 33.50'  
T = 52.10'  
L = 143.53'  
E = 28.44'

RA4  
P.I. Sta. = 3+19.91  
 $\Delta = 25^\circ 36' 12''$  RT  
Dc = 131'13.52"  
R = 43.66'  
T = 9.92'  
L = 19.51'  
E = 1.11'

RA5  
P.I. Sta. = 3+42.72  
 $\Delta = 16^\circ 26' 34''$  RT  
Dc = 62'37.06"  
R = 91.50'  
T = 13.22'  
L = 26.26'  
E = 0.95'

RA6  
P.I. Sta. = 3+94.45  
 $\Delta = 32^\circ 00' 37''$  RT  
Dc = 62'37.06"  
R = 91.50'  
T = 26.24'  
L = 51.11'  
E = 3.69'

RA7  
P.I. Sta. = 4+72.92  
 $\Delta = 244^\circ 00' 37''$  LT  
Dc = 171'01.56"  
R = 33.50'  
T = 53.60'  
L = 142.67'  
E = 29.71'

RA8  
P.I. Sta. = 5+88.23  
 $\Delta = 32^\circ 00' 19''$  RT  
Dc = 62'37.06"  
R = 91.50'  
T = 26.24'  
L = 51.11'  
E = 3.69'



ROUNDABOUT GEOMETRIC LAYOUT



DESIGN AGENCY



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KMK 02-10-22

PROJECT ID

111059

SHEET

P.89

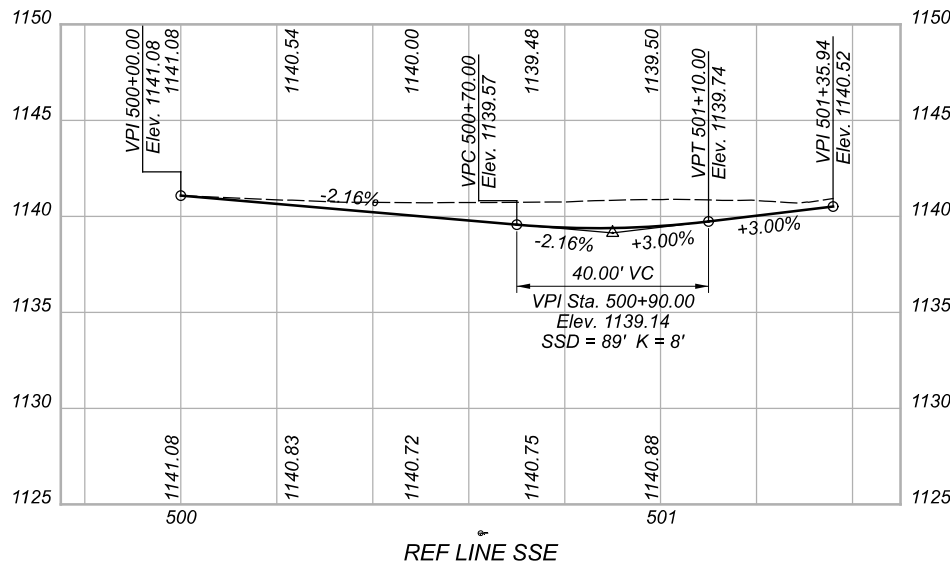
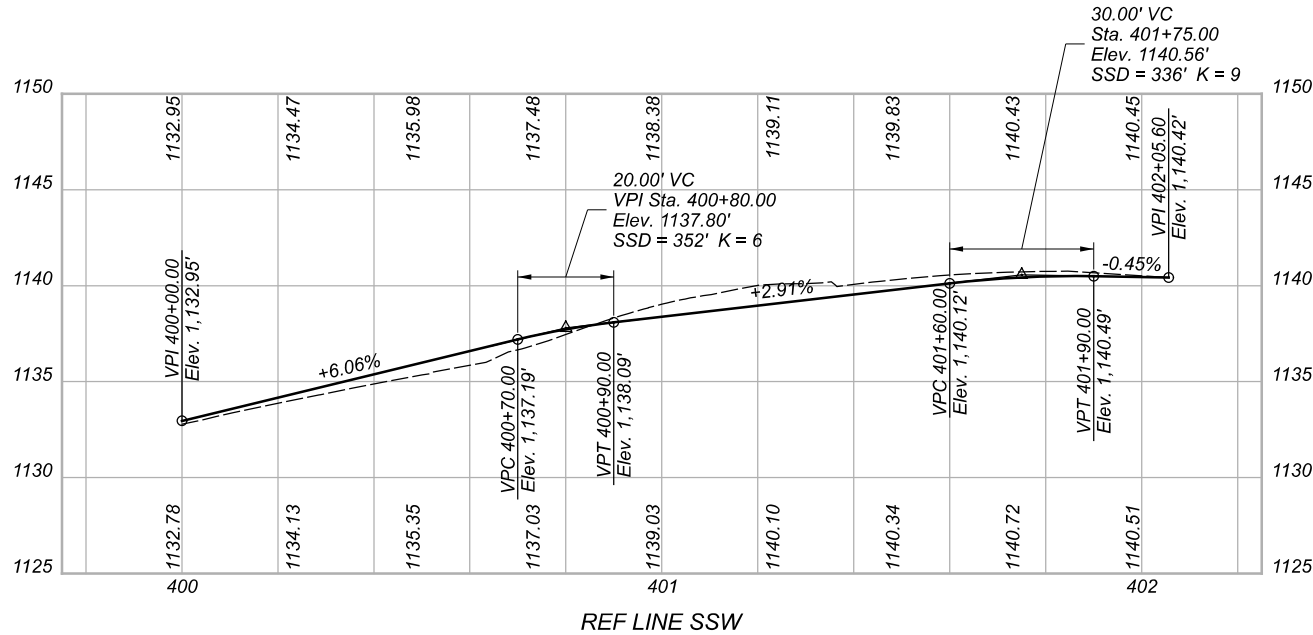
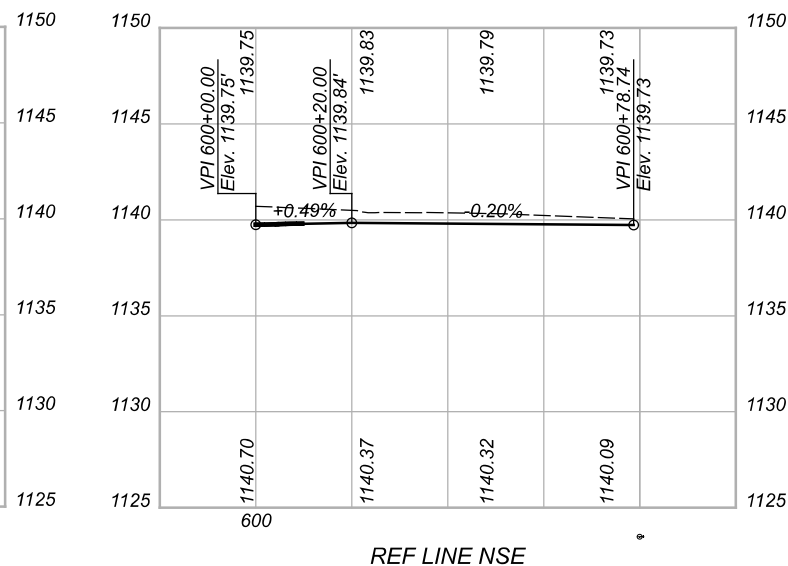
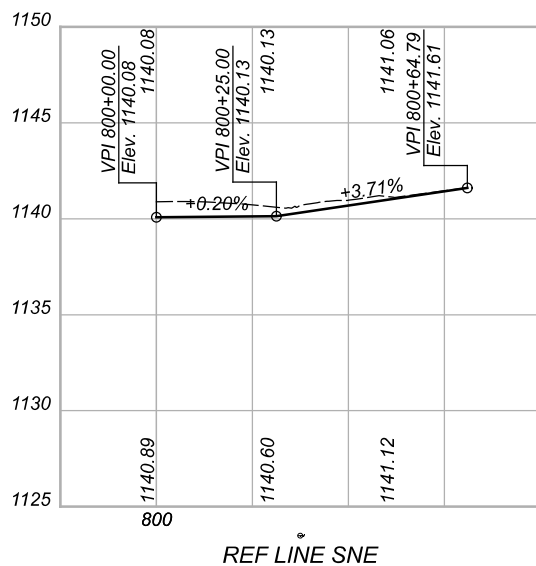
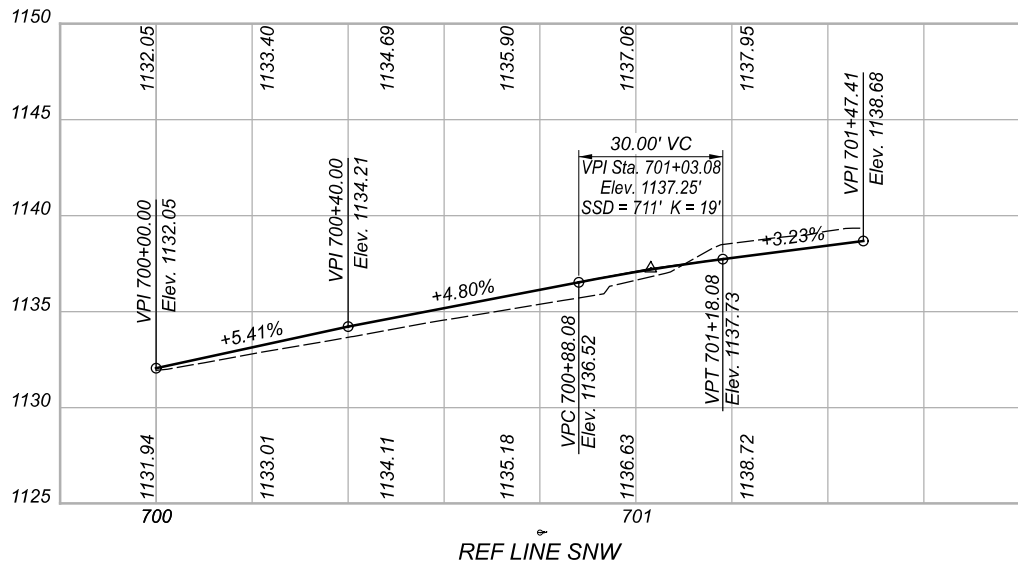
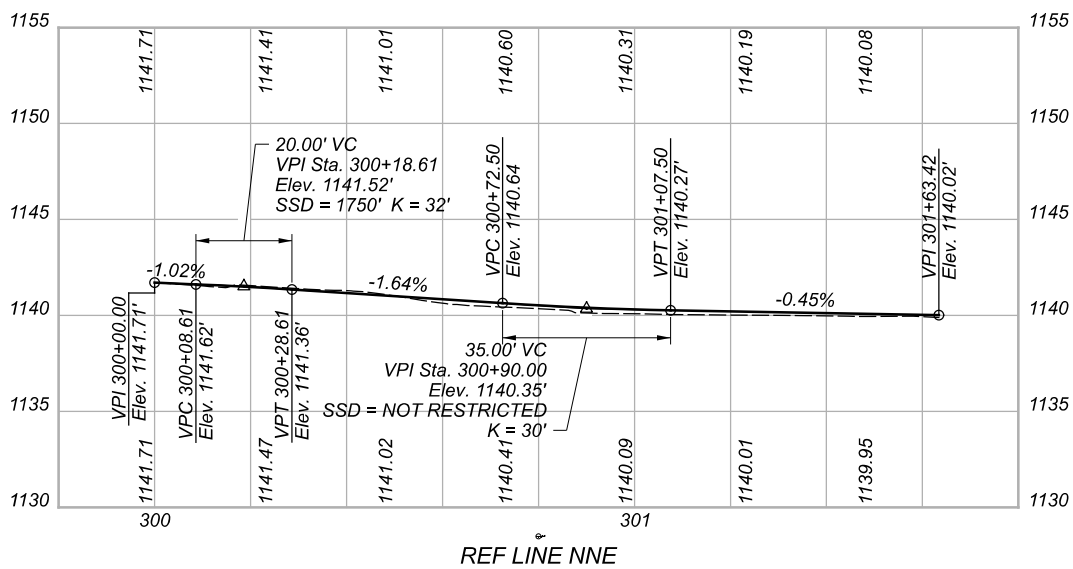
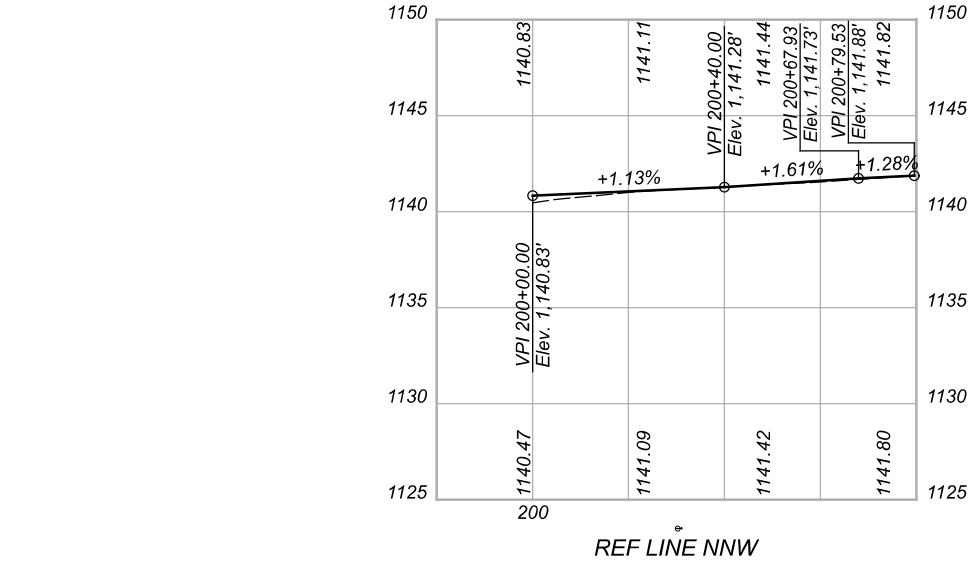
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STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Profile 1-3 [Sheet] PAPERSIZE: 17x11(in.) DATE: 2022-02-10 TIME: 8:53:59 AM USER: jennifer.kelley

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ROUNDABOUT DETAILS  
ENTRY CURVE PROFILES

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P.90

TOTAL

168



## NOTES:

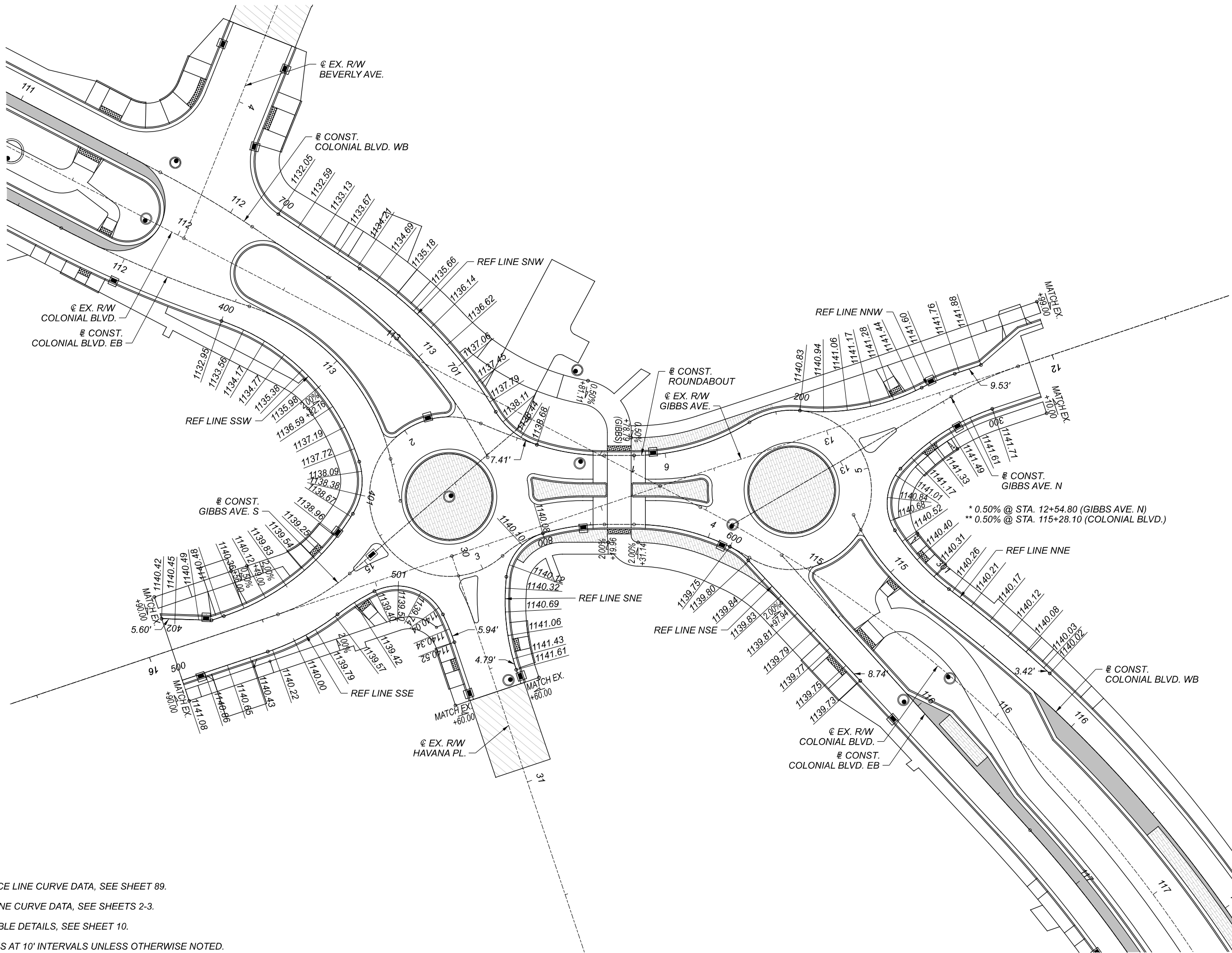
1.) FOR REFERENCE LINE CURVE DATA, SEE SHEET 89.

2.) FOR CENTERLINE CURVE DATA, SEE SHEETS 2-3.

3.) FOR SPEED TABLE DETAILS, SEE SHEET 10.

4.) ALL ELEVATIONS AT 10' INTERVALS UNLESS OTHERWISE NOTED.

5.) ALL ELEVATIONS AT EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

HORIZONTAL  
SCALE IN FEET  
0 10 20 40ROUNDBOUT DETAIL  
GIBBS AVENUE & HAVANA PLACE & COLONIAL BOULEVARD

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TOTAL

168



W1 CURVE DATA  
Δ = 108°09'06"  
R = 4.50'  
T = 6.21'  
L = 8.49'

W2 CURVE DATA  
Δ = 122°05'45"  
R = 4.50'  
T = 8.13'  
L = 9.59'

CONST. COLONIAL BOULEVARD EB

CONST. COLONIAL BOULEVARD WB

EX. R/W COLONIAL BOULEVARD

CONST. GIBBS AVE. N

CONST. ROUNDABOUT

EX. R/W COLONIAL BOULEVARD

CONST. COLONIAL BOULEVARD WB

- NOTES:
- 1.) FOR REFERENCE LINE CURVE DATA, SEE SHEET 89.
  - 2.) FOR CENTERLINE CURVE DATA, SEE SHEETS 2-3.
  - 3.) FOR SPEED TABLE DETAILS, SEE SHEET 10.
  - 4.) FOR COLONIAL WEST SPLITTER ISLAND DETAILS, SEE SHEET 84.
  - 5.) ALL ELEVATIONS AT 10' INTERVALS UNLESS OTHERWISE NOTED.
  - 6.) ALL ELEVATIONS AT EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

REF	STATION	OFFSET	BASELINE
A	15+05.01	0.87' RT	# CONST. GIBBS AVE. S
B	15+05.06	1.11' LT	
C	14+94.02	2.83' RT	
D	14+91.76	4.70' LT	
E	14+90.34	0.30' LT	# EX. R/W HAVANA PL.
F	14+90.42	3.73' LT	
G	30+28.89	0.08' LT	
H	30+29.10	2.06' LT	
I	30+14.13	1.04' RT	# EX. R/W GIBBS AVE.
J	30+12.37	7.38' LT	
K	30+10.68	2.31' LT	
L	30+10.97	6.47' LT	
M	14+25.90	19.95' RT	# EX. R/W GIBBS AVE.
N	14+27.10	14.27' RT	
O	14+22.11	21.78' RT	
P	14+23.38	8.49' RT	
Q	14+03.63	13.14' RT	# EX. R/W GIBBS AVE.
R	14+06.49	4.60' RT	
S	13+99.52	11.76' RT	
T	14+02.38	3.22' RT	
U	13+78.66	4.77' RT	# EX. R/W GIBBS AVE.
V	13+81.52	3.77' LT	

REF	STATION	OFFSET	BASELINE
W	13+74.54	3.39' RT	# EX. R/W GIBBS AVE.
X	13+77.40	5.14' LT	
Y	13+56.62	0.63' LT	
Z	13+58.42	14.10' LT	
AA	13+52.96	6.75' LT	# CONST. GIBBS AVE. N
BB	13+54.65	12.46' LT	
CC	12+88.79	3.13' RT	
DD	12+88.65	0.45' LT	
EE	12+87.49	4.17' RT	# EX. R/W COLONIAL BLVD.
FF	12+84.84	3.38' LT	
GG	12+73.71	0.99' RT	
HH	12+73.71	0.99' LT	
II	113+13.93	33.30' RT	# EX. R/W COLONIAL BLVD.
JJ	113+21.04	31.67' RT	
KK	113+34.90	15.91' RT	
LL	113+34.70	8.04' RT	
MM	115+01.80	3.26' LT	# EX. R/W COLONIAL BLVD.
NN	115+08.94	22.29' LT	
OO	115+03.85	3.83' RT	
PP	115+12.37	24.43' LT	
QQ	115+22.61	9.75' RT	# EX. R/W COLONIAL BLVD.

\*\* ELEVATION AT FACE OF CURB (TOP)

ROUNDABOUT DETAIL  
GIBBS AVENUE & HAVANA PLACE & COLONIAL BOULEVARD

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SHEET

P.92

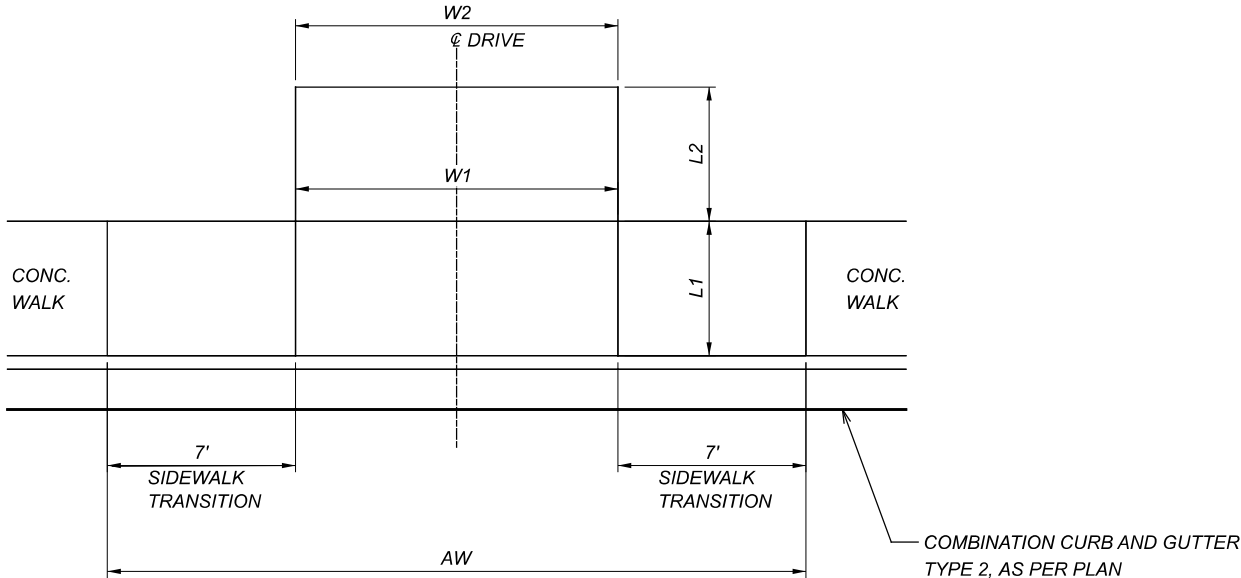
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SHEET NO.	REFERENCE NO.	STATION	SIDE	DRIVE TYPE	DRIVE ANGLE	APRON LENGTH	APRON WIDTH	DRIVEWAY LENGTH	DRIVEWAY WIDTH AT THE BACK OF THE PROPOSED WALK	DRIVEWAY WIDTH AT THE TIE-IN TO EXISTING	APRON AREA	DRIVEWAY AREA	202	204	301	304	407	441	452	608
													PAVEMENT REMOVED	SUBGRADE COMPACTION	ASPHALT CONCRETE BASE, PG64-22 (3.5")	AGGREGATE BASE (4" OR 8")	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (1.25")	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	6" CONCRETE WALK
													SY	SY	CY	CY	GAL	CY	SY	SF
23	DR-1	101+34.00	RT	CONC	71°00'00"	5.0	33.0	2.7	13.0	11.3	165.0	31.0	5.49	21.78		2.04			3.45	165.00
23	DR-2	101+54.00	LT	CONC	90°00'00"	5.0	41.0	5.5	21.0	21.8	205.0	117.7	15.27	35.86		2.53			13.08	205.00
23	DR-3	102+07.00	RT	CONC	75°00'00"	5.0	33.0	2.6	13.0	11.7	165.0	31.3	5.35	21.81		2.04			3.47	165.00
23	DR-4	102+22.50	LT	ASPH	90°00'00"	5.0	31.0	5.5	11.0	9.8	155.0	57.1	7.34	23.56	0.62	1.91	0.38	0.22		155.00
24	DR-5	102+80.00	RT	CONC	90°00'00"	5.0	30.3	7.5	10.0	10.0	136.6	74.9	9.39	23.51		1.69			8.33	136.64
24	DR-6	102+83.00	LT	GRAVEL	90°00'00"	5.0	32.0	2.5	13.0	12.1	161.1	31.8	6.05	21.43		2.77				161.11
24	DR-7	103+48.00	RT	CONC	80°00'00"	5.0	33.5	4.9	13.0	11.1	159.0	57.2	7.80	24.03		1.96			6.36	159.04
24	DR-8	104+04.00	LT	CONC	71°17'34"	5.0	38.0	5.6	18.8	17.9	191.4	98.8	14.02	32.24		2.36			10.98	191.38
24	DR-9	104+05.00	RT	CONC	65°08'29"	5.0	34.5	3.3	14.1	11.9	171.1	38.2	6.04	23.26		2.11			4.25	171.06
	DR-10	NOT USED																		
24	DR-11	104+60.50	LT	CONC	90°00'00"	5.0	34.0	5.5	14.0	10.7	171.2	68.1	9.85	26.59		2.11			7.57	171.17
24	DR-12	105+24.00	RT	CONC	58°00'00"	5.0	38.4	3.1	15.5	15.4	190.9	38.5	6.21	25.49		2.36			4.28	190.88
24	DR-13	105+26.00	LT	ASPH	90°00'00"	5.0	32.0	1.0	12.8	12.7	139.4	12.9	1.93	16.92	0.14	1.72	0.09	0.05		139.37
24	DR-14	106+42.50	LT	CONC	90°00'00"	5.0	32.0				160.0		1.36	17.78		1.98				160.00
25	DR-15	107+62.50	LT	ASPH	90°00'00"	5.0	30.0				153.5		1.31	17.06		1.90				153.50
25	DR-16	12+85.00 26TH	RT	CONC	82°05'25"	5.0	25.0	24.6	10.1	10.0	129.2	246.2	27.03	41.70		1.59			27.35	129.18
25	DR-17	109+05.50	RT	GRAVEL	71°10'07"	5.0	32.0	5.8	12.4	12.0	162.4	70.3		25.85		3.74				162.37
25	DR-18	110+26.50	RT	GRAVEL	68°10'07"	5.0	30.0				145.1		0.89	16.12		1.79				145.07
25	DR-19	111+78.50	RT	CONC	44°00'00"	5.0	39.0	16.5	22.0	10.0	195.0	189.9	22.64	42.77		2.41			21.10	195.03
26	DR-20	112+86.00	LT	CONC	84°00'00"	12.0	40.0	13.9	17.5	17.0	492.2	236.8	26.85	80.99		6.08			26.31	492.15
26	DR-21	113+54.00	LT	CONC	90°00'00"	23.6	37.4	42.6	20.0	20.2	650.7	955.0	62.27	178.41		8.03			106.11	650.68
26	DR-22	15+62.00 GIBBS S	RT	ASPH	90°00'00"	15.4	26.0	5.6	12.0	12.7	274.5	68.9	7.74	38.15	0.74	3.39	0.46	0.27		274.47
26	DR-23	15+68.50 GIBBS S	LT	CONC	90°00'00"	7.1	32.0	11.4	18.0	18.0	212.6	204.7	22.11	46.36		2.62			22.74	212.58
26	DR-24	115+88.50	LT	ASPH	60°03'06"	6.5	36.0				235.0			26.11		2.90				235.01
26	DR-25	116+93.50	RT	CONC	72°56'54"	5.0	32.3	5.6	11.6	11.3	160.3	60.1	1.79	24.49		1.98			6.68	160.28
27	DR-26	117+88.00	RT	CONC	83°12'22"	5.0	22.7				112.9		1.32	12.54		1.39				112.88
27	DR-27	118+02.50	LT	GRAVEL	90°00'00"	5.0	32.0				160.9		1.86	17.87		1.99				160.86
27	DR-28	118+05.00	RT	CONC	82°12'23"	5.0	22.7				112.9		1.18	12.54		1.39				112.88
27	DR-29	118+50.50	LT	CONC	90°00'00"	5.0	30.0				150.8		2.19	16.76		1.86				150.80
27	DR-30	118+86.00	RT	CONC	90°00'00"	5.0	29.3				145.7		1.17	16.19		1.80				145.70
27	DR-31	119+19.00	LT	ASPH	86°06'12"	5.0	30.0	4.4	10.0	9.8	150.8	43.7	6.75	21.61	0.47	1.86	0.29	0.17		150.77
27	DR-32	119+85.50	LT	CONC	78°56'54"	5.0	38.0	4.8	19.3	19.1	191.0	91.2	13.14	31.36		2.36			10.14	190.97
27	DR-33	120+12.00	RT	CONC	82°00'00"	5.0	38.4				190.9		2.45	21.21		2.36				190.92
27	DR-34	121+27.50	LT	CONC	64°03'06"	5.0	34.0				170.9		3.09	18.99		2.11				170.87
26	DR-35	12+11.00 GIBBS N	RT	CONC	90°00'00"	7.8	24.0	1.3	10.0	9.0	157.0	12.4	1.31	18.82		1.94			1.38	156.99
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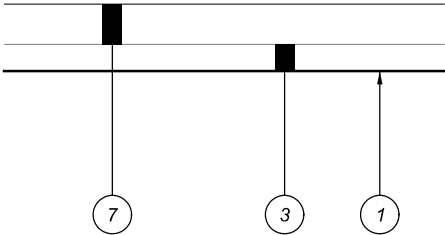


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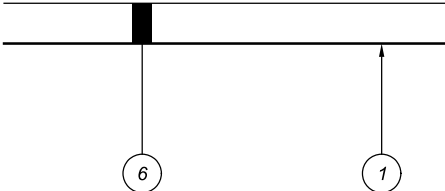
- 1 ITEM 204 - SUBGRADE COMPACTION
- 2 ITEM 301 - ASPHALT CONCRETE BASE, PG 64-22 (3.5")
- 3 ITEM 304 - AGGREGATE BASE (4" CONCRETE APRON, 8" GRAVEL DRIVE)
- 4 ITEM 407 - NON-TRACKING TACK COAT (APPLIED AT A RATE OF 0.06 GAL/SY)
- 5 ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22 (1.25")
- 6 ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- 7 ITEM 608 - 6" CONCRETE WALK

DRIVE TYPICALS

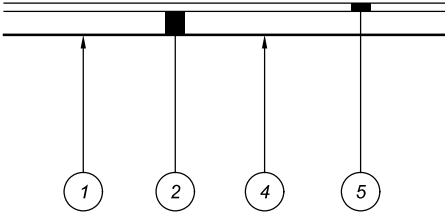
CONCRETE APRON BUILDUP



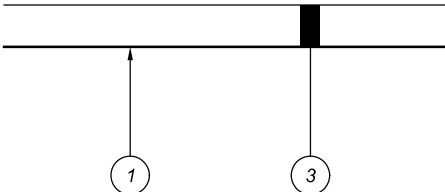
CONCRETE DRIVE BUILDUP



ASPHALT DRIVE BUILDUP



GRAVEL DRIVE BUILDUP



DRIVEWAY DETAILS

DESIGN AGENCY



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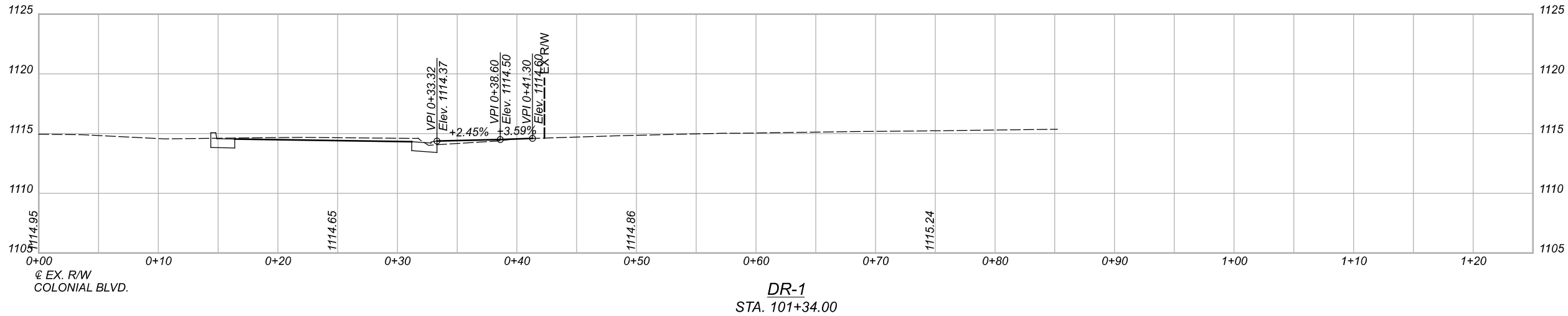
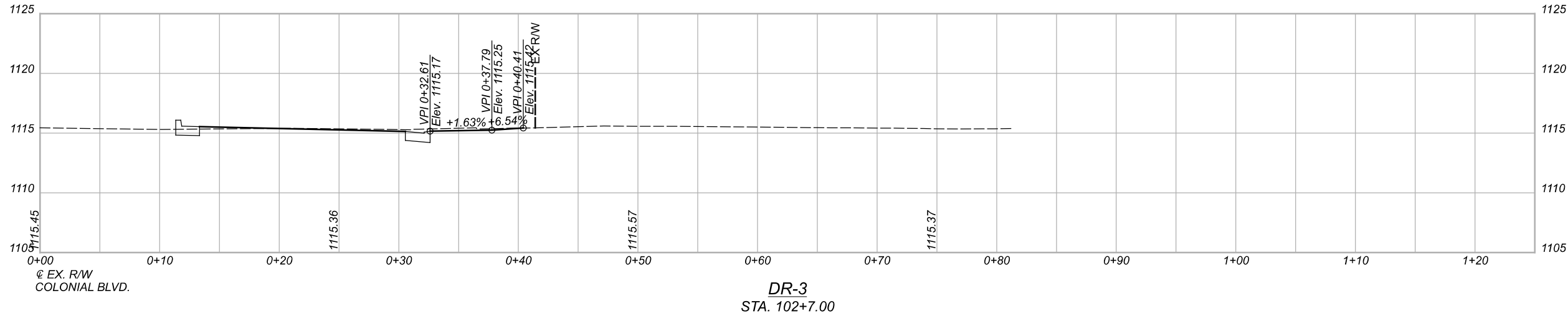
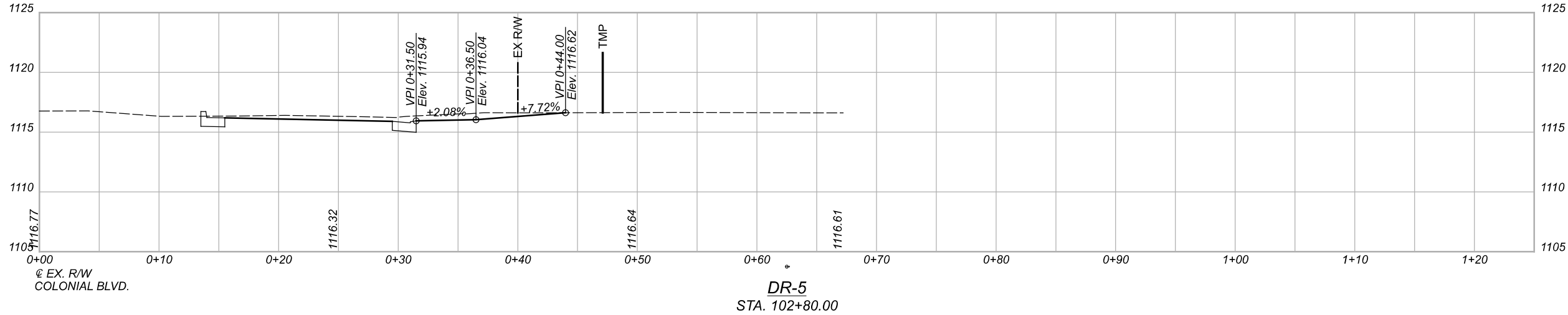
111059

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TOTAL

168



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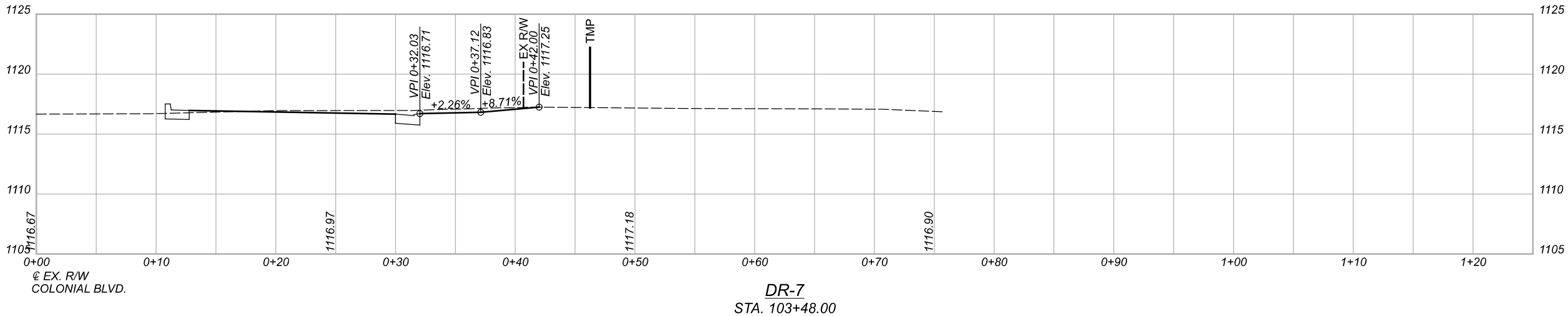
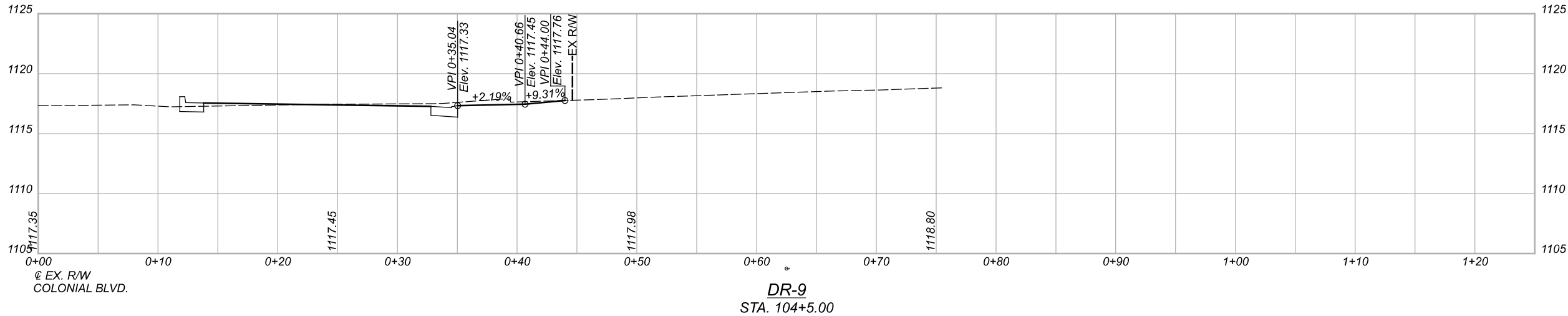
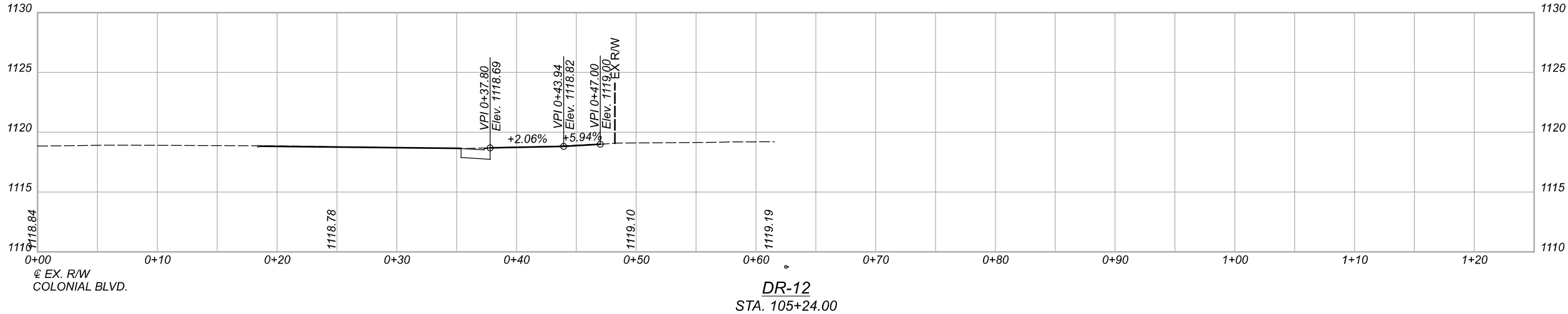
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TOTAL

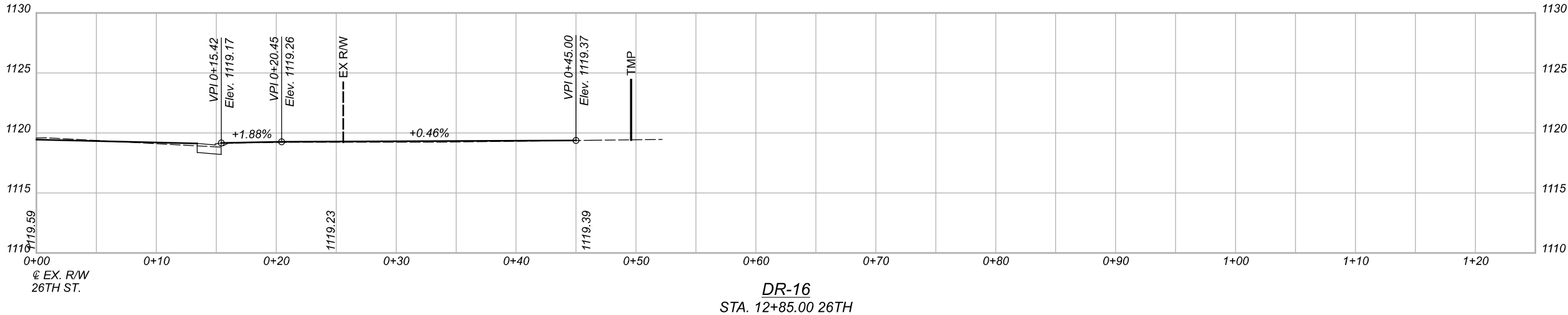
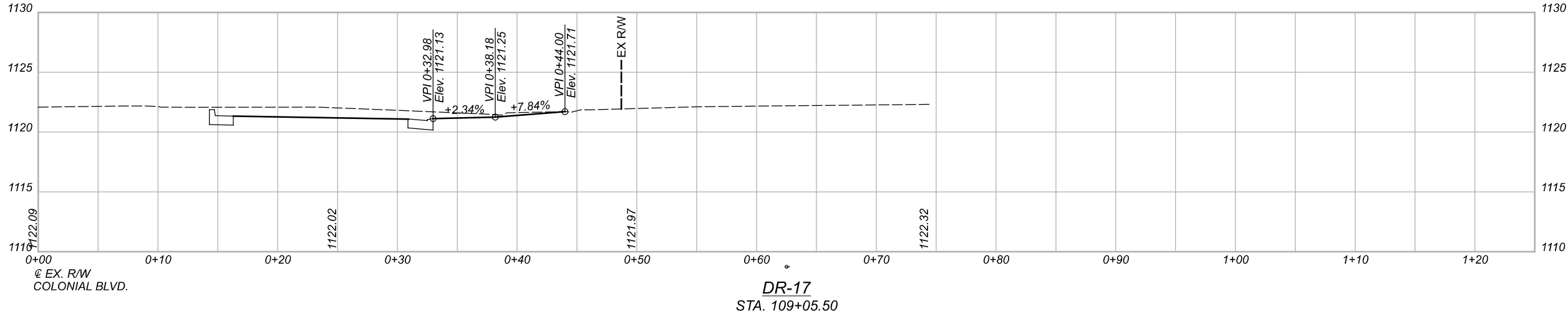
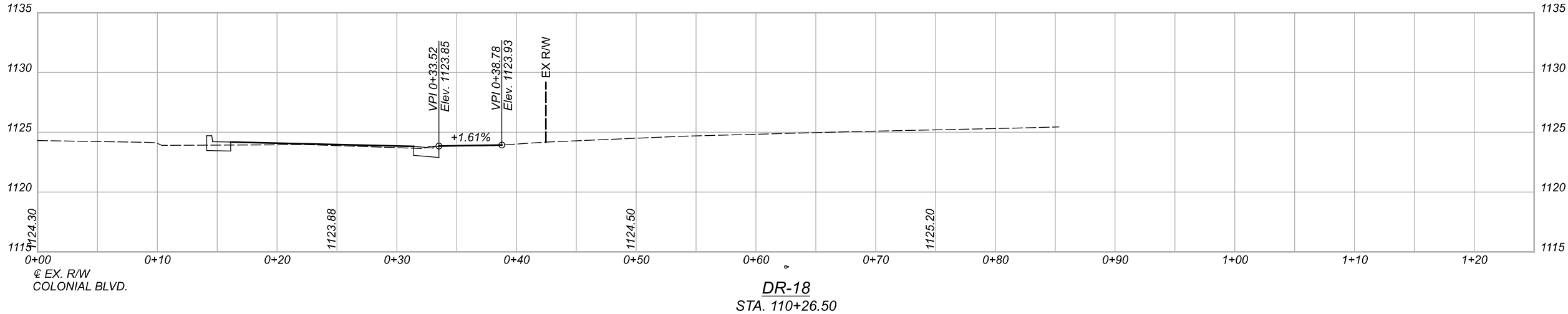
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DRIVE PROFILES - RIGHT  
DR-1, DR-3 & DR-5



STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Profile 7 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:54:20 AM USER: jennifer.kelley  
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DRIVE PROFILES - RIGHT  
DR-16, DR-17 & DR-18

DESIGN AGENCY



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KMK 02-10-22

PROJECT ID

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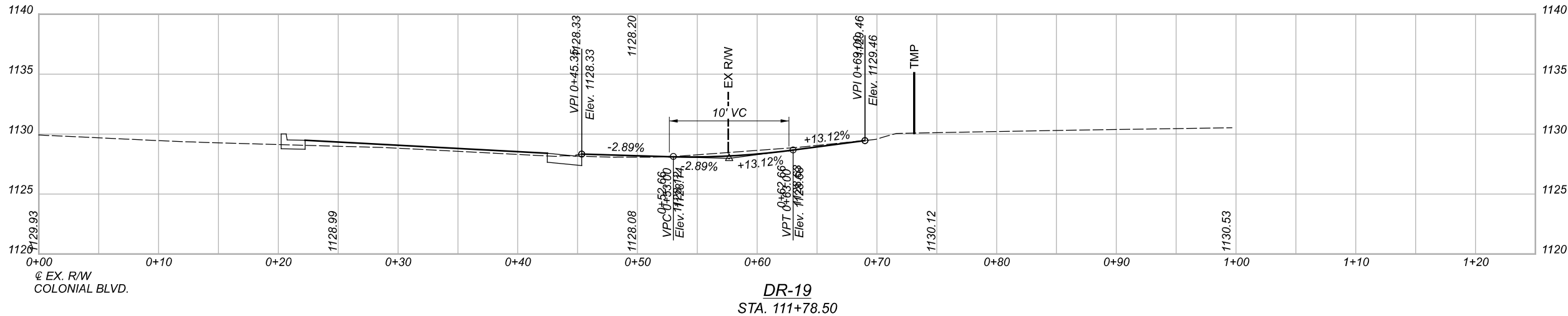
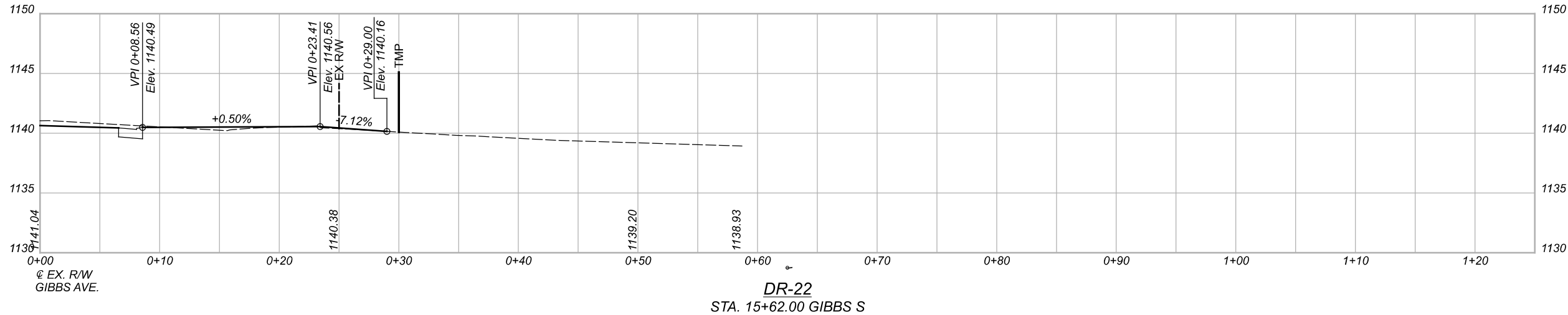
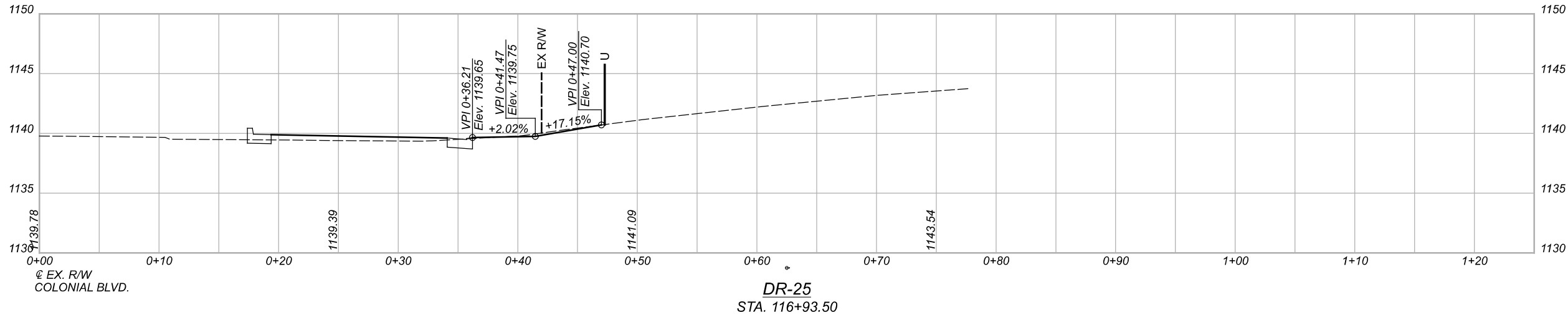
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TOTAL

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STA-COLONIAL BOULEVARD NE - PHASE 1

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DESIGN AGENCY



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KMK 02-10-22

PROJECT ID

111059

SHEET

P.97

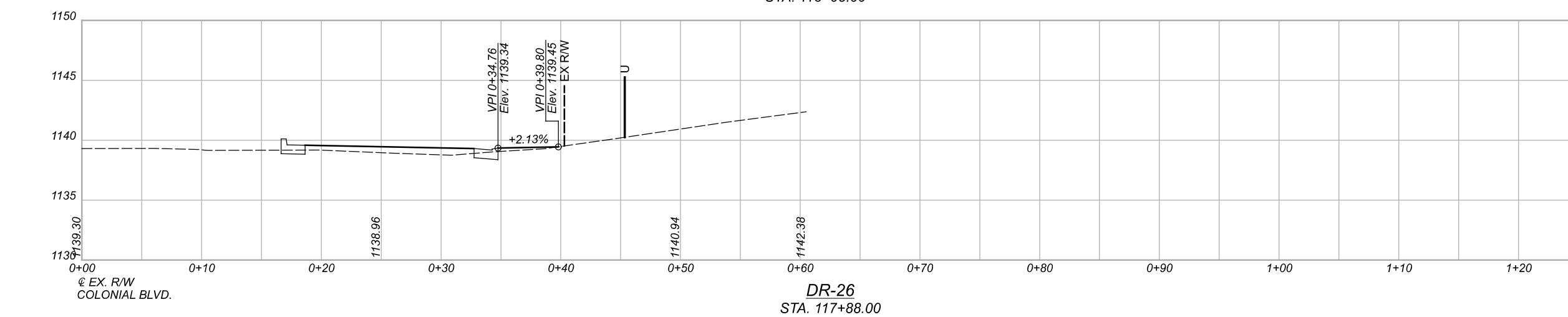
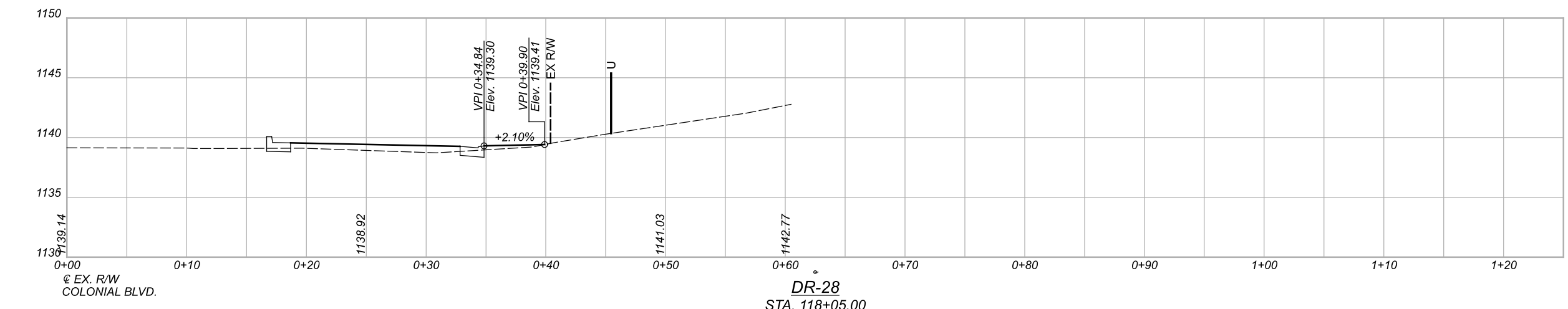
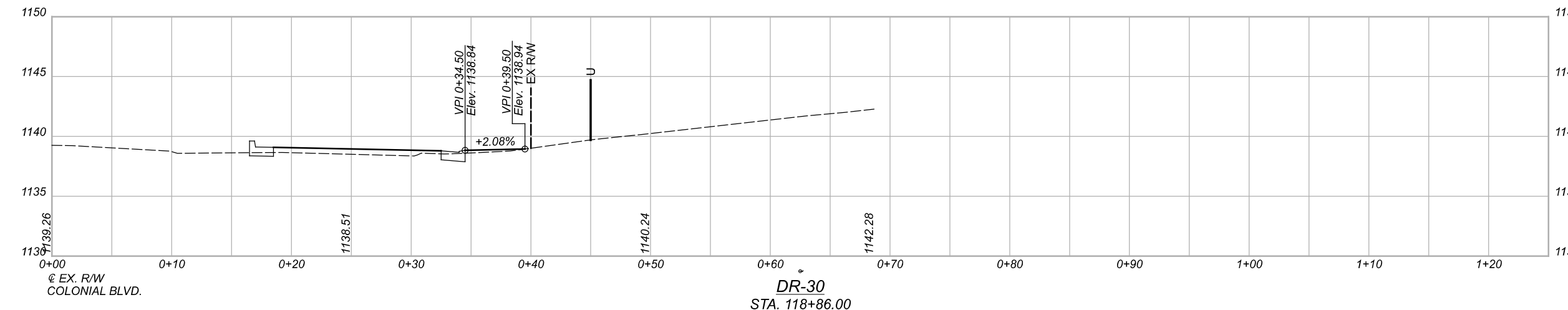
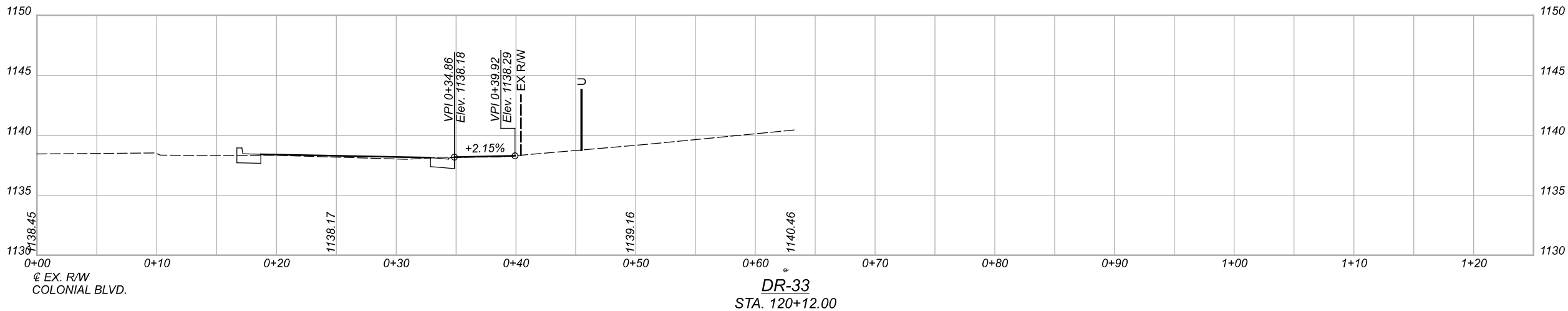
TOTAL

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DRIVE PROFILES - RIGHT  
DR-19, DR-22 & DR-25

STA-COLONIAL BOULEVARD NE - PHASE 1

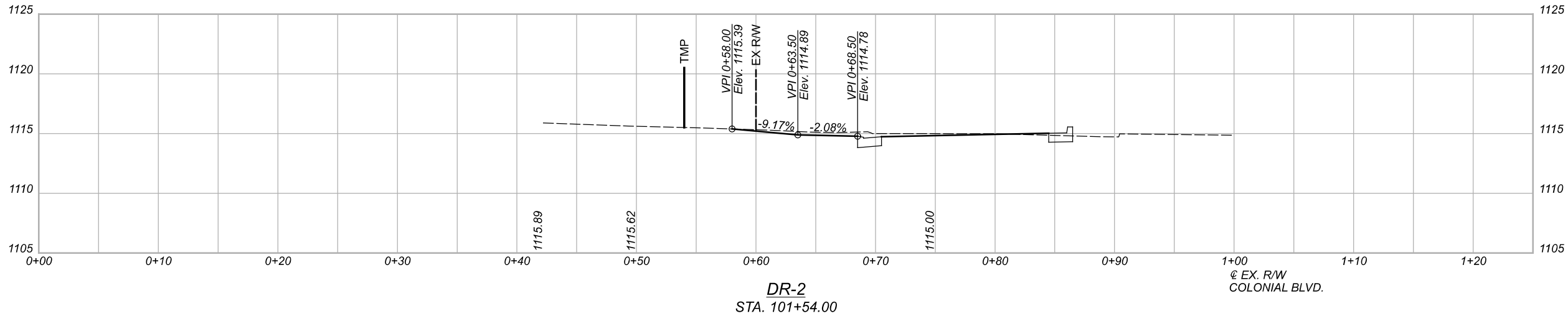
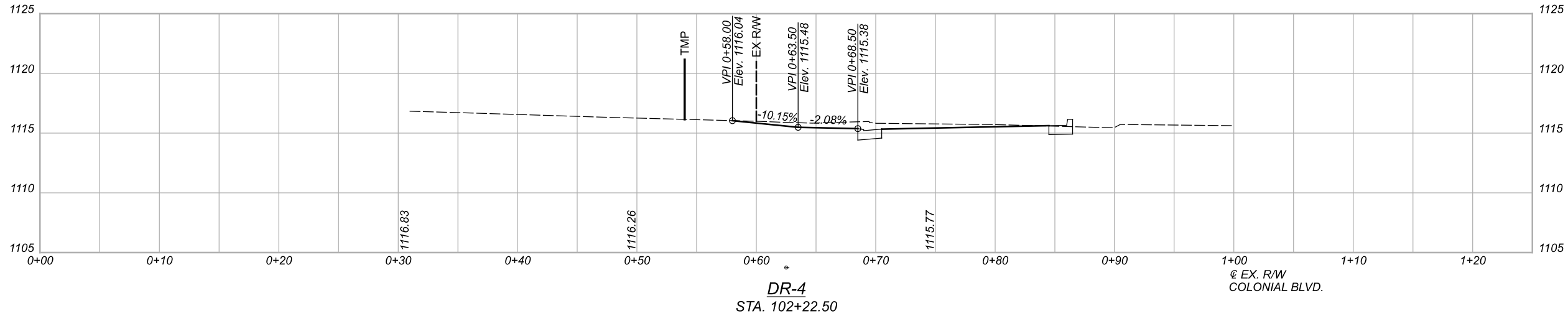
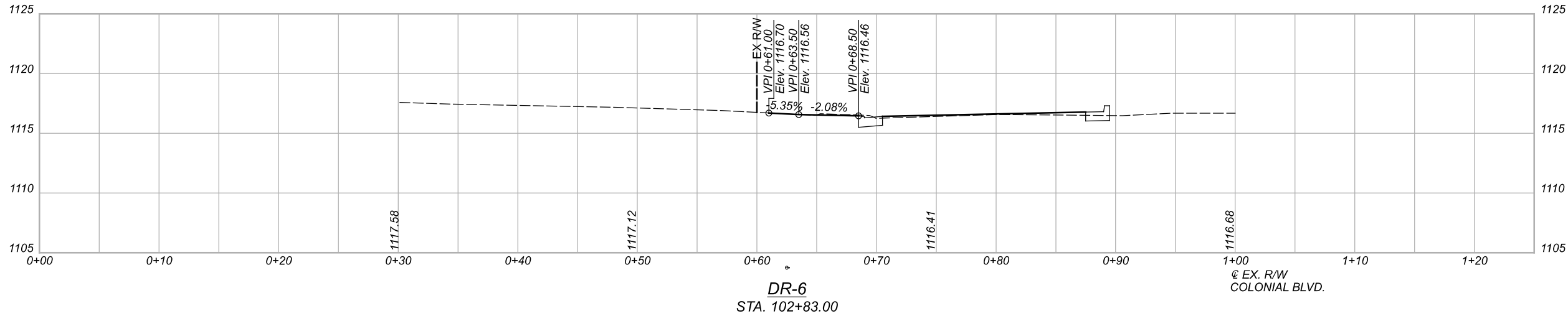
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DRIVE PROFILES - RIGHT  
DR-26, DR-28, DR-30 & DR-33

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SHEET	TOTAL
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DRIVE PROFILES - LEFT  
DR-2, DR-4 & DR-6

DESIGN AGENCY



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KMK 02-10-22

PROJECT ID

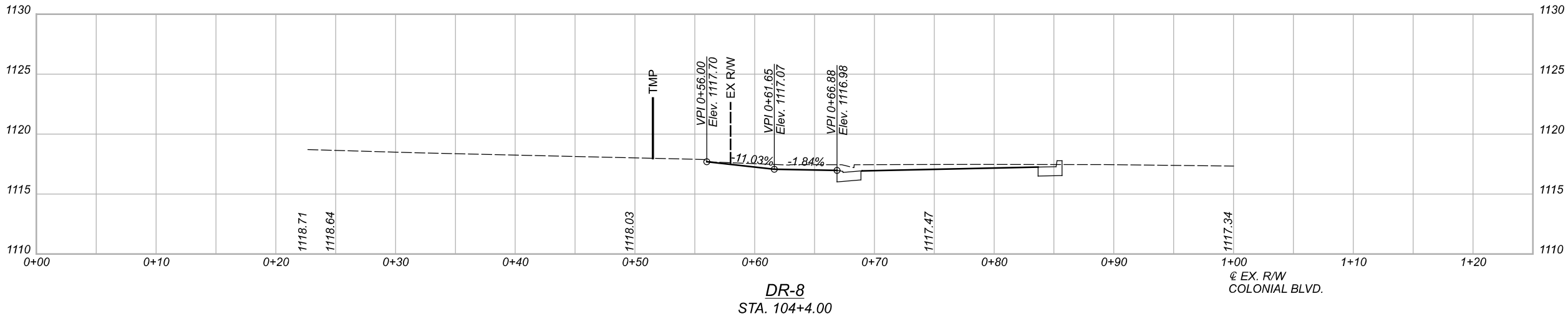
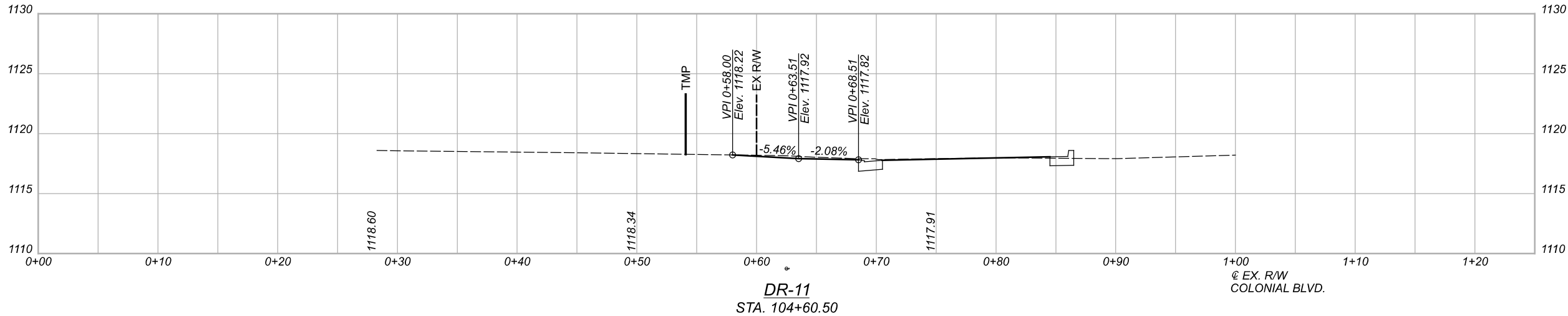
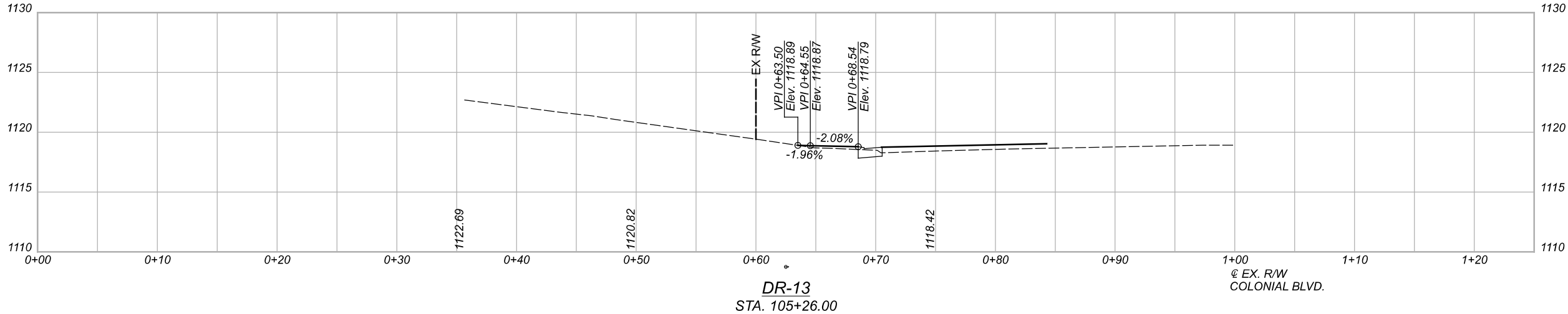
111059

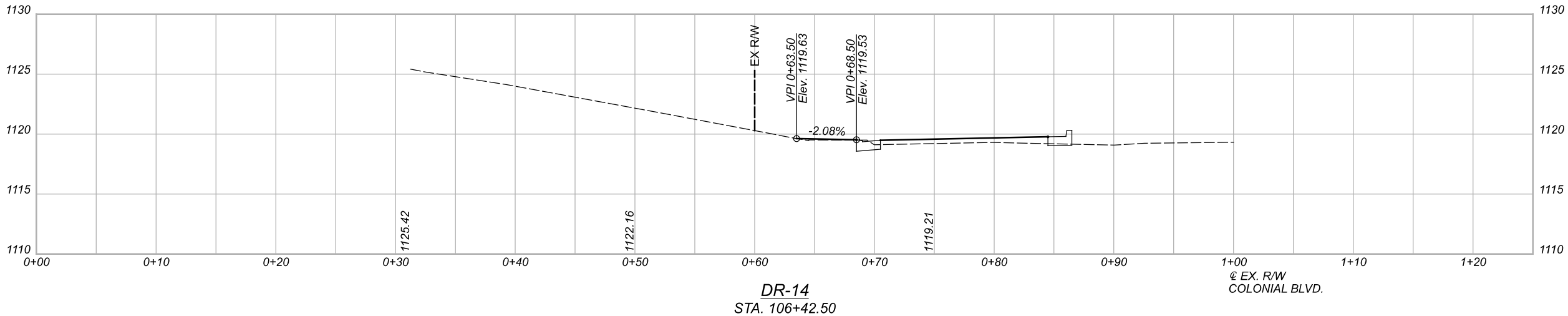
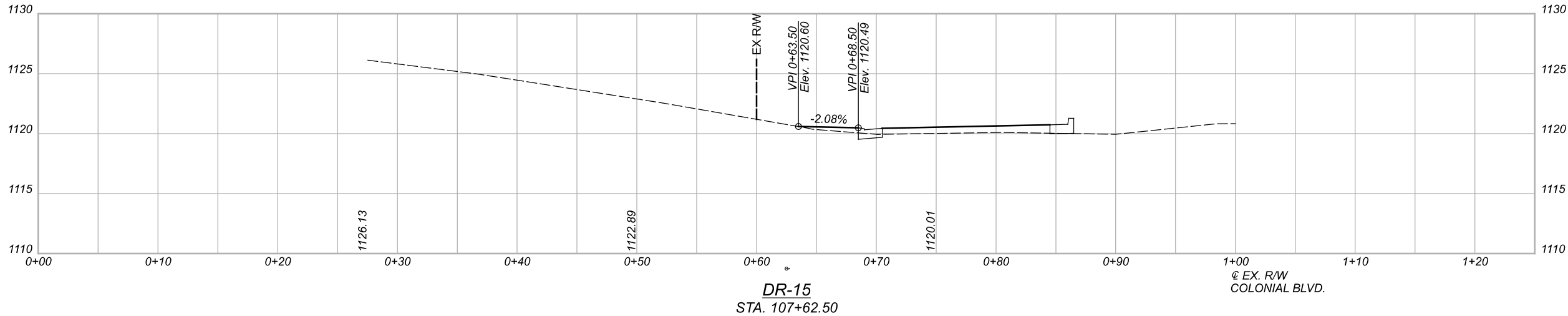
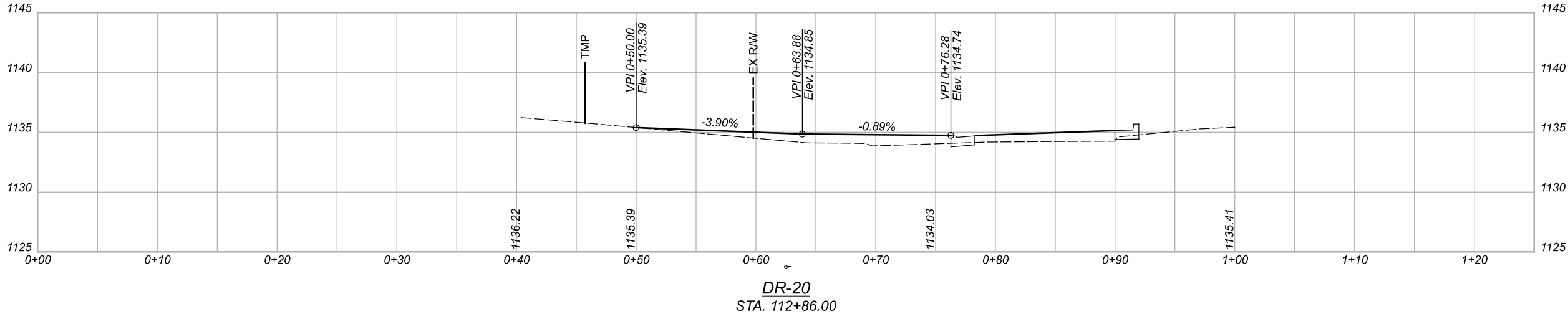
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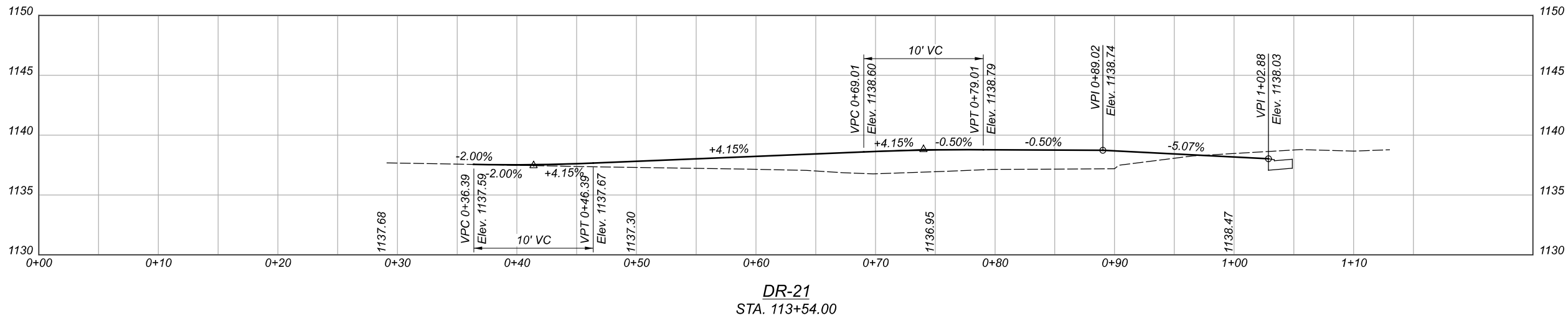
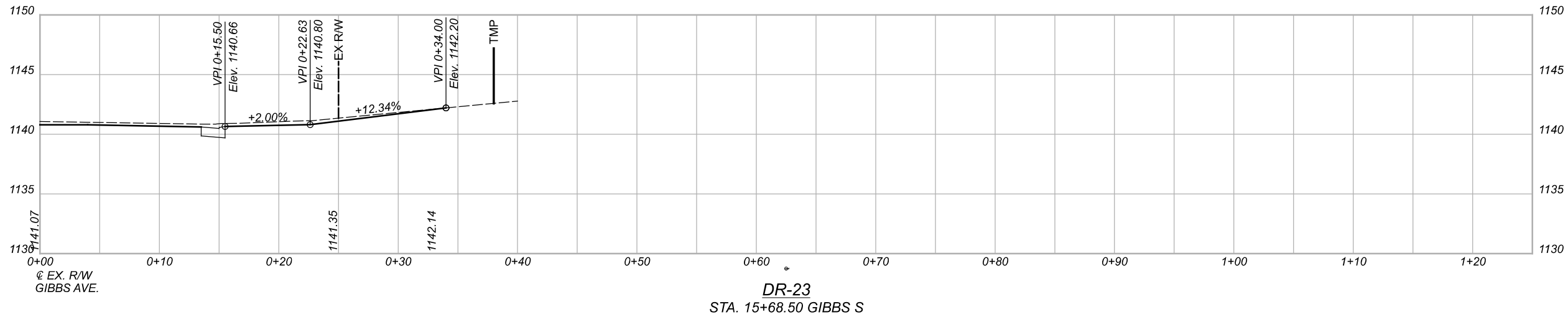
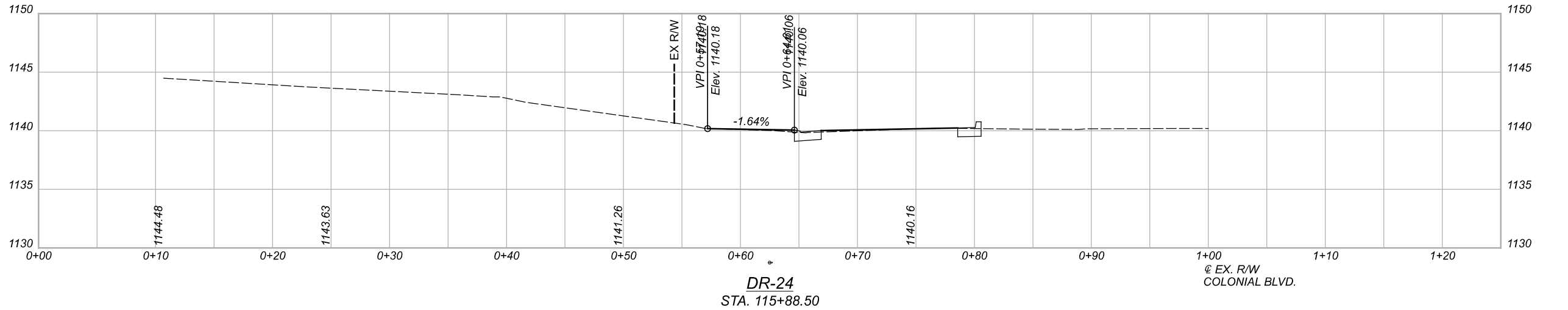
P.99

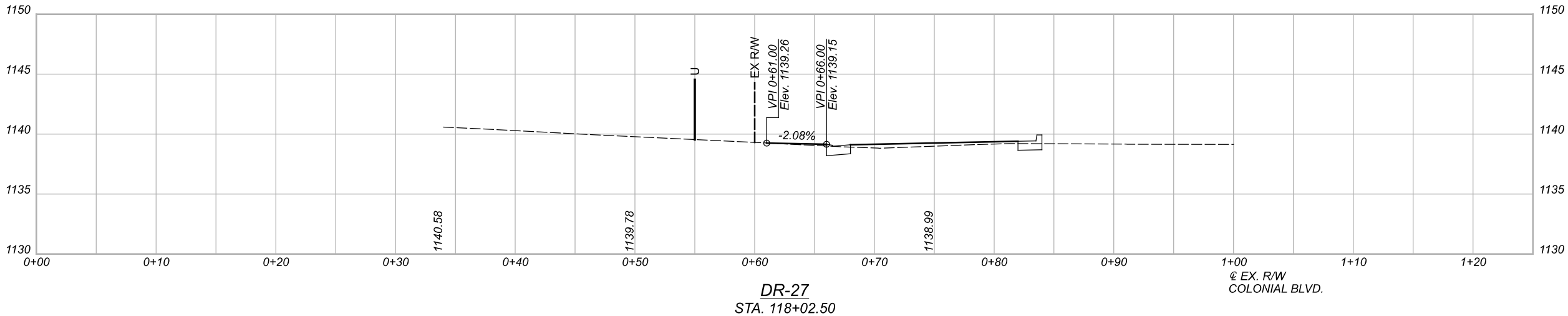
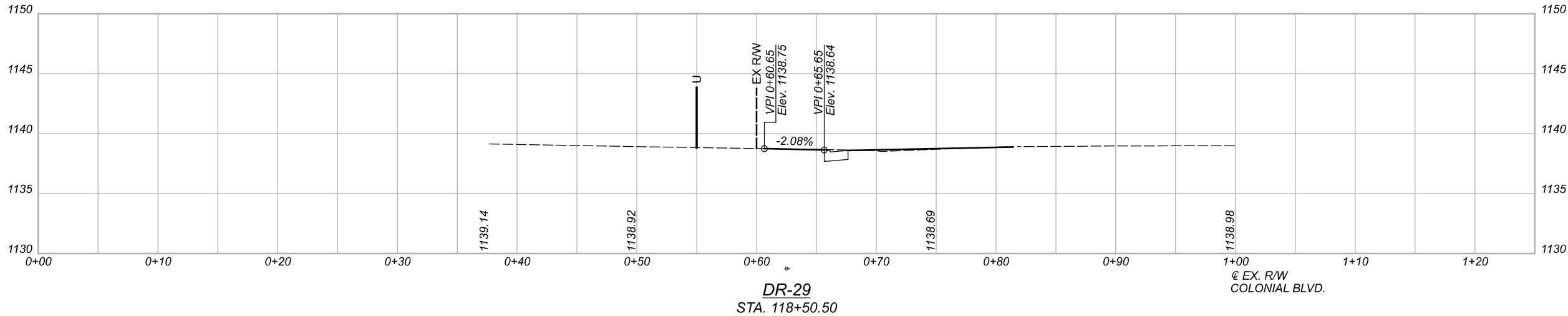
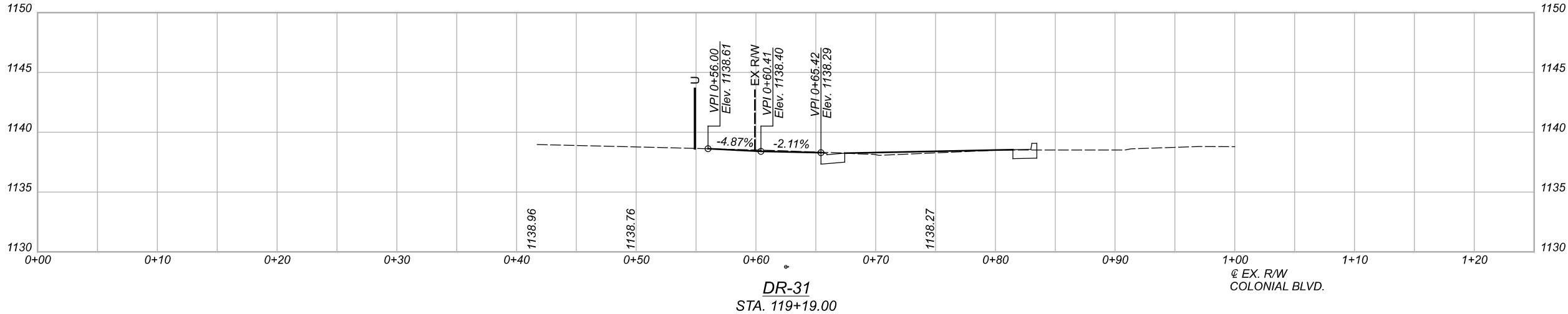
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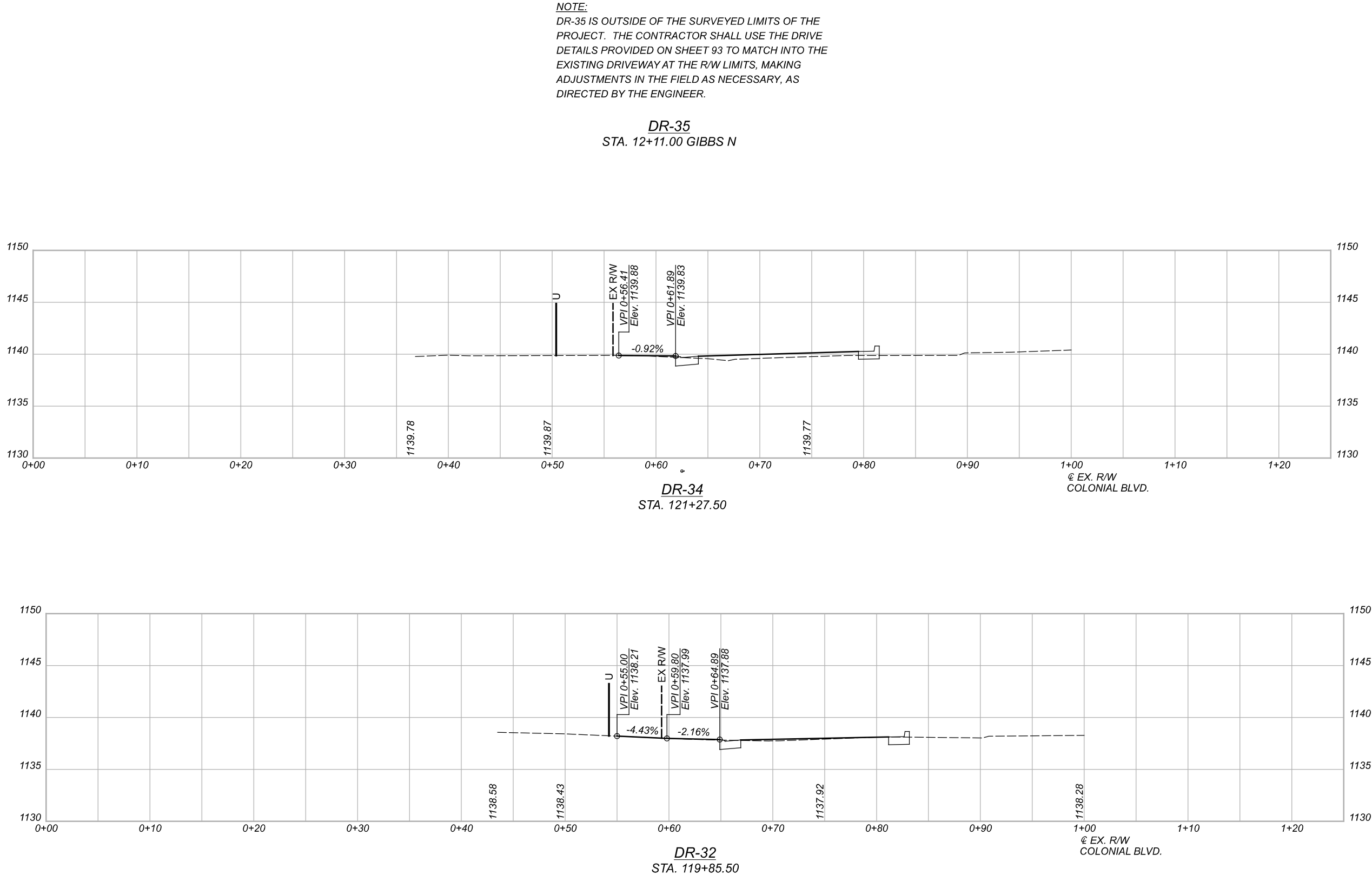
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\\0102012151bitshare\\21f98\_STA-Colonial\\7.0\_Production\\Worksheets\\0059\_400-Engineering\\Drainage\\Sheets\\0059\_PP001.dgn

BEGIN WORK  
STA. 100+00.00  
@ EX. R/W  
COLONIAL BLVD.

E191(613)  
BEGIN PROJECT  
STA. 100+16.84  
@ EX. R/W  
COLONIAL BLVD.

BRYAN P. UNDERWOOD  
2640 MARKET AVE. N  
P.P.N. 243028


RACHELLE M. NELSON  
TRUSTEE OF KATIE D. NELSON  
FAMILY IRREVOCABLE TRUST,  
DATED JUNE 3, 2021  
117 COLONIAL BLVD. NE  
P.P.N. 222892


RICK L. CARTER  
AND ALAN CARTER  
703 COLONIAL BLVD. NE  
P.P.N. 222162

LANCE D. GILL  
108 COLONIAL BLVD. NE  
P.P.N. 228141

NEIL GENSHAFT AND  
MARIE GENSHAFT  
120 COLONIAL BLVD. NE  
P.P.N. 223655

MATCH LINE STA. 102+50.00  
SEE SHEET 106

 *BRICK PARKING AREA*

 *ITEM 608 - DETECTABLE WARNING*



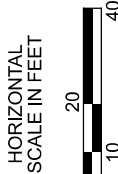
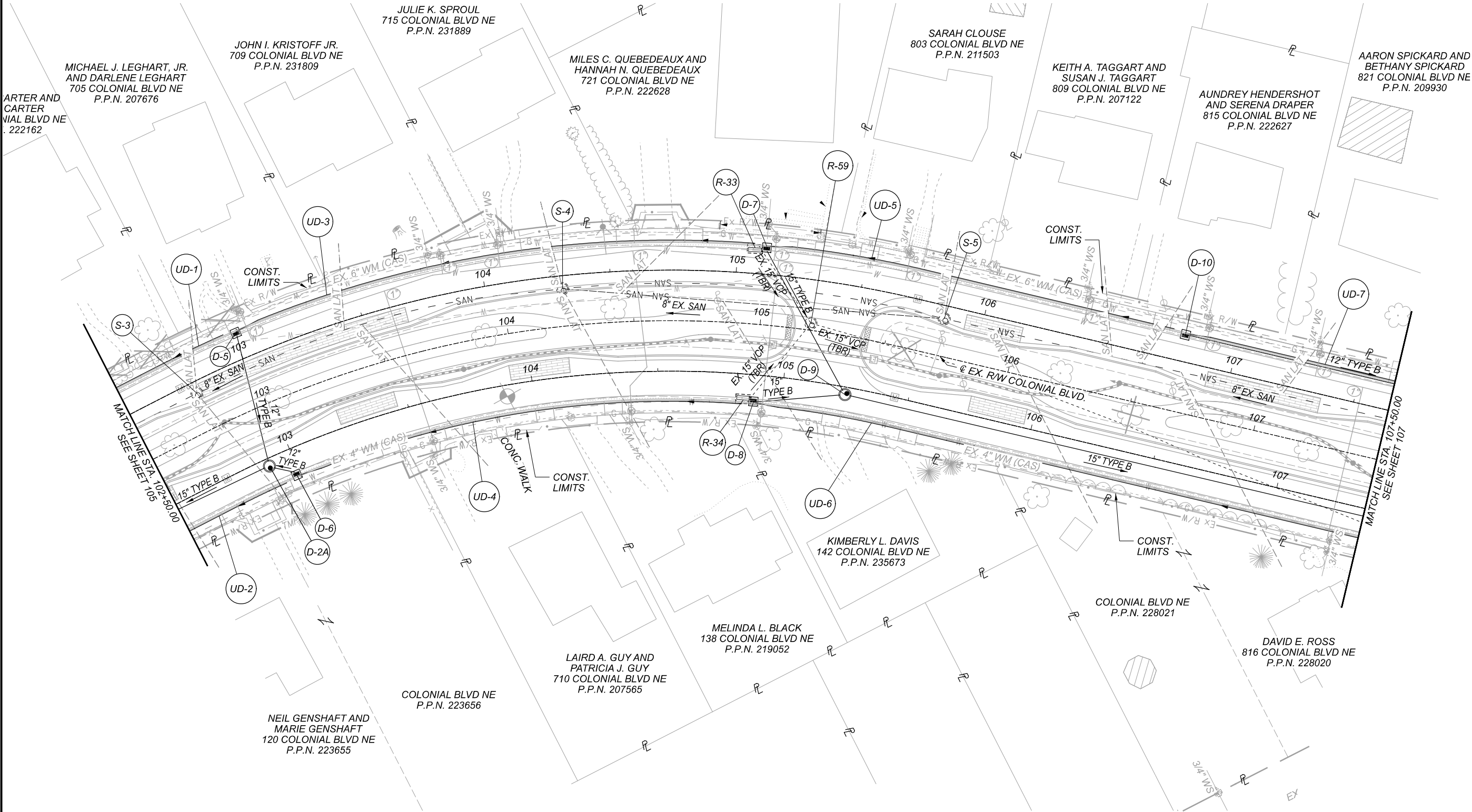
## DESIGN AGENCY



DESIGNER	
BDB	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.105	168

CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-88 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

LEGEND  
BRICK PARKING AREA  
ITEM 608 - DETECTABLE WARNING



DRAINAGE PLAN - COLONIAL BOULEVARD  
STA. 102+50 TO STA. 107+50

DESIGN AGENCY



DESIGNER

BDB

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET



P.106

TOTAL

168



LEGEND

	BRICK PARKING AREA
	ITEM 608 - DETECTABLE WARNING

JEANNE MARTIN AND  
JAMES EDWARD MARTIN  
827 COLONIAL BLVD NE  
P.P.N. 220800

JENNIFER PRICE AND  
PAUL M. PRICE  
909 COLONIAL BLVD NE  
P.P.N. 228313

25'x37' RESERVED AREA FOR  
ITEM 895 - MANUFACTURED WATER  
QUALITY STRUCTURE, TYPE 4

JAMES V. BAKER AND  
DIANE M. BAKER  
COLONIAL BLVD NE  
P.P.N. 204518

MARY FISHER AND  
KEVIN FISHER  
12 COLONIAL BLVD NE  
P.P.N. 241771

GIBBS AVE NE  
P.P.N. 234610

MARY E. GANOE  
900 COLONIAL BLVD NE  
P.P.N. 208570

LISA A. MITCHELL  
908 COLONIAL BLVD NE  
P P N 215906


CYNTHIA R. NORRIS  
910 COLONIAL BLVD NE  
D.B.N. 202752

ADAM D. LAUTZENHEISER  
916 COLONIAL BLVD NE  
P.P.N. 231634

AMANDA L. SWINEHART  
1004 COLONIAL BLVD NE  
P.P.N. 211028



**HORIZONTAL  
SCALE IN FEET**



A horizontal scale bar with alternating black and white segments. It is marked with '0' at the left end, '10' at the first tick mark, '20' at the second tick mark, and '40' at the right end.

DRAINAGE PLAN - COLONIAL BOULEVARD  
STA. 107+50 TO STA. 112+50

DESIGN AGENCY



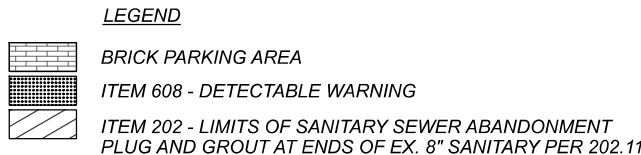
DESIGNER  
BDB

REVIEWER  
KMK 02-10-2

PROJECT ID	111050
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SHEET	TOTAL
P.107	168

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\\V0120121251share\21298\_STA-Colonial\7.0-Production\Worksheets\0059\_400-Engineering\Drainage\Sheets\0059\_DP004.dgn



HORIZONTAL  
SCALE IN FEET

A horizontal scale bar with alternating black and white segments. The segments are labeled 10, 20, 30, and 40, indicating distances in feet.

DRAINAGE PLAN - COLONIAL BOULEVARD  
STA. 112+50 TO STA. 117+50

DESIGN AGENCY



DESIGNER

BDB

REVIEWER

KMK 02-1

PROJECT ID

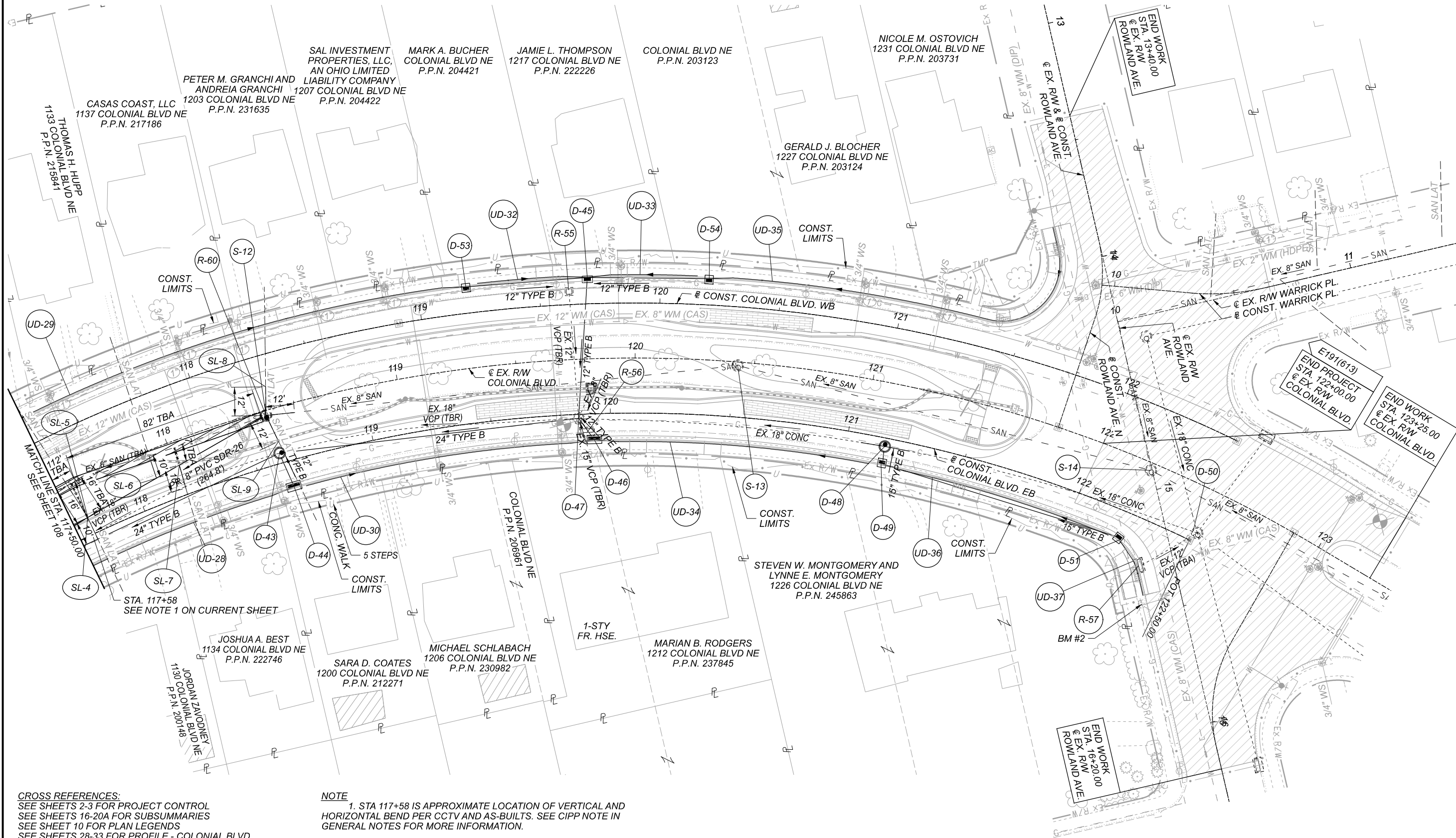
11105

SHEET	TO
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08 |

# STA-COLONIAL BOULEVARD NE - PHASE 1

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CROSS REFERENCES:  
SEE SHEETS 2-3 FOR PROJECT CONTROL  
SEE SHEETS 16-20A FOR SUBSUMMARIES  
SEE SHEET 10 FOR PLAN LEGENDS  
SEE SHEETS 28-33 FOR PROFILE - COLONIAL BLVD.  
SEE SHEETS 45-75 FOR CROSS SECTIONS - COLONIAL BLVD.  
SEE SHEETS 76-81 FOR CROSS SECTIONS - GIBBS AVE.  
SEE SHEETS 82-88 FOR INTERSECTION DETAILS  
SEE SHEETS 89-92 FOR ROUNDABOUT DETAILS  
SEE SHEETS 110-115 FOR STORM SEWER DETAILS  
SEE SHEETS 116-130 FOR WATER WORK DETAILS  
SEE SHEETS 131-140 FOR TRAFFIC CONTROL PLAN  
SEE SHEETS 141-149 FOR LIGHTING PLAN

NOTE  
1. STA 117+58 IS APPROXIMATE LOCATION OF VERTICAL AND HORIZONTAL BEND PER CCTV AND AS-BUILTS. SEE CIPP NOTE IN GENERAL NOTES FOR MORE INFORMATION.

2. SEE SHEET 114 FOR SANITARY PROFILE

**LEGEND**

- |                                                                                       |                                                                                                    |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|  | BRICK PARKING AREA                                                                                 |
|  | ITEM 608 - DETECTABLE WARNING                                                                      |
|  | ITEM 202 - LIMITS OF SANITARY SEWER ABANDONMENT<br>PLUG AND GROUT AT ENDS OF EX. 8" SAN PER 202.11 |

HORIZONTAL  
SCALE IN FEET

DRAINAGE PLAN - COLONIAL BOULEVARD  
STA. 117+50 TO STA. 122+50

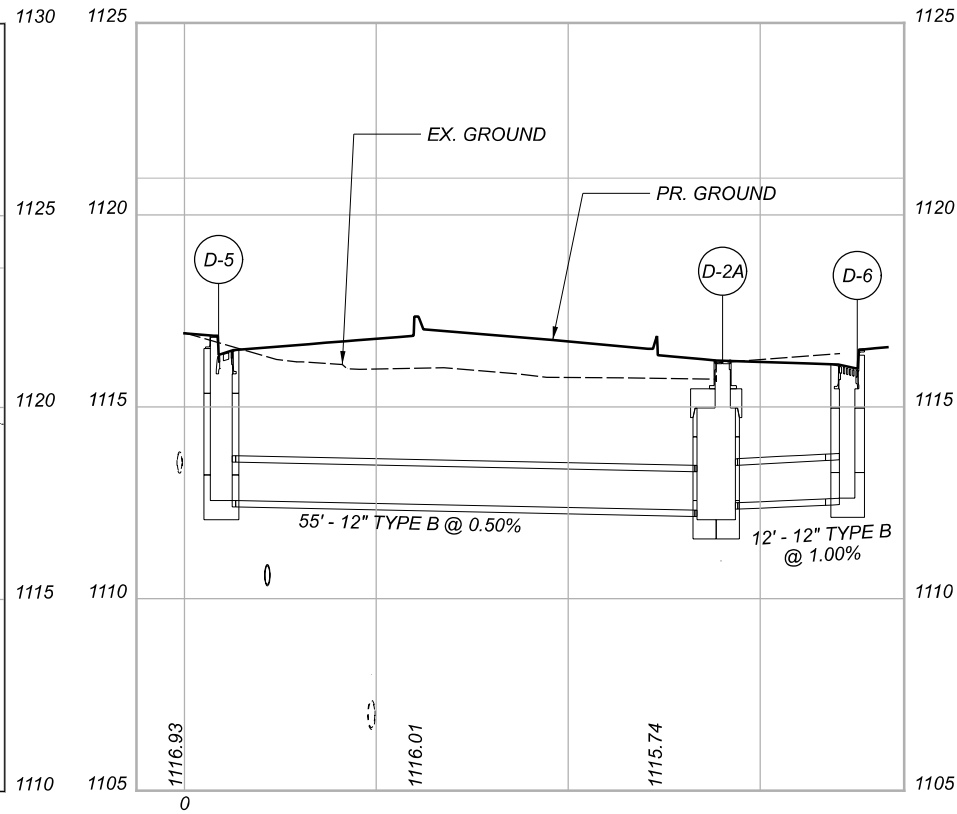
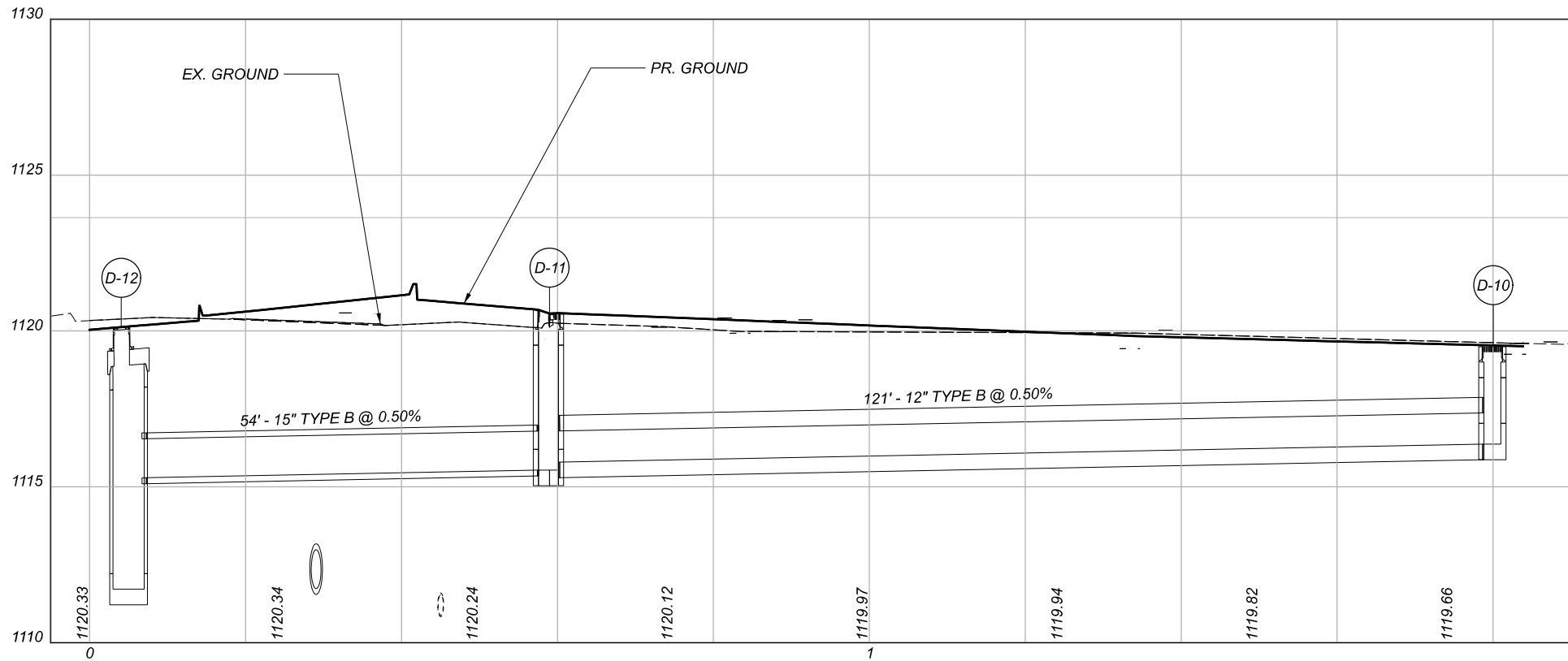
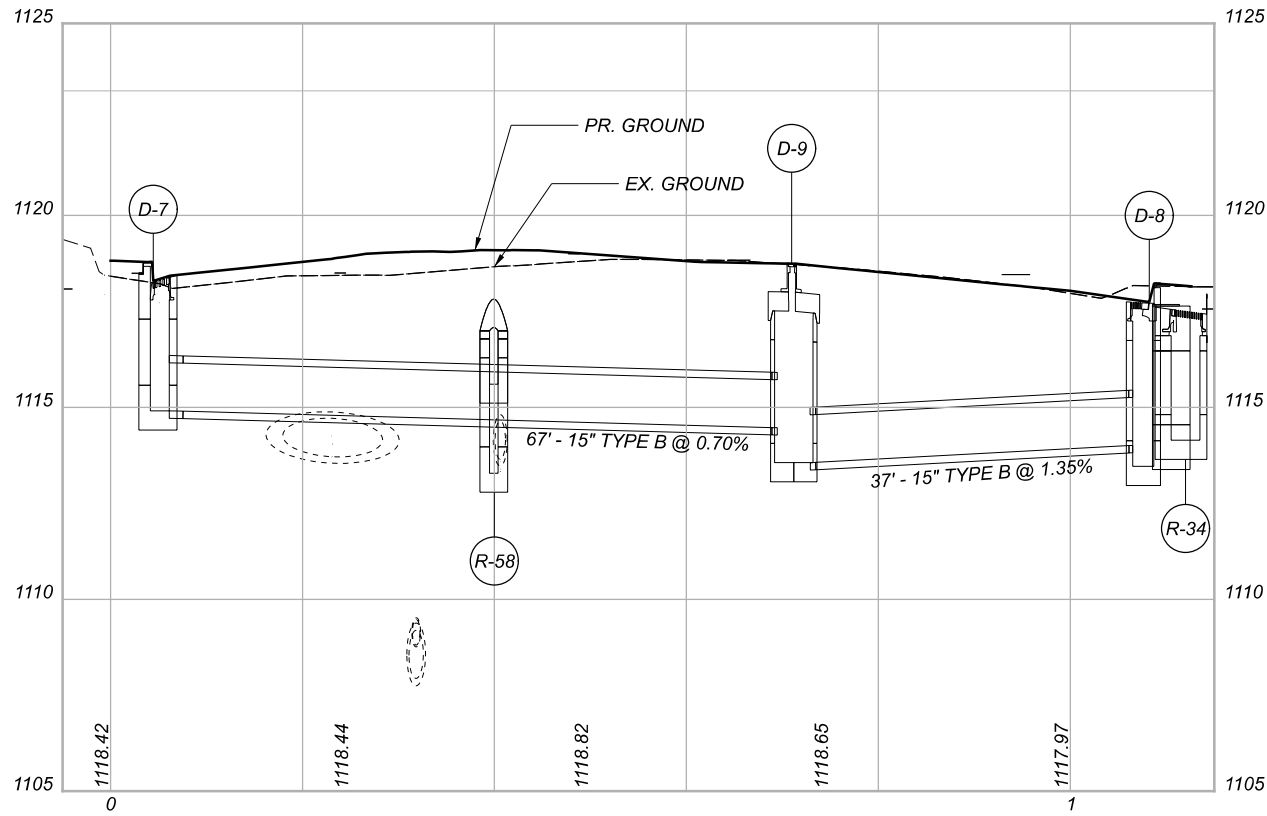
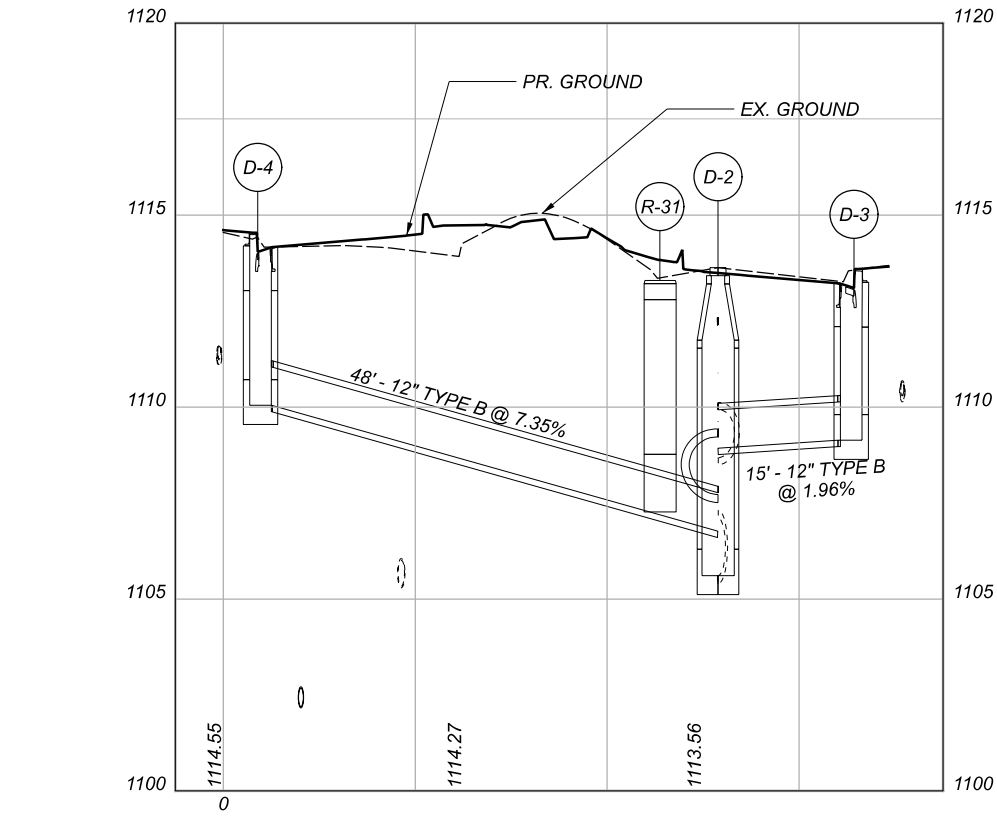
DESIGN AGENCY



DESIGNER	
BDB	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
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SHEET	TOTAL
P.109	168

STA-COLONIAL BOULEVARD NE - PHASE 1

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FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115

STORM SEWER PROFILES

DESIGN AGENCY



DESIGNER

BDB

REVIEWER

KMK 02-10-22

PROJECT ID

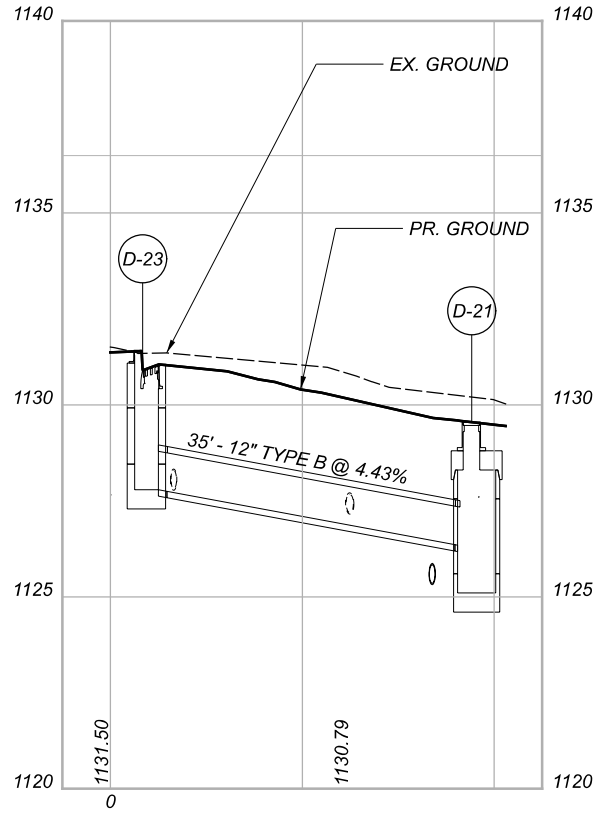
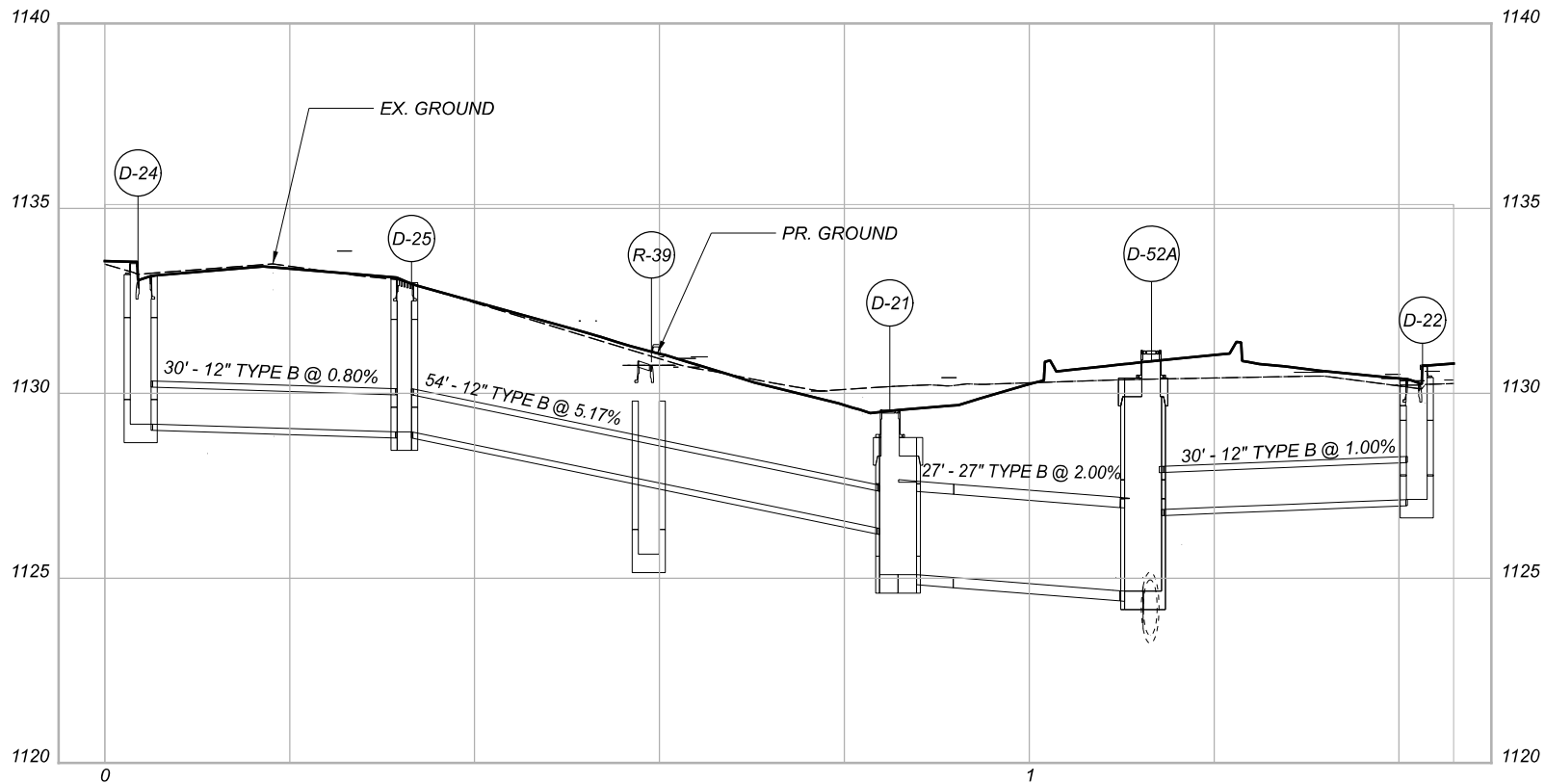
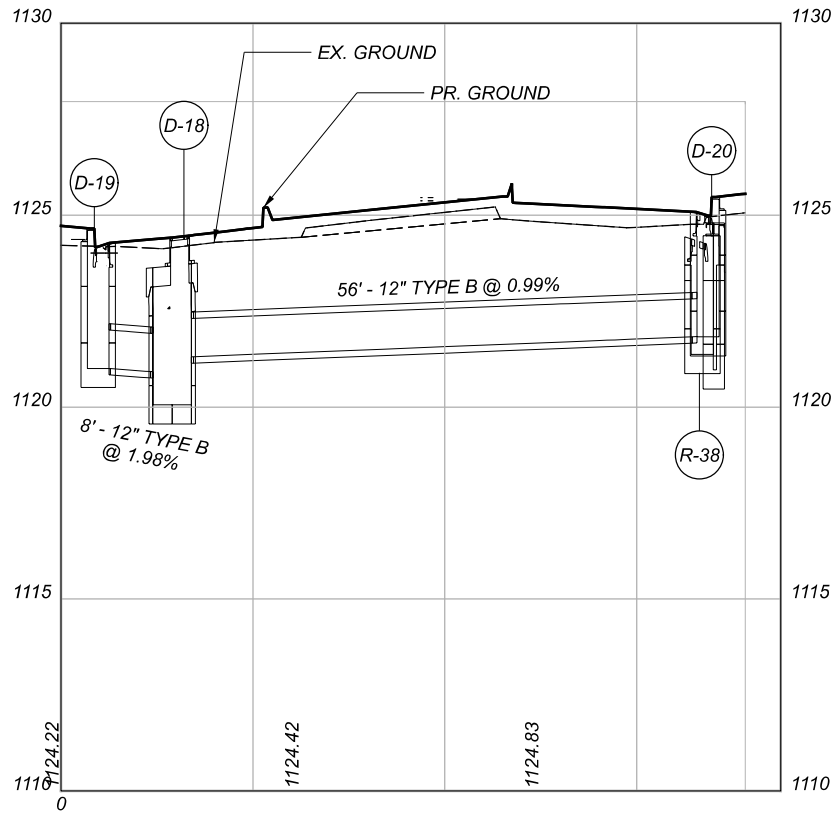
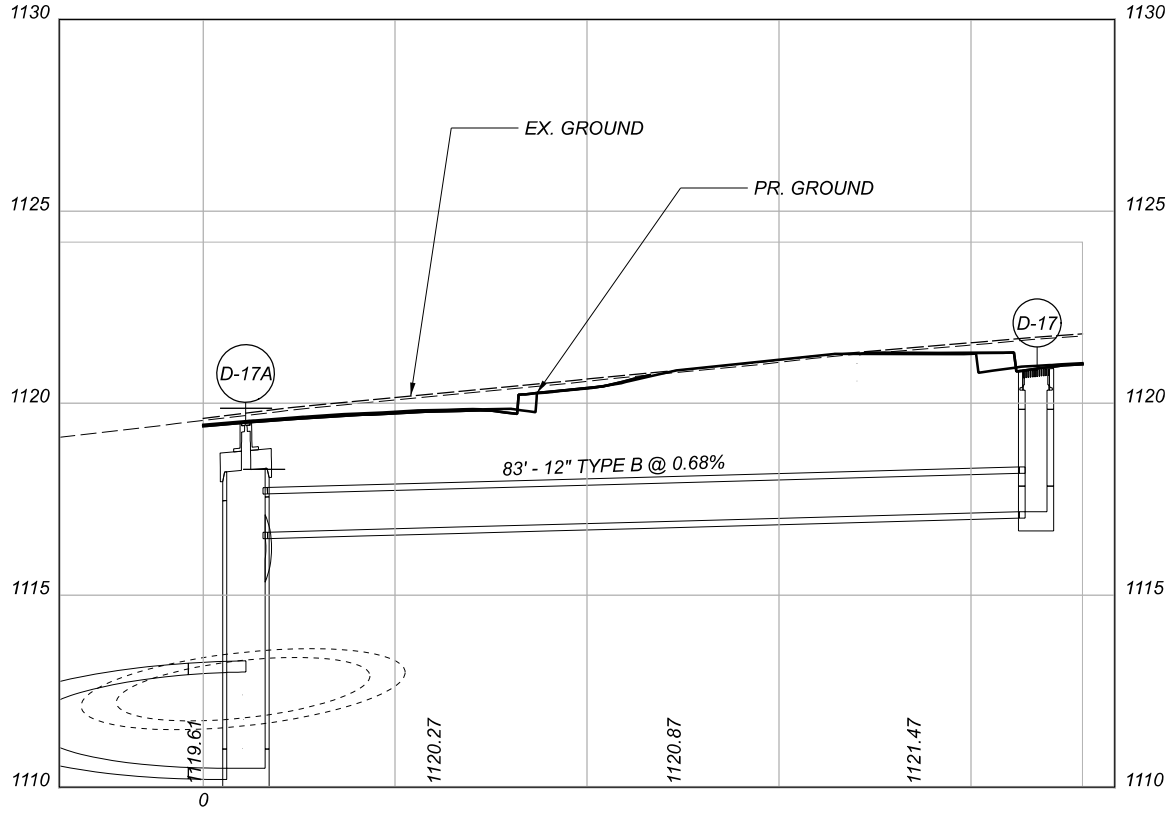
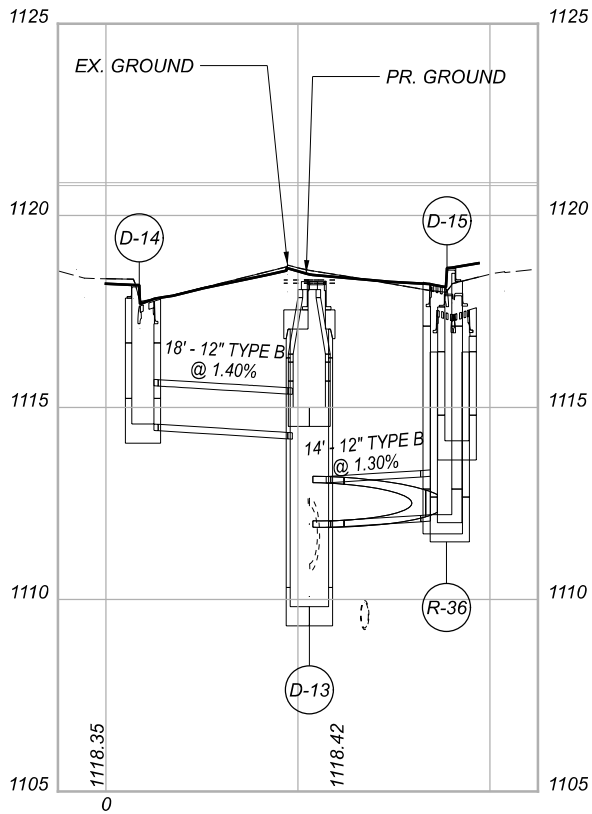
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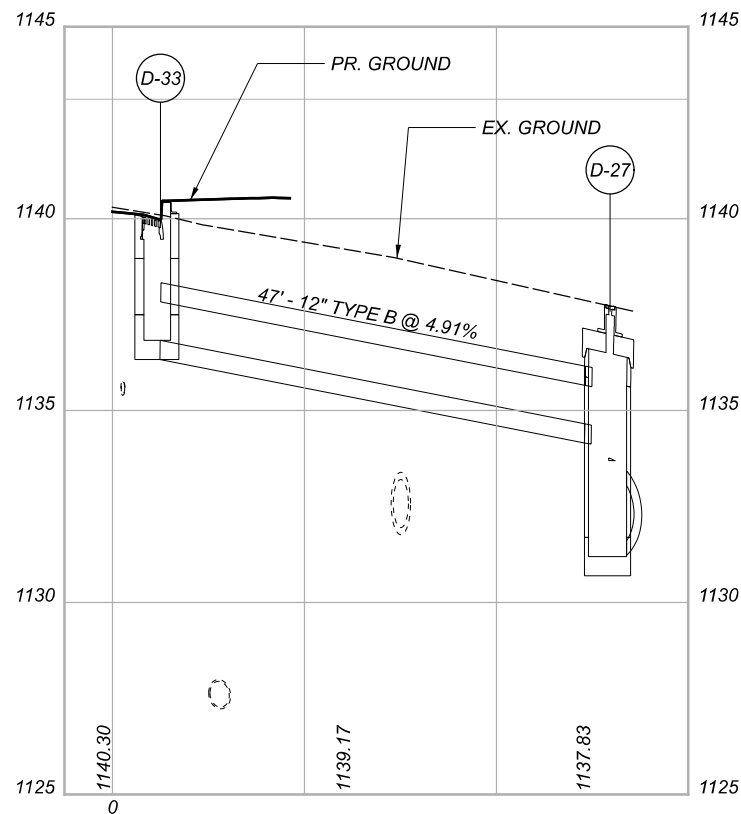
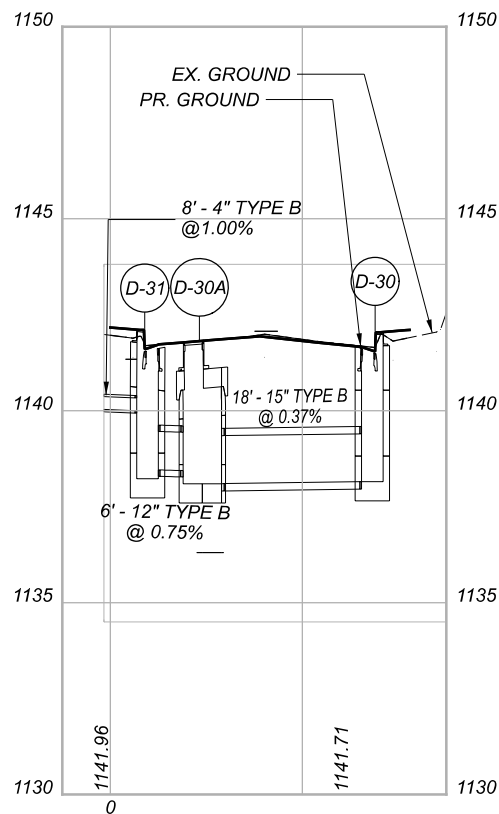
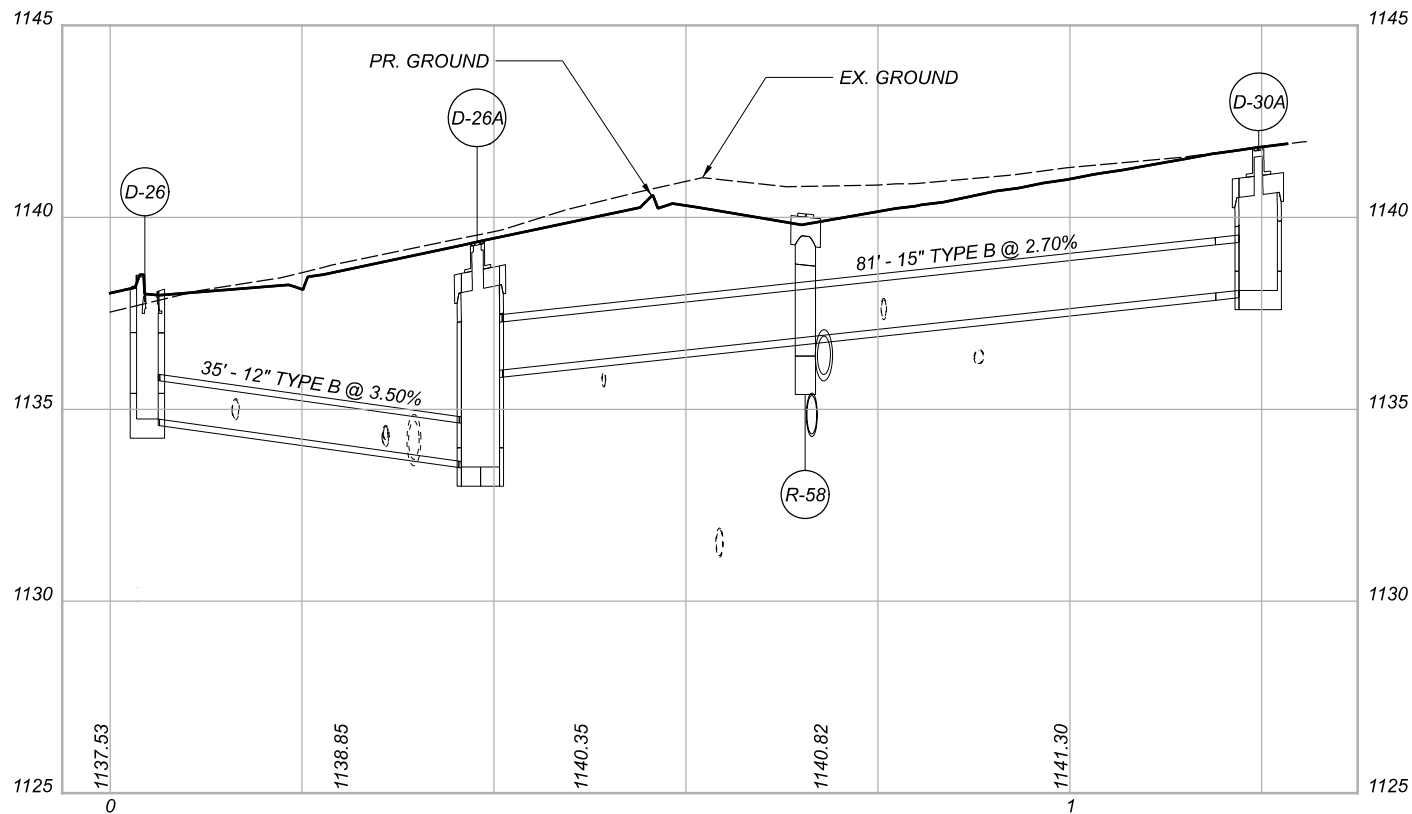
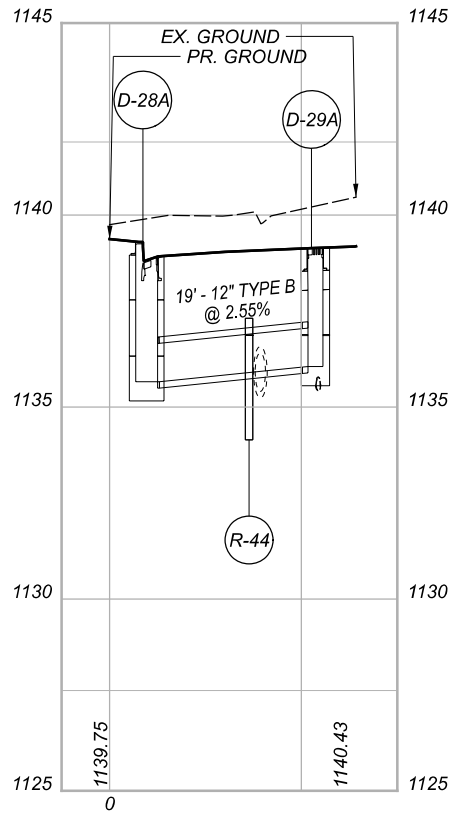
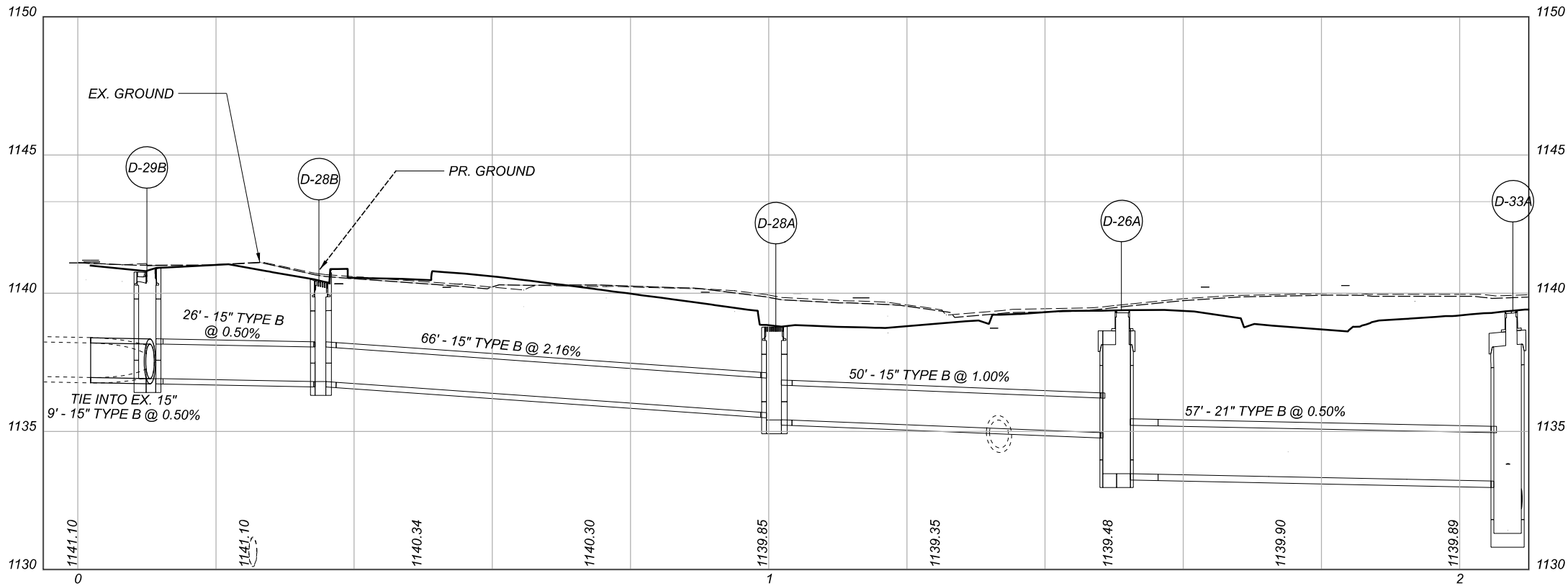
P.110

TOTAL

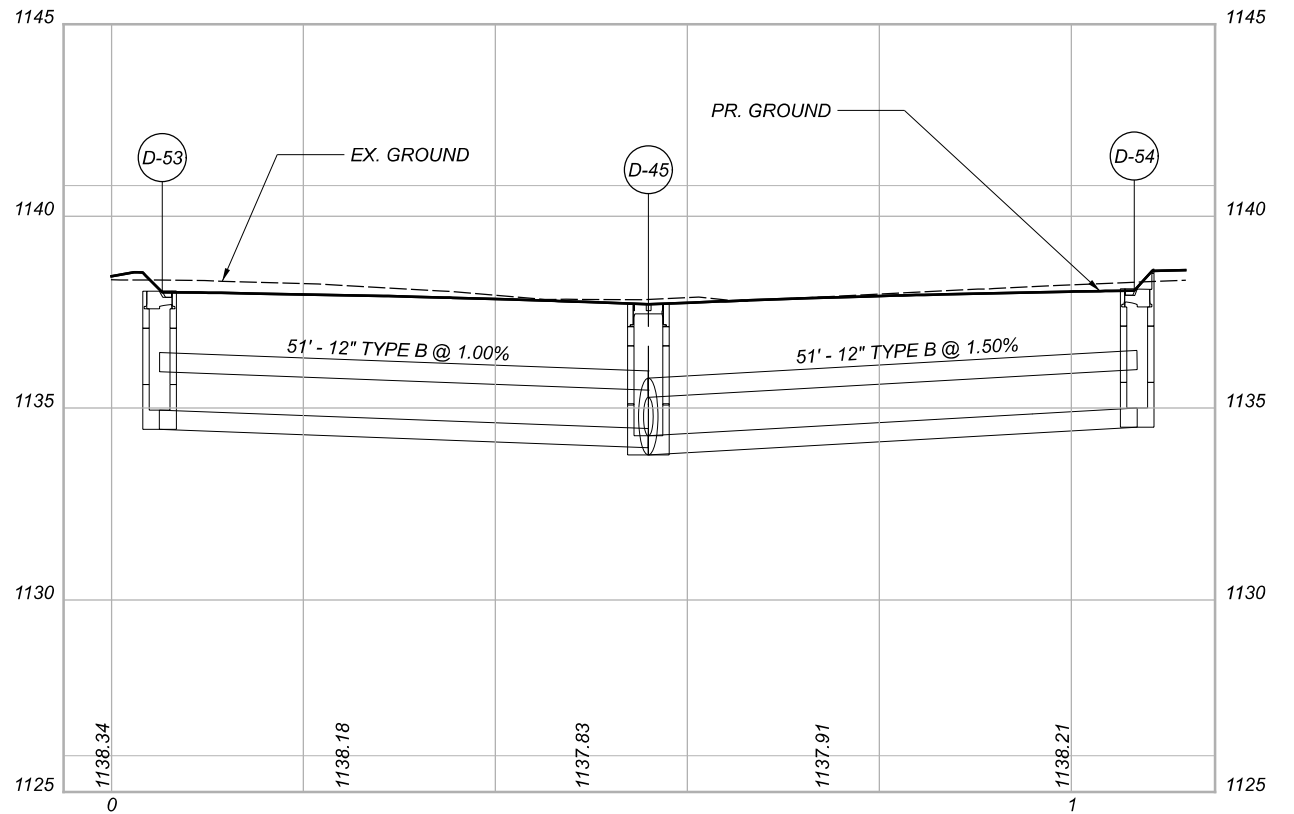
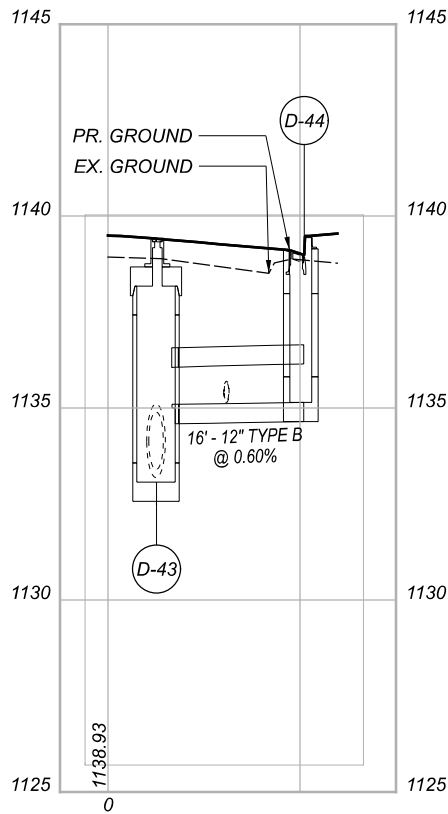
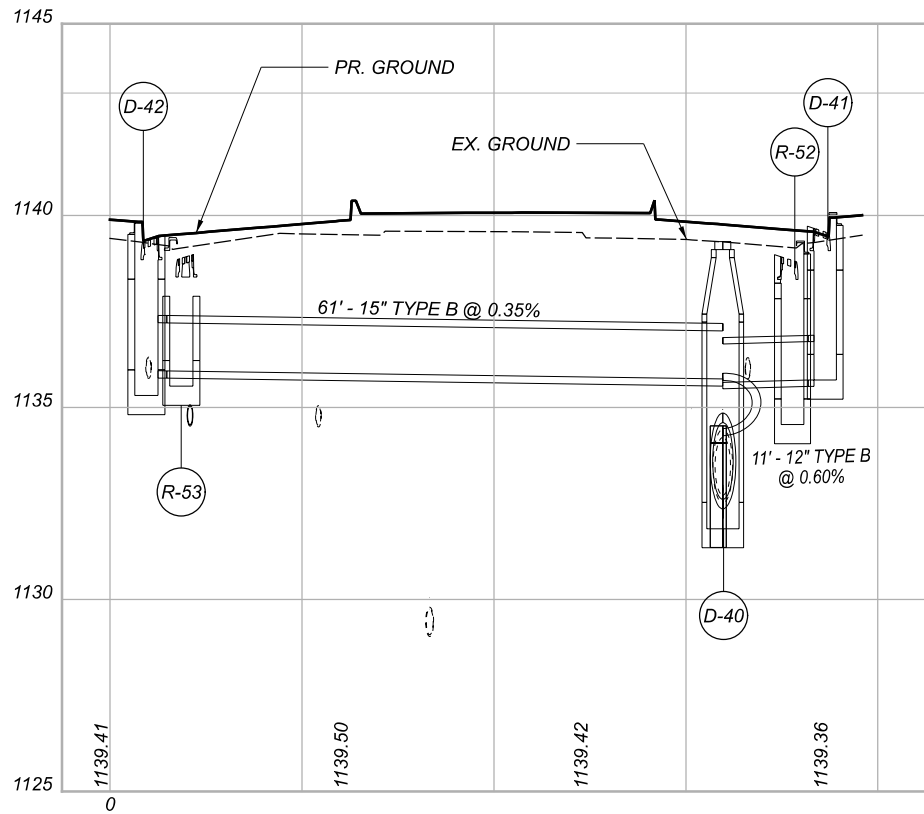
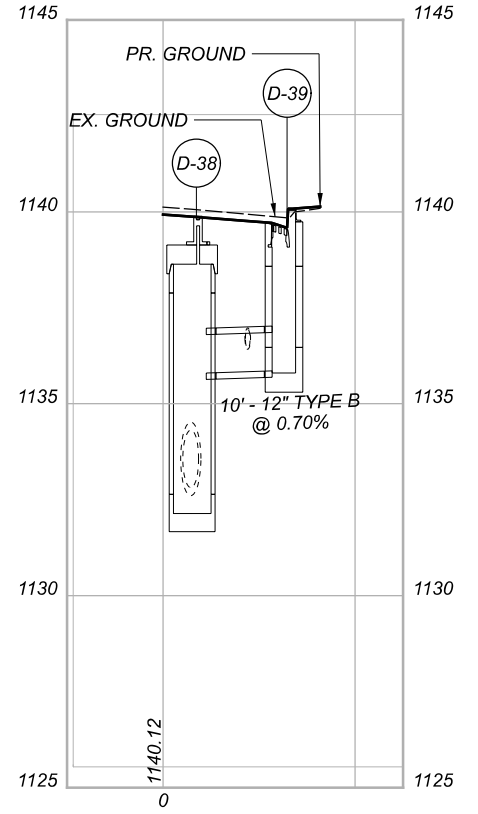
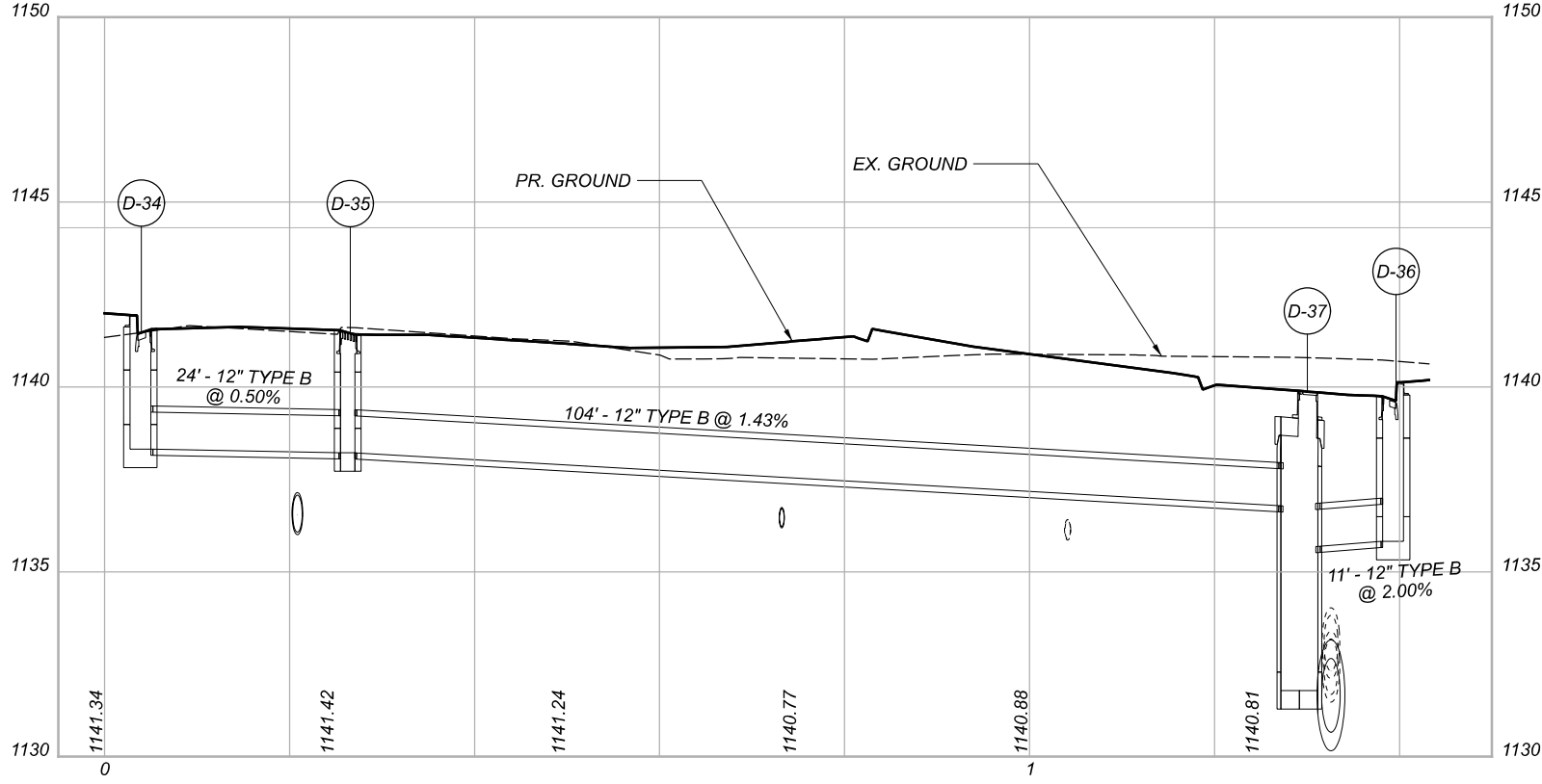
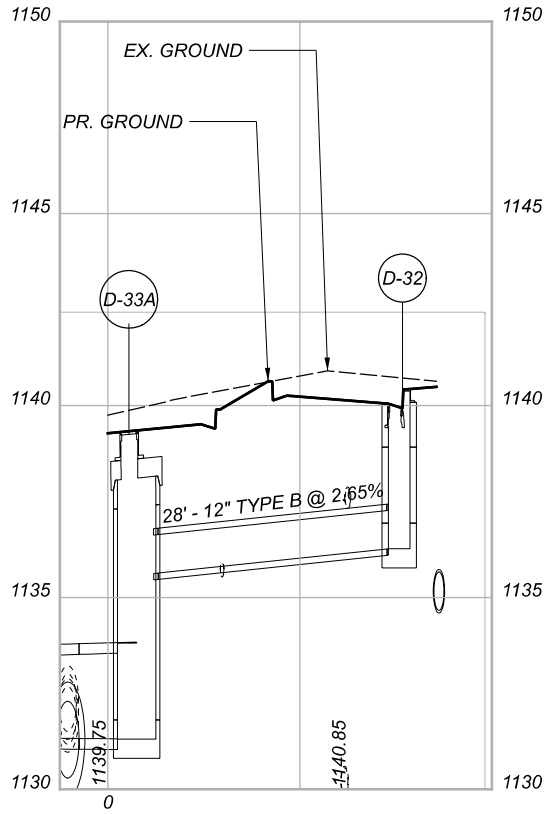
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FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115

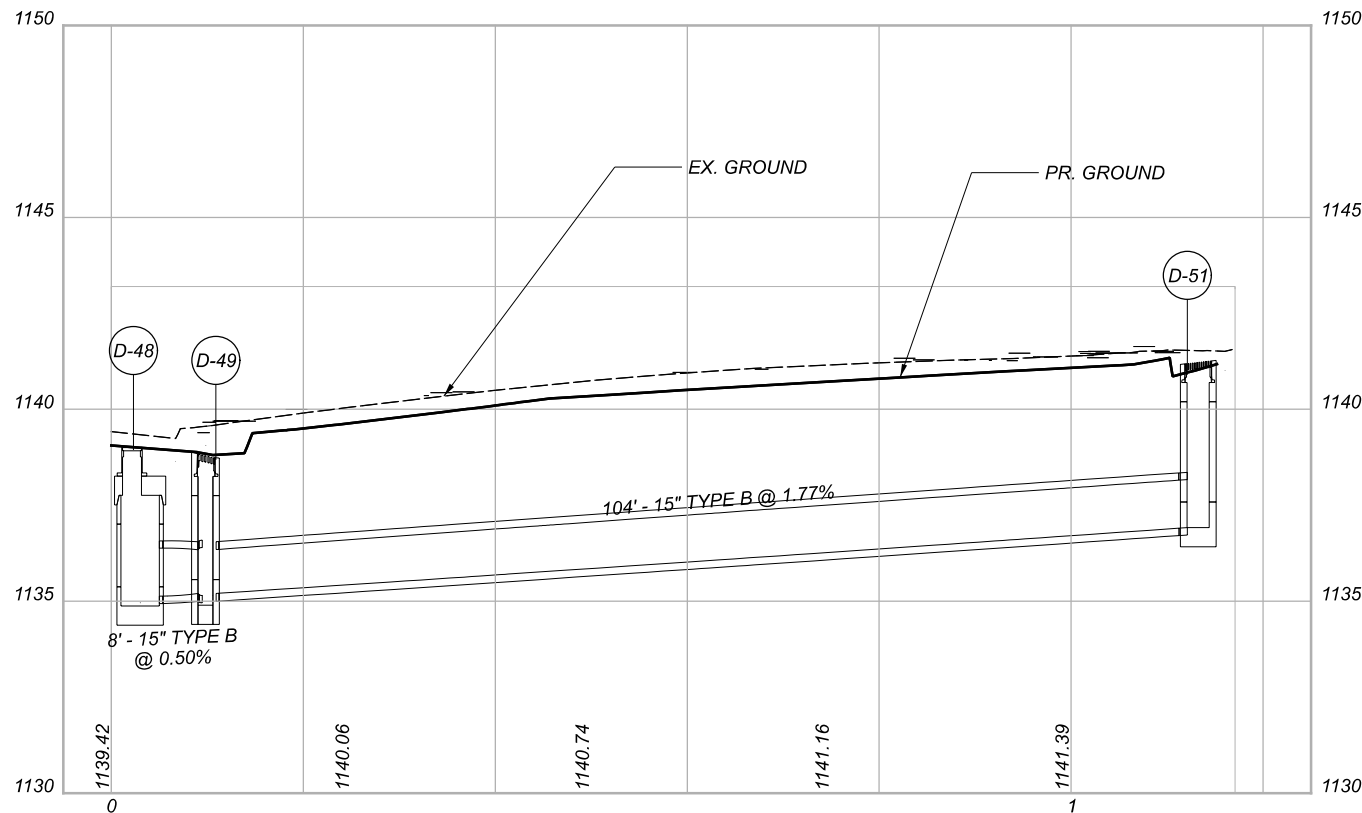
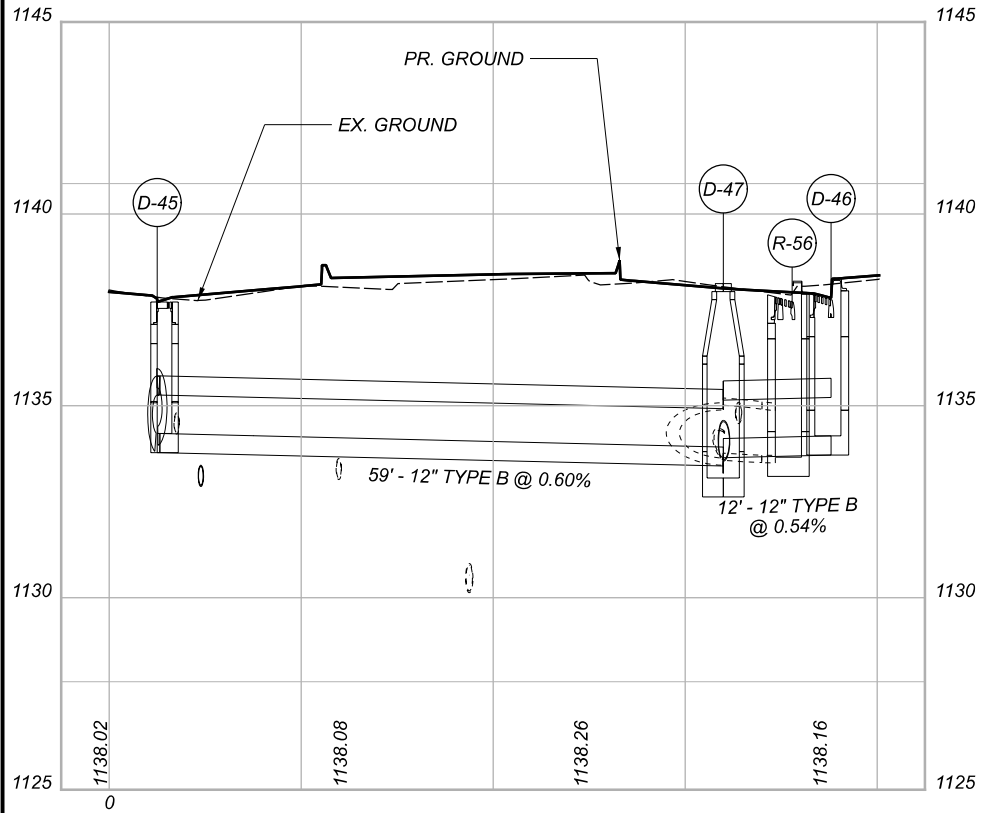


FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115



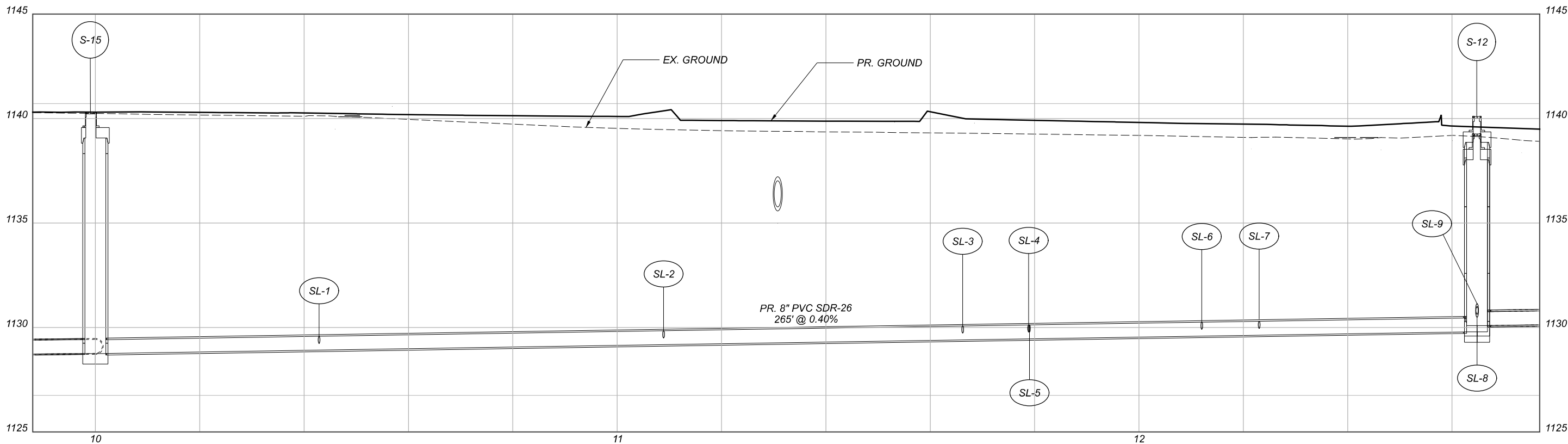
FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115





NOTE:  
ALL EXISTING SANITARY SEWER LATERAL LOCATIONS  
SHOWN IN THESE PLANS ARE APPROXIMATE AND ARE  
BASED ON GIS DATA PROVIDED BY THE CITY OF CANTON.

- |      |                                                              |
|------|--------------------------------------------------------------|
| SL-1 | HOUSE #1115<br>STA. 10+42.87<br>4" (N) 1129.24               |
| SL-2 | HOUSE #1126<br>STA. 11+08.90<br>4" (S) 1129.51               |
| SL-3 | EMPTY LOT - P.P.N. 207167<br>STA. 11+66.22<br>4" (N) 1129.74 |
| SL-4 | HOUSE #1130<br>STA. 11+78.86<br>4" (S) 1129.79               |
| SL-5 | HOUSE #1127<br>STA. 11+79.01<br>4" (N) 1129.79               |
| SL-6 | HOUSE #1133<br>STA. 12+12.04<br>4" (N) 1129.92               |
| SL-7 | HOUSE #1134<br>STA. 12+23.04<br>4" (S) 1129.96               |
| SL-8 | HOUSE #1203<br>STA. 12+64.80<br>6" (N) 1130.49               |
| SL-9 | HOUSE #1200<br>STA. 12+64.80<br>6" (S) 1130.63               |



FOR DRAINAGE STRUCTURE INFORMATION SEE SHEET 115



D-1 (ATG)  
STA. 100+22.85, 19.8' RT.  
EX. MH, COVER ELEV 1113.37  
EX. 15" (N) 1108.27  
EX. 18" (E) 1105.47  
EX. 24" (W) 1105.44

D-2 (ATG)  
STA. 100+51.58, 16.9' RT.  
EX. MH, COVER ELEV 1113.49  
12" (N) 1106.77  
15" (E) 1110.89  
12" (S) 1108.93  
EX. 18" (W) 1105.61

D-2A  
STA. 102+90.90, 23.0' RT.  
MH-3, COVER ELEV 1116.21  
12" (N) 1112.31  
12" (S) 1112.49  
15" (W) 1112.06

D-3  
STA. 100+50.00, 31.0' RT.  
CB-3A, GRATE ELEV 1113.10  
12" (N) 1109.14

D-4  
STA. 100+50.00, 31.0' LT.  
CB-3A, GRATE ELEV 1114.00  
12" (S) 1110.05

D-5  
STA. 103+00.00, 31.0' LT.  
CB-3A, GRATE ELEV 1116.35  
12" (S) 1112.56

D-6  
STA. 103+00.00, 31.0' RT.  
CB-3A, GRATE ELEV 1115.94  
12" (N) 1112.62

D-7  
STA. 105+00.00, 31.0' LT.  
CB-3A, GRATE ELEV 1118.26  
15" (S) 1114.91

D-8  
STA. 105+00.00, 31.0' RT.  
CB-3A, GRATE ELEV 1117.71  
15" (SE) 1114.01

D-9  
STA. 105+38.11, 23.0' RT.  
MH-3, COVER ELEV 1118.74  
15" (N) 1114.47  
15" (SE,NW) 1113.56

D-10  
STA. 106+65.00, 31.0' LT.  
CB-3A, GRATE ELEV 1119.47  
12" (SE) 1116.37

D-11  
STA. 107+85.87, 31.0' LT.  
CB-3A, GRATE ELEV 1120.52  
15" (SW) 1115.54  
12" (NW) 1115.79

D-12  
STA. 107+86.06, 23.0' RT.  
MH-3, COVER ELEV 1120.14  
15" (NE) 1115.29  
15" (SE,NW) 1112.10

D-12A  
STA. 108+19.13, 35.0' RT.  
MH-3, COVER ELEV 1119.76  
15" (S) 1111.40  
15" (NW) 1111.79

D-13 (ATG)  
STA. 12+55.89, 2.3' RT.  
# CONST. 26TH ST.  
EX. MH, COVER ELEV 1118.54  
12" (N) 1114.35  
EX. 15" (NE) 1112.02 (PLUG)  
27" (E) 1110.44  
12" (S) 1112.04  
EX. 18" (W) 1109.81

D-14  
STA. 12+52.00, 14.8' LT.  
# CONST. 26TH ST.  
CB-3A, GRATE ELEV 1117.65  
12" (S) 1114.57

D-15  
STA. 12+62.00, 14.8' RT.  
# CONST. 26TH ST.  
CB-3A, GRATE ELEV 1118.09  
12" (NE) 1112.21

D-16  
STA. 109+00.00, 31.0' LT.  
CB-3A, GRATE ELEV 1121.34  
12" (S) 1117.47

D-16A  
STA. 109+00.00, 23.0' LT.  
MH-3, COVER ELEV 1121.64  
12" (N) 1117.18  
27" (E) 1117.35  
27" (SW) 1117.15

D-17  
STA. 109+02.00, 31.0' RT.  
CB-3A, GRATE ELEV 1120.81  
12" (W) 1117.18

D-17A  
STA. 12+89.20, 2.8' RT.  
# CONST. 26TH ST.  
MH-3, COVER ELEV 1119.50  
15" (N) 1111.00  
27" (NE) 1115.10  
12" (E) 1116.64  
27" (W) 1110.74

D-18  
STA. 110+60.00, 23.0' LT.  
MH-3, COVER ELEV 1124.41  
27" (E,SW) 1120.06  
12" (SE) 1121.31  
12" (NW) 1120.92

D-18A  
STA. 109+78.49, 24.5' LT.  
MH-3, COVER ELEV 1122.88  
27" (NE,W) 1118.53

D-19  
STA. 110+60.00, 31.0' LT.  
CB-3A, GRATE ELEV 1124.11  
12" (SE) 1121.01

D-20  
STA. 110+75.00, 31.0' RT.  
CB-3A, GRATE ELEV 1124.93  
12" (NW) 1121.83

D-21  
STA. 111+85.00, 26.5' LT.  
MH-3, COVER ELEV 1129.45  
12" (N,NW) 1126.35  
27" (NE,SE) 1125.10

D-22  
STA. 111+85.00, 30.0' RT.  
CB-3A, GRATE ELEV 1130.23  
12" (NW) 1127.13

D-23  
STA. 4+15.00, 13.7 LT.  
# EX. R/W BEVERLY AVE.  
CB-3A, GRATE ELEV 1130.89  
12" (S) 1127.79

D-24  
STA. 3+80, 13.5' LT.  
# EX. R/W BEVERLY AVE.  
CB-3A, GRATE ELEV 1133.02  
12" (SW) 1129.17

D-25  
STA. 3+80.00, 15.9' RT.  
# EX. R/W BEVERLY AVE.  
CB-3A, GRATE ELEV 1132.97  
12" (NE,SE) 1128.96

D-26  
STA. 113+28.16, 19.0' RT.  
CB-3A, GRATE ELEV 1137.85  
12" (E) 1134.75

D-26A  
STA. 113+51.86, 44.8' RT.  
MH-3, COVER ELEV 1139.37  
21" (N) 1133.47  
15" (E) 1136.02  
15" (S) 1134.95  
12" (W) 1133.64

D-27  
STA. 113+75.06, 27.2' LT.  
MH-3, COVER ELEV 1137.74  
12" (NE) 1134.64  
27" (SE,SW) 1131.20

D-28A  
STA. 15+00.82, 17.1' RT.  
# CONST. GIBBS AVE. S  
CB-3A, GRATE ELEV 1138.76  
15" (N,S) 1135.42  
12" (E) 1135.66

D-28B  
STA. 15+71.99, 8.7' RT.  
# CONST. GIBBS AVE. S  
CB-3A, GRATE ELEV 1140.33  
15" (N,E) 1136.80

D-29A  
STA. 14+95.97, 0.8' LT.  
# CONST. GIBBS AVE. S  
CB-6, GRATE ELEV 1139.16  
12" (W) 1136.06

D-29B  
STA. 15+82.00, 15.0' LT.  
# CONST. GIBBS AVE. S  
CB-3A, GRATE ELEV 1140.76  
15" (S,W) 1136.92

D-30  
STA. 30+57.00, 12.0' RT.  
# EX. R/W HAVANA PL.  
CB-3A, GRATE ELEV 1141.50  
15" (N) 1138.15

D-30A  
STA. 30+57.00, 6.0' LT.  
# EX. R/W HAVANA PL.  
MH-3, COVER ELEV 1141.82  
15" (S,W) 1138.10  
12" (N) 1138.44

D-31  
STA. 30+57.00, 12.0' LT.  
# EX. R/W HAVANA PL.  
CB-3A, GRATE ELEV 1141.56  
4" (N) 1140.00  
12" (S) 1138.46

D-32  
STA. 114+08.18, 30.8' RT.  
CB-3A, GRATE ELEV 1139.89  
12" (W) 1136.27

D-33  
STA. 114+18.98, 11.7' LT.  
CB-3A, GRATE ELEV 1139.93  
12" (SW) 1136.83

D-33A  
STA. 113+94.03, 7.1' RT.  
MH-3, COVER ELEV 1139.35  
24" (NE) 1131.56  
12" (E) 1135.63  
21" (S) 1133.20  
27" (NW) 1131.31

D-34  
STA. 12+50, 10.6' RT.  
# CONST. GIBBS AVE. N  
CB-3A, GRATE ELEV 1141.42  
12" (E) 1138.32

D-35  
STA. 12+50, 12.7' LT.  
# CONST. GIBBS AVE. N  
CB-3A, GRATE ELEV 1141.37  
12" (S,W) 1138.22

D-36  
STA. 114+63.22, 10.4' RT.  
CB-3A, GRATE ELEV 1139.58  
12" (NW) 1135.83

D-37  
STA. 114+62.88  
MH-3, COVER ELEV 1139.89  
12" (N) 1136.79  
24" (NE,SW) 1131.79  
12" (SE) 1135.69

D-38  
STA. 115+65.77, 20.3' RT.  
MH-3, COVER ELEV 1139.87  
24" (NE,SW) 1132.14  
12" (SE) 1135.81

D-39  
STA. 115+67.52, 29.9' RT.  
CB-3A, GRATE ELEV 1139.54  
12" (NW) 1135.86

D-40 (ATG)  
STA. 117+04.55, 23.5' RT.  
EX. MH, COVER ELEV 1139.77  
15" (N) 1135.75  
24" (NE,SW) 1132.61  
15" (N,S) 1135.42  
12" (SE) 1135.66

D-41  
STA. 117+07.52, 34.0' RT.  
CB-3, GRATE ELEV 1139.55  
12" (NW) 1135.72

D-42  
STA. 117+26.37, 32.5' LT.  
CB-3A, GRATE ELEV 1139.31  
15" (S) 1135.96

D-43  
STA. 118+44.18, 18.7' RT.  
MH-3, COVER ELEV 1139.41  
24" (SE,SW) 1133.07  
12" (S) 1135.08

D-44  
STA. 118+46.27, 34.0' RT.  
CB-3, GRATE ELEV 1138.95  
12" (N) 1135.15

D-45  
STA. 119+81.14, 34.0' LT.  
CB-6, GRATE ELEV 1137.70  
12" (SE,SW) 1134.28  
12" (NW) 1134.47

D-46  
STA. 119+81.89, 34.0' RT.  
CB-3, GRATE ELEV 1137.77  
12" (N) 1134.22

D-47 (ATG)  
STA. 119+75.27, 24.7' RT.  
EX. MH, COVER ELEV 1138.06  
12" (NE) 1133.93  
EX. 18" (SE) 1133.59  
12" (S) 1134.15  
24" (NW) 1133.50

D-48  
STA. 121+10.29, 26.6' RT.  
MH-3, COVER ELEV 1139.00  
18" (SE) 1134.97  
15" (SW) 1135.13  
18" (NW) 1134.96

D-49  
STA. 121+10.50, 34.0' RT.  
CB-3A, GRATE ELEV 1138.72  
15" (NE,SE) 1135.15

D-50 (ATG)  
STA. 122+51.75, 18.9' RT.  
EX. MH, COVER ELEV 1143.37  
EX. 18" (N) 1134.58 (DND)  
EX. 15" (SE) 1136.33 (DND)  
EX. 15" (S) 1136.62 (DND)  
EX. 15" (W) 1136.85 (DND)  
EX. 18" (NW) 1136.45 (DND)

D-51  
STA. 122+21.00, 34.8' RT.  
CB-3A, GRATE ELEV 1141.16  
15" (NW) 1136.92

D-52  
STA. 111+21.67, 1.0' RT.  
MH-3-108 W/ 12" WEIR, COVER ELEV 1128.23  
27" (NE) 1123.88  
27" (W) 1122.88

D-52A  
STA. 111+85.00  
MH-3, COVER ELEV 1131.15  
12" (SE) 1126.86  
27" (SW,NE) 1124.65

D-53  
STA. 119+33.13, 34.0' LT.  
CB-3A, GRATE ELEV 1138.05  
12" (SE) 1134.95

D-54  
STA. 120+29.15, 34.0' LT.  
CB-3A, GRATE ELEV 1138.10  
12" (NW) 1135.00

S-1 (ATG)  
STA. 100+16, 2.3' RT.  
EX. SAN-MH, COVER ELEV 1113.77  
8" (N) 1104.14  
8" (NE) 1105.05  
8" (S) 1104.10

S-2 (ATG)  
STA. 100+32, 16.1' LT.  
EX. SAN-MH, COVER ELEV 1114.40  
8" (E) 1105.21  
8" (SW) 1105.19

S-3 (ATG)  
STA. 102+77, 15.4' LT.  
EX. SAN-MH, COVER ELEV 1116.60  
8" (E) 1107.08  
8" (W) 1107.12

S-4 (ATG)  
STA. 104+23, 14.8' LT.  
EX. SAN-MH, COVER ELEV 1117.47  
8" (SE) 1108.07  
8" (NW) 1107.96

S-5 (ATG)  
STA. 105+71, 14.8' LT.  
EX. SAN-MH, COVER ELEV 1119.36  
8" (SE) 1109.21  
8" (NW) 1109.26

S-6 (ATG)  
STA. 12+80, 7.4' RT.  
EX. SAN-MH, COVER ELEV 1119.16  
8" (E) 1109.28  
8" (S) 1109.98  
8" (W) 1109.26

S-7 (ATG)  
STA. 108+76, 14.6' LT.  
EX. SAN-MH, COVER ELEV 1121.40  
8" (SE) 1111.51  
8" (NW) 1111.54

S-8 (ATG)  
STA. 111+02, 14.5' LT.  
EX. SAN-MH, COVER ELEV 1126.42  
8" (NE) 1115.15  
8" (SW) 1113.39

S-9 (ATG)  
STA. 114+43, 13.1' LT.  
EX. SAN-MH, COVER ELEV 1140.68  
8" (NE) 1128.42  
8" (S) 1128.54  
8" (SW) 1128.38

S-10 (ATG)  
STA. 30+01, 1.1' LT.  
EX. SAN-MH, COVER ELEV 1139.31  
8" (N) 1131.28

S-12  
STA. 118+43, 2.1' RT.  
SAN-MH-3, COVER ELEV 1140.10  
6" (N) 1130.49  
8" (E) 1130.09  
6" (S) 1130.63  
8" (W) 1129.79

S-13 (ATG)  
STA. 120+43, 1.5' RT.  
EX. SAN-MH, COVER ELEV 1139.17  
8" (SE) 1130.76  
8" (NW) 1130.78

S-14 (ATG)  
STA. 122+23, 4.1' RT.  
EX. SAN-MH, COVER ELEV 1142.81  
8" (SE) 1134.03  
8" (NW) 1134.00

S-15  
STA. 115+75, 0.8' RT.  
SAN-MH-3, COVER ELEV 1140.75  
8" (NE,SW) 1128.75

NOTE:

1. ALL STATIONING AND OFFSETS ARE REFERENCED TO  
# EX. R/W COLONIAL BLVD UNLESS OTHERWISE STATED

2. STRUCTURE CALL-OUTS REFERENCE ODOT STRUCTURE  
NUMBERS. BELOW IS THE CHANGE IN REFERENCE TO CITY  
OF CANTON SCDS.  
CB-3 = SCD #1 WITH TWO GRATES  
CB-3A = SCD#1  
CB-6 = SCD #4  
MH-3 = SCD #10

DESIGN AGENCY



DESIGNER

BDB

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

P.115

168

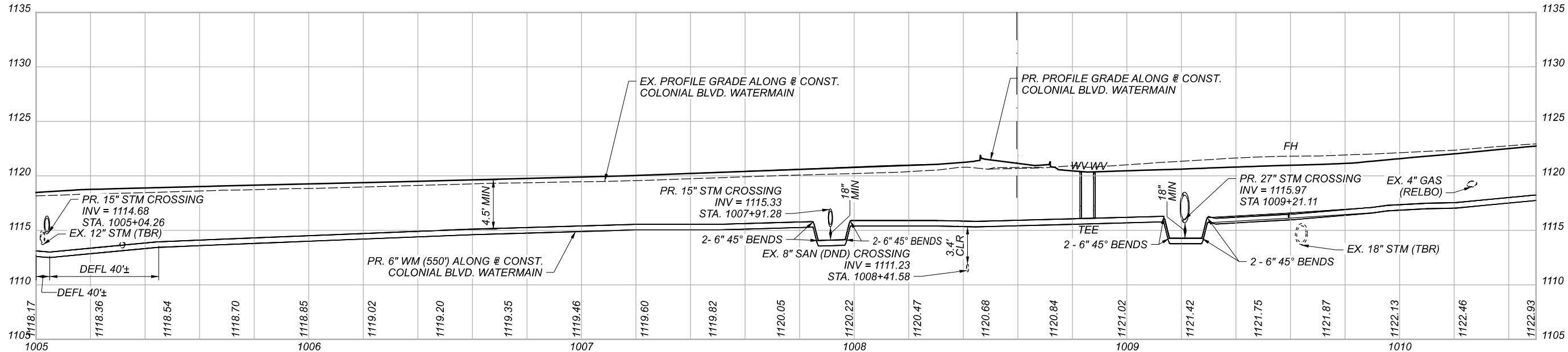
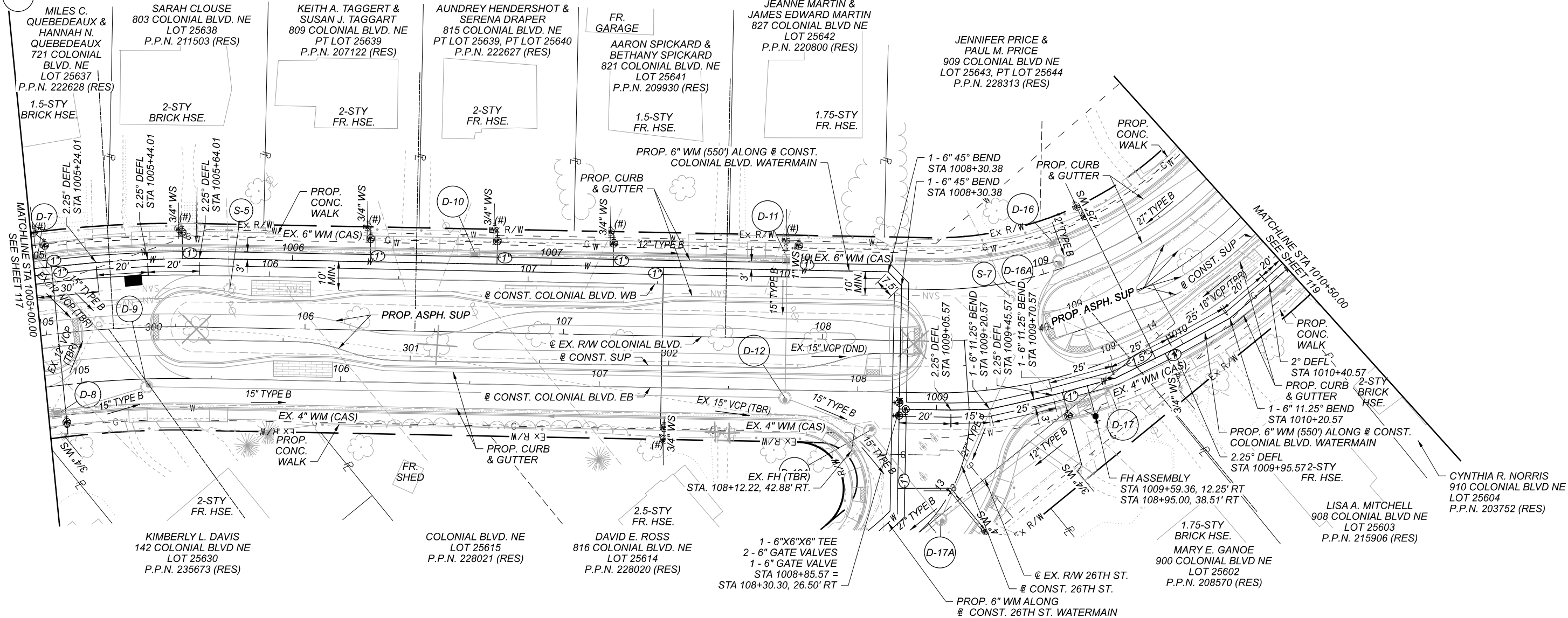
WATER WORK SUBSUMMARY - TAG 624	
DESIGN AGENCY	
	
DESIGNER	
WLC	
REVIEWER	
KMK	02-10-22
PROJECT ID	
111059	
SHEET	TOTAL
P.116	168



NOTE:

1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)
  2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
  3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND
  4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.
- (#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 122 FOR WATER WORKS PLAN & PROFILE - 26TH ST.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

TAG 624



WATER WORKS PLAN AND PROFILE - COLONIAL BOULEVARD  
STA 1005+00.00 TO STA 1010+50.00

DESIGN AGENCY



DESIGNER

CJK/WLC

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.118

TOTAL

168





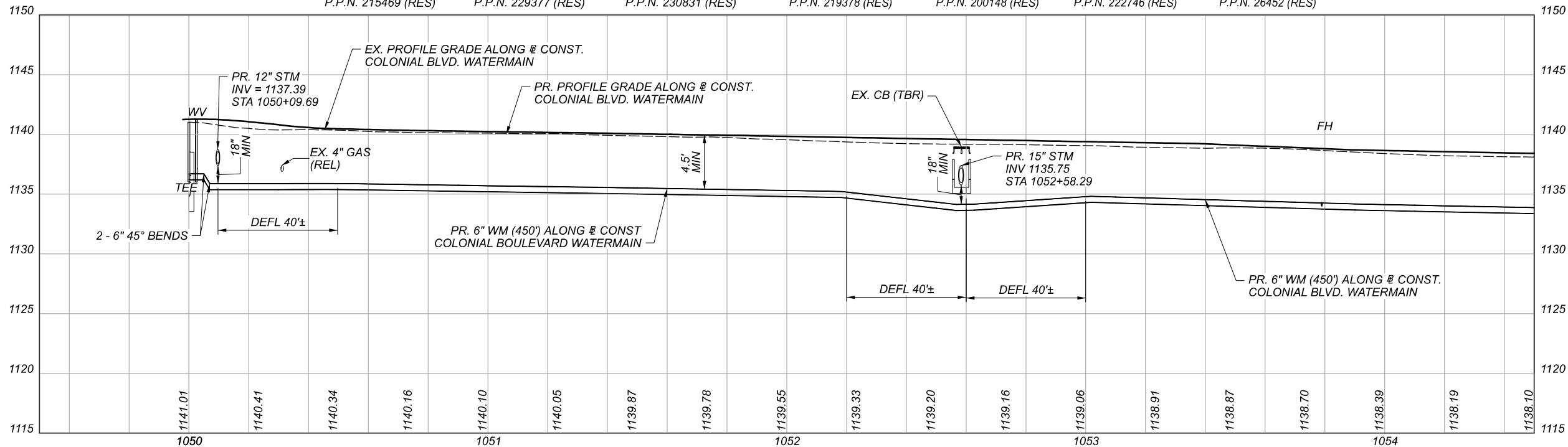
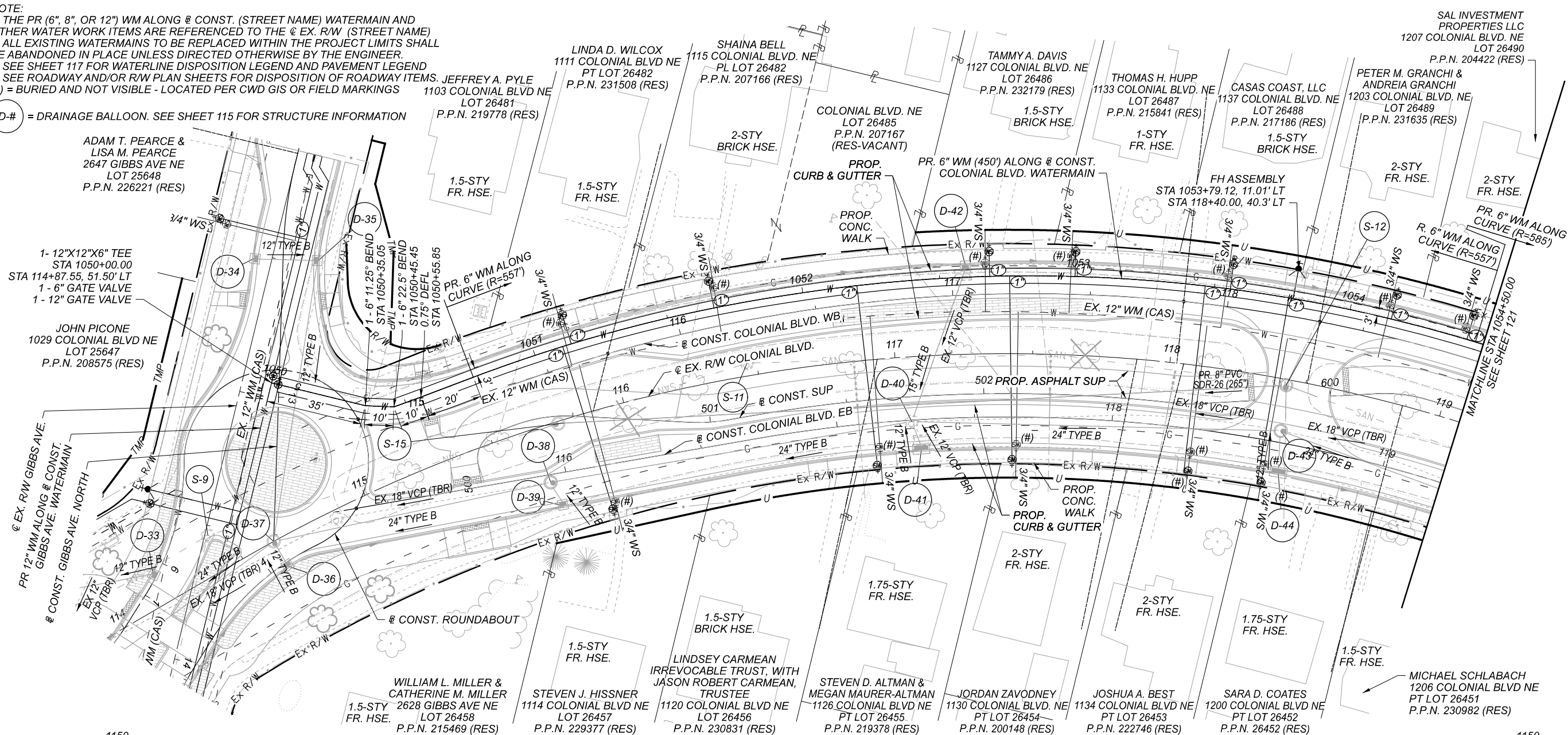
# STA-COLONIAL BOULEVARD NE - PHASE 1

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\\0.120.12.5\\bisthar\\v2\\798\_STA-Colonial\\7.0\_Production\\Work-sets\\0059-400-Engineering\\Utilities\\Sheets\\0059\_LPI04.dgn

NOTE:  
1. THE  
OTHER  
2. ALL  
BE ABA  
3. SEE  
4. SEE  
(#) = B

1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND  
OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL  
BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS 110

(D-#) = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 124 FOR WATER WORKS PLAN & PROFILE - GIBBS AVE.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

TAG 624

DESIGN AGENCY



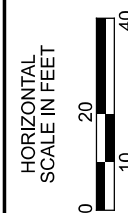
DESIGNER  
CJK/WLC

REVIEWER
KMK 02-10-22

PROJECT ID

SHEET	TOTAL
P.120	168

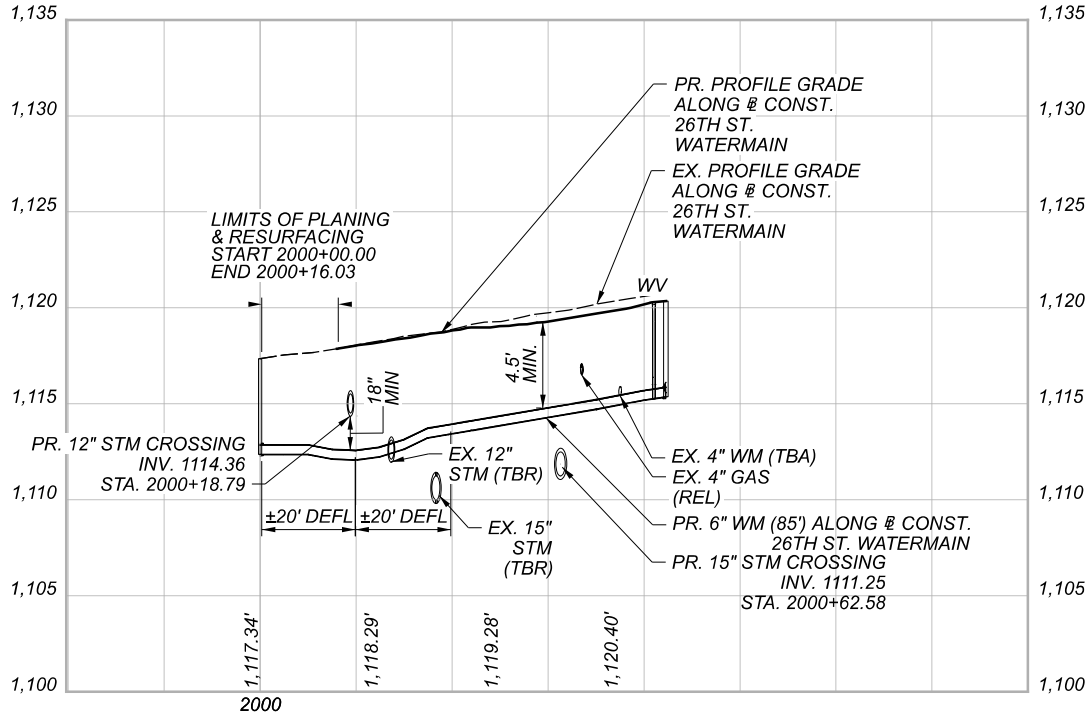
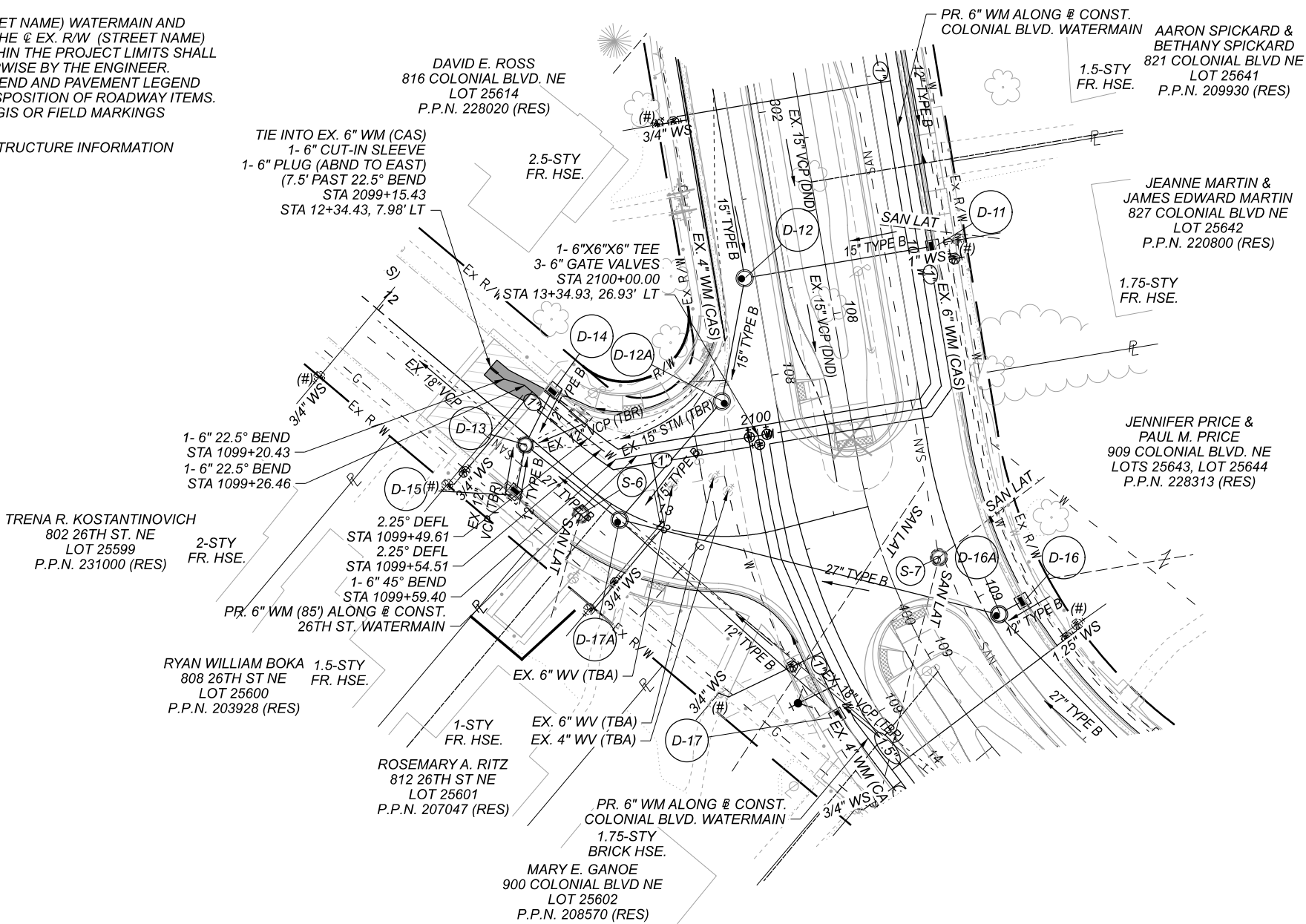
WATER WORKS PLAN AND PROFILE - COLONIAL BOULEVARD  
STA 1050+00.00 TO STA 1054+50.00





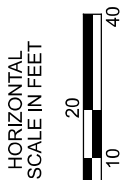
NOTE:  
1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 118 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

TAG 624



WATER WORKS PLAN AND PROFILE - 26TH STREET  
STA 2099+15.43 TO STA 2100+00.00

DESIGN AGENCY



DESIGNER

CJK/WLC

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.122

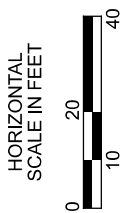
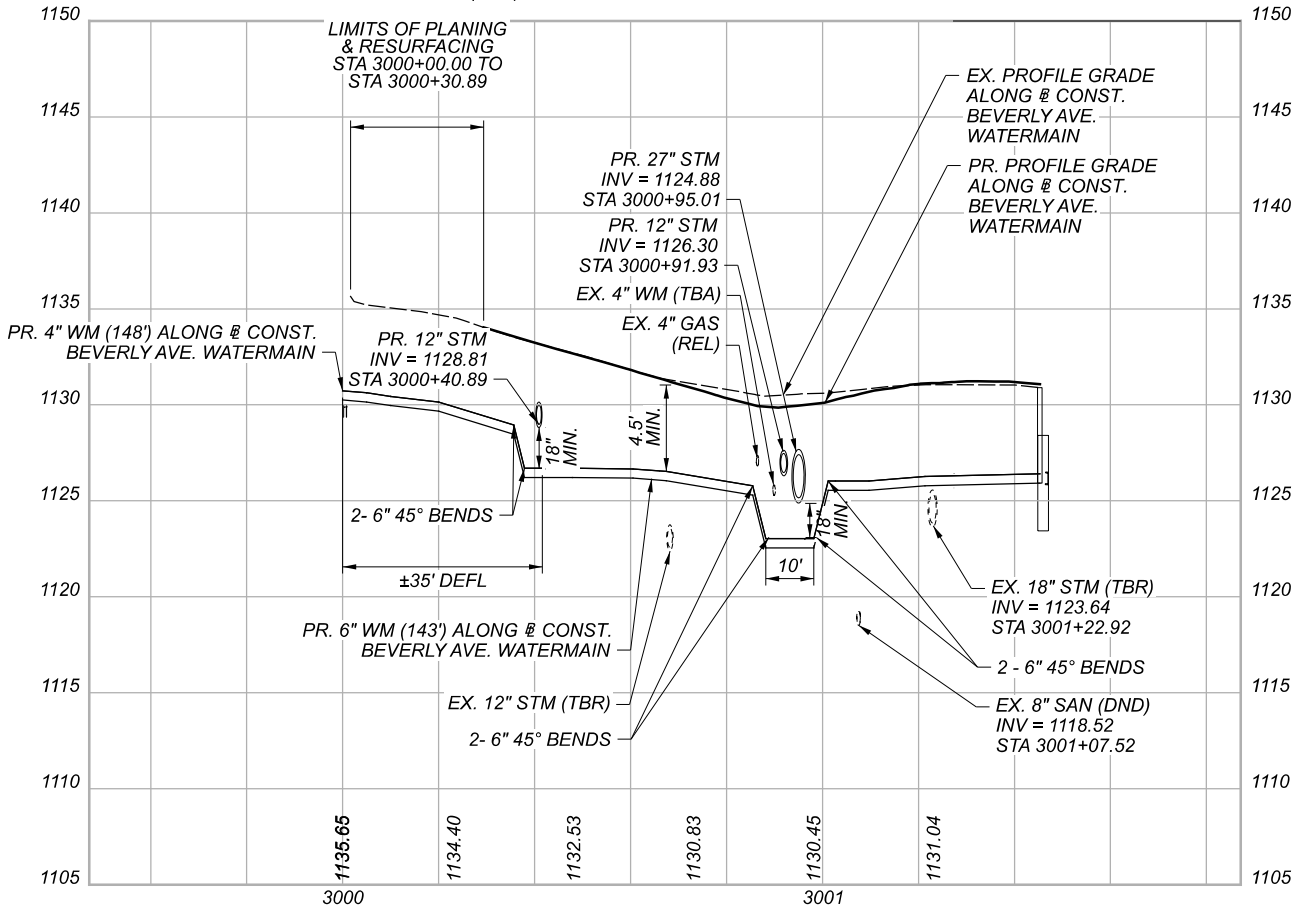
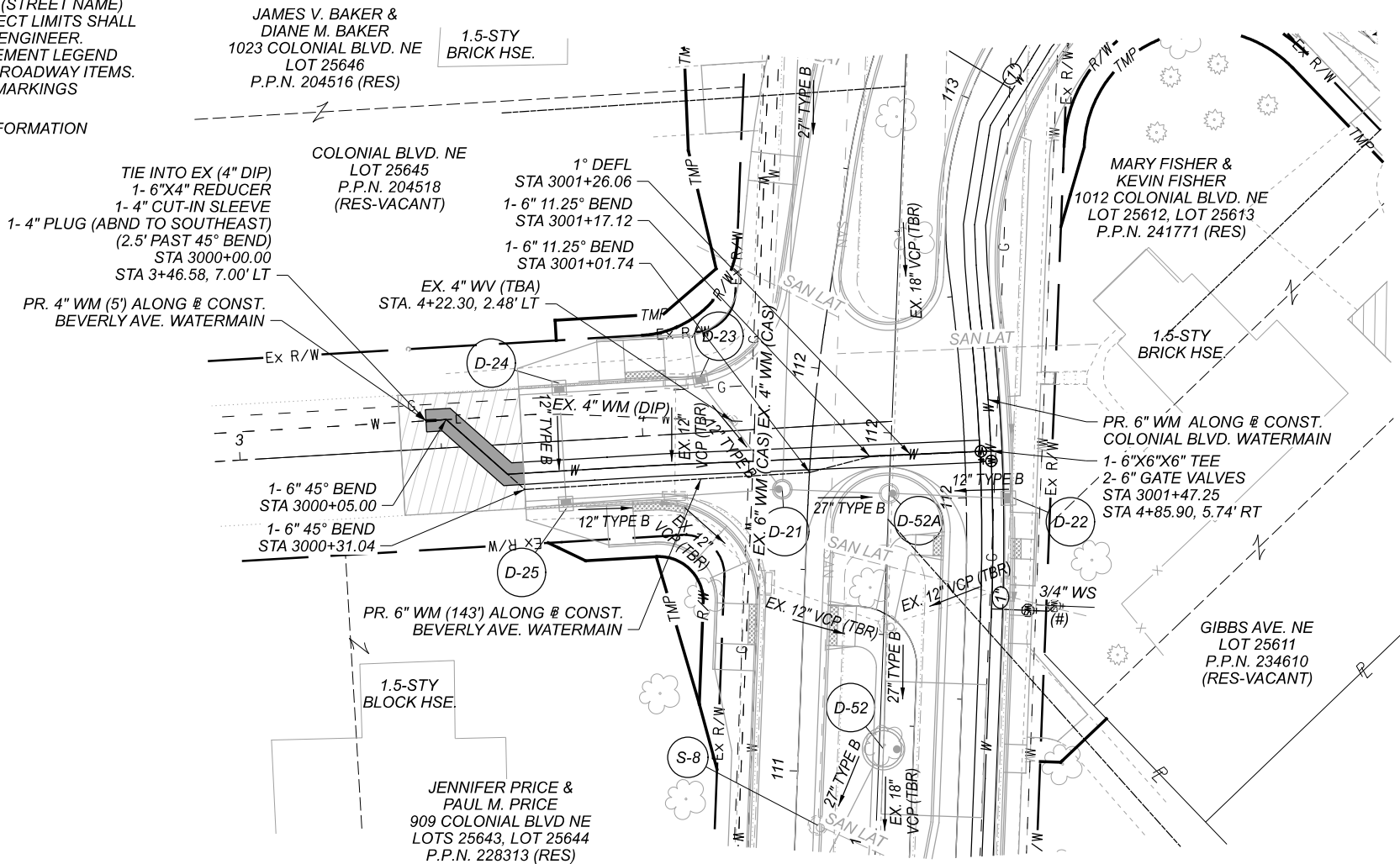
TOTAL

168



NOTE:  
1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



WATER WORKS PLAN AND PROFILE - BEVERLY AVENUE  
STA 3000+00.00 TO STA 3001+47.25

CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 119 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

DESIGN AGENCY



DESIGNER  
CJK/WLC

REVIEWER  
KMK 02-10-22

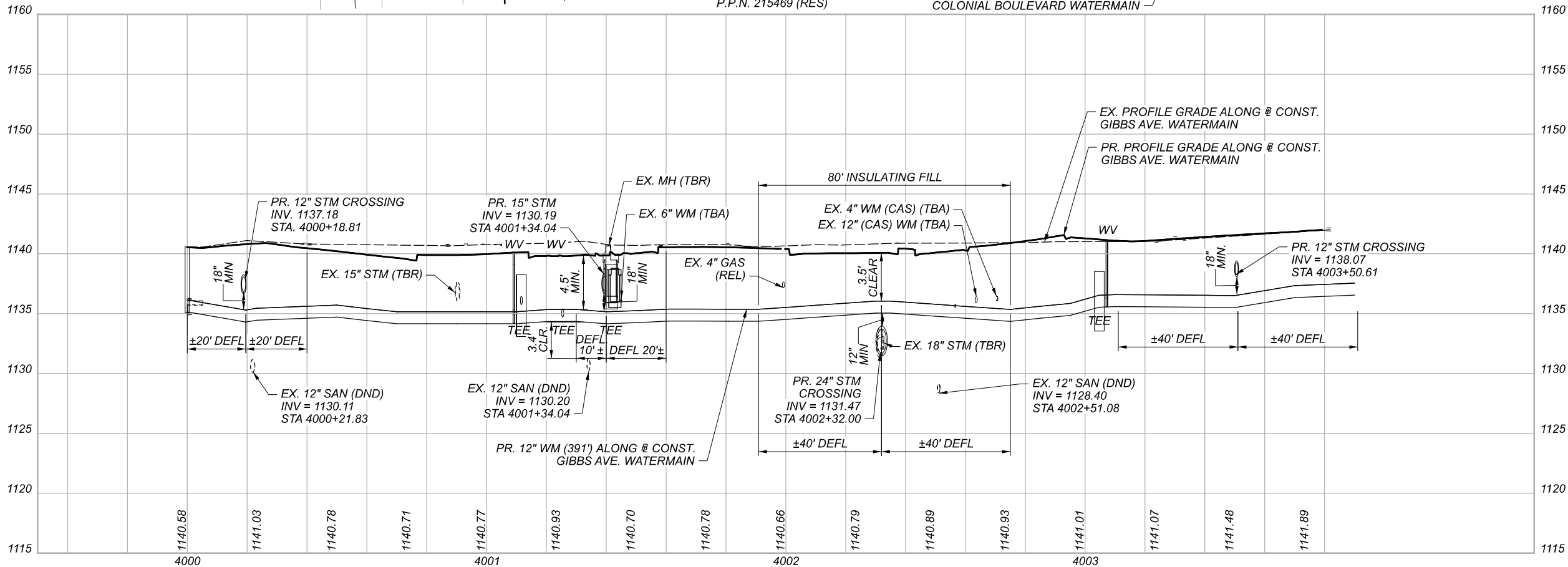
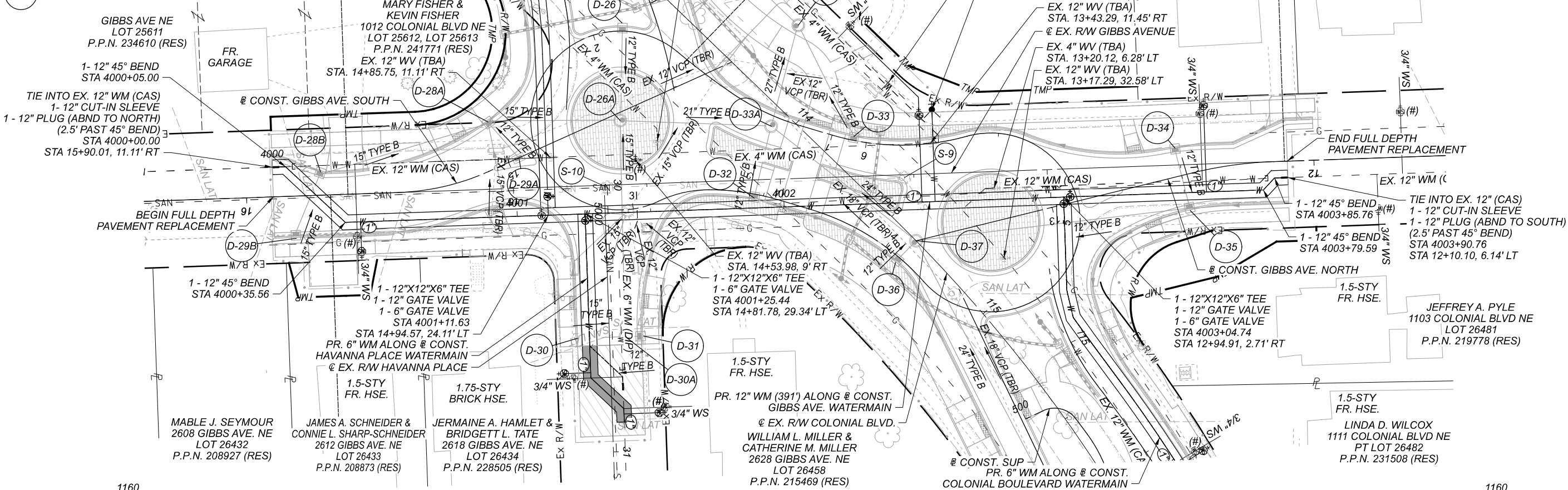
PROJECT ID  
111059

SHEET TOTAL  
P.123 168

TAG 624

NOTE:  
1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 119-120 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 125 FOR WATER WORKS PLAN & PROFILE - HAVANNA PL.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

DESIGN AGENCY



DESIGNER

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.124

TOTAL

168

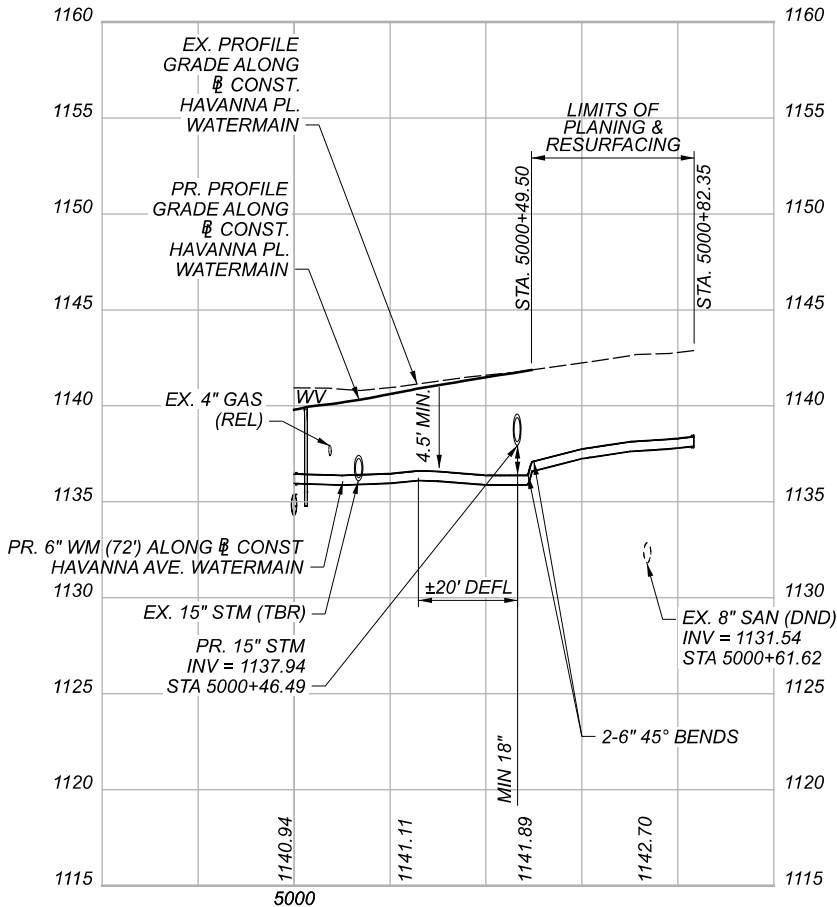
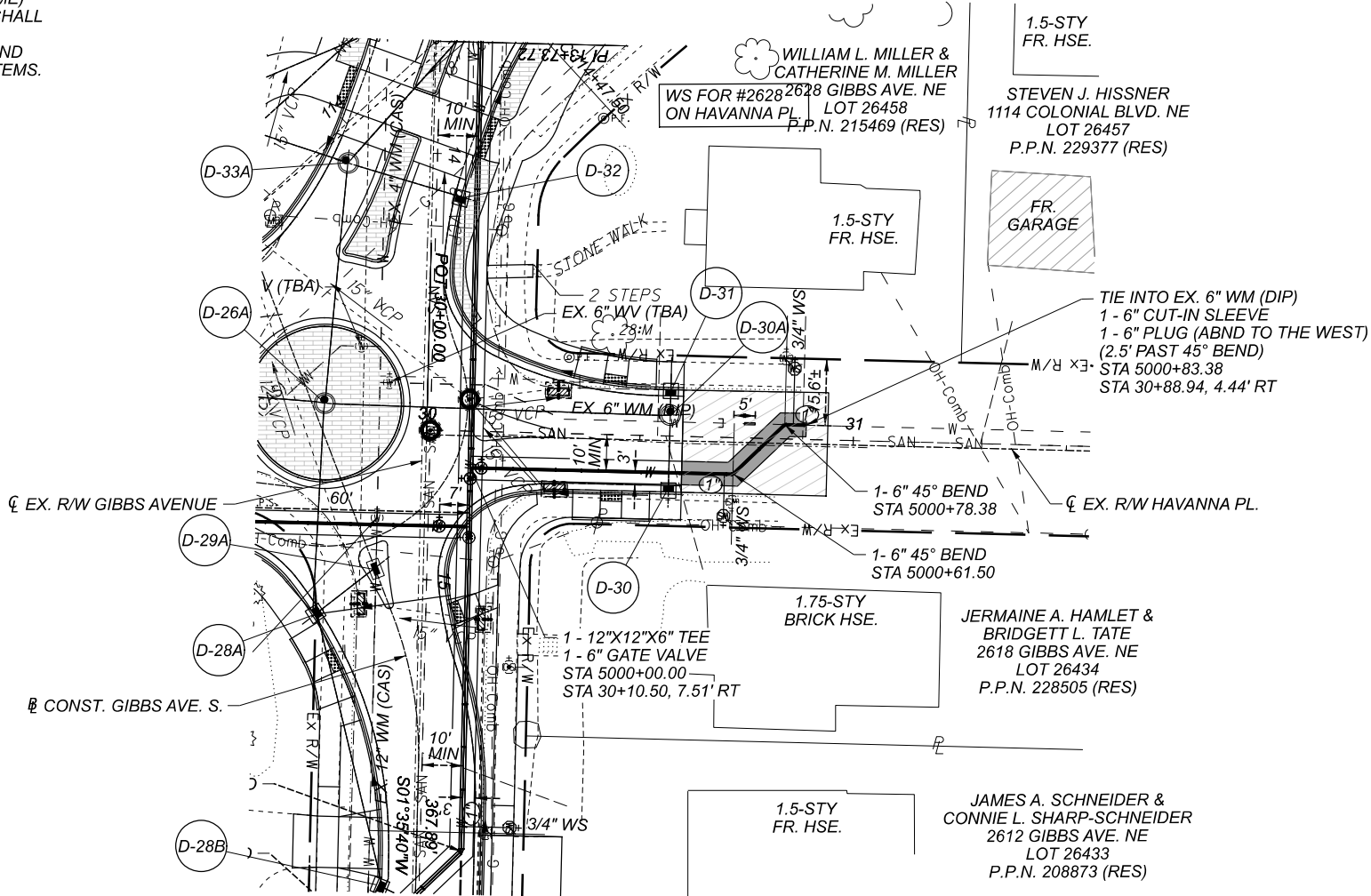
WATER WORKS PLAN AND PROFILE - GIBBS AVENUE  
STA 4000+00.00 TO STA 4003+90.76

HORIZONTAL  
SCALE IN FEET



NOTE:  
1. THE PR (6", 8", OR 12") WM ALONG  $\frac{1}{2}$  CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE  $\frac{1}{2}$  EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 119 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 124 FOR WATER WORKS PLAN & PROFILE - GIBBS AVE.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

DESIGN AGENCY



DESIGNER  
WLC/CJK

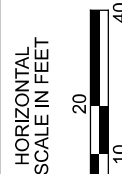
REVIEWER  
KMK 02-10-22

PROJECT ID  
111059

SHEET TOTAL  
P.125 168

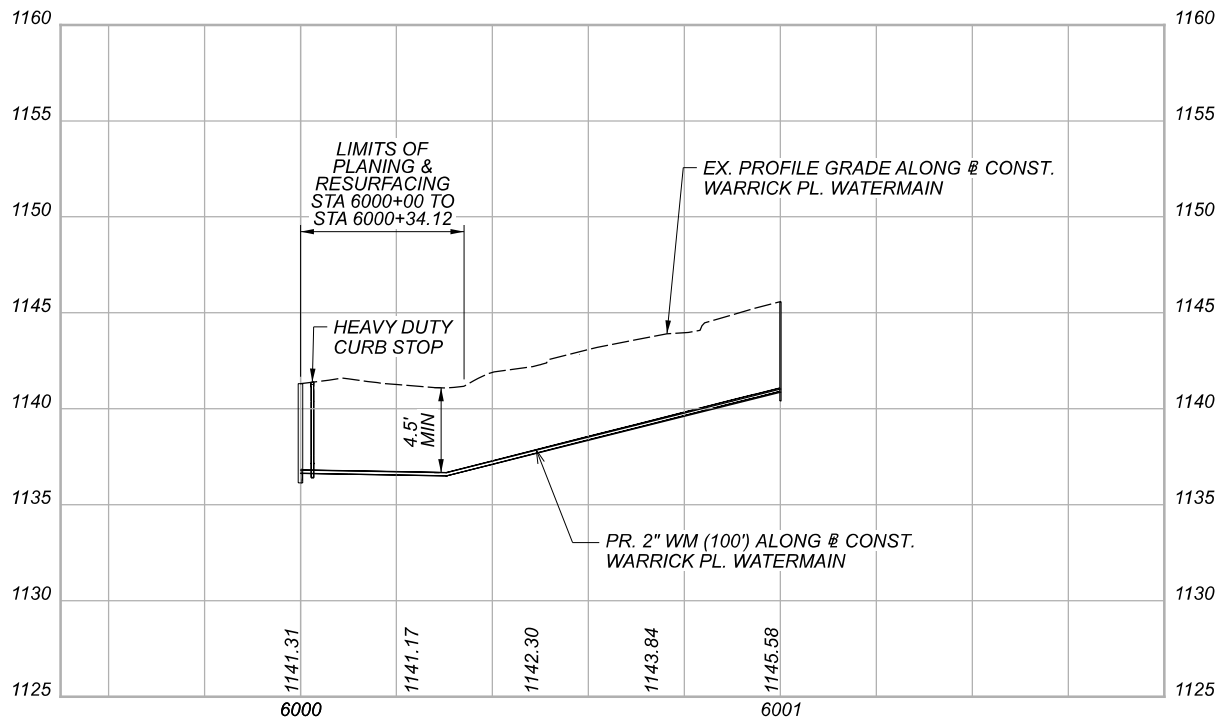
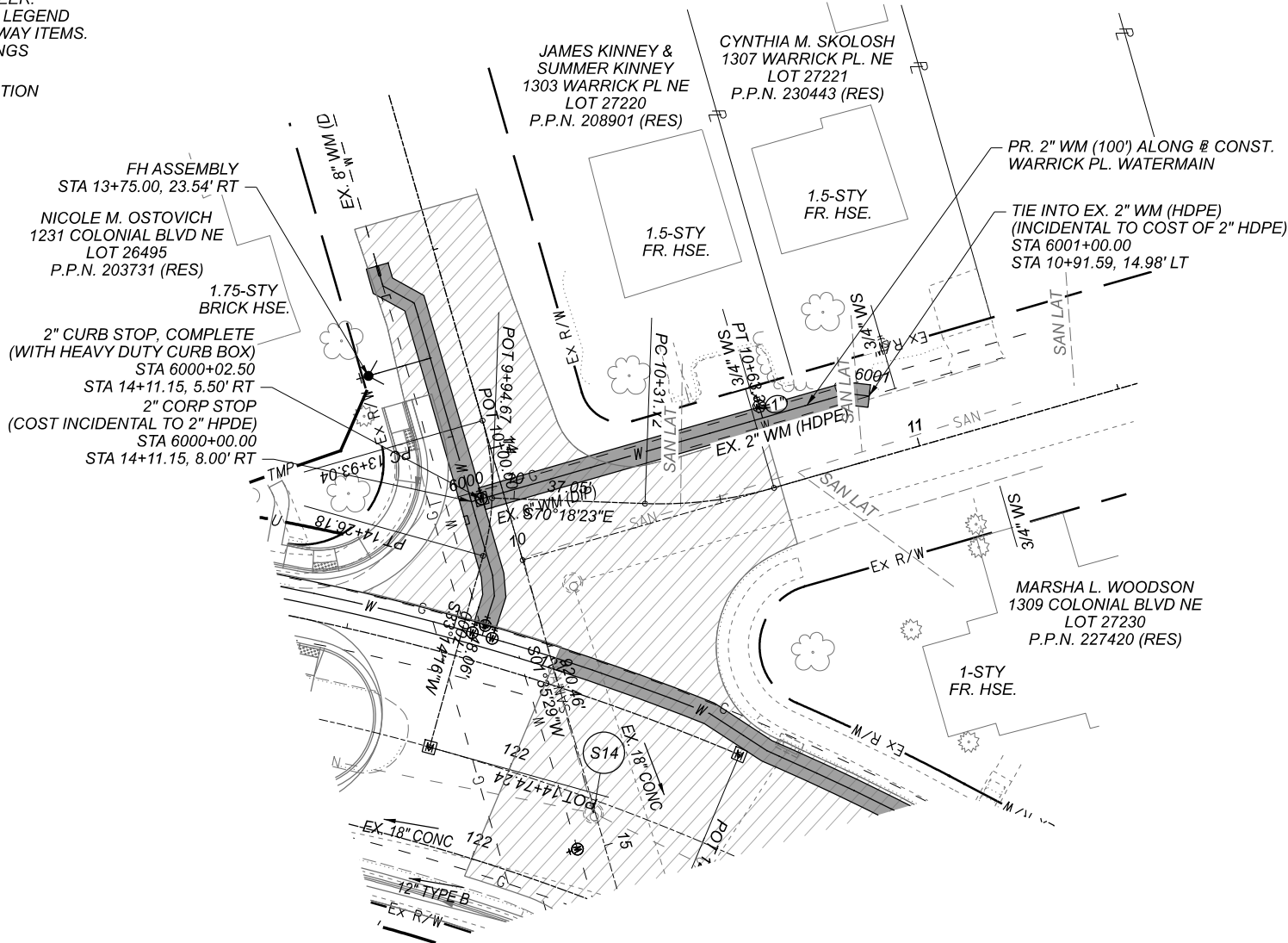
TAG 624

WATER WORKS PLAN AND PROFILE - HAVANNA PLACE  
STA 5000+00.00 TO STA 5000+83.38



NOTE:  
1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 121 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 121 FOR WATER WORKS PLAN & PROFILE - ROWLAND AVE.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

DESIGN AGENCY



DESIGNER

CJK/WLC

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.126

TOTAL

168

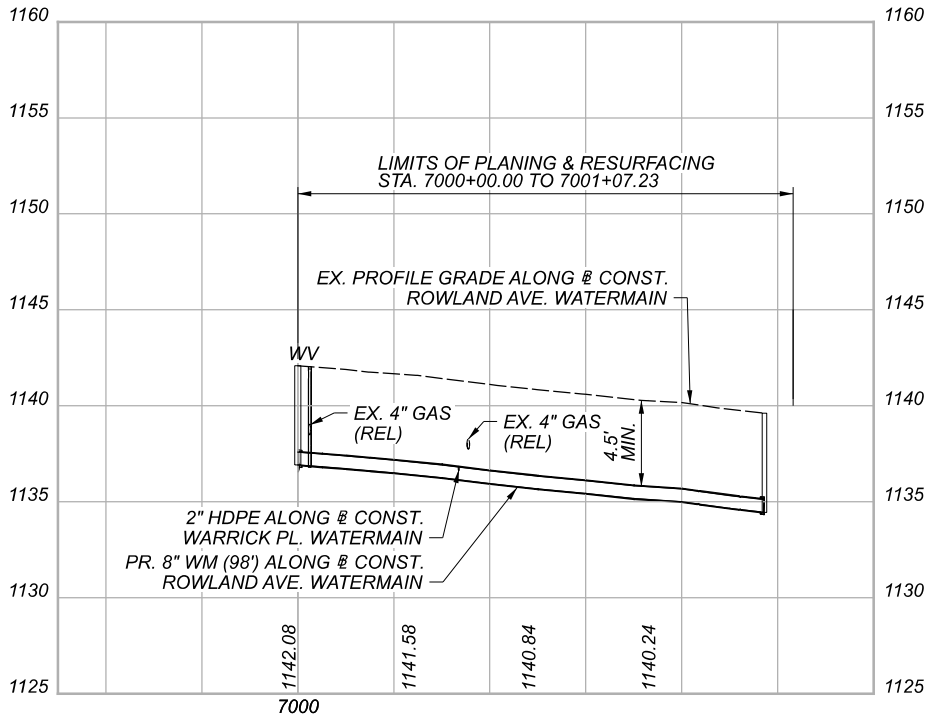
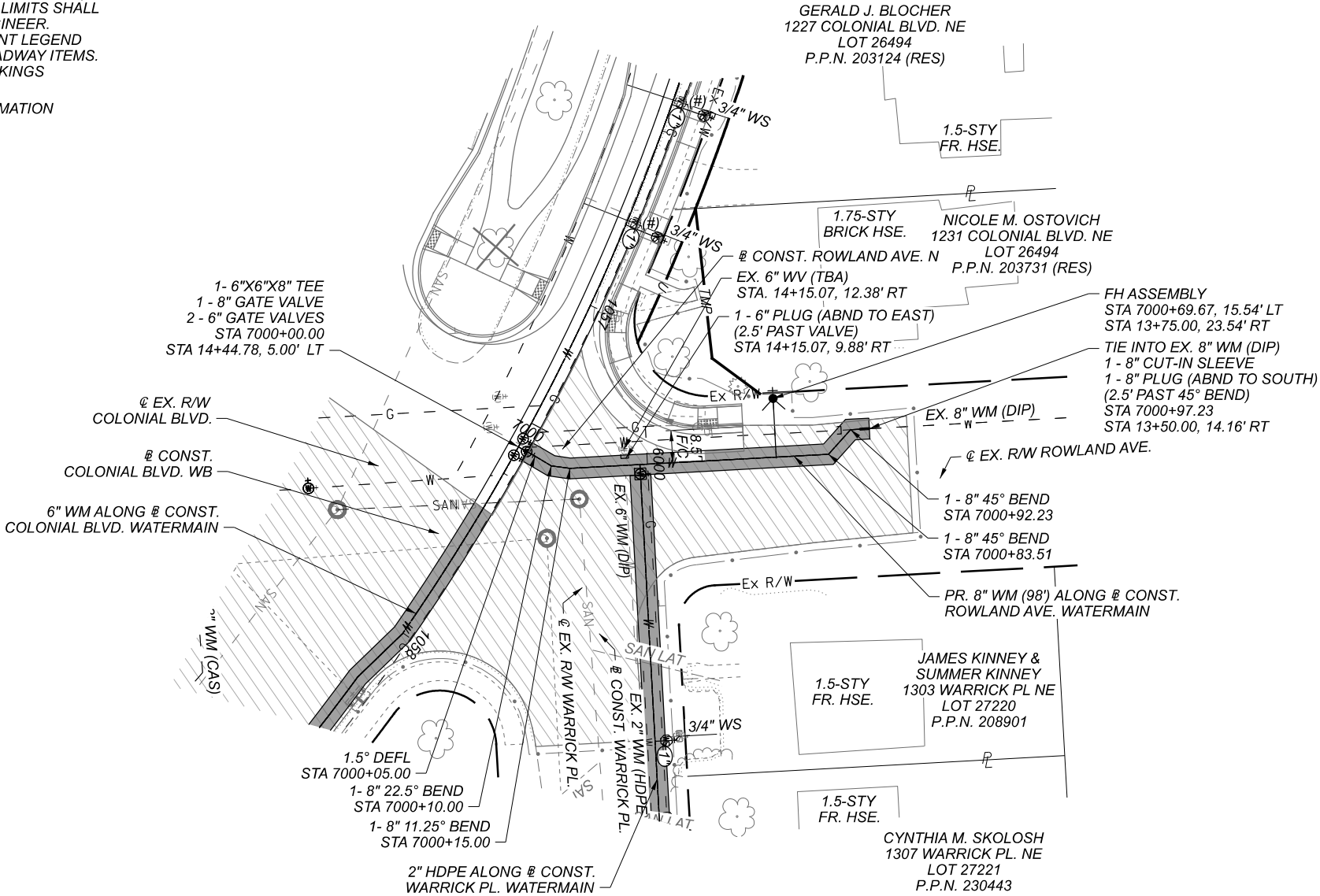
TAG 624

WATER WORKS PLAN AND PROFILE - WARRICK PLACE  
STA 6000+00.00 TO STA 6001+00.00



- NOTE:
1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE @ EX. R/W (STREET NAME)
  2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
  3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND
  4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.
- (#) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 121 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 126 FOR WATER WORKS PLAN & PROFILE - WARRICK PL.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

DESIGN AGENCY	
[IBI]	
DESIGNER	CJK/WLC
REVIEWER	KMK 02-10-22
PROJECT ID	111059
SHEET	TOTAL
P.127	168

TAG 624



WATER WORKS PLAN AND PROFILE - ROWLAND AVENUE  
STA 7000+00.00 TO STA 7000+97.23

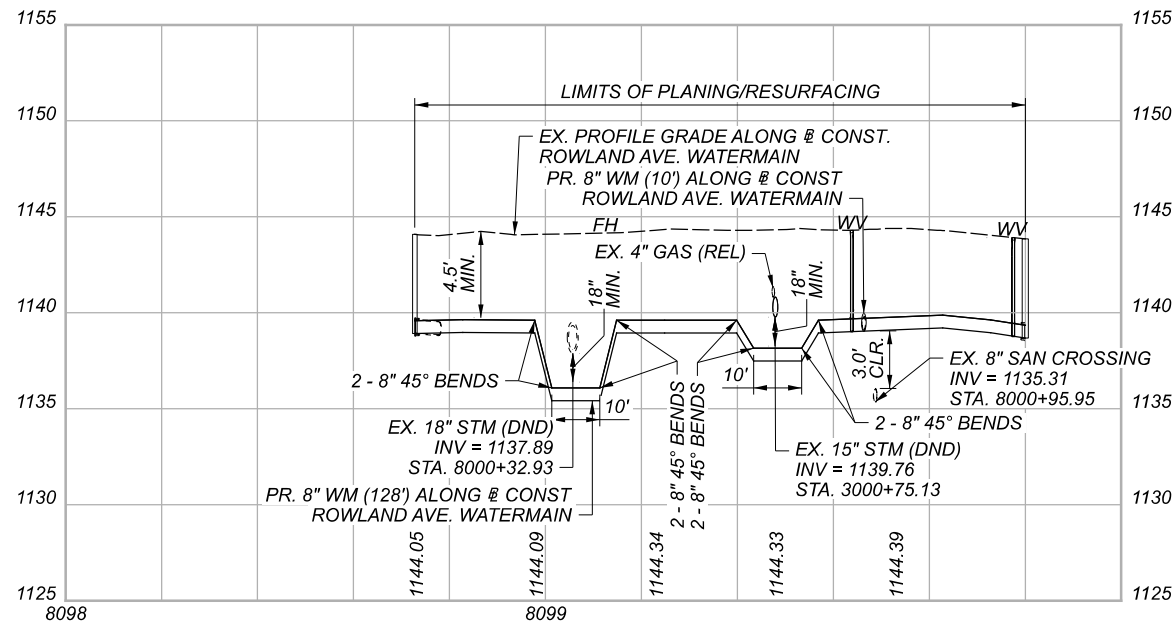
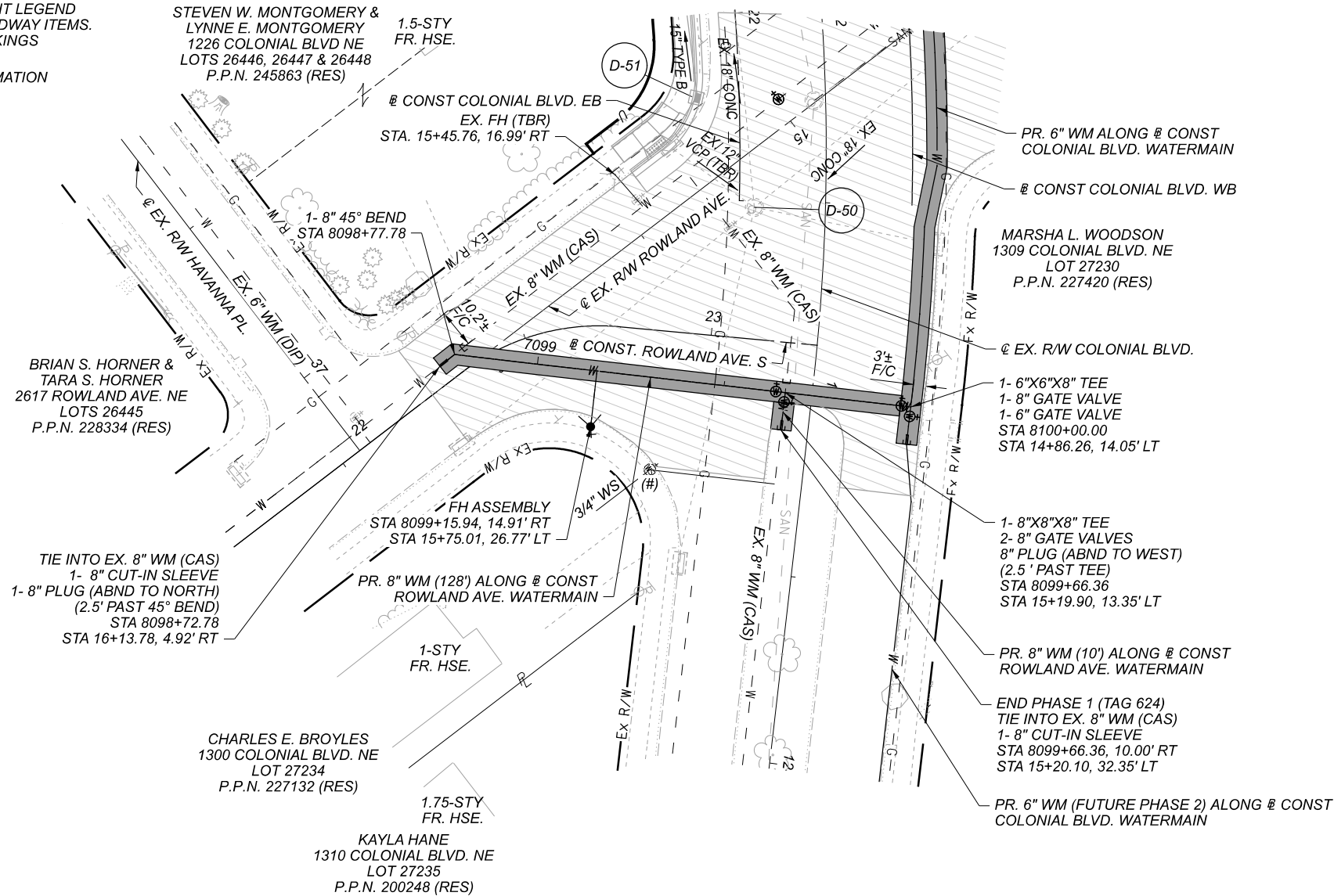


## STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: \\0059.UP801 PAPER SIZE: ITX (in.) DATE: 2022-03-21 TIME: 2:49:21 PM USER: Jennifer.kelley  
\\10.20.212.5\ibshare\121798\_STA-Colonial\7.0-Production\Worksheets\0059\400-Engineering\Utilities\Sheets\0059.UP801.dgn

**NOTE:**  
1. THE PR (6", 8", OR 12") WM ALONG @ CONST. (STREET NAME) WATERMAIN AND OTHER WATER WORK ITEMS ARE REFERENCED TO THE  $\varnothing$  EX. R/W (STREET NAME)  
2. ALL EXISTING WATERMAINS TO BE REPLACED WITHIN THE PROJECT LIMITS SHALL BE ABANDONED IN PLACE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.  
3. SEE SHEET 117 FOR WATERLINE DISPOSITION LEGEND AND PAVEMENT LEGEND  
4. SEE ROADWAY AND/OR R/W PLAN SHEETS FOR DISPOSITION OF ROADWAY ITEMS.  
(##) = BURIED AND NOT VISIBLE - LOCATED PER CWD GIS OR FIELD MARKINGS

D-# ) = DRAINAGE BALLOON. SEE SHEET 115 FOR STRUCTURE INFORMATION



CROSS REFERENCES:  
SEE SHEET 116 FOR WATER WORKS SUBSUMMARY  
SEE SHEET 121 FOR WATER WORKS PLAN & PROFILE - COLONIAL BLVD.  
SEE SHEET 129-130 FOR WATER WORKS DETAILS

DESIGN AGENCY



DESIGNER  
G. J. KAMLO

REVIEWER

PROJECT ID

111059


SHEET	TOTAL
-------	-------

P.128 | 168

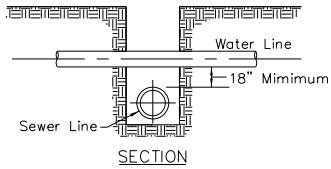


WATER WORKS PLAN AND PROFILE - ROWLAND AVENUE  
STA 8098+72.78 TO STA 8100+00.00

HORIZONTAL  
SCALE IN FEET

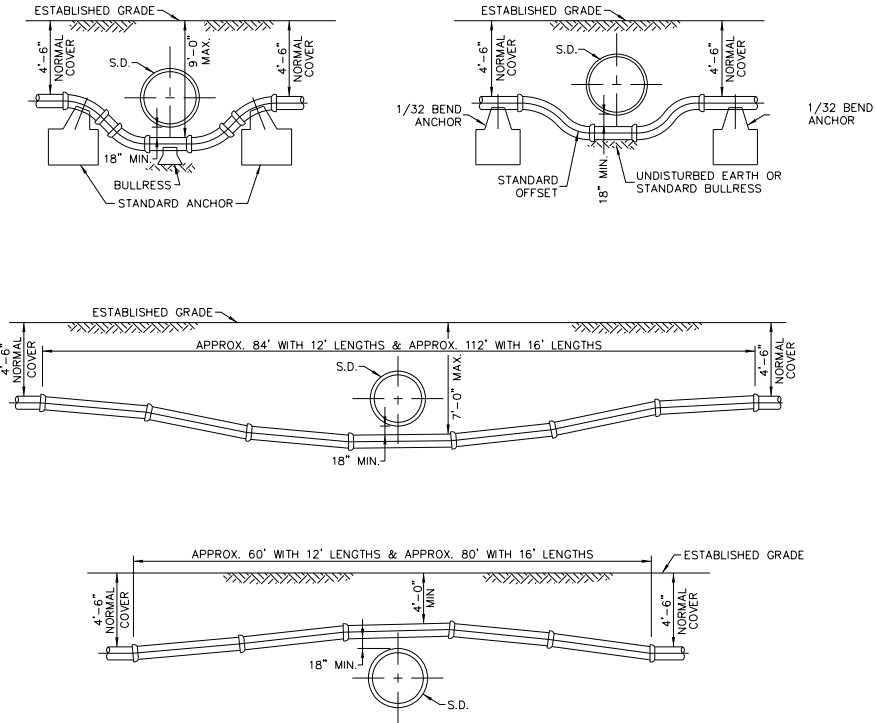


A horizontal scale bar with alternating black and white segments. It is marked with '0' at the left end, '10' at the midpoint, and '20' at the right end.

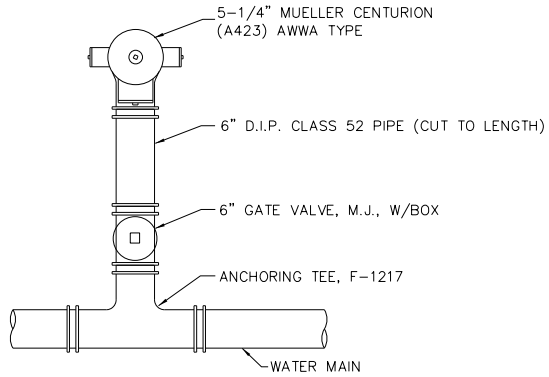


- NOTES:
1. IF JOINT ON WATER MAIN IS WITHIN LIMITS OF SEWER TRENCH, INSTALL MECHANICAL BELL JOINT CLAMP.
  2. IF CLEARANCE IS LESS THAN 18":
    - FOR STORM SEWERS, CONCRETE ENCASE THE STORM SEWER PIPE, 6 FT. ON EACH SIDE OF WATER MAIN.
    - FOR SANITARY SEWERS, REPLACE THE SANITARY SEWER PIPE WITH PVC C900 PIPE, 10 FT. ON EACH SIDE OF WATER MAIN. APPROVED COUPLINGS SHALL BE USED TO TIE ONTO THE EXISTING SEWER
- COST FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ALL ITEMS IN THIS PROPOSAL.
3. IN NO CASE SHALL THE SEWER PIPE CONTACT ANY WATER MAIN, SERVICE LINE, OR APPURTENANCE.

VERTICAL WATER MAIN CLEARANCE  
(C186)

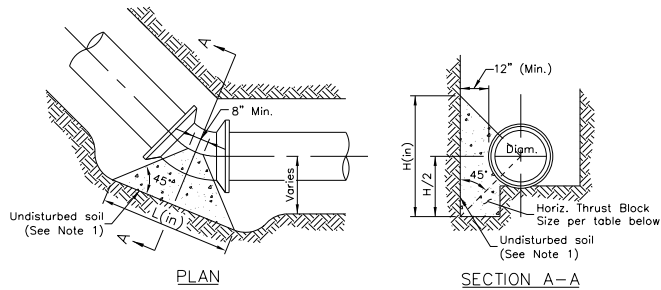


WATER MAIN CROSSING STORM DRAIN  
(C187)



- NOTES:
1. HYDRANT SETTINGS CONSIST OF HYDRANT, VALVE, VALVE BOX, FITTINGS AND MATERIALS SHOWN OR SPECIFIED WHICH ARE NEEDED FOR PROPER INSTALLATION.
  2. SEE SPECIFICATIONS FOR MORE INFORMATION ABOUT MATERIALS, SETTING HYDRANTS AND DRAINAGE REQUIREMENTS.
  3. IF RESTRAINED JOINT FITTINGS CANNOT BE USED, (2) TIE RODS AND (4) EYE BOLTS WITH NUTS AND WASHERS MUST BE USED.
  4. FIGURES SUCH AS F-1217 INDICATE CLOW CORPORATION STYLES. USE THIS BRAND OR APPROVED EQUAL.
  5. ALL HYDRANTS ARE TO BE INSTALLED WITH THE PUMPER NOZZLE FACING THE STREET.

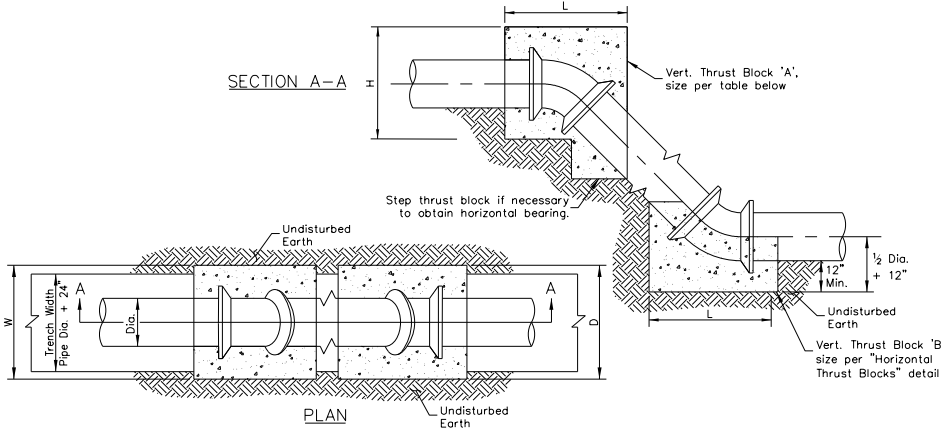
HYDRANT CONNECTION  
(C70)



SIZE OF PIPE	DEGREE OF BEND							
	11 1/4°		22 1/2°		45°		90°	
	L	H	L	H	L	H	L	H
6"	16	8	16	10	24	14	32	18
8"	16	10	21	14	31	18	44	24
12"	21	16	32	20	48	26	66	36
16"	29	20	42	28	66	34	90	46
20"	37	24	50	36	73	48	107	60
24"	46	28	64	40	93	54	128	72

- NOTES:
1. THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED SOIL. WHERE IT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.
  2. PIPE, BOLTS, NUTS, AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE FILM TO PROTECT CORROSION AND CONCRETE ADHESION.
  3. ALL JOINTS TO BE MEGALUGGED.

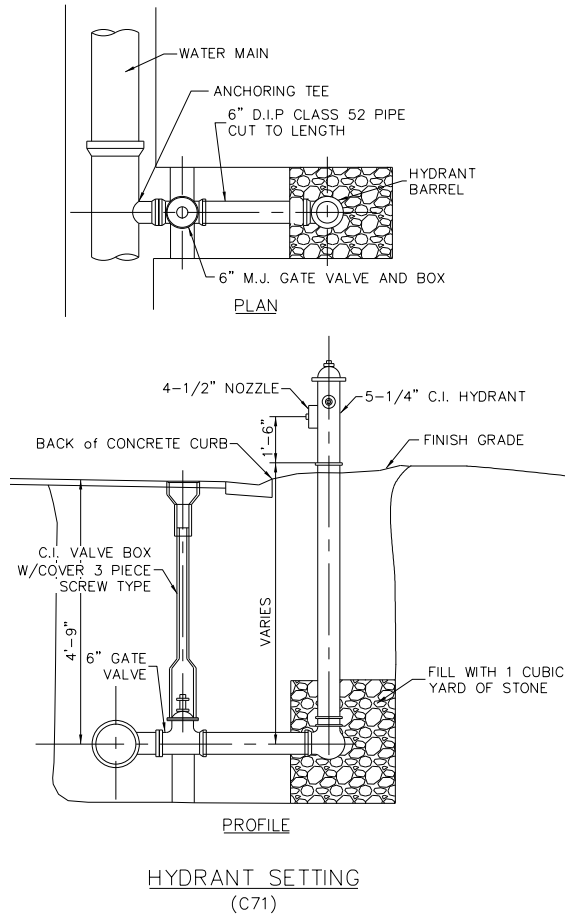
HORIZONTAL THRUST BLOCKS  
(C130)



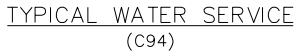
SIZE OF PIPE	DEGREE OF BEND															
	11 1/4°				22 1/2°				45°				90°			
	L	W	H	V (cy)	L	W	H	V (cy)	L	W	H	V (cy)	L	W	H	V (cy)
6"	12	48	18	0.2	15	43	36	0.5	28	55	24	0.8	48	82	68	2.7
8"	12	63	24	0.4	18	57	34	0.7	36	57	33	1.4	66	90	72	4.2
12"	20	54	36	0.8	37	62	37	1.7	48	62	51	3.1	90	107	107	8.1
16"	31	65	38	1.6	55	65	39	3.0	65	65	65	5.6	128	128	128	12.8
20"	40	56	50	2.4	57	66	59	4.8	82	74	68	8.8	128	128	128	12.8
24"	48	60	60	3.5	67	72	66	6.9	91	91	72	12.7	128	128	128	12.8

- NOTES:
1. PIPE, BOLTS, NUTS, AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE FILM TO PROTECT CORROSION AND CONCRETE ADHESION.
  2. THRUST BLOCKS TO BE CENTERED ON BEND HORIZONTALLY
  3. THRUST BLOCK "A" SHALL BE OFF CENTERED ON BEND VERTICALLY TO SHIFT THE MAJORITY OF THE BLOCK ABOVE THE FITTING.
  4. ALL JOINTS TO BE MEGALUGGED.
  5. CONCRETE THRUST BLOCKS TO BE PLACED ON ALL VERTICAL BENDS. (POURED IN PLACE, CLASS C)

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS ON WATER MAINS  
(C147)







PLANING & RESURFACING AREAS (TYP.)

- # ITEM 441-ACSC, TYPE 1, (448), PG64-22 (0.75")
- # ITEM 407-TACK COAT (0.085 GAL/SY)
- # ITEM 441-ACIC, TYPE 1, (448) (2.25")
- # ITEM 407-TACK COAT (0.085 GAL/SY)
- ITEM 301-ASPHALT CONCRETE BASE (6")
- ITEM 304-AGGREGATE BASE (4")

SEE NOTE 2

EXISTING PAVEMENT

TRENCH WIDTH AS DEFINED

GRANULAR BACKFILL MATERIAL (IF REQUIRED) (703.11 OR 304)

BEDDING STRUCTURAL BACKFILL 703.11

12" MIN

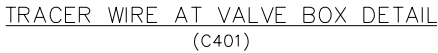
12" MAX

12" MAX

CONCRETE SURFACE

CONCRETE

SE





[illegible]

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630	630	630	630	630	630	630	630	630
							GROUND MOUNTED SUPPORT, NO.2 POST	GROUND MOUNTED SUPPORT, NO.3 POST	STREET NAME SIGN SUPPORT, NO.3 POST	SIGN POST REFLECTOR	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
							FT	FT	FT	EACH	SF	EACH	EACH	EACH	EACH
135	S1	COLONIAL BLVD	100+29	CL	R4-7b-24	24X30	13				5				
135	S2	COLONIAL BLVD	100+38	RT	D3-1				15			1			
135	S3	COLONIAL BLVD	100+47	LT	R1-1-30	30X30		13		1	6.25				
135	S4	COLONIAL BLVD	100+50	LT	W11-15-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
135	S5	COLONIAL BLVD	100+52	RT	R3-4-24	24X24	12.5				4				
135	S6	COLONIAL BLVD	100+67	RT	R6-2L-24	24X30	13				5				
135	S7	COLONIAL BLVD	100+76	RT	R2-1-30	30X36		13.5			7.5				
135	S8	COLONIAL BLVD	101+00	RT	R8-2-18	18X24	12.5				3				
136	S9	COLONIAL BLVD	105+05	RT	R6-2L-24	24X30	13				5				
136	S10	COLONIAL BLVD	105+09	LT	W11-15-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
136	S11	COLONIAL BLVD	105+42	LT	R6-2L-24	24X30	13				5				
136	S12	COLONIAL BLVD	105+46	RT	W11-15-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
137	S13	COLONIAL BLVD	107+98	RT	W11-2-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
137	S14	COLONIAL BLVD	108+13	RT	R5-1-30	30X30		13			6.25				
137	S15	COLONIAL BLVD	108+14	LT	R8-2-18	18X24	12.5				3				
137	S16	COLONIAL BLVD	108+34	RT	R1-1-18	18X18	12			1	2.25				
137	S17	COLONIAL BLVD	108+34	LT	W11-15-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
137	S18	26TH ST NE	13+04	RT	D3-1				15			1			
					D3-1							1			
					R1-1-30	30X30				1	6.25				
137	S19	COLONIAL BLVD	108+90	RT	W11-2-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
137	S20	COLONIAL BLVD	108+91	RT	W11-15-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
137	S21	COLONIAL BLVD	109+06	RT	R8-2-18	18X24	12.5				3				
137	S22	COLONIAL BLVD	108+94	LT	R1-1-18	18X18	12			1	2.25				
137	S23	COLONIAL BLVD	109+06	LT	R5-1-30	30X30		13			6.25				
137	S24	COLONIAL BLVD	111+60	LT	R1-1-18	18X18	12			1	2.25				
137	S25	COLONIAL BLVD	111+69	LT	R8-2-18	18X24	12.5				3				
137	S26	COLONIAL BLVD	111+63	LT	W11-15-30 (X2)	30X30		28			12.5				
					W16-7PL-24 (X2)	24X12					4				
137	S27	COLONIAL BLVD	111+68	RT	W11-2-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
137	S28	COLONIAL BLVD	111+78	RT	R5-1-30	30X30		13			6.25				
137	S29	COLONIAL BLVD	112+39	RT	W2-6-30	30X30		13.5			6.25				
					W16-H8P-48	48X8					2.7				
137	S30	COLONIAL BLVD	112+36	LT	R5-1-30	30X30		13			6.25				
137	S31	BEVERLY AVE	3+94	RT	D3-1				15			1			
					D3-1							1			
					R1-1-30	30X30				1	6.25				
139	S32	COLONIAL BLVD	113+04	RT	R1-2-36	36X36		15		1	9				
					R6-5P-30	30X30					6.25				
139	S33	COLONIAL BLVD	113+30	RT	D1-2d-72	28X72		26			14				
139	S34	COLONIAL BLVD	113+20	RT	R2-1-24	24X30	13				5				
139	S35	COLONIAL BLVD	113+75	RT	R1-2-36	36X36		14	1	1	9				
					R6-5P-30	30X30					6.25				
139	S36	COLONIAL BLVD	114+00	LT	W11-15-30	30X30		14			6.25				
					W16-7PL-24	24X12					2				
					R1-1-18	18X18				1	2.25				
139	S37	COLONIAL BLVD	113+85	RT	D1-2d-72	28X72		26			14				
139	S38	COLONIAL BLVD	114+28	RT	W11-15-30	30X30		14			6.25				
TOTALS CARRIED TO SHEET 133							163.5	341	46	9	265.7	5	0	0	0

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630	630	630	630	630	630	630	630	630
							GROUND MOUNTED SUPPORT, NO.2 POST	GROUND MOUNTED SUPPORT, NO.3 POST	STREET NAME SIGN SUPPORT, NO.3 POST	SIGN POST REFLECTOR	SIGN, FLAT SHEET	SIGN, DOUBLE FACED, STREET NAME	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
							FT	FT	FT	EACH	SF	EACH	EACH	EACH	EACH
					W16-7PL-24	24X12					2				
					R1-1-18	18X18				1	2.25				
139	S39	COLONIAL BLVD	114+44	LT	D1-2d-72	28X72		26			14				
139	S40	COLONIAL BLVD	114+63	RT	R1-2-36	36X36		14		1	9				
					R6-5P-30	30X30					6.25				
139	S41	COLONIAL BLVD	115+24	RT	W11-15-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S42	COLONIAL BLVD	115+06	LT	D1-2d-72	28X72		26			14				
139	S43	COLONIAL BLVD	115+18	LT	R1-2-36	36X36		15		1	9				
					R6-5P-30	30X30					6.25				
139	S44	COLONIAL BLVD	115+30	RT	R1-1-18	18X18	12			1	2.25				
139	S45	COLONIAL BLVD	115+46	RT	R1-1-18	18X18	12			1	2.25				
139	S46	COLONIAL BLVD	115+70	RT	R2-1-24	24X30	13				5				
139	S47	COLONIAL BLVD	115+42	LT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S48	COLONIAL BLVD	116+04	LT	W2-6-30	30X30		13.5			6.25				
					W16-H8P-48	48X8					2.7				
139	S49	GIBBS AVE	11+75	RT	W2-6-30	30X30		13.5			6.25				
					W16-H8P-48	48X8					2.7				
139	S50	GIBBS AVE	12+73	RT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S51	GIBBS AVE	12+90	RT	R1-2-36	36X36		14		1	9				
					R6-5P-30	30X30					6.25				
139	S52	GIBBS AVE	12+67	LT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S53	GIBBS AVE	14+82	LT	R1-2-36	36X36		15		1	9				
					R6-5P-30	30X30					6.25				
139	S54	GIBBS AVE	15+08	LT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S55	GIBBS AVE	15+19	RT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S56	GIBBS AVE	15+90	LT	W2-6-30	30X30		13.5			6.25				
					W16-H8P-48	48X8					2.7				
139	S57	HAVANA PL	30+38	RT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
139	S58	HAVANA PL	30+23	LT	D3+H6a-1L-48	48X8			14		2.67				
					D3+H6a-1R-48	48X8					2.67				
					R1-2-36	36X36				1	9				
					R6-5P-30	30X30					6.25				
139	S59	HAVANA PL	30+50	LT	W11-2-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
140	S60	COLONIAL BLVD	118+27	LT	W11-15-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
140	S61	COLONIAL BLVD	118+37	RT	R6-2L-24	24X30	13				5				
140	S62	COLONIAL BLVD	118+68	RT	W11-15-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
140	S63	COLONIAL BLVD	118+69	LT	R6-2L-24	24X30	13				5				
140	S64	COLONIAL BLVD	120+90	LT	R2-1-24	24X30	13				5				
140	S65	COLONIAL BLVD	121+27	LT	R8-2-18	18X24	12.5				3				
140	S66	COLONIAL BLVD	121+47	LT	W11-15-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
140	S67	COLONIAL BLVD	121+38	RT	R5-1-30	30X30		13			6.25				
140	S68	COLONIAL BLVD	121+41	RT	W11-15-30	30X30		14			6.25				
					W6-7PL-24	24X12					2				
140	S69	COLONIAL BLVD	121+54	CL	SPECIAL	24X24		13.5			4				
					W1-7-24	24X12					2				
					R4-7b-24	24X30					5				
					D3-1				15			1			
					D3-1							1			
					S1-1-30	30X30					6.25				
140	S71	ROWLAND AVE	13+80	RT	R1-1-30	30X30		13		1	6.25				
SUB-TOTALS THIS SHEET							88.5	358	29	9	296.9	2	0	0	0
SUB-TOTALS FROM SHEET 131							0	0	0	0	0	0	44	28	8
SUB-TOTALS FROM SHEET 132							163.5	341	46	9	265.7	5	0	0	0
TOTALS CARRIED TO GENERAL SUMMARY							252	699	75	18	562.6	7	44	28	8

SIGN SUBSUMMARY

DESIGN AGENCY



DESIGNER

JMB

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.133

TOTAL

168

**STA-COLONIAL BOULEVARD NE - PHASE 1**

MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:55:10 AM USER: jennifer.kelley  
\\10.120.112.51\share\121798\_STA-Colonial\7.0\_Production\Worksheets\111059\400-Engineering\Traffic\Sheets\111059\_TS004.dgn

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	644	644	644	644	644	644	646
			CENTER LINE	STOP LINE		CROSSWALK LINE, 12", AS PER PLAN	CROSSWALK LINE, 24", AS PER PLAN	DOTTED LINE, 6"	PAVEMENT MARKING, MISC.: SPEED TABLE MARKING	TRANSVERSE/DIAGONAL LINE		
		FROM									TO	MILE
135	CW	COLONIAL BLVD	100+28	100+38	LT			41				
135	CW	COLONIAL BLVD	100+28	100+38	RT			41				
135	SL	COLONIAL BLVD	100+42		LT		10					
135	CW	COLONIAL BLVD	100+54	100+66	RT				30			
135	ST	COLONIAL BLVD	100+61		LT						1	
135	ST	COLONIAL BLVD	100+61		RT						1	
136	CW	COLONIAL BLVD	105+16	105+38	CL				50			
136	ST	COLONIAL BLVD	105+22		LT						1	
136	ST	COLONIAL BLVD	105+32		RT						1	
137	CW	COLONIAL BLVD	108+03	108+08	RT			52				
137	CW	COLONIAL BLVD	108+38	108+80	CL				80			
137	CW	COLONIAL BLVD	108+89	108+97	RT			38				
137	CW	COLONIAL BLVD	111+47	111+57	LT				40			
137	CW	COLONIAL BLVD	111+70	111+76	RT			28				
137	SL	26TH ST NE	12+86	12+99	LT/RT		20					
137	CW	26TH ST NE	12+73	13+11	LT/RT			89				
137	SL	BEVERLY AVE NE	3+93		RT		13					
137	CW	BEVERLY AVE NE	3+97	4+07	LT/RT				50			
139	DL	COLONIAL BLVD	113+17		RT					17		
139	DL	COLONIAL BLVD	113+65		RT					19		
139	CW	COLONIAL BLVD	114+03	114+25	RT				60			
139	ST	COLONIAL BLVD	114+09		RT						1	
139	ST	COLONIAL BLVD	114+19		LT						1	
139	DL	COLONIAL BLVD	114+52		RT					19		
139	DL	COLONIAL BLVD	115+10		LT					19		
139	CW	COLONIAL BLVD	115+30	115+36	LT			24				
139	CW	COLONIAL BLVD	115+30	115+39	RT				30			
139	TW	COLONIAL BLVD	116+17	116+69	LT							31
139	CL	GIBBS AVE NE	12+10	12+72	LT	0.01						
139	CW	GIBBS AVE NE	12+61	12+67	LT/RT			46				
139	DL	GIBBS AVE NE	12+89		LT/RT					19		
139	DL	GIBBS AVE NE	14+90		LT/RT					19		
139	CL	GIBBS AVE NE	15+07	15+90	LT/RT	0.02						
139	CW	GIBBS AVE NE	15+16	15+21	LT/RT			50				
SUB-TOTALS CARRIED TO RIGHT SIDE						0.03	43	409	340	112	6	31

[illegible]

## PAVEMENT MARKING SUBSUMMARY

DESIGN AGENCY



DESIGNER

JME

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

TOTAL

PAVEMENT MARKING LEGEND

- CL

CENTER LINE, DOUBLE SOLID
- SL

STOP LINE
- CW

CROSSWALK LINE
- DL

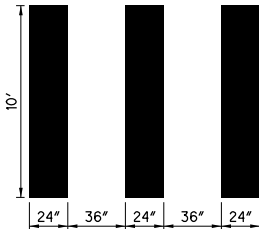
DOTTED LINE
- ST

SPEED TABLE MARKING
- TW

TRANSVERSE LINE, WHITE

TRANSVERSE LINES SHALL BE ITEM 646 - EPOXY.  
ALL OTHER PAVEMENT MARKINGS SHALL BE ITEM 644 - THERMOPLASTIC.

HIGH-VISIBILITY  
CROSSWALK DETAIL



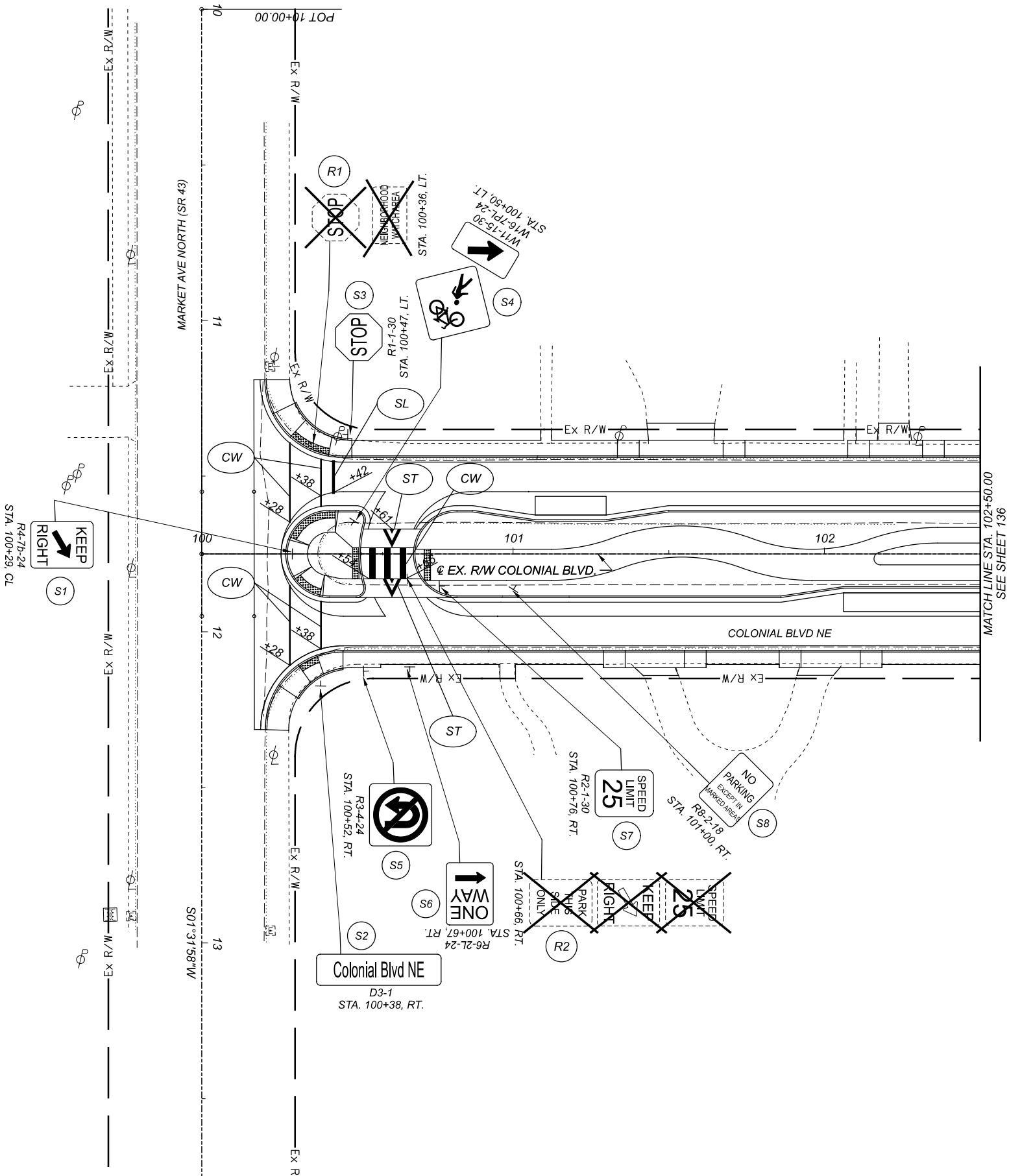
**ITEM 644 - CROSSWALK LINE, 12" AS PER PLAN**  
STANDARD TRANSVERSE CROSSWALK LINES SHALL BE 12 INCHES WIDE AND ARE MEASURED AND PAID FOR BY THE FOOT.

**ITEM 644 - CROSSWALK LINE, 24" AS PER PLAN**  
HIGH-VISIBILITY CROSSWALK LINES USED IN THE LONGITUDINAL BAR PATTERN SHALL BE 24 INCHES WIDE AND ARE MEASURED AND PAID FOR BY THE FOOT.

SIGN LEGEND

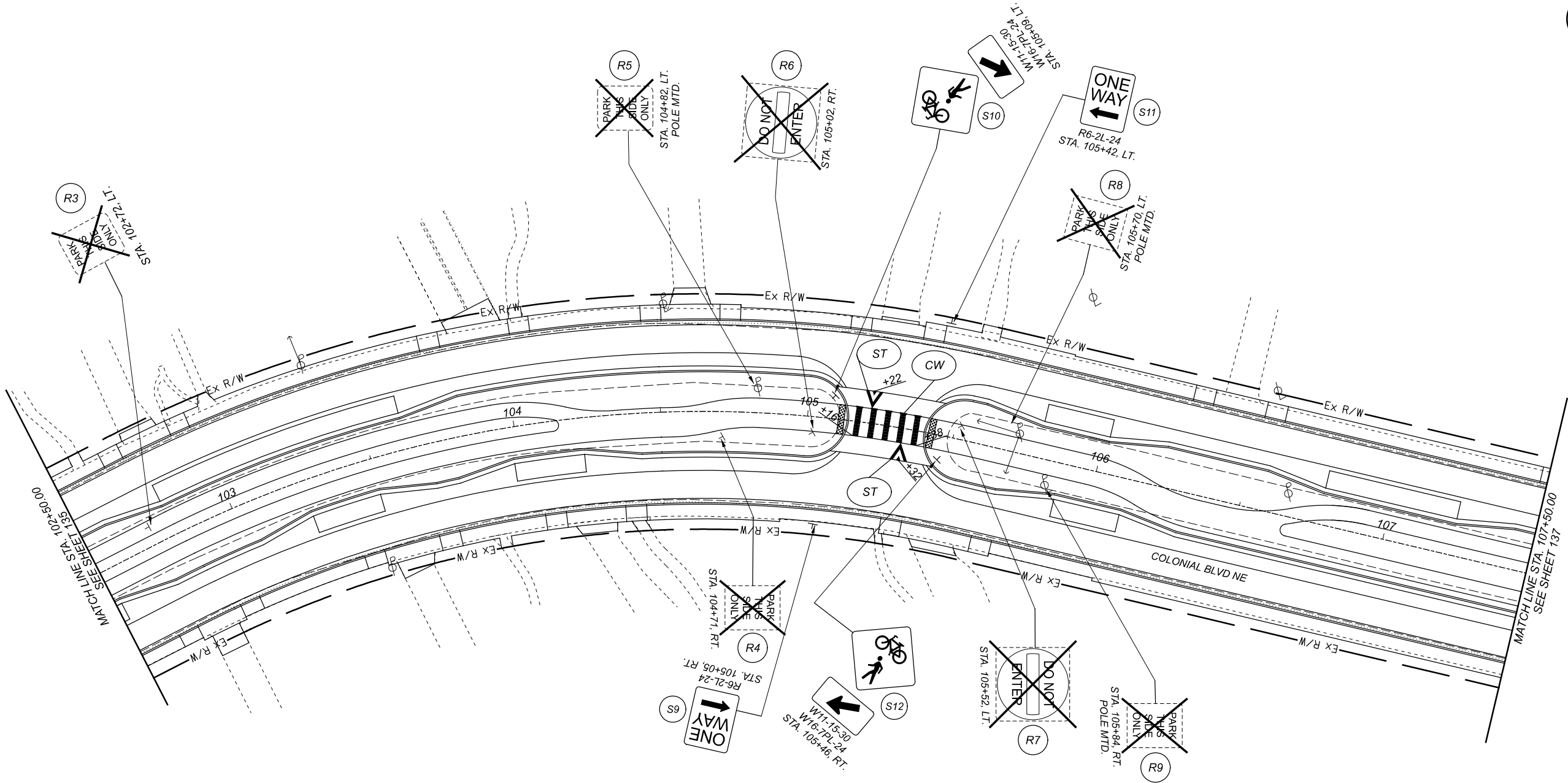
- EXISTING SIGN  
TO BE REMOVED
- EXISTING SIGN  
TO REMAIN
- PROPOSED SIGN

NOTE:  
STATIONING IS REFERENCED TO @ EX. R/W COLONIAL BLVD.  
OR RELEVANT CROSS STREET.



STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: 111059\_T12 PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:55:12 AM USER: Jennifer.Kelley  
\\NO1201125\lshare\21798\_STA-Colonial\7.0\_Production\Worksheets\111059\_400-Engineering\Traffic\Sheets\111059\_T12.dgn



- NOTES:
1. STATIONING IS REFERENCED TO @ EX. R/W COLONIAL BLVD. OR RELEVANT CROSS STREET.
  2. FOR PAVEMENT MARKING AND SIGNING LEGENDS SEE SHEET 135.



DESIGN AGENCY

DESIGNER

JMB

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.136

TOTAL

168

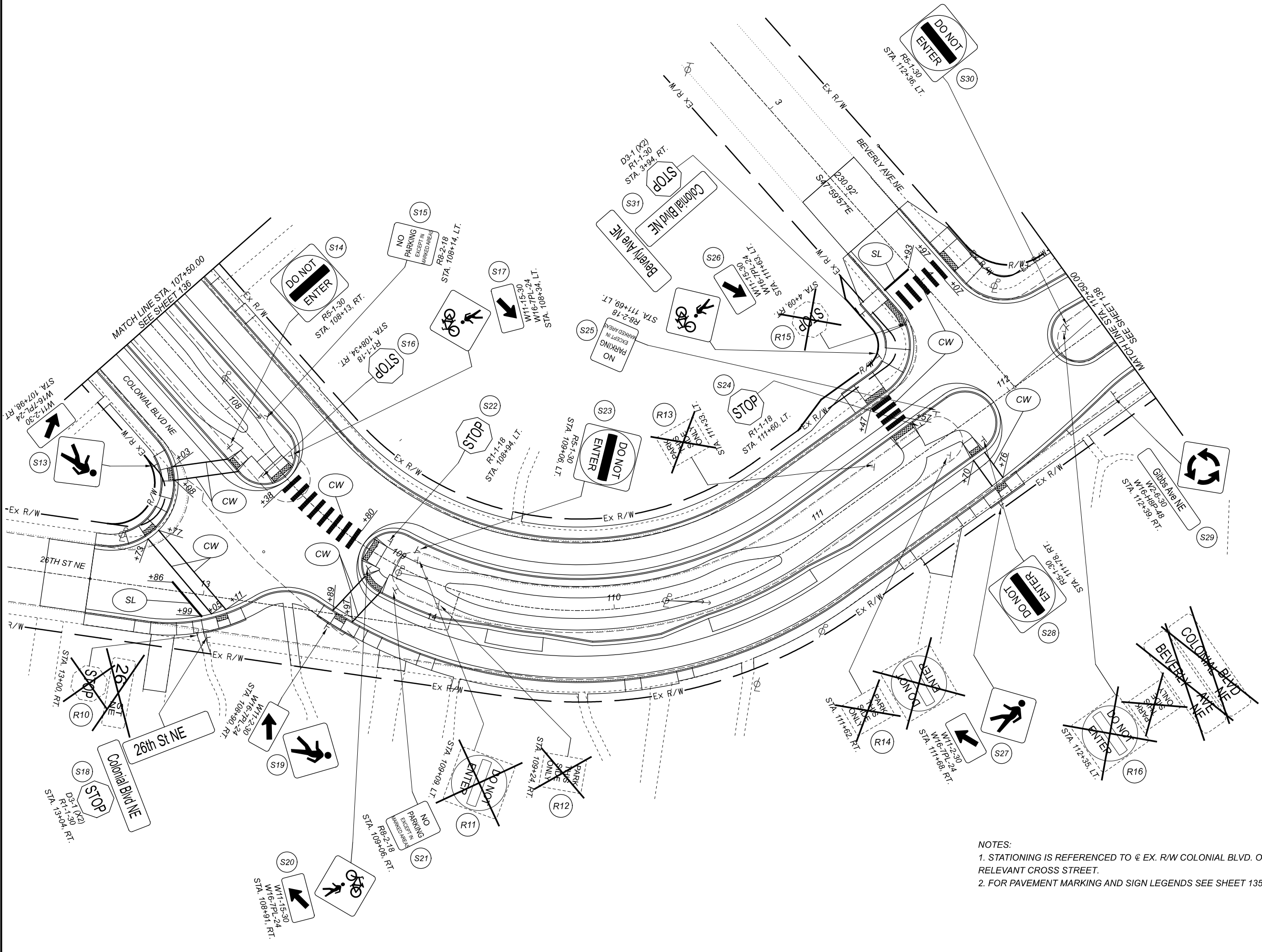
SIGN & PAVEMENT MARKING PLAN - COLONIAL BOULEVARD  
STA. 102+50 TO STA. 107+50

HORIZONTAL  
SCALE IN FEET

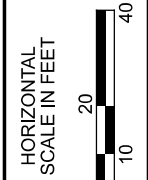


STA-COLONIAL BOULEVARD NE - PHASE 1

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\\NO120112.5\lshare\21798.STA-Colonial\7.0\_Production\Worksheets\11059.400-Engineering\Traffic\Sheets\11059.TP003.dgn



SIGN & PAVEMENT MARKING PLAN - COLONIAL BOULEVARD  
STA. 107+50 TO STA. 112+50

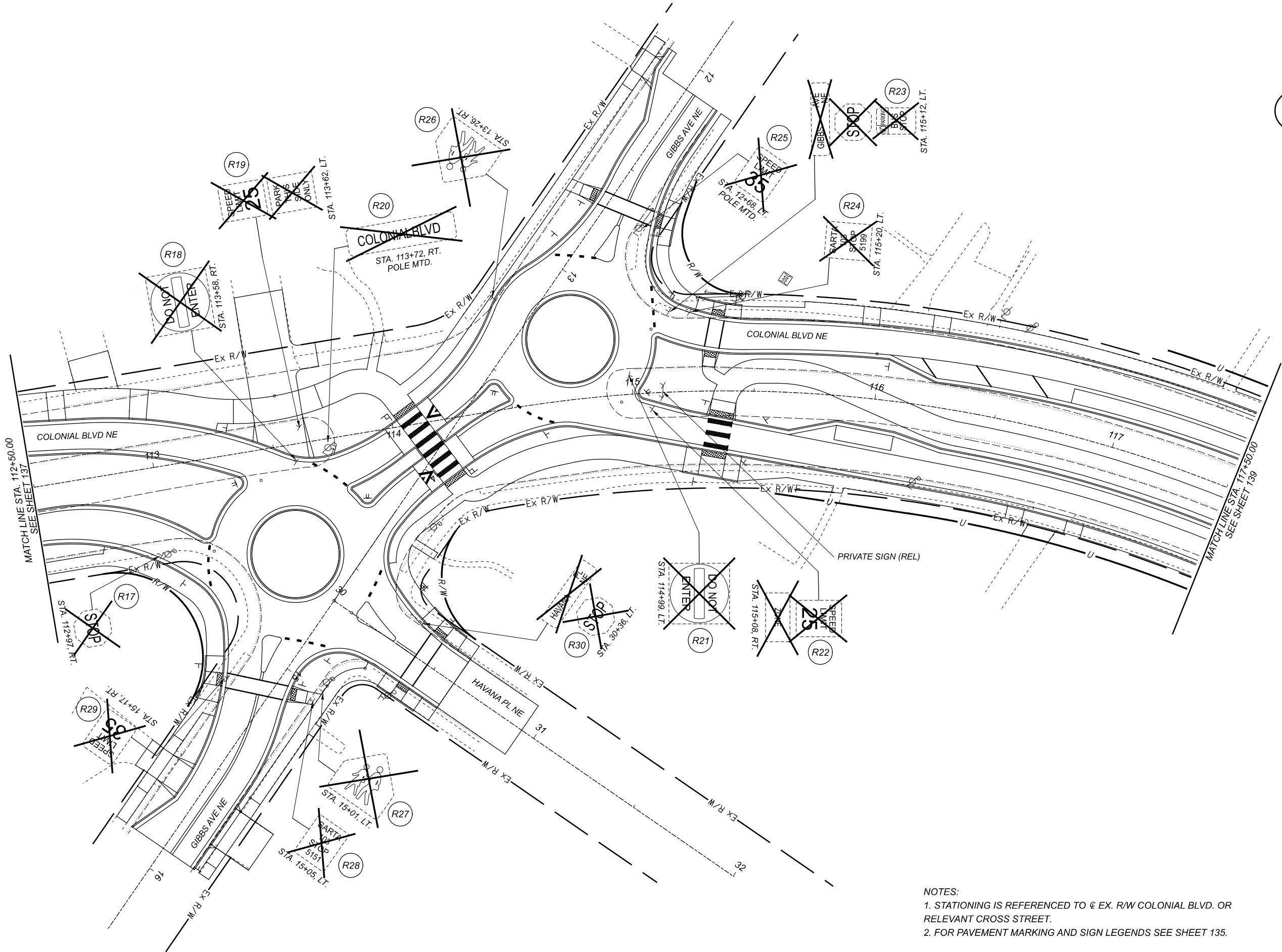


- NOTES:  
1. STATIONING IS REFERENCED TO @ EX. R/W COLONIAL BLVD. OR RELEVANT CROSS STREET.  
2. FOR PAVEMENT MARKING AND SIGN LEGENDS SEE SHEET 135.

DESIGN AGENCY	
[IBI]	
DESIGNER	
JMB	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.137	168

STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: I11059\_TP4 PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:55:14 AM USER: Jennifer.Kelley  
\\NO1201125\lshare\21798\_STA-Colonial\7.0\_Production\Worksheets\I11059\_400-Engineering\Traffic\Sheets\I11059\_TP004.dgn



- NOTES:
1. STATIONING IS REFERENCED TO @ EX. R/W COLONIAL BLVD. OR RELEVANT CROSS STREET.
  2. FOR PAVEMENT MARKING AND SIGN LEGENDS SEE SHEET 135.

EXISTING SIGN PLAN - COLONIAL BOULEVARD  
STA. 112+50 TO STA. 117+50

DESIGN AGENCY



DESIGNER

JMB

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.138

TOTAL

168

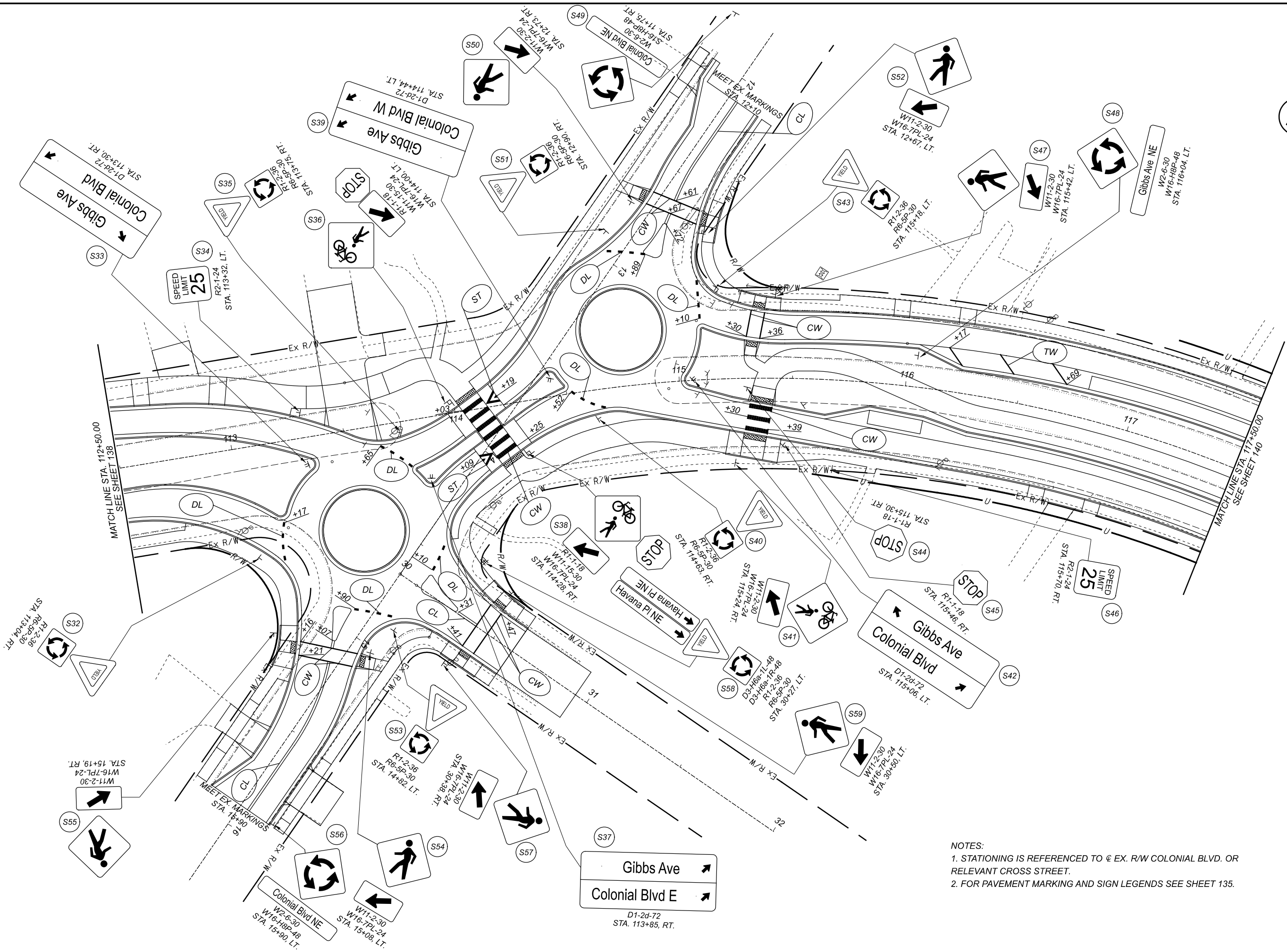
HORIZONTAL  
SCALE IN FEET





STA-COLONIAL BOULEVARD NE - PHASE 1

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\\NO120112.5\Bshare\21798.STA-Colonial\7.0\_Production\Worksheets\I1059\400-Engineering\Traffic\Sheets\I1059\_TP005.dgn



- NOTES:
1. STATIONING IS REFERENCED TO @ EX. R/W COLONIAL BLVD. OR RELEVANT CROSS STREET.
  2. FOR PAVEMENT MARKING AND SIGN LEGENDS SEE SHEET 135.

SIGN & PAVEMENT MARKING PLAN - COLONIAL BOULEVARD  
STA. 112+50 TO STA. 117+50

DESIGN AGENCY



DESIGNER

JMB

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.139

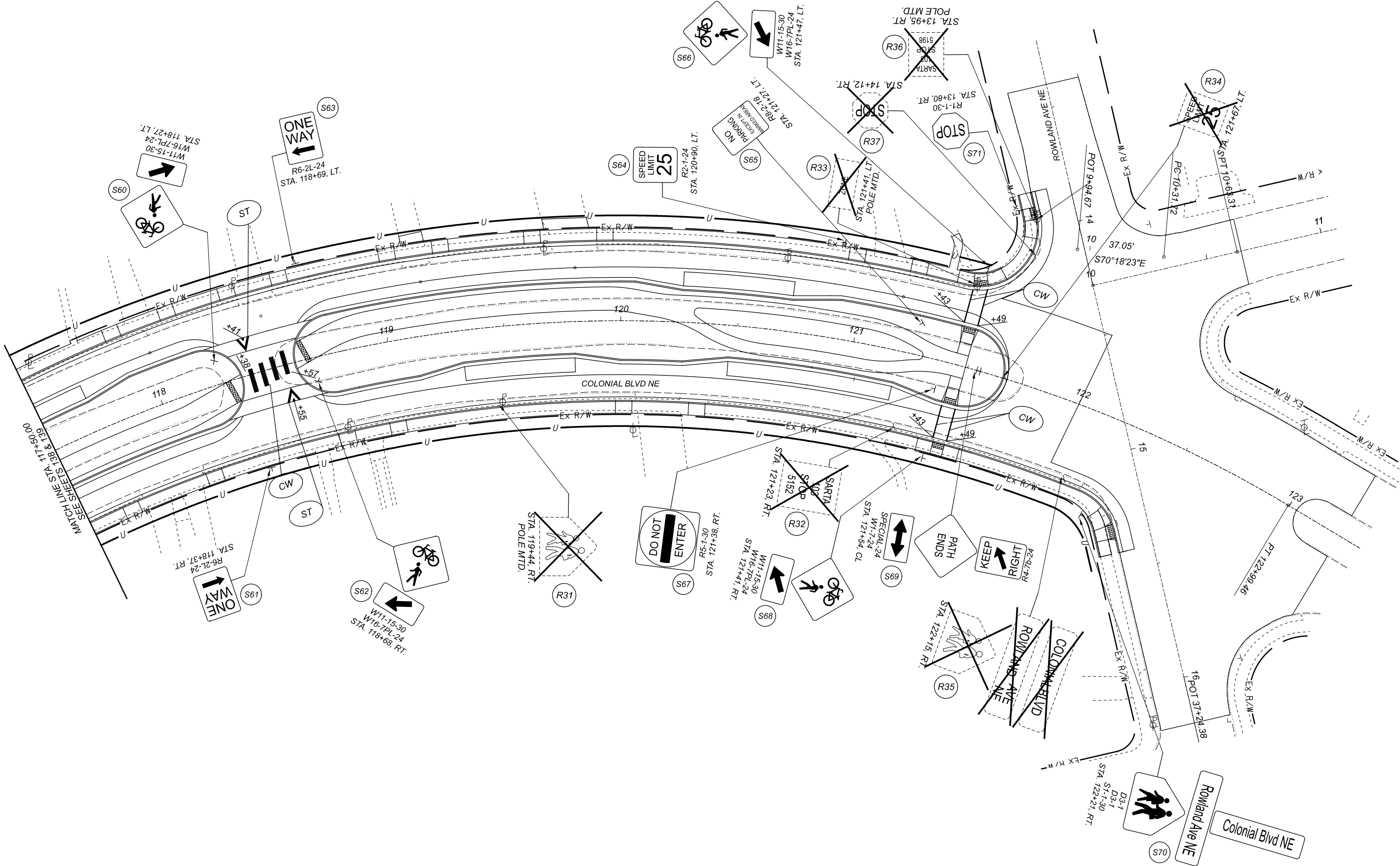
TOTAL

168



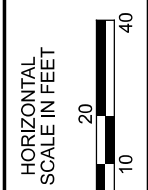
STA-COLONIAL BOULEVARD NE - PHASE 1

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\\NO1201125\blshare\21798\_STA-Colonial\7.0\_Production\Worksheets\11059\_400-Engineering\Traffic\Sheets\11059\_TP006.dgn



- NOTES:
1. STATIONING IS REFERENCED TO @ EX. R/W COLONIAL BLVD. OR RELEVANT CROSS STREET.
  2. FOR PAVEMENT MARKING AND SIGN LEGENDS SEE SHEET 135.

SIGN & PAVEMENT MARKING PLAN - COLONIAL BOULEVARD  
STA 117+50.00 TO 122+50.00



DESIGN AGENCY	
[IB]	
DESIGNER	
JMB	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.140	168

ITEM 625 - LIGHT POLE FOUNDATION, AS PER PLAN (NOSTALGIA):

LIGHT POLE FOUNDATIONS SHALL BE CONSTRUCTED AS PER THE CITY OF CANTON STANDARD DRAWING NO. 65.

ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN (NOSTALGIA):

NOSTALGIA PEDESTALS/LIGHT POLES SHALL BE PACIFIC FAMILY SERIES (VERIFY WITH CITY FOR CURRENT STANDARD DESIGN) MANUFACTURED BY:

UNION METAL CORPORATION  
1432 MAPLE AVENUE N.E.  
P.O. BOX 9920  
CANTON, OH 44711  
PHONE: 330-456-7653

THE CONTRACTOR SHALL FURNISH AND INSTALL DECORATIVE LIGHT POLES, AS PER PLANS. POLES SHALL INCLUDE HANDHOLE, CHAIN, AND COVER. ALL HARDWARE INCLUDING BRACKET ARMS AND RELATED EQUIPMENT SHALL BE INCLUDED WITH THIS ITEM. THE ENTIRE ASSEMBLY SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF AASHTO. THE ORNAMENTAL BASE SHALL BE UNION METAL CORPORATION BASE NO. 74 AND SHALL BE LEVEL IN ORDER TO ACCEPT THE BASE ASSEMBLY AND SHALL BE AT LEAST AS LARGE AS THE BOTTOM DIMENSION OF THE ORNAMENTAL BASE CASTING. ALL PROPOSED EXTERIOR CONNECTIONS (PEDESTRIAN SIGNAL HEADS, SIGNS, ETC.) TO DECORATIVE LIGHT POLES SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE DECORATIVE LIGHT POLES SHALL NOT BE PERMITTED. A PERMANENT LEGIBLE MARKING INDICATION SHALL BE INCLUDED ON EACH DECORATIVE LUMINAIRE SUPPORT. THE FOLLOWING INDICATION SHALL BE REQUIRED AS A MINIMUM:

A. POLE INDICATIONS: MONTH/DATE OF FABRICATION; POLE GAUGE: BOTTOM DIAMETER: POLE HEIGHT: BOLT CIRCLE: ANCHOR BOLT DIAMETER: FLANGE BOLT DIAMETER: AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

EACH POLE SHALL INCLUDE AN OUTLET FRAME INTEGRALLY WELDED INTO THE TOP OF THE SHAFT TO ACCOMMODATE A DUPLEX 20A-125V, GFI RECEPTACLE PROVIDED WITH THE POLE. A WEATHERPROOF COVER PAINTED TO MATCH THE POLE SHALL ALSO BE PROVIDED.

LIGHT POLE SHALL BE CONSTRUCTED SO THAT LUMINAIRE ARMS ARE PARALLEL TO THE ROADWAY CENTERLINE.

BASIS OF PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN, WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, INSTALLATION, ANCHOR BOLTS, COVER BASE, PAINTING, AND INCIDENTALS.

ITEM 625 - CONDUIT, 725.051, 2", AS PER PLAN:

ALL CONDUITS AND FITTINGS SHALL BE TYPE EB, SCHEDULE 40 PVC. ALL CONDUITS SHALL HAVE PULL WIRE. ALL CONDUITS ENTERING A PULL BOX, POLE, ETC. SHALL NOT EXTEND MORE THAN 1" BEYOND ENTERING THE PULL BOX, POLE, ETC.

ITEM 625 - TRENCH IN PAVED AREAS, AS PER PLAN:

IN ADDITION TO THE REQUIREMENTS OF 625.13, THIS ITEM SHALL INCLUDE FULL PAVEMENT REPLACEMENT WHEN TRENCHING IN THE ROADWAY. BORING OR JACKING THE CONDUIT UNDER THE PAVEMENT CAN BE PERFORMED IN LIEU OF TRENCHING. IF BORING OR JACKING IS PERFORMED IN LIEU OF TRENCHING, THE CONDUIT PLACED SHALL BE 725.04 ANY EXTRA COST FOR THE 725.04 CONDUIT SHALL BE INCLUDED IN THIS ITEM.

ITEM 625 - POWER SERVICE, AS PER PLAN:

POWER SERVICE SHALL BE AS PER ODOT SPECIFICATION 625 AND ODOT STANDARD CONSTRUCTION DRAWING TC-83.10. ELECTRIC POWER SHALL BE SUPPLIED BY AMERICAN ELECTRIC POWER (AEP). POWER SERVICE IS TO BE METERED. THE BREAKER SHALL BE MILBANK MODEL#CP3B51115AAOSP10. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 240 VOLTS, EXCEPT WHERE DECORATIVE SIGNAL SUPPORTS WITH ORNAMENTAL LUMINAIRE WHICH REQUIRES 240V OR 208V. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE LIGHTING IS ACCEPTED BY THE CITY OF CANTON.

NOSTALGIA SIGNAL SUPPORT AND PEDESTAL AND DECORATIVE LIGHT POLE PAINTING:

LUMINAIRE POLE AND BRACKETS SHALL BE PAINTED (SURFACE PREPARATION, PRIMER APPLICATION, AND FINISH COATING OF GALVANIZED SUBSTRATES). THE FOLLOWING SHALL APPLY:

- A. SURFACE PREPARATION:  
PRE CLEAN SUBSTRATES TO SSPC-SP-1 SOLVENT CLEANING SPECIFICATION. PREPARE GALVANIZED SUBSTRATES BY ABRASIVE BLASTING TO SSPC-SP-7 BRUSH-OFF BLAST CLEANING SPECIFICATION.
- B. COLOR  
THE COLOR OF THE POLES SHALL BE CBD GREEN (COLOR AND FORMULA IS ON FILE AT THE MIDWEST TANK SERVICES CO., INC., CANTON, OH).
- C. MATERIALS:  
PRIMER-APPLY ONE (1) COAT OF POLYAMIDE UNIVERSAL EPOXY PRIMER-LIGHT GRAY AT A DRY FILM THICKNESS OF 2.0-4.0 MILS. 1ST INTERMEDIATE-APPLY ONE (1) COAT OF HIGH BUILD EPOXY-BUFF COLOR AT A DRY FILM THICKNESS OF 4.0-8.0 MILS. 2ND INTERMEDIATE-APPLY ONE (1) COAT OF ALIPHATIC ACRYLIC URETHANE-CBD GREEN AT A DRY FILM THICKNESS OF 2.0-3.0 MILS. FINISH-APPLY ONE (1) COAT OF ALIPHATIC URETHANE-CLEAR AT A DRY FILM THICKNESS OF 2.0-3.0 MILS.
- D. APPLICATION:  
APPLICATION(S) OF COATING(S) SHALL BE BY SPRAY METHOD ONLY BY INDUSTRY STANDARDS OF GOOD WORKMANSHIP AND PRACTICES.
- E. INSPECTION:  
INSPECTION OF APPLIED COATINGS SHALL BE IN ACCORDANCE WITH THE SOCIETY FOR PROTECTIVE COATINGS (SSPC) PAINT APPLICATION STANDARD NO.2: MEASUREMENT OF DRY COATING THICKNESS WITH MAGNETIC GAGES (SSPC-PA2).
- F. WARRANTY:  
COATINGS MANUFACTURER SHALL PROVIDE A TEN YEAR (10 YEAR) MATERIALS PERFORMANCE GUARANTEE.

THE COST FOR NOSTALGIA DECORATIVE LIGHT POLE PAINTING SHALL BE INCLUDED IN AND INCIDENTAL TO ITEM 625 - LIGHT POLE, DECORATIVE, AS PER PLAN.

ITEM 625 - LUMINAIRE, POST TOP, TYPE III, 55 WATT, LED, 240 VOLT, AS PER PLAN (NOSTALGIA):

THE LUMINAIRES ON THE LIGHT POLES SHALL BE UNION METAL DESIGN (#NL318R-3) AND SHALL BE FURNISHED PREWIRED AND MANUFACTURED AS DETAILED ON THE CITY OF CANTON STANDARD CONSTRUCTION DRAWING NO. 63. THE CONTRACTOR SHALL VERIFY WITH THE CITY FOR THE CURRENT CITY STANDARD FOR THIS ITEM. THIS ITEM SHALL INCLUDE THE LED LAMP AS DETAILED ON THE STANDARD DRAWINGS.

LIGHT POLE SHALL BE CONSTRUCTED SO THAT LUMINAIRE ARMS ARE PARALLEL TO THE ROADWAY CENTERLINE.

BASIS OF PAYMENT SHALL BE AT THE CONTRACT BID PRICE PER EACH ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, INSTALLATION AND INCIDENTALS FOR EACH LUMINAIRE.

GROUNDING AND BONDING:

THE REQUIREMENTS OFF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

- 1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
  - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUIT (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
  - B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDINGS CONDUCTOR IN ADDITION TO SPECIFIED CONDUCTORS.
  - C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
  - D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
  - E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
  - F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.
- 2. CONDUITS
  - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH THE COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
  - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBUGGED AT ALL TERMINATION POINTS.
  - C. BOTH ENDS OF METALLIC CONDUITS SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
  - D. METALLIC CONDUIT MAY BE BONDED TO THE METALLIC BOXES TROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
- 3. WIRE FOR GROUNDING AND BONDING
  - A. USE INSULATED, STRANDED COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
    - I. USE #4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER, OR FLASHER CABINETS.
    - II. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR #4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
- 4. GROUND ROD
  - A. A 3/4 INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUND WIRE.
  - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE #4 AWG INSULATED, STRANDED COPPER.
- 5. POWER SERVICE AND MAIN PEDESTAL
  - A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE MAIN PEDESTAL NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
  - B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT.
    - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
    - II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.
- 6. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO OTHER CONDUCTORS INSTALLED BY CONTRACT.

DESIGN AGENCY



DESIGNER

JAW

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

P.141

TOTAL

168

VOLTAGE DROP CALCULATIONS										
County-Route-Section:		Colonial		No. of Wires for Calculation Purposes:						2
Power Service:		CC-A	Circuit:	CKT A						
Supply Voltage:		240								
Wire Resistance Used:		No.	6	AWG.	0.490					
		No.	6	AWG.	0.490					
Voltage: 240		Wire Factor Used (Two - No. 10 AWG Wires):				2.40	ohms/mft/1000			
		Wire Factor Used (Two - No. 8 AWG Wires):				1.56	ohms/mft/1000			
		Wire Factor Used (Two - No. 6 AWG Wires):				0.98	ohms/mft/1000		Circuit: 'A'	
		Wire Factor Used (Two - No. 4 AWG Wires):				0.62	ohms/mft/1000			
Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	FEET	At Point	Accum.			In Section	Accum.		
A1-13	A1-12	105	0.50	0.50	53	6	0.05	4.68	1.95	A1-13
A1-12	A1-11	123	0.50	1.00	123	6	0.12	4.63	1.93	A1-12
A1-11	A1-10	111	0.50	1.50	167	6	0.16	4.51	1.88	A1-11
A1-10	A1-9	109	0.50	2.00	218	6	0.21	4.35	1.81	A1-10
A1-9	A1-8	100	0.50	2.50	250	6	0.25	4.14	1.72	A1-9
A1-8	A1-7	83	0.50	3.00	249	6	0.24	3.89	1.62	A1-8
A1-7	A1-6	108	0.50	3.50	378	6	0.37	3.65	1.52	A1-7
A1-6	A1-5	93	0.50	4.00	372	6	0.36	3.28	1.37	A1-6
A1-5	A1-4	121	0.50	4.50	545	6	0.53	2.91	1.21	A1-5
A1-4	A1-3	91	0.50	5.00	455	6	0.45	2.38	0.99	A1-4
A1-3	A1-2	118	0.50	5.50	649	6	0.64	1.93	0.81	A1-3
A1-2	A1-1	84	0.50	6.00	504	6	0.49	1.30	0.54	A1-2
A1-1	CC-A	126	0.50	6.50	819	6	0.80	0.80	0.33	A1-1

1. AT A POINT WHERE A CIRCUIT BRANCHES (I.E., PB) THE ACCUMULATED LOAD BEYOND THIS POINT IS SHOWN IN THE "AT POINT" COLUMN TO FACILITATE CHECKING.

VOLTAGE DROP CALCULATIONS										
County-Route-Section:		I-405		No. of Wires for Calculation Purposes:					2	
Power Service:		CC-A		Circuit:		CKT B				
Supply Voltage:		240								
Wire Resistance Used:		No.	6	AWG.	0.490					
		No.	6	AWG.	0.490					
Voltage: 240		Wire Factor Used (Two - No. 10 AWG Wires):				2.40	ohms/mft/1000			
		Wire Factor Used (Two - No. 8 AWG Wires):				1.56	ohms/mft/1000			
		Wire Factor Used (Two - No. 6 AWG Wires):				0.98	ohms/mft/1000		Circuit: 'B'	
		Wire Factor Used (Two - No. 4 AWG Wires):				0.62	ohms/mft/1000			
Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	FEET	At Point	Accum.			In Section	Accum.		
A2-11	A2-10	116	0.50	0.50	58	6	0.06	3.84	1.60	A2-11
A2-10	A2-9	126	0.50	1.00	126	6	0.12	3.78	1.58	A2-10
A2-9	A2-8	119	0.50	1.50	179	6	0.17	3.66	1.53	A2-9
A2-8	A2-7	105	0.50	2.00	210	6	0.21	3.49	1.45	A2-8
A2-7	A2-6	103	0.50	2.50	258	6	0.25	3.28	1.37	A2-7
A2-6	A2-5	110	0.50	3.00	330	6	0.32	3.03	1.26	A2-6
A2-5	A2-4	122	0.50	3.50	427	6	0.42	2.70	1.13	A2-5
A2-4	A2-3	118	0.50	4.00	472	6	0.46	2.29	0.95	A2-4
A2-3	A2-2	129	0.50	4.50	581	6	0.57	1.82	0.76	A2-3
A2-2	A2-1	145	0.50	5.00	725	6	0.71	1.25	0.52	A2-2
A2-1	CC-A	101	0.50	5.50	556	6	0.54	0.54	0.23	A2-1

1. AT A POINT WHERE A CIRCUIT BRANCHES (I.E., PB) THE ACCUMULATED LOAD BEYOND THIS POINT IS SHOWN IN THE "AT POINT" COLUMN TO FACILITATE CHECKING.

BASIC FORMULAS AND DATA:

LED ELECTRICAL DATA

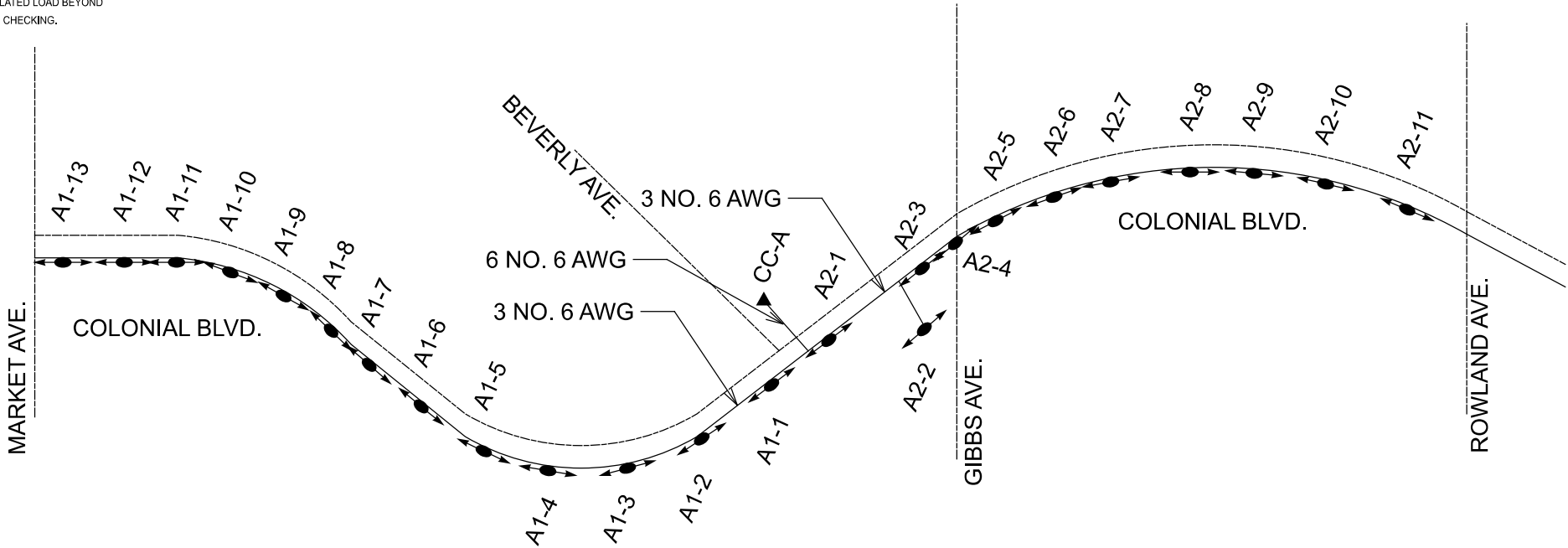
LAMP WATTAGE	LINE VOLTS	LINE AMP. OPERATING
60	240	0.25
100	240	0.42
200	240	0.83
250	240	1.04
310	240	1.29
400	240	1.67

VOLTAGE DROP STUDY

WIRE SIZE

14	3.10
12	2.00
10	1.20
8	0.78
6	0.49
4	0.31
2	0.19
1/0	0.12
2/0	0.10
4/0	0.079


LIGHTING POWER SERVICE DATA									
POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
CC-A	240	2.9	#1	60	CKT A	7	15	6	CITY OF CANTON
					CKT B	6	15	6	



## STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 2022-02-10 TIME: 8:55:20 AM USER: jennifer.kelley  
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SHEET NO.	REFERENCE NO.	STATION		SIDE	CONNECTION, FUSED PULL APART	LIGHT POLE, DECORATIVE, AS PER PLAN (NOSTALGIA)	LIGHT POLE FOUNDATION, AS PER PLAN (NOSTALGIA)	NO. 6 AWG 600 VOLT DISTRIBUTION CABLE	NO. 12 AWG POLE AND BRACKET CABLE	CONDUIT, 2", 725.051, AS PER PLAN	625 LUMINAIRE, POST TOP, TYPE III, 55 WATT, LED, 240 VOLT, AS PER PLAN (NOSTALGIA)	TRENCH, 24" DEEP	TRENCH IN PAVED AREA	UNDERGROUND WARNING/MARKING TAPE	PULL BOX, 725.08, 18"	GROUND ROD	POWER SERVICE, AS PER PLAN																		
					EACH	EACH	EACH	FT	FT	FT	EACH	FT	FT	FT	EACH	EACH	EACH																		
		FROM	TO																																
		COLONIAL																																	
145	EX. PB	EX. PB (SOUTH)	100+36.7							118			59																						
145	EX. PB	EX. PB (NORTH)	100+36.7							82			41																						
145	PB1-9	100+36.7		RT											1																				
		100+36.7	100+72.5							68			34																						
145	PB1-8	100+72.5		LT											1																				
		100+72.5	100+80.8							32			16																						
145	A1-13	100+80.8		RT	4	1	1		138	2		95		95		1																			
		100+80.8	101+74					300		190																									
145	A1-12	101+74		RT	4	1	1		138	2						1																			
		101+74	102+82					354		226		93	20	93																					
146	A1-11	102+82		LT	4	1	1		138	2						1																			
		102+82	103+80					318		202		81	20	81																					
146	A1-10	103+80		RT	4	1	1		138	2						1																			
		103+80	104+81					312		198		99		99																					
146	A1-9	104+81		RT	4	1	1		138	2						1																			
		104+81	105+06					90		50		25		25																					
146	PB1-7	105+06		RT											1																				
		105+06	105+47					132		78			39																						
146	PB1-6	105+47		RT											1																				
		105+47	105+74					93		52		26		26																					
146	A1-8	105+74		RT	4	1	1		138	2						1																			
		105+74	106+44					234		146		53	20	53																					
146	A1-7	106+44		LT	4	1	1		138	2						1																			
		106+44	107+41					309		196		78	20	78																					
146	A1-6	107+41		RT	4	1	1		138	2						1																			
		107+41	108+24					264		166		63	20	63																					
147	A1-5	108+24		RT	4	1	1		138	2						1																			
		108+24	108+30					33		12		6		6																					
147	PB1-5	108+30		RT											1																				
		108+30	109+03					234		146			73																						
147	PB1-4	109+03		RT											1																				
		109+03	109+31					111		64		12	20	12																					
147	A1-4	109+31		RT	4	1	1		138	2						1																			
		109+31	110+05					258		162		41	40	41																					
147	A1-3	110+05		RT	4	1	1		138	2						1																			
		110+05	111+7					339		216		58	50	58																					
147	A1-2	111+7		LT	4	1	1		138	2						1																			
		111+7	111+81					237		148		59	15	59																					
147	A1-1	111+81		LT	4	1	1		138	2						1																			
		111+81	111+87.2					33		12		6		6																					
147	PB1-3	111+87.2		LT											1																				
		111+87.2	112+30					144		86			43																						
147	PB1-2	112+30		LT											1																				
		112+30	112+20.6					240		105			35																						
147	PB1-1	112+20.6		LT											1																				
		112+20.6	112+17					222		96			32																						
147	CC-A	112+17		LT													1																		
147	PB1-2	112+30																																	
		112+30	112+54					87		48		24		24																					

DESIGN AGENCY	
	
DESIGNER	
JAW	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.143	168

## STA-COLONIAL BOULEVARD NE - PHASE 1

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[illegible]

## LIGHTING SUBSUMMARY

DESIGN AGENCY



DESIGNER

JAW

REVIEWER

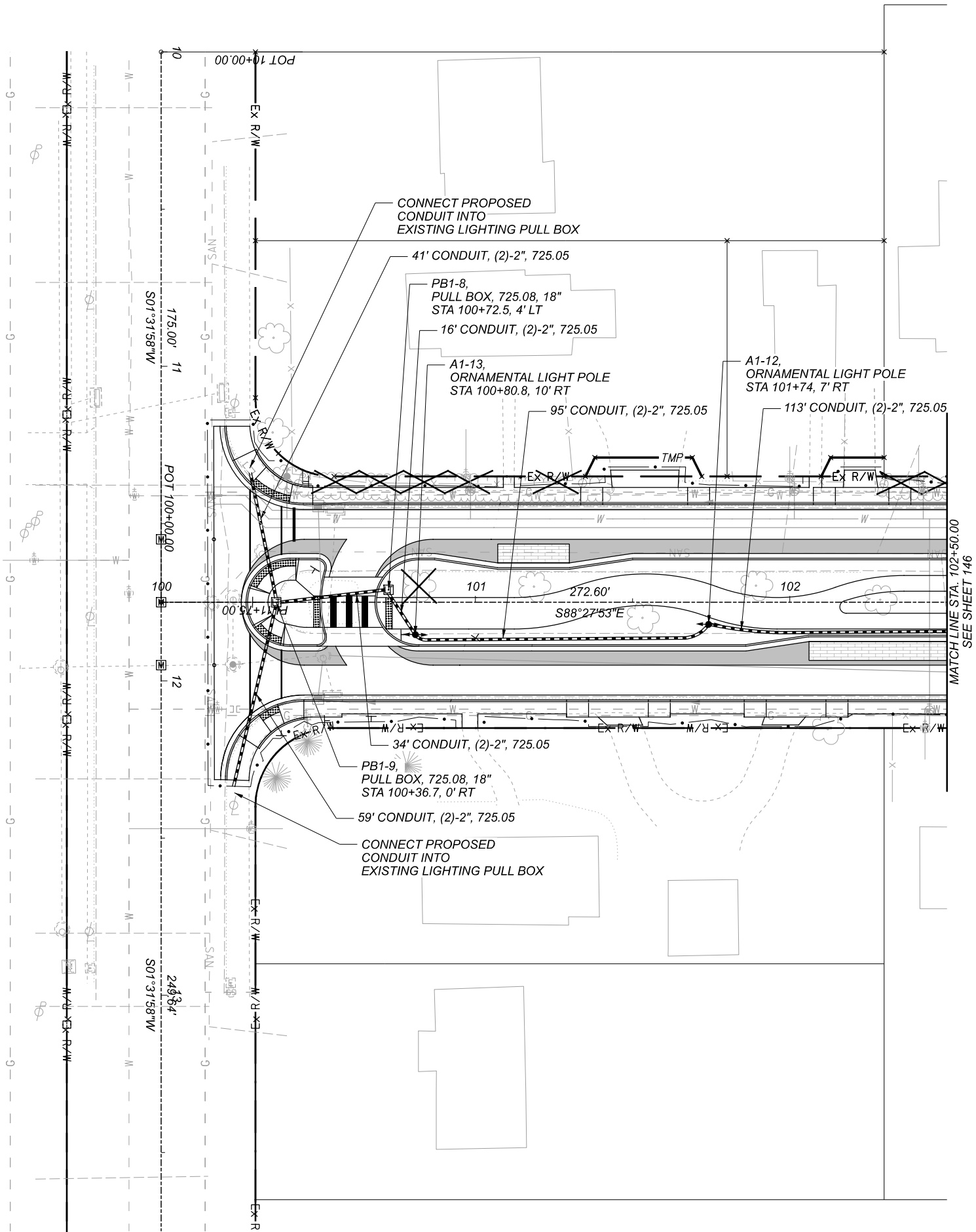
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111059

SHEET	TOTAL
P.144	16

STA-COLONIAL BOULEVARD NE - PHASE 1

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\\0059.LP001.PAPERSIZE: 17x11 (in.) DATE: 2022-03-21 TIME: 2:03:39 PM USER: Jennifer.Kelley



LIGHTING PLAN - COLONIAL BOULEVARD  
STA. 100+00 TO STA. 102+50



DESIGN AGENCY



DESIGNER

JAW

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

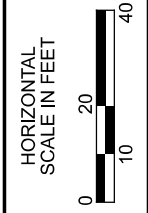
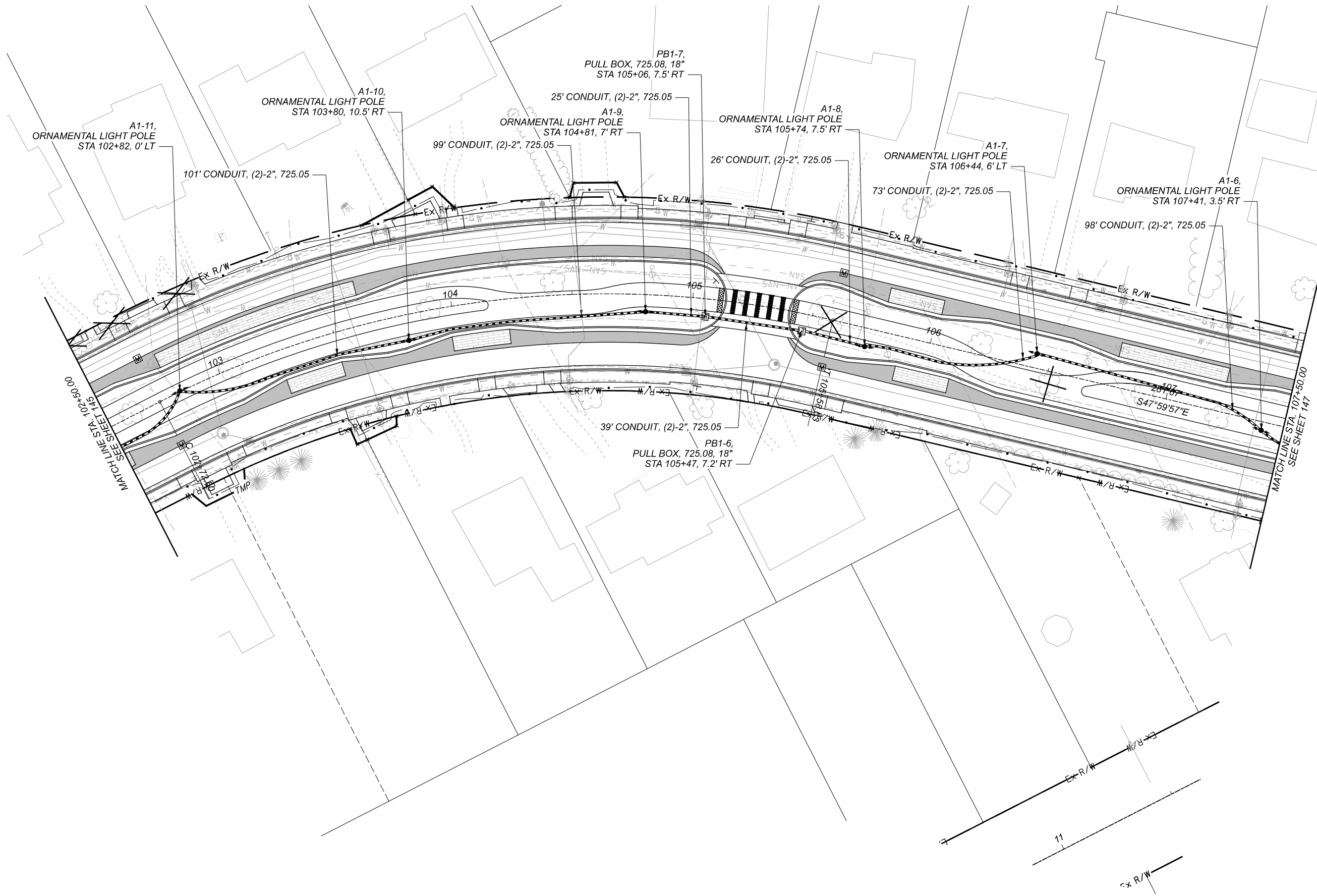
P.145

TOTAL

168

STA-COLONIAL BOULEVARD NE - PHASE 1

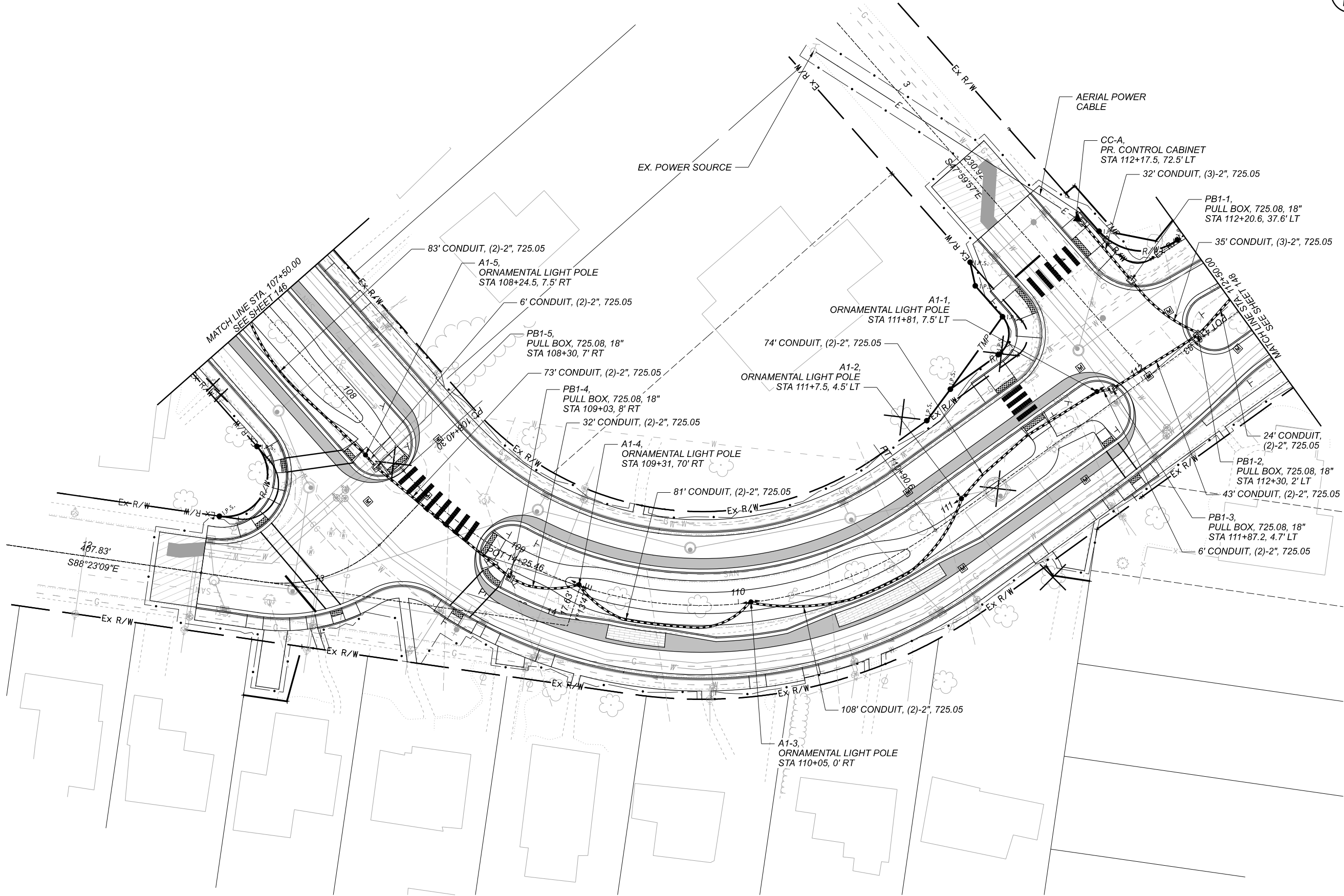
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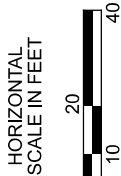
LIGHTING PLAN - COLONIAL BOULEVARD  
STA. 102+50 TO STA. 107+50

DESIGN AGENCY	
[IBI]	
DESIGNER	JAW
REVIEWER	KMK 02-10-22
PROJECT ID	111059
SHEET	TOTAL
P.146	168





LIGHTING PLAN - COLONIAL BOULEVARD  
STA. 107+50 TO STA. 112+50



DESIGN AGENCY



DESIGNER

JAW

REVIEWER

KMK 02-10-22

PROJECT ID

111059

SHEET

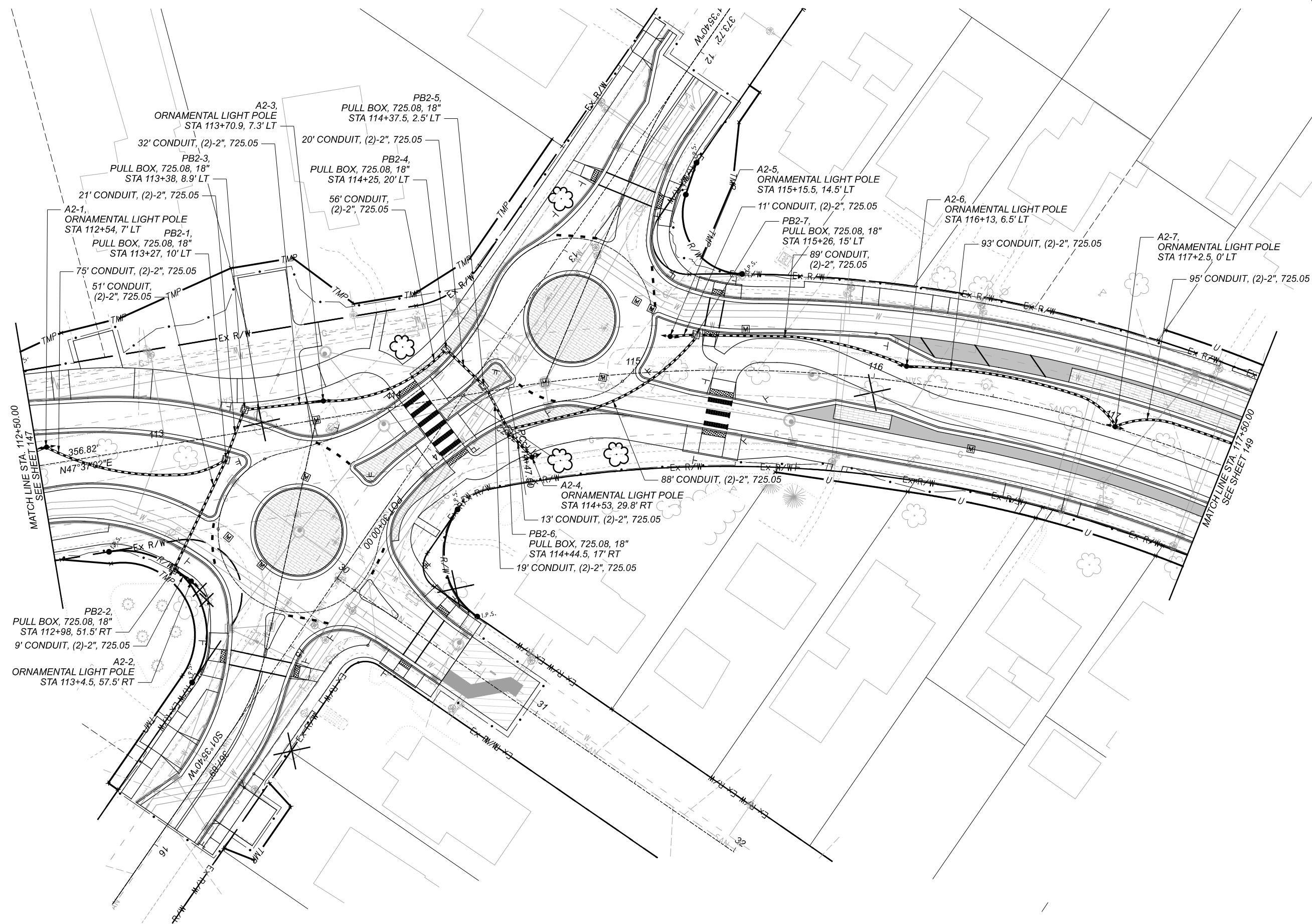
P.147

TOTAL


168

# STA-COLONIAL BOULEVARD NE - PHASE 1

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\\012012152\1bshare\121798\_STA-Colonial\7.0-Production\Worksheets\0059\_400-Engineering\Lighting\Sheets\0059\_LP004.dgn



**HORIZONTAL  
SCALE IN FEET**



A horizontal scale bar with alternating black and white segments. The segments are labeled 0, 10, 20, and 40.

LIGHTING PLAN - COLONIAL BOULEVARD  
STA. 112+50 TO STA. 117+50

DESIGN AGENCY



DESIGNER  
JAW

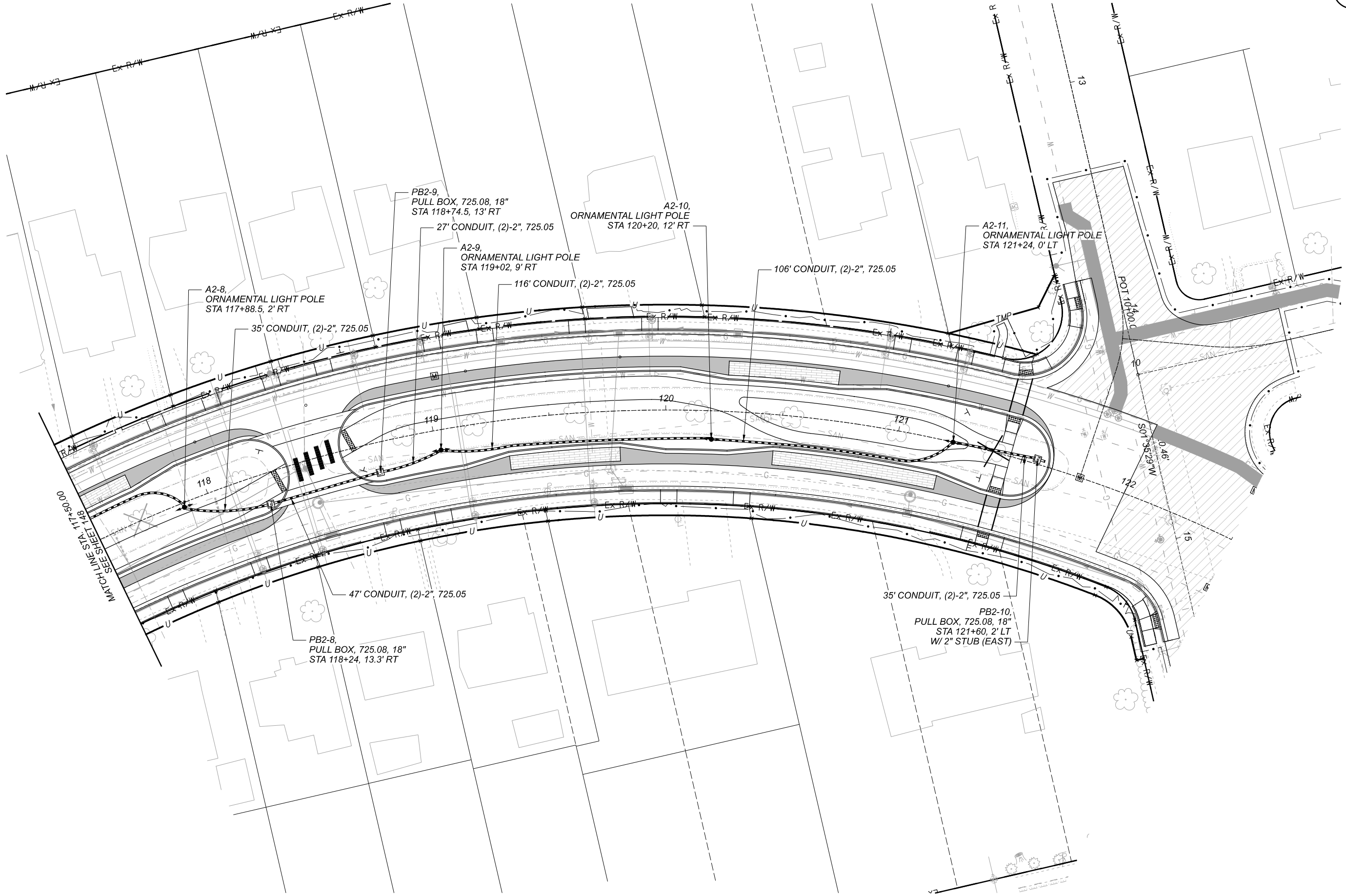
REVIEWER
KMK 02-10-22

PROJECT ID
111059

SHEET	TOTAL
P.148	168

STA-COLONIAL BOULEVARD NE - PHASE 1

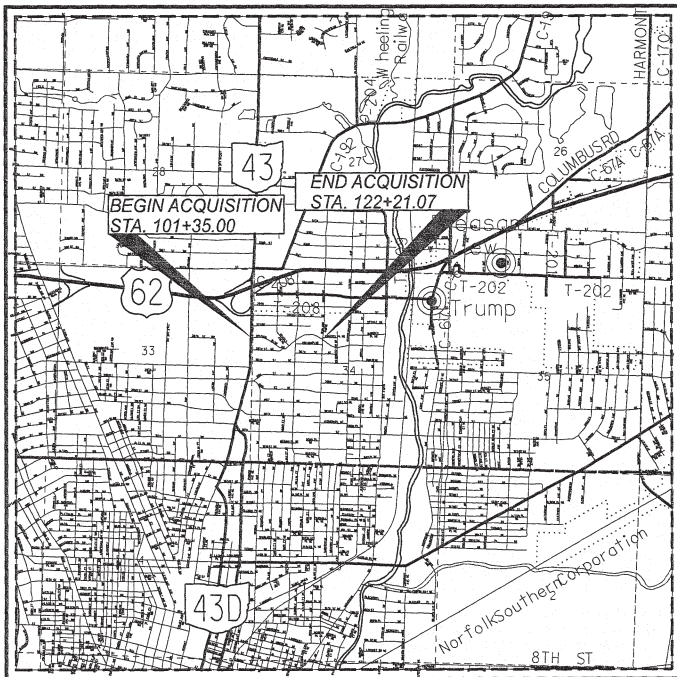
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LIGHTING PLAN - COLONIAL BOULEVARD  
STA. 117+50 TO STA. 122+50

DESIGN AGENCY	
[IBI]	
DESIGNER	
JAW	
REVIEWER	
KMK 02-10-22	
PROJECT ID	
111059	
SHEET	TOTAL
P.149	168





LOCATION MAP

LATITUDE: 40°49'30" N LONGITUDE: 81°21'45" W



**TELEPHONE**  
AT&T  
50 WEST BOWERY ST.  
AKRON, OHIO 44308  
330-384-3055  
ATTN: STEVE HYLTON  
EMERGENCY NO. - 24 HRS  
1-800-572-4545 OPT#4

**WATER**  
CANTON WATER DEPT.  
2664 HARRISBURG RD NE  
CANTON, OHIO 44708  
ATTN: BRENT BURRIER OR LEW MILLER  
330-489-3310

**COMMUNICATIONS CABLE**  
CHARTER (SPECTRUM)  
5520 WHIPPLE AVE NW  
NORTH CANTON, OHIO 44720  
ATTN: RON ICKES  
CELL 216-392-7964

**TRAFFIC INTERCONNECT**  
CITY ENGINEER'S OFFICE  
2436 30TH ST NE  
CANTON, OHIO 44705  
ATTN: NICK LOUKAS  
330-489-3381

**NATURAL GAS DIST./TRANS.**  
DOMINION ENERGY OHIO  
320 SPRINGSIDE DR.  
AKRON, OHIO 44333  
330-664-2541 (MICAH RISACHER)  
ATTN: 2ND FLOOR RELOCATION  
RELOCATION@DOMINIONENERGY.COM  
EMERGENCY NO.  
1-800-521-4400  
SUPPLEMENTAL CONTACT:  
MALLERIE STRASSER  
330-472-4209

**ELECTRIC**  
AMERICAN ELECTRIC POWER  
301 CLEVELAND AVE SW  
P.O. BOX 24400  
CANTON, OHIO 44701-4400  
330-438-7739  
ATTN: MICHAEL ALLMAN  
CELL 330-312-6981  
ATTN: KEITH SCHALMO  
330-438-7720  
EMERGENCY NO.  
1-800-672-2017

**SANITARY AND STORM SEWER**  
CITY ENGINEER'S OFFICE  
2436 30TH ST NE  
CANTON, OHIO 44705  
ATTN: DAN MOEGLIN  
330-489-3381

UNDERGROUND  
UTILITIES

**NOTES:**  
THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

## CONVENTIONAL SYMBOLS

County Line	-----	Edge of Shoulder (Ex)	-----
Township Line	-----	Edge of Shoulder (Pr)	-----
Section Line	-----	Ditch / Creek (Ex)	-----
Corporation Line	----- or -----	Ditch / Creek (Pr)	-----
Fence Line (Ex)	-----x----- (Pr)	Tree Line (Ex)	-----
Center Line	-----	Ownership Hook Symbol	Example
Right of Way (Ex)	----- Ex R/W	Property Line Symbol	Example
Right of Way (Pr)	----- R/W	Break Line Symbol	Example
Standard Highway Ease.(Ex)	----- Ex SH	Tree (Pr) Tree (Ex) Shrub (Ex)	
Standard Highway Ease.(Pr)	----- SH	Tree (Remove) Shrub (Remove)	
Temporary Right of Way	----- TMP	Evergreen (Ex) Stump	
Channel Ease. (Pr)	----- CH	Evergreen (Remove) Stump (Remove)	
Utility Ease. (Ex)	----- Ex U	Wetland (Pr) Grass (Pr) Aerial Target	
Utility Ease. (Pr)	----- U	Post (Ex) Mailbox (Ex) Mailbox (Pr)	
Railroad	----- or -----	Light (Ex) Telephone Marker (Ex) TEL	
Guardrail (Ex)	----- (Pr)	Fire Hydrant (Ex) Water Meter (Ex)	
Construction Limits	-----	Water Valve (Ex) Utility Valve Unknown (Ex.)	
Edge of Pavement (Ex)	-----	Telephone Pole (Ex) Power Pole (Ex)	
Edge of Pavement (Pr)	-----	Light Pole (Ex)	

# RIGHT OF WAY LEGEND SHEET STA-COLONIAL BOULEVARD NE PHASE 1, G.P. 1206

STATE OF OHIO  
STARK COUNTY  
SEC. 34, T. 11N, R. 8W  
CITY OF CANTON

## INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2-3
PROPERTY MAP	4-5
SUMMARY OF ADDITIONAL R/W	6-9
R/W TOPOGRAPHIC SHEETS	10,12,14,16,18
R/W BOUNDARY SHEETS	11,13,15,17,19

**STRUCTURE KEY:**  
RESIDENTIAL  
COMMERCIAL  
OUT-BUILDING

**PARCEL LEGEND:**  
WD = WARRANTY DEED  
T = TEMPORARY EASEMENT  
U = UTILITY EASEMENT

**MONUMENT LEGEND**  
PROPOSED R/W MONUMENT BOX  
RAILROAD SPIKE FOUND  
AXLE EXISTING AXLE FOUND  
I.R.F. IRON PIN FOUND  
I.R.F. IRON PIN FOUND W/ ID CAP  
R.F. IRON PIPE FOUND

I, BRANDEN BATTIG, P.S. have conducted a survey of the existing conditions for STA-COLONIAL BOULEVARD (CITY OF CANTON) in July and August of 2019. The results of that survey are contained herein. Underground utility locations are shown for informational purposes only. Though they are believed to be accurate, their location is as marked on the ground by the utility company per OHIO-811 Confirmation Numbers A918303453, B918300874, B918300925 and those markings subsequently being surveyed as a part of this project. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System, North Zone on NAD 83 (2011) datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (US Survey Feet) by a Project Adjustment Factor (PAF) of 1.00010138. As a part of this project I have reestablished the locations of the existing property lines and EX. R/W for property takes contained herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

BRANDEN BATTIG, Professional Land Surveyor No. 8708

Date: 09-20-21

I, RYAN HUTSON, P.S., have calculated the proposed property lines, Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

RYAN HUTSON, Professional Land Surveyor No. 8586

Date: 09-20-21

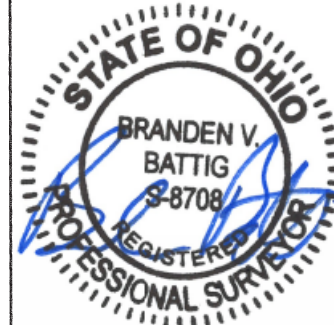
## PROJECT DESCRIPTION

0.4 MILES OF ROADWAY RECONSTRUCTION ALONG COLONIAL BOULEVARD NE BETWEEN MARKET AVENUE AND ROWLAND AVENUE. THE PROJECT CONSISTS OF PAVEMENT RECONSTRUCTION, REPLACEMENT OF EXISTING SIDEWALK AND CURB, A NEW DUAL MINI-ROUNDBOUT AT GIBBS AVENUE NE, AND THE CONSTRUCTION OF A SHARED USE PATH IN THE BOULEVARD. ADA, LIGHTING, AND DRAINAGE FACILITIES WILL ALSO BE UPGRADED AS PART OF THIS PROJECT.

## PLANS PREPARED BY:

FIRM NAME: IBI GROUP  
R/W DESIGNER: JENNIFER KELLEY, P.E. (JMK)  
WILLIAM L. CROXTON IV, PE (WLC)  
R/W REVIEWER: RYAN HUTSON, P.E., P.S. (RMH)  
FIELD REVIEWER: WILLIAM L. CROXTON IV, PE (WLC)  
PRELIMINARY FIELD REVIEW DATE: 10-23-20  
TRACINGS FIELD REVIEW DATE: 01-27-21  
OWNERSHIP UPDATED BY: JMK  
DATE COMPLETED: 09-20-21  
PLAN COMPLETION DATE: 09-20-21

SURVEYORS SEAL



SURVEYORS SEAL



DESIGN AGENCY



DESIGNER	JMK/WLC
REVIEWER	RMH 09-20-21
PROJECT ID	111059
SUBSET	TOTAL
1	19
SHEET	TOTAL
P.150	168





SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.1.

BENCHMARKS							
POINT NO.	STATION	OFFSET	ROADWAY	NORTHING	EASTING	ELEV.	DESCRIPTION
BM #1	114+14.09	34.99' LT.	EX. COLONIAL BLVD.	424327.767	2283641.424	1140.83	CHISELED X ON THE NORTH FLANGE BOLT OF HYDRANT AT THE NORTHWEST CORNER OF GIBBS AVE. AND COLONIAL BLVD.
BM #2	122+43.07	55.79' RT.	EX. COLONIAL BLVD.	424298.313	2284383.007	1144.63	ARROW FLANGE BOLT ON HYDRANT AT THE SOUTHWEST CORNER OF ROWLAND AVE. AND COLONIAL BLVD.

PRIMARY PROJECT CONTROL INFORMATION						
POINT NUMBER	GRID COORDINATES U.S. SURVEY FEET		GROUND COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING	NORTHING	EASTING		
CP #100	423948.1723	2285870.8819	423991.1522	2286102.6235	1059.304	IRON PIN
CP #101	424380.4373	2285883.8337	424423.4610	2286115.5766	1052.648	IRON PIN
CP #102	424082.2182	2284181.1296	424125.2117	2284412.6998	1145.688	IRON PIN
CP #103	424524.3183	2284191.9323	424567.3565	2284423.5036	1136.868	IRON PIN
CP #104	424512.0673	2282199.0368	424555.1044	2282430.4061	1116.256	IRON PIN
CP #105	424125.0436	2282190.2902	424168.0414	2282421.6586	1110.777	IRON PIN
CP #106	424092.4206	2285801.0955	424135.4151	2286032.8300	1057.163	IRON PIN
CP #107	424139.2128	2285273.9215	424182.2121	2285505.6026	1093.373	IRON PIN
CP #108	424147.8581	2284899.4112	424190.8582	2285131.0543	1124.721	IRON PIN
CP #109	424029.2252	2284572.4114	424072.2133	2284804.0213	1146.671	IRON PIN
CP #110	424155.3394	2284385.0170	424198.3402	2284616.6080	1148.161	IRON PIN
CP #111	424337.6084	2284201.5204	424380.6277	2284433.0927	1142.370	IRON PIN
CP #112	424388.9858	2283871.2867	424432.0103	2284102.8255	1138.582	IRON PIN
CP #113	424365.3271	2283580.6946	424408.3493	2283812.2041	1140.552	IRON PIN
CP #114	424160.6346	2283398.7088	424203.6360	2283630.1997	1138.478	IRON PIN
CP #115	424003.0206	2283036.8826	424046.0060	2283268.3369	1122.959	IRON PIN
CP #116	424321.5615	2282592.8351	424364.5792	2282824.2443	1117.523	IRON PIN
CP #117	424308.6743	2282195.9264	424351.6908	2282427.2954	1113.410	IRON PIN

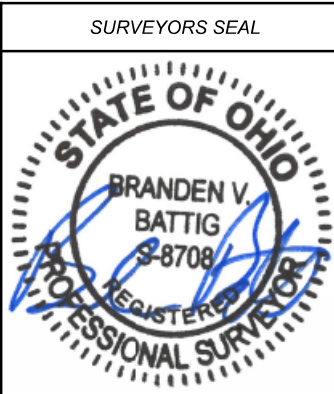
MONUMENT TABLE								
STATION	OFFSET	REFERENCE	PROJECT COORDINATES SEE SURVEY CERTIFICATION		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED	DESCRIPTION
			NORTH (Y)	EAST (X)	MON. ASSY.	REF. MON.	R/W MON.	
100+00.00	CL	BL CONST. COLONIAL BLVD. EB	424,362.83	2,282,455.26	1			POT STATION
102+72.60	CL		424,355.53	2,282,727.76	1			PC STATION
105+44.51	CL		424,256.77	2,282,975.07	1			PT STATION
108+26.18	CL		424,068.29	2,283,184.39	1			PC STATION
111+06.01	CL		424,069.14	2,283,439.60	1			PT STATION
111+70.50	CL		424,112.62	2,283,487.24	1			PC STATION
112+56.26	CL		424,175.57	2,283,545.33	1			PRC STATION
113+47.54	CL		424,209.20	2,283,625.87	1			PT STATION
113+65.64	CL		424,207.03	2,283,643.85	1			POT STATION
115+14.53	CL		424,349.58	2,283,720.32	1			POT STATION
116+70.28	CL		424,407.85	2,283,864.76	1			PC STATION
122+50.00	CL		424,319.24	2,284,409.06	1			POT STATION
100+00.00	CL	BL CONST. COLONIAL BLVD. WB	424,402.81	2,282,456.34	1			POT STATION
102+72.60	CL		424,395.51	2,282,728.83	1			PC STATION
105+72.76	CL		424,286.50	2,283,001.83	1			PT STATION
108+54.43	CL		424,098.02	2,283,211.15	1			PC STATION
110+75.34	CL		424,098.69	2,283,412.64	1			PT STATION
111+65.95	CL		424,159.77	2,283,479.56	1			PC STATION
112+10.83	CL		424,188.15	2,283,514.30	1			PT STATION
112+49.21	CL		424,210.77	2,283,545.31	1			PC STATION
113+51.30	CL		424,247.76	2,283,639.27	1			POT STATION
114+71.16	CL		424,383.79	2,283,714.88	1			POT STATION
114+78.12	CL		424,384.47	2,283,721.80	1			PCC STATION
115+18.41	CL		424,398.72	2,283,759.12	1			PRC STATION
118+90.34	CL		424,490.45	2,284,112.29	1			PCC STATION
122+50.00	CL		424,354.24	2,284,438.91	1			POT STATION
100+00.00	CL	CL EX. R/W COLONIAL BLVD.	424,382.82	2,282,455.80	1			INTERSECTION WITH CL EX. R/W MARKET AVE.
108+55.00	CL		424,073.81	2,283,209.10	1			INTERSECTION WITH BL CONST. 26TH ST.
112+02.85	CL		424,159.53	2,283,508.98	1			INTERSECTION WITH CL EX. R/W BEVERLY AVE.
113+66.72	CL		424,269.99	2,283,630.02	1			INTERSECTION WITH BL CONST. GIBBS AVE. S
114+62.88	CL		424,334.65	2,283,701.19	1			INTERSECTION WITH BL CONST. GIBBS AVE. N
121+80.00	CL		424,378.69	2,284,368.00	1			INTERSECTION WITH BL CONST. ROWLAND AVE. N
122+88.00	CL		424,311.11	2,284,452.03	1			INTERSECTION WITH BL CONST. ROWLAND AVE. S
TOTAL CARRIED TO GENERAL SUMMARY SHEET					32			

RECEIVED \_\_\_\_\_, 21

RECORDED \_\_\_\_\_, 21

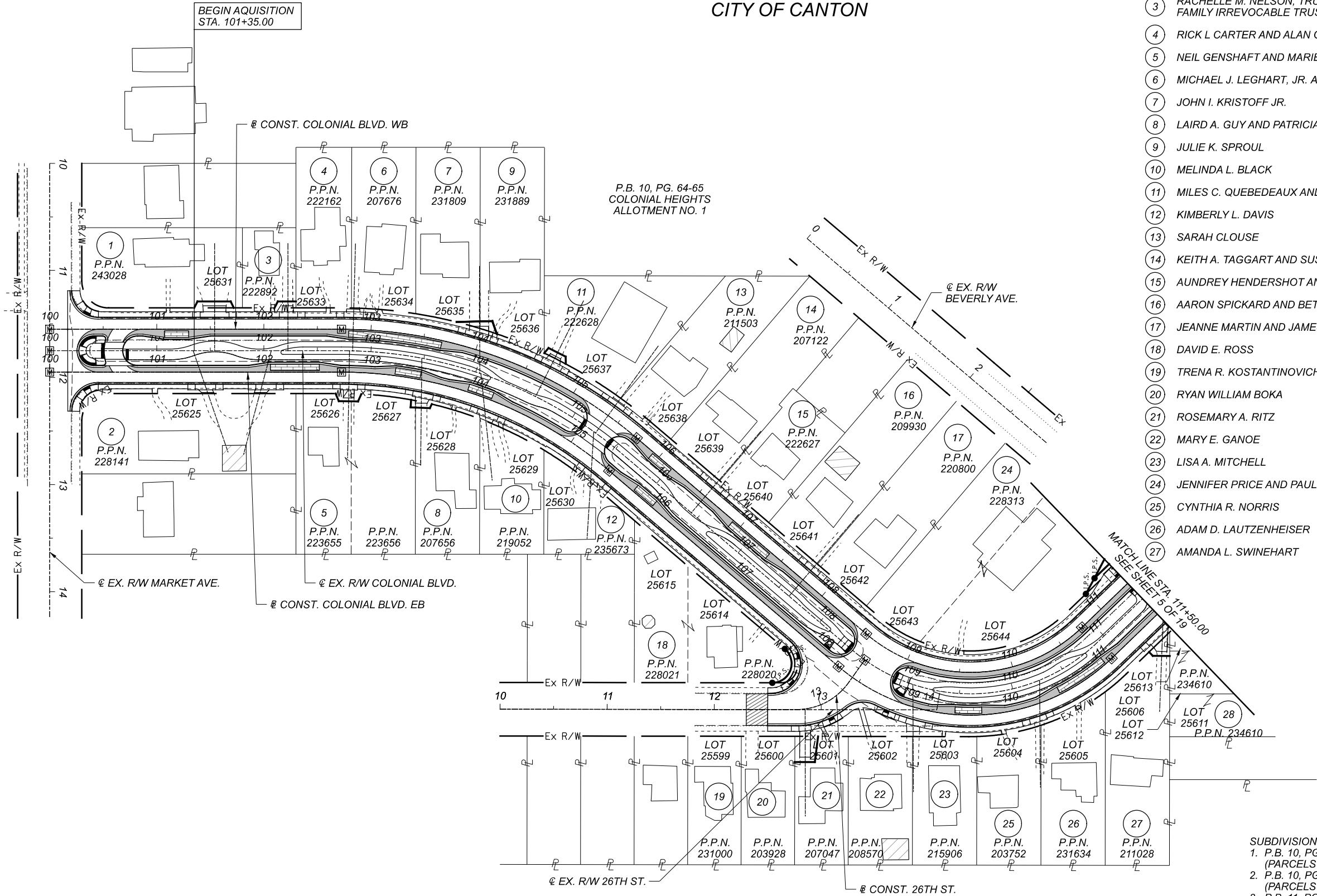
I.I.N. \_\_\_\_\_

COUNTY RECORDER \_\_\_\_\_



DESIGN AGENCY	
[IB]	
DESIGNER	JMK/WLC
REVIEWER	RMH 09-20-21
PROJECT ID	111059
SUBSET	TOTAL
3	19
SHEET	TOTAL
P.152	168

STARK COUNTY  
SEC. 34, T. 11N, R. 8W  
CITY OF CANTON



- 1 BRYAN P. UNDERWOOD
- 2 LANCE D. GILL
- 3 RACHELLE M. NELSON, TRUSTEE OF KATIE D. NELSON FAMILY IRREVOCABLE TRUST, DATED JUNE 3, 2021
- 4 RICK L CARTER AND ALAN CARTER
- 5 NEIL GENSHAFT AND MARIE GENSHAFT
- 6 MICHAEL J. LEGHART, JR. AND DARLENE LEGHART
- 7 JOHN I. KRISTOFF JR.
- 8 LAIRD A. GUY AND PATRICIA J. GUY
- 9 JULIE K. SPROUL
- 10 MELINDA L. BLACK
- 11 MILES C. QUEBEDEAUX AND HANNAH N. QUEBEDEAUX
- 12 KIMBERLY L. DAVIS
- 13 SARAH CLOUSE
- 14 KEITH A. TAGGART AND SUSAN J. TAGGART
- 15 AUNDREY HENDERSHOT AND SERENA DRAPER
- 16 AARON SPICKARD AND BETHANY SPICKARD
- 17 JEANNE MARTIN AND JAMES EDWARD MARTIN
- 18 DAVID E. ROSS
- 19 TRENA R. KOSTANTINOVICH
- 20 RYAN WILLIAM BOKA
- 21 ROSEMARY A. RITZ
- 22 MARY E. GANOE
- 23 LISA A. MITCHELL
- 24 JENNIFER PRICE AND PAUL M. PRICE
- 25 CYNTHIA R. NORRIS
- 26 ADAM D. LAUTZENHEISER
- 27 AMANDA L. SWINEHART

SUBDIVISION & PARCEL NOTES:  
1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)  
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)  
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

			DESIGN AGENCY
			<b>[B]</b>
			DESIGNER
			JMK/WLC
			REVIEWER
			RMH 09-20-21
			PROJECT ID
			111059
			SUBSET
			4
			TOTAL
			19
REV. BY	DATE	DESCRIPTION	SHEET
			TOTAL
			P.153
			168

DATE COMPLETED - FINAL RW PLANS - 09-20-21

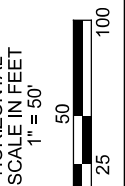


**STA-COLONIAL BOULEVARD NE - PHASE 1**



- SUBDIVISION & PARCEL NOTES:**
1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
  2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
  3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

			JMK/WLC
			REVIEWER
			RMH 09-20-21
			PROJECT ID
			111059
			SUBSET
			TOTAL
			5
			19
REV. BY	DATE	DESCRIPTION	SHEET
DATE COMPLETED - FINAL RW PLANS - 09-20-21			TOTAL
			P.154
			168



PROPERTY MAP (Z OF Z)  
STA. 111+50 TO STA. 122+50



MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 2021-09-20 TIME: 1:02:08 PM USER: jennifer.kelley \\10.120.112.51\share\121798\_STA-Colonial\7.0\_Production\Worksheets\111059\400-Engineering\RW\Sheets\111059\_RS001.dgn

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			INSTRUMENT NO.								LEFT	RIGHT			INSTRUMENT NO.	
1-T	BRYAN P. UNDERWOOD	10,11	IIN 200708280047354	243028	0.258	0.000	0.005	0.000	0.005	NO				↑ TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED PT LOT 25631, *1 STEP (DND-SAVE) *BUSHES ALONG WALK (TAKE ALL WITHIN R/W) *6' VINYL FENCE (3' ENCROACHES) (DND-SAVE) *6' WIRE FENCE (90' ENCROACHES) (DND-SAVE) *6' WOOD FENCE (2' ENCROACHES) (DND-SAVE) *LANDSCAPE AREA W/ ROCKS FLOWERS, SHRUBS, (DND-SAVE)		
2	LANCE D. GILL	10,11	IIN 200604040019478	228141	0.344	0.000								NO TAKE LOT 25625		
3-T	RACHELLE M. NELSON, TRUSTEE OF KATIE D. NELSON FAMILY IRREVOCABLE TRUST, DATED JUNE 3, 2021	10,11	IIN 202106090029736	222892	0.086	0.000	0.003	0.000	0.003	NO				TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED PT LOT 25631 *5 WOOD FENCE (39' ENCROACHES) (DND-SAVE) *4' GATE (DND-SAVE)		
4	RICK L. CARTER AND ALAN CARTER	10,11,12,13	IIN 201901230002485	222162	0.179	0.000								NO TAKE LOT 25633 *BUSHES ALONG WALK W/ LANDSCAPE BLOCKS (TAKE ALL WITHIN R/W)		
5-T1	NEIL GENSHAFT AND MARIE GENSHAFT	10,11,12,13	IIN 200508300058274	223656 223655 TOTAL:	0.201 0.176 0.377	0.000 0.000 0.000	0.001 0.002 0.003	0.000 0.000 0.000	0.001 0.002 0.003	NO				TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 25627 LOT 25626 TO GRADE AND SEED, *4' WOOD FENCE (45' ENCROACHES) (DND-SAVE) *4' WOOD FENCE (45' ENCROACHES) (DND-SAVE) *MAILBOX ON FENCE (DND-SAVE) *4' WOOD FENCE (58' ENCROACHES) (DND-SAVE)		
5-T2				223656	0.201	0.000	0.001	0.000	0.001	NO						
6	MICHAEL J. LEGHART, JR. AND DARLENE LEGHART	12,13	IIN 200807230033231	207676	0.209	0.000								NO TAKE, LOT 25634 *3' LANDSCAPE TIMBER WALL ALONG EAST SIDE DRIVE (ENCROACHES 6') (TAKE 6' WITHIN R/W) *LANDSCAPE AREA W/ GRAVEL PATH, FLOWERS, BUSHES, ROCKS, MISC. ITEMS, (ENCROACHES 6') (TAKE ALL WITHIN R/W)		
7-T	JOHN I. KRISTOFF JR.	12,13	IIN 202002260008059	231809	0.223	0.000	0.002	0.000	0.002	NO				TO CONSTRUCT JOINT DRIVEWAY AND TO GRADE AND SEED LOT 25635, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
8-T	LAIRD A. GUY AND PATRICIA J. GUY	12,13	IIN 199109100034191	207565	0.185	0.000	0.002	0.000	0.002	NO				TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 25628 *LANDSCAPE AREA W/ FLOWERS, ROCKS, MISC. ITEMS (TAKE ALL WITHIN R/W)		
9-T	JULIE K. SPROUL	12,13	IIN 200912030049243	231889	0.248	0.000	0.003	0.000	0.003	NO				TO CONSTRUCT JOINT DRIVEWAY AND TO GRADE AND SEED LOT 25636, DRIVEWAY ESMT (P.B. 10, PG. 64-65), *BUSH (DND-SAVE) *CURB (5' ENCROACHES)(TAKE 10')		
10	MELINDA L. BLACK	12,13	IIN 202109100047070	219052	0.160	0.000								NO TAKE LOT 25629		
11-T	MILES C. QUEBEDEAUX AND HANNAH N. QUEBEDEAUX	12,13	IIN 201906280023620	222628	0.238	0.000	0.003	0.000	0.003	NO				TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 25637, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *40' STONE WALL (40' ENCROACHES) (TAKE ALL WITHIN R/W)		
12	KIMBERLY L. DAVIS	12,13	IIN 202104010016624	235673	0.135	0.000								NO TAKE LOT 25630, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *4' WOOD FENCE (11' ENCROACHES) (DND-SAVE)		
13	SARAH CLOUSE	12,13	IIN 201612200051503	211503	0.226	0.000								NO TAKE LOT 25638, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *10 STEPS AND METAL RAILING BOTH SIDES, (2 STEPS ENROACH) (TAKE) (RAILING ENCROACHES 3' BOTH SIDES (TAKE),*3' BLOCK WALL (DND-SAVE) *3' BLOCK WALL (23' ENCROACHES) (DND-SAVE)		

SUMMARY NOTES:  
1. ALL AREAS IN ACRES, EXCEPT FOR PARCELS <0.001 AC (50 SF)  
2. NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
3. NET TAKE = GROSS TAKE - PRO IN TAKE  
4. (c) = CALCULATED AREA  
5. \* = RIGHT OF WAY ENCROACHMENT

TEMPORARY EASEMENT NOTES:  
1. ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.  
2. UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

PARCEL LEGEND:  
WD = WARRANTY DEED  
T = TEMPORARY EASEMENT  
U= UTILITY EASEMENT

INSTRUMENT LEGEND:  
PB, PG. = PLAT BOOK, PAGE  
IIN = INSTRUMENT IMAGING NUMBER  
OR, PG. = OFFICIAL RECORD, PAGE  
VOL. PG. = VOLUME, PAGE  
REL. PG = RELEASE OF EASEMENT, PAGE

SUBDIVISION & PARCEL NOTES:  
1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)  
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)  
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

TOTAL NUMBER OF :

35 OWNERSHIPS  
41 PARCELS

0 TOTAL TAKES

0 OWNERSHIPS W/ STRUCTURES INVOLVED

GRANTEE:  
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF  
THE CITY OF CANTON, STARK COUNTY, OHIO  
UNLESS OTHERWISE SHOWN.

REV. BY	DATE	DESCRIPTION			
FIELD REVIEW BY WLC		DATE: 01-27-21		SUBSET	TOTAL
OWNERSHIP VERIFIED BY JMK		DATE: 09-20-21		6	19
DATE COMPLETED - FINAL R/W PLANS - 09-20-21				SHEET	TOTAL
				P.155	168

SUMMARY OF ADDITIONAL RIGHT OF WAY (1 OF 4)

DESIGN AGENCY



DESIGNER		JMK/WLC
REVIEWER		RMH 09-20-21
PROJECT ID		111059
SUBSET	TOTAL	
6	19	
SHEET	TOTAL	
P.155	168	

MODEL: Sheet PAPER:SIZE: 17x11 (in.) DATE: 2021-09-20 TIME: 11:17:09 AM USER: jennifer.kelley \\10.120.112.5\jshare\121798\_STA-COLONIAL\7.0\_Production\Works\111059\400-Engineering\RW\Sheets\111059\_RS002.dgn

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			INSTRUMENT NO.								LEFT	RIGHT			INSTRUMENT NO.	
14	KEITH A. TAGGART AND SUSAN J. TAGGART	12,13	IIN 200504180023971	207122	0.273	0.000							↑	NO TAKE PT LOT 25639, DRIVEWAY ESMT (P.B. 10, PG. 64-65) DRIVEWAY AGREEMENT (OR. 178, PG. 571) *BUSH (DND-SAVE)		
15	AUNDREY HENDERSHOT AND SERENA DRAPER	12,13	IIN 202106080029553	222627	0.154	0.000								NO TAKE PT LOT 25640, PT LOT 25639 DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
16	AARON SPICKARD AND BETHANY SPICKARD	12,13,14,15	IIN 201811300048286	209930	0.275	0.000								NO TAKE LOT 25641, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
17	JEANNE MARTIN AND JAMES EDWARD MARTIN	14,15	IIN 201906280023575	220800	0.275	0.000								NO TAKE LOT 25642, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *STONE WALL (51' ENCROACHES) (DND-SAVE)		
18-WD	DAVID E. ROSS	12,13,14,15	IIN 199611270065025	228020	0.155	0.000	0.003	0.000	0.003					LOT 25614 LOT 25615 *BUSHES (SAVE) *LANDSCAPE AREA (DND) *BUSHES (2) (TAKE)		
				228021	0.153	0.000	0.000	0.000	0.000							
				TOTAL:	0.308	0.000	0.003	0.000	0.003	NO		0.305				
19	TRENA R. KOSTANTINOVICH	14,15	IIN 201301070000705	231000	0.138	0.000								NO TAKE, LOT 25599		
20	RYAN WILLIAM BOKA	14,15	IIN 202011040048241	203928	0.138	0.000								NO TAKE LOT 25600, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
21-T	ROSEMARY A. RITZ	14,15	IIN 198203010003509	207047	0.138	0.000	0.011	0.000	0.011	NO			LOCAL	TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 25601, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
22	MARY E. GANOE	14,15	IIN 202005010016931	208570	0.165	0.000								NO TAKE LOT 25602, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *LANDSCAPE AREA W/ BLOCKS (5' ENCROACHES) (DND-SAVE)		
23	LISA A. MITCHELL	14,15	IIN 200605110028353	215906	0.165	0.000								NO TAKE LOT 25603, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *LANDSCAPE AREA W/ BLOCKS (5' ENCROACHES) (DND-SAVE)		
24-WD	JENNIFER PRICE AND PAUL M. PRICE	14,15	IIN 200106290044858	228313	0.571	0.000	0.010	0.000	0.010	NO	0.561			LOT 25643, LOT 25644		
24-T		14,15					0.004	0.000	0.004	NO				TO GRADE AND SEED * 93' BUSHES ALONG WALK (TAKE ALL WITHIN R/W) LANDSCAPE AREA W/ BLOCKS AROUND TREE (TAKE) 36" MAPLE (TAKE)		
25	CYNTHIA R. NORRIS	14,15	IIN 198901310003244	203752	0.172	0.000								NO TAKE LOT 25604, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
26	ADAM D. LAUTZENHEISER	14,15	IIN 201807200028564	231634	0.201	0.000								NO TAKE LOT 25605, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *LANDSCAPE AREA W/ 2' STONE WALL (4' ENCROACHES ON EACH SIDE OF WALK) (DND-SAVE), *4 STEPS (RECONSTRUCT)		
27-T	AMANDA L. SWINEHART	14,15	IIN 200906250025776	211028	0.262	0.000	0.006	0.000	0.006	NO				TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 25606, DRIVEWAY ESMT (P.B. 10, PG. 64-65), 40" MAPLE (TAKE)		
28-WD	MARY FISHER AND KEVIN FISHER	14,15,16,17	IIN 201607280029199	241771	0.298	0.000	0.020	0.000	0.020					LOT 25612, LOT 25613, DRIVEWAY ESMT (P.B. 10, PG. 64-65) LOT 25611, DRIVEWAY ESMT (P.B. 10, PG. 64-65) *LANDSCAPE AREA W/ 2 BUSHES, ADDRESS STONE, SPOTLIGHT, MISC. ITEMS (2' ENCROACHES) (TAKE) *LANDSCAPE AREA (DND-SAVE)		
				234610	0.138	0.000	0.000	0.000	0.000							
				TOTAL:	0.436	0.000	0.020	0.000	0.020	NO		0.416				
28-T		14,15,16,17		241771			0.016	0.000	0.016	NO			↓	TO GRADE AND SEED		
<div>SUMMARY NOTES: 1. ALL AREAS IN ACRES, EXCEPT FOR PARCELS &lt;0.001 AC (50 SF) 2. NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE 3. NET TAKE = GROSS TAKE - PRO IN TAKE 4. (c) = CALCULATED AREA 5. * = RIGHT OF WAY ENCROACHMENT  TEMPORARY EASEMENT NOTES: 1. ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION. 2. UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.</div> <div>PARCEL LEGEND: WD = WARRANTY DEED T = TEMPORARY EASEMENT U = UTILITY EASEMENT  INSTRUMENT LEGEND: PB, PG. = PLAT BOOK, PAGE IIN = INSTRUMENT IMAGING NUMBER OR, PG. = OFFICIAL RECORD, PAGE VOL, PG. = VOLUME, PAGE REL, PG = RELEASE OF EASEMENT, PAGE</div> <div>SUBDIVISION &amp; PARCEL NOTES: 1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32) 2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56) 3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)</div>																

SUMMARY OF ADDITIONAL RIGHT OF WAY (2 OF 4)

DESIGN AGENCY



DESIGNER

JMK/WLC

REVIEWER

RMH 09-20-21

PROJECT ID

111059

SUBSET

7 19

SHEET

P.156 168

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY WLC		DATE: 01-27-21
OWNERSHIP VERIFIED BY JMK		DATE: 09-20-21
DATE COMPLETED - FINAL R/W PLANS - 09-20-21		

MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 2021-09-20 TIME: 1:02:11 PM USER: jennifer.kelley \\10.120.112.51\share\121798\_STA-Colonial\7.0\_Production\Worksheets\111059\400-Engineering\RW\Sheets\111059\_RS003.dgn

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			INSTRUMENT NO.								LEFT	RIGHT			INSTRUMENT NO.	
29-WD	JAMES V. BAKER AND DIANE M. BAKER	14, 15, 16, 17	IIN 200107170049138	204518	0.244	0.000	0.002	0.000	0.002				↑	LOT 25645 DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
				204516	0.252	0.000	0.000	0.000	0.000					LOT 25646, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
				TOTAL:	0.496	0.000	0.002	0.000	0.002	NO	0.494					
29-T		14, 15, 16, 17		204518			0.016	0.000	0.016				↑	TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED		
				204516			0.028	0.000	0.028							
				TOTAL:			0.044	0.000	0.044	NO						
30-T	JOHN PICONE	16, 17	IIN 201510020039490	208575	0.406	0.000	0.039	0.000	0.039	NO			↑	TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 25647, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
31	ADAM T. PEARCE AND LISA M. PEARCE	16, 17	IIN 201701130002554	226221	0.262	0.000								NO TAKE LOT 25648, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
32	TONYA A. RUCKMAN AND KAREN S. DAUGHERTY	16, 17	IIN 202109070046334	222941	0.262	0.000								NO TAKE LOT 25649, DRIVEWAY ESMT (P.B. 10, PG. 64-65)		
33	MABLE J. SEYMOUR	16, 17	IIN 201311150055914	208927	0.172	0.000							↑	NO TAKE LOT 26432		
34-T	JAMES A. SCHNEIDER AND CONNIE L. SHARP-SCHNEIDER	16, 17	IIN 201712190053797	208873	0.172	0.000	0.009	0.000	0.009	NO				TO CONSTRUCT SINGLE DRIVEWAY AND TO GRADE AND SEED LOT 26433		
35	JERMAINE A. HAMLET AND BRIDGETT L. TATE	16, 17	IIN 201910100039493	228505	0.172	0.000								NO TAKE LOT 26434 *EX. BOULDER (TAKE) *EX. WALL (DND-SAVE)		
36-WD	WILLIAM L. MILLER AND CATHERINE M. MILLER	16, 17	VOL. 3547, PG. 571	215469	0.193	0.000	0.005	0.000	0.005	NO		0.188	↑	LOT 26458 *2 STEPS (1 STEP ENCROACHES) (DND-SAVE)		
37-WD	JEFFREY A. PYLE	16, 17	IIN 202108160042341	219778	0.200	0.000	0.011	0.000	0.011	NO	0.189			LOT 26481, DRIVEWAY ESMT (P.B. 11, PG. 17)		
37-T		16, 17					0.018	0.000	0.018	NO				TO GRADE AND SEED		
38-U	STEVEN J. HISSNER	16, 17	IIN 201708020032296	229377	0.155	0.000	0.005	0.000	0.005	NO			↑	PERPETUAL EASEMENT FOR UTILITY PURPOSES AND TO GRADE AND SEED LOT 26457 *5 STEPS (1 STEP ENCROACHES) (RECONSTRUCT)		
39	LINDA D. WILCOX	16, 17	IIN 201906140021522	231508	0.119	0.000								NO TAKE PT LOT 26482, DRIVEWAY ESMT (P.B. 11, PG. 17) *EX. WALL (35' ENCROACHES) (DND-SAVE)		
40-U	LINDSEY CARMEAN IRREVOCABLE TRUST, WITH JASON ROBERT CARMEAN, TRUSTEE	16, 17	IIN 202003040009165	230831	0.183	0.000	0.006	0.000	0.006	NO				PERPETUAL EASEMENT FOR UTILITY PURPOSES AND TO GRADE AND SEED LOT 26456, DRIVEWAY ESMT (P.B. 10, PG. 96)		
41	SHAINA BELL	16, 17	IIN 202102250010320	207166	0.097	0.000							↑	NO TAKE PT LOT 26482, PT LOT 26485 DRIVEWAY ESMT (P.B. 11, PG. 17) *EX. WALL (27' ENCROACHES) (DND-SAVE) *7 STEPS (2 STEPS ENCROACH) (RECONSTRUCT) *EX. WALL (69' ENCROACHES) (DND-SAVE)		
				207167	0.075	0.000										
				TOTAL:	0.172	0.000										
42-U	STEVEN D. ALTMAN AND MEGAN MAURER-ALTMAN	16, 17	IIN 201810190042192	219378	0.106	0.000	0.006	0.000	0.006	NO			↑	PERPETUAL EASEMENT FOR UTILITY PURPOSES AND TO GRADE AND SEED PT LOT 26455, DRIVEWAY ESMT (P.B. 10, PG. 96) *STONE WALL (2' ENCROACHES) (DND-SAVE)		
43-U	TAMMY A. DAVIS (SUBJECT TO LIFE ESTATE RETAINED BY HAROLD W. DAVIS AND BARBARA A. DAVIS)	16, 17, 18, 19	IIN 201808070031046	232179	0.183	0.000	0.006	0.000	0.006	NO				PERPETUAL EASEMENT FOR UTILITY PURPOSES AND TO GRADE AND SEED LOT 26486, DRIVEWAY ESMT (P.B. 11, PG. 17)		

SUMMARY NOTES:  
1. ALL AREAS IN ACRES, EXCEPT FOR PARCELS <0.001 AC (50 SF)  
2. NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE  
3. NET TAKE = GROSS TAKE - PRO IN TAKE  
4. (c) = CALCULATED AREA  
5. \* = RIGHT OF WAY ENCROACHMENT

TEMPORARY EASEMENT NOTES:  
1. ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.  
2. UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

PARCEL LEGEND:  
WD = WARRANTY DEED  
T = TEMPORARY EASEMENT  
U = UTILITY EASEMENT

INSTRUMENT LEGEND:  
PB. PG. = PLAT BOOK, PAGE  
IIN = INSTRUMENT IMAGING NUMBER  
OR. PG. = OFFICIAL RECORD, PAGE  
VOL. PG. = VOLUME, PAGE  
REL. PG = RELEASE OF EASEMENT, PAGE

SUBDIVISION & PARCEL NOTES:  
1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)  
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)  
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

			DESIGNER	JMK/WLC
			REVIEWER	RMH 09-20-21
			PROJECT ID	111059
REV. BY	DATE	DESCRIPTION		
FIELD REVIEW BY WLC		DATE: 01-27-21		
OWNERSHIP VERIFIED BY JMK		DATE: 09-20-21		
DATE COMPLETED - FINAL R/W PLANS - 09-20-21				
SUBSET	TOTAL			
8	19			
SHEET	TOTAL			
P.157	168			


DESIGN AGENCY



DESIGNER	JMK/WLC
REVIEWER	RMH 09-20-21
PROJECT ID	111059
SUBSET	TOTAL
8	19
SHEET	TOTAL
P.157	168

[illegible]

SUMMARY OF ADDITIONAL RIGHT OF WAY (4 OF 4)

DESIGN AGENCY	
	
DESIGNER	
JMK/WLC	
REVIEWER	
RMH 09-20-21	
PROJECT ID	
111059	
SUBSET	TOTAL
9	19
SHEET	TOTAL
P.158	168

**SUMMARY NOTES:**

1. ALL AREAS IN ACRES, EXCEPT FOR PARCELS <0.001 AC (50 SF)
2. NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
3. NET TAKE = GROSS TAKE - PRO IN TAKE
4. (c) = CALCULATED AREA
5. \* = RIGHT OF WAY ENCROACHMENT

**TEMPORARY EASEMENT NOTES:**

1. ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.
2. UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

**PARCEL LEGEND:**  
WD = WARRANTY DEED  
T = TEMPORARY EASEMENT  
U = UTILITY EASEMENT

**INSTRUMENT LEGEND:**  
PB. PG. = PLAT BOOK, PAGE  
IIN = INSTRUMENT IMAGING NUMBER  
OR. PG. = OFFICIAL RECORD, PAGE  
VOL. PG. = VOLUME, PAGE  
REL. PG. = RELEASE OF EASEMENT, PAGE

**SUBDIVISION & PARCEL NOTES:**

1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1  
(PARCELS 1-32)
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2  
(PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3  
(PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

MODEL: \\0059\_RT001\PAPE\SIZE: 17x11 (in.)      DATE: 2021-09-20      TIME: 11:17:25 AM      USER: jennifer.kelley  
\\V10\2012\5\libshare\217198\_STA-Colonial V7.0\_Production\Worksheets\110059\_400-Engineering\RW\_Sheets\110059\_RT001.dgn

HORIZONTAL  
SCALE IN FEET  
1" = 20'



A horizontal scale bar with alternating black and white segments. The segments are labeled 0, 10, 20, and 40, representing feet. The scale is oriented horizontally.

RIGHT OF WAY TOPO SHEET - COLONIAL BOULEVARD  
STA. 100+00 TO STA. 102+50

DESIGN AGENCY



DESIGNER

JMK/WLC

REVIEWER

RMH 09-20

PROJECT ID

111059

SUBSET	TOTAL
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
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88	1
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92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

10	1
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HEET TOTAL

P.159	1
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**CENTERLINE INTERSECTIONS**

(A) STA. 100+00.00 @ CONST. COLONIAL BLVD. WB =  
STA. 11+55.50 @ EX. R/W MARKET AVE. (SR-43)

(B) STA. 100+00.00 @ EX. R/W COLONIAL BLVD. =  
STA. 11+75.00 @ EX. R/W MARKET AVE. (SR-43)

(C) STA. 100+00.00 @ CONST. COLONIAL BLVD. EB =  
STA. 11+95.00 @ EX. R/W MARKET AVE. (SR-43)

(#) PRIOR TO CONSTRUCTION, THE CITY OF CANTON SHALL COORDINATE WITH THE COLONIAL HEIGHTS NEIGHBORHOOD ASSOCIATION (CHNA) FOR THE REMOVAL AND REPLACEMENT OF THE EXISTING PRIVATE SIGNS LOCATED AT THE BOULEVARD ENTRANCES WITHIN THE EXISTING RIGHT OF WAY.

**SUBDIVISION & PARCEL NOTES:**

1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

REV. BY	DATE	DESCRIPTION
DATE COMPLETED - FINAL R/W PLANS - 09-20-21		

MODEL: RB001 PAPER SIZE: 17x11(in.) DATE: 2021-09-20 TIME: 11:7:40 AM USER: jennifer.kelley  
\\V0120125\ibshare\217398\_STA-Colonial\7.0-Production\Worksets\110591400-Engineering\RW\Sheets\110591\_RB001.dgn

HORIZONTAL  
SCALE IN FEET  
1" = 20'

RIGHT OF WAY BOUNDARY SHEET - COLONIAL BOULEVARD  
STA. 100+00 TO STA. 102+50

EX. RIGHT OF WAY CURVE DATA					
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
ER-1	89° 59' 52"	25.00	39.27'	35.35'	S 43° 27' 57" E
ER-2	90° 00' 08"	25.00	39.27'	35.36'	N 46° 32' 03" E

**CENTERLINE INTERSECTIONS**

(A) STA. 100+00.00 @ CONST. COLONIAL BLVD. WB =  
STA. 11+55.50 @ EX. R/W MARKET AVE.

(B) STA. 100+00.00 @ EX. R/W COLONIAL BLVD. =  
STA. 11+75.00 @ EX. R/W MARKET AVE.

(C) STA. 100+00.00 @ CONST. COLONIAL BLVD. EB =  
STA. 11+95.00 @ EX. R/W MARKET AVE.

**SUBDIVISION & PARCEL NOTES:**

1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

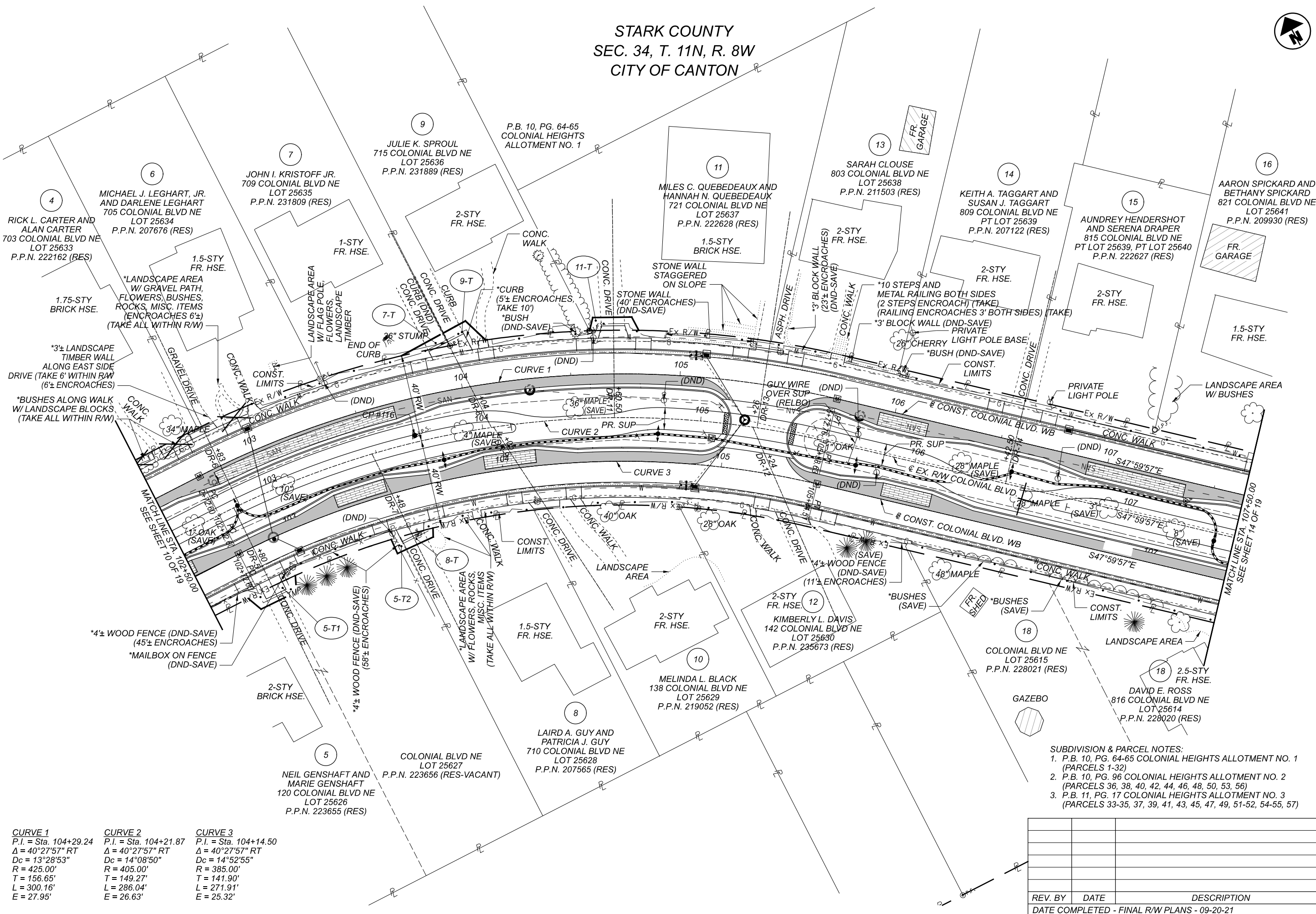
			JMK/WLC
			REVIEWER
			RMH 09-20-21
			PROJECT ID
			111059
			SUBSET TOTAL
			11 19
REV. BY	DATE	DESCRIPTION	SHEET TOTAL
DATE COMPLETED - FINAL R/W PLANS - 09-20-21			P.160 168

**CURVE 1**  
P.I. = Sta. 104+29.24  
 $\Delta = 40^\circ 27' 57''$  RT  
 $D_c = 13^\circ 28' 53''$   
 $R = 425.00'$   
 $T = 156.65'$   
 $L = 300.16'$   
 $E = 27.95'$

**CURVE 2**  
P.I. = Sta. 104+21.87  
 $\Delta = 40^\circ 27' 57''$  RT  
 $D_c = 14^\circ 08' 50''$   
 $R = 405.00'$   
 $T = 149.27'$   
 $L = 286.04'$   
 $E = 26.63'$

**CURVE 3**  
P.I. = Sta. 104+14.50  
 $\Delta = 40^\circ 27' 57''$  RT  
 $D_c = 14^\circ 52' 55''$   
 $R = 385.00'$   
 $T = 141.90'$   
 $L = 271.91'$   
 $E = 25.32'$

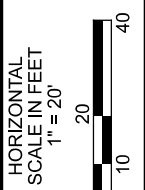
STARK COUNTY  
SEC. 34, T. 11N, R. 8W  
CITY OF CANTON



- SUBDIVISION & PARCEL NOTES:
1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
  2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
  3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

REV. BY	DATE	DESCRIPTION
DATE COMPLETED - FINAL R/W PLANS - 09-20-21		

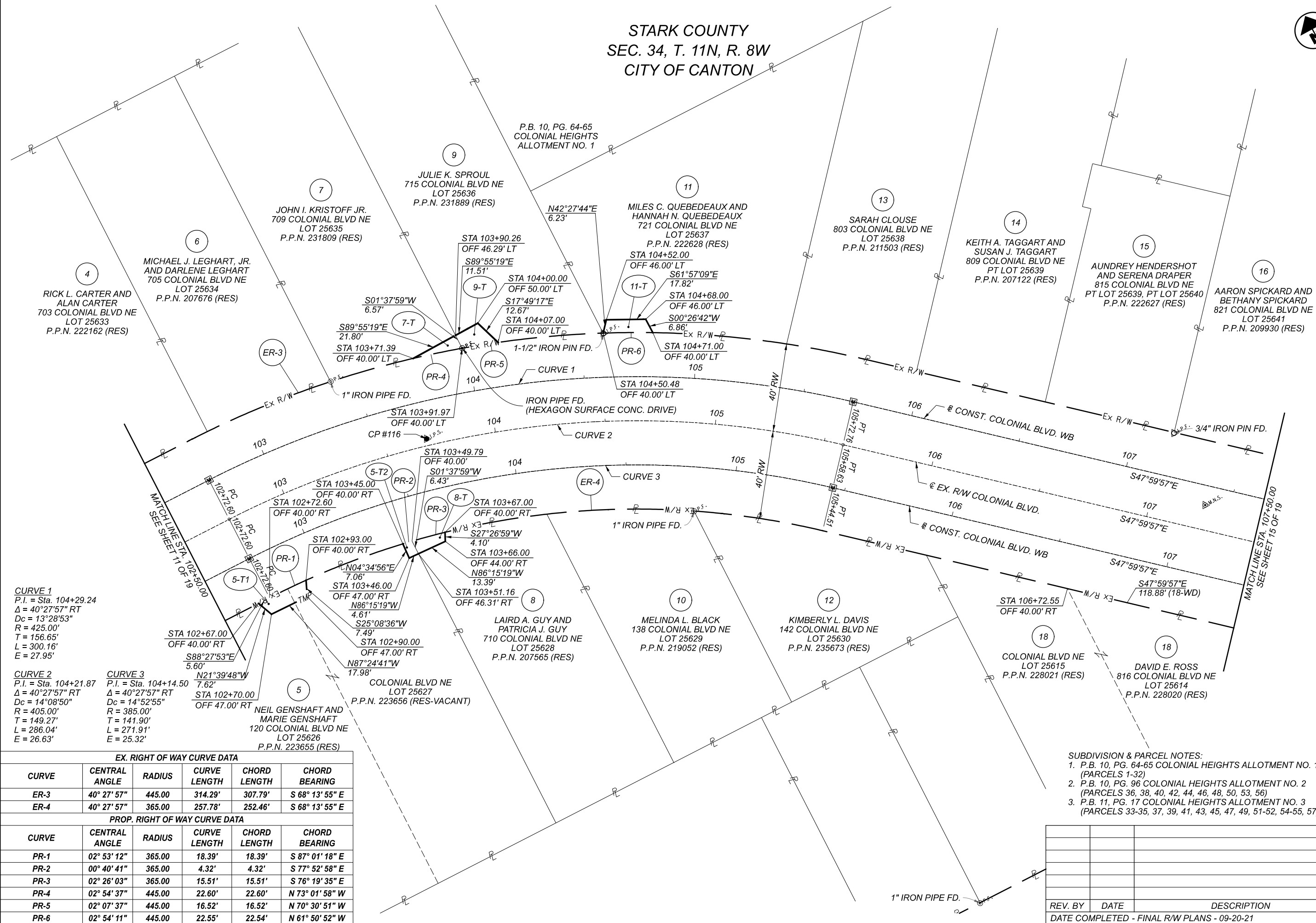
DESIGNER	JMK/WLC
REVIEWER	RMH 09-20-21
PROJECT ID	111059
SUBSET	12
TOTAL	19
SHEET	P.161
TOTAL	168





## STA-COLONIAL BOULEVARD NE - PHASE 1


MODEL: RB2 PAPER SIZE: 17x11(in.) DATE: 2021-09-20 TIME: 11:48:07 AM USER: jennifer.kelley  
\\10.120.112.5\ibshare\121798\_STA-Colonial\7.0\_Production\Worksheets\11059\_400-Engineering\RW\Sheets\11059\_RB002.dgn



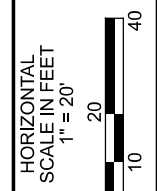
**SUBDIVISION & PARCEL NOTES:**

1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

REV. BY	DATE	DESCRIPTION
DATE COMPLETED - FINAL R/W PLANS - 09-20-21		

DESIGN AGENCY	
	
DESIGNER	
JMK/WLC	
REVIEWER	
RMH 09-20-21	
PROJECT ID	
111059	
SUBSET	TOTAL
13	19
SHEET	TOTAL
P.162	168

RIGHT OF WAY BOUNDARY SHEET - COLONIAL BOULEVARD  
STA. 102+50 TO STA. 107+50





## STA-COLONIAL BOULEVARD NE - PHASE 1

MODEL: III059.RT3 PAPER SIZE: 17x11(in.) DATE: 2021-09-20 TIME: 11:48:17 AM USER: jennifer.kelley  
\\10.120.12.5\ibshare\121798\_STA-Colonial\7.0\_Production\Worksets\III059\_400-Engineering\RW\Sheets\III059\_RT003.dgn

**CENTERLINE INTERSECTIONS**

(D) STA. 108+55.00 @ EX. R/W COLONIAL BLVD. = STA. 13+59.83 @ CONST. 26TH ST.

(E) STA. 108+42.60 @ CONST. COLONIAL BLVD. EB = STA. 13+39.83 @ CONST. 26TH ST.

(F) STA. 109+31.60 @ EX. R/W COLONIAL BLVD = STA. 14+25.46 @ EX. R/W 26TH ST.

(G) STA. 109+16.40 @ CONST. COLONIAL BLVD. EB = STA. 13+95.85 @ EX. R/W 26TH ST.

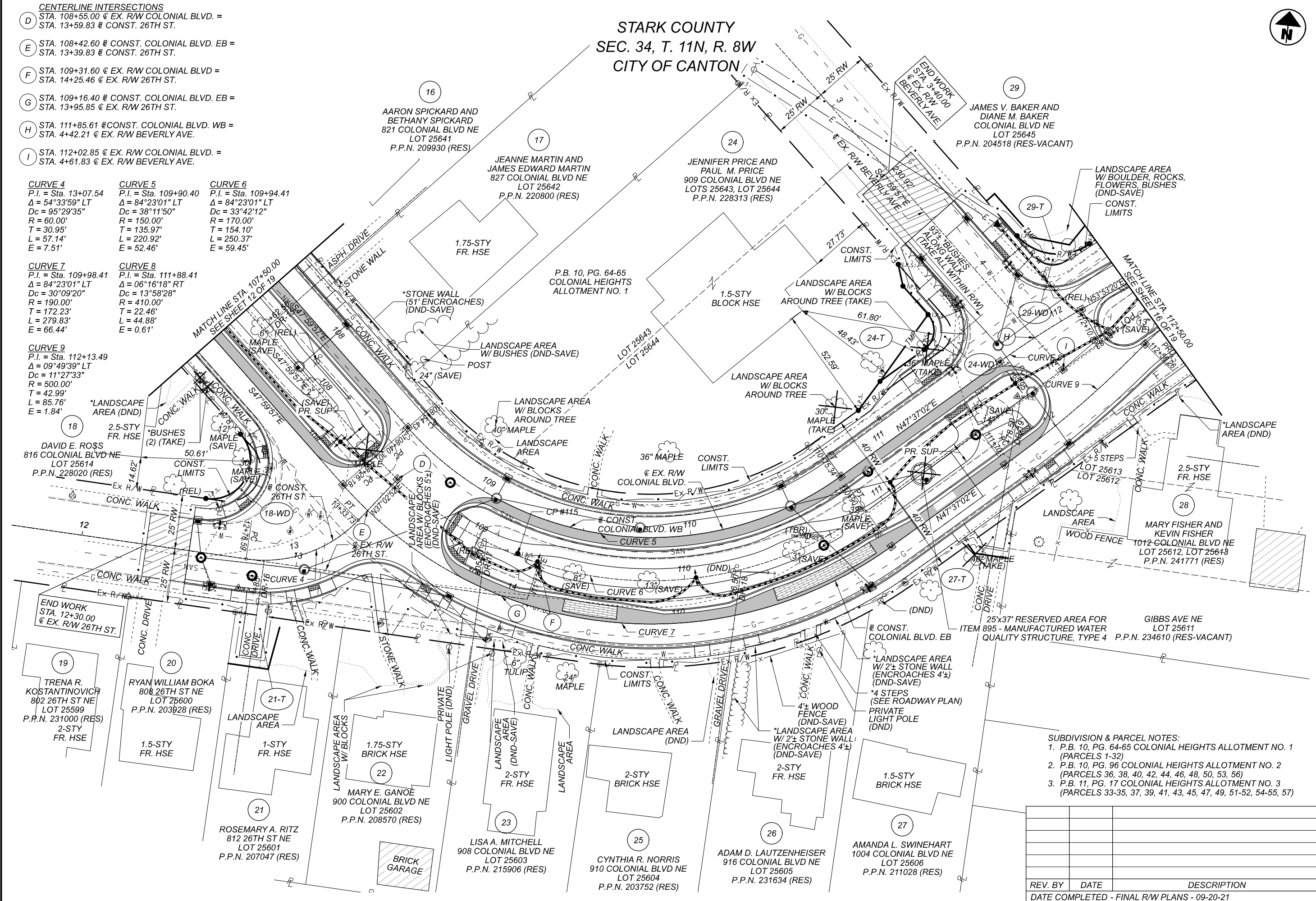
(H) STA. 111+85.61 @ CONST. COLONIAL BLVD. WB = STA. 4+42.21 @ EX. R/W BEVERLY AVE.

(I) STA. 112+02.85 @ EX. R/W COLONIAL BLVD. = STA. 4+61.83 @ EX. R/W BEVERLY AVE.

<u>CURVE 4</u>	<u>CURVE 5</u>	<u>CURVE 6</u>
P.I. = Sta. 13+07.54	P.I. = Sta. 109+90.40	P.I. = Sta. 109+94.41
$\Delta = 54^{\circ}33'59''$ LT	$\Delta = 84^{\circ}23'01''$ LT	$\Delta = 84^{\circ}23'01''$ LT
Dc = $95^{\circ}29'35''$	Dc = $38^{\circ}11'50''$	Dc = $33^{\circ}42'12''$
R = 60.00'	R = 150.00'	R = 170.00'
T = 30.95'	T = 135.97'	T = 154.10'
L = 57.14'	L = 220.92'	L = 250.37'
E = 7.51'	E = 52.46'	E = 59.45'

<u><b>CURVE 7</b></u>	<u><b>CURVE 8</b></u>
<i>P.I.</i> = Sta. 109+98.41	<i>P.I.</i> = Sta. 111+88.41
$\Delta = 84^{\circ}23'01"$ LT	$\Delta = 06^{\circ}16'18"$ RT
<i>Dc</i> = $30^{\circ}09'20"$	<i>Dc</i> = $13^{\circ}58'28"$
<i>R</i> = 190.00'	<i>R</i> = 410.00'
<i>T</i> = 172.23'	<i>T</i> = 22.46'
<i>L</i> = 279.83'	<i>L</i> = 44.88'
<i>E</i> = 66.44'	<i>E</i> = 0.61'

CURVE 9  
P.I. = Sta. 112+13.49  
 $\Delta = 09^{\circ}49'39''$  LT  
 $D_c = 11^{\circ}27'33''$   
 $R = 500.00'$   
 $T = 42.99'$   
 $L = 85.76'$  \*LAN  
 $E = 1.84'$  ARE



RIGHT OF WAY TOPO SHEET - COLONIAL BOULEVARD  
STA. 107+50 TO STA. 112+50

DESIGN AGENCY



DESIGNER

REVIEWER

PROJECT ID

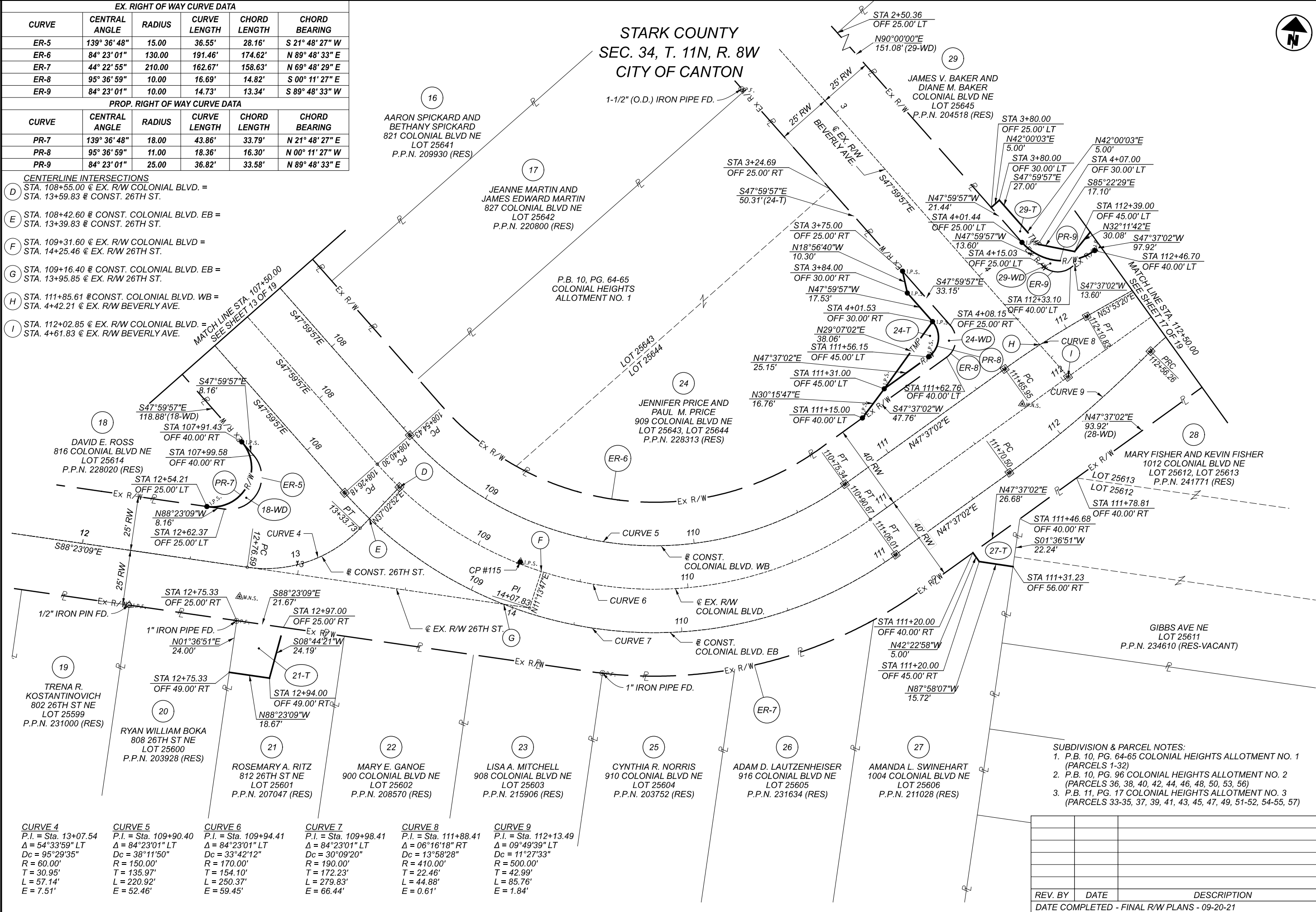
SUBSET	TOTAL
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SHEET	TOTAL
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P 163 | 168

EX. RIGHT OF WAY CURVE DATA					
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
ER-5	139° 36' 48"	15.00	36.55'	28.16'	S 21° 48' 27" W
ER-6	84° 23' 01"	130.00	191.46'	174.62'	N 89° 48' 33" E
ER-7	44° 22' 55"	210.00	162.67'	158.63'	N 69° 48' 29" E
ER-8	95° 36' 59"	10.00	16.69'	14.82'	S 00° 11' 27" E
ER-9	84° 23' 01"	10.00	14.73'	13.34'	S 89° 48' 33" W
PROP. RIGHT OF WAY CURVE DATA					
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
PR-7	139° 36' 48"	18.00	43.86'	33.79'	N 21° 48' 27" E
PR-8	95° 36' 59"	11.00	18.36'	16.30'	N 00° 11' 27" W
PR-9	84° 23' 01"	25.00	36.82'	33.58'	N 89° 48' 33" E

- CENTERLINE INTERSECTIONS**
- (D) STA. 108+55.00 @ EX. R/W COLONIAL BLVD. = STA. 13+59.83 @ CONST. 26TH ST.
- (E) STA. 108+42.60 @ CONST. COLONIAL BLVD. EB = STA. 13+39.83 @ CONST. 26TH ST.
- (F) STA. 109+31.60 @ EX. R/W COLONIAL BLVD = STA. 14+25.46 @ EX. R/W 26TH ST.
- (G) STA. 109+16.40 @ CONST. COLONIAL BLVD. EB = STA. 13+95.85 @ EX. R/W 26TH ST.
- (H) STA. 111+85.61 @ CONST. COLONIAL BLVD. WB = STA. 4+42.21 @ EX. R/W BEVERLY AVE.
- (I) STA. 112+02.85 @ EX. R/W COLONIAL BLVD. = STA. 4+61.83 @ EX. R/W BEVERLY AVE.



HORIZONTAL SCALE IN FEET  
1" = 20'

0 10 20 40

RIGHT OF WAY BOUNDARY SHEET - COLONIAL BOULEVARD  
STA. 107+50 TO STA. 112+50

DESIGN AGENCY

**[B]**

DESIGNER  
JMK/WLC

REVIEWER  
RMH 09-20-21

PROJECT ID  
111059

SUBSET	TOTAL
15	19

SHEET  
P.164

TOTAL  
168

SUBDIVISION & PARCEL NOTES:

- P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
- P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
- P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

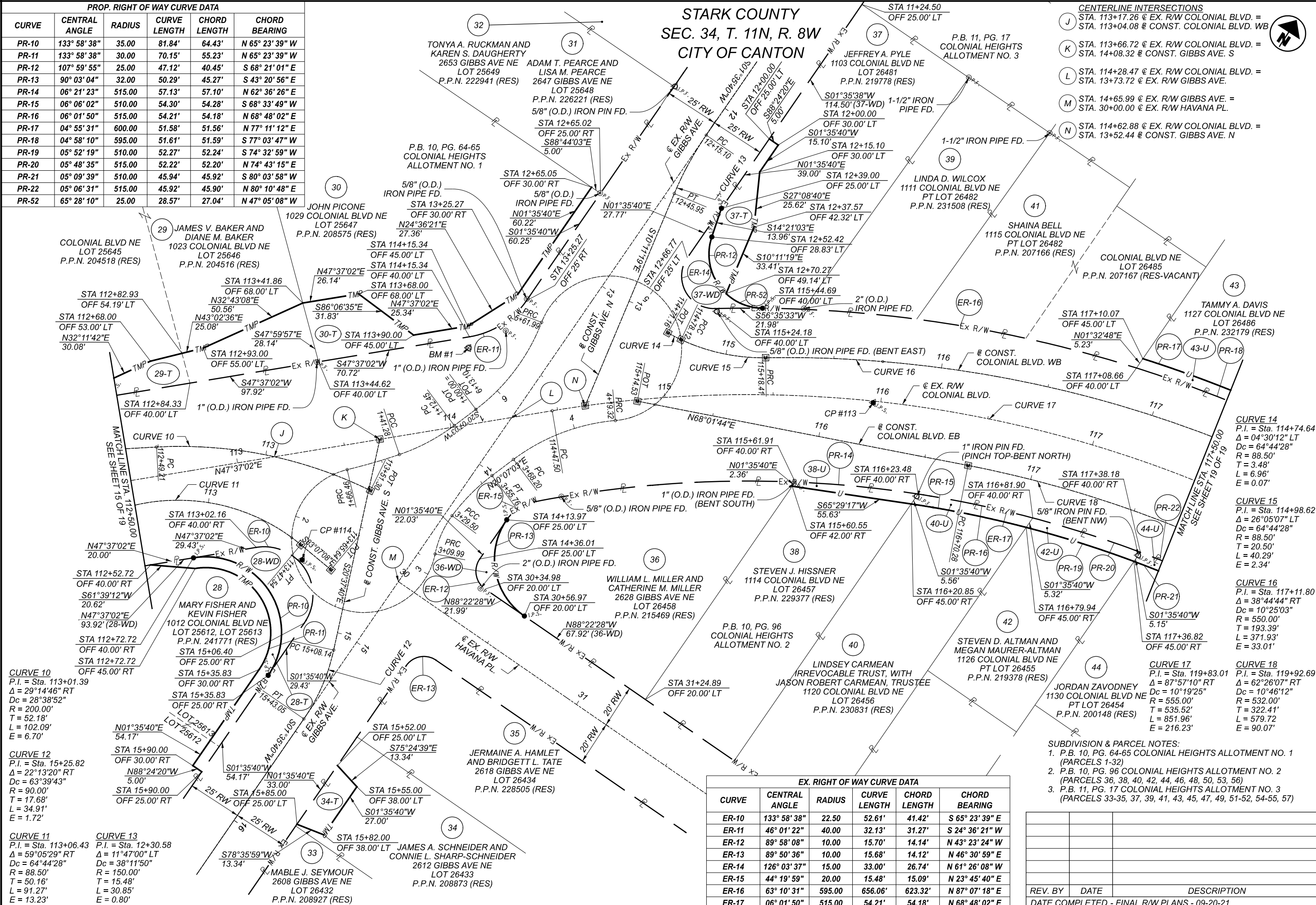
REV. BY	DATE	DESCRIPTION
DATE COMPLETED - FINAL R/W PLANS - 09-20-21		





## STA-COLONIAL BOULEVARD NE - PHASE 1

PROP. RIGHT OF WAY CURVE DATA					
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
PR-10	133° 58' 38"	35.00	81.84'	64.43'	N 65° 23' 39" W
PR-11	133° 58' 38"	30.00	70.15'	55.23'	N 65° 23' 39" W
PR-12	107° 59' 55"	25.00	47.12'	40.45'	S 68° 21' 01" E
PR-13	90° 03' 04"	32.00	50.29'	45.27'	S 43° 20' 56" E
PR-14	06° 21' 23"	515.00	57.13'	57.10'	N 62° 36' 26" E
PR-15	06° 06' 02"	510.00	54.30'	54.28'	S 68° 33' 49" W
PR-16	06° 01' 50"	515.00	54.21'	54.18'	N 68° 48' 02" E
PR-17	04° 55' 31"	600.00	51.58'	51.56'	N 77° 11' 12" E
PR-18	04° 58' 10"	595.00	51.61'	51.59'	S 77° 03' 47" W
PR-19	05° 52' 19"	510.00	52.27'	52.24'	S 74° 32' 59" W
PR-20	05° 48' 35"	515.00	52.22'	52.20'	N 74° 43' 15" E
PR-21	05° 09' 39"	510.00	45.94'	45.92'	S 80° 03' 58" W
PR-22	05° 06' 31"	515.00	45.92'	45.90'	N 80° 10' 48" E
PR-52	65° 28' 10"	25.00	28.57'	27.04'	N 47° 05' 08" W



EX. RIGHT OF WAY CURVE DATA					
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
ER-10	133° 58' 38"	22.50	52.61'	41.42'	S 65° 23' 39" E
ER-11	46° 01' 22"	40.00	32.13'	31.27'	S 24° 36' 21" W
ER-12	89° 58' 08"	10.00	15.70'	14.14'	N 43° 23' 24" W
ER-13	89° 50' 36"	10.00	15.68'	14.12'	N 46° 30' 59" E
ER-14	126° 03' 37"	15.00	33.00'	26.74'	N 61° 26' 08" W
ER-15	44° 19' 59"	20.00	15.48'	15.09'	N 23° 45' 40" E
ER-16	63° 10' 31"	595.00	656.06'	623.32'	N 87° 07' 18" E
ER-17	06° 01' 50"	515.00	54.21'	54.18'	N 68° 48' 02" E

**SUBDIVISION & PARCEL NOTES:**  
 1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1  
 (PARCELS 1-32)  
 2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2  
 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)  
 3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3  
 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

			JMK/WLC	
			REVIEWER	
			RMH 09-20-21	
			PROJECT ID	
			111059	
			SUBSET	TOTAL
			17	19
REV. BY	DATE	DESCRIPTION		
DATE COMPLETED - FINAL R/W PLANS - 09-20-21				
			SHEET	TOTAL
			P.166	168

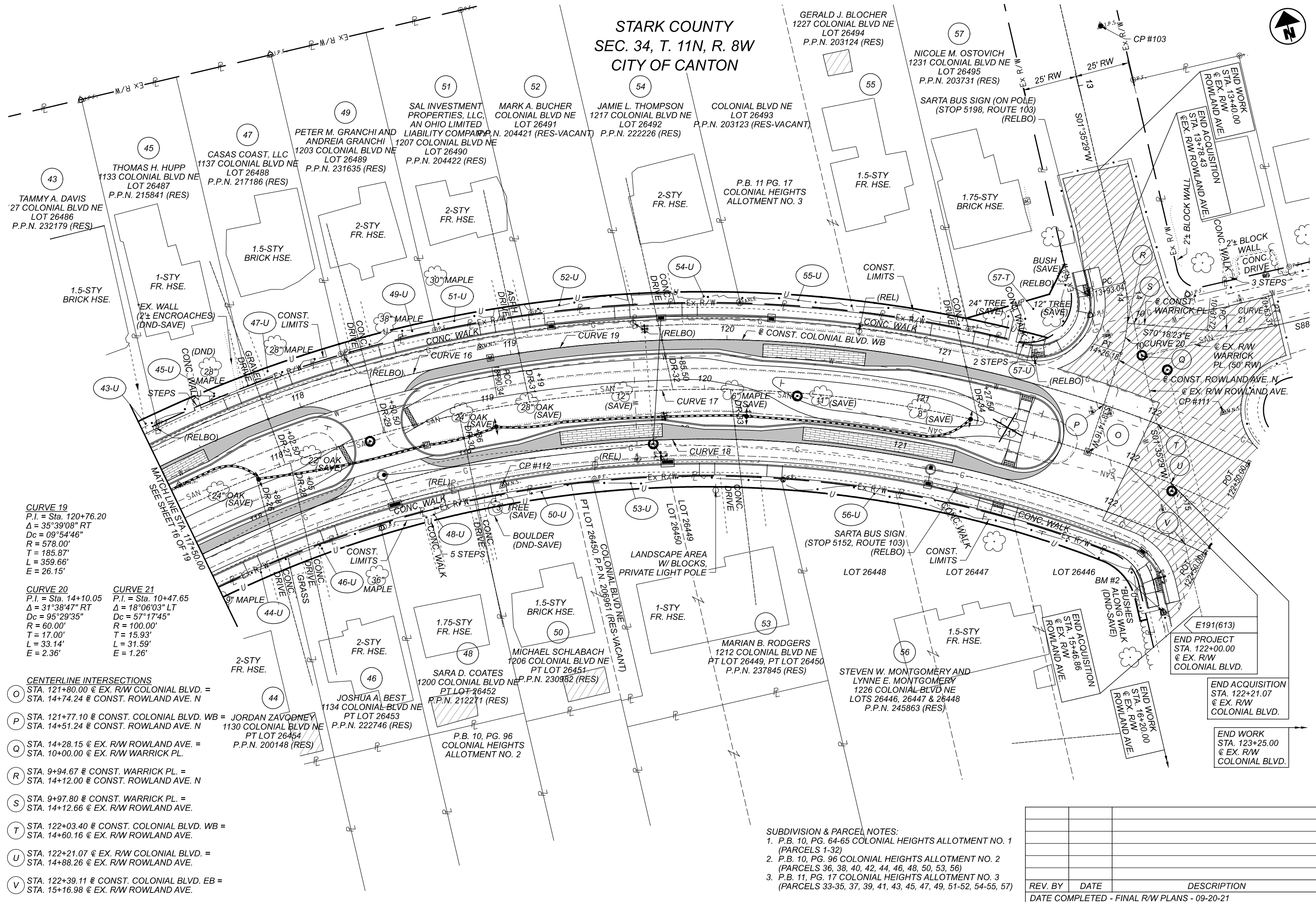
RIGHT OF WAY BOUNDARY SHEET - COLONIAL BOULEVARD  
STA. 112+50 TO STA. 117+50



**STA-COLONIAL BOULEVARD NE - PHASE 1**

MODEL: II059\_RT5 PAPER SIZE: 17x11 (in.) DATE: 2021-09-20 TIME: 11:51:00 AM USER: jennifer.kelley  
\\10.120.112.5\ibisnare\121798\_STA-Colonial\7.0\_Production\Worksets\II059\_400-Engineering\RW\Sheets\II059\_RT005.dgn

STARK COUNTY  
SEC. 34, T. 11N, R. 8W  
CITY OF CANTON



**SUBDIVISION & PARCELS NOTES:**  
 1. P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)  
 2. P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)  
 3. P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

REV. BY	DATE	DESCRIPTION
<i>DATE COMPLETED - FINAL R/W PLANS - 09-20-21</i>		

DESIGN AGENCY



DESIGNER

REVIEWER

PROJECT ID

SUBJECT	TOTAL
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10	15
20	25

P.167	168
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**HORIZONTAL  
SCALE IN FEET  
1" = 20'**

RIGHT OF WAY TOPO SHEET - COLONIAL BOULEVARD  
STA. 117+50 TO STA. 122+50

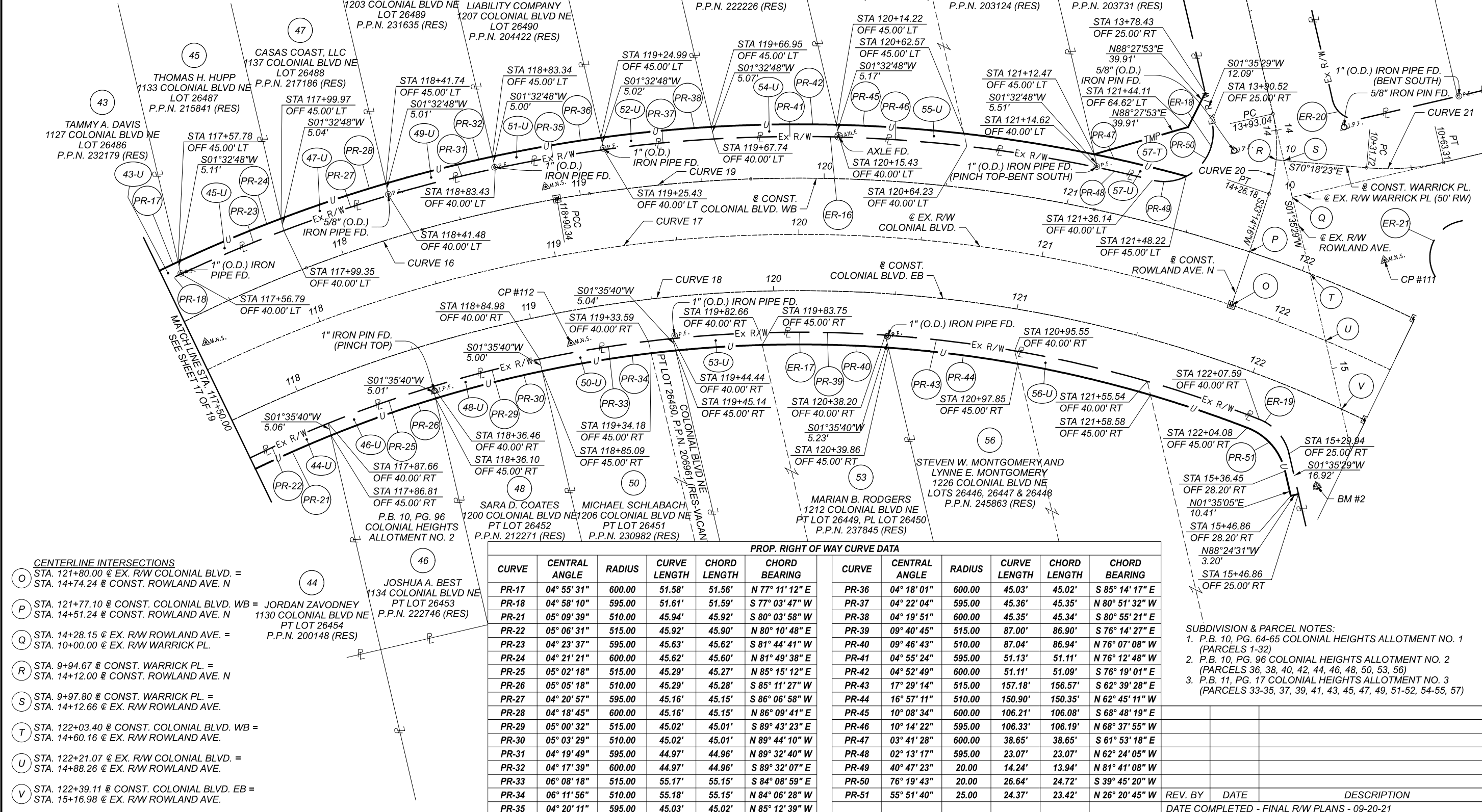


EX. RIGHT OF WAY CURVE DATA					
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
ER-16	63° 10' 31"	595.00	656.06'	623.32'	N 87° 07' 18" E
ER-17	06° 01' 50"	515.00	54.21'	54.18'	N 68° 48' 02" E
ER-18	117° 07' 05"	20.00	40.88'	34.13'	N 60° 09' 01" E
ER-19	55° 30' 19"	20.00	19.38'	18.63'	S 26° 09' 41" E
ER-20	89° 59' 55"	10.00	15.71'	14.14'	S 43° 24' 29" E
ER-21	140° 21' 52"	15.00	36.75'	28.22'	S 21° 24' 37" W

**CURVE 19**  
P.I. = Sta. 120+76.20  
Δ = 35°39'08" RT  
Dc = 09°54'46"  
R = 578.00'  
T = 185.87'  
L = 359.66'  
E = 26.15'

**CURVE 20**  
P.I. = Sta. 14+10.05  
Δ = 31°38'47" RT  
Dc = 95°29'35"  
R = 60.00'  
T = 17.00'  
L = 33.14'  
E = 2.36'

**CURVE 21**  
P.I. = Sta. 10+47.65  
Δ = 18°06'03" LT  
Dc = 57°17'45"  
R = 100.00'  
T = 15.93'  
L = 31.59'  
E = 1.26'



- CENTERLINE INTERSECTIONS**
- STA. 121+80.00 @ EX. R/W COLONIAL BLVD. = STA. 14+74.24 @ CONST. ROWLAND AVE. N
  - STA. 121+77.10 @ CONST. COLONIAL BLVD. WB = JORDAN ZAVODNEY STA. 14+51.24 @ CONST. ROWLAND AVE. N 1130 COLONIAL BLVD NE PT LOT 26454 P.P.N. 222746 (RES)
  - STA. 14+28.15 @ EX. R/W ROWLAND AVE. = STA. 10+00.00 @ EX. R/W WARRICK PL. P.P.N. 200148 (RES)
  - STA. 9+94.67 @ CONST. WARRICK PL. = STA. 14+12.00 @ CONST. ROWLAND AVE. N
  - STA. 9+97.80 @ CONST. WARRICK PL. = STA. 14+12.66 @ EX. R/W ROWLAND AVE.
  - STA. 122+03.40 @ CONST. COLONIAL BLVD. WB = STA. 14+60.16 @ EX. R/W ROWLAND AVE.
  - STA. 122+21.07 @ EX. R/W COLONIAL BLVD. = STA. 14+88.26 @ EX. R/W ROWLAND AVE.
  - STA. 122+39.11 @ CONST. COLONIAL BLVD. EB = STA. 15+16.98 @ EX. R/W ROWLAND AVE.

PROP. RIGHT OF WAY CURVE DATA									
CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING	CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH
PR-17	04° 55' 31"	600.00	51.58'	51.56'	N 77° 11' 12" E	PR-36	04° 18' 01"	600.00	45.03'
PR-18	04° 58' 10"	595.00	51.61'	51.59'	S 77° 03' 47" W	PR-37	04° 22' 04"	595.00	45.36'
PR-21	05° 09' 39"	510.00	45.94'	45.92'	S 80° 03' 58" W	PR-38	04° 19' 51"	600.00	45.35'
PR-22	05° 06' 31"	515.00	45.92'	45.90'	N 80° 10' 48" E	PR-39	09° 40' 45"	515.00	87.00'
PR-23	04° 23' 37"	595.00	45.63'	45.62'	S 81° 44' 41" W	PR-40	09° 46' 43"	510.00	87.04'
PR-24	04° 21' 21"	600.00	45.62'	45.60'	N 81° 49' 38" E	PR-41	04° 55' 24"	595.00	51.13'
PR-25	05° 02' 18"	515.00	45.29'	45.27'	N 85° 15' 12" E	PR-42	04° 52' 49"	600.00	51.11'
PR-26	05° 05' 18"	510.00	45.29'	45.28'	S 85° 11' 27" W	PR-43	17° 29' 14"	515.00	157.18'
PR-27	04° 20' 57"	595.00	45.16'	45.15'	S 86° 06' 58" W	PR-44	16° 57' 11"	510.00	150.90'
PR-28	04° 18' 45"	600.00	45.16'	45.15'	N 86° 09' 41" E	PR-45	10° 08' 34"	600.00	106.21'
PR-29	05° 00' 32"	515.00	45.02'	45.01'	S 89° 43' 23" E	PR-46	10° 14' 22"	595.00	106.33'
PR-30	05° 03' 29"	510.00	45.02'	45.01'	N 89° 44' 10" W	PR-47	03° 41' 28"	600.00	38.65'
PR-31	04° 19' 49"	595.00	44.97'	44.96'	N 89° 32' 40" W	PR-48	02° 13' 17"	595.00	23.07'
PR-32	04° 17' 39"	600.00	44.97'	44.96'	S 89° 32' 07" E	PR-49	40° 47' 23"	20.00	14.24'
PR-33	06° 08' 18"	515.00	55.17'	55.15'	S 84° 08' 59" E	PR-50	76° 19' 43"	20.00	26.64'
PR-34	06° 11' 56"	510.00	55.18'	55.15'	N 84° 06' 28" W	PR-51	55° 51' 40"	25.00	24.37'
PR-35	04° 20' 11"	595.00	45.03'	45.02'	N 85° 12' 39" W				

- SUBDIVISION & PARCEL NOTES:**
- P.B. 10, PG. 64-65 COLONIAL HEIGHTS ALLOTMENT NO. 1 (PARCELS 1-32)
  - P.B. 10, PG. 96 COLONIAL HEIGHTS ALLOTMENT NO. 2 (PARCELS 36, 38, 40, 42, 44, 46, 48, 50, 53, 56)
  - P.B. 11, PG. 17 COLONIAL HEIGHTS ALLOTMENT NO. 3 (PARCELS 33-35, 37, 39, 41, 43, 45, 47, 49, 51-52, 54-55, 57)

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