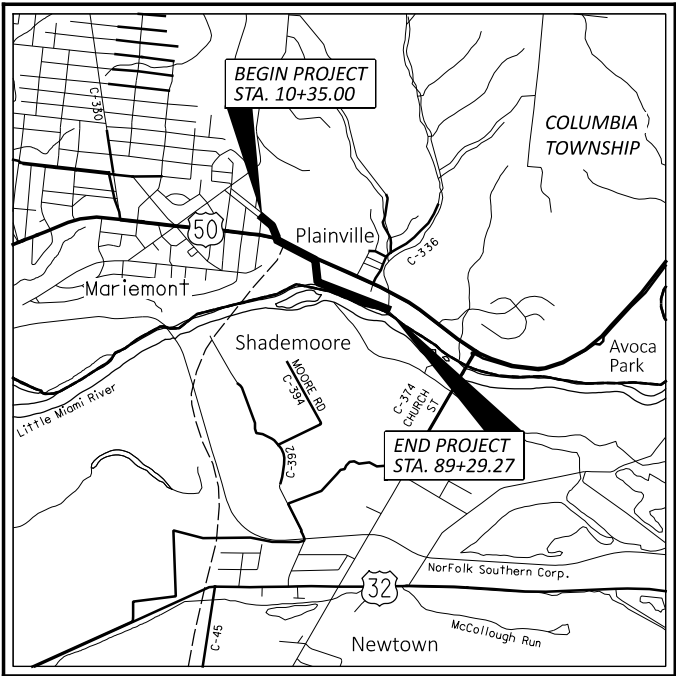




LOCATION MAP

LATITUDE: N 39°08'35" LONGITUDE: 84°21'47" W



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

DESIGN DESIGNATION	TRAIL	US 50
CURRENT ADT (2022)		20204
OPENING YEAR ADT (2027)		21215
DESIGN YEAR ADT (2045)		24851
DESIGN HOURLY VOLUME (2045)		2237
DIRECTIONAL DISTRIBUTION		0.60
TRUCKS (24 HOUR B&C)		0.03
DESIGN SPEED	15 MPH	40 MPH
LEGAL SPEED		40 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	(04) URBAN MINOR ARTERIAL	
NHS PROJECT		NO

DESIGN EXCEPTIONS
NONE REQUIRED

ADA DESIGN WAIVERS
REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig



OHIO 811, 8-1-1, or 1-800-362-2764 (Non members must be called directly)

PLAN PREPARED BY:



Stantec

10200 Alliance Road,
Suite 300
Cincinnati OH 45242
(513) 842-8200

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

HAM-COLUMBIA CONNECTOR

VILLAGE OF MARIEMONT

COLUMBIA TOWNSHIP

HAMILTON COUNTY

INDEX OF SHEETS:

TITLE SHEET	P.1
SCHEMATIC PLAN	P.2, P.2A
TYPICAL SECTIONS	P.3-P.5
GENERAL NOTES	P.6-P.8
MAINTENANCE OF TRAFFIC	P.9-P.12
GENERAL SUMMARY	P.13 -P.14
SUBSUMMARIES	P.15 -P.16
PROJECT SITE PLAN	P.17
PLAN AND PROFILE SHEETS	P.18 -P.26
CROSS SECTION SHEETS	P.27 -P.70
DRIVEWAY DETAILS	P.71 -P.72
CURB RAMPS AND STAIRS DETAILS	P.73 -P.75
STORM SEWER PROFILE	P.76 -P.77
TRAFFIC SUBSUMMARIES	P.78 -P.79
TRAFFIC CONTROL SHEETS	P.80 -P.84
TRAFFIC SIGNAL SHEETS	P.85 -P.89
LANDSCAPING PLAN SHEETS	P.90 -P.93
WALL DETAILS	P.94 -P.97
STRUCTURES (OVER 20 FOOT SPAN)	P.98 -P.104
HAM-COLUMBIA CONNECTOR	

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/19/24	HW-2.2	7/20/18	TC-52.10	10/18/13			800-2023 7/18/25	
BP-4.1	7/19/13			TC-52.20	1/15/21			823 10/20/23	
BP-5.1	7/18/25	MT-95.31	7/18/25	TC-74.10	7/21/23			832 7/18/25	
BP-7.1	7/18/25	MT-95.41	7/18/25	TC-83.20	7/18/25			878 1/21/22	
		MT-97.10	7/18/25	TC-85.10	1/19/24				
CB-2-2A, 2B, 2C	7/19/24	MT-101.60	1/17/25						
		MT-101.70	7/19/24						
DM-1.1	1/17/25	MT-101.75	7/21/23						
DM-1.3	7/18/14	MT-101.90	7/17/20						
		MT-105.10	1/17/20						
MH-3	7/19/24	MT-110.10	7/19/13						
RM-2.1	7/19/13	TC-41.20	10/18/13						
RM-4.2	7/18/25	TC-41.30	4/21/23						
RM-5.2	7/19/24	TC-41.40	10/18/13						
		TC-42.20	10/18/13						

FEDERAL PROJECT NUMBER

E210 (519)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

CONSTRUCTION OF A 0.7 MILE SHARED USE PATH FROM THE EXISTING MARIEMONT CONNECTOR PROJECT TO THE WESTERN TERMINUS OF THE EXISTING COLUMBIA CONNECTOR TRAIL JUST EAST OF WALTON CREEK. THE PROPOSED SHARED USE PATH WILL BE 12' WIDE. THE PROJECT INCLUDES A PROPOSED RETAINING WALL AND A NEW BRIDGE OVER WALTON CREEK SOUTH OF US 50.

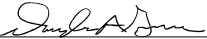
EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	2.98 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.78 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	3.76 ACRES

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN

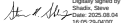
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.


Douglas A. Gruver, P.E.
District 08 Deputy Director


Pamela Boratyn
Director, Department of Transportation

ENGINEER'S SEAL



SIGNED: 
DATE: 08-04-2025

ENGINEER'S SEAL

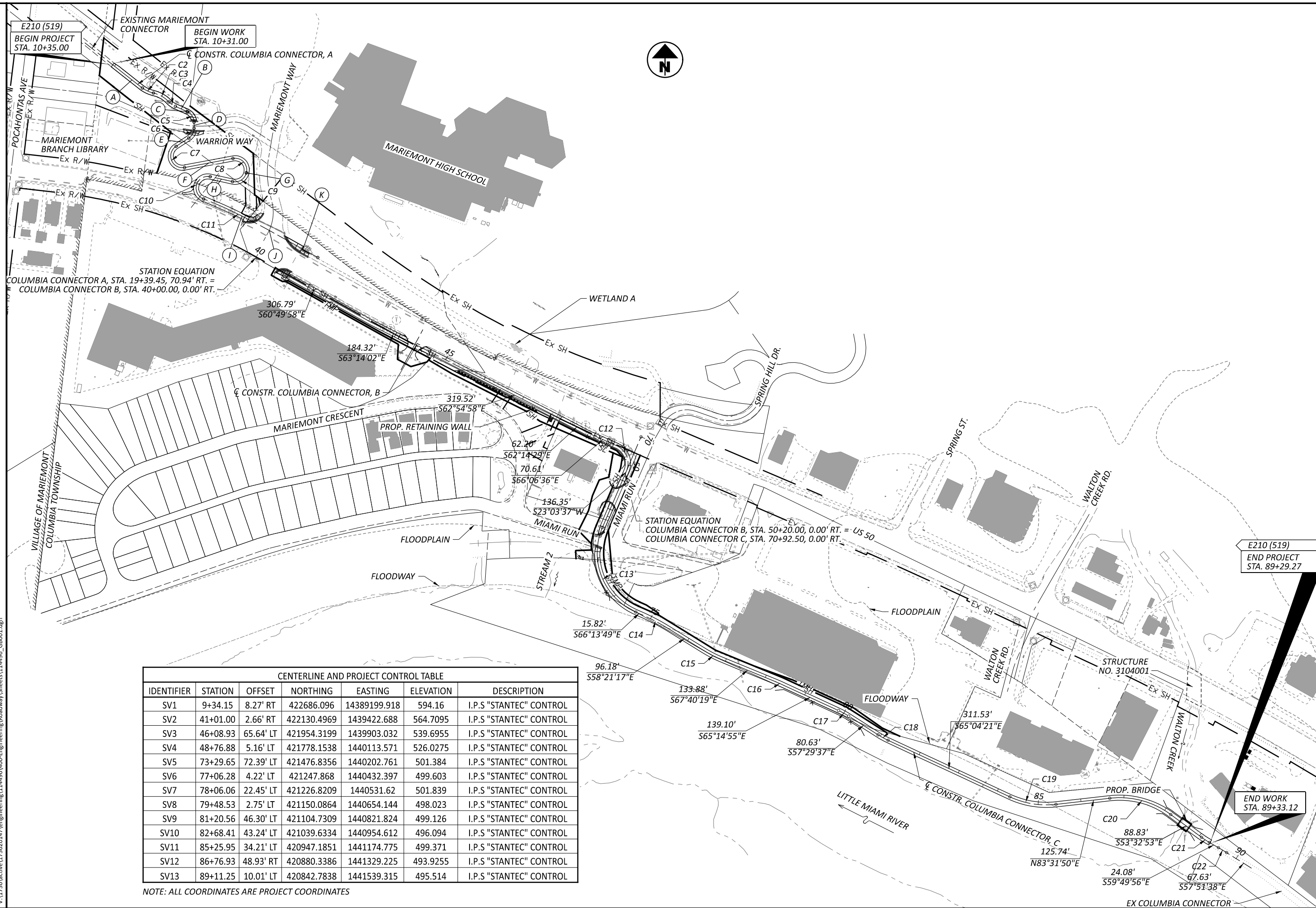
SHEETS 94-104



SIGNED: 
DATE: 08-04-2025

HAM-COLUMBIA CONNECTOR

MODEL: CLP_XCL50 - Plan 1 [Sheet] PAPER/SIZE: 17x11 (in.) DATE: 8/4/2025 TIME: 11:58:23 AM USER: zmorman
V:\1736\active\173620147\engineering\114496\400-Engineering\Roadway\Sheets\114496_GB001.dgn



CENTERLINE AND PROJECT CONTROL TABLE						
IDENTIFIER	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
SV1	9+34.15	8.27' RT	422686.096	14389199.918	594.16	I.P.S "STANTEC" CONTROL
SV2	41+01.00	2.66' RT	422130.4969	1439422.688	564.7095	I.P.S "STANTEC" CONTROL
SV3	46+08.93	65.64' LT	421954.3199	1439903.032	539.6955	I.P.S "STANTEC" CONTROL
SV4	48+76.88	5.16' LT	421778.1538	1440113.571	526.0275	I.P.S "STANTEC" CONTROL
SV5	73+29.65	72.39' LT	421476.8356	1440202.761	501.384	I.P.S "STANTEC" CONTROL
SV6	77+06.28	4.22' LT	421247.868	1440432.397	499.603	I.P.S "STANTEC" CONTROL
SV7	78+06.06	22.45' LT	421226.8209	1440531.62	501.839	I.P.S "STANTEC" CONTROL
SV8	79+48.53	2.75' LT	421150.8864	1440654.144	498.023	I.P.S "STANTEC" CONTROL
SV9	81+20.56	46.30' LT	421104.7309	1440821.824	499.126	I.P.S "STANTEC" CONTROL
SV10	82+68.41	43.24' LT	421039.6334	1440954.612	496.094	I.P.S "STANTEC" CONTROL
SV11	85+25.95	34.21' LT	420947.1851	1441174.775	499.371	I.P.S "STANTEC" CONTROL
SV12	86+76.93	48.93' RT	420880.3386	1441329.225	493.9255	I.P.S "STANTEC" CONTROL
SV13	89+11.25	10.01' LT	420842.7838	1441539.315	495.514	I.P.S "STANTEC" CONTROL

NOTE: ALL COORDINATES ARE PROJECT COORDINATES



CENTERLINE P.I. DATA

COLUMBIA CONNECTOR A	
PI STA.	DEFLECTION
12+40.41	3° 24' 40" RT
18+93.50	1° 45' 01" RT
19+39.19	0° 40' 06" RT

COLUMBIA CONNECTOR B	
PI STA.	DEFLECTION
43+06.79	3° 35' 56" LT
44+91.11	0° 19' 5" RT
48+10.63	0° 40' 30" RT
48+72.83	4° 4' 52" LT

- A

S51°45'02"E 118.07'
- B

S66°15'40"E 29.70'
- C

S62°50'58"E 1.63'
- D

S00°03'43"E 14.18'
- E

S56°59'17"W 35.21'
- F

N79°21'09"E 114.24'
- G

S13°57'22"W 0.80'
- H

N77°39'12"W 52.93'
- I

S60°49'36"E 125.28'
- J

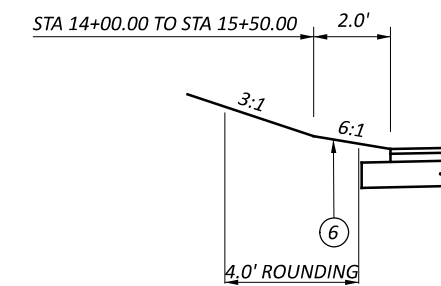
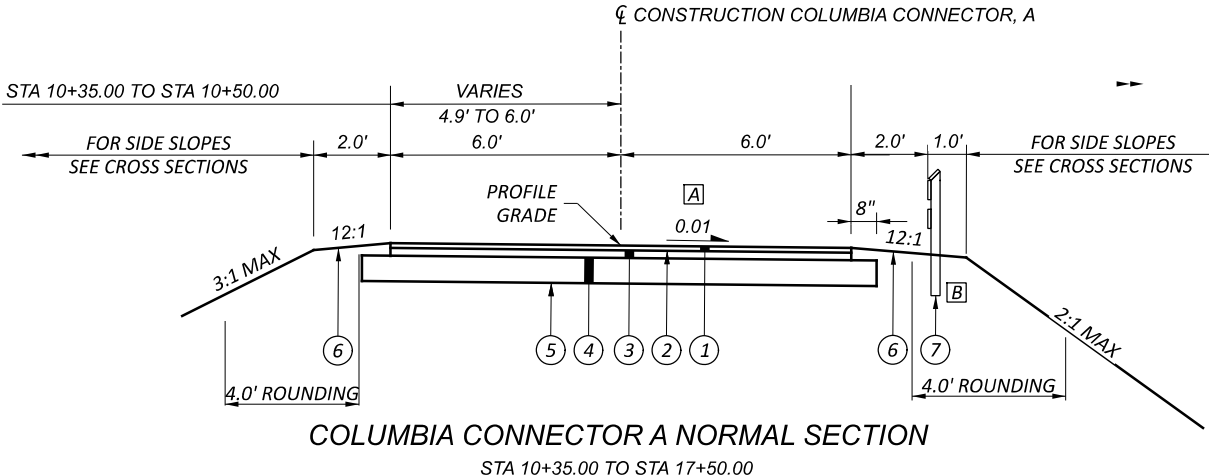
N77°39'12"W 52.93'
- K

S60°49'36"E 125.28'

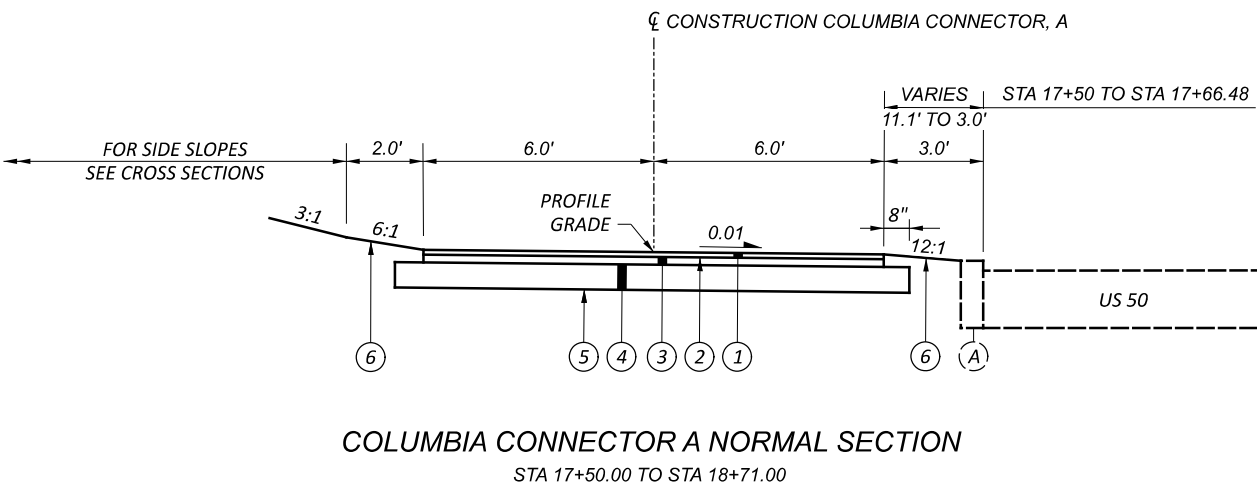
COLUMBIA CONNECTOR

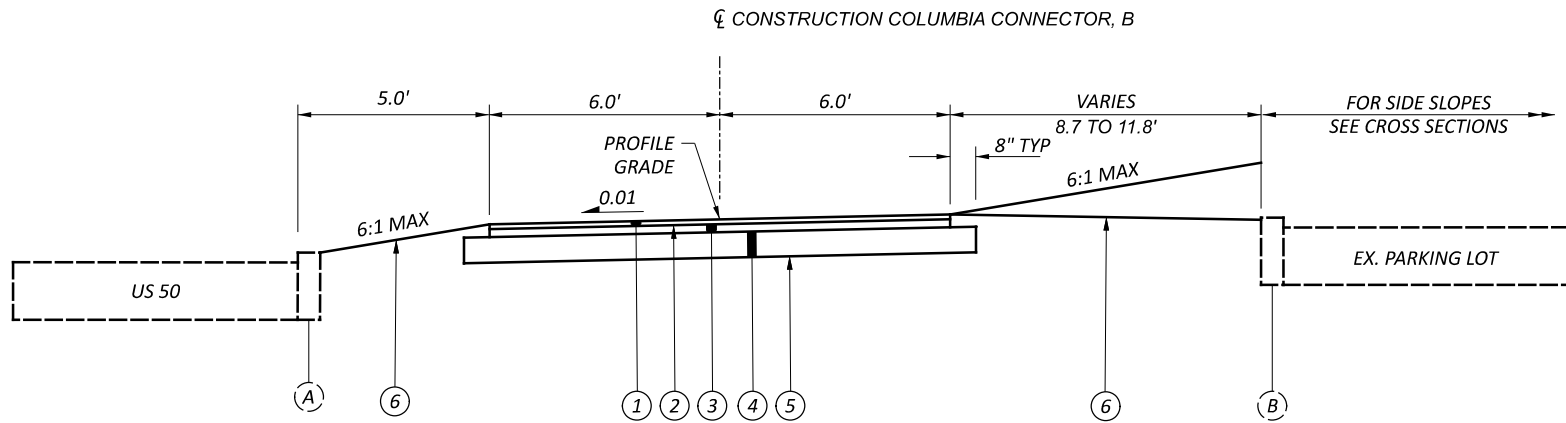
<u>CURVE DATA C2</u> P.I. = STA. 11+34.73 Δ = 24°50'35" LT Dc = 77°57'11" R = 73.50' T = 16.19' L = 31.87' E = 1.76' PC = STA. 11+18.54 PRC = STA. 11+50.41	<u>CURVE DATA C3</u> P.I. = STA. 11+72.09 Δ = 32°39'40" RT Dc = 77°25'37" R = 74.00' T = 21.68' L = 42.18' E = 3.11' PRC = STA. 11+50.41 PT = STA. 11+92.59	<u>CURVE DATA C4</u> P.I. = STA. 12+01.77 Δ = 22°19'44" LT Dc = 123°13'01" R = 46.50' T = 9.18' L = 18.12' E = 0.90' PRC = STA. 11+92.59 PT = STA. 12+10.71	<u>CURVE DATA C5</u> P.I. = STA. 12+58.52 Δ = 62°47'15" RT Dc = 212°12'24" R = 27.00' T = 16.48' L = 29.59' E = 4.63' PC = STA. 12+42.04 PT = STA. 12+71.63	<u>CURVE DATA C6</u> P.I. = STA. 13+00.48 Δ = 57°03'01" RT Dc = 212°12'24" R = 27.00' T = 14.68' L = 26.88' E = 3.73' PC = STA. 12+85.81 PT = STA. 13+12.69	<u>CURVE DATA C7</u> P.I. = STA. 14+84.49 Δ = 157°38'08" LT Dc = 212°12'24" R = 27.00' T = 136.58' L = 74.28' E = 112.23' PC = STA. 13+47.90 PT = STA. 14+22.19
<u>CURVE DATA C8</u> P.I. = STA. 15+78.49 Δ = 114°36'13" RT Dc = 212°12'24" R = 27.00' T = 42.06' L = 54.01' E = 22.98' PC = STA. 15+36.43 PT = STA. 15+90.43	<u>CURVE DATA C9</u> P.I. = STA. 16+17.48 Δ = 88°23'26" RT Dc = 212°12'24" R = 27.00' T = 26.25' L = 41.65' E = 10.66' PC = STA. 15+91.23 PT = STA. 16+32.88	<u>CURVE DATA C10</u> P.I. = STA. 20+35.49 Δ = 171°10'10" LT Dc = 212°12'24" R = 27.00' T = 349.68' L = 80.66' E = 323.72' PC = STA. 16+85.82 PRC = STA. 17+66.48	<u>CURVE DATA C11</u> P.I. = STA. 18+13.58 Δ = 05°34'39" RT Dc = 05°55'33" R = 966.90' T = 47.1' L = 94.12' E = 1.15' PRC = STA. 17+66.48 PT = STA. 18+60.60	<u>CURVE DATA C12</u> P.I. = STA. 49+87.80 Δ = 89°10'14" RT Dc = 127°19'26" R = 45.00' T = 44.35' L = 70.03' E = 18.18' PC = STA. 49+43.44 PT = STA. 50+13.48	<u>CURVE DATA C13</u> P.I. = STA. 73+77.00 Δ = 89°17'26" LT Dc = 38°11'50" R = 150.00' T = 148.15' L = 233.76' E = 60.83' PC = STA. 72+28.85 PT = STA. 74+62.61
<u>CURVE DATA C14</u> P.I. = STA. 75+12.85 Δ = 07°52'32" RT Dc = 11°27'33" R = 500.00' T = 34.42' L = 68.73' E = 01.18' PC = STA. 74+78.43 PT = STA. 75+47.16	<u>CURVE DATA C15</u> P.I. = STA. 76+67.78 Δ = 09°19'02" LT Dc = 19°05'55" R = 300.00' T = 24.45' L = 48.79' E = 0.99' PC = STA. 76+43.33 PT = STA. 76+92.12	<u>CURVE DATA C16</u> P.I. = STA. 78+36.58 Δ = 02°25'24" RT Dc = 11°27'33" R = 500.00' T = 10.58' L = 21.15' E = 0.11' PC = STA. 78+26.00 PT = STA. 78+47.15	<u>CURVE DATA C17</u> P.I. = STA. 79+99.80 Δ = 07°45'18" RT Dc = 28°38'52" R = 200.00' T = 13.56' L = 27.07' E = 0.46' PC = STA. 79+86.25 PT = STA. 80+13.32	<u>CURVE DATA C18</u> P.I. = STA. 81+07.20 Δ = 07°34'43" LT Dc = 28°38'52" R = 200.00' T = 13.25' L = 26.45' E = 0.44' PC = STA. 80+93.95 PT = STA. 81+20.41	<u>CURVE DATA C19</u> P.I. = STA. 84+88.15 Δ = 31°23'49" LT Dc = 28°38'52" R = 200.00' T = 56.21' L = 109.60' E = 7.75' PC = STA. 84+31.93 PT = STA. 85+41.53
<u>CURVE DATA C20</u> P.I. = STA. 87+45.89 Δ = 42°55'18" RT Dc = 28°38'52" R = 200.00' T = 78.62' L = 149.82' E = 14.9' PC = STA. 86+67.27 PT = STA. 88+17.09	<u>CURVE DATA C21</u> P.I. = STA. 89+16.90 Δ = 06°17'03" LT Dc = 28°38'52" R = 200.00' T = 10.98' L = 21.94' E = 0.30' PC = STA. 89+05.92 PT = STA. 89+27.85	<u>CURVE DATA C22</u> P.I. = STA. 89+62.89 Δ = 01°58'18" RT Dc = 08°59'41" R = 637.00' T = 10.96' L = 21.92' E = 0.09' PC = STA. 89+51.93 PT = STA. 89+73.85			

- LEGEND**
- ① ITEM 823, 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449)
 - ② ITEM 407, TACK COAT
 - ③ ITEM 823, 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
 - ④ ITEM 304, 8" AGGREGATE BASE
 - ⑤ ITEM 204, SUBGRADE COMPACTION AND PROOF ROLLING
 - ⑥ ITEM 659, SEEDING AND MULCHING
 - ⑦ ITEM 607, FENCE, MISC.: WOOD FENCE
 - Ⓐ EXISTING US 50 CURB



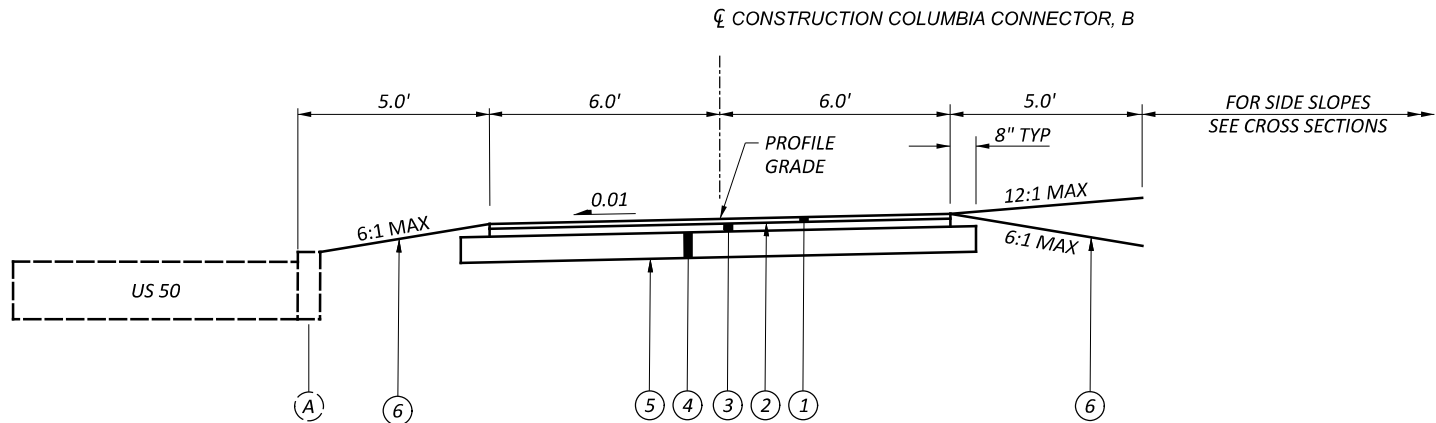
- Ⓐ CROSS SLOPE TOWARDS LEFT SIDE BETWEEN THE FOLLOWING STATIONS:
STA. 13+55.00 TO STA. 14+00.00
STA. 16+20.00 TO STA. 17+45.00
TRANSITION CROSS SLOPE FROM -0.01 TO +0.01 IN 20 FT
- Ⓑ WOOD FENCE
STA 14+10.00 TO STA 15+25.00





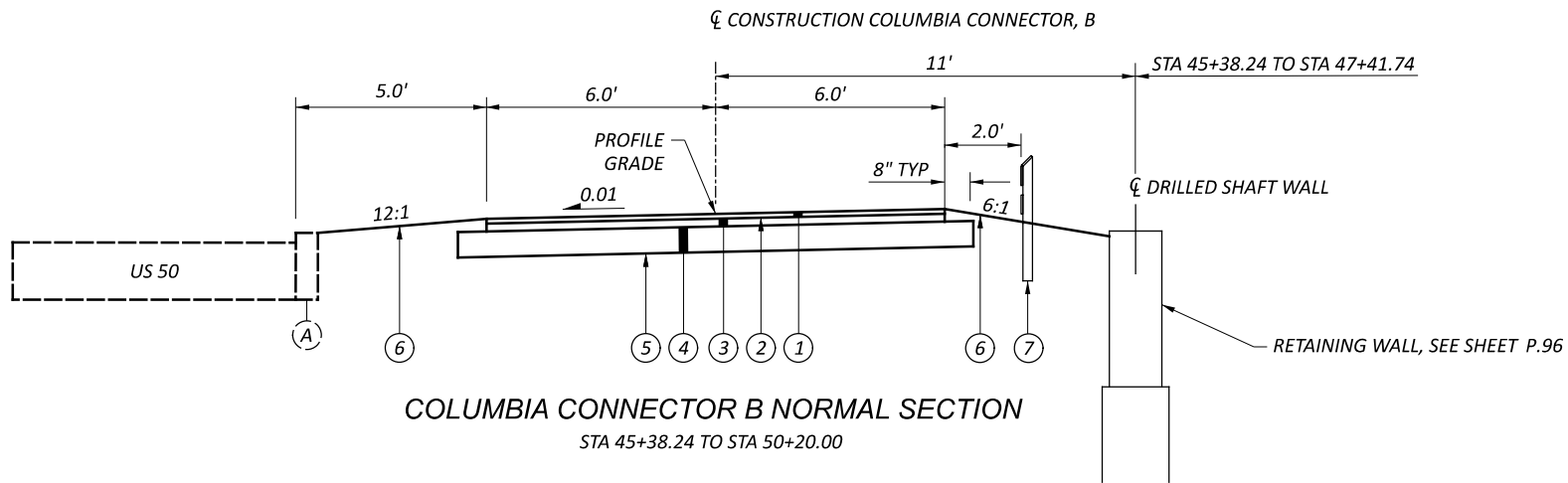
COLUMBIA CONNECTOR B NORMAL SECTION

STA 40+85.50 TO STA 43+79.40



COLUMBIA CONNECTOR B NORMAL SECTION

STA 44+59.68 TO STA 45+38.24

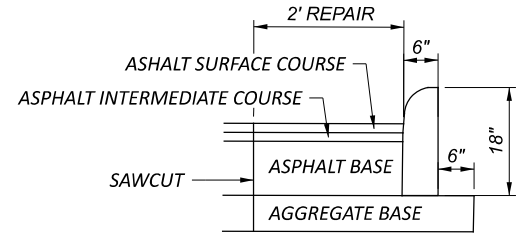


COLUMBIA CONNECTOR B NORMAL SECTION

STA 45+38.24 TO STA 50+20.00



PAVEMENT REPLACEMENT DETAIL



ITEM 253 PAVEMENT REPAIR BUILDUP

ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22

ITEM 441 - 1.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)

ITEM 407 - NON-TRACKING TACK COAT

ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22, (449)

ITEM 304 - 6" AGGREGATE BASE

ITEM 202 - PAVEMENT REMOVED

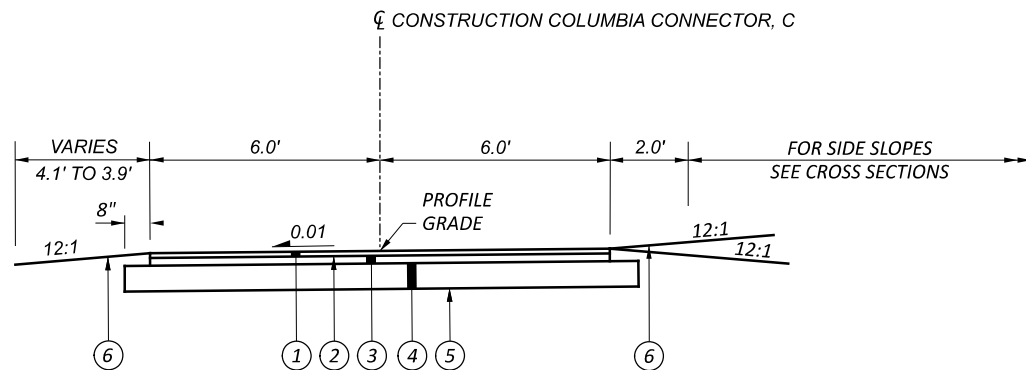
FOR PAVEMENT REPLACEMENT LOCATIONS SEE PLAN AND PROFILE SHEETS WITH ASSOCIATED HATCH PATTERN

LEGEND

- 1 ITEM 823, 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449)
- 2 ITEM 407, TACK COAT
- 3 ITEM 823, 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
- 4 ITEM 304, 8" AGGREGATE BASE
- 5 ITEM 204, SUBGRADE COMPACTION AND PROOF ROLLING
- 6 ITEM 659, SEEDING AND MULCHING
- 7 ITEM 607, FENCE, MISC.: WOOD FENCE
- A EXISTING US 50 CURB
- B EXISTING PARKING LOT CURB

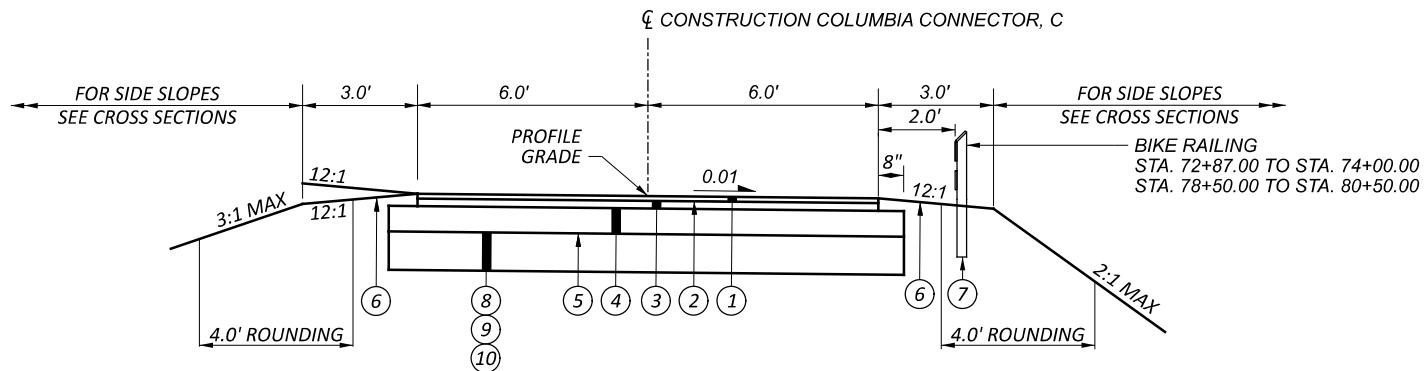
LEGEND

- ① ITEM 823, 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449)
- ② ITEM 407, TACK COAT
- ③ ITEM 823, 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
- ④ ITEM 304, 8" AGGREGATE BASE
- ⑤ ITEM 204, SUBGRADE COMPACTION AND PROOF ROLLING
- ⑥ ITEM 659, SEEDING AND MULCHING
- ⑦ ITEM 607, FENCE, MISC.: WOOD FENCE
- ⑧ ITEM 204, EXCAVATION OF SUBGRADE, 12" (ALTERNATE)
- ⑨ ITEM 204, GRANULAR MATERIAL, TYPE C (ALTERNATE)
- ⑩ ITEM 204, GEOTEXTILE FABRIC, 712.09, TYPE D (ALTERNATE)



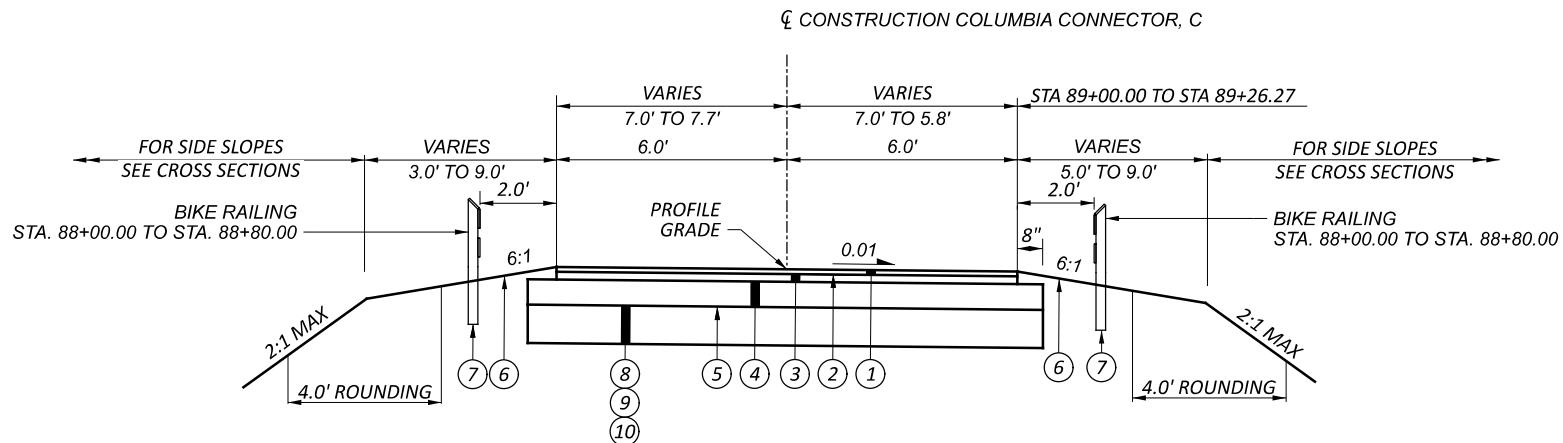
COLUMBIA CONNECTOR C NORMAL SECTION

STA 70+92.50 TO STA 72+26



COLUMBIA CONNECTOR C NORMAL SECTION

STA 72+87.00 TO STA 86+00.00



COLUMBIA CONNECTOR C NORMAL SECTION

STA 86+00.00 TO STA 89+29.27

BRIDGE LIMITS

STA. 88+33.74 TO STA. 88+61.73

DESIGN AGENCY

10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

TOTAL

P.5 104

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC DISTRIBUTION:
DUKE ENERGY
2010 DANA AVE
CINCINNATI, OH 45207
PHONE: (513) 508-9609
(SHANE ERHART)

ELECTRIC TRANSMISSION:
DUKE ENERGY
139 EAST FOURTH ST, 4TH FLOOR ANNEX
CINCINNATI, OH 45202
PHONE: (513) 659-3513
(TIM MEYER)

GAS:
DUKE ENERGY
139 EAST FOURTH ST, ROOM 460A
CINCINNATI, OH 45202
PHONE: (513) 384-4731
(ANDY MCNICHOLS)

CABLE:
CHARTER COMMUNICATIONS
11252 CORNELL PARK DRIVE
CINCINNATI, OH 45242
PHONE: (513) 386-5499
(KENT RIEGER)

SANITARY:
METROPOLITAN SEWER DISTRICT (MSD)
1600 GEST STREET
CINCINNATI, OH 45204
PHONE: (513) 557-7188
(ROB FRANKLIN)

WATER:
GREATER CINCINNATI WATER WORKS
1600 GEST STREET
CINCINNATI OHIO 45204
PHONE: (513)591-6533
(EARL BRATFISH)

TELEPHONE:
ALTA FIBER
221 EAST FOURTH ST, BLDG 121-900
CINCINNATI, OH 45202
PHONE: (513)565-7187
(BRECK COWAN)

TELECOM:
MCI/VERIZON
8800 GOVERNOR HILL DR
CINCINNATI, OH 45249
EMAIL: ORY.ROBERTS@VERIZON.COM
(ORY ROBERTS)

SIGNALS:
ODOT DISTRICT 8
505 SOUTH STATE ROUTE 741
CINCINNATI, OH 45242
PHONE: (513)933-6689

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CLEARING AND GRUBBING, AS PER PLAN

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	20	1	21
30"	1		1
48"	1		1

TREE PROTECTION IS REQUIRED FOR ANY TREE TO BE RETAINED FOLLOWING CONSTRUCTION. TREES TO BE RETAINED INCLUDE ANY TREES INDICATED ON THE PLANS WITHIN THE LIMITS OF CONSTRUCTION NOT SPECIFIED TO BE REMOVED OR ANY TREES ADJACENT TO THE PROJECT AREA WHEN THE LIMITS OF CONSTRUCTION PASS UNDER THIER DRIPLINES. TREE PROTECTION SHALL CONSIST OF ORANGE COLOR HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS WIRE TIED TO STEEL T-POSTS ON MINIMUM 8' SPACING ERECTED AT THE DRIPLINE OF TREE TO BE PROTECTED. GROUPS OF TREES MAY BE PROTECTED BY ONE PERIMETER FENCE MEETING THESE SPECIFICATIONS. NO CONSTRUCTION, GRADING, PARKING OF EQUIPMENT OR VEHICLES OR STORAGE OF MATERIALS SHALL BE ALLOWED WITHIN THE TREE PROTECTION LIMITS. TREE PROTECTION SHALL BE ESTABLISHED PRIOR TO ANY SOIL DISTURBING ACTIVITY BEGINS AND REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION. THE LOCATION OF TREE PROTECTION FOR EACH TREE SHALL BE MARKED, STAKED, OR FLAGGED, FOR APPROVAL BY THE ENGINEER, PRIOR TO INSTALLATION. IN THE EVENT OF DIRECT DISTURBANCE TO ROOTS OF TREES TO REMAIN, ANY DAMAGED ROOTS SHALL BE CLEANLY CUT BACK TO AN UNDAMAGED SECTION AND A SOLUTION OF PHOSPHITE 30 OR APPROVED EQUAL APPLIED TO CUT ROOT ENDS.

IT IS THE INTENT TO MINIMIZE THE NUMBER OF TREE REMOVALS AS A RESULT OF THIS PROJECT. ANY ADDITIONAL TREE REMOVALS DEEMED NECESSARY BY THE CONTRACTOR AND NOT MARKED IN THE PLANS SHALL BE APPROVED BY THE ENGINEER IN ADVANCE OF SUCH REMOVAL.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING, AS PER PLAN AND SHALL INCLUDE ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK. ALL OTHER ASPECTS OF ITEM 201 SHALL APPLY.

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 AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ADA WAIVER

AN APPROVED ADA DESIGN WAIVER IS REQUIRED ON THIS PROJECT. THE FOLLOWING FEATURES LISTED BELOW CANNOT FEASIBLY BE CONSTRUCTED TO MEET ADA GUIDELINES.

ADA DESIGN WAIVER		
ADA FEATURE	APPROVAL DATE	SHEET NUMBERS
RMP0029762	07/23/2025	P20, P73
RMP0029764	07/23/2025	P20, P73
RMP0029771	07/23/2025	P23, P74
RMP0029773	07/23/2025	P23, P74
RMP0029774	07/23/2025	P23, P74

ROUNDING

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

ITEM 690 - CONCRETE, MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CMS SPECIFICATIONS 455 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

ITEM 511 - CONCRETE, MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM 511 - CONCRETE, MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:
UPON APPROVAL OF CONSULTANT 20%
PROGRESSIVE EQUIVALENT PAYMENTS 50%
UPON SUBMISSION OF FINAL REPORT 30%.

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.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: GPS - ODOT VRS
MONUMENT TYPE: 30" X 5/8" IRON PIN W/ CAP

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011)
ELLIPSOID: (GRS 80)
MAP PROJECTION: LAMBERT CONFORMAL
COORDINATE SYSTEM: SPC (3402 OH SOUTH)
COMBINED SCALE FACTOR: 1.0000738355
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.

DESIGN AGENCY



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DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

P.6

TOTAL

104

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 9 PM AND 8 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.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. P.15 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 2.0 HOUR.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

- SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
- EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF THE EXCAVATION LIMITS ARE SHOWN AND LABERLED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).
- IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
- COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.
- APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.

- EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
- PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
- FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF THE LUNKEN AIRPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 160 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
OBSTRUCTION EVALUATION GROUP
10101 HILLWOOD PARKWAY
FORT WORTH, TX 76177
FAX: (817) 222-5920
HTTP://CEAAA.FAA.GOV

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
OHIO.AIRPORT.PROTECTION@DOT.OHIO.GOV

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	605 CU. YD.
659, COMMERCIAL FERTILIZER	0.73 TON
659, LIME	1.13 ACRES
659, WATER	30 M. GAL.

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.

PERMITS - WATERWAY PERMITS

SEE SPECIAL PROVISIONS IN THE CONTRACT DOCUMENT FOR WATERWAY PERMIT CONDITIONS OF WHICH THE CONTRACTOR MUST COMPLY.

ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT (ESA). FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ENVIRONMENTAL COMMITMENTS

1) THE CONTRACTOR SHALL INSTRUCT WORKERS NOT TO HANDLE ANY LIVE, DEAD OR INJURED BATS DISCOVERED AT THE PROJECT SITE. THIS IS TO ENSURE THAT BOTH THE HANDLER AND THE ANIMAL ARE PROTECTED FROM EXPOSURE TO INJURY AND/OR DISEASE. ANY PARTY FINDING A DEAD, INJURED, OR SICK SPECIMEN MUST PROMPTLY NOTIFY THE OHIO FIELD OFFICE AT (614) 416-8993. REPORTING THE DISCOVERY OF DEAD OR INJURED BATS IS REQUIRED IN ALL CASES TO ENABLE THE SERVICE TO DETERMINE WHETHER THE LEVEL OF INCIDENTAL TAKE EXEMPTED BY THIS PBO HAS BEEN EXCEEDED AND TO ENSURE THE TERMS AND CONDITIONS ARE APPROPRIATE AND EFFECTIVE. BIOLOGICAL MATERIAL MUST BE PRESERVED IN THE BEST POSSIBLE CONDITION; THEREFORE, PROJECT PERSONNEL ARE RESPONSIBLE FOR ENSURING THAT ANY EVIDENCE ESSENTIAL FOR DETERMINING THE CAUSE OF DEATH OR INJURY IS NOT UNNECESSARILY DISTURBED.

2) WHERE APPROPRIATE, THE CONTRACTOR WILL REVEGETATE DISTURBED AREAS WITH NATIVE GRASSES AND WILDFLOWERS (CMS ITEM 659.09) OR SIMILAR SEED MIXES COMPOSED OF NATIVE HERBS AND GRASSES.

3) THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SWPPP, PER SS 832, BEFORE EARTHWORK COMMENCES. SEDIMENT AND EROSION CONTROLS SHALL BE PROPERLY INSTALLED AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. STRAW BALES SHALL NOT BE PERMITTED AS A FORM OF SEDIMENT CONTROL. ENSURE TIMELY ADHERENCE TO THE GENERAL CONSTRUCTION PERMIT FOR ALL SEDIMENT AND EROSION CONTROLS, INCLUDING SEEDING AND MULCHING. PARTICULAR ATTENTION SHALL BE GIVEN TO ANY DRAINAGE WAYS, UNPROTECTED SLOPES, DICHTES, AND STREAMS THAT COULD CONVEY SEDIMENT LADEN WATERS DIRECTLY TO THE LITTLE MIAMI SCENIC RIVER.

STORAGE OF FUELS, PETROCHEMICALS AND EQUIPMENT

THE CONTRACTOR SHALL NOT STORE IDLE EQUIPMENT, PETROCHEMICALS, AND TOXIC/HAZARDOUS MATERIALS IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES OR STREAMS THAT COULD CONVEY SUCH MATERIALS TO THE LITTLE MIAMI SCENIC RIVER OR ANY OF ITS TRIBUTARIES. THE CONTRACTOR SHALL NOT DISCHARGE ANY PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS INTO THE LITTLE MIAMI SCENIC RIVER, ITS FLOODPLAINS, OR ANY OF ITS TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS. THE CONTRACTOR SHALL NOT REFUEL EQUIPMENT IN THE FLOODPLAIN OR NEAR ANY TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS.

MATERIAL DISPOSAL

THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION DEBRIS, EARTHEN DEBRIS, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, AND TRASH IS DISPOSED OR AT AN APPROVED UPLAND SITE OR LAND FILL ABOVE 100-YEAR FLOOD ELEVATIONS. THE CONTRACTOR SHALL NOT DISPOSE OF ANY SUCH MATERIALS IN WETLANDS, FLOODPLAINS OR WITHIN 1000 FEET OF THE LITTLE MIAMI SCENIC RIVER.

SCENIC RIVER COORDINATION

THE CONTRACTOR SHALL INVITE THE SOUTHWEST REGIONAL SCENIC RIVER MANAGER, AARON ROURKE, AARON.ROURKE@DNR.OHIO.GOV, (614)-230-8534, TO A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR PRESENT AND NOTIFY MR. ROURKE OF THE PROJECT START DATE ONE WEEK PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL MEET MR. ROURKE PERIODICALLY FOR PERIODIC INSPECTIONS OF THE PROJECT TO ENSURE THAT SCENIC RIVER REQUIREMENTS ARE BEING MET. THE CONTRACTOR SHALL ALSO CONTACT MR. ROURKE ONE WEEK PRIOR TO COMPLETION OF THE PROJECT FOR A FINAL SITE INSPECTION.

SCENIC RIVER COORDINATION (CONTINUED)

THE CONTRACTOR SHALL BE PRESENT AT THE FINAL SITE INSPECTION TO ENSURE THAT FINAL SITE STABILIZATION HAS BEEN ACHIEVED. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER 40 DAYS PRIOR TO WORK WITHIN 1000 FEET OF THE LITTLE MIAMI SCENIC RIVER. THE PROJECT ENGINEER SHALL NOTIFY THE DISTRICT ENVIRONMENTAL COORDINATOR 35 DAYS PRIOR TO WORK WITHIN 1000 FEET OF THE SCENIC RIVER. THE DISTRICT ENVIRONMENTAL COORDINATOR SHALL COORDINATE WITH ODNR SCENIC RIVERS A MINIMUM OF 30 DAYS PRIOR TO ANY WORK WITHIN 1000 FEET OF THE LITTLE MIAMI SCENIC RIVER.

IN-STREAM WORK AND MITIGATION

THE CONTRACTOR SHALL NOT WORK BELOW THE ORDINARY HIGH WATER MARK OF STREAM 2, OR INSTALL, MODIFY, OR REMOVE ANY EXISTING INSTREAM FILLS DURING THE ODNR INSTREAM WORK RESTRICTION PERIOD OF NOVEMBER 1 THROUGH JULY 31.

DEWATERING

THE CONTRACTOR SHALL NOT DISCHARGE WASTEWATER OF ANY KIND INTO THE LITTLE MIAMI SCENIC RIVER OR ANY OF ITS TRIBUTARY STREAMS, DRAINAGE WAYS, OR DITCHES. IF DEWATERING IS NECESSARY TO FACILITATE IN-STREAM WORK OR PIER CONSTRUCTION, PUMP ALL WASTEWATER ONTO A VEGETATED AREA A SUFFICIENT DISTANCE FROM THE RIVER TO ALLOW FOR COMPLETE INFILTRATION. IF DISCHARGE TO A VEGETATED AREA IS NOT FEASIBLE, THEN WASTEWATER SHALL BE DISCHARGED INTO A SEDIMENT FILTER BAG OR INTO A TEMPORARY DETENTION/RETENTION POND OR APPROPRIATE SEDIMENT CONTROL WITH A SUFFICIENT RETENTION PERIOD THAT PERMITS THE SETTLING OF ALL SUSPENDED SOLIDS. THE CONTRACTOR SHALL PUMP ALL WATER TO AN AREA WITHIN THE PROJECT LIMITS OR AN AREA CLEARED BY THE CONTRACTOR

SECTION 4(F) PROPERTIES PROTECTION

- ACCESS TO COLUMBIA CONNECTOR TRAIL AND MARIEMONT CONNECTOR TRAIL SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR THE IMMEDIATELY ADJACENT 100' SECTION OF THE COLUMBIA CONNECTOR TRAIL WHICH CAN BE CLOSED UP TO 2 MONTHS, AND THE ADJACENT 25' SECTION OF THE MARIEMONT CONNECTOR TRAIL WHICH CAN BE CLOSED UP TO 2 WEEKS, IN ORDER TO TIE IN THE TRAILS.
- TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED ALONG PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE SECTION 4(F) PROPERTY AND THE PUBLIC.
- APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF BOTH THE COLUMBIA CONNECTOR TRAIL AND MARIEMONT CONNECTOR TRAIL OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS.

4) THE CONTRACTOR SHALL NOTIFY ODOT, GREAT PARKS OF HAMILTON COUNTY AND THE VILLAGE OF MARIEMONT 2 WEEKS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES IMPACTING THE EXISTING COLUMBIA CONNECTOR TRAIL AND/OR MARIEMONT CONNECTOR TRAILS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS TEMPORARY CONSTRUCTION FENCING AS REQUIRED ABOVE.

ITEM 607 – FENCE, SNOW 200 FT

ITEM 614 - MAINTENANCE OF TRAFFIC, MISC.: TYPE 3 BARRICADE WITH FLASHING BEACONS 2 EACH

ITEM 630 - SIGN, FLAT SHEET (R11-2, TRAIL CLOSED) 10.0 SQ FT

DESIGN AGENCY



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(613) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

P.7

TOTAL

104

SOLE SOURCE AQUIFER AND SCENIC RIVER SPILL PREVENTION

THIS PROJECT IS OVER A PORTION OF THE GREAT MIAMI BURIED AQUIFER AND WITHIN 1000 FEET OF THE LITTLE MIAMI SCENIC RIVER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER. THE CONTRACTOR SHALL KEEP ALL IDLE EQUIPMENT, FUELS, LUBRICANTS, AND ANY STORAGE FOR/OR POTENTIALLY TOXIC OR HAZARDOUS MATERIALS OUT OF THE FEMA DESIGNATED SPECIAL FLOOD HAZARD AREA AND NOT WITHIN 1000 FEET OF THE LITTLE MIAMI SCENIC RIVER. IF REFUELING OF IMMOBILE EQUIPMENT IS NECESSARY WITHIN THE FLOODPLAIN OR NEAR ANY TRIBUTARY DRAINAGE WAYS, DICHTES, OR STREAMS, THE THE CONTRACTOR SHALL PROVIDE SECONDARY CONTAINMENT WITH ENOUGH CAPACITY TO COMPLETELY CONTAIN AND COLLECT ALL POTENTIAL POTENTIAL LIQUID WASTES IN THE EVENT OF A SPILL. SPILLS OF FUELS, OILS, CHEMICALS, OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP BY THE CONTRACTOR. IN ACCORDANCE WITH ORC 3750.06, REPORTABLE SPILLS MUST BE REPORTED TO THE LOCAL FIRE DEPARTMENT (911), THE LOCAL EMERGENCY COORDINATOR (513-825-2260), AND THE OHIO SPILL LINE (1-800-282-9378).

ITEM 611 - 24", SLOTTED DRAIN, TYPE 2

THIS ITEM SHALL CONSIST OF 24 INCH DIAMETER SLOTTED DRAIN ALUMINUM COATED STEEL CONDUIT 707.01 WITH 6 INCH TRAPEZOIDAL GALVANIZED SOLID BAR GRATE AS APPROVED BY THE ENGINEER. ALL COSTS FOR LABOR AND MATERIALS, INCLUDING TYPE 2 BEDDING, AND BACKFILLING AS DETAILED ON STANDARD CONSTRUCTION DRAWING DM-1.3 SHALL BE INCLUDED IN THE PRICE BID PER FT FOR ITEM 611 - 24" SLOTTED DRAIN, TYPE 2.

POST CONSTRUCTION STORM WATER TREATMENT

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

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. THE VEGETATED FILTER STRIPS ARE CURRENTLY IN PLACE AND FUNCTIONAL SO CONTRACTOR DOESN'T NEED TO PERFORM ANY WORK ON EXISTING VEGETATED FILTER STRIPS.

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REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

P.8

TOTAL

104

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON US 50, MIAMI RUN, MARIEMONT WAY, AND WARRIOR WAY BY USE OF THE EXISTING PAVEMENT. WHEN REQUIRED FOR ACTIVE CONSTRUCTION OPERATIONS TRAFFIC ON MIAMI RUN, MARIEMONT WAY, AND WARRIOR WAY MAY BE REDUCED TO ONE LANE-TWO WAY TRAFFIC BY USE OF A FLAGGER ACCORDING TO MT-97.10, AS APPROVED BY THE ENGINEER.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 9 M. GAL.

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION OUTLINED BELOW IS INTENDED TO GUIDE THE WORK IN A MANNER THAT PROVIDES A BASIC LEVEL OF SERVICE TO ALL MOTORISTS.

ALTHOUGH THIS SEQUENCE OF CONSTRUCTION LISTS TASKS IN A SPECIFIC ORDER, NOT EVERY ITEM LISTED MUST BE COMPLETED BEFORE COMMENCING THE NEXT ITEM, AND SOME TASKS MAY BE PERFORMED CONCURRENTLY.

PHASE 1

CONSTRUCT SEGMENT A OF THE COLUMBIA CONNECTOR FROM THE EXISTING MARIEMONT CONNECTOR TO MARIEMONT WAY INCLUDING THE NEW CURB RAMPS NORTH OF US 50 FROM STA 10+40 TO STA 20+50. WORK ALONG MARIEMONT WAY AND WARRIOR WAY SHOULD BE CONDUCTED WHILE SCHOOL IS OUT OF SESSION. USE FLAGGERS, ACCORDING TO MT-97.10, AS NECESSARY TO CONSTRUCT CURB RAMPS ALONG WARRIOR WAY. CLOSE ONE WESTBOUND LANE OF US 50 USING MT-95.31 TO CONSTRUCT THE SHARED USE PATH AND CURB RAMPS ALONG US 50 FROM STA 17+50 TO STA 20+50.

PHASE 2

CONTRACTOR TO CONSTRUCT THE CURB RAMP ALONG THE SOUTH SIDE OF US 50 AT APPROXIMATE STATION 40+85.50 THROUGH THE USE OF FLAGGERS. THE CONTRACTOR SHALL OPEN THAT INTERSECTION UP TO PEDESTRIAN TRAFFIC PRIOR TO BEGINNING THE CONSTRUCTION OF CONNECTOR B.

CONSTRUCT SEGMENT B OF THE COLUMBIA CONNECTOR FROM MARIEMONT WAY TO MIAMI RUN FROM STA. 40+50 TO APPROXIMATE STA. 50+20, INCLUDING THE DRIVE AND RETAINING WALL WITHIN THE STATION LIMITS, BY CLOSING ONE EASTBOUND LANE AS SHOWN IN THE PLANS.

PHASE 3

CONSTRUCT SEGMENT C OF THE COLUMBIA CONNECTOR ALONG MIAMI RUN FROM STA 70+92.50 TO STA 77+00. FLAGGERS MAY BE USED ACCORDING TO MT-97.10. CONSTRUCTION ACTIVITY SHALL NOT INTERFERE WITH BUSINESS ACTIVITIES OF KROGER, KROGER FUEL, OR McDONALDS, INCLUDING THE ACCOMMODATION OF DELIVERY VEHICLES.

THE REMAINDER OF SEGMENT C CAN BE CONSTRUCTED WITH NO IMPACT TO EXISTING TRAFFIC PATTERNS.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE
ITEM DURATION OF NOTICE DUE TO CLOSURE PERMITS & PIO

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS CLOSURES & PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF N/A		14 CALENDAR DAYS CONSTRUCTION & PRIOR TO CLOSURE TRAFFIC PATTERN IMPLEMENTATION CHANGES

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

WINDOW CONTRACT TABLE

DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE	DISINCENTIVE \$ PER DAY	WORK WINDOW	
			START	END
ALL WORK REQUIRED TO COMPLETE CONSTRUCTION PHASE 1	60	\$2500	06/01/2026	08/14/2026
LANE RESTRICTIONS AS IDENTIFIED IN CONSTRUCTION PHASE 2	120	\$2500	04/01/2026	08/14/2027

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

MAINTENANCE OF DRIVES

THE CONTRACTOR SHALL COORDINATE ANY ACCESS RESTRICTION WITH THE PROPERTY OWNERS. DRIVES THAT ARE IMPACTED DURING CONSTRUCTION SUCH THAT ACCESS SHALL BE MAINTAINED TO THE GREATEST EXTENT POSSIBLE. WHEN WORK IS REQUIRED TO RECONSTRUCT A DRIVE APPROACH, THE WORK SHALL BE SCHEDULED TO LIMIT THE DISRUPTION TO THE ADJACENT BUSINESSES TO 14 DAYS. DRIVES SHALL BE MAINTAINED VIA EXISTING PAVEMENT, ITEM 304, OR ITEM 410 TRAFFIC COMPACTED SURFACE TYPE A DURING BUSINESS HOURS. DURING NONBUSINESS HOURS OR AT THE APPROVAL OF THE ENGINEER, THE DRIVES MAY BE CLOSED TO COMPLETE THE PROPOSED WORK. DRIVES WHICH ARE CLOSED, SHALL BE CLOSED USING TYPE III BARRICADES PER SCD MT-101.60.

DURING THE CONSTRUCTION OF THE DRIVE AT STATION 44+20.28, THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE DUMPSTER FOR REGULARLY SCHEDULED TRASH PICKUPS.

DURING THE CONSTRUCTION OF THE DRIVE AT STATION 71+50.65, THE CONTRACTOR SHALL LIMIT DRIVEWAY RESTRICTIONS AND/OR CLOSURES TO PERIODS BETWEEN SCHEDULED FUEL DELIVERIES AS MUCH AS IS FEASIBLE.

PAYMENT FOR THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MOT SUBSUMMARY										
SHEET NO.	REF. NO.	LOCATION	SIDE	STATION		614				622
						WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1	PORTABLE BARRIER, UNANCHORED
				FROM	TO	EACH	EACH	EACH	MI	FT
P.10	EL-1	U.S. 50	RT	1669+08.58	1671+52.87				0.05	
P.10-P.11	EL-2	COLUMBIA CONNECTOR B	LT	40+84.34	49+53.41				0.17	
P.10	IA-1	COLUMBIA CONNECTOR B	LT		44+67.45	1				
P.10-P.11		COLUMBIA CONNECTOR B	LT	74+67.09	47+88.86		7	6		
P.10-P.11	PB-1	COLUMBIA CONNECTOR B	LT	44+67.45	47+88.86					320
SUBTOTAL						1	7	6	0.22	320
TOTALS CARRIED TO GENERAL SUMMARY						1	7	6	0.22	320

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB OR PERMANENT BARRIER (INCLUDING BRIDGE PARAPETS) CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

[INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.]

[THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.]

[DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL) 7 EACH

ITEM 614, OBJECT MARKER, TWO-WAY 6 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]

DESIGN AGENCY



Stantec
10200 Alliance Road,
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Cincinnati, OH 45242
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DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

114496

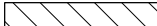
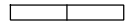
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P.9A

TOTAL

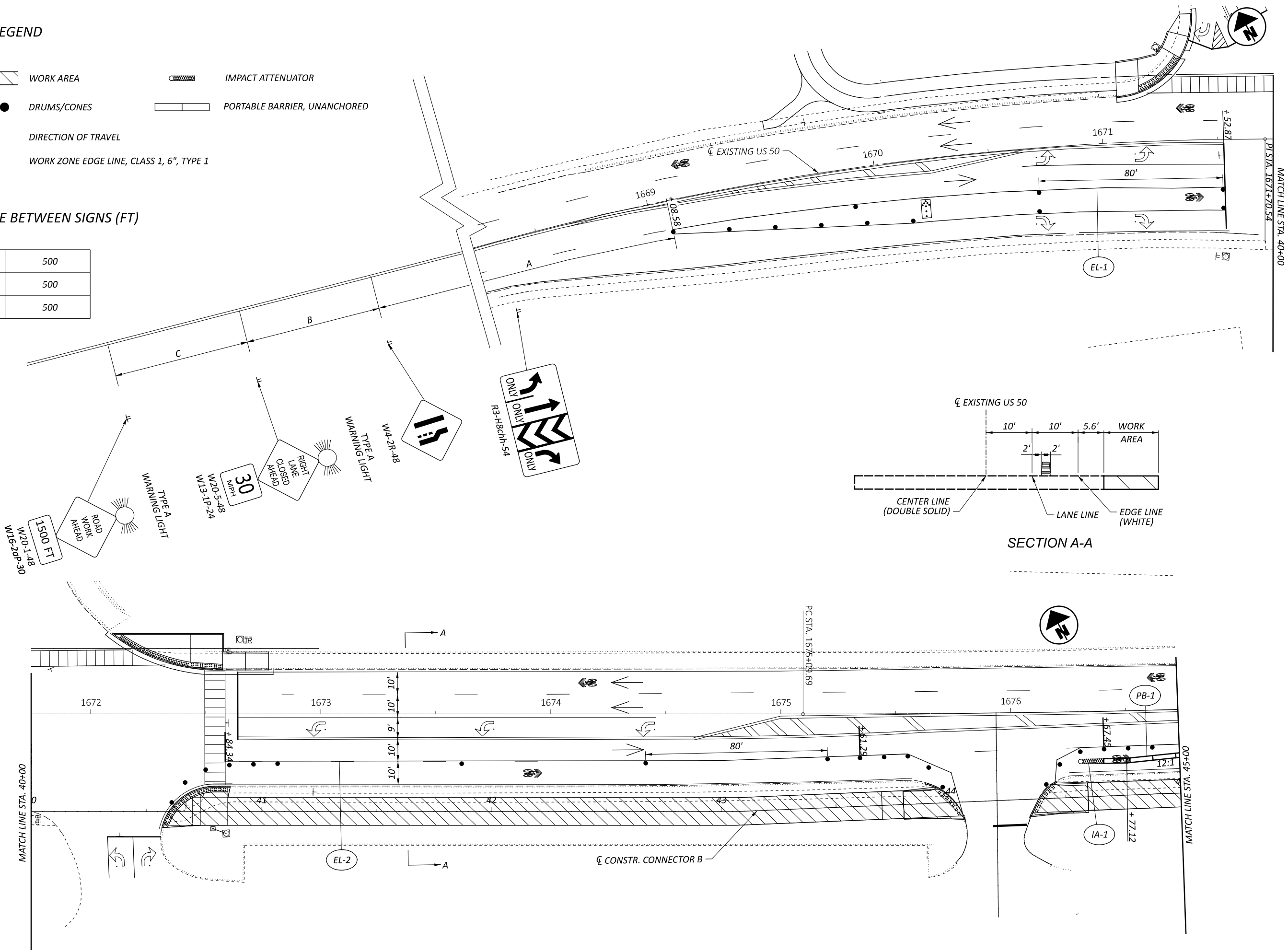
104

LEGEND

-  WORK AREA
-  DRUMS/CONES
-  DIRECTION OF TRAVEL
-  WORK ZONE EDGE LINE, CLASS 1, 6", TYPE 1
-  IMPACT ATTENUATOR
-  PORTABLE BARRIER, UNANCHORED

DISTANCE BETWEEN SIGNS (FT)

A	500
B	500
C	500



MAINTENANCE OF TRAFFIC PHASE 2
TO STA. 45+00.00



DESIGN AGENCY



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DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

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SHEET

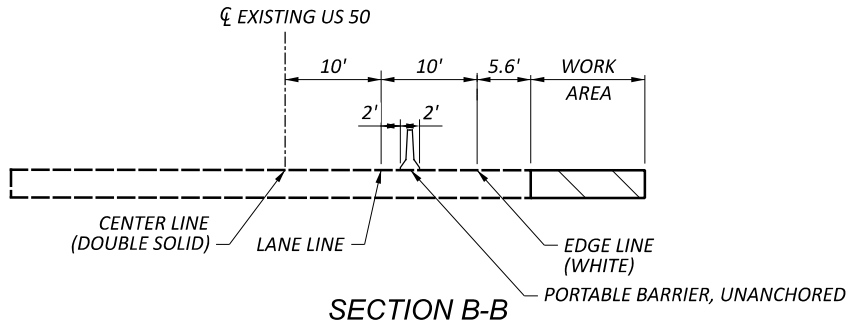
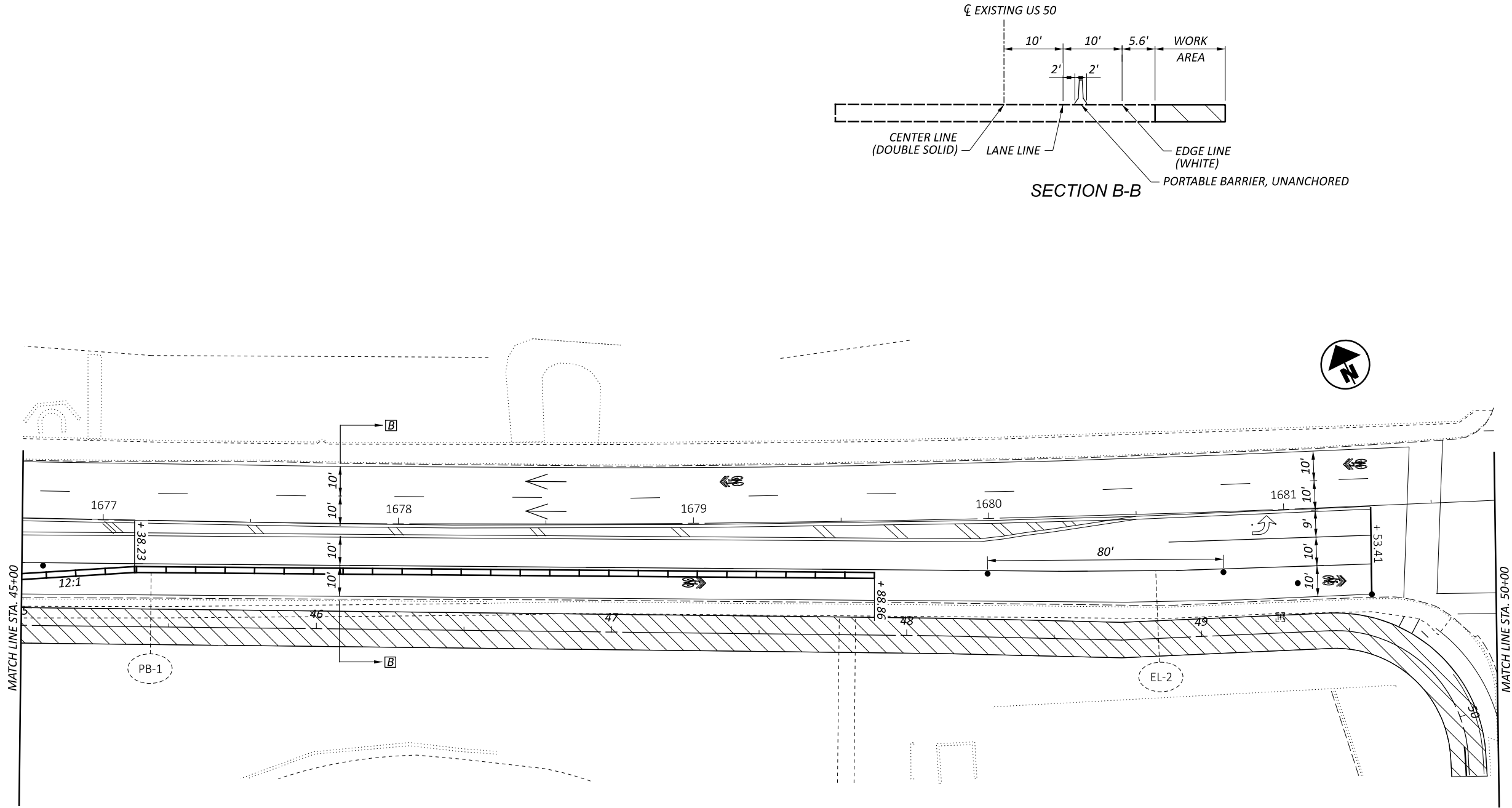
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TOTAL

104

HAM-COLUMBIA CONNECTOR

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FOR LEGEND SEE SHEET P.10

MAINTENANCE OF TRAFFIC PHASE 2
STA. 45+00.00 TO STA. 50+00.00

DESIGN AGENCY



DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

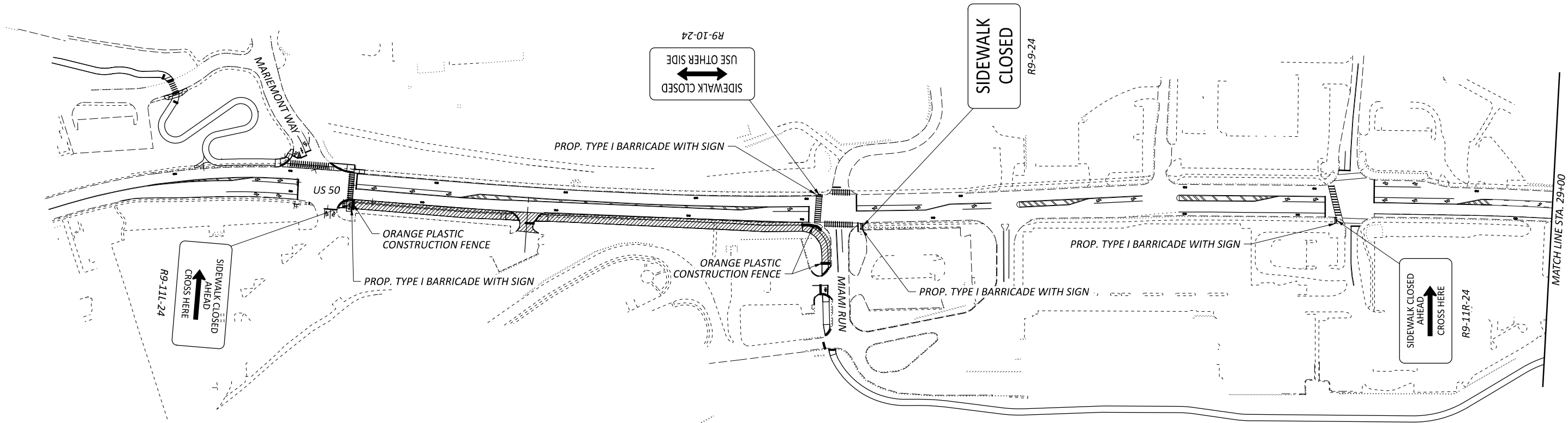
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P.11

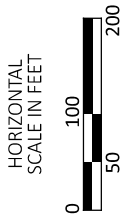
TOTAL

104





-  WORK AREA
-  TYPE I BARRICADE WITH SIGN
-  ORANGE PLASTIC CONSTRUCTION FENCE



MAINTENANCE OF TRAFFIC
PEDESTRIAN DETOUR PLAN

DESIGN AGENCY



10200 Alliance Road,
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DESIGNER

QC

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SNS 08-04-25

PROJECT ID

114496

SHEET

P.12

TOTAL

104

SHEET NUM.													PART. 01/S>2/28	ITEM ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.6	P.7	P.9	P.15	P.16	P.78	P.79	P.85	P.87	P.90	P.96	P.97	P.99							
																		ROADWAY	
LS													LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	P.6
				7									7	202	23000	7	SY	PAVEMENT REMOVED	
			4,364										4,364	202	30000	4,364	SF	WALK REMOVED	
			269										269	202	32000	269	FT	CURB REMOVED	
			77										77	202	35100	77	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
			240										240	202	75000	240	FT	FENCE REMOVED	
			2,783										2,783	203	10000	2,783	CY	EXCAVATION	
			1,358										1,358	203	20000	1,358	CY	EMBANKMENT	
				5,578									5,578	204	10000	5,578	SY	SUBGRADE COMPACTION	
	2												2	204	45000	2	HOURL	PROOF ROLLING	
	200												200	607	30000	200	FT	FENCE, SNOW	P.7
			1,133										1,133	607	98000	1,133	FT	FENCE, MISC.: WOOD FENCE	P.19
			192										192	608	10000	192	SF	4" CONCRETE WALK	
			56										56	608	40000	56	FT	CONCRETE STEPS, TYPE A	
			3,369										3,369	608	52000	3,369	SF	CURB RAMP	
																		EROSION CONTROL	
				7									7	601	32100	7	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
	2												2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	605												605	659	00300	605	CY	TOPSOIL	
			2,778										2,778	659	10000	2,778	SY	SEEDING AND MULCHING	
									1,030				1,030	659	10001	1,030	SY	SEEDING AND MULCHING, AS PER PLAN (TURF MOW STRIP)	P.90
									3,085				3,085	659	10001	3,085	SY	SEEDING AND MULCHING, AS PER PLAN (BALANCE MIX)	P.90
	0.73												0.73	659	20000	0.73	TON	COMMERCIAL FERTILIZER	
	1.13												1.13	659	31000	1.13	ACRE	LIME	
	30												30	659	35000	30	MGAL	WATER	
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
													LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
													LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
			47,377										47,377	832	30000	47,377	EACH	EROSION CONTROL	
																		DRAINAGE	
				1									1	602	20000	1	CY	CONCRETE MASONRY	
				89									89	611	04400	89	FT	12" CONDUIT, TYPE B	
				93									93	611	04600	93	FT	12" CONDUIT, TYPE C	
				5									5	611	05900	5	FT	15" CONDUIT, TYPE B, 706.02	
				6									6	611	16400	6	FT	36" CONDUIT, TYPE B, 706.02	
				26									26	611	16600	26	FT	36" CONDUIT, TYPE C	
				32									32	611	97010	32	FT	SLOTTED DRAIN, TYPE 2	
				1									1	611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
				1									1	611	99574	1	EACH	MANHOLE, NO. 3	
				1									1	611	99654	1	EACH	MANHOLE ADJUSTED TO GRADE	
																		PAVEMENT	
				30									30	253	02000	30	CY	PAVEMENT REPAIR	
			336	1,168									1,504	304	20000	1,504	CY	AGGREGATE BASE	
				266									266	407	10000	266	GAL	TACK COAT	
				10									10	441	70500	10	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS), 1-1/4"	
				10									10	441	70700	10	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS), 1-1/4"	
				37									37	452	12050	37	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
			90										90	609	12001	90	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	P.23
			93										93	609	26000	93	FT	CURB, TYPE 6	
			76										76	609	28000	76	FT	CURB, TYPE 7	
				190									190	823	40000	190	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449)	
				311									311	823	42000	311	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	
																		PAVEMENT ALTERNATES	
				723									723	204	13000	723	CY	EXCAVATION OF SUBGRADE, 12" (ALTERNATE)	
				723									723	204	30020	723	CY	GRANULAR MATERIAL, TYPE C (ALTERNATE)	
				2,169									2,169	204	50000	2,169	SY	GEOTEXTILE FABRIC, 712.09, TYPE D (ALTERNATE)	

GENERAL SUMMARY

DESIGN AGENCY



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DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

P.13

TOTAL

104

Model: Sheet 02 PAPER SIZE: 17x11 (in.) DATE: 8/4/2025 TIME: 9:22:24 AM USER: zrm001n
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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.6	P.7	P.9	P.15	P.16	P.78	P.79	P.85	P.87	P.90	P.96	P.97	P.99	01/S>2/28						
																		WATER WORK	
			9										9	638	10800	9	EACH	VALVE BOX ADJUSTED TO GRADE	
																		TRAFFIC CONTROL	
					153.8								153.8	630	03100	153.8	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
					3								3	630	08600	3	EACH	SIGN POST REFLECTOR	
					3								3	630	79500	3	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
	10				56			1.5					67.5	630	80100	67.5	SF	SIGN, FLAT SHEET	
					4								4	630	84900	4	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
					2								2	630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
					6								6	630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
					1			1					2	630	87500	2	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
						52							52	644	00500	52	FT	STOP LINE	
						444							444	644	00630	444	FT	CROSSWALK LINE, 24"	
																		TRAFFIC SIGNALS	
								7					7	625	25408	7	FT	CONDUIT, 2", 725.051	
								1.5					1.5	630	80100	1.5	SF	SIGN, FLAT SHEET	
								1					1	630	87500	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
								1					1	632	20750	1	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON	
								180					180	632	40500	180	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
								180					180	632	65300	180	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
								1					1	632	90010	1	EACH	PEDESTAL, MISC.:TRANSFORMER BASE AND FOUNDATION	P.87
							1						1	632	90203	1	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN	P.85
							1						1	632	90207	1	EACH	REUSE OF SIGNAL SUPPORT, AS PER PLAN	P.85
							90						90	632	90500	90	FT	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	P.85
									90				90	661	40081	90	EACH	LANDSCAPING	P.90
										990			990	507	00400	990	FT	RETAINING WALLS (001)	P.96
													45	518	21101	45	CY	POROUS BACKFILL, AS PER PLAN	P.94
										650			650	524	94803	650	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	P.94
											29		29	SPECIAL	53000400	29	EACH	STRUCTURES: PRECAST CONCRETE PANEL 1	P.97
											75		75	SPECIAL	53000400	75	EACH	STRUCTURES: PRECAST CONCRETE PANEL 2	P.97
												11	11	SPECIAL	53000400	11	EACH	STRUCTURES: PRECAST CONCRETE PANEL 3	P.97
												1	1	SPECIAL	53000400	1	EACH	STRUCTURES: PRECAST CONCRETE PANEL 4	P.97
												LS	LS	503	21301	LS		STRUCTURE OVER 20 FOOT SPAN (HAM-COLUMBIA CONNECTOR)	P.99
												1,535	1,535	509	26000	1,535	LB	UNCLASSIFIED EXCAVATION, AS PER PLAN	
												146	146	510	09950	146	EACH	GALVANIZED STEEL REINFORCEMENT	
												12	12	511	45710	12	CY	DOWEL HOLES WITH CEMENT GROUT	
												LS	LS	SPECIAL	53000200	LS		CLASS QC1 CONCRETE, ABUTMENT	
																		STRUCTURES, MISC.: PREFABRICATED BRIDGE	P.100
			1										1	614	12384	1	EACH	MAINTENANCE OF TRAFFIC	
			7										7	614	13310	7	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
			6										6	614	13360	6	EACH	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)	
	2												2	614	18000	2	EACH	OBJECT MARKER, TWO WAY	P.7
		0.22											0.22	614	22210	0.22	MILE	MAINTAINING TRAFFIC, MISC.:TYPE 3 BARRICADE WITH FLASHING BEACONS	
																		WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	
			9										9	616	10000	9	MGAL	WATER	
		320											320	622	41100	320	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
			LS										LS	614	11000	LS		MAINTAINING TRAFFIC	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	
LS													LS	SPECIAL	69098400	LS		CONCRETE, MISC; CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	P.6
													LS	878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

EARTHWORK QUANTITIES				
STATION	203		304	659
	EXCAVATION	EMBANKMENT	AGGREGATE BACKFILL	SEEDING & MULCHING
	CU YD	CU YD	CU YD	SQ YD
STA. 10+35.00 to STA. 20+00.00	1219	53		1465
STA. 41+00.00 to STA. 50+20.00	614	219	336	1313
STA. 70+92.50 to STA. 89+00.00	950	1086		
TOTALS CARRIED TO GENERAL SUMMARY	2783	1358	336	2778

EROSION CONTROL

ITEM 832, EROSION CONTROL SHALL BE PERFORMED EXCEPT THAT STRAW BALES WILL NOT BE PERMITTED AS A FORM OF EROSION CONTROL. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 832, EROSION CONROL 47,377 EACH

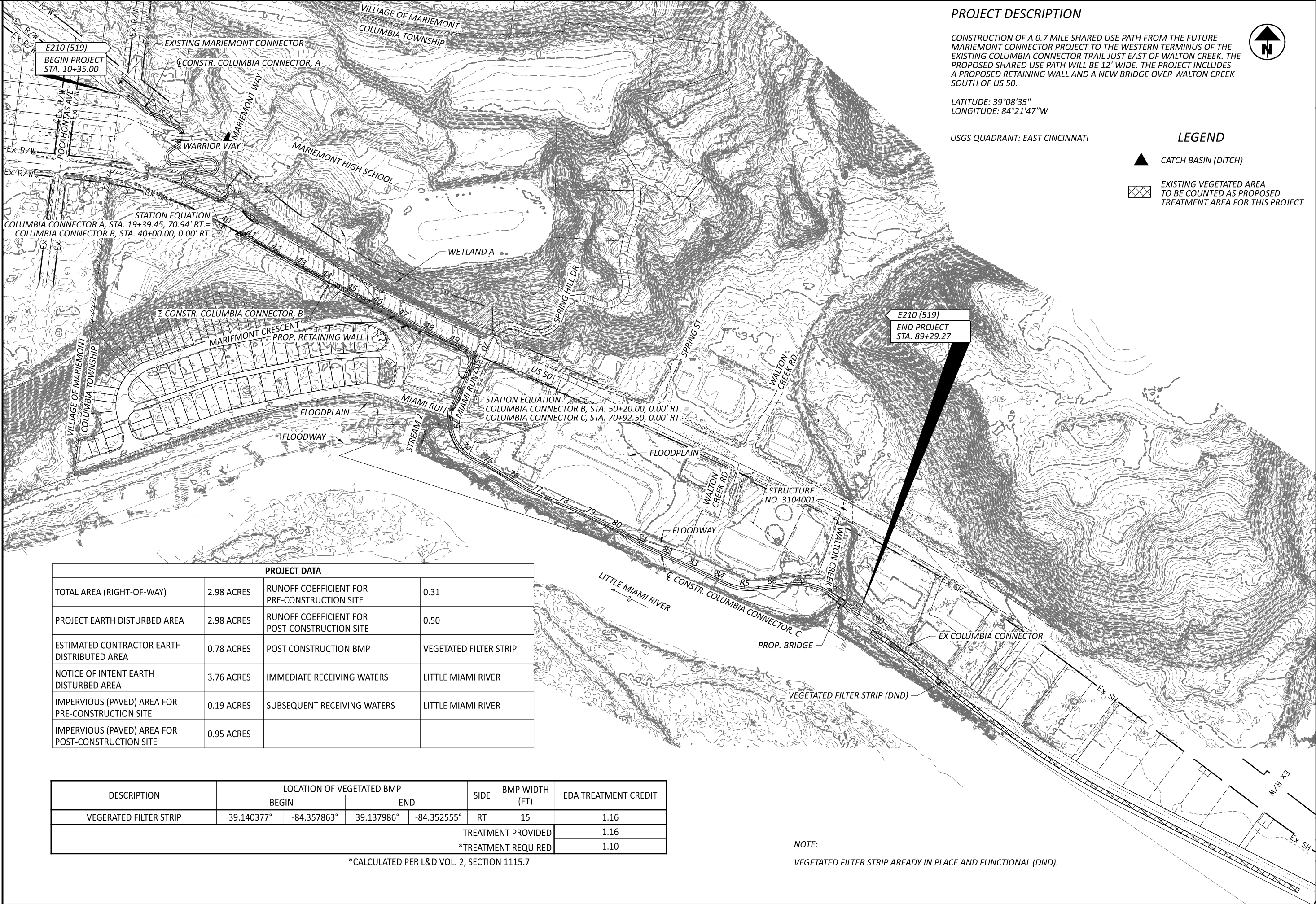
WATER WORK SUBSUMMARY					
SHEET NO.	REF. NO.	LOCATION	STATION	SIDE	638
					VALVE BOX ADJUSTED TO GRADE
					EACH
P.20	U1	COLUMBIA CONNECTOR SECTION B	40+74.22	RT	1
			40+80.42		1
			40+80.53		1
P.22	U2	COLUMBIA CONNECTOR SECTION B	46+59.99	LT	1
			46+60.68		1
			46+60.96		1
P.22	U3	COLUMBIA CONNECTOR SECTION B	47+90.11	LT	1
P.22	U4	COLUMBIA CONNECTOR SECTION B	48+51.67	LT	1
			48+51.71		1
SUBTOTAL					9
TOTALS CARRIED TO GENERAL SUMMARY					9

ROADWAY SUBSUMMARY																
SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	202				607	608			609		
						WALK REMOVED	CURB REMOVED	PIPE REMOVED, 24" AND UNDER	FENCE REMOVED	FENCE, MISC.: WOOD FENCE	4" CONCRETE WALK	CONCRETE STEPS, TYPE A	CURB RAMP	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	CURB, TYPE 6	CURB, TYPE 7
			FROM	TO		SF	FT	FT	FT	FT	SF	FT	SF	FT	FT	FT
P.19-P.20	R1	COLUMBIA CONNECTOR SECTION A	17+40.08	19+04.13	RT	836										
P.20	R5	COLUMBIA CONNECTOR SECTION A	18+75.00	19+04.13	LT&RT		17									
P.20	R6	COLUMBIA CONNECTOR SECTION A	19+68.93	19+86.90	LT&RT		22									
P.20-P.21	R2	COLUMBIA CONNECTOR SECTION B	40+58.10	43+98.96	LT	1364										
P.20	R7	COLUMBIA CONNECTOR SECTION B	40+61.12	40+75.67	LT		18									
P.21	R8	COLUMBIA CONNECTOR SECTION B	43+89.02	44+06.34	LT&RT		45									
P.21	R9	COLUMBIA CONNECTOR SECTION B	44+34.21	44+46.20	LT&RT		47									
P.21-P.22	R3	COLUMBIA CONNECTOR SECTION B	44+40.48	49+55.57	LT	2164										
P.23	R10	COLUMBIA CONNECTOR SECTION C	71+19.37	71+33.91	LT&RT		43									
P.23	R11	COLUMBIA CONNECTOR SECTION C	71+32.32	71+70.16	RT			41								
P.23	R12	COLUMBIA CONNECTOR SECTION C	71+67.27	71+88.16	LT&RT		46									
P.23	R15	COLUMBIA CONNECTOR SECTION C	71+67.30	72+03.04	RT			36								
P.23	R13	COLUMBIA CONNECTOR SECTION C	72+36.73	42+47.23	LT&RT		16									
P.23	R14	COLUMBIA CONNECTOR SECTION C	72+72.72	72+78.12	LT&RT		15									
P.26	R4	COLUMBIA CONNECTOR SECTION C	87+18.61	88+40.63	LT&RT				240							
P.18	P2	COLUMBIA CONNECTOR SECTION A	12+55.54	12+69.06	LT&RT								99			
P.18	P5	COLUMBIA CONNECTOR SECTION A	12+92.18	13+02.21	LT&RT								395			
P.19	P30	COLUMBIA CONNECTOR SECTION A	17+32.30	17+50.12	RT						167					
P.20	P7	COLUMBIA CONNECTOR SECTION A	18+71.00	19+04.13	LT&RT								514			
P.20	P11	COLUMBIA CONNECTOR SECTION B	40+35.18	41+03.20	LT								661			76
P.20	P13	COLUMBIA CONNECTOR SECTION B	40+56.88	40+86.50	LT&RT								391			
P.21	P15	COLUMBIA CONNECTOR SECTION B	43+79.40	44+05.56	LT&RT								287		46	
P.21	P16	COLUMBIA CONNECTOR SECTION B	44+34.24	44+59.68	LT&RT								266		47	
P.22	P31	COLUMBIA CONNECTOR SECTION B	49+64.93	49+69.33	LT						25					
P.23	P18	COLUMBIA CONNECTOR SECTION C	71+09.96	71+34.06	LT&RT								227	43		
P.23	P19	COLUMBIA CONNECTOR SECTION C	71+67.27	71+82.77	LT&RT								183	47		
P.23	P21	COLUMBIA CONNECTOR SECTION C	72+26.38	72+47.23	LT&RT								203			
P.23	P23	COLUMBIA CONNECTOR SECTION C	72+72.97	72+86.50	LT&RT								143			
P.19	F1	COLUMBIA CONNECTOR SECTION A	14+10.00	15+25.00	RT					123						
P.22	F2	COLUMBIA CONNECTOR SECTION B	45+29.58	47+76.36	RT					249						
P.22	F3	COLUMBIA CONNECTOR SECTION B	47+83.36	50+11.96	RT					217						
P.23	F4	COLUMBIA CONNECTOR SECTION C	72+85.76	74+00.17	RT					125						
P.24-P.25	F5	COLUMBIA CONNECTOR SECTION C	78+32.80	80+67.98	RT					239						
P.26	F6	COLUMBIA CONNECTOR SECTION C	87+86.70	88+43.71	RT					62						
P.26	F7	COLUMBIA CONNECTOR SECTION C	87+86.70	88+43.71	RT					58						
P.26	F8	COLUMBIA CONNECTOR SECTION C	88+68.71	88+97.30	LT					30						
P.26	F9	COLUMBIA CONNECTOR SECTION C	88+68.74	88+97.30	RT					30						
P.22	S1	COLUMBIA CONNECTOR SECTION B	47+76.35	47+83.39	RT							56				
SUBTOTAL						4364	269	77	240	1133	192	56	3369	90	93	76
TOTALS CARRIED TO GENERAL SUMMARY						4364	269	77	240	1133	192	56	3369	90	93	76

DRAINAGE SUBSUMMARY																
SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	601	602	611								
						ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CONCRETE MASONRY	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE B, 706.02	36" CONDUIT, TYPE B, 706.02	36" CONDUIT, TYPE C	MANHOLE, NO.3	CATCH BASIN, NO. 2-2B	SLOTTED DRAIN, TYPE 2	MANHOLE ADJUSTED TO GRADE
			FROM	TO		CY	CY	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH
P.18	D1	COLUMBIA CONNECTOR SECTION A	11+13.52	11+61.45	LT & RT			52								
P.23	D2	COLUMBIA CONNECTOR SECTION C	71+31.33	71+70.15	71+70.16			37								
P.23	D3	COLUMBIA CONNECTOR SECTION C	71+70.15	72+03.04	RT				62					1		
P.23	D4	COLUMBIA CONNECTOR SECTION C	72+71.83	73+05.05	RT				31							
P.23	D5	COLUMBIA CONNECTOR SECTION C	72+04.58	73+05.05	LT & RT		0.2				6					
P.23	D6	COLUMBIA CONNECTOR SECTION C	73+05.05	73+09.01	LT & RT		0.1			5						
P.23	D7	COLUMBIA CONNECTOR SECTION C	72+95.64	73+05.05	LT & RT	7	0.69					26	1			
P.23	D8	COLUMBIA CONNECTOR SECTION C	71+34.09	71+66.65	RT										32	
P.20	D9	COLUMBIA CONNECTOR SECTION A	18+94.00		LT										1	
SUBTOTAL						7	0.99	89	93	5	6	26	1	1	32	1
TOTALS CARRIED TO GENERAL SUMMARY						7	1.0	89	93	5	6	26	1	1	32	1

PAVEMENT SUBSUMMARY																		
SHEET NO.	REF. NO.	STATION		SIDE	AREA (COMPUTER GENERATED)	202	204	204			253	304	407	441		452	823	
						PAVEMENT REMOVED	SUBGRADE COMPACTION	EXCAVATION OF SUBGRADE, 12" (ALTERNATE)	GRANULAR MATERIAL, TYPE C (ALTERNATE)	GEOTEXTILE FABRIC, 712.09, TYPE D (ALTERNATE)	PAVEMENT REPAIR (AREA*1.5/27)	8" AGGREGATE BASE (AREA*0.67/27)	TACK COAT (AREA*0.055/9)	1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 449, (DRIVEWAYS) (AREA*0.104/27)	1-1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS) (AREA*0.104/27)	8' NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS (AREA*0.67/27)	1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449) (AREA*0.125/27)	2-1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449) (AREA*0.208/27)
		FROM	TO			SY	SY	CY	CY	SY	CY	CY	GAL	CY	CY	CY	CY	CY
P.18	P1	10+35.00	12+60.00	LT & RT	2699	6.4	380					75	17				13	21
P.18	P3	12+68.17	12+70.19	LT & RT	37						2							
P.18	P4	12+90.17	12+92.18	LT & RT	99						6							
P.18-P.20	P6	13+02.21	18+71.00	LT & RT	6827		948					188	42				32	53
P.20	P8	18+70.92	19+01.31	LT & RT	70						4							
P.20	P9	19+00.97	19+06.39	LT	36						2							
P.20	P10	19+71.81	20+44.66	LT & RT	152						8							
P.20	P12	40+54.35	40+88.70	LT & RT	89						5							
P.20-P.21	P14	40+85.50	43+79.40	LT & RT	3515		490					97	22				17	27
P.21-P.23	P17	44+59.68	71+09.96	LT & RT	6934		963					191	43				33	54
P.23	P20	71+82.77	72+26.38	LT & RT	523		73					15	4				3	4
P.23	P22	72+36.63	72+49.13	LT & RT	34						2							
P.23	P24	71+71.04	72+77.70	LT & RT	30						2							
P.23-P.26	P25	72+86.02	88+46.23	LT & RT	18809		2610	723	723	2169		516	115				88	145
P.26	P26	88+68.02	89+29.37	LT & RT	850		114					23	6				4	7
P.21	P27	43+89.16	44+47.52	LT & RT	582											15		
P.21	P28	44+01.57	44+42.11	LT & RT	1010							25	7	4	4			
P.23	P29	50+51.39	51+15.66	RT	1515							38	10	6	6			
P.23	P30	50+41.63	51+05.96	LT & RT	860											22		
SUBTOTAL						6.4	5578	723	723	2169	30	1168	266	10	10	37	190	311
TOTALS CARRIED TO GENERAL SUMMARY						7	5578	723	723	2169	30	1168	266	10	10	37	190	311





PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY)	2.98 ACRES	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.31
PROJECT EARTH DISTURBED AREA	2.98 ACRES	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.50
ESTIMATED CONTRACTOR EARTH DISTRIBUTED AREA	0.78 ACRES	POST CONSTRUCTION BMP	VEGETATED FILTER STRIP
NOTICE OF INTENT EARTH DISTURBED AREA	3.76 ACRES	IMMEDIATE RECEIVING WATERS	LITTLE MIAMI RIVER
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	0.19 ACRES	SUBSEQUENT RECEIVING WATERS	LITTLE MIAMI RIVER
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	0.95 ACRES		

DESCRIPTION	LOCATION OF VEGETATED BMP				SIDE	BMP WIDTH (FT)	EDA TREATMENT CREDIT
	BEGIN		END				
VEGERATED FILTER STRIP	39.140377°	-84.357863°	39.137986°	-84.352555°	RT	15	1.16
TREATMENT PROVIDED							1.16
*TREATMENT REQUIRED							1.10

*CALCULATED PER L&D VOL. 2, SECTION 1115.7

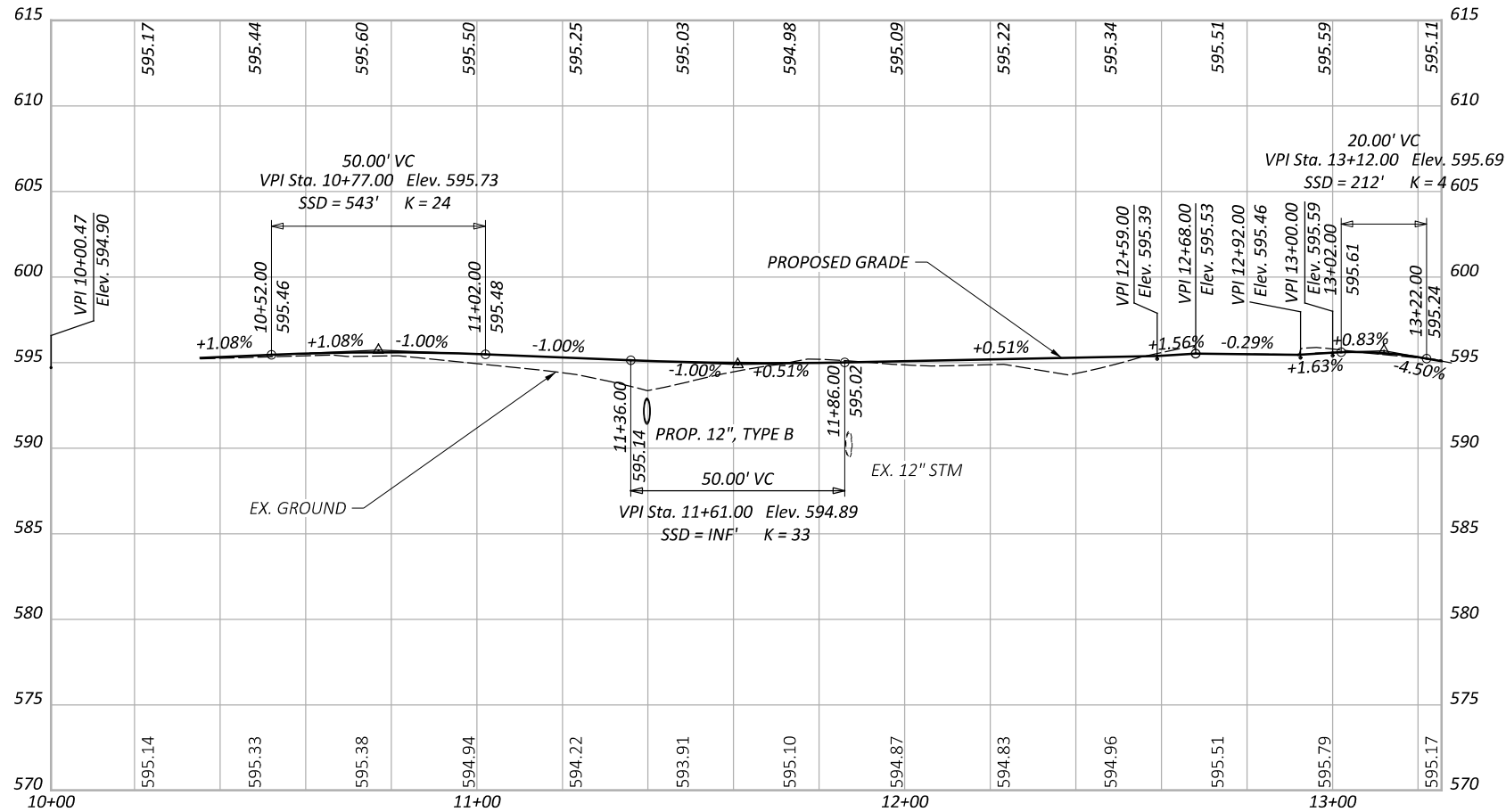
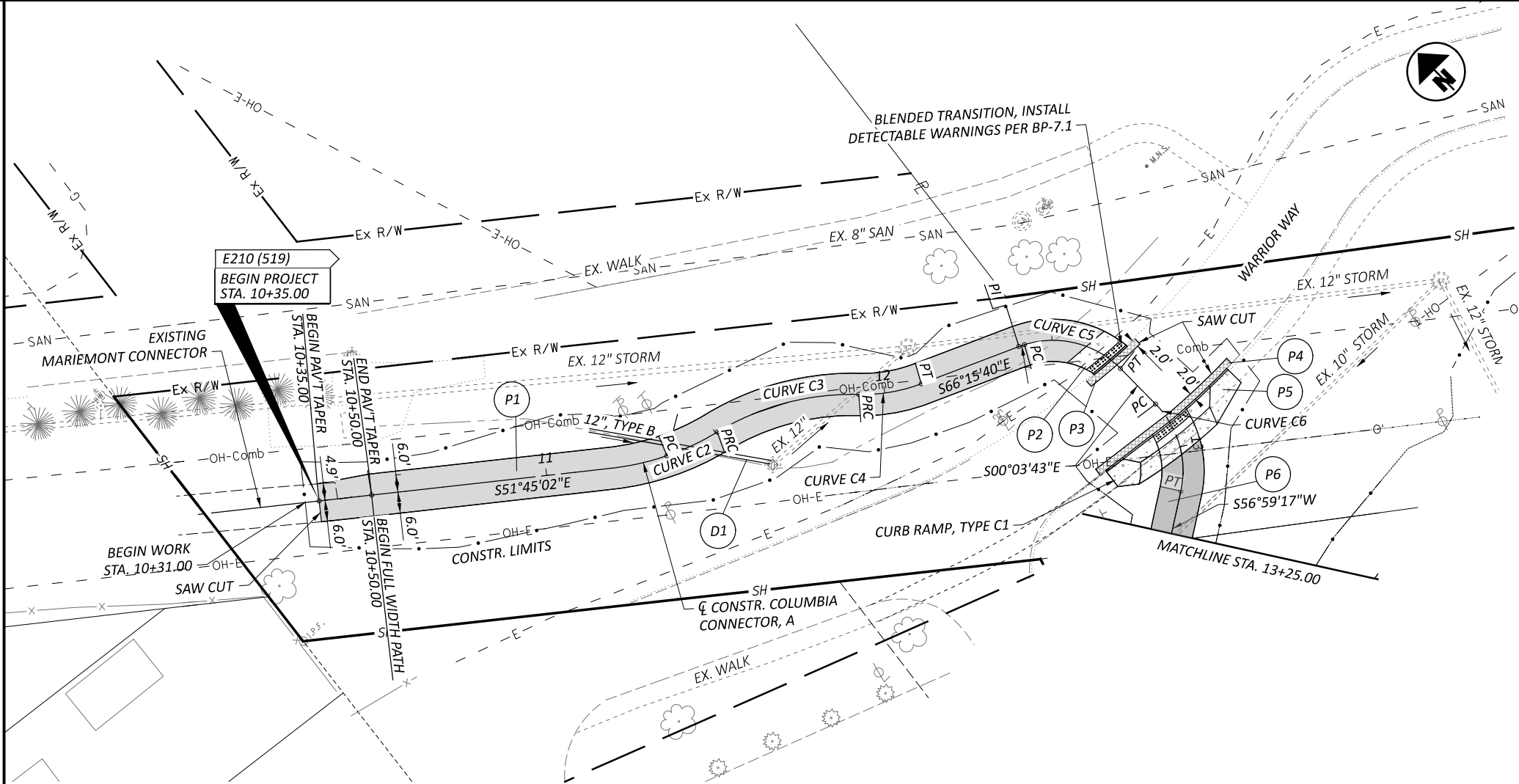
NOTE:
VEGETATED FILTER STRIP AREADY IN PLACE AND FUNCTIONAL (DND).

HORIZONTAL SCALE IN FEET
0 75 150 300

PROJECT SITE PLAN

DESIGN AGENCY

10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(613) 842-8200
DESIGNER
ZTM
REVIEWER
SNS 08-04-25
PROJECT ID
114496
SHEET TOTAL
P.17 104



	ASPHALT CONCRETE SHARED USE PATH
	CONCRETE CURB RAMPS AND BLENDED TRANSITIONS
	ASPHALT CONCRETE PAVEMENT REPLACEMENT, FOR BUILDUP SEE SHEET P.4
	CONCRETE DRIVEWAY
	ASPHALT CONCRETE DRIVEWAY

CURVE DATA C2
P.I. = STA. 11+34.73
 $\Delta = 24^{\circ}50'35''$ LT
 $D_c = 77^{\circ}57'11''$
 $R = 73.50'$
 $T = 16.19'$
 $L = 31.87'$
 $E = 1.76'$
PC = STA. 11+18.54
PRC = STA. 11+50.41

CURVE DATA C3
P.I. = STA. 11+72.09
 $\Delta = 32^{\circ}39'40''$ RT
 $D_c = 77^{\circ}25'37''$
 $R = 74.00'$
 $T = 21.68'$
 $L = 42.18'$
 $E = 3.11'$
PC = STA. 11+50.41
PRC = STA. 11+92.59

CURVE DATA C4
P.I. = STA. 12+01.77
 $\Delta = 22^{\circ}19'44''$ LT
 $D_c = 123^{\circ}13'01''$
 $R = 46.50'$
 $T = 9.18'$
 $L = 18.12'$
 $E = 0.90'$
PC = STA. 11+92.59
PT = STA. 12+10.71

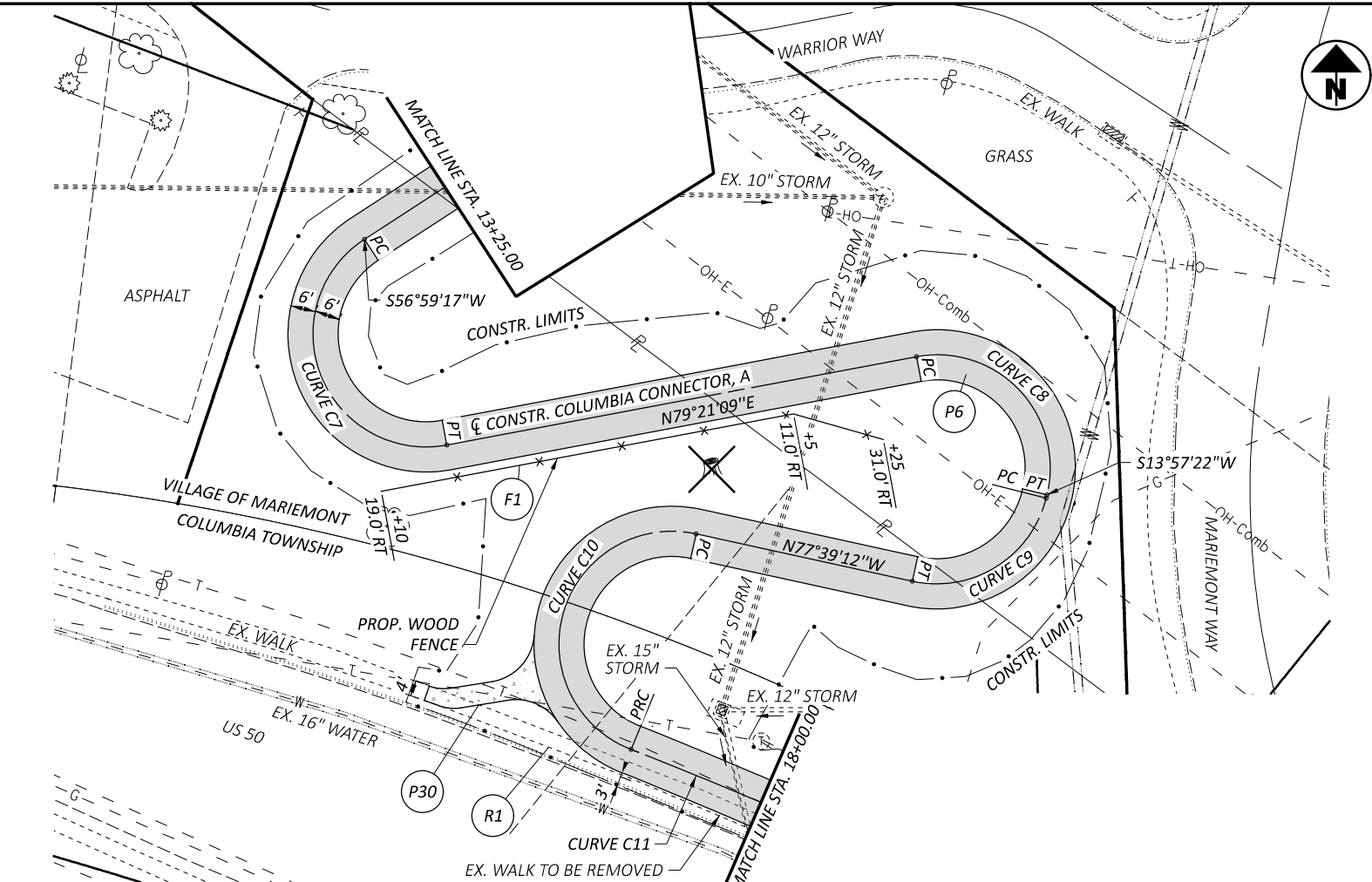
CURVE DATA C5
P.I. = STA. 12+58.52
 $\Delta = 62^{\circ}47'15''$ RT
 $D_c = 212^{\circ}12'24''$
 $R = 27.00'$
 $T = 16.48'$
 $L = 29.59'$
 $E = 4.63'$
PC = STA. 12+42.04
PT = STA. 12+71.63

CURVE DATA C6
P.I. = STA. 13+00.48
 $\Delta = 57^{\circ}03'01''$ RT
 $D_c = 212^{\circ}12'24''$
 $R = 27.00'$
 $T = 14.68'$
 $L = 26.88'$
 $E = 3.73'$
PC = STA. 12+85.81
PT = STA. 13+12.69

P.I. = STA. 12+40.41
DEFLECTION = $03^{\circ}24'40''$ RT
NO CURVE

PLAN AND PROFILE
STA. 10+00.00 TO STA. 13+25.00





CURVE DATA C7
P.I. = STA. 14+84.49
 $\Delta = 157^{\circ}38'08''$ LT
 $D_c = 212^{\circ}12'24''$
 $R = 27.00'$
 $T = 136.58'$
 $L = 74.28'$
 $E = 112.23'$
PC = STA. 13+47.90
PT = STA. 14+22.19

CURVE DATA C8
P.I. = STA. 15+78.49
 $\Delta = 114^{\circ}36'13''$ RT
 $D_c = 212^{\circ}12'24''$
 $R = 27.00'$
 $T = 42.06'$
 $L = 54.01'$
 $E = 22.98'$
PC = STA. 15+36.43
PT = STA. 15+90.43

CURVE DATA C9
P.I. = STA. 16+17.48
 $\Delta = 88^{\circ}23'26''$ RT
 $D_c = 212^{\circ}12'24''$
 $R = 27.00'$
 $T = 26.25'$
 $L = 41.65'$
 $E = 10.66'$
PC = STA. 15+91.23
PT = STA. 16+32.88

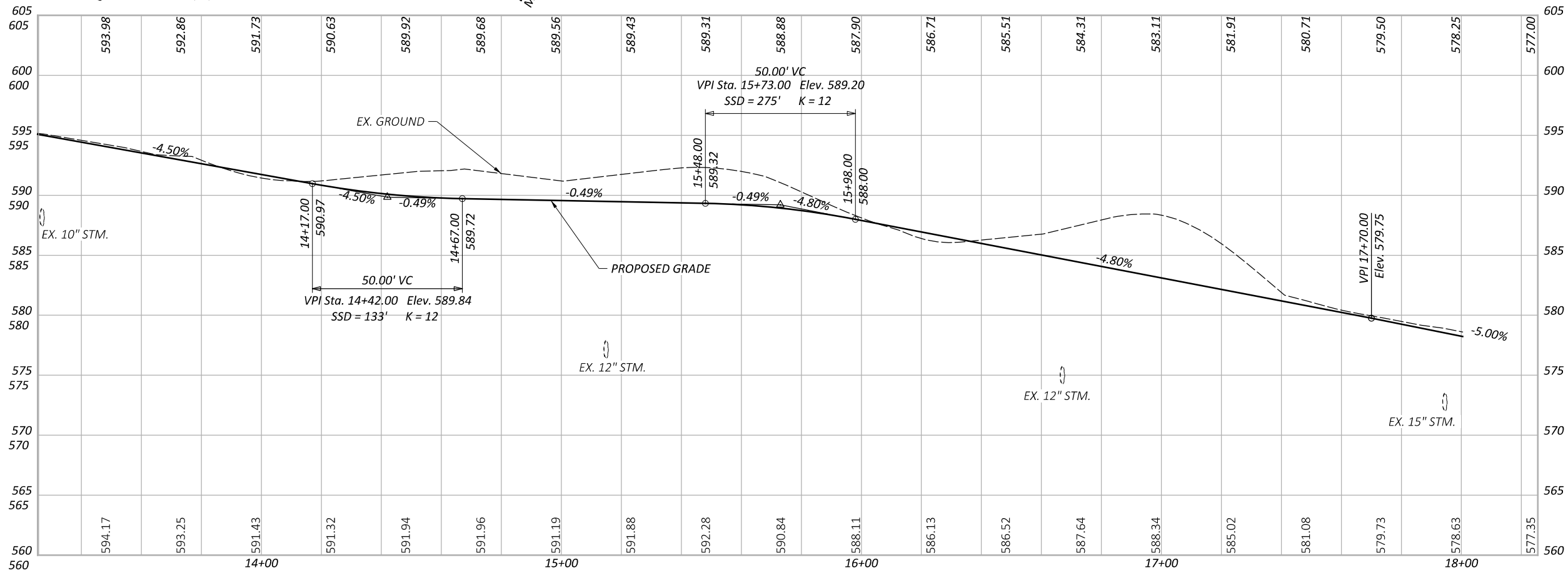
CURVE DATA C10
P.I. = STA. 20+35.49
 $\Delta = 171^{\circ}10'10''$ LT
 $D_c = 212^{\circ}12'24''$
 $R = 27.00'$
 $T = 349.68'$
 $L = 80.66'$
 $E = 323.72'$
PC = STA. 16+85.82
PT = STA. 17+66.48

CURVE DATA C11
P.I. = STA. 18+13.58
 $\Delta = 05^{\circ}34'39''$ RT
 $D_c = 05^{\circ}55'33''$
 $R = 966.90'$
 $T = 47.1'$
 $L = 94.12'$
 $E = 1.15'$
PC = STA. 17+66.48
PT = STA. 18+60.60

ITEM 607 - FENCE, MISC.: WOOD FENCE

THE CONTRACTOR SHALL MEET THE REQUIREMENTS AS SET FORTH IN SCD RM-5.2 FOR THE WOOD FENCE SHOWN IN THE PLANS.

ALL LABOR, EQUIPMENT AND MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER FOOT OF ITEM 607 - FENCE, MISC.: WOOD FENCE.



FOR PAVEMENT LEGEND, SEE SHEET P.18
FOR CURB RAMP DETAILS, SEE SHEETS P.73 TO P.75



PLAN AND PROFILE
STA. 13+25.00 TO STA. 18+00.00

DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

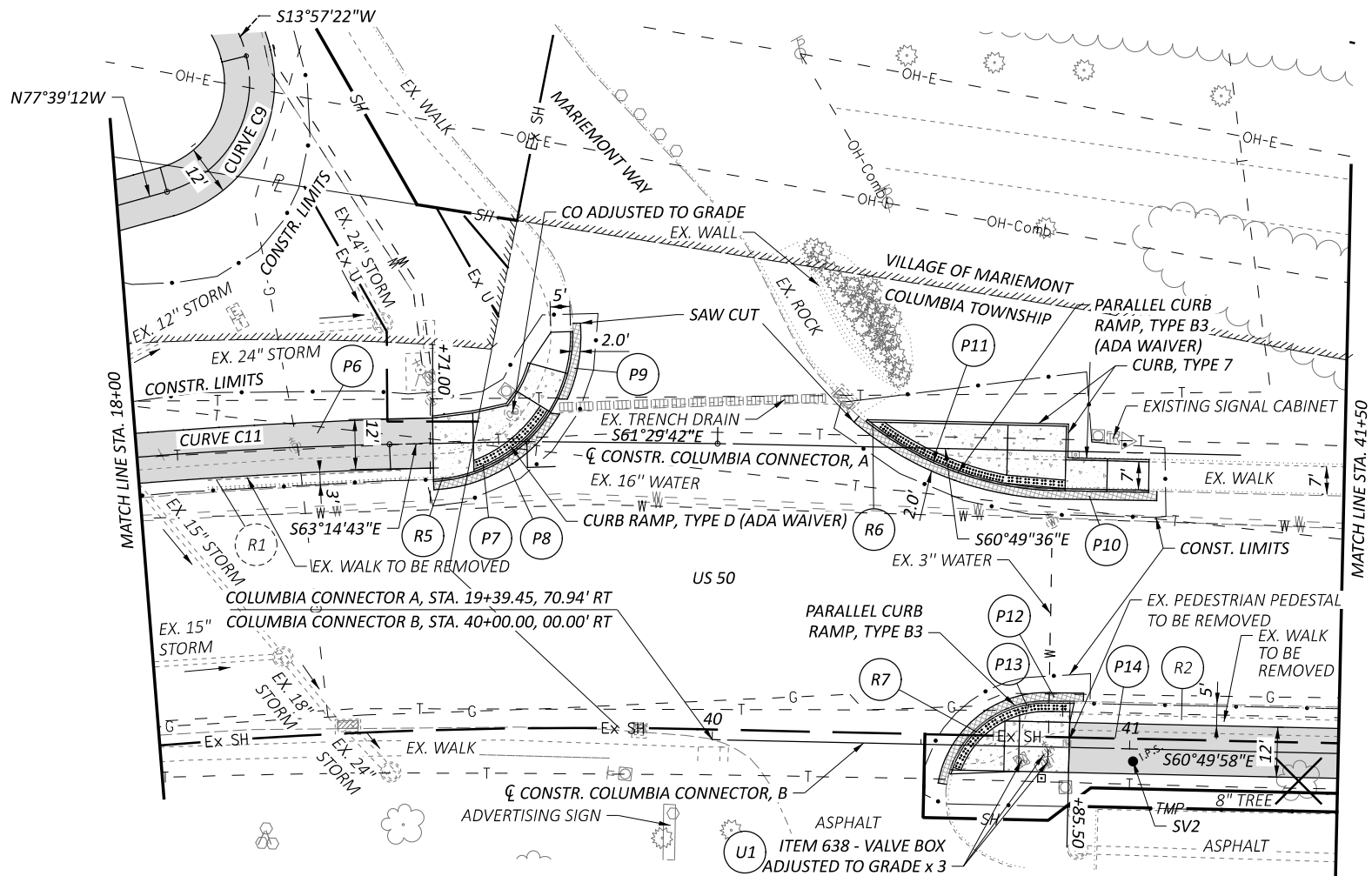
114496

SHEET

P.19

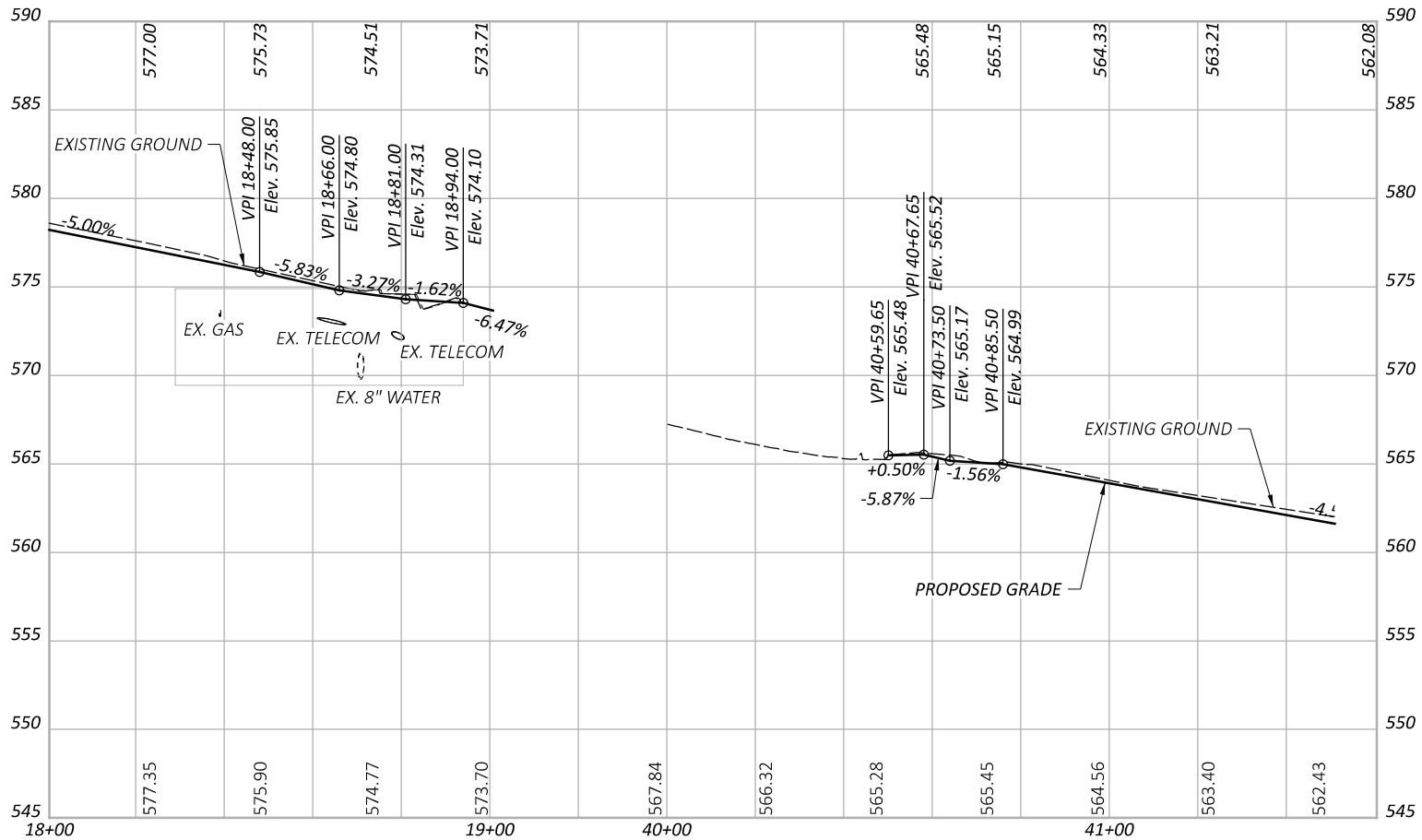
TOTAL

104



P.I. = STA. 18+93.50
DEFLECTION = 01°45'01" RT
NO CURVE

P.I. = STA. 19+39.19
DEFLECTION = 00°40'06" RT
NO CURVE



PLAN AND PROFILE
STA. 18+00.00 TO STA. 41+50.00

DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

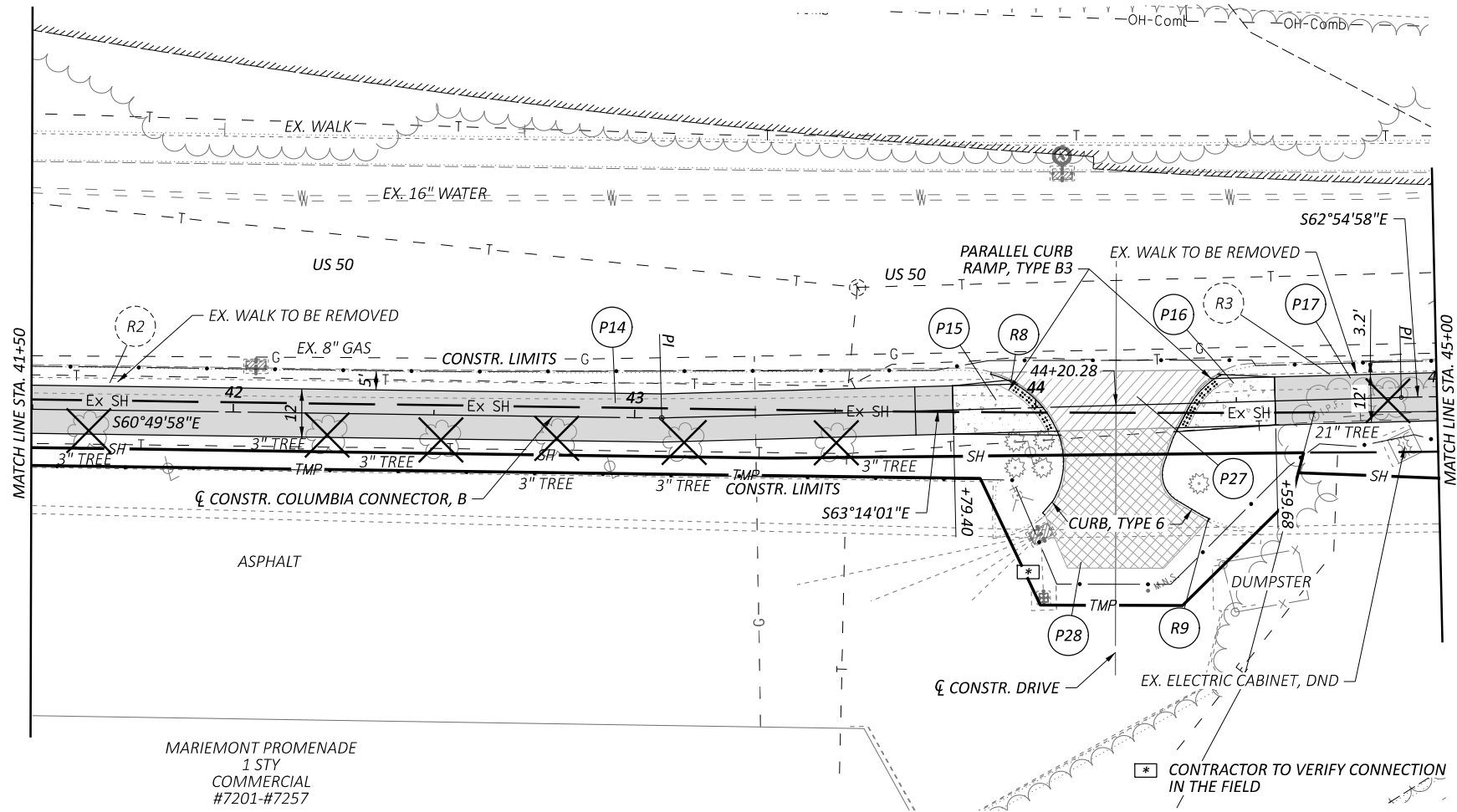
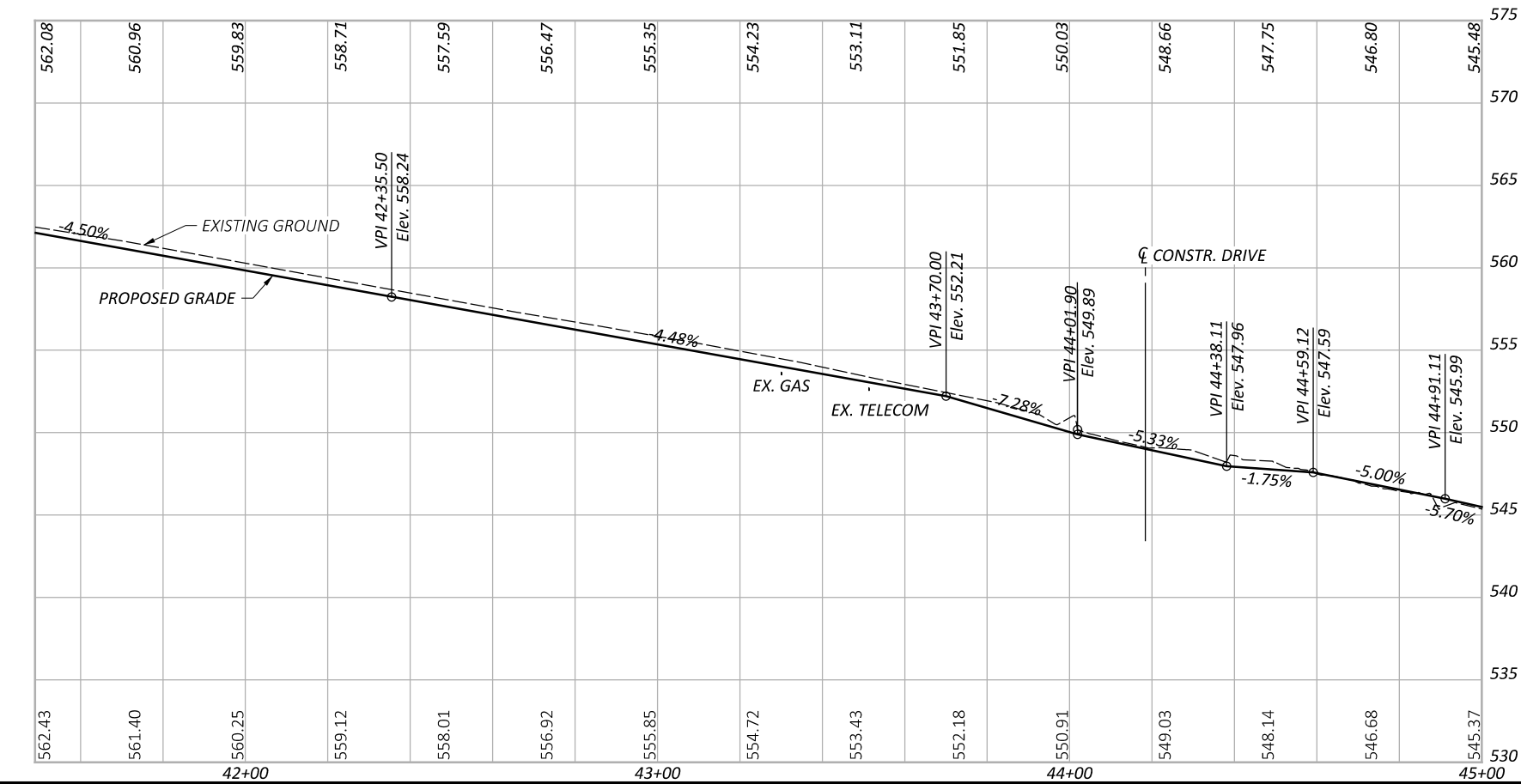
PROJECT ID

114496

SHEET TOTAL

P.20 104

FOR PAVEMENT LEGEND, SEE SHEET P.18
FOR CURB RAMP DETAILS, SEE SHEETS P.73 TO P.75



P.I. = STA. 43+06.79
DEFLECTION = 03°35'56" LT
NO CURVE

P.I. = STA. 44+91.11
DEFLECTION = 00°19'05" RT
NO CURVE



PLAN AND PROFILE
STA. 41+50.00 TO STA. 45+00.00

DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET TOTAL

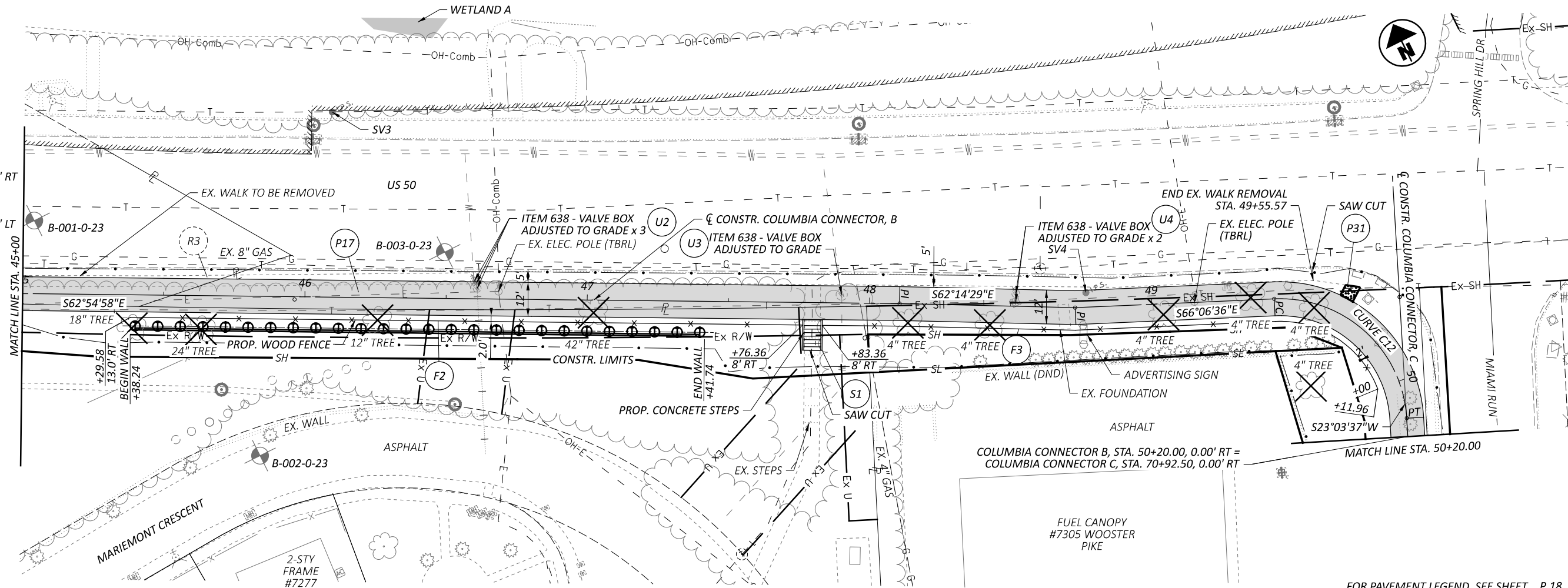
P.21 104

FOR PAVEMENT LEGEND, SEE SHEET P.18
FOR DRIVEWAY DETAILS SEE SHEET P.71
FOR CURB RAMP DETAILS, SEE SHEETS P.73 TO P.75

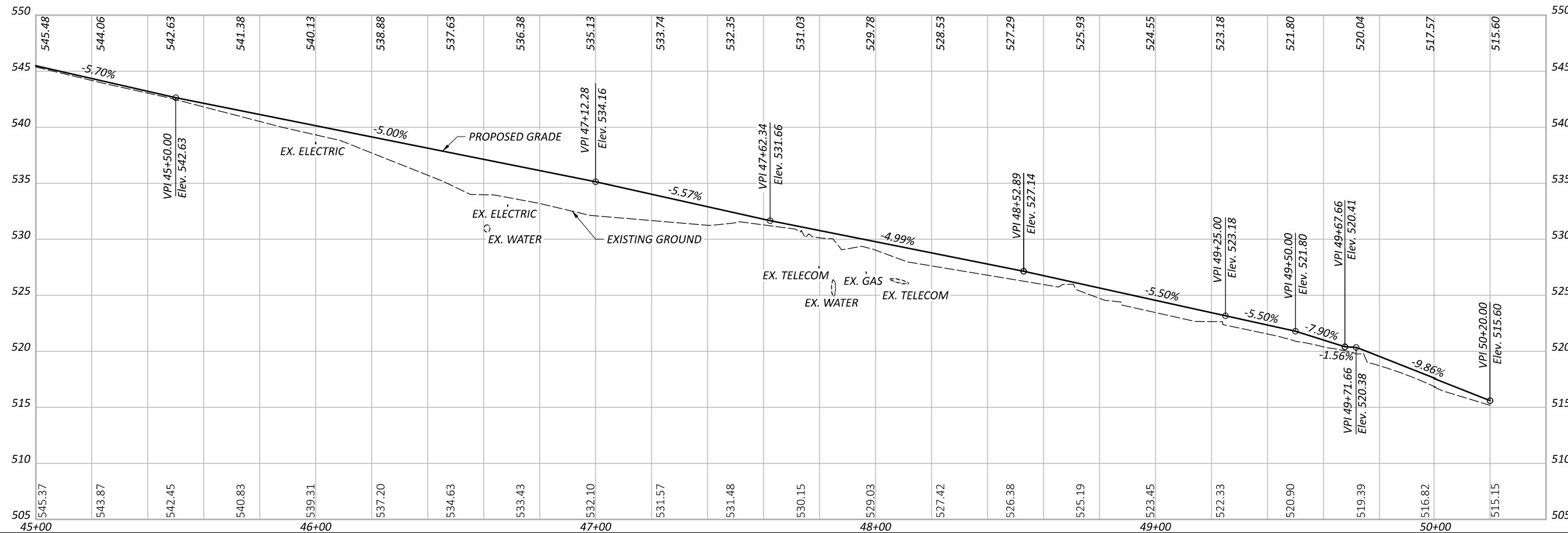
CURVE DATA C12
 P.I. = STA. 49+87.80
 $\Delta = 89^{\circ}10'14''$ RT
 $D_c = 127^{\circ}19'26''$
 $R = 45.00'$
 $T = 44.35'$
 $L = 70.03'$
 $E = 18.18'$
 PC = STA. 49+43.44
 PT = STA. 50+13.48

P.I. = STA. 48+10.63
 DEFLECTION = $00^{\circ}40'30''$ RT
 NO CURVE

P.I. = STA. 48+72.83
 DEFLECTION = $04^{\circ}04'52''$ LT
 NO CURVE



FOR PAVEMENT LEGEND, SEE SHEET P.18
 FOR CURB RAMP DETAILS, SEE SHEETS P.73 TO P.75
 FOR RETAINING WALL, SEE SHEETS P.94 TO P.97



PLAN AND PROFILE
 STA. 45+00.00 TO STA. 50+20.00

DESIGN AGENCY



10200 Alliance Road,
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 Cincinnati, OH 45242
 (613) 842-8200

DESIGNER

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SNS 08-04-25

PROJECT ID

114496

SHEET

TOTAL

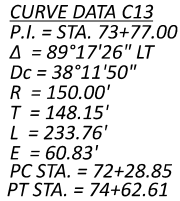
P.22 104

HORIZONTAL
 SCALE IN FEET
 0 20 40

HAM-COLUMBIA CONNECTOR

MODEL: CLP_24 - Plan 11 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 7/31/2025 TIME: 8:13:11 AM USER: cgaerke
v:\1736\active\173620147\engineering\114496\400-Engineering\Roadway\Sheets\114496 GP0003.dgn

(D7) WHEN SETTING THE MANHOLE THE CONTRACOR SHALL ORIENT THE FRAME AND COVER TO SUCH THAT IT IS NOT IN THE SHARED USE PATH OR UNDER THE BIKEWAY FENCE.



PLAN AND PROFILE
STA. 70+92.50 TO STA. 75+00.00

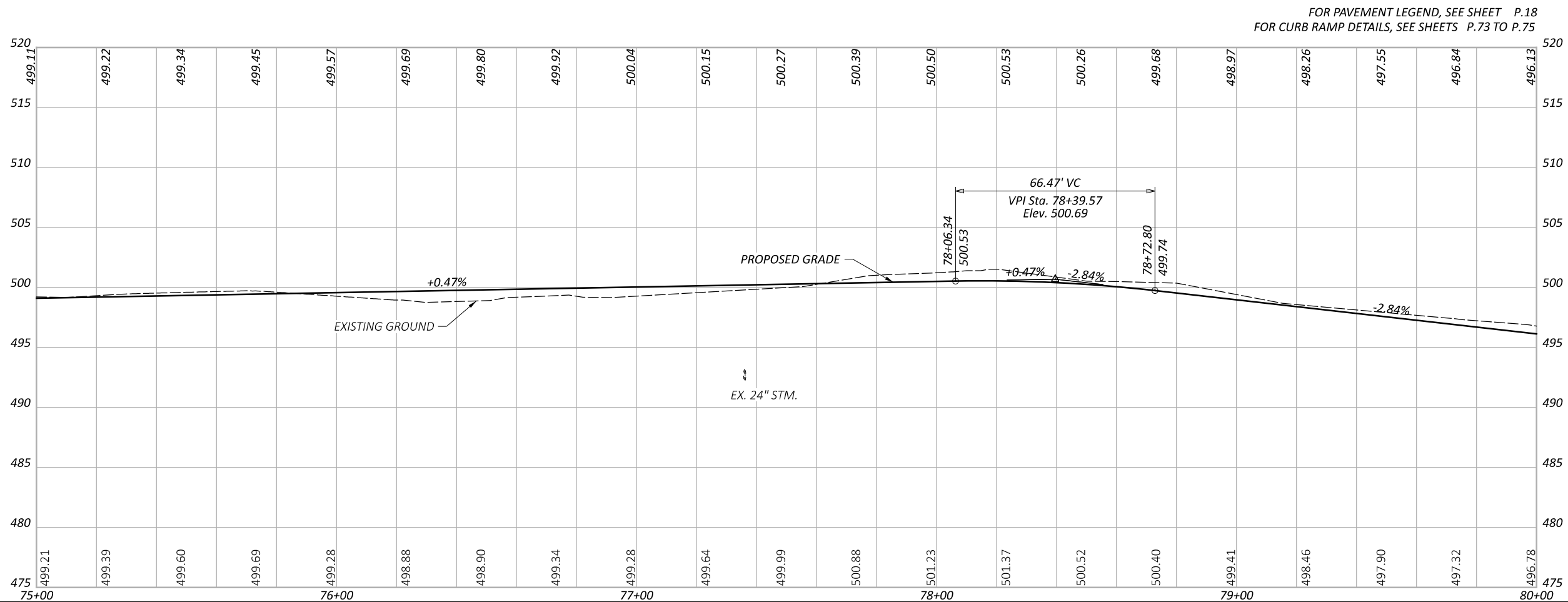


CURVE DATA C14
P.I. = STA. 75+12.85
 $\Delta = 07^{\circ}52'32''$ RT
 $D_c = 11^{\circ}27'33''$
 $R = 500.00'$
 $T = 34.42'$
 $L = 68.73'$
 $E = 01.18'$
PC STA. = 74+78.43
PT STA. = 75+47.16

CURVE DATA C15
P.I. = STA. 76+67.78
 $\Delta = 09^{\circ}19'02''$ LT
 $D_c = 19^{\circ}05'55''$
 $R = 300.00'$
 $T = 24.45'$
 $L = 48.79'$
 $E = 0.99'$
PC STA. = 76+43.33
PT STA. = 76+92.12

CURVE DATA C16
P.I. = STA. 78+36.58
 $\Delta = 02^{\circ}25'24''$ RT
 $D_c = 11^{\circ}27'33''$
 $R = 500.00'$
 $T = 10.58'$
 $L = 21.15'$
 $E = 0.11'$
PC STA. = 78+26.00
PT STA. = 78+47.15

CURVE DATA C17
P.I. = STA. 79+99.80
 $\Delta = 07^{\circ}45'18''$ RT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 13.56'$
 $L = 27.07'$
 $E = 0.46'$
PC STA. = 79+86.25
PT STA. = 80+13.32



PLAN AND PROFILE
STA. 75+00.00 TO STA. 80+00.00

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SHEET

P.24

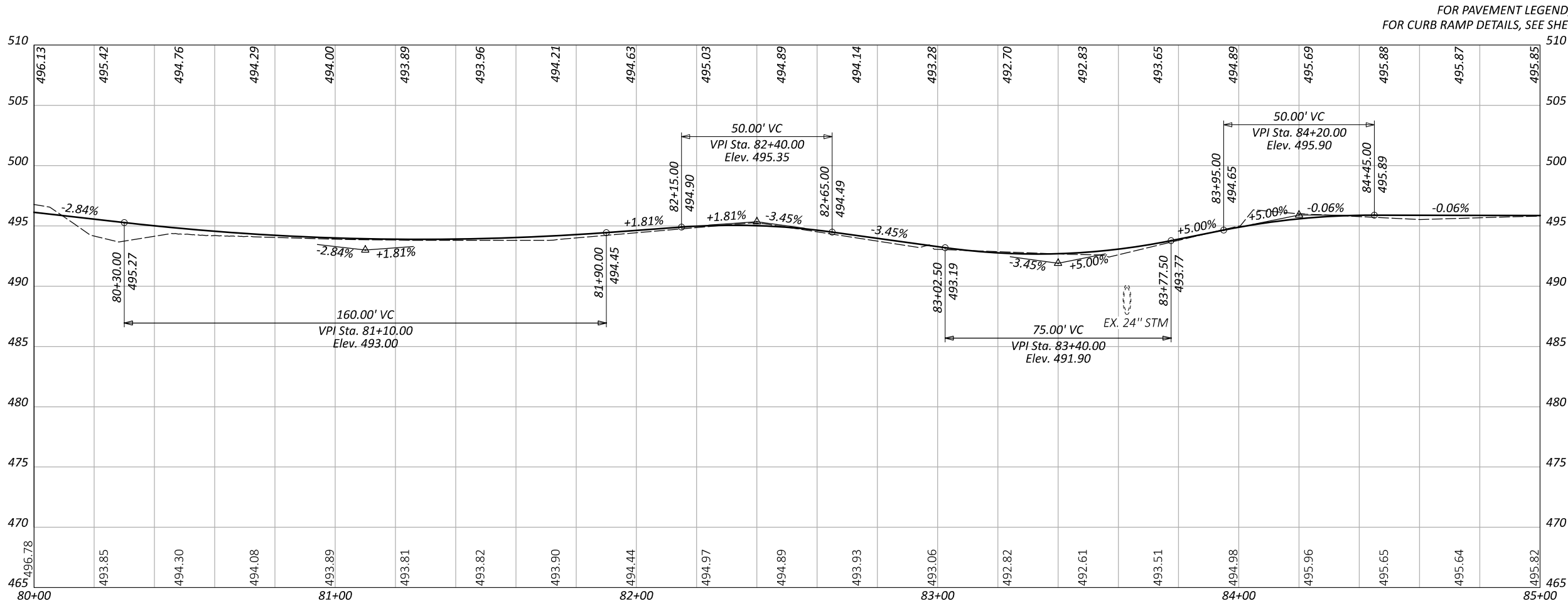
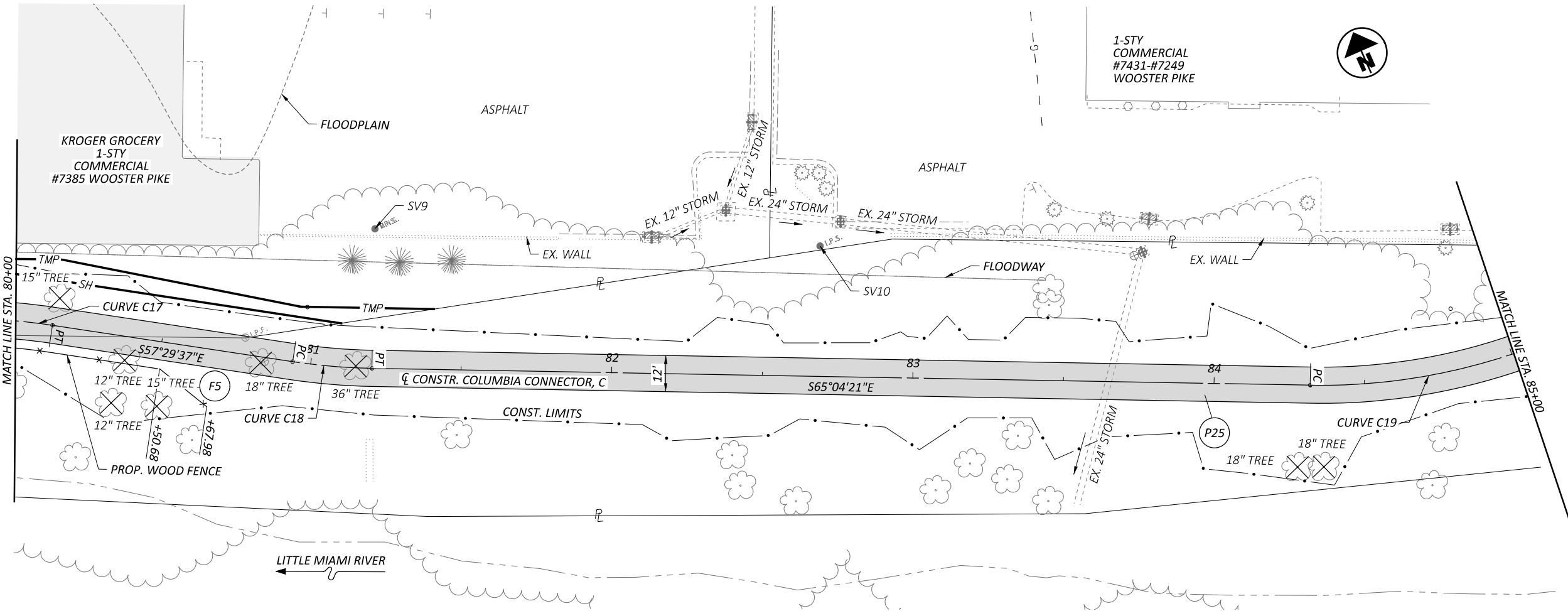
TOTAL

104

CURVE DATA C17
P.I. = STA. 79+99.80
 $\Delta = 07^{\circ}45'18''$ RT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 13.56'$
 $L = 27.07'$
 $E = 0.46'$
PC STA. = 79+86.25
PT STA. = 80+13.32

CURVE DATA C18
P.I. = STA. 81+07.20
 $\Delta = 07^{\circ}34'43''$ LT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 13.25'$
 $L = 26.45'$
 $E = 0.44'$
PC = STA. 80+93.95
PT = STA. 81+20.41

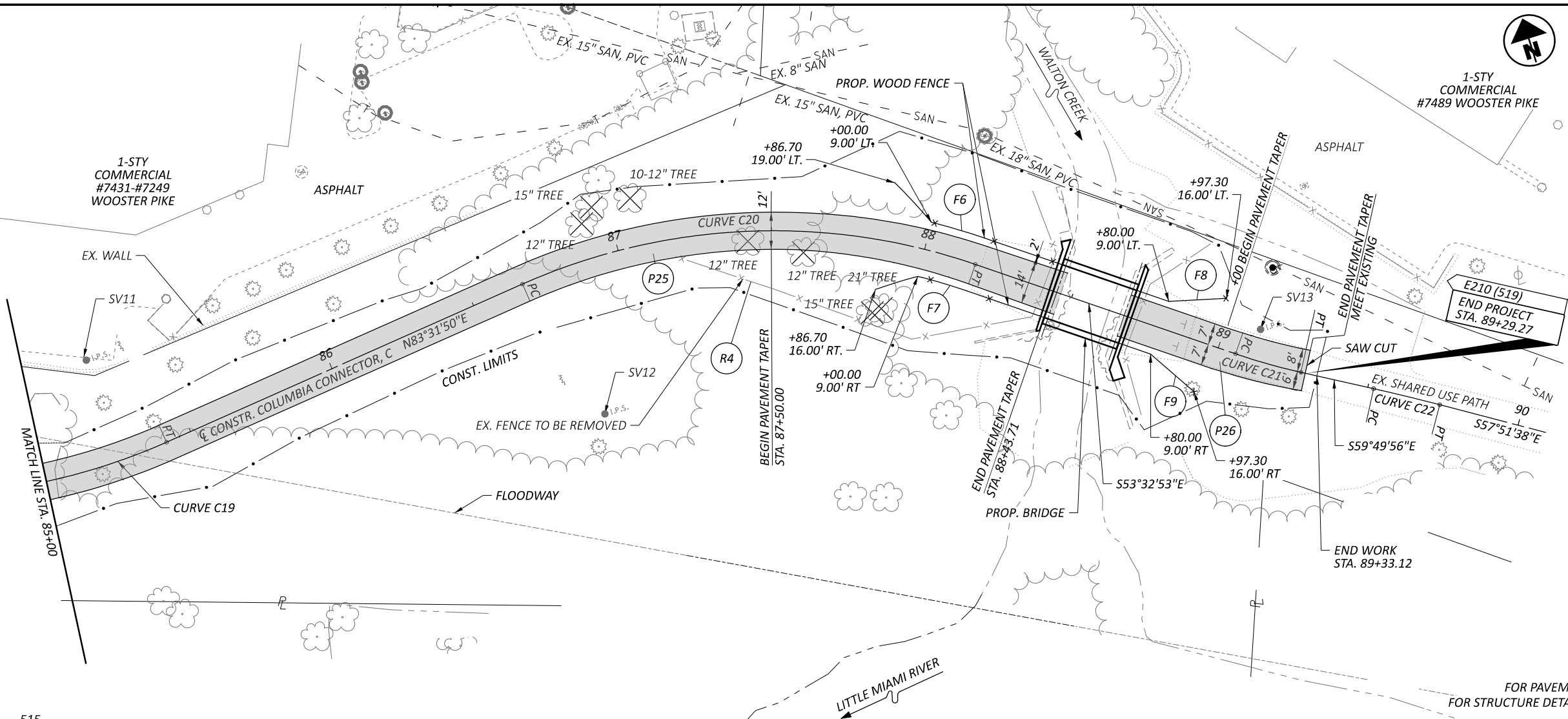
CURVE DATA C19
P.I. = STA. 84+88.15
 $\Delta = 31^{\circ}23'49''$ LT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 56.21'$
 $L = 109.60'$
 $E = 7.75'$
PC = STA. 84+31.93
PT = STA. 85+41.53



FOR PAVEMENT LEGEND, SEE SHEET P.18
FOR CURB RAMP DETAILS, SEE SHEETS P.73 TO P.75



PLAN AND PROFILE
STA. 80+00.00 TO STA. 85+00.00



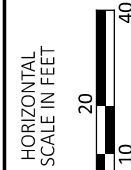
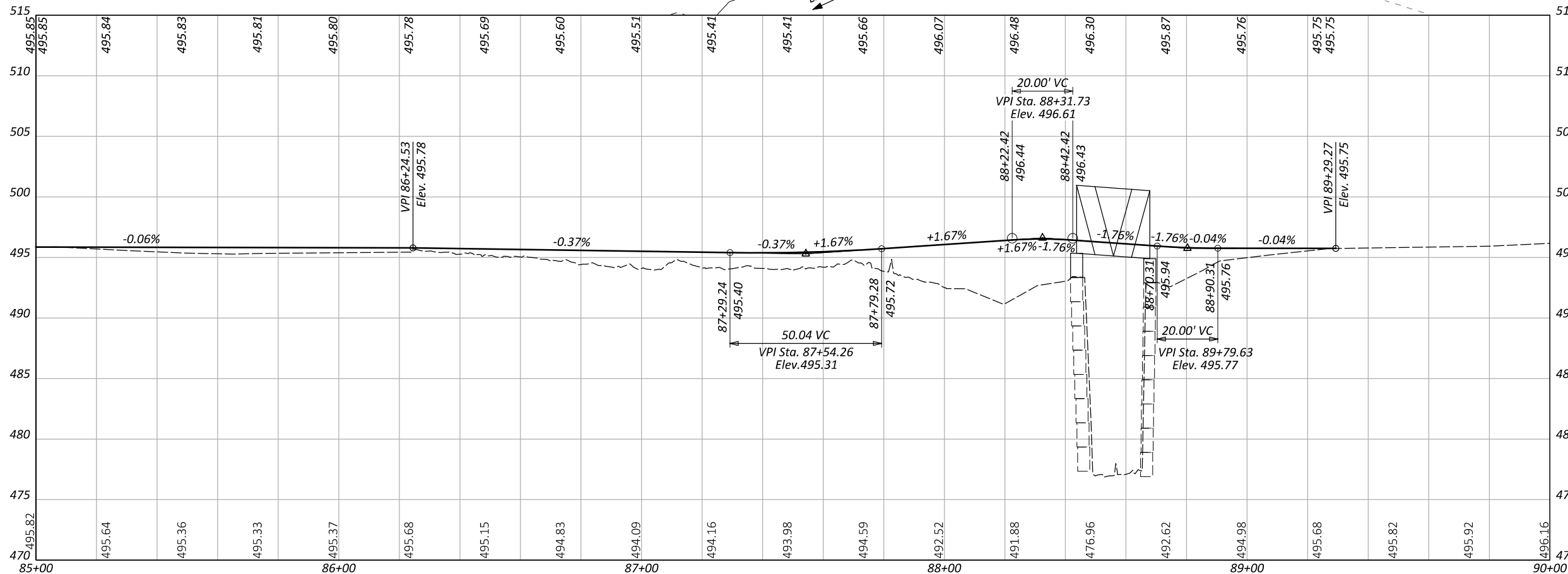
CURVE DATA C19
P.I. = STA. 84+88.15
 $\Delta = 31^{\circ}23'49''$ LT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 56.21'$
 $L = 109.60'$
 $E = 7.75'$
PC = STA. 84+31.93
PT = STA. 85+41.53

CURVE DATA C20
P.I. = STA. 87+45.89
 $\Delta = 42^{\circ}55'18''$ RT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 78.62'$
 $L = 149.82'$
 $E = 14.9'$
PC = STA. 86+67.27
PT = STA. 88+17.09

CURVE DATA C21
P.I. = STA. 89+16.90
 $\Delta = 06^{\circ}17'03''$ LT
 $D_c = 28^{\circ}38'52''$
 $R = 200.00'$
 $T = 10.98'$
 $L = 21.94'$
 $E = 0.30'$
PC = STA. 89+05.92
PT = STA. 89+27.85

CURVE DATA C22
P.I. = STA. 89+62.89
 $\Delta = 01^{\circ}58'18''$ RT
 $D_c = 08^{\circ}59'41''$
 $R = 637.00'$
 $T = 10.96'$
 $L = 21.92'$
 $E = 0.09'$
PC = STA. 89+51.93
PT = STA. 89+73.85

FOR PAVEMENT LEGEND, SEE SHEET P.18
FOR STRUCTURE DETAILS, SEE SHEETS P.73 TO P.75



PLAN AND PROFILE
STA. 85+00.00 TO STA. 90+00.00

DESIGN AGENCY



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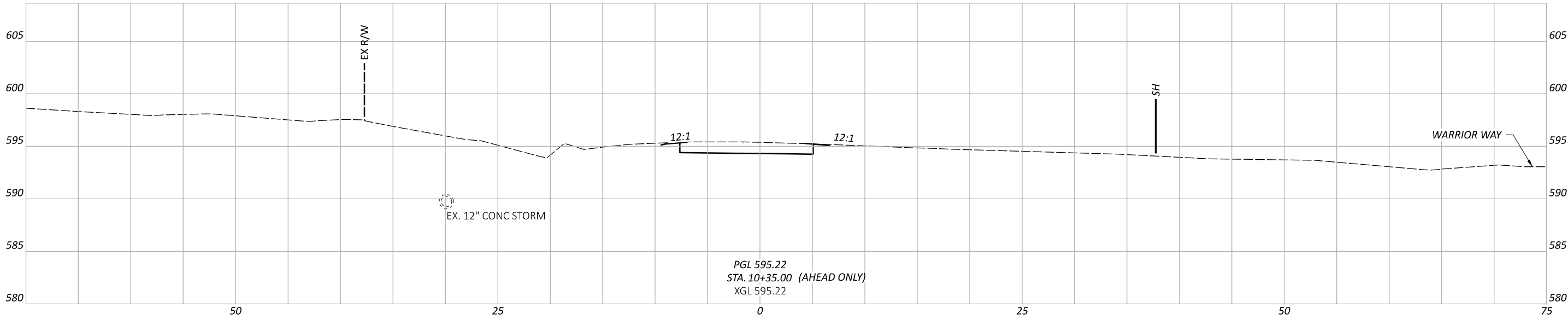
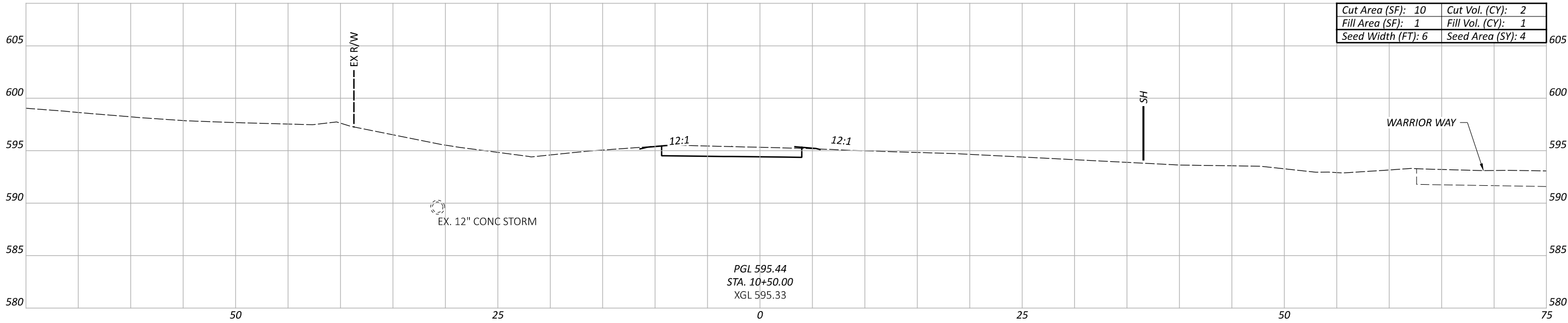
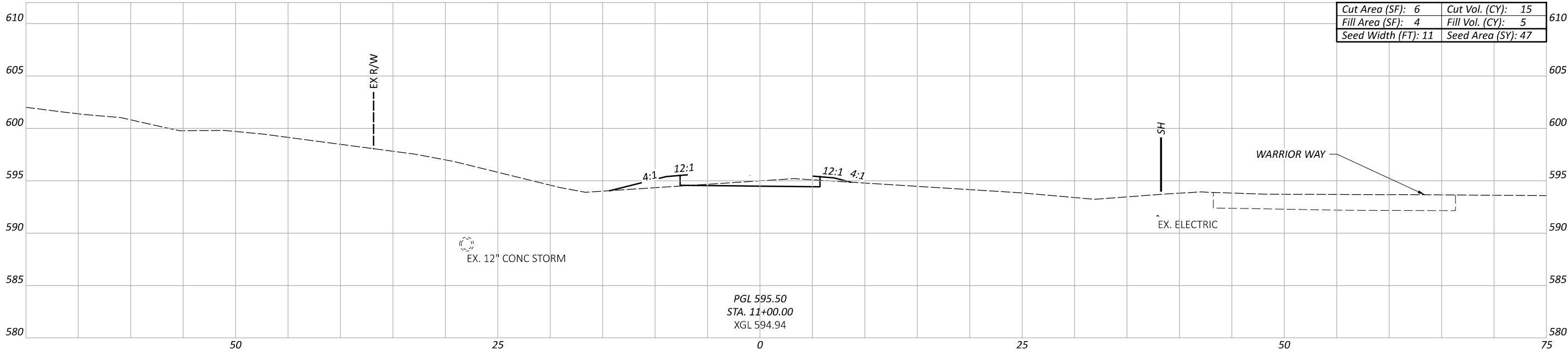
114496

SHEET

P.26

TOTAL

104



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
51	17	6	P.27	104

CROSS SECTIONS
STA. 10+40.00 TO STA. 11+00.00

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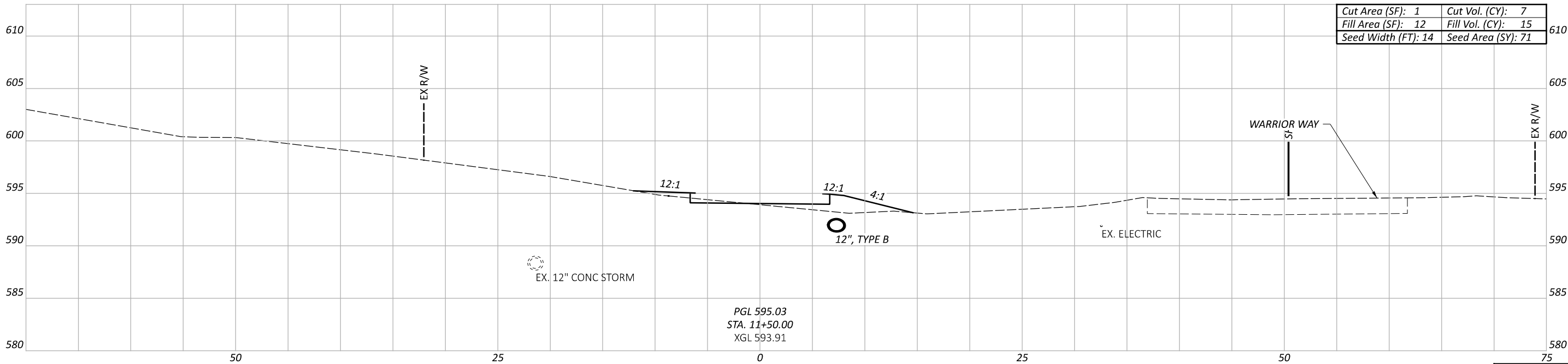
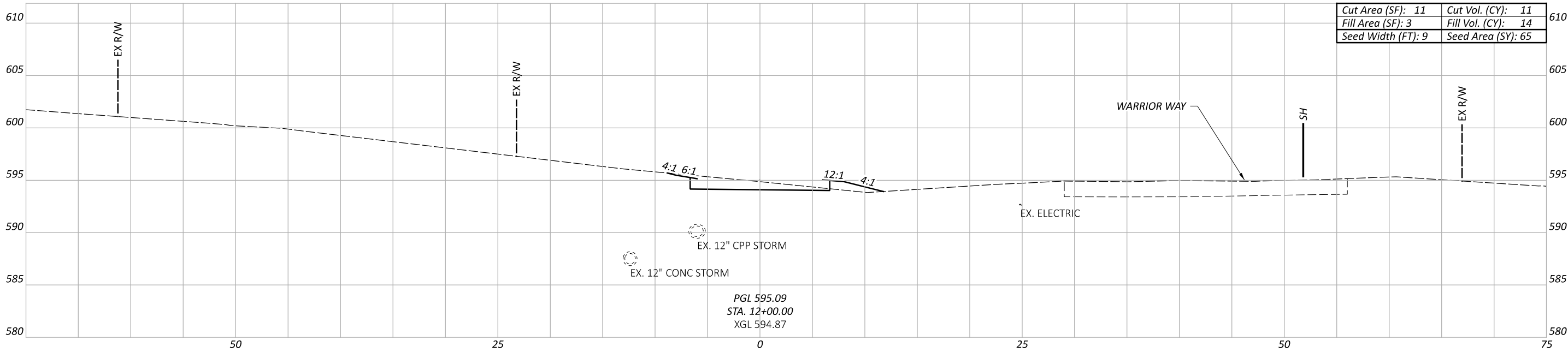
ZTM

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PROJECT ID

114496



Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.28	104
136	18	29		

CROSS SECTIONS
STA. 11+50.00 TO STA. 12+00.00

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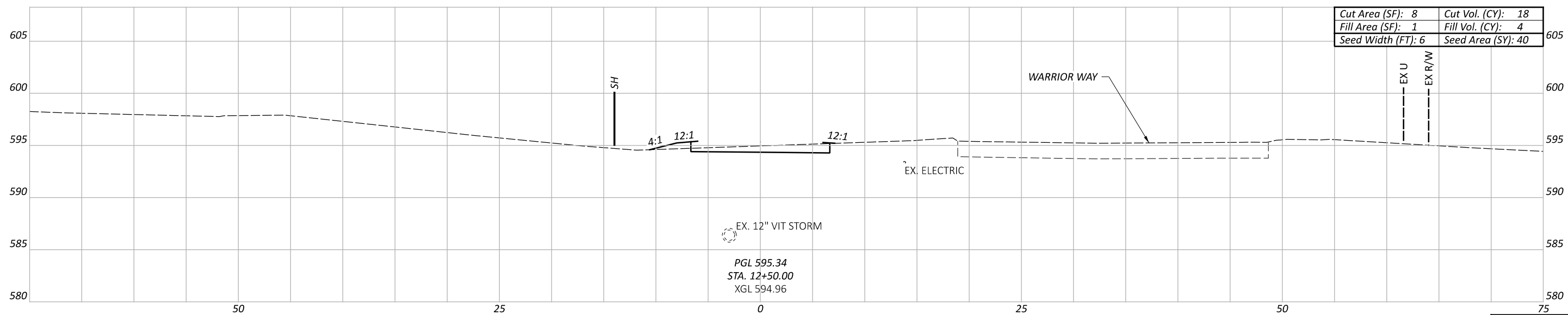
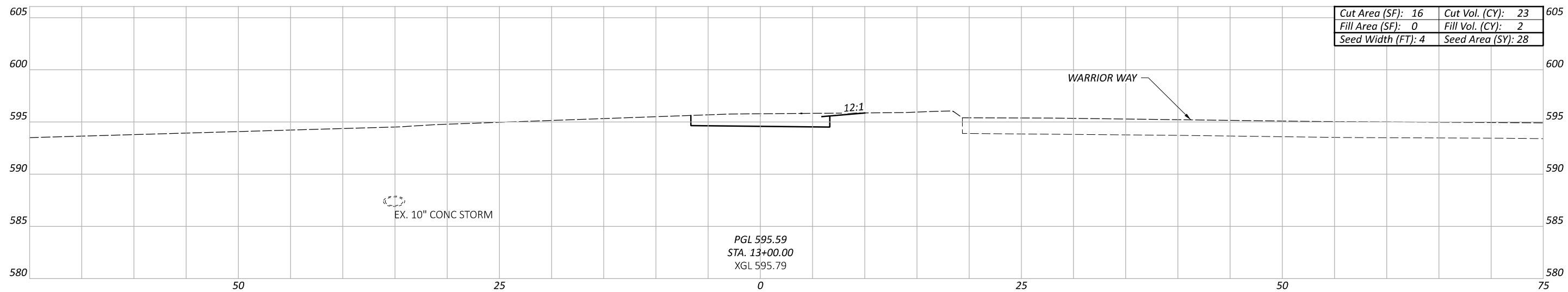
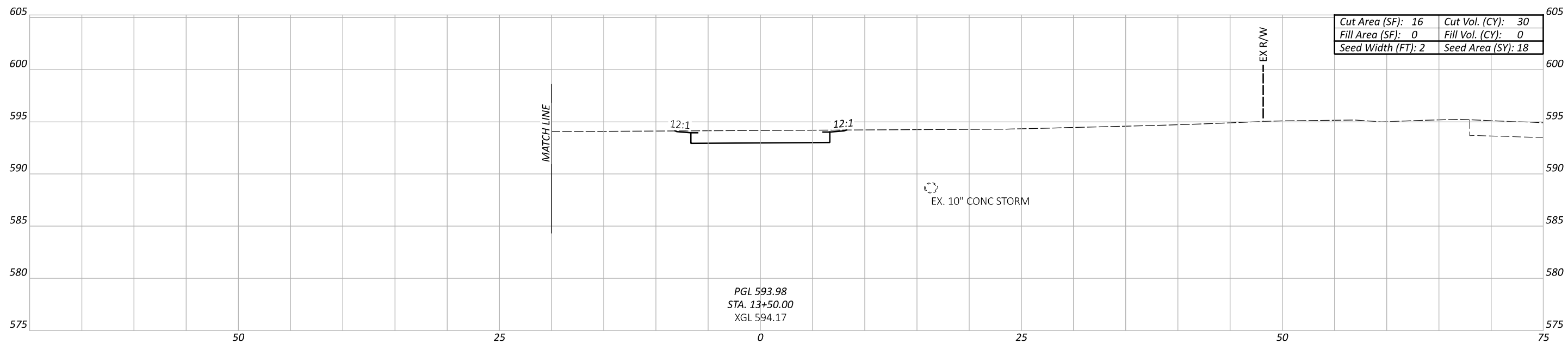
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PROJECT ID

114496

HAM-COLUMBIA CONNECTOR

MODEL: CLP_37 - 12+50.00 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 7/30/2025 TIME: 3:20:55 PM USER: cgaerke
V:\1736\active\173620147\engineering\114496\400-Engineering\Roadway\Sheets\114496_XS001.dgn



Cut Area (SF): 16	Cut Vol. (CY): 30
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT): 2	Seed Area (SY): 18

Cut Area (SF): 16	Cut Vol. (CY): 23
Fill Area (SF): 0	Fill Vol. (CY): 2
Seed Width (FT): 4	Seed Area (SY): 28

Cut Area (SF): 8	Cut Vol. (CY): 18
Fill Area (SF): 1	Fill Vol. (CY): 4
Seed Width (FT): 6	Seed Area (SY): 40

Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
86	71	6	P.29	10.

CROSS SECTIONS
STA. 12+50.00 TO STA. 13+50.00

DESIGN AGENCY



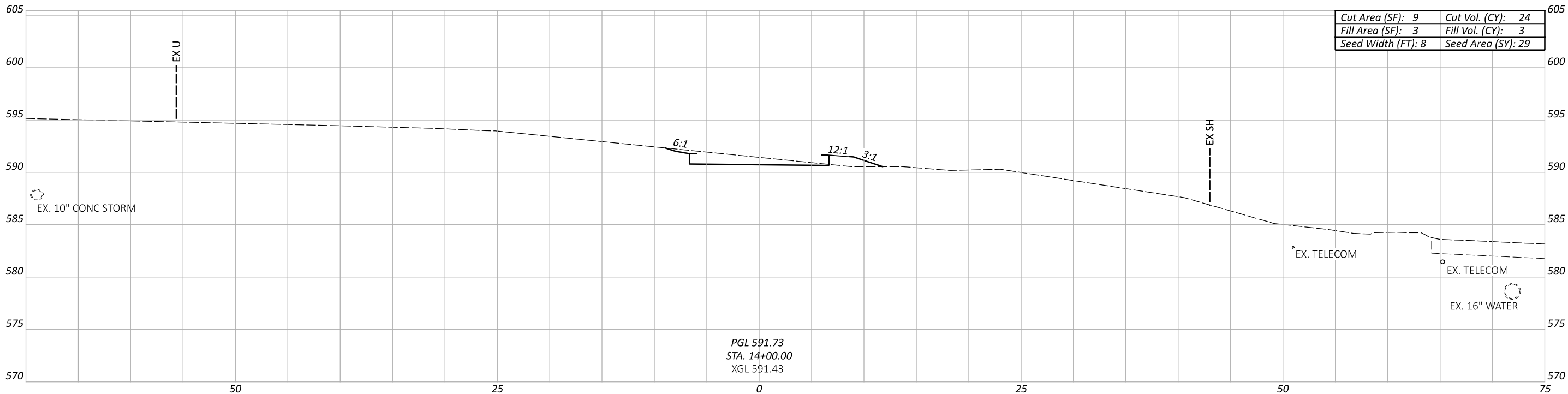
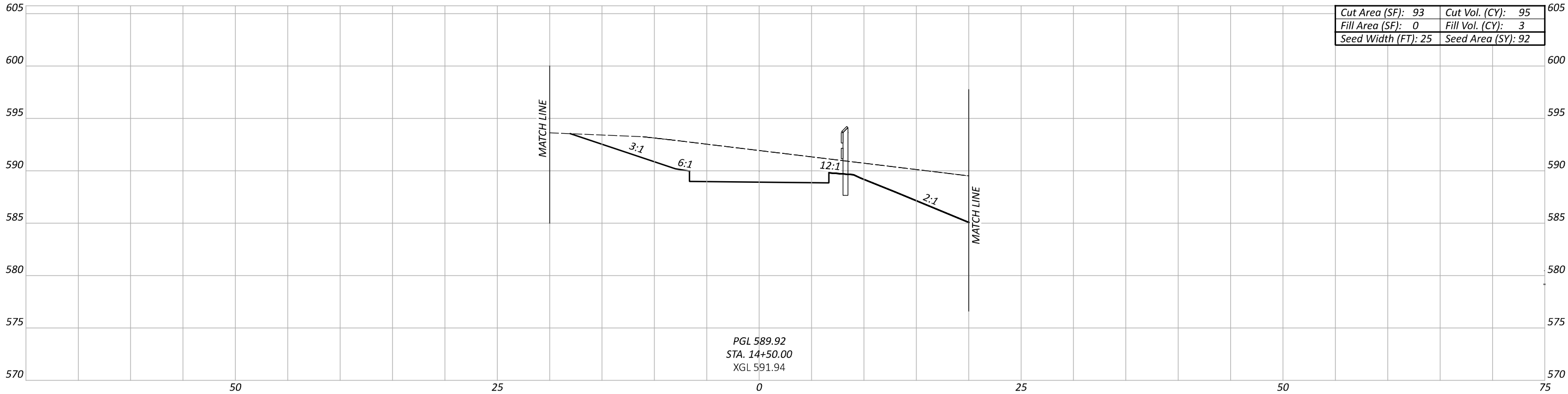
10200 Alliance Road
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REVIEWER
SNC 08.04

PROJECT ID	111122
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114496	
SHEET	TOTAL



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
121	119	6	P.30	104

CROSS SECTIONS
STA. 14+00.00 TO STA. 14+50.00

DESIGN AGENCY



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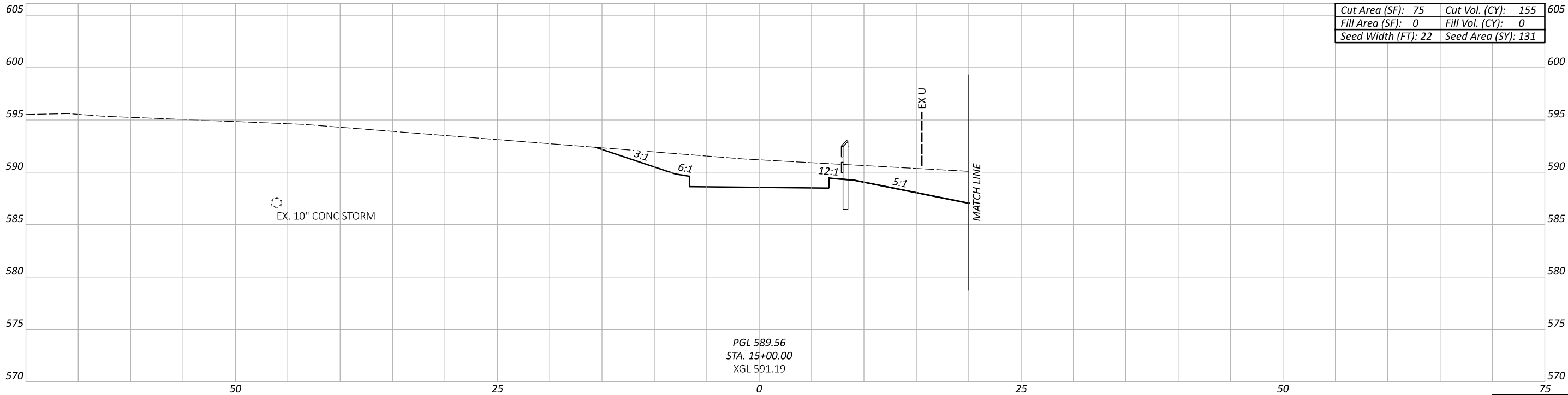
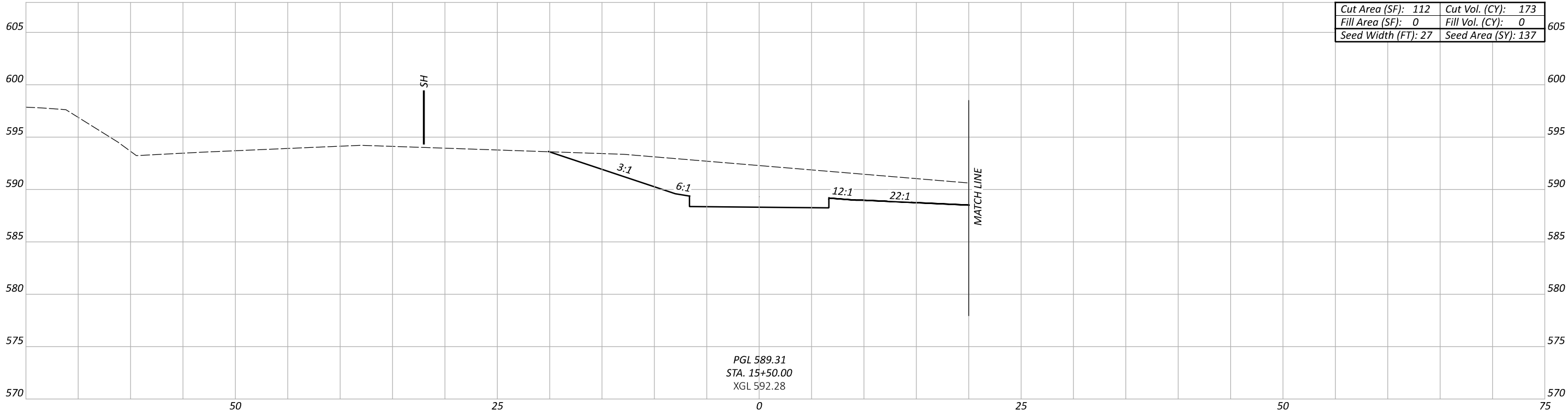
ZTM

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PROJECT ID

114496



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
268	328	0	P.31	104

CROSS SECTIONS
STA. 15+00.00 TO STA. 15+50.00

DESIGN AGENCY



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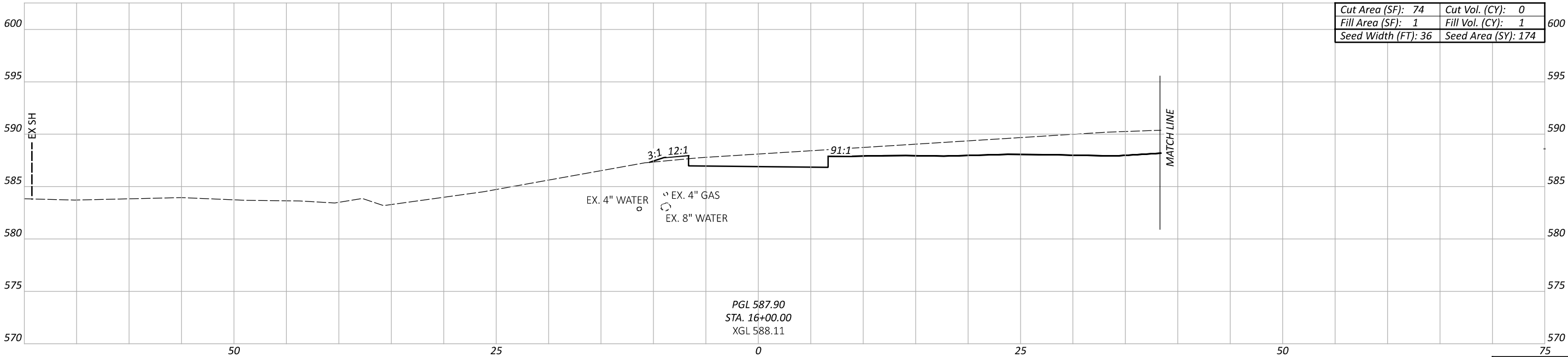
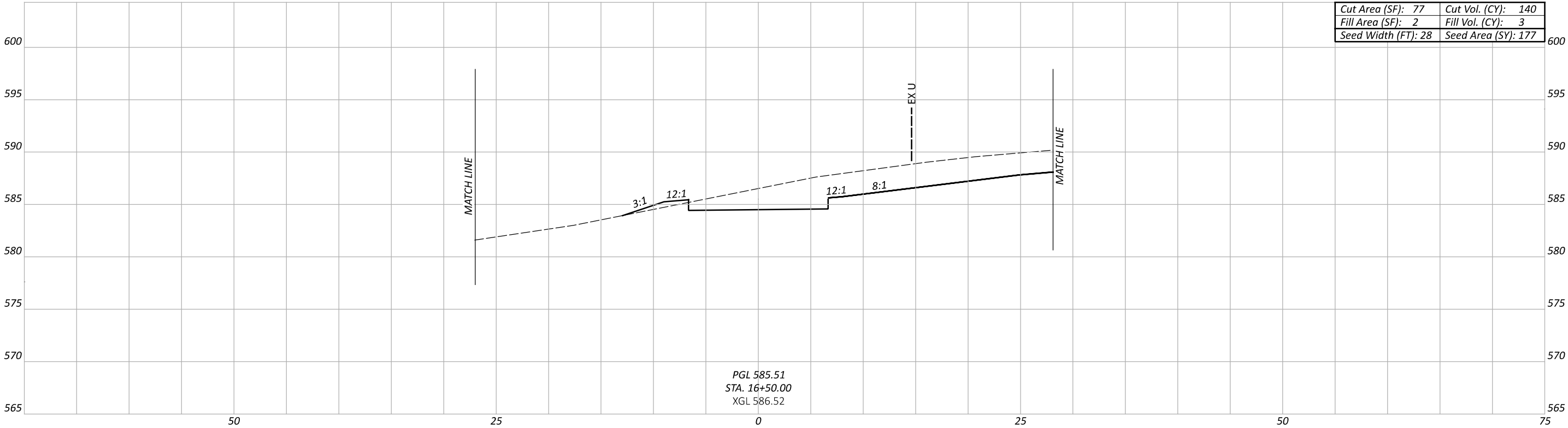
ZTM

REVIEWER

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PROJECT ID

114496



Sheet Totals				114496	
Seeding	Cut	Fill	TOTAL	SHEET	TOTAL
351	140	4	P.32	104	

CROSS SECTIONS
STA. 16+00.00 TO STA. 16+50.00

DESIGN AGENCY



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Suite 300
Cincinnati, OH 45242
(513) 842-8200

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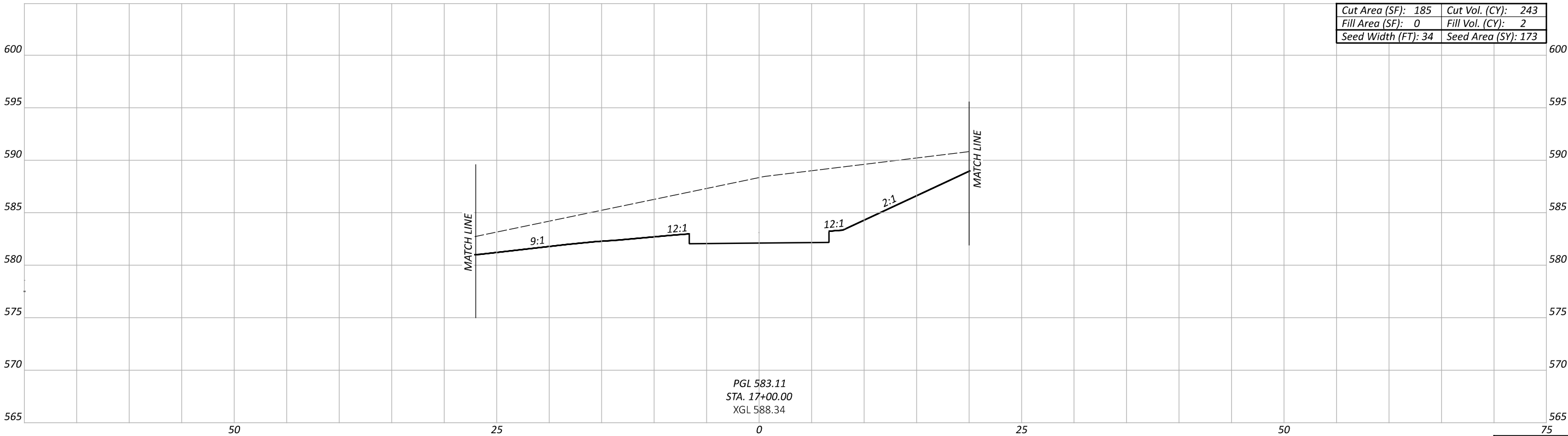
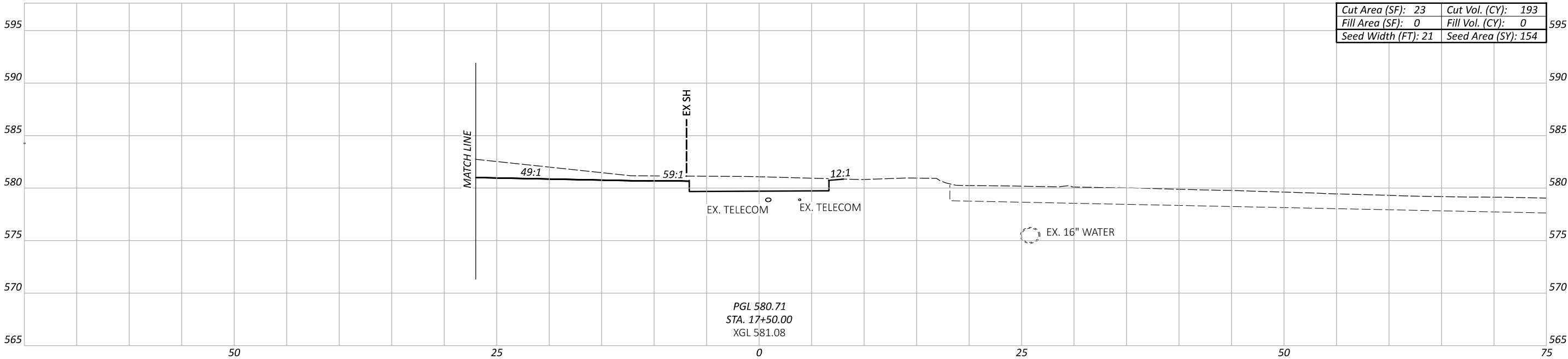
ZTM

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SNS 08-04-25

PROJECT ID

114496



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
327	436	2	P.33	104

CROSS SECTIONS
STA. 17+00.00 TO STA. 17+50.00

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10200 Alliance Road,
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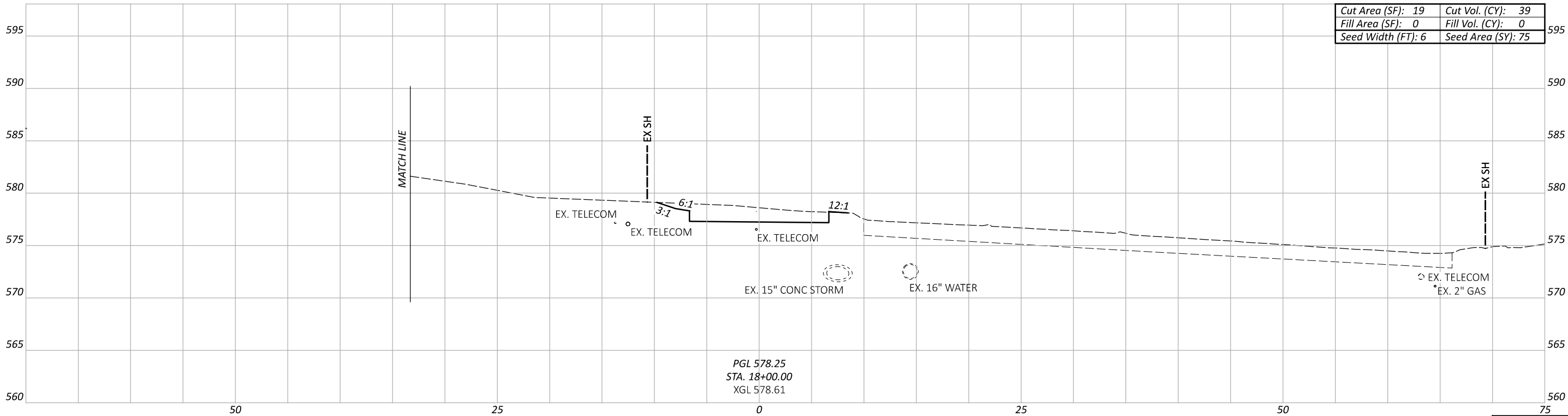
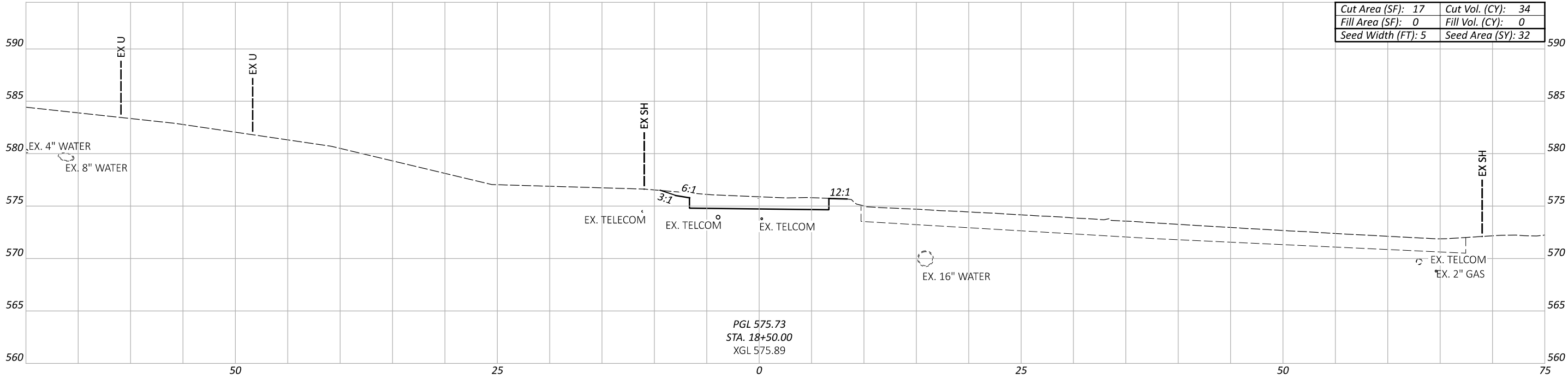
ZTM

REVIEWER

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PROJECT ID

114496



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
107	73	0	P.34	104

CROSS SECTIONS
STA. 18+00.00 TO STA. 18+50.00

DESIGN AGENCY



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Suite 300
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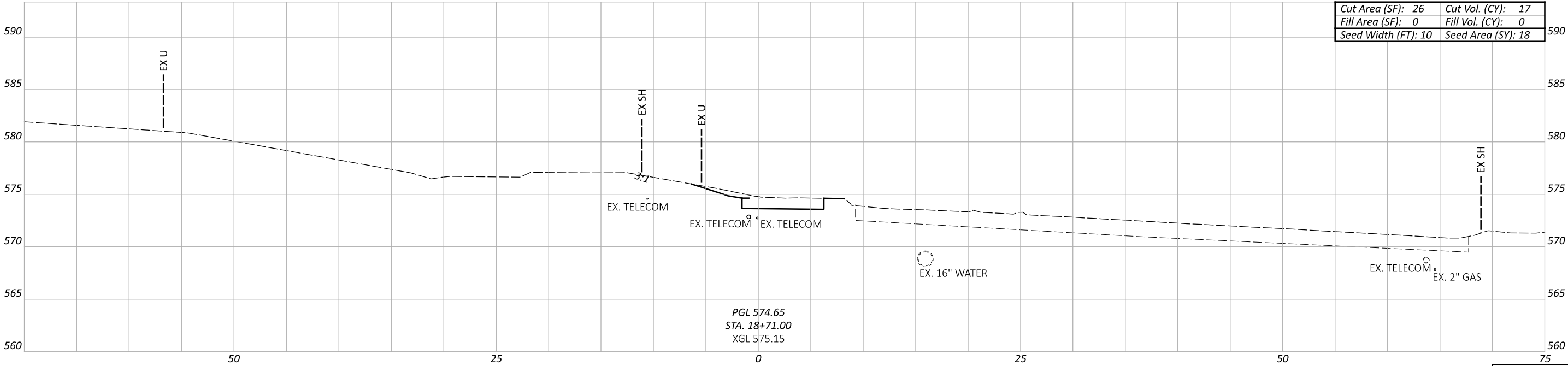
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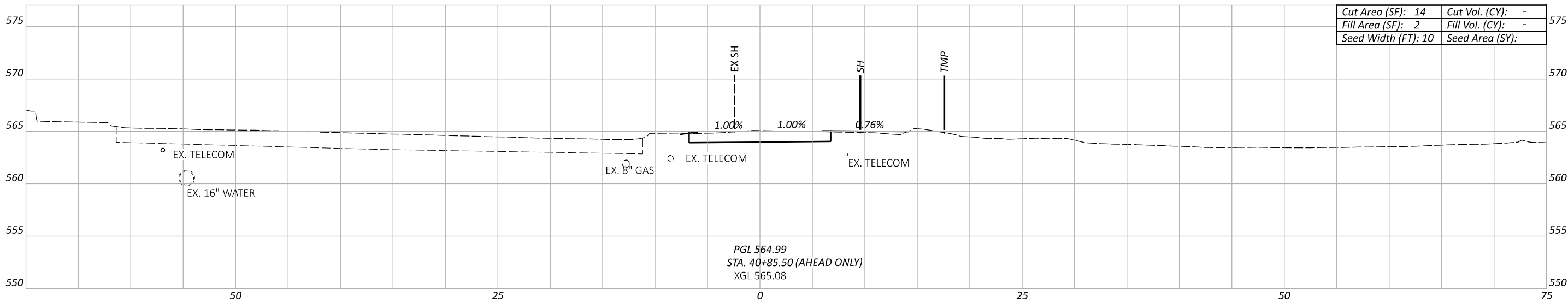
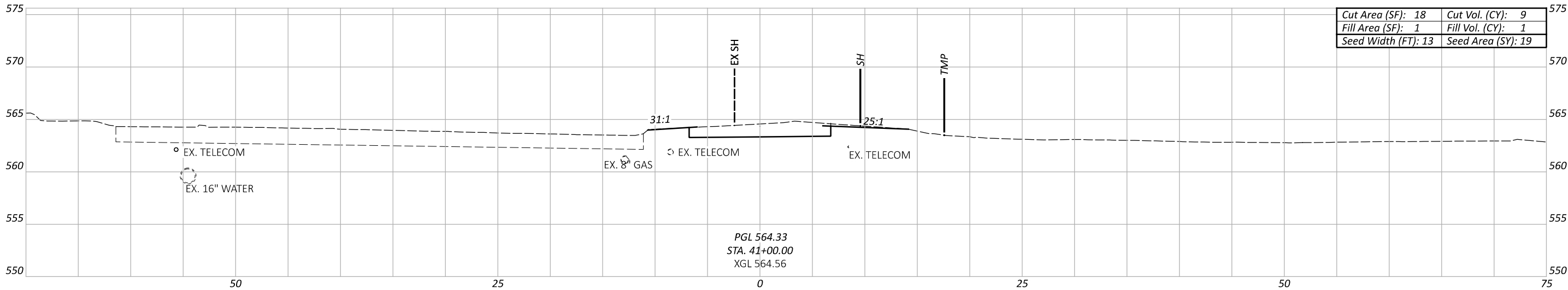
PROJECT ID

114496



COLUMBIA CONNECTOR SEGMENT A EARTHWORK TOTALS	
ITEM 203 EXCAVATION	1219 CY
ITEM 203 EMBANKMENT	53 CY
ITEM 659 SEEDING AND MULCHING	1465 CY

TOTALS CARRIED TO SHEET NO. P.15



CROSS SECTIONS
STA. 40+85.50 TO STA. 41+00.00

DESIGN AGENCY



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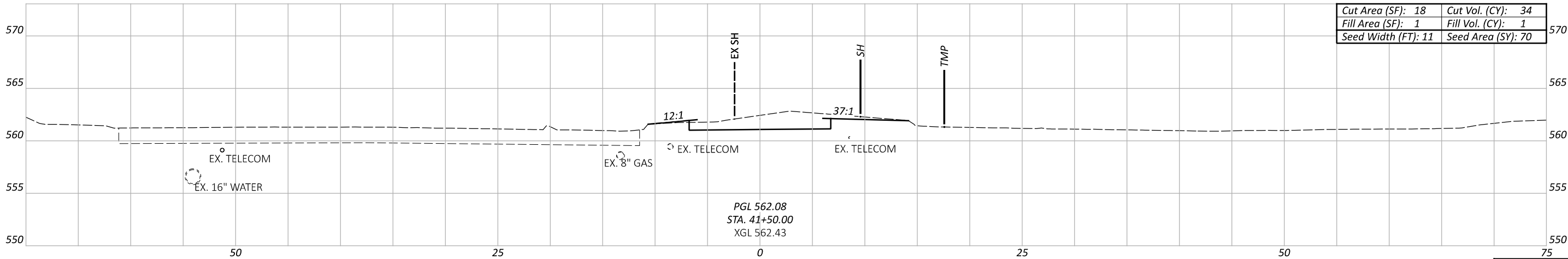
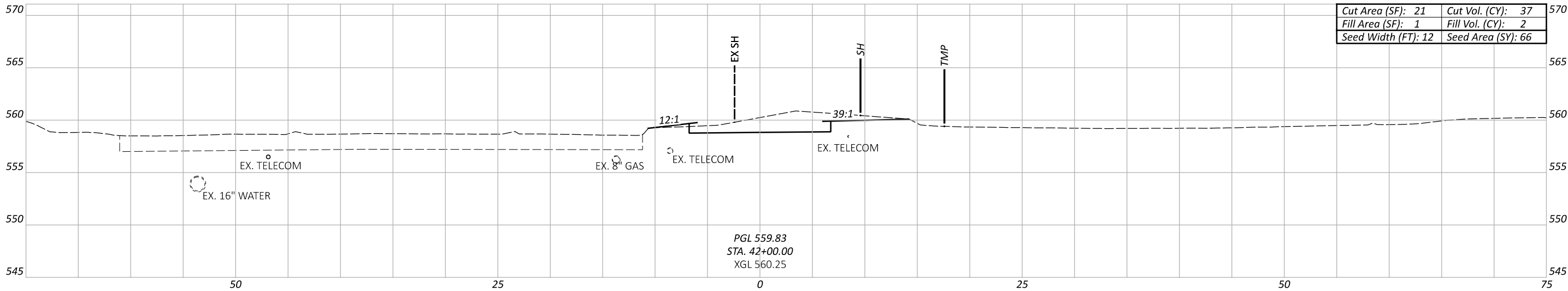
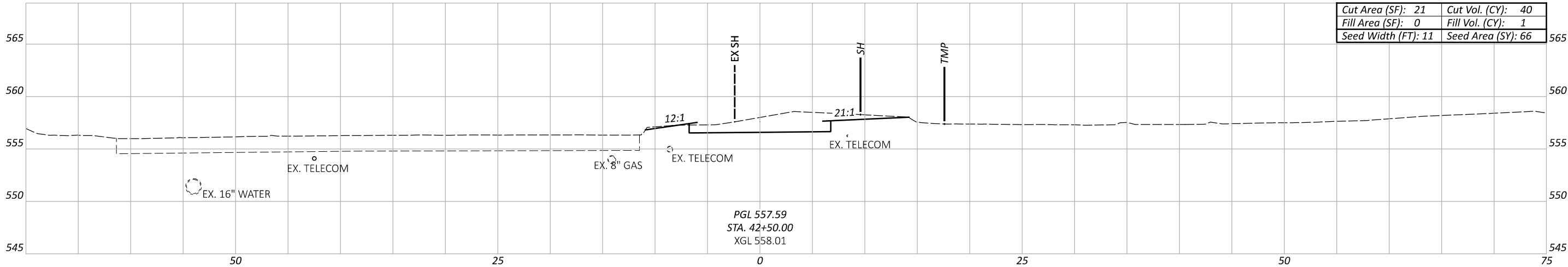
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PROJECT ID

114496

Sheet Totals		
Seeding	Cut	Fill
19	9	1

SHEET	TOTAL
P.36	104



CROSS SECTIONS
STA. 41+50.00 TO STA. 42+50.00

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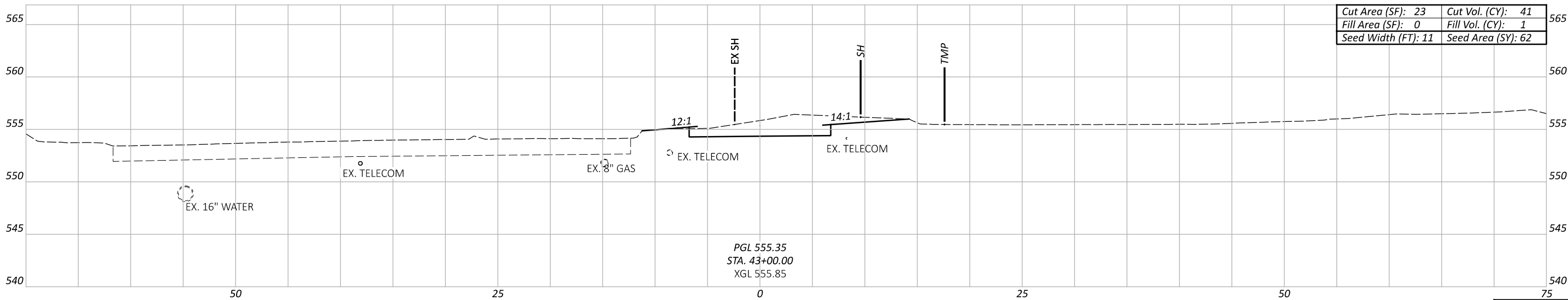
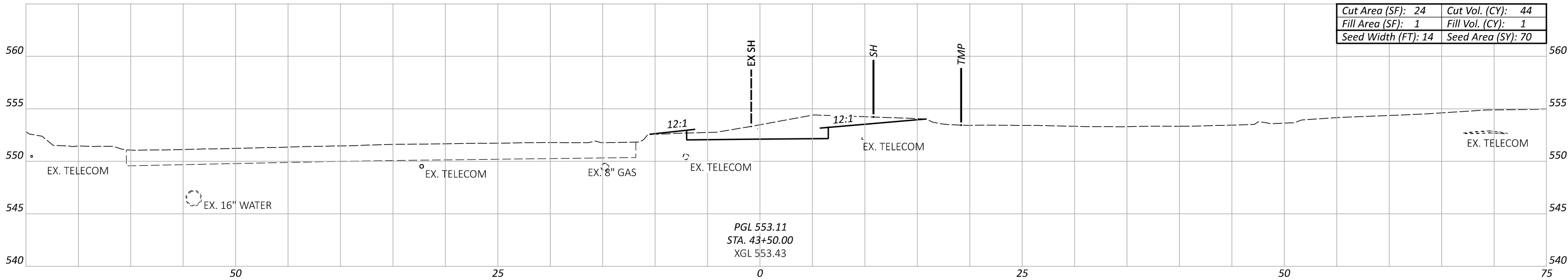
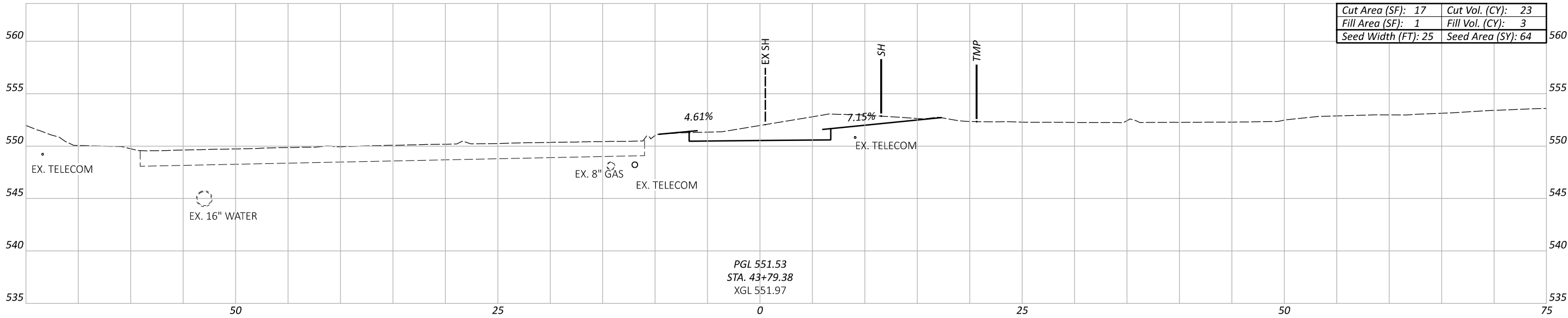
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PROJECT ID

114496

Sheet Totals		
Seeding	Cut	Fill
202	111	4

SHEET	TOTAL
P.37	104



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
196	108	5	P.38	104

CROSS SECTIONS
STA. 43+00.00 TO STA. 43+79.38

DESIGN AGENCY



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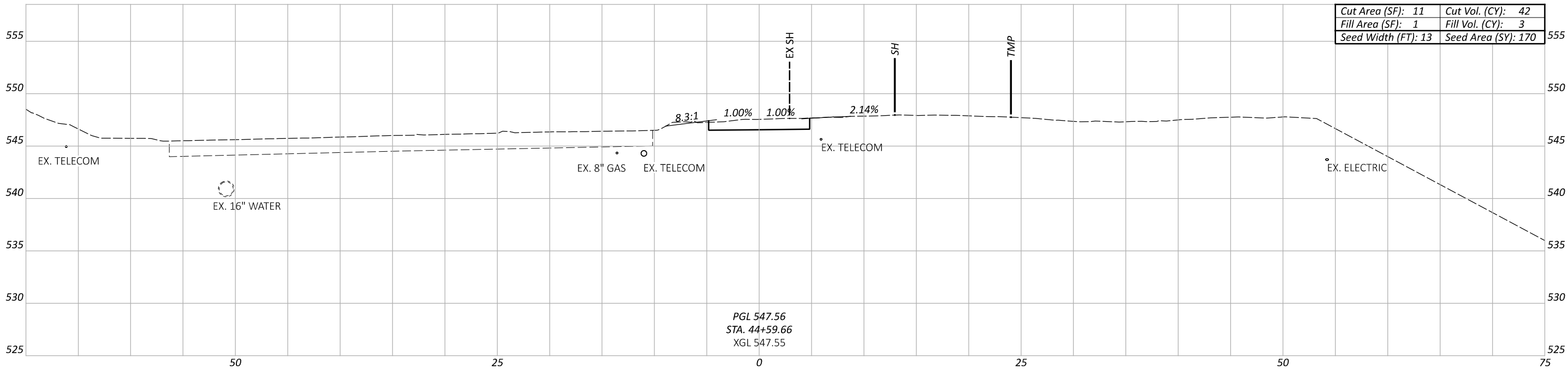
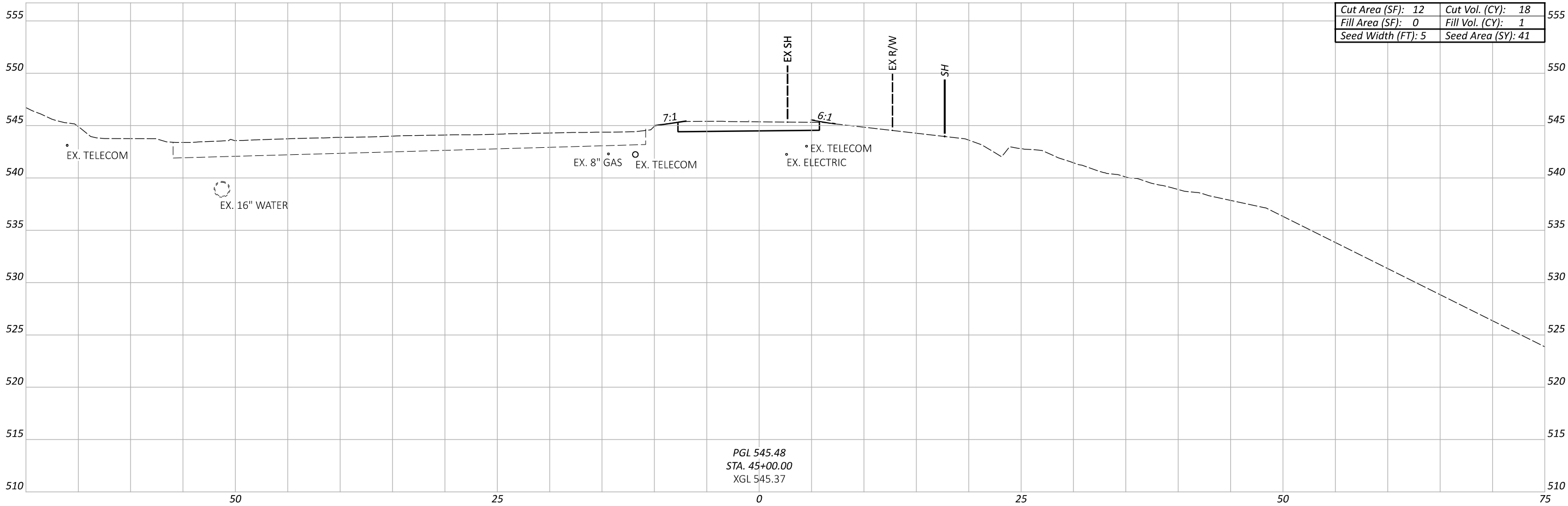
ZTM

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PROJECT ID

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CROSS SECTIONS
STA. 44+59.66 TO STA. 45+00.00

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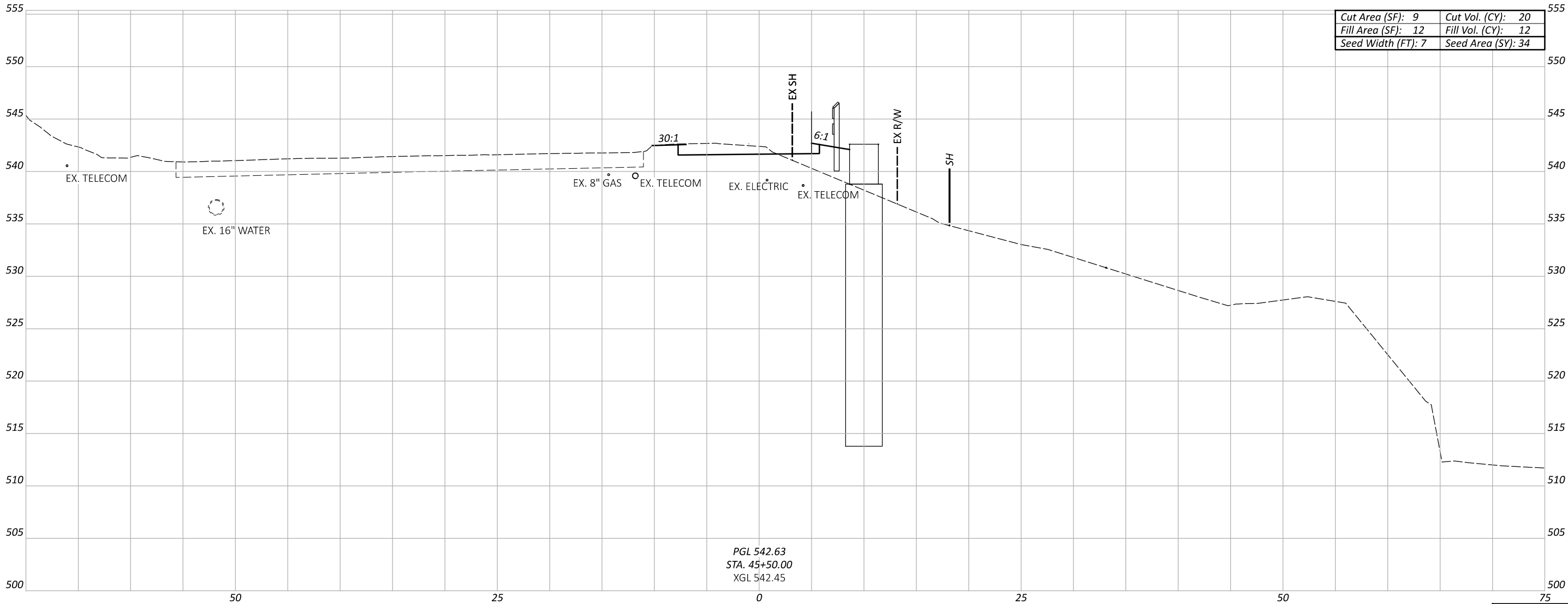
REVIEWER

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PROJECT ID

114496

Sheet Totals				114496	
Seeding	Cut	Fill	SHEET	TOTAL	
211	60	4	P.39	104	



Sheet Totals		
Seeding	Cut	Fill
34	20	12

SHEET	TOTAL
P.40	104

DESIGN AGENCY



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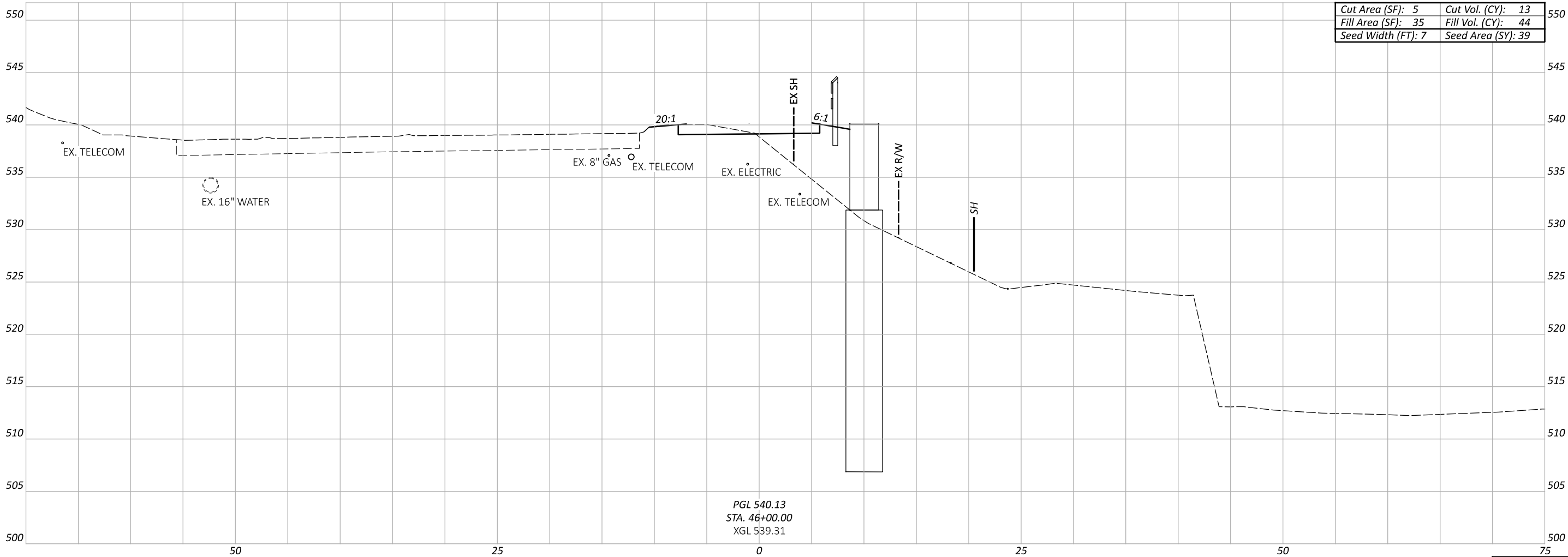
REVIEWER

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PROJECT ID

114496

CROSS SECTIONS
STA. 45+50.00



PGL 540.13
STA. 46+00.00
XGL 539.31

Sheet Totals		
Seeding	Cut	Fill
39	13	44

SHEET	TOTAL
P.41	104

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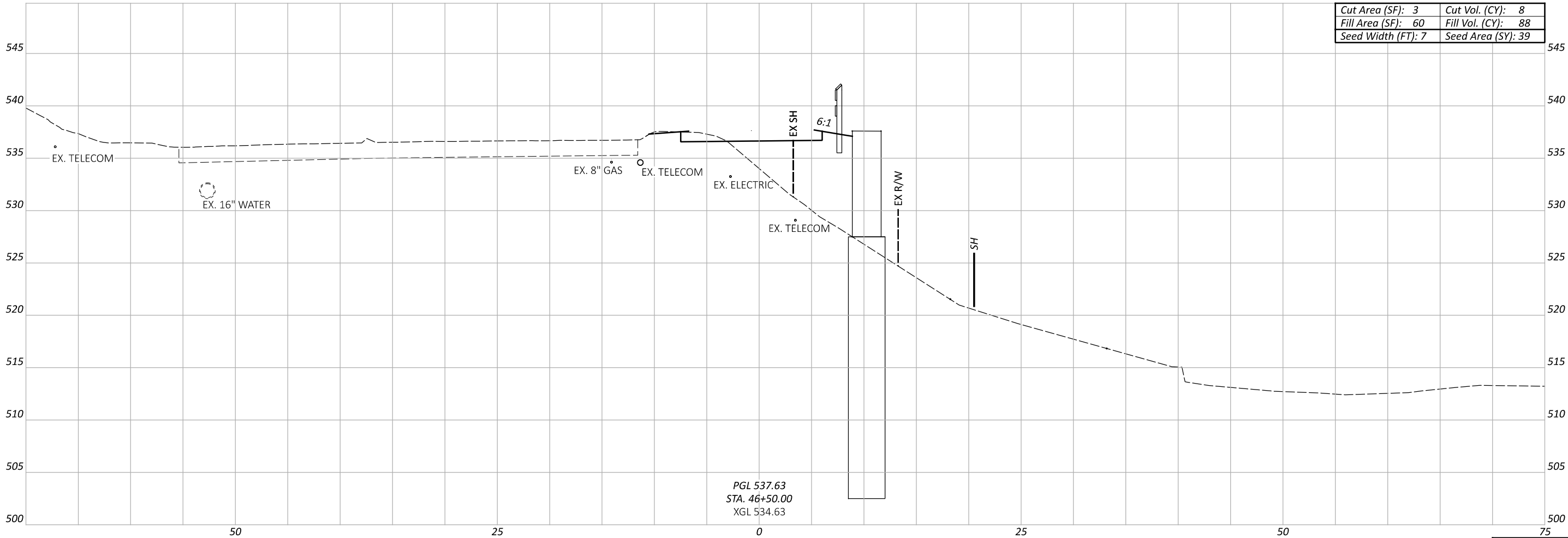
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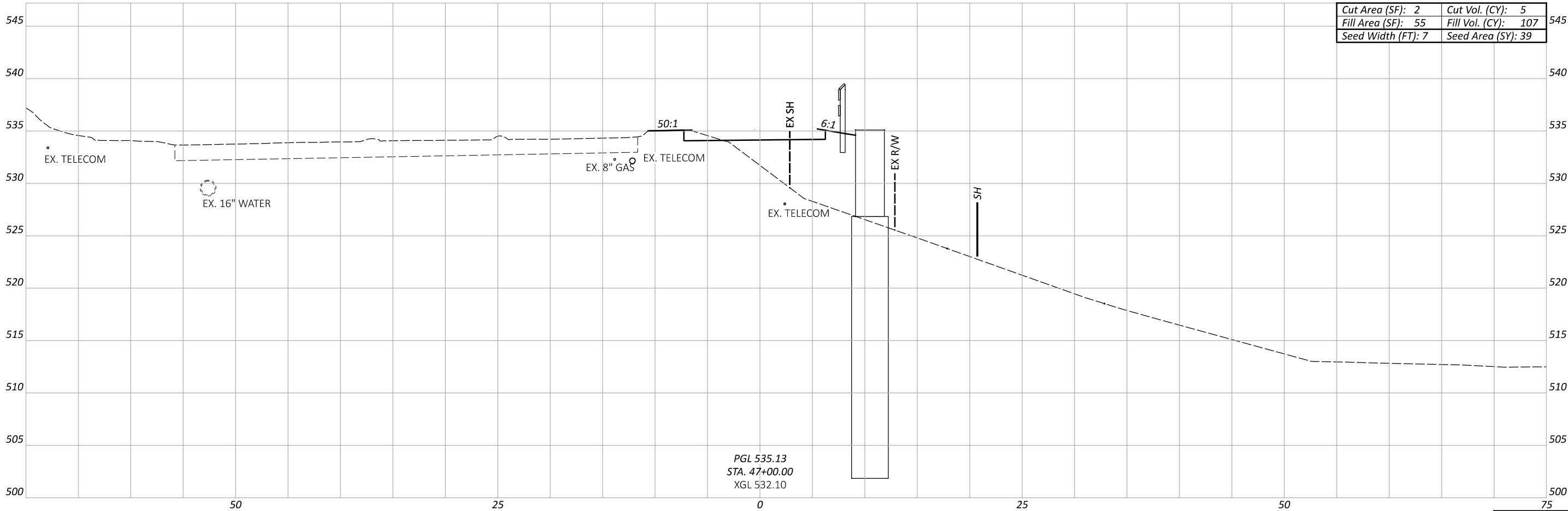
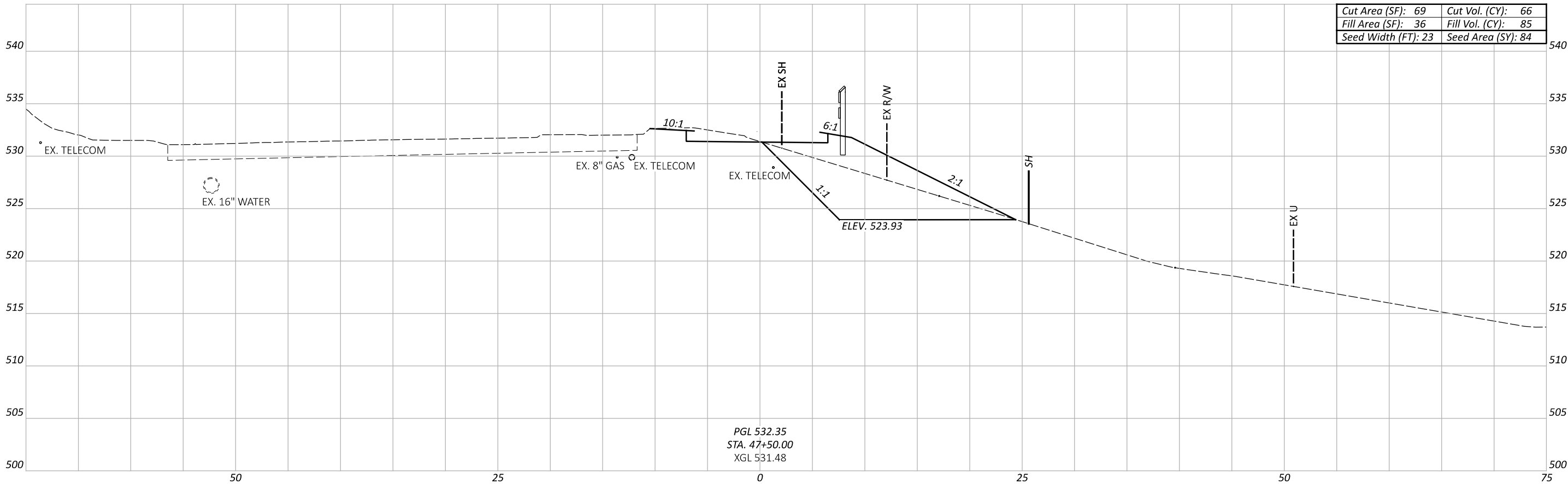
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CROSS SECTIONS
STA. 47+00.00 TO STA. 47+50.00

DESIGN AGENCY



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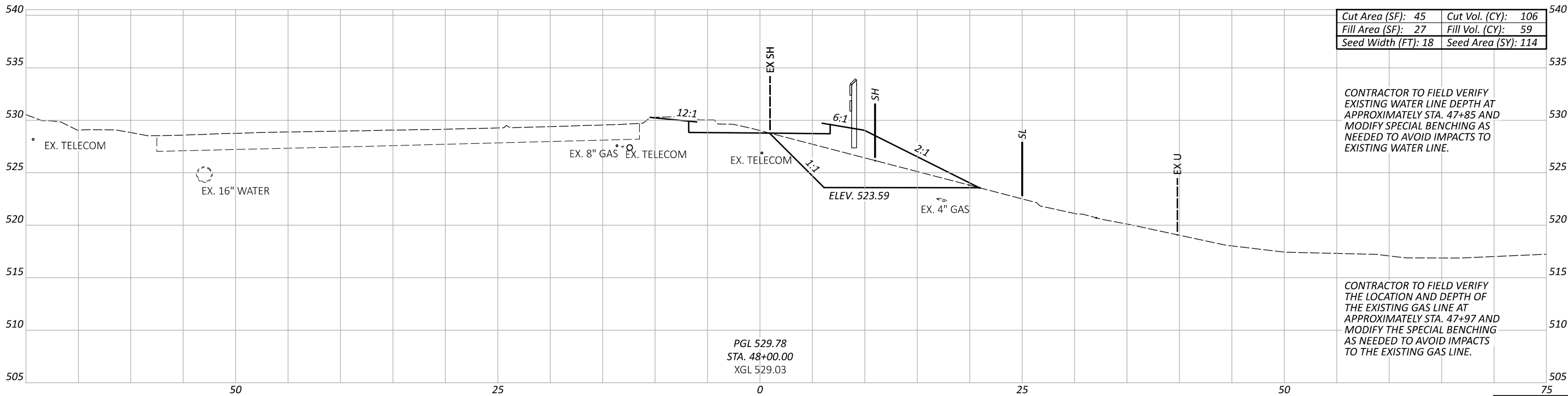
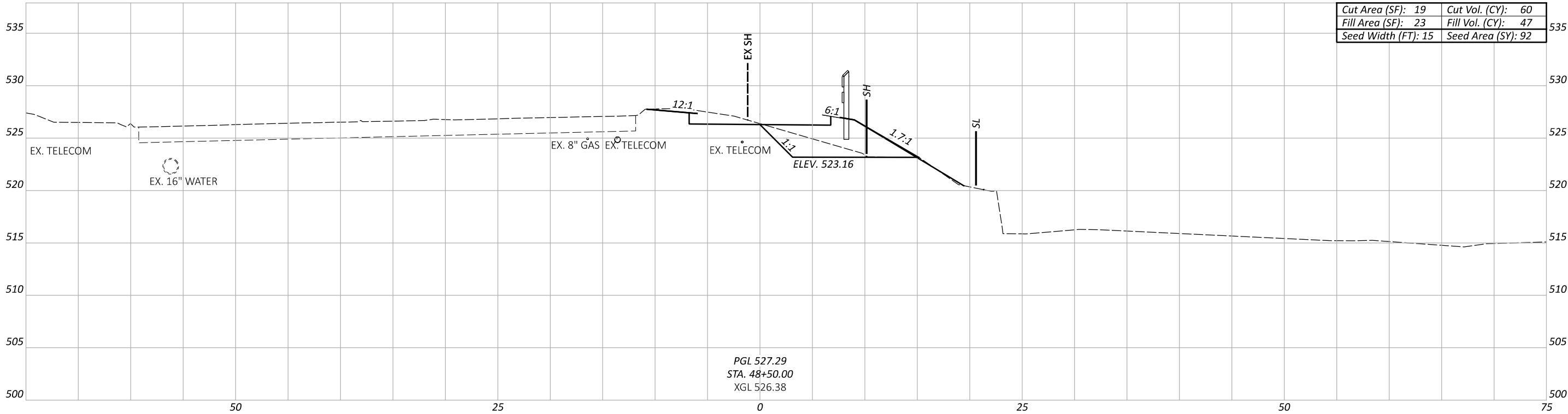
REVIEWER

SNS 08-04-25

PROJECT ID

114496

Sheet Totals			TOTAL	
Seeding	Cut	Fill	SHEET	P.43
123	71	192		104



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
206	166	106	P.44	104

CROSS SECTIONS
STA. 48+00.00 TO STA. 48+50.00

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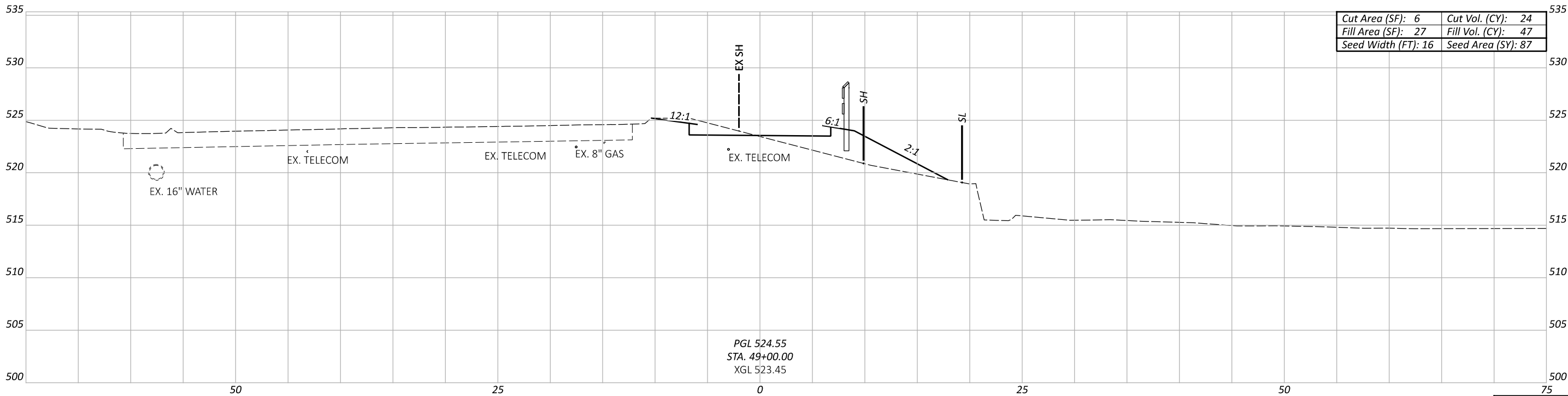
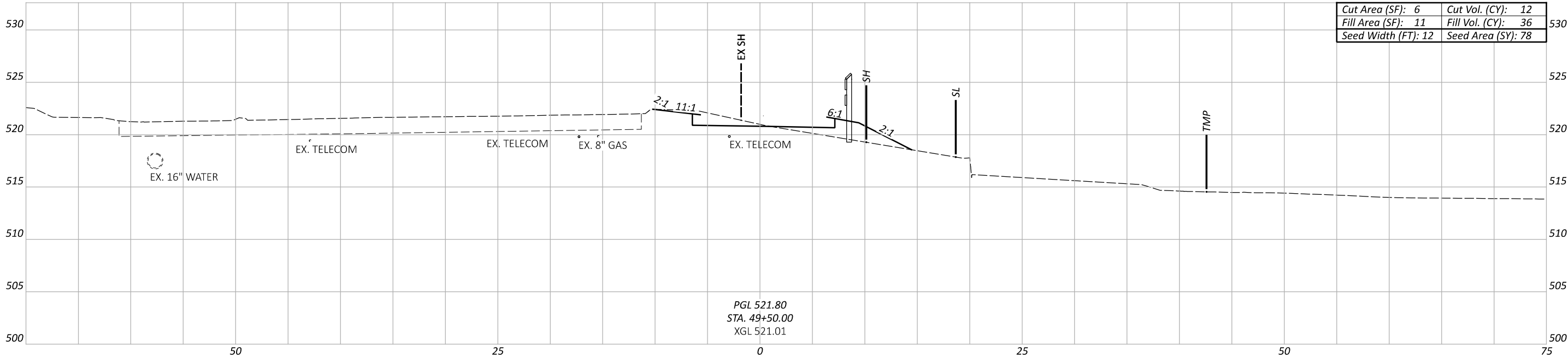
ZTM

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PROJECT ID

114496



Sheet Totals		
Seeding	Cut	Fill
165	36	83

DESIGN AGENCY



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Cincinnati, OH 45242
(513) 842-8200

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SNS 08-04-25

PROJECT ID

114496

SHEET

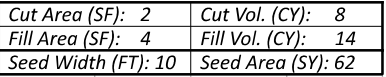
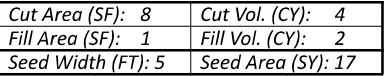
P.45

TOTAL

104

CROSS SECTIONS
STA. 49+00.00 TO STA. 49+50.00

TOTALS CARRIED TO SHEET NO. P.15



DESIGN AGENCY

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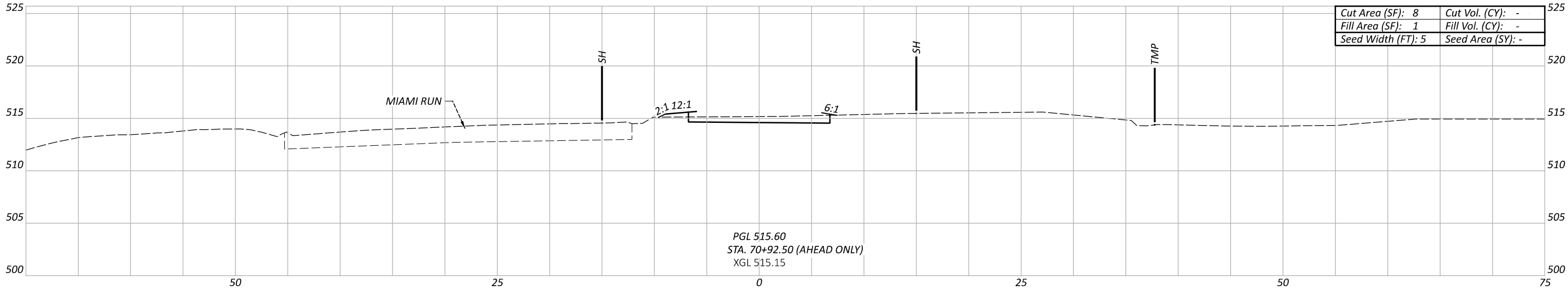
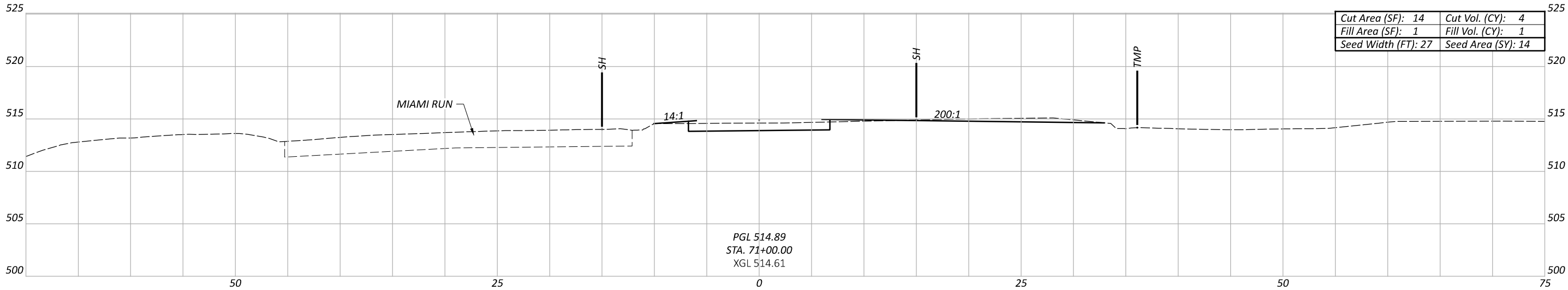
DESIGNER
QC

REVIEWER
SNS 08-04-25

PROJECT ID
114496

SHEET	TOTAL
P.46	104

CROSS SECTION
STA. 50+00.00 TO STA. 50+20.00



CROSS SECTIONS
STA. 70+92.50 TO STA. 71+00.00

DESIGN AGENCY



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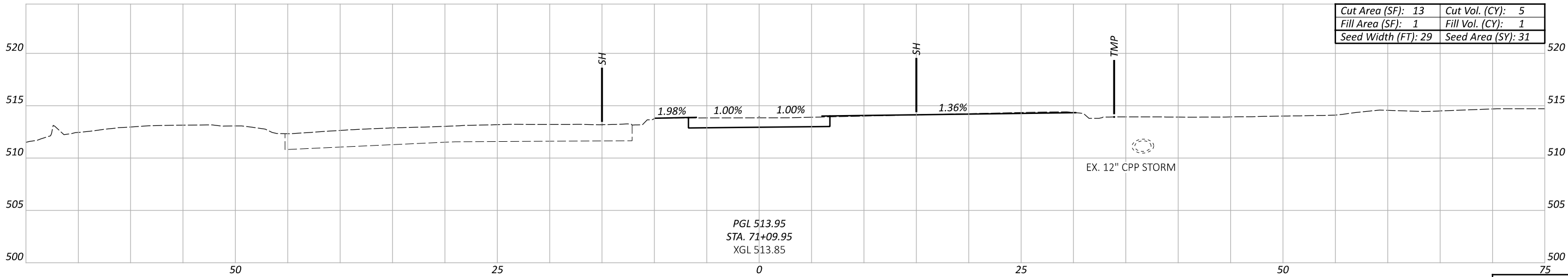
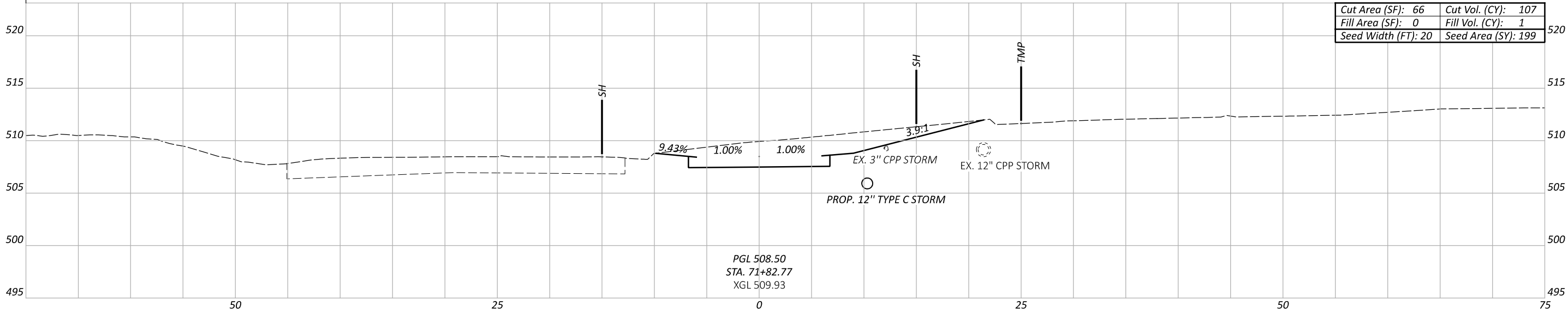
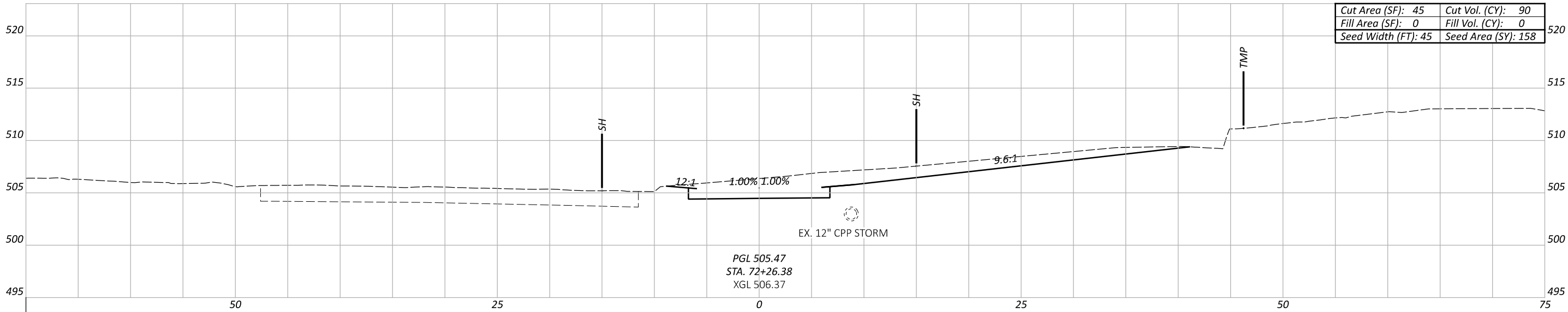
PROJECT ID

114496

Sheet Totals

Seeding	Cut	Fill
14	4	1

SHEET	TOTAL
P.47	104



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
388	202	2	P.48	104

CROSS SECTIONS
STA. 71+09.95 TO STA. 72+26.38

DESIGN AGENCY



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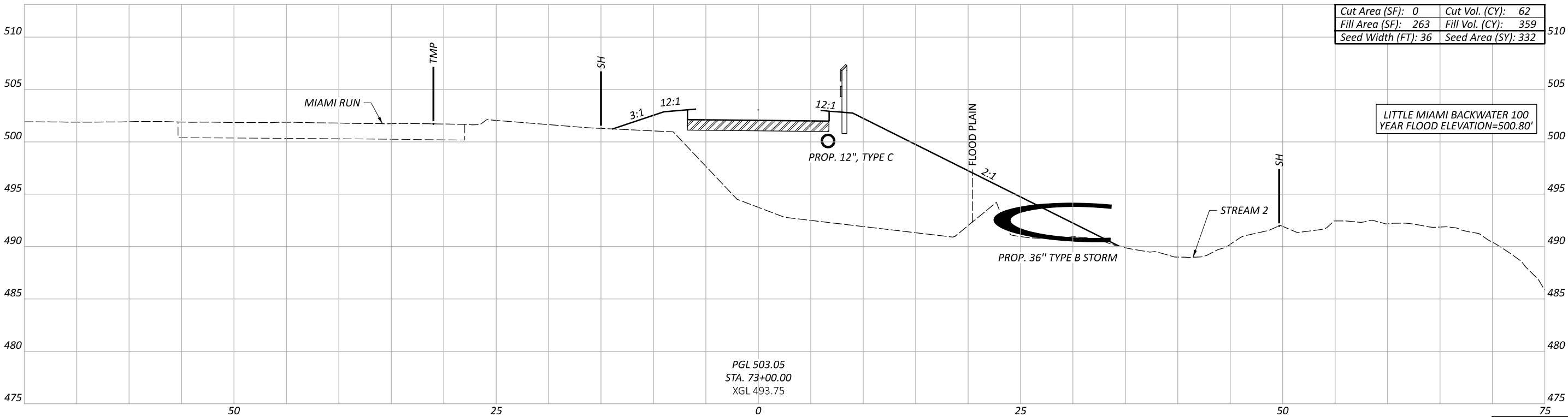
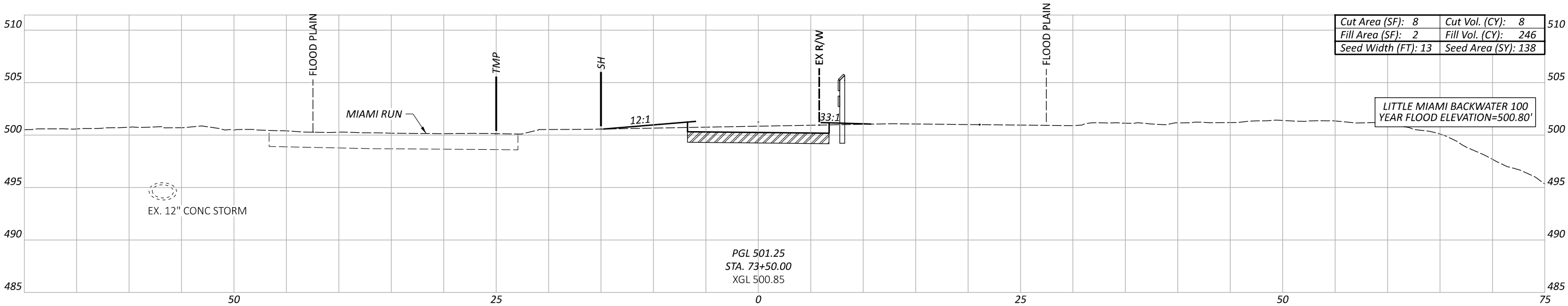
SNS 08-04-25

PROJECT ID

114496

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
470	70	605	P.49	104

CROSS SECTIONS
STA. 73+00.00 TO STA. 73+50.00

DESIGN AGENCY



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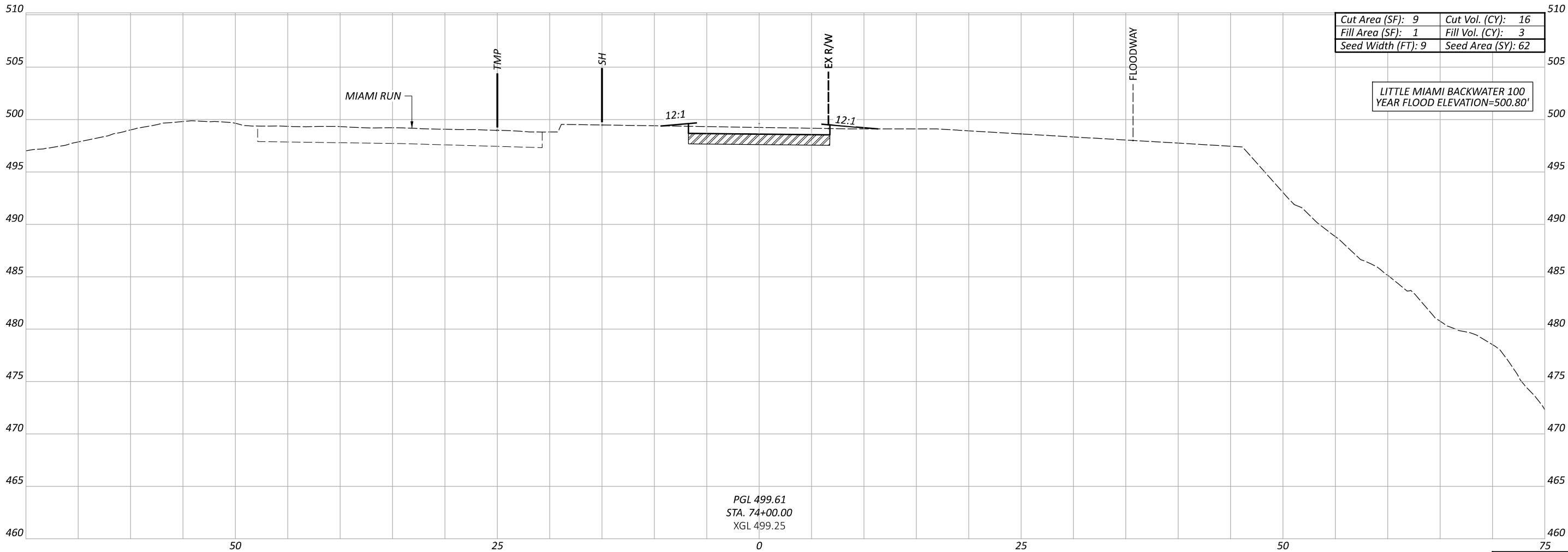
SNS 08-04-25

PROJECT ID

114496



ALTERNATE BID - SUBGRADE STABILIZATION
ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



PGL 499.61
STA. 74+00.00
XGL 499.25

Cut Area (SF):	9	Cut Vol. (CY):	16
Fill Area (SF):	1	Fill Vol. (CY):	3
Seed Width (FT):	9	Seed Area (SY):	62

LITTLE MIAMI BACKWATER 100
YEAR FLOOD ELEVATION=500.80'

Sheet Totals		
Seeding	Cut	Fill
62	16	3

DESIGN AGENCY



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PROJECT ID

114496

SHEET

P.50

TOTAL

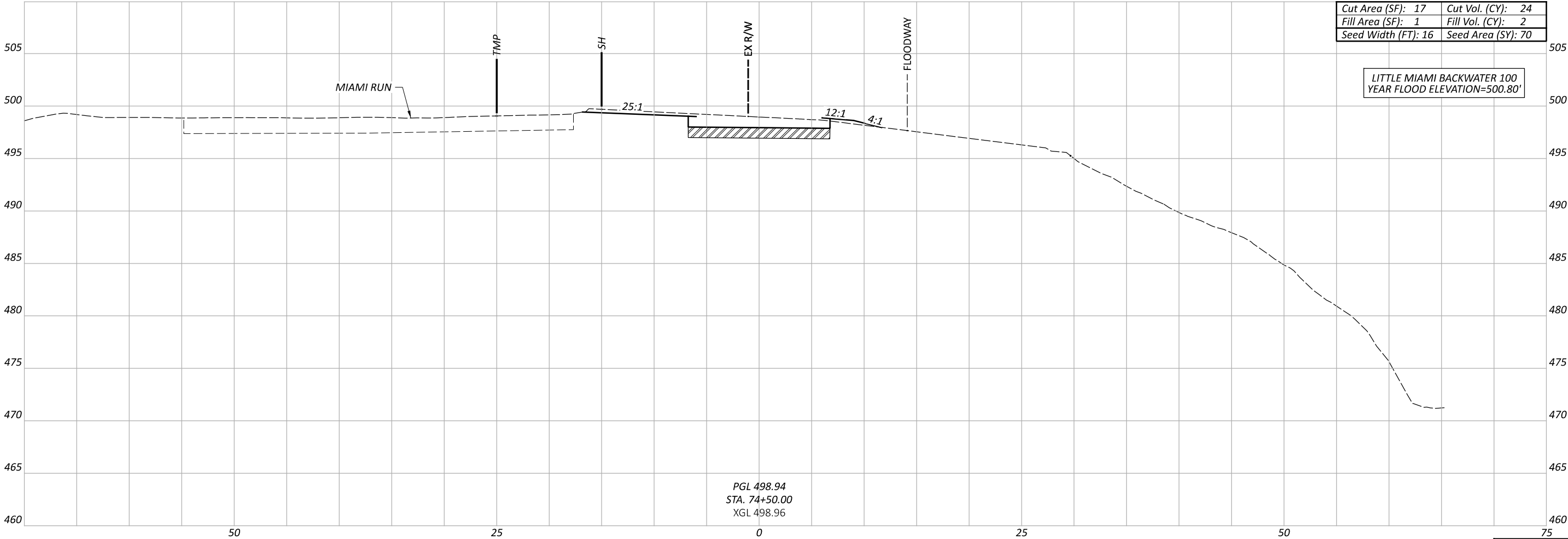
104

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Cut Area (SF):	17	Cut Vol. (CY):	24
Fill Area (SF):	1	Fill Vol. (CY):	2
Seed Width (FT):	16	Seed Area (SY):	70

Sheet Totals		
Seeding	Cut	Fill
70	24	2

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114496

SHEET

P.51

TOTAL

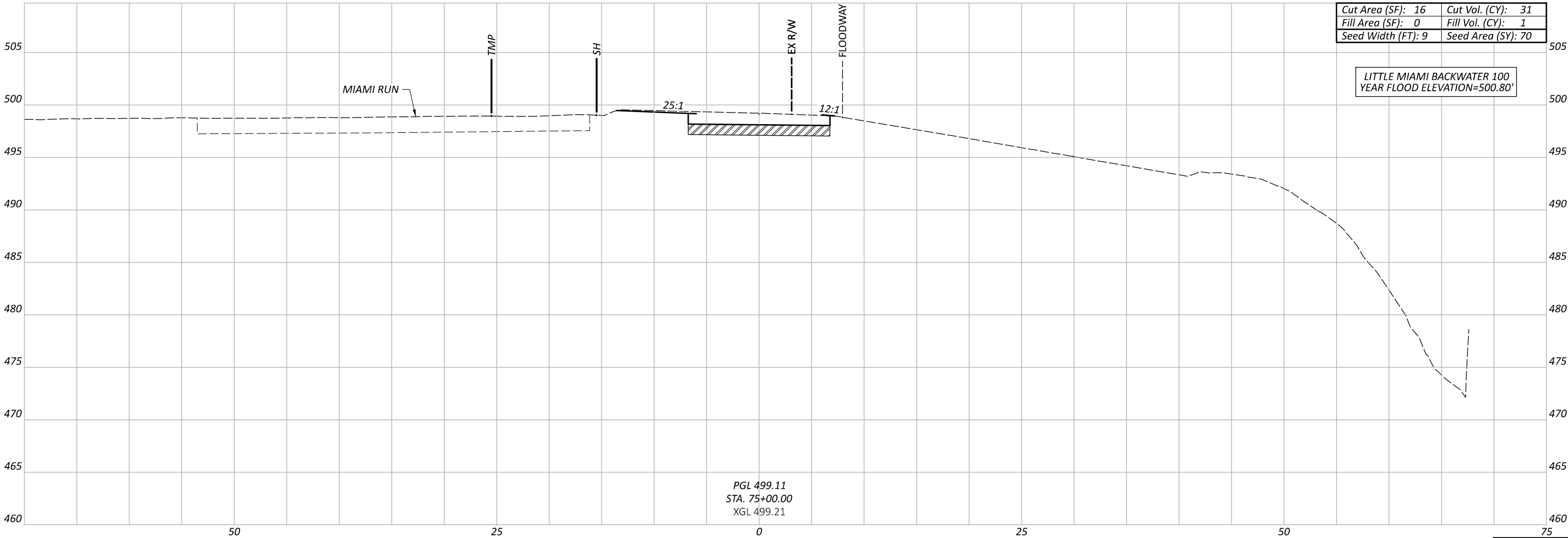
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ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



PGL 499.11
STA. 75+00.00
XGL 499.21

Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
70	31	1	P.52	104

CROSS SECTION
STA. 75+00.00

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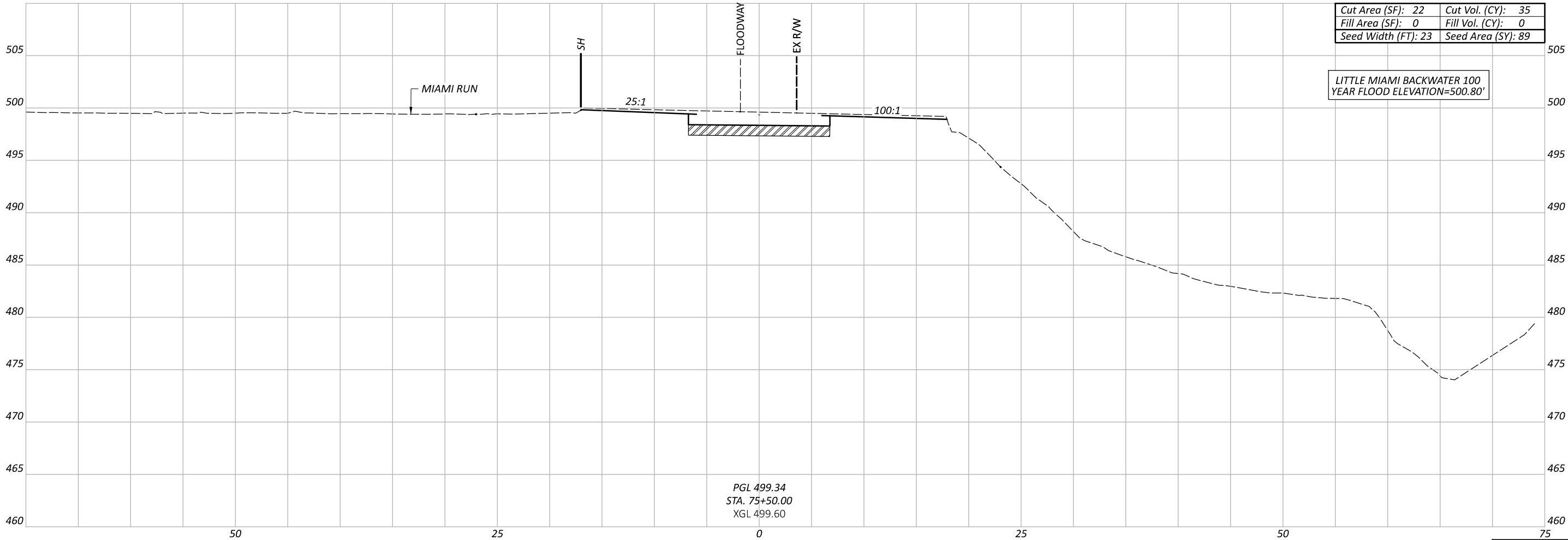
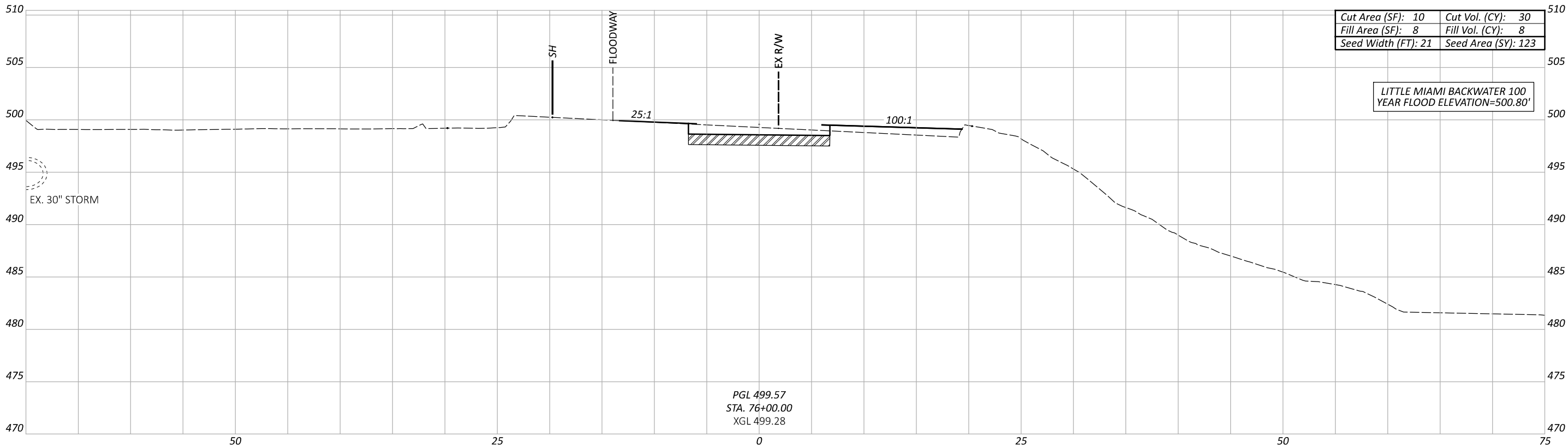
PROJECT ID

114496

ALTERNATE BID - SUBGRADE STABILIZATION



ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
212	65	8	P.53	104

CROSS SECTIONS
STA. 75+50.00 TO STA. 76+00.00

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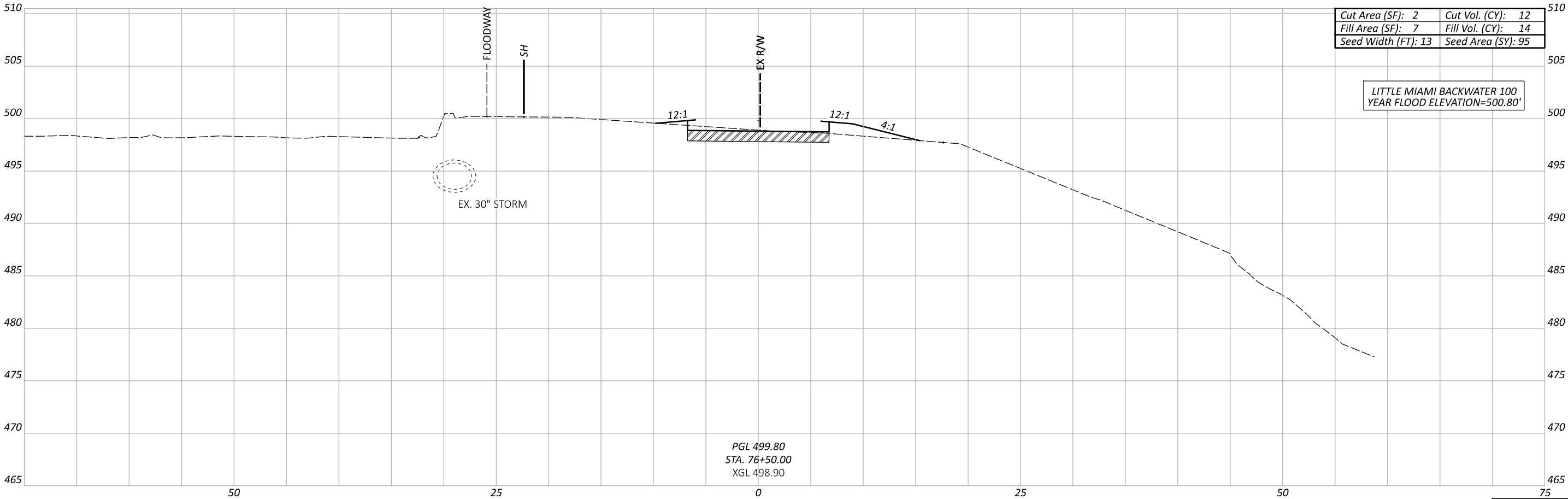
114496

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals				114496	
Seeding	Cut	Fill	SHEET	TOTAL	
95	12	14	P.54	104	

CROSS SECTION
STA. 76+50.00

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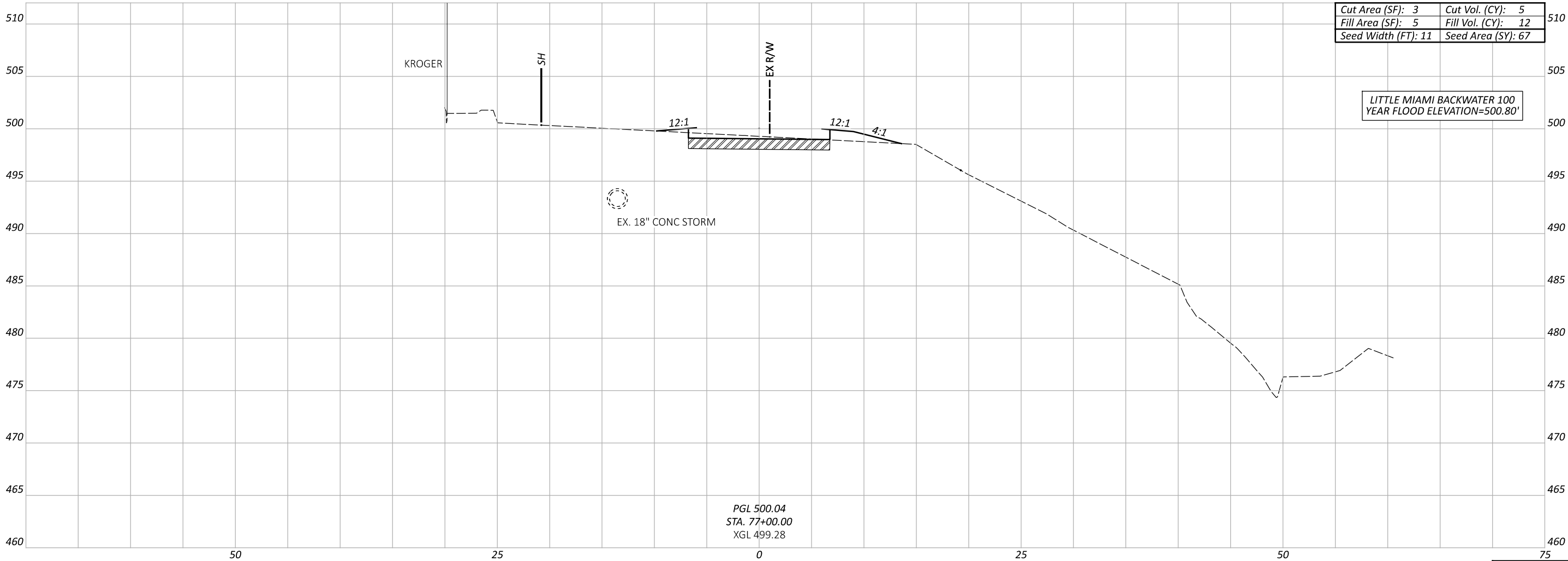
114496

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Cut Area (SF): 3	Cut Vol. (CY): 5
Fill Area (SF): 5	Fill Vol. (CY): 12
Seed Width (FT): 11	Seed Area (SY): 67

LITTLE MIAMI BACKWATER 100
YEAR FLOOD ELEVATION=500.80'

Sheet Totals		
Seeding	Cut	Fill
67	5	12

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PROJECT ID

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SHEET

P.55

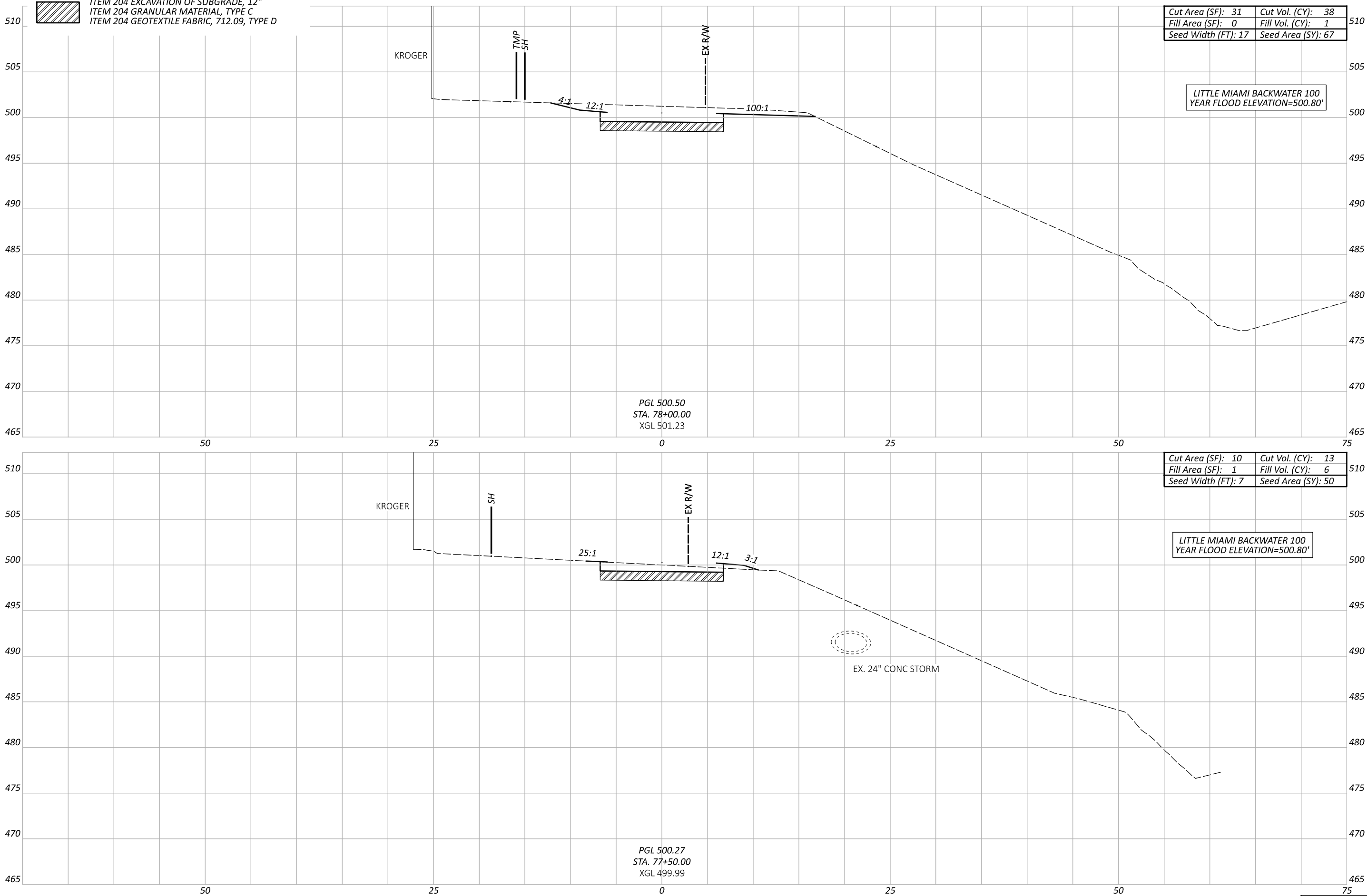
TOTAL

104

ALTERNATE BID - SUBGRADE STABILIZATION



ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



CROSS SECTIONS
STA. 77+50.00 TO STA. 78+00.00

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PROJECT ID

114496

Sheet Totals

Seeding	Cut	Fill
117	51	7

SHEET

P.56

TOTAL

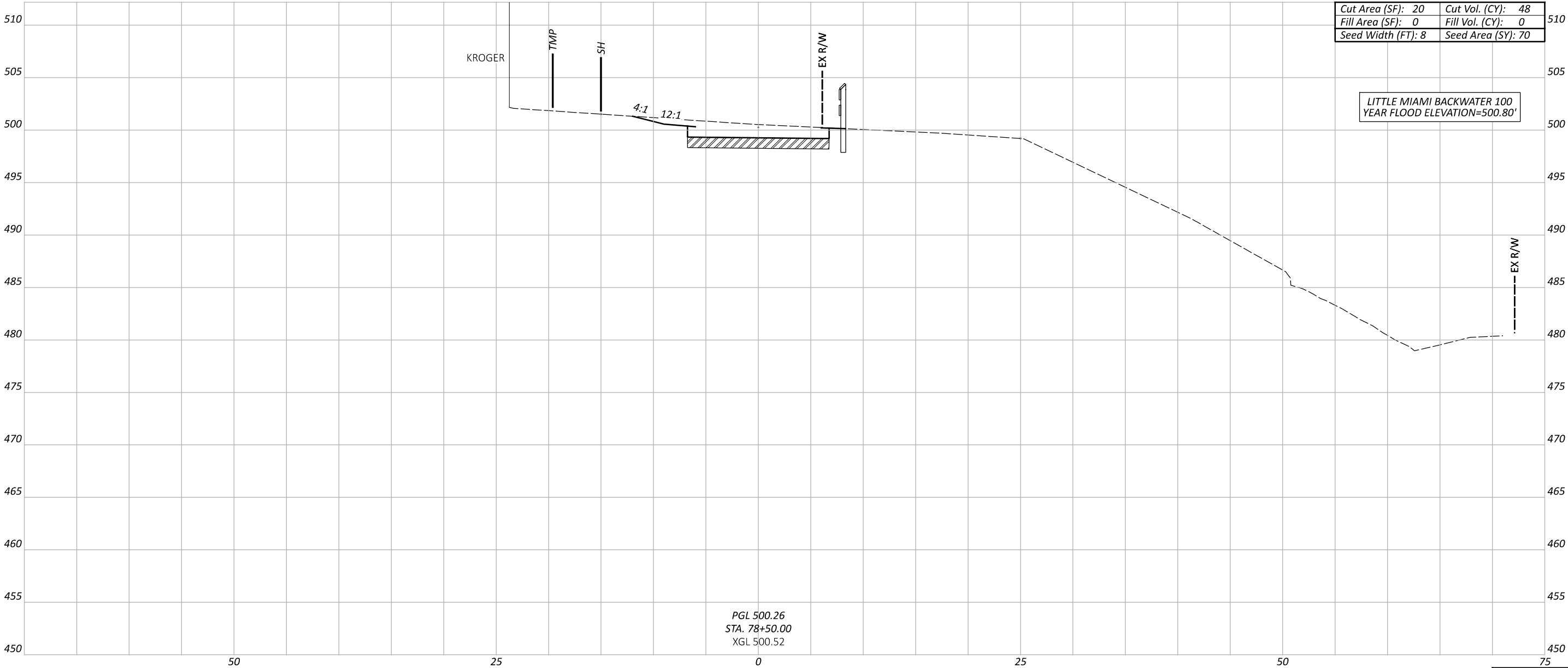
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ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



PGL 500.26
STA. 78+50.00
XGL 500.52

Sheet Totals		
Seeding	Cut	Fill
70	48	0

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SHEET

P.57

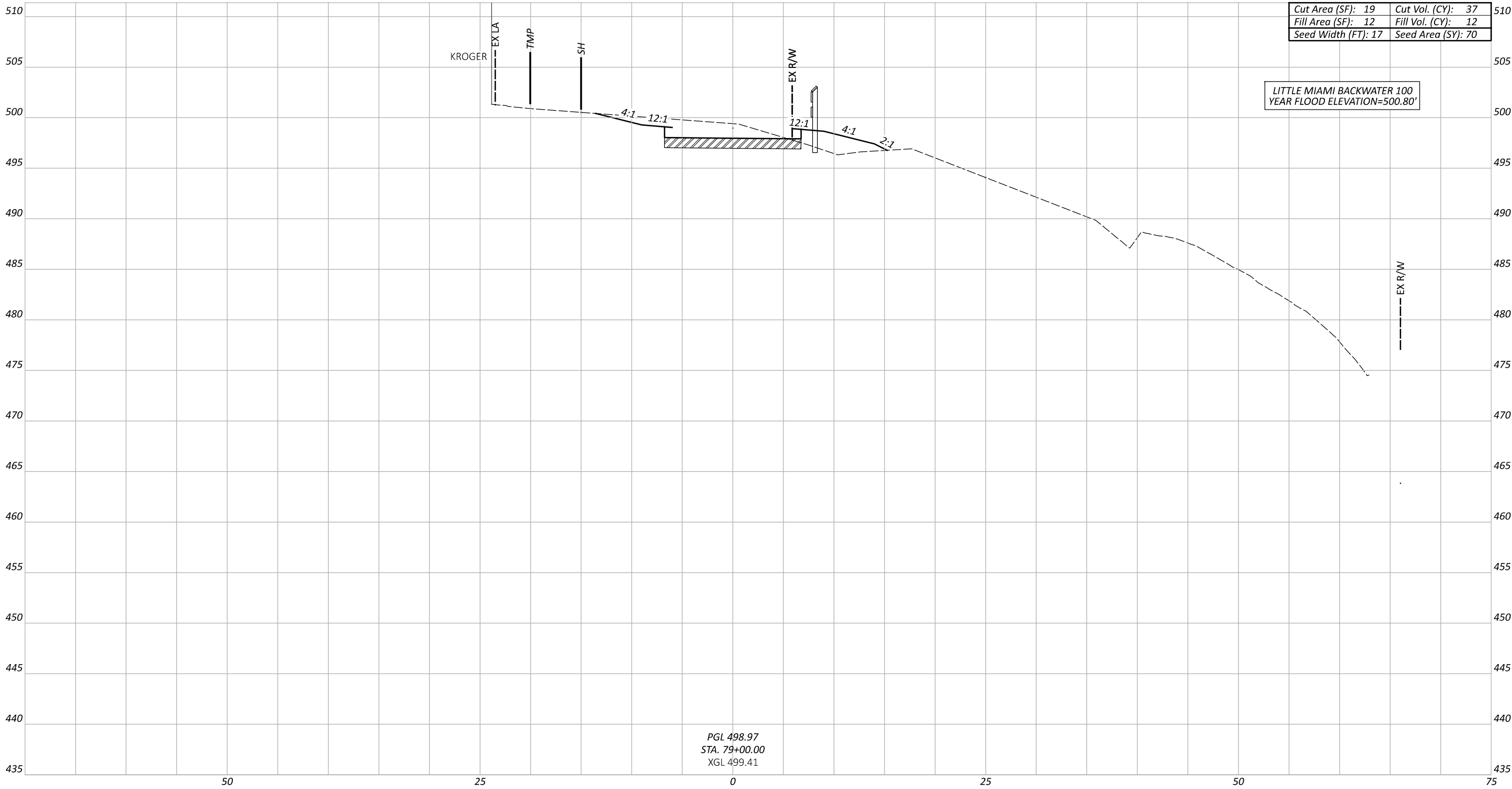
TOTAL

104

CROSS SECTION
STA. 78+50.00



ALTERNATE BID - SUBGRADE STABILIZATION
ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



CROSS SECTION
STA. 79+00.00

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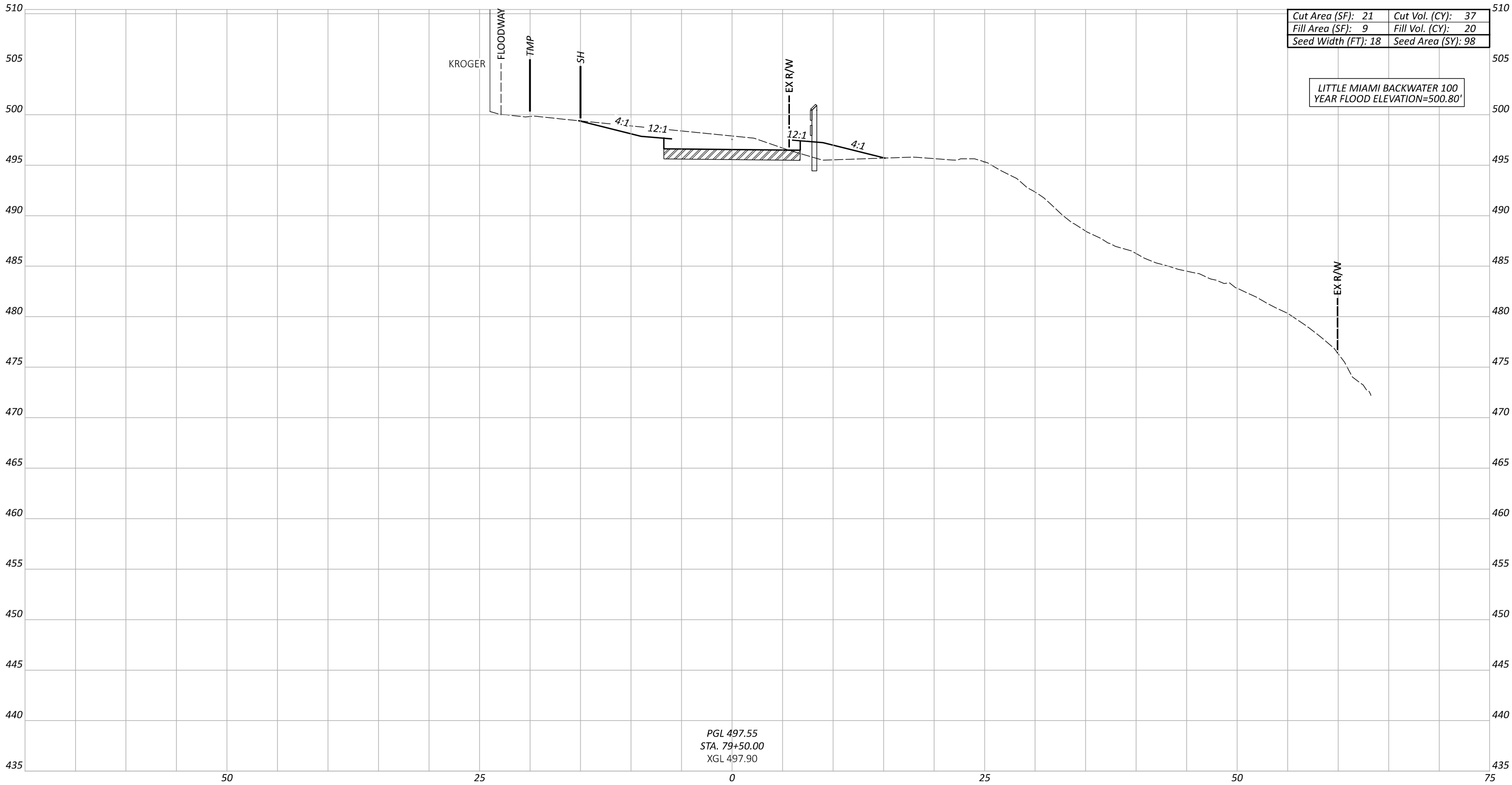
PROJECT ID
114496

SHEET TOTAL
P.58 104

Sheet Totals		
Seeding	Cut	Fill
70	37	12



ALTERNATE BID - SUBGRADE STABILIZATION
ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



PGL 497.55
STA. 79+50.00
XGL 497.90

Cut Area (SF):	21	Cut Vol. (CY):	37
Fill Area (SF):	9	Fill Vol. (CY):	20
Seed Width (FT):	18	Seed Area (SY):	98

LITTLE MIAMI BACKWATER 100
YEAR FLOOD ELEVATION=500.80'

CROSS SECTION
STA. 79+50.00

DESIGN AGENCY



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PROJECT ID

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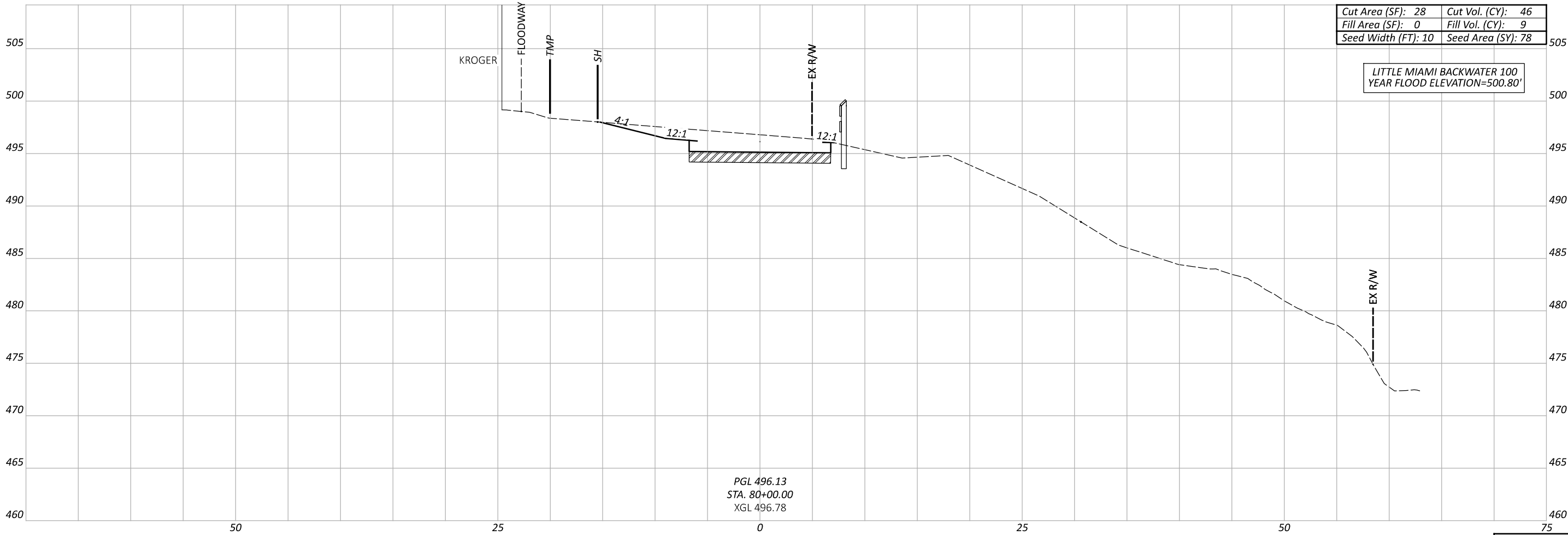
Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
98	37	20	P.59	104

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
78	46	9	P.60	104

CROSS SECTION
STA. 80+00.00

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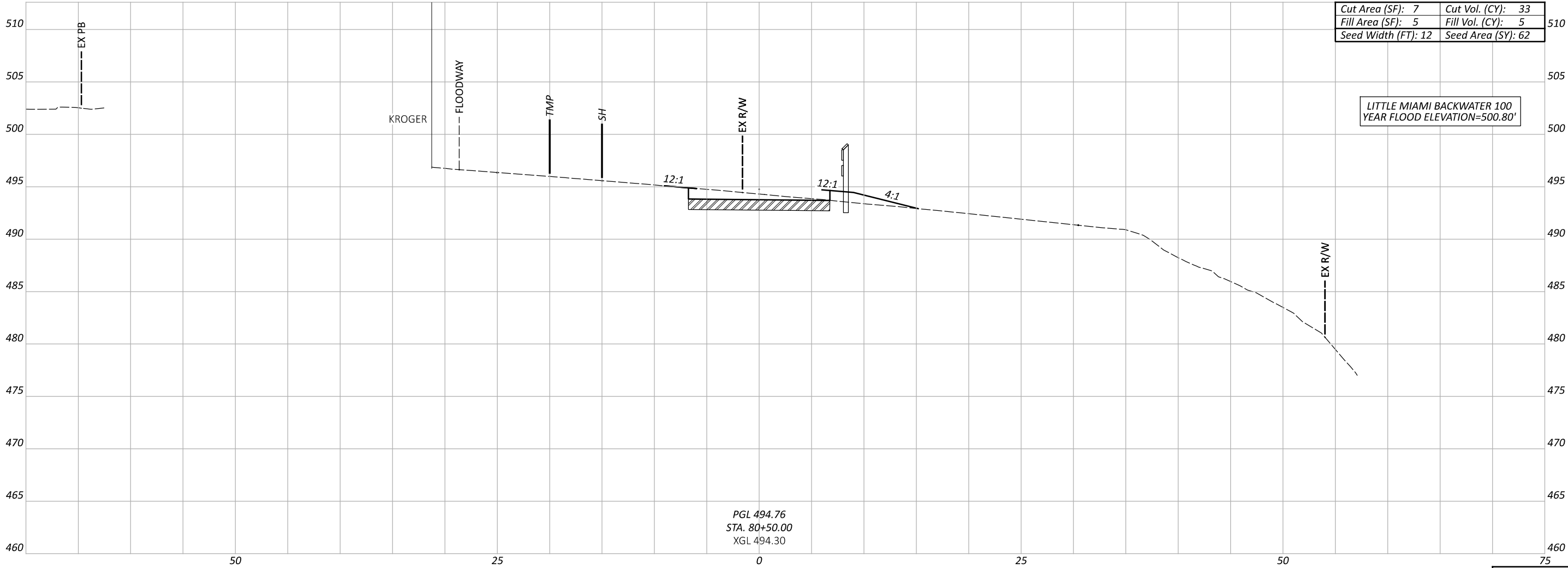
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ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Cut Area (SF):	7	Cut Vol. (CY):	33
Fill Area (SF):	5	Fill Vol. (CY):	5
Seed Width (FT):	12	Seed Area (SY):	62

Sheet Totals		
Seeding	Cut	Fill
62	33	5

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SHEET

P.61

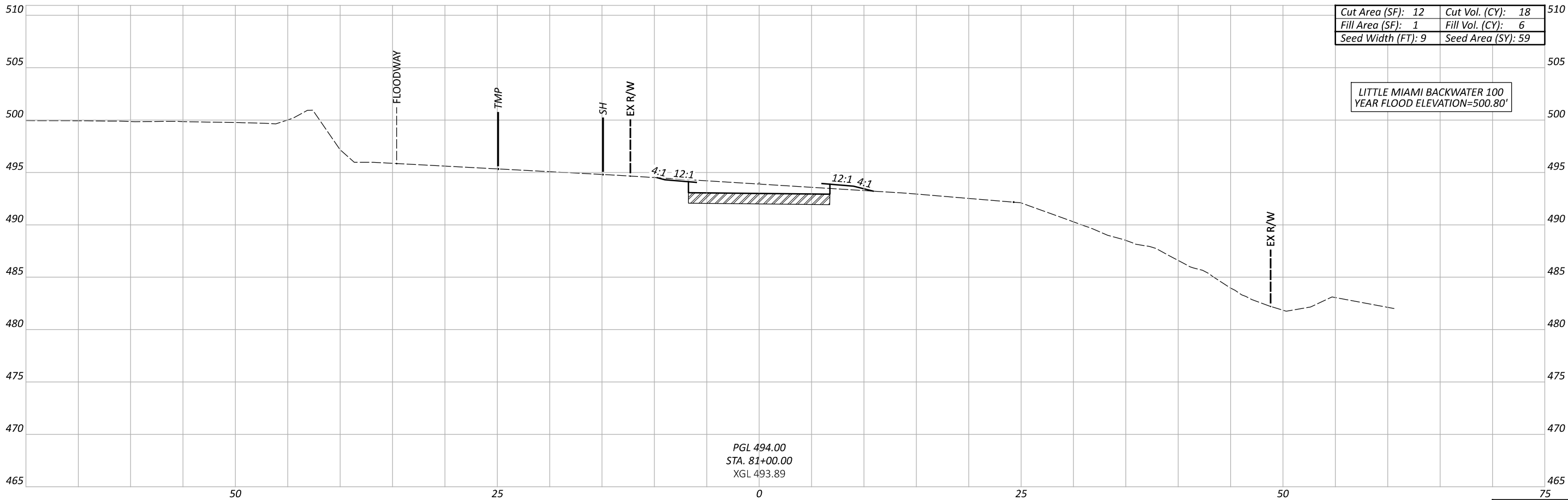
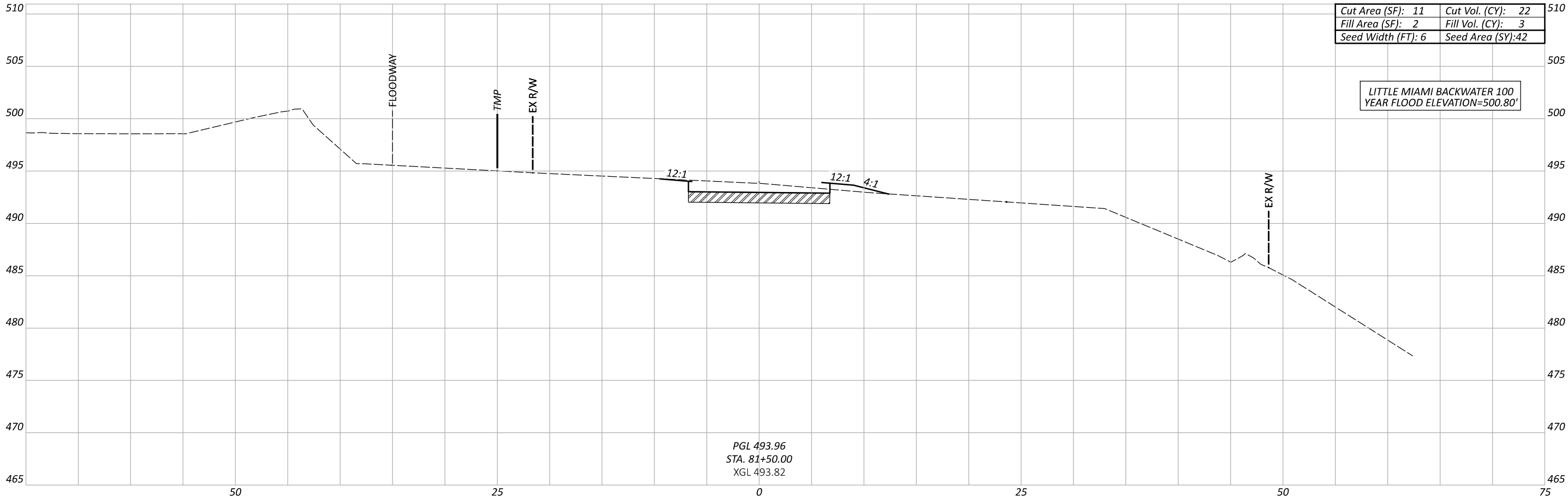
TOTAL

104

ALTERNATE BID - SUBGRADE STABILIZATION



ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
101	40	9	P.62	104

CROSS SECTIONS
STA. 81+00.00 TO 81+50.00

DESIGN AGENCY



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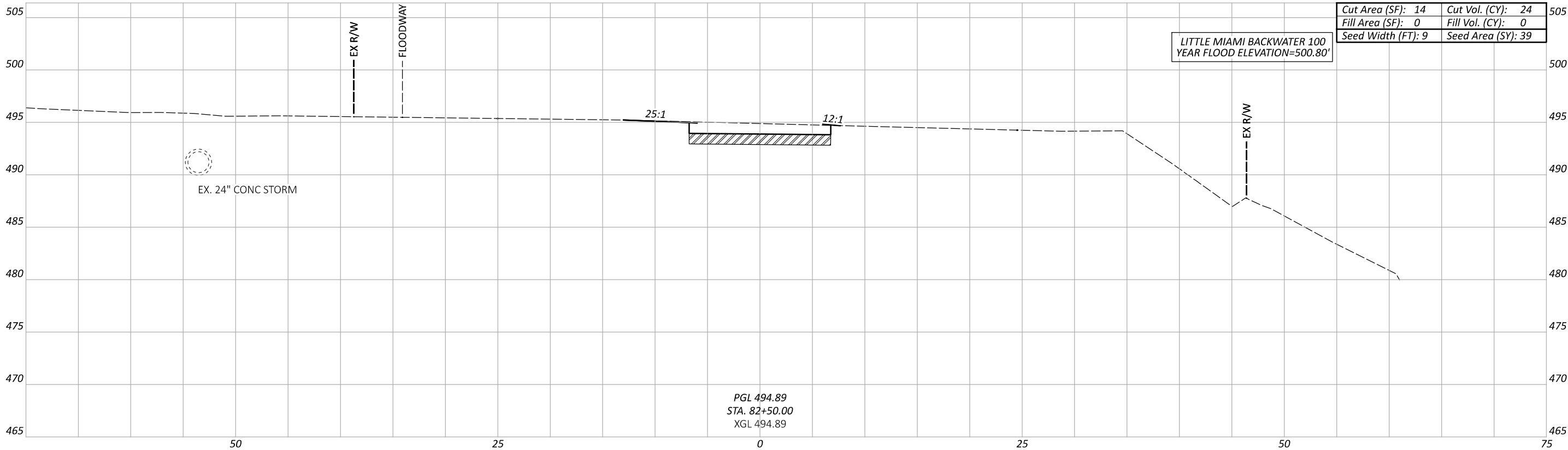
PROJECT ID

114496

ALTERNATE BID - SUBGRADE STABILIZATION

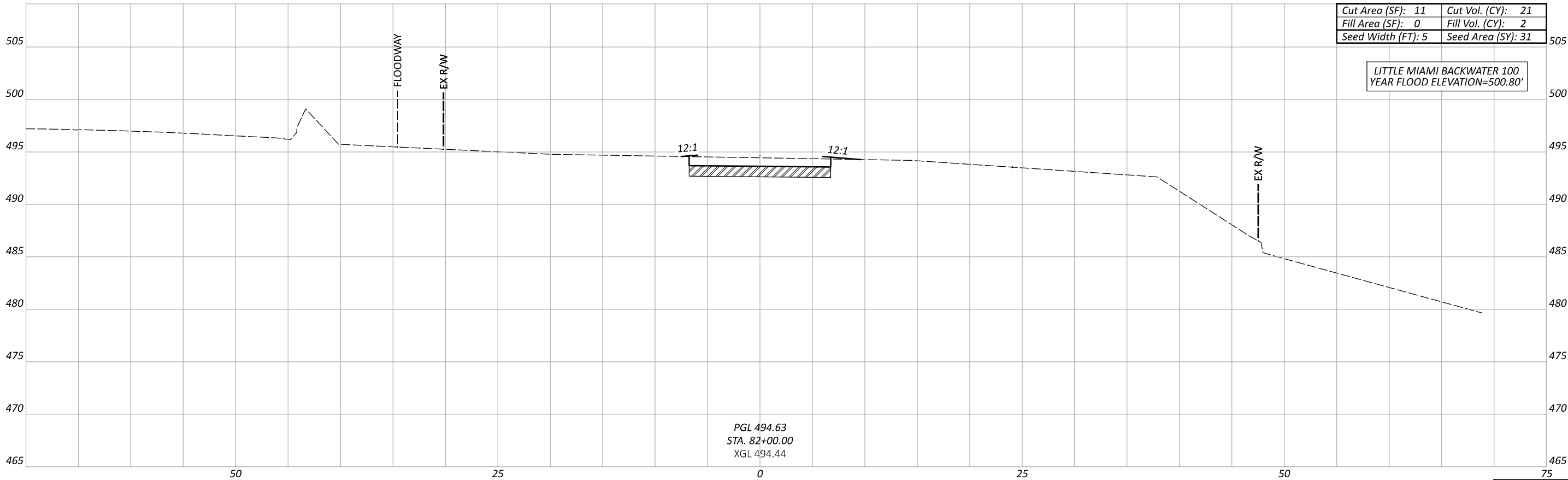


- ITEM 204 EXCAVATION OF SUBGRADE, 12"
- ITEM 204 GRANULAR MATERIAL, TYPE C
- ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Cut Area (SF):	14	Cut Vol. (CY):	24
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):	9	Seed Area (SY):	39

LITTLE MIAMI BACKWATER 100
YEAR FLOOD ELEVATION=500.80'



Cut Area (SF):	11	Cut Vol. (CY):	21
Fill Area (SF):	0	Fill Vol. (CY):	2
Seed Width (FT):	5	Seed Area (SY):	31

LITTLE MIAMI BACKWATER 100
YEAR FLOOD ELEVATION=500.80'

Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
70	45	2	P.63	104

CROSS SECTIONS
STA. 82+00.00 TO STA. 82+50.00

DESIGN AGENCY



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PROJECT ID

114496

SHEET

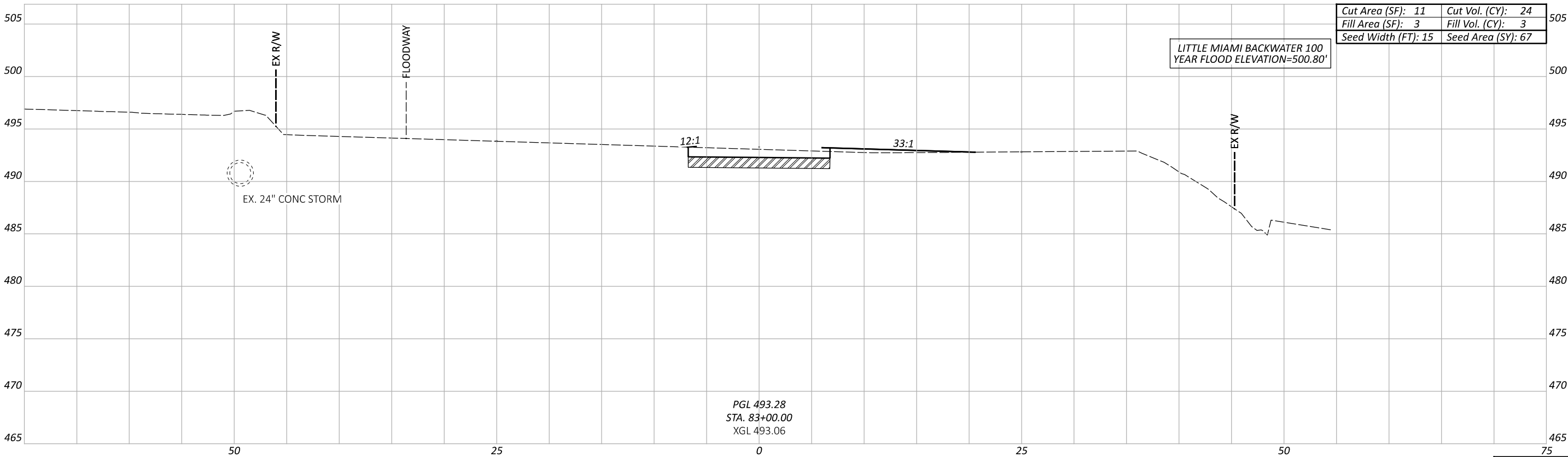
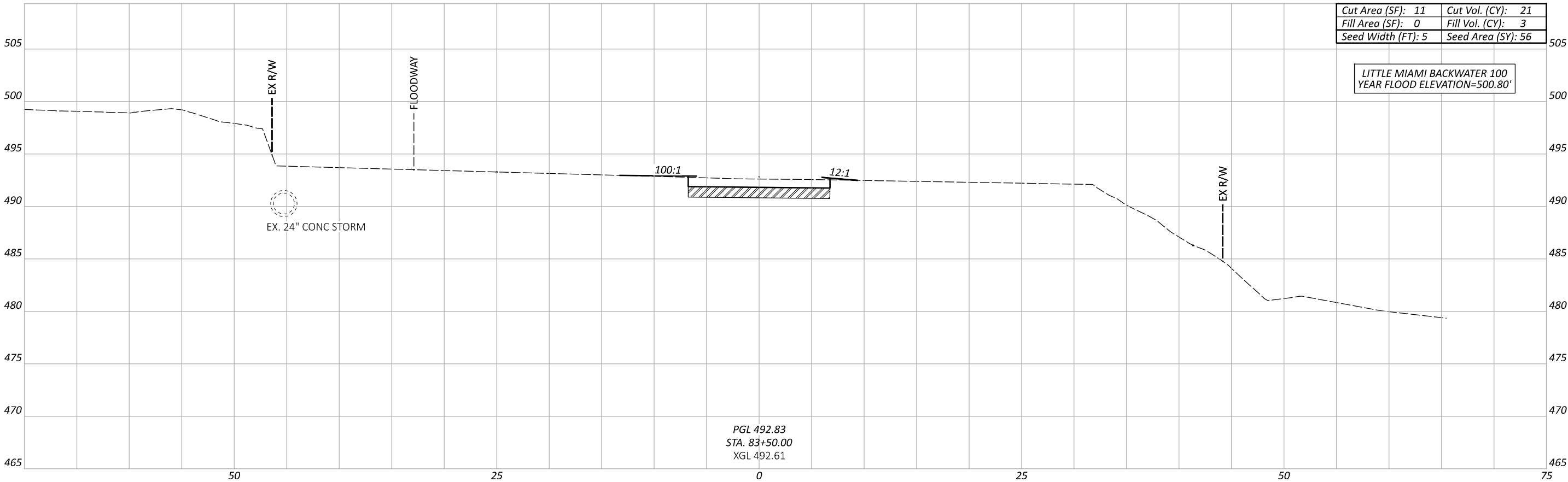
P.63

TOTAL

104

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
121	45	6	P.64	104

CROSS SECTIONS
STA. 83+00.00 TO STA. 83+50.00

DESIGN AGENCY

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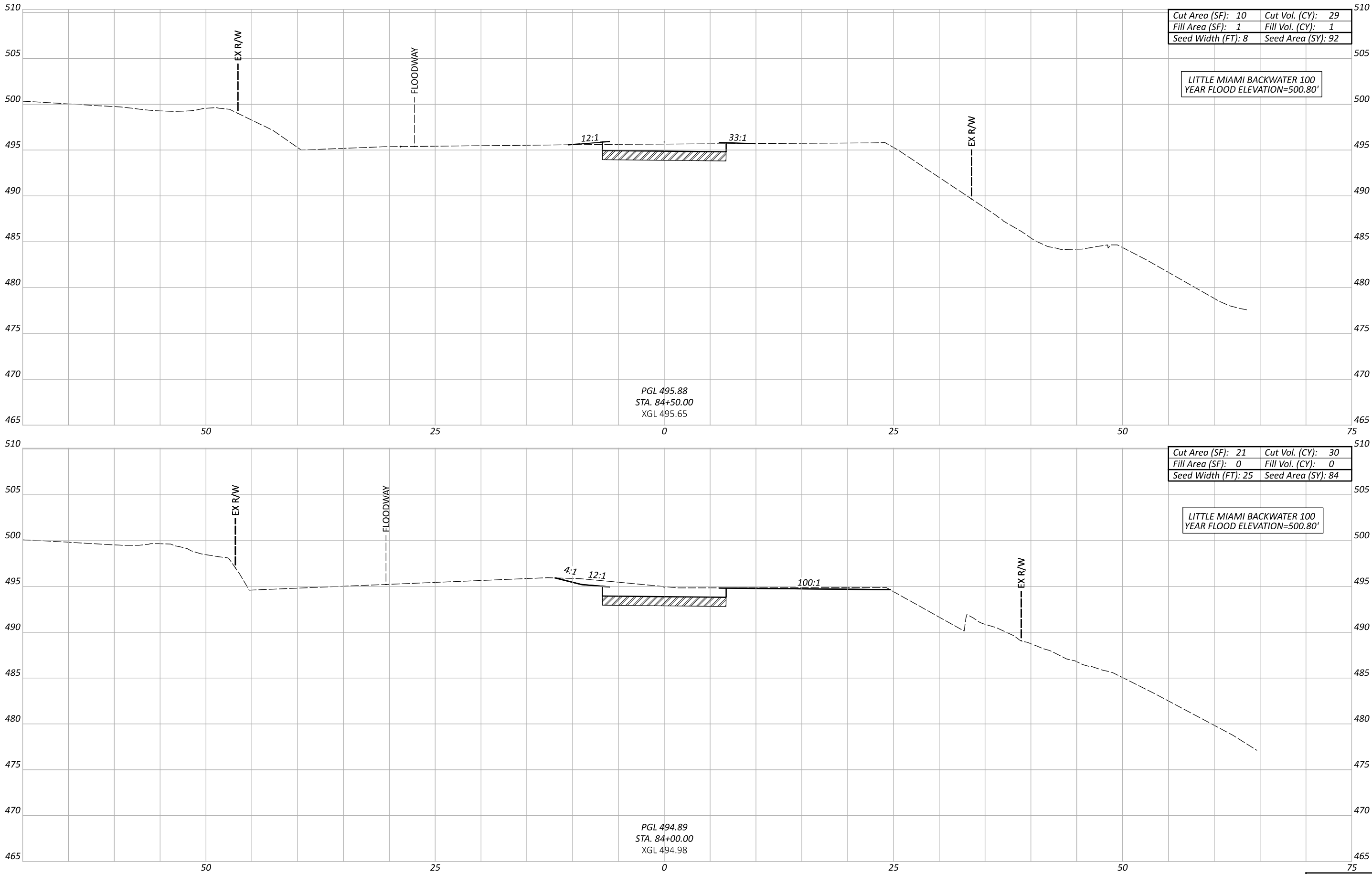
PROJECT ID

114496

ALTERNATE BID - SUBGRADE STABILIZATION



ITEM 204 EXCAVATION OF SUBGRADE, 12"
ITEM 204 GRANULAR MATERIAL, TYPE C
ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



CROSS SECTIONS
STA. 84+00.00 TO STA. 84+50.00

DESIGN AGENCY



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PROJECT ID

114496

Sheet Totals

SHEET TOTAL

Seeding	Cut	Fill
176	59	1

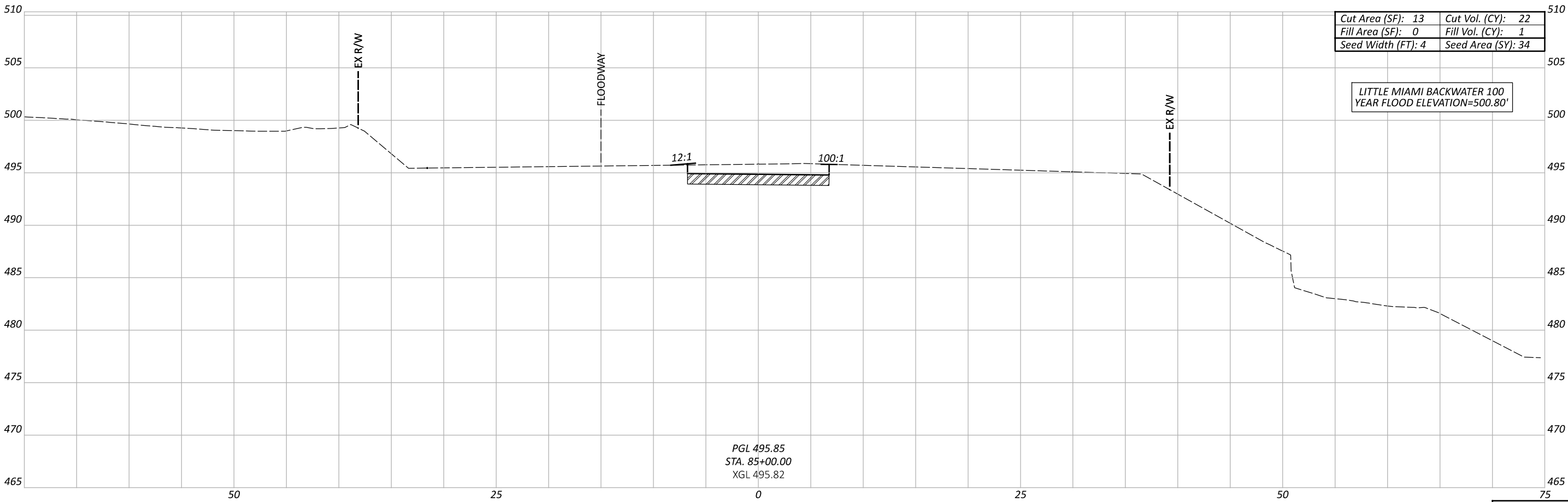
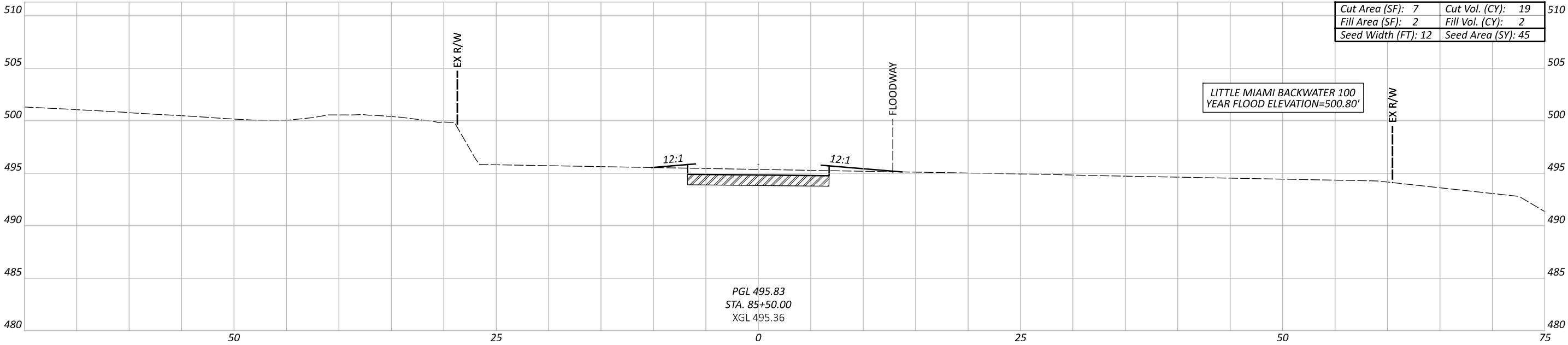
P.65	104
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ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
79	41	3	P.66	104

CROSS SECTIONS
STA. 85+00.00 TO STA. 85+50.00

DESIGN AGENCY

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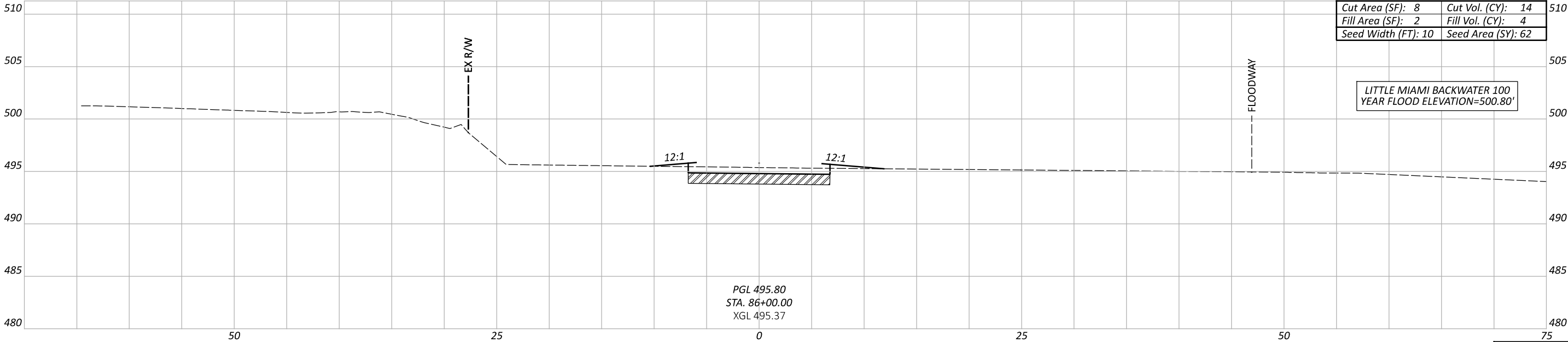
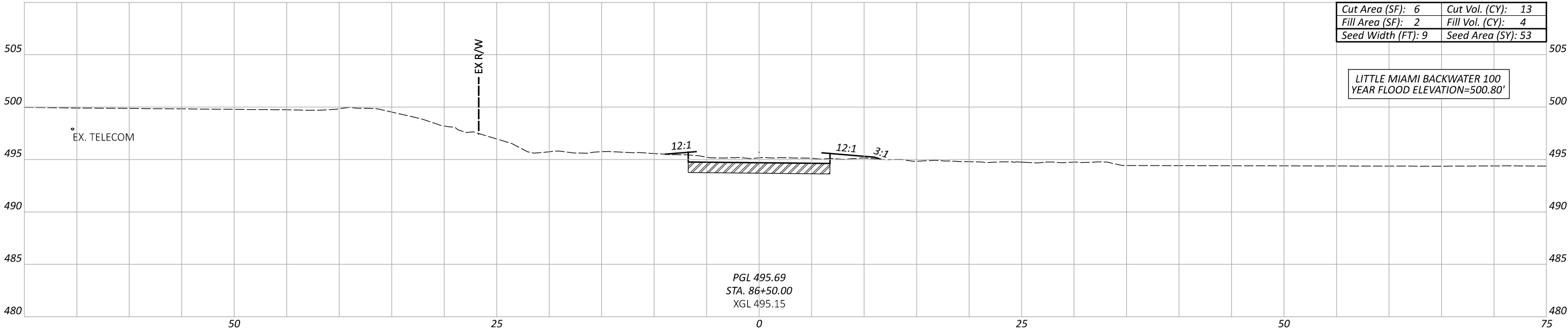
114496

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
115	27	8	P.67	104

CROSS SECTIONS

STA. 86+00.00 TO STA. 86+50.00

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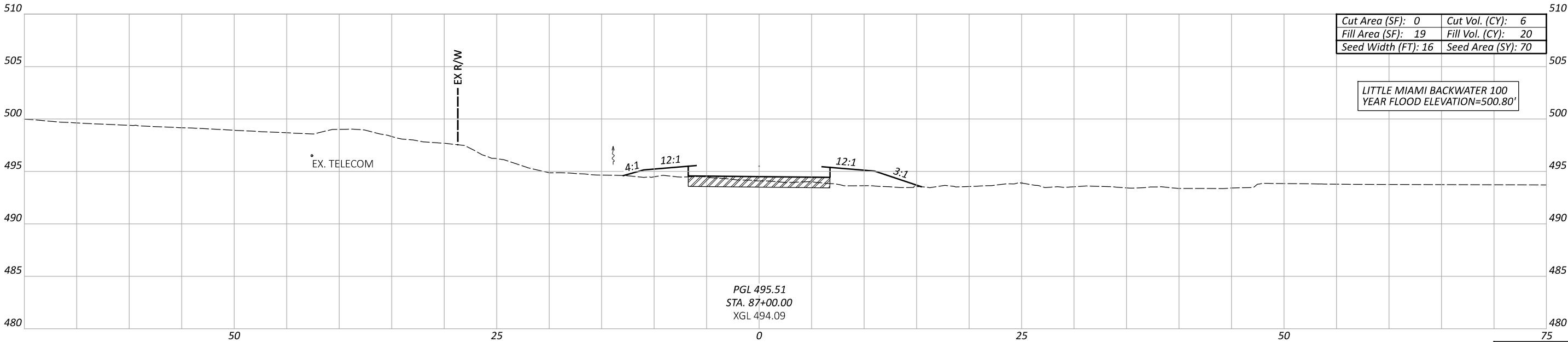
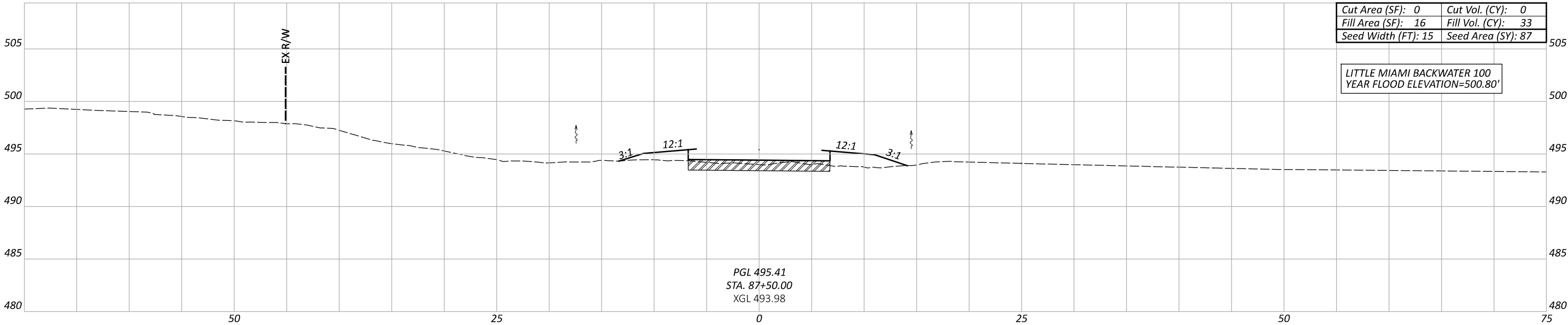
114496

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



Sheet Totals			114496	
Seeding	Cut	Fill	SHEET	TOTAL
157	6	53	P.68	104

CROSS SECTIONS
STA. 87+00.00 TO STA. 87+50.00

DESIGN AGENCY



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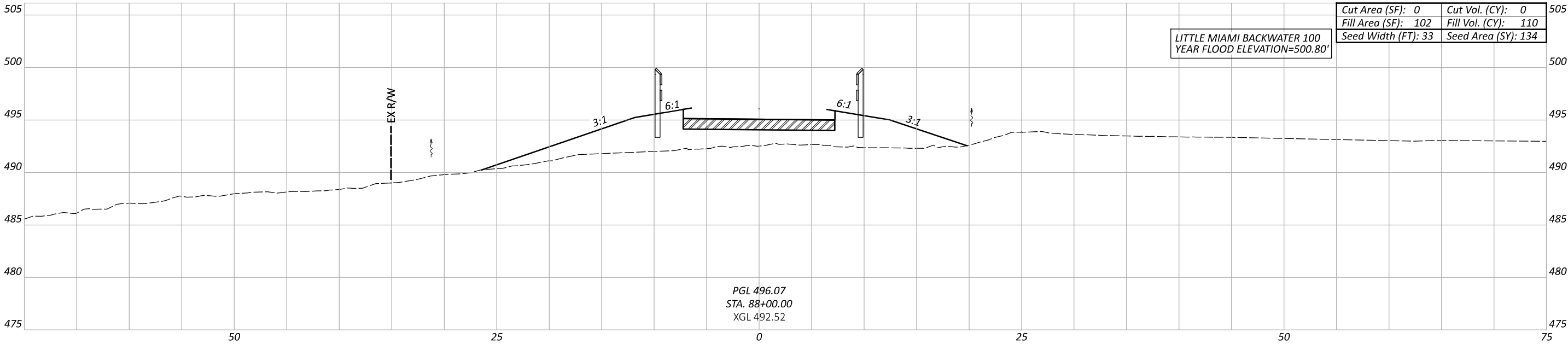
114496

ALTERNATE BID - SUBGRADE STABILIZATION

ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D



ALTERNATE BID - SUBGRADE STABILIZATION

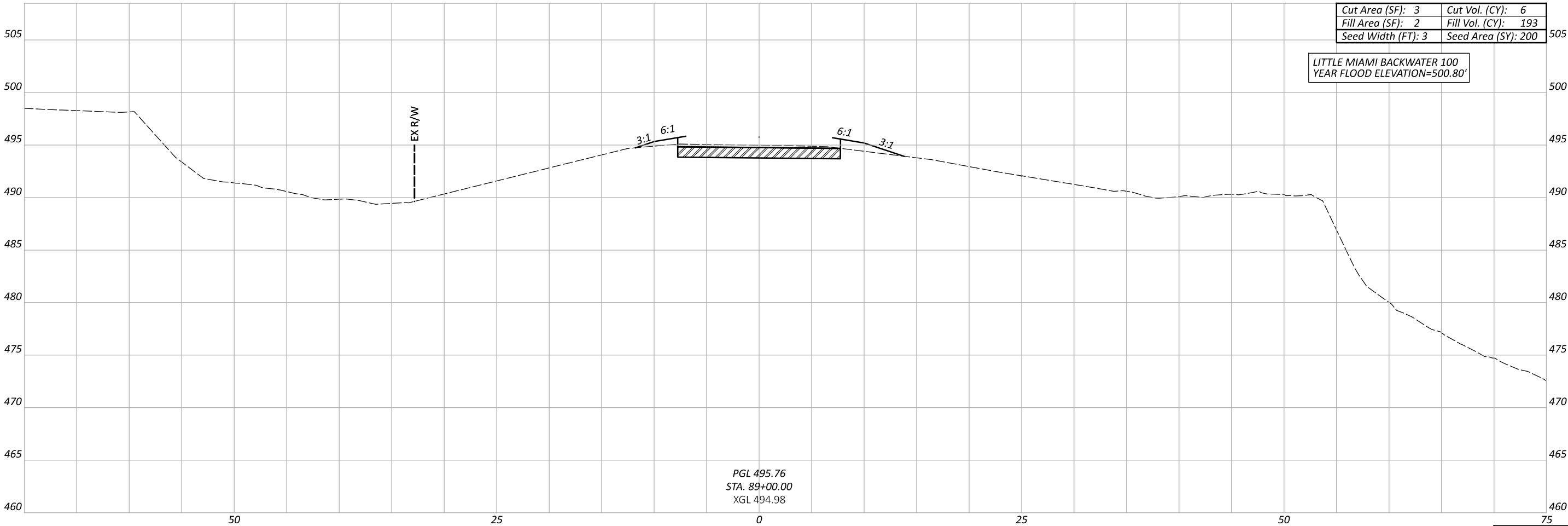
ITEM 204 EXCAVATION OF SUBGRADE, 12"

ITEM 204 GRANULAR MATERIAL, TYPE C

ITEM 204 GEOTEXTILE FABRIC, 712.09, TYPE D

COLUMBIA CONNECTOR SEGMENT C EARTHWORK TOTALS	
ITEM 203 EXCAVATION	950 CY
ITEM 203 EMBANKMENT	1086 CY
ITEM 659 SEEDING AND MULCHING	*

TOTALS CARRIED TO SHEET NO. P.15
* SEE SHEET P.88 FOR SEEDING AND MULCHING QUANTITIES.



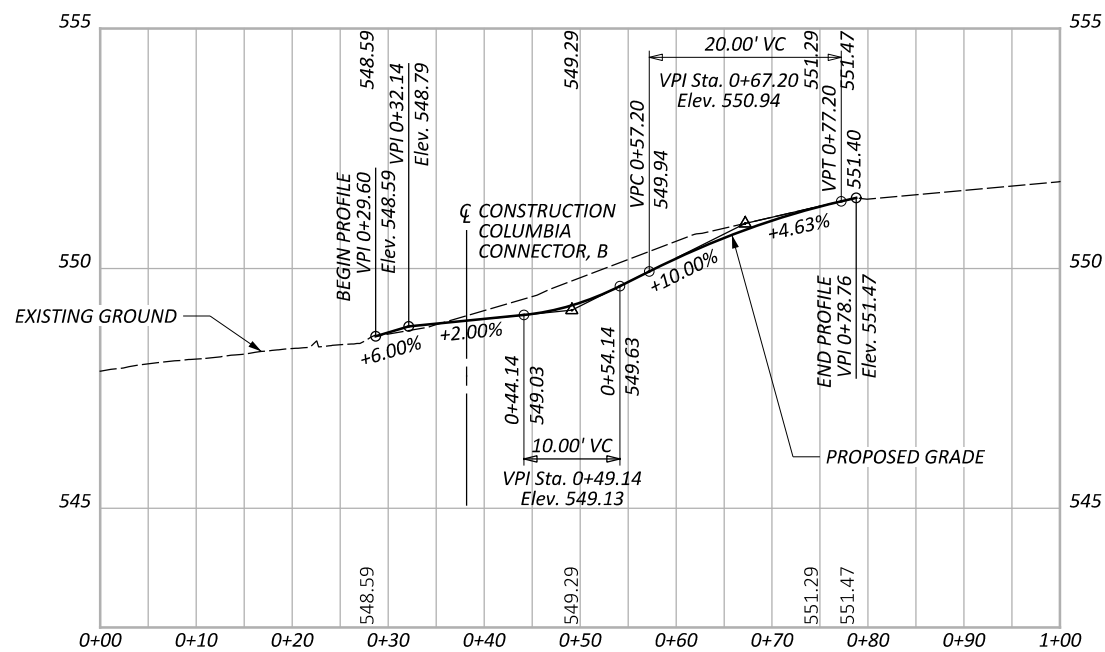
Cut Area (SF): 3	Cut Vol. (CY): 6
Fill Area (SF): 2	Fill Vol. (CY): 193
Seed Width (FT): 3	Seed Area (SY): 200

Sheet Totals		
Seeding	Cut	Fill
200	6	193

SHEET	TOTAL
P.70	104

HAM-COLUMBIA CONNECTOR

C2 CURVE DATA
 $\Delta = 62^{\circ}10'40''$ RT.
 $D_c = 293^{\circ}49'28''$
 $R = 19.50'$
 $T = 11.76'$
 $L = 21.16'$
 $E = 3.27'$
R.P. STA. 43+87.56, 13.25' RT. CONNECTOR C
P.C.C. STA. 44+06.10, 7.19' RT. CONNECTOR C
P.T. STA. 44+01.57, 26.81' RT. CONNECTOR C



ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 449, (DRIVEWAYS)
ITEM 407 - TACK COAT
ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, 449, (DRIVEWAYS)
ITEM 304 - 8" AGGREGATE BASE

FOR CURB RAMP DETAILS, SEE SHEET P.75

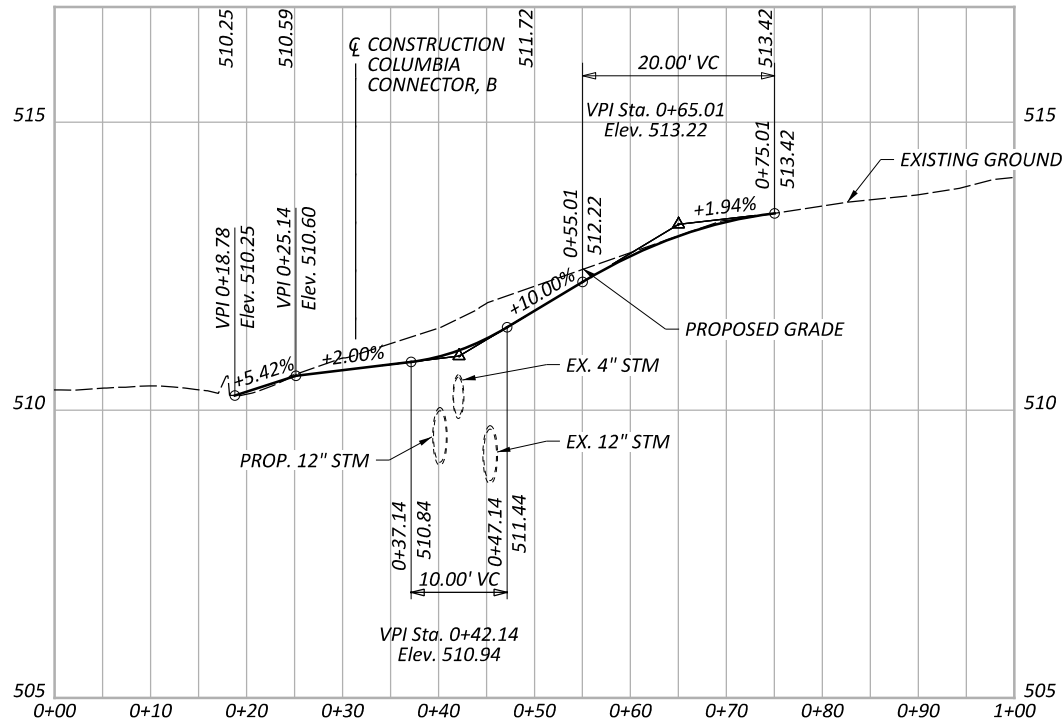
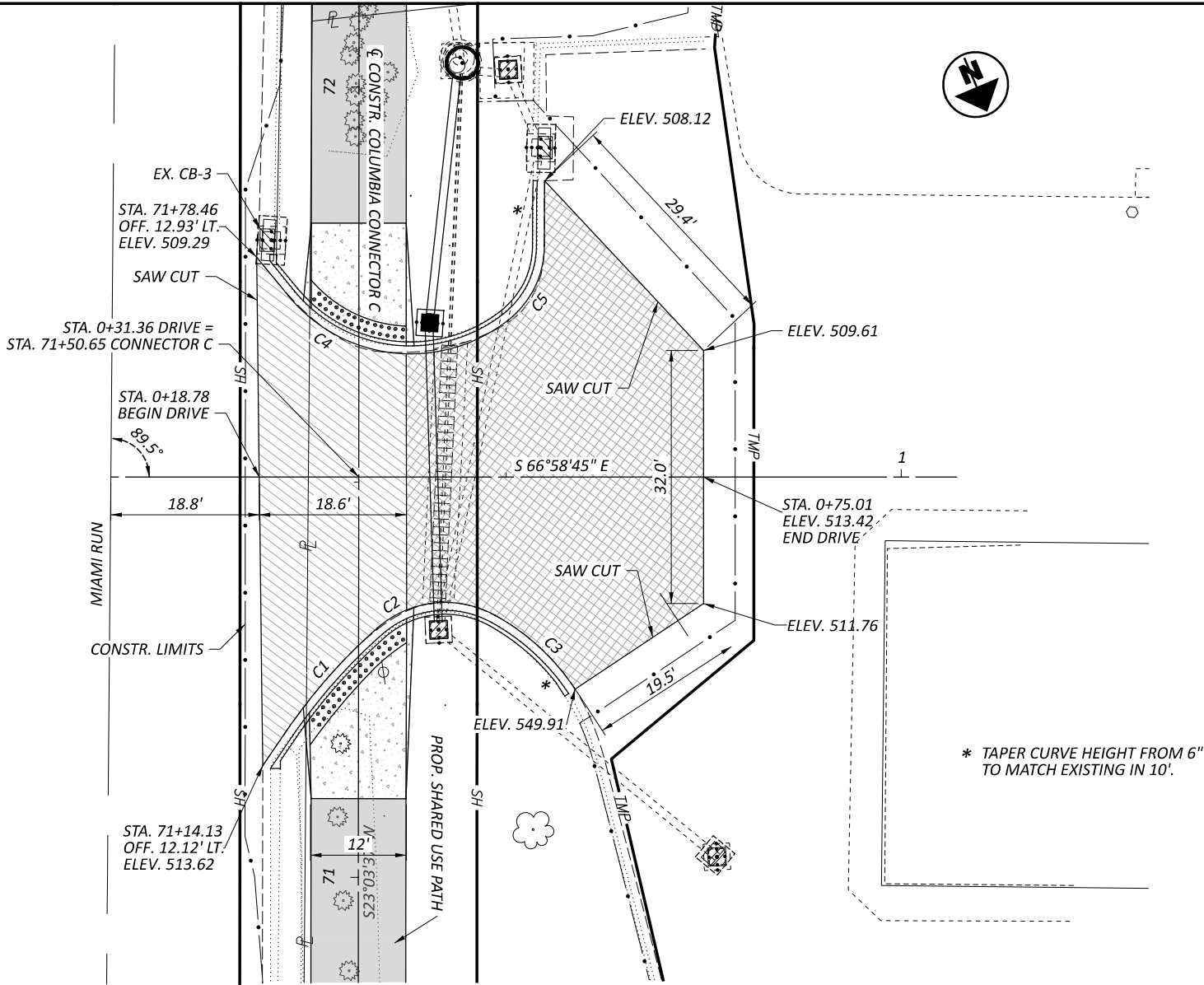
C4 CURVE DATA
 $\Delta = 88^{\circ}34'51''$ RT
 $Dc = 286^{\circ}28'44''$
 $R = 20.00'$
 $T = 19.51'$
 $L = 30.92'$
 $E = 7.94'$
R.P. STA. 71+86.24, 6.56' RT. COLUMBIA CONNECTOR A
P.C. STA. 71+73.55, 8.91' LT. COLUMBIA CONNECTOR A
P.C.C. STA. 71+70.46, 18.85' RT. COLUMBIA CONNECTOR A

C5 CURVE DATA
 $\Delta = 52^{\circ}00'44''$ RT
 $Dc = 117^{\circ}27'53''$
 $R = 12.00'$
 $T = 5.85'$
 $L = 10.89'$
 $E = 1.35'$
R.P. STA. 71+79.93, 11.47' RT. COLUMBIA CONNECTOR A
P.C. STA. 71+70.46, 18.85' RT. COLUMBIA CONNECTOR A
P.T. STA. 71+79.92, 23.47' RT. COLUMBIA CONNECTOR A

C1 CURVE DATA
 $\Delta = 14^{\circ}12'37''$
 $Dc = 81^{\circ}51'04''$
 $R = 70.00'$
 $T = 8.73'$
 $L = 17.36'$
 $E = .54'$
R.P. STA. 70+79.07, 48.71' RT. COLUMBIA CONNECTOR A
P.C. STA. 71+18.55, 9.10' LT. COLUMBIA CONNECTOR A
P.C.C. STA. 71+31.53, 2.37' RT. COLUMBIA CONNECTOR A

C2 CURVE DATA
 $\Delta = 70^{\circ}15'55''$ RT
 $Dc = 80^{\circ}44'12''$
 $R = 13.00'$
 $T = 9.15'$
 $L = 15.94'$
 $E = 2.9'$
R.P. STA. 71+21.79, 10.79' RT. COLUMBIA CONNECTOR A
P.C.C. STA. 71+31.53, 2.37' RT. COLUMBIA CONNECTOR A
P.C.C. STA. 71+33.18, 17.24' RT. COLUMBIA CONNECTOR A

C3 CURVE DATA
 $\Delta = 27^{\circ}34'21''$ RT
 $Dc = 197^{\circ}34'18''$
 $R = 29.00'$
 $T = 7.12'$
 $L = 13.96'$
 $E = .86'$
R.P. STA. 71+07.77, 3.26' RT. COLUMBIA CONNECTOR A
P.C.C. STA. 71+33.18, 17.24' RT. COLUMBIA CONNECTOR A
P.C.C. STA. 71+23.82, 27.41' RT. COLUMBIA CONNECTOR A



FOR PAVEMENT LEGEND, SEE SHEET P.71
FOR CURB RAMP DETAILS, SEE SHEET P.74



DRIVEWAY DETAIL
STA. 71+50.65

DESIGN AGENCY



DESIGNER

ZTM

REVIEWER

SNS 08-04-25

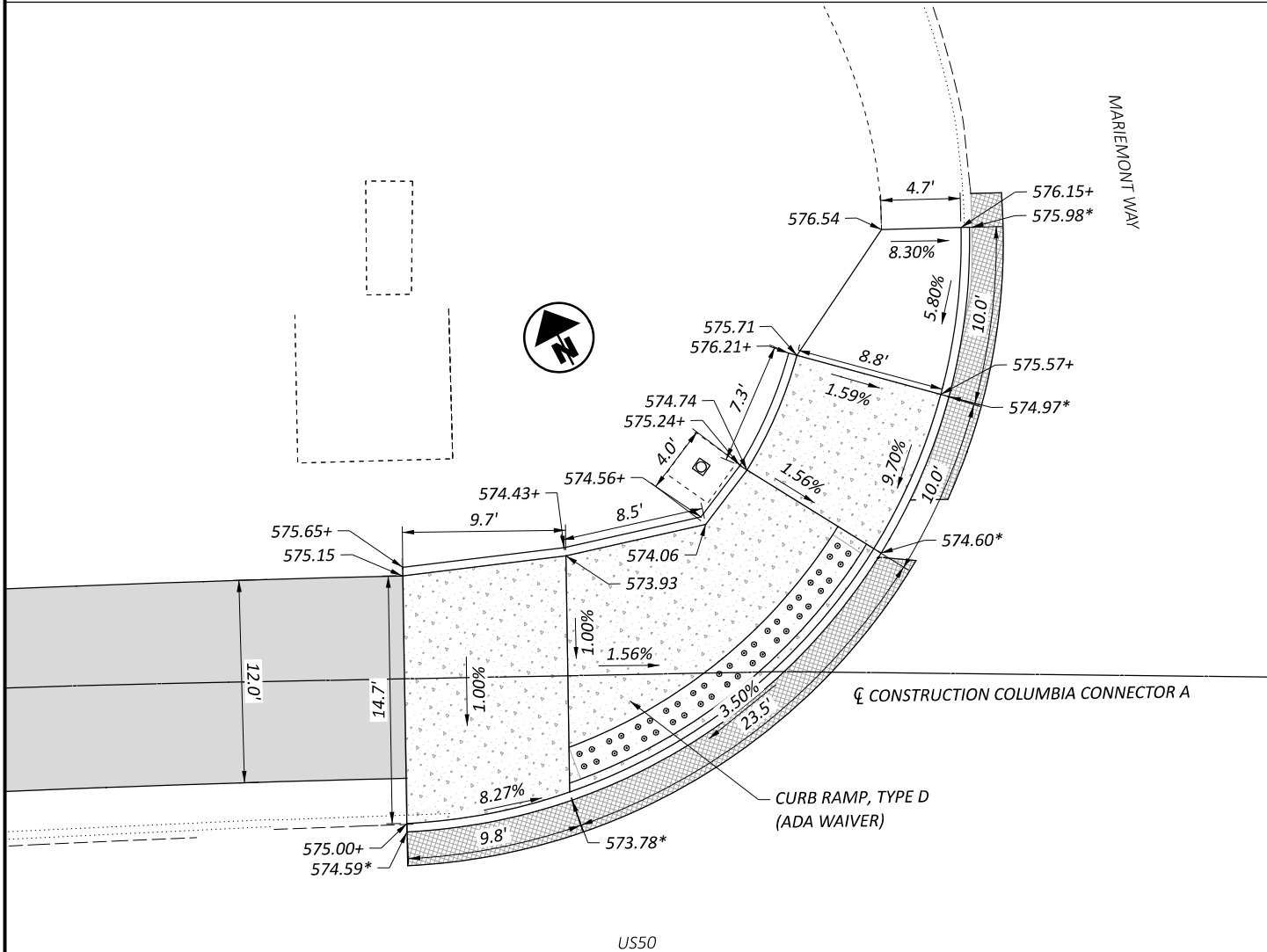
PROJECT ID

114496

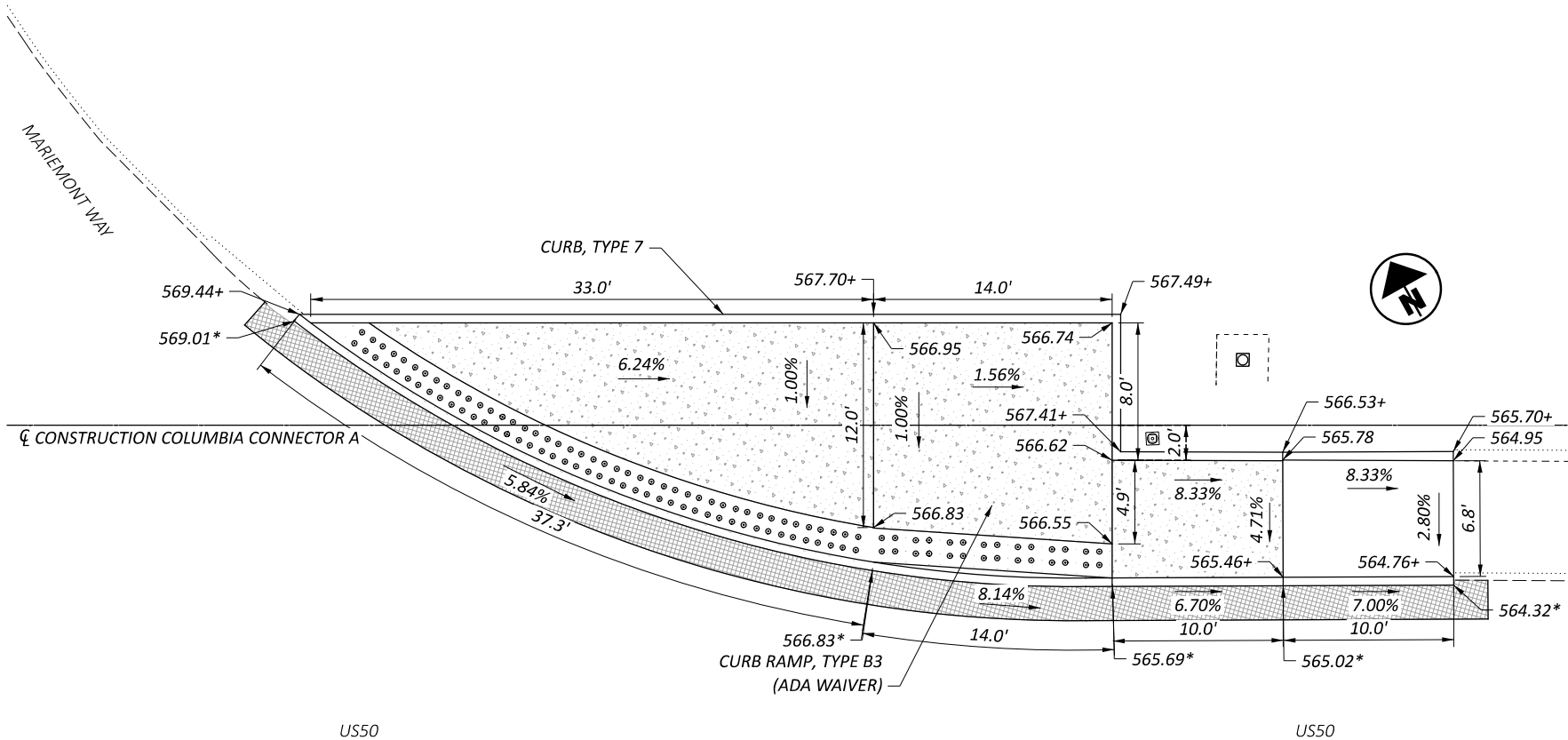
SHEET TOTAL

P.72 104

FOR LEGEND, SEE SHEET P.18



* EDGE OF PAVEMENT ELEVATION
+ TOP OF CURB ELEVATION



INTERSECTION DETAIL
MARIEMONT WAY AND US 50



DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(613) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

114496

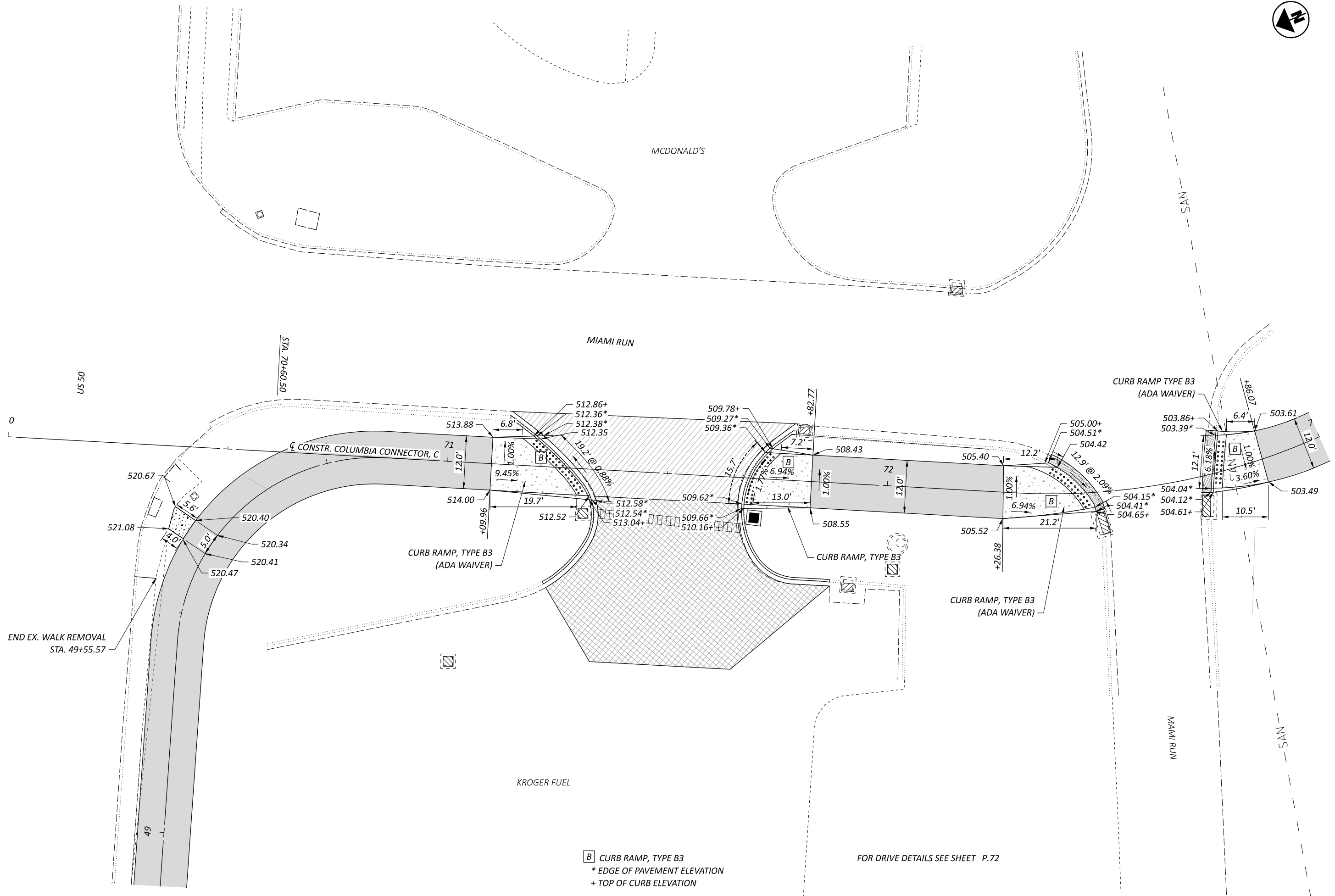
SHEET

P.73

TOTAL
104

HAM-COLUMBIA CONNECTOR

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V:\1736\active\173620147\engineering\114496\400-Engineering\Roadway\Sheets\114496_G1002.dgn



INTERSECTION DETAIL

MIAMI RUN

DESIGN AGENCY



Stante
10200 Alliance Rd
Suite 300
Cincinnati, OH 45240
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04

315 08-04

PROJECT ID
114406

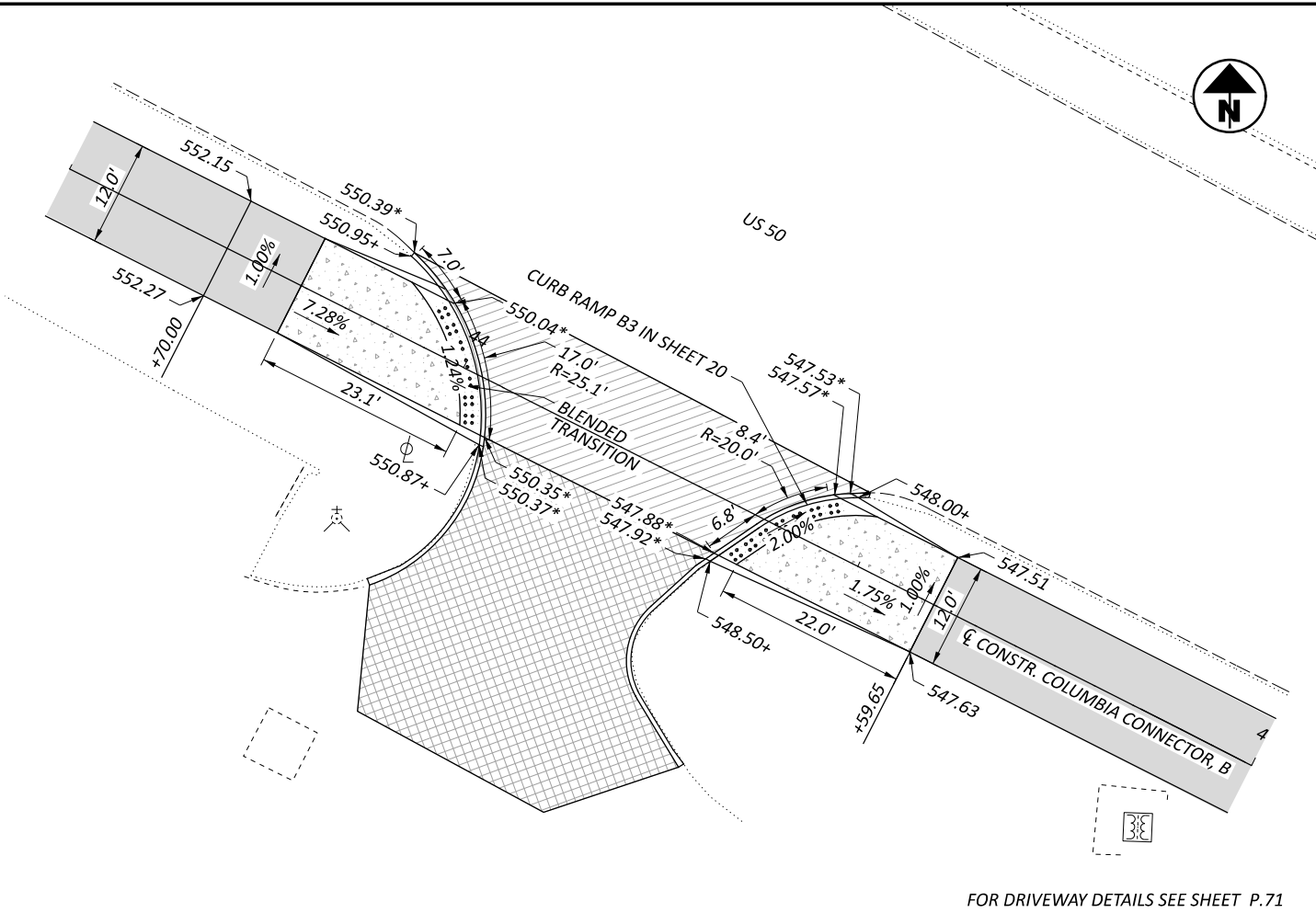
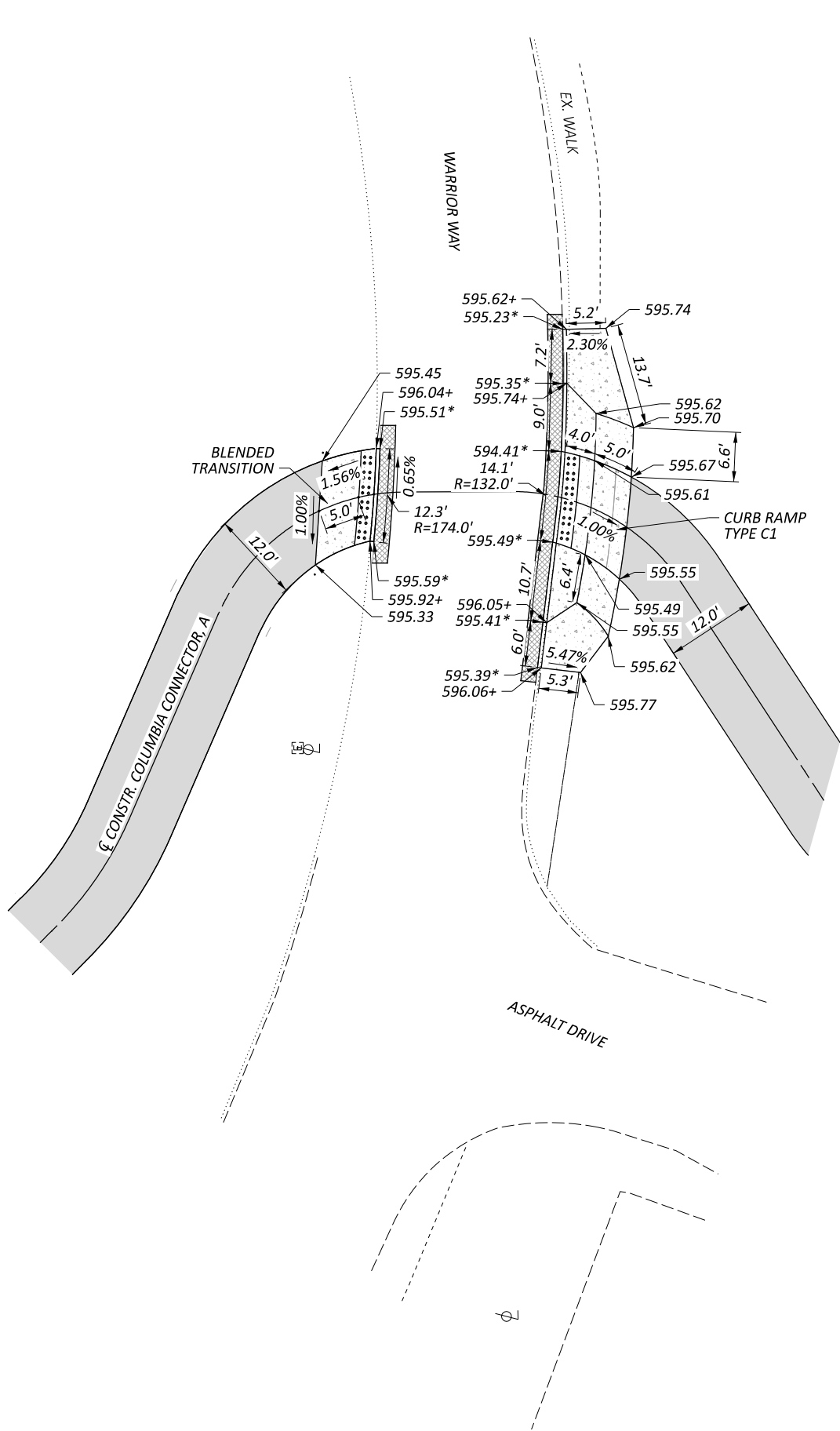
114496

SHEET	TOTAL
-------	-------

P.74 | 10



* BOTTOM/FACE OF CURB ELEVATION
+ TOP OF CURB ELEVATION



FOR DRIVEWAY DETAILS SEE SHEET P.71

CURB RAMP AND STEP DETAILS
COLUMBIA CONNECTOR



DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(613) 842-8200

DESIGNER

ZTM

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PROJECT ID

114496

SHEET

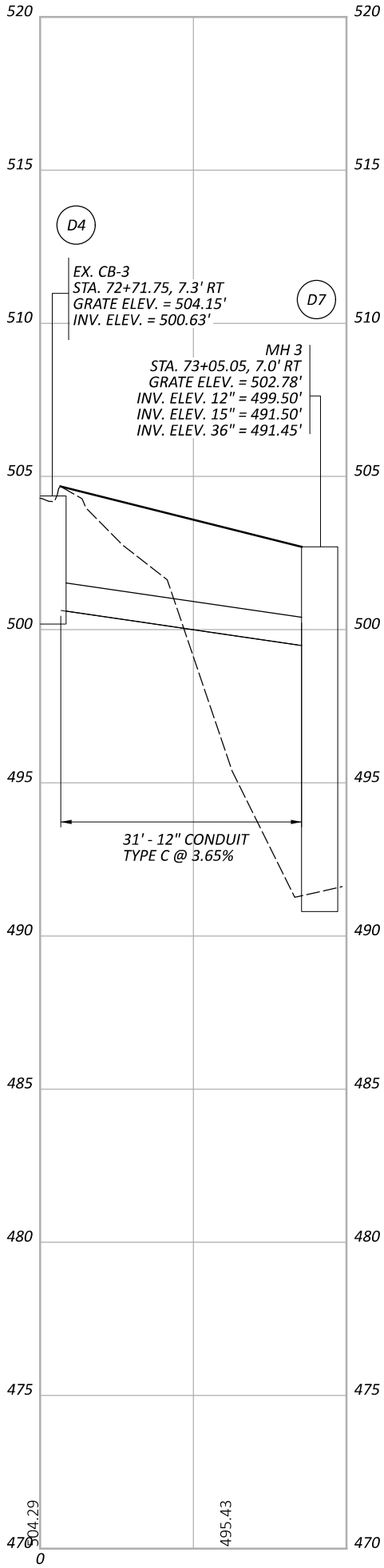
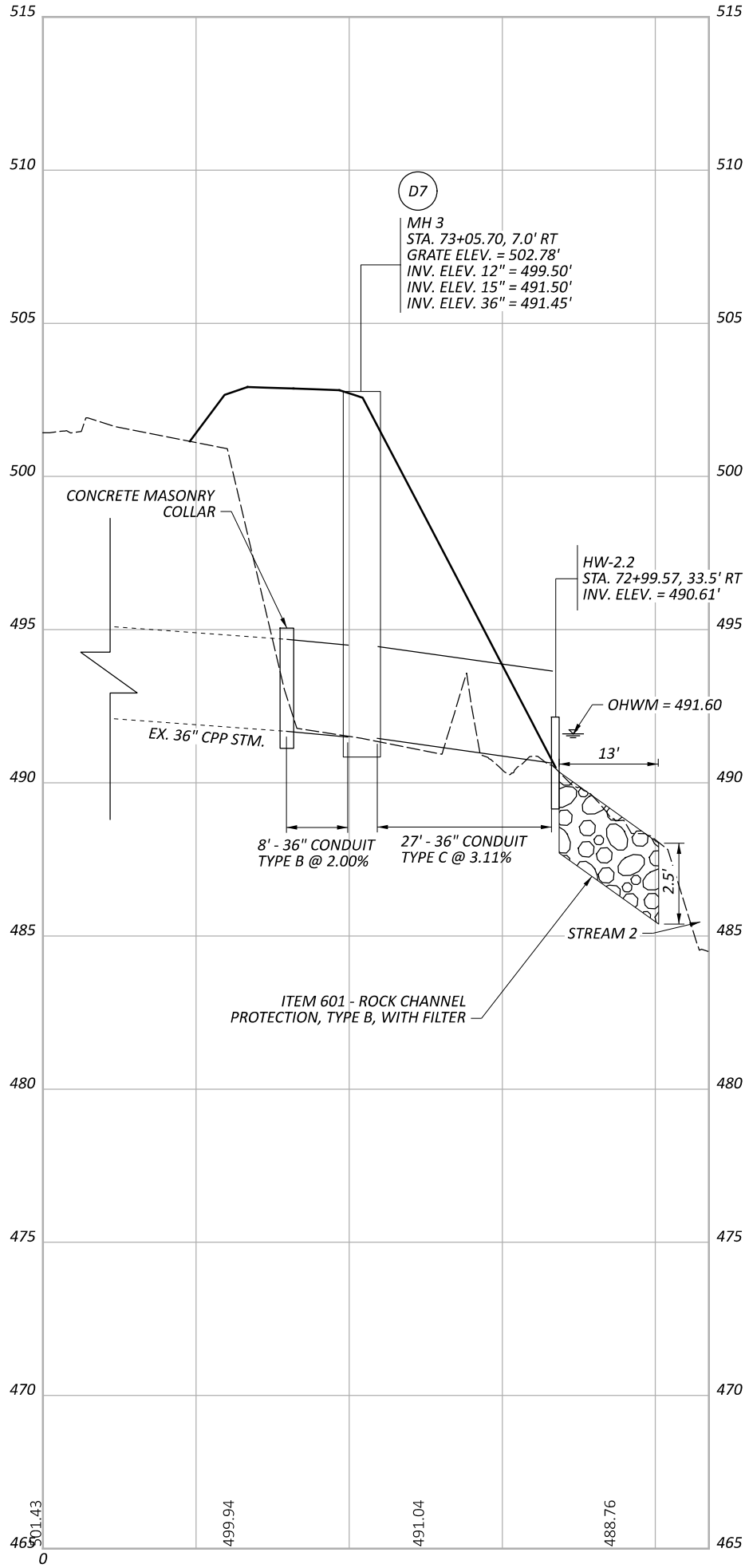
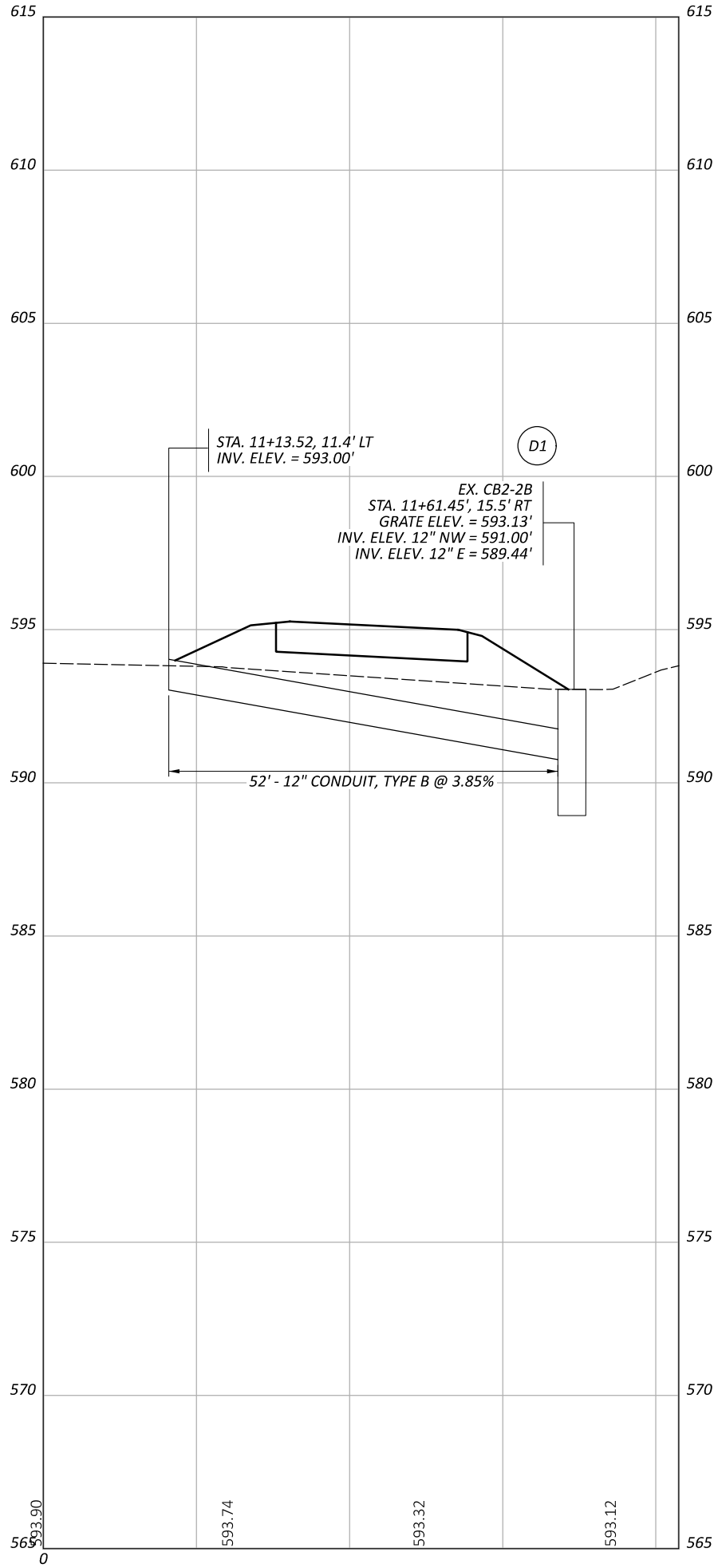
P.75

TOTAL

104

HAM-COLUMBIA CONNECTOR

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STORM SEWER PROFILES

DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

ZTM

REVIEWER

SNS 08-04-25

PROJECT ID

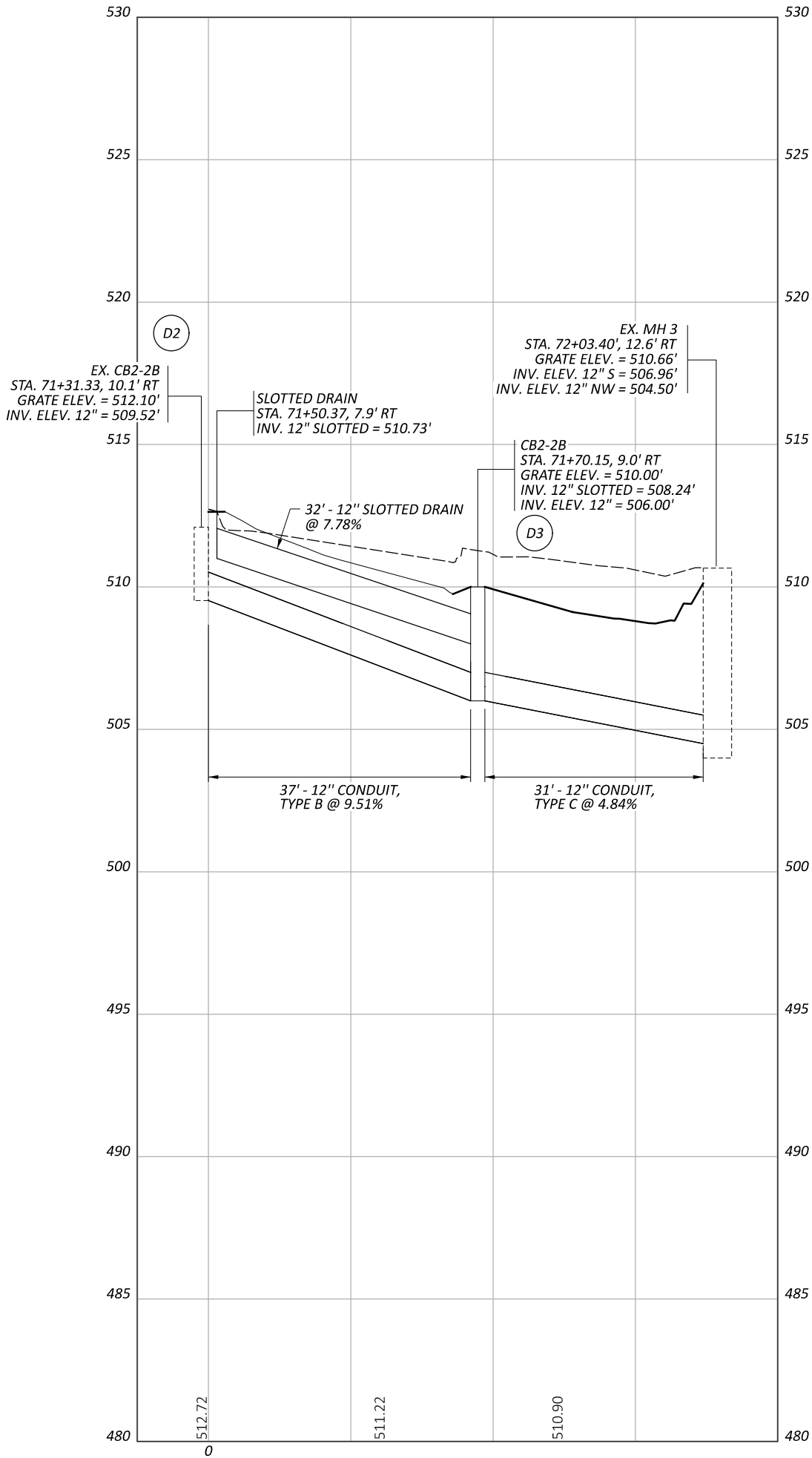
114496

SHEET

P.76

TOTAL

104



SIGNING SUBSUMMARY														
SHEET NO.	REF NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630							
							GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN POST REFLECTOR	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	SIGN, FLAT SHEET	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL
							FT	EACH	EACH	SF	EACH	EACH	EACH	EACH
82	R-1	COLUMBIA CONNECTOR SECTION B	49+73.86	LT	R10-3	12x9								1
83	R-2	COLUMBIA CONNECTOR SECTION C	72+76.39	RT	R1-1-30	30x30					1		1	
84	R-3	COLUMBIA CONNECTOR SECTION C	88+87.53	LT	OM4-3-18	18x18					1		1	
84	R-4	COLUMBIA CONNECTOR SECTION C	88+87.39	RT	OM4-3-18	18x18					1		1	
80	R-5	COLUMBIA CONNECTOR SECTION A	10+35.00	LT/RT							1		1	
80	S-3	COLUMBIA CONNECTOR SECTION A	12+50.12	RT	R1-1-18	18x18	12.0			2.3				
80	S-4	COLUMBIA CONNECTOR SECTION A	12+66.83	LT	W11-15-30	30x30	14.0			6.3				
					W16-7PL-24	24x12				2.0				
80	S-5	COLUMBIA CONNECTOR SECTION A	13+10.52	RT	W11-15-30	30x30	14.0			6.3				
					W16-7PL-24	24x12				2.0				
80	S-6	COLUMBIA CONNECTOR SECTION A	13+09.96	LT	R1-1-18	18x18	12.0			2.3				
80	S-7	COLUMBIA CONNECTOR SECTION A	13+25.00	RT	W1-5R-18	18x18	12.0			2.3				
80	S-8	COLUMBIA CONNECTOR SECTION A	18+05.86	LT	R4-11-30	30x30	13.0					1	1	
80	S-9	COLUMBIA CONNECTOR SECTION A	18+50.00	LT	W1-5L-18	18x18	12.0			2.3				
81	S-10	COLUMBIA CONNECTOR SECTION B	40+67.30	LT	R4-11-30	30x30	13.0					1	1	
81	S-11	COLUMBIA CONNECTOR SECTION B	40+90.83	LT	D11-1-24	24x18			2	3.0				
		COLUMBIA CONNECTOR SECTION B			M6-6-21	21x15				2.2				
81	S-12	COLUMBIA CONNECTOR SECTION B	40+67.35	RT	D11-1-24	24x18	12.8			3.0				
					M6-6-21	21x15				2.2				
81	S-13	COLUMBIA CONNECTOR SECTION B	44+35.69	RT	R1-1-30	30x30	13.0	1		6.3				
82	S-14	COLUMBIA CONNECTOR SECTION B	49+72.81	LT	R10-3e-9	9x15			1	0.9				
83	S-15	COLUMBIA CONNECTOR SECTION C	71+71.77	RT	R1-1-30	30x30	13.0	1		6.3				
83	S-16	COLUMBIA CONNECTOR SECTION C	72+72.48	RT	R1-1-30	30x30	13.0	1		6.3				
SUBTOTAL							153.8	3	3	56.0	4	2	6	1

SIGNING SUBSUMMARY

PAVEMENT MARKING SUBSUMMARY							
SHEET NO.	REF NO.	LOCATION	STATION		SIDE	644	
			FROM	TO		STOP LINE	CROSSWALK LINE, 24"
80	SL-1	COLUMBIA CONNECTOR SECTION A	12+51.34	12+51.46	RT	6	
80	SL-2	COLUMBIA CONNECTOR SECTION A	13+09.94	13+09.99	LT	6	
81	SL-3	COLUMBIA CONNECTOR SECTION B	44+18.27	44+32.23	RT	14	
83	SL-4	COLUMBIA CONNECTOR SECTION C	71+51.39	71+67.64	RT	16	
83	SL-5	COLUMBIA CONNECTOR SECTION C	72+60.05	72+69.48	RT	10	
80	CR-1	COLUMBIA CONNECTOR SECTION A	12+68.03	12+92.20	LT&RT		72
81	CR-2	COLUMBIA CONNECTOR SECTION A	18+99.64	19+73.64	LT&RT		228
81	CR-3	COLUMBIA CONNECTOR SECTION B	40+73.48	40+85.50	LT		144
SUBTOTAL						52	444
TOTALS CARRIED TO GENERAL SUMMARY						52	444

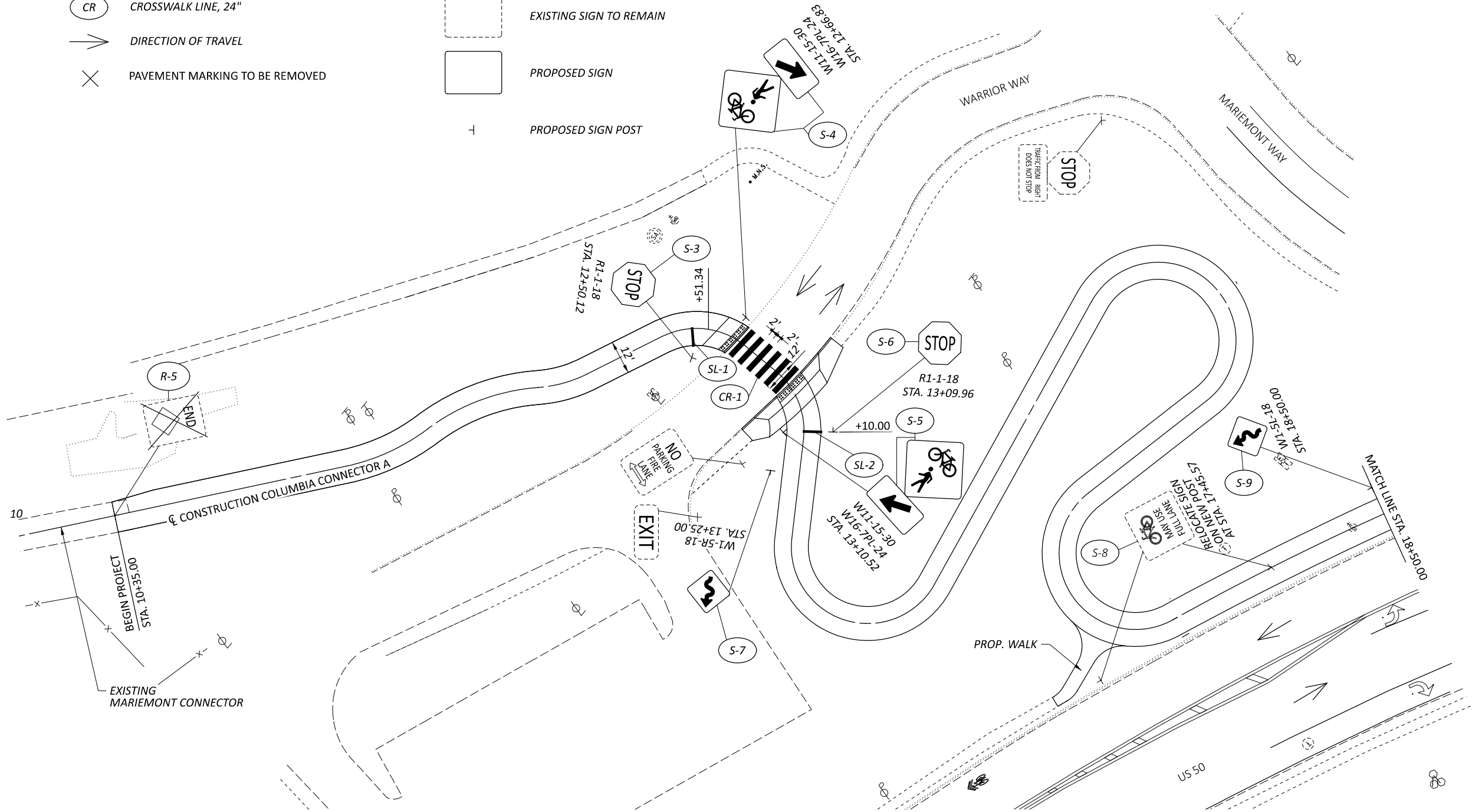
PAVEMENT MARKING LEGEND

ALL PAVEMENT MARKINGS SHALL BE ITEM 644 THERMOPLASTIC

- SL ITEM 644 - STOP LINE, 24"
- CR CROSSWALK LINE, 24"
- DIRECTION OF TRAVEL
- PAVEMENT MARKING TO BE REMOVED

SIGNING LEGEND

- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- PROPOSED SIGN POST



TRAFFIC CONTROL PLAN
STA. 10+40.00 TO STA. 18+50.00



DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

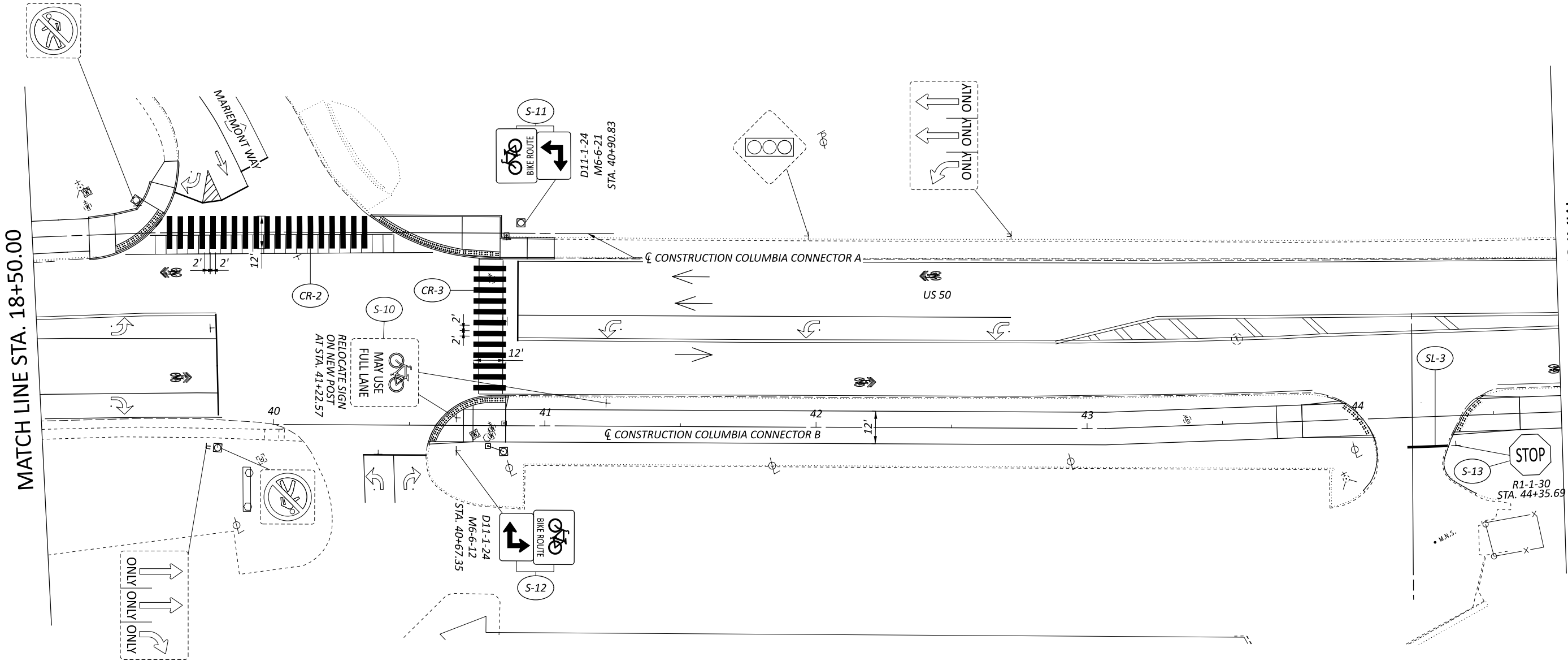
P.80

TOTAL

104

HAM-COLUMBIA CONNECTOR

MODEL: Plan 2 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 7/30/2025 TIME: 3:26:51 PM USER: cgaerke
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TRAFFIC CONTROL PLAN
STA. 18+50.00 TO STA. 44+75.00

DESIGN AGENCY



DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

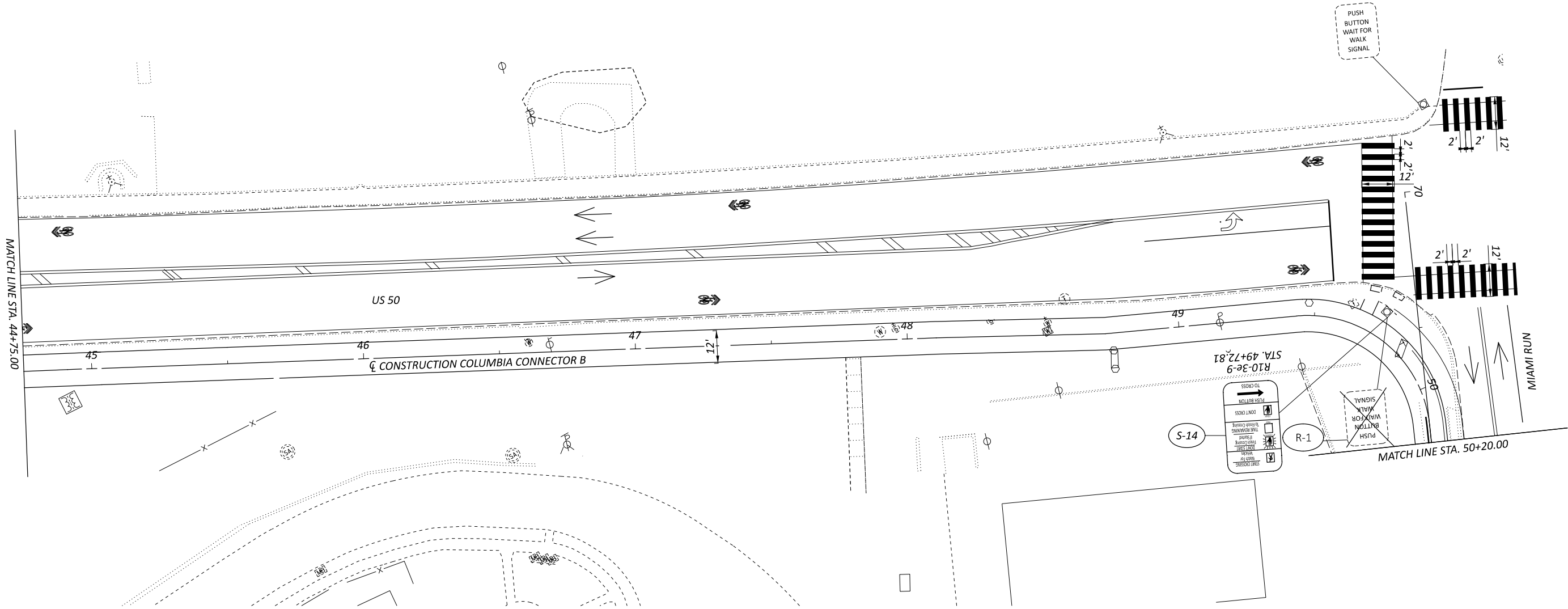
SHEET TOTAL

P.81 104

FOR LEGEND, SEE SHEET P.80

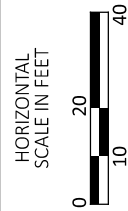
HAM-COLUMBIA CONNECTOR

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FOR LEGEND, SEE SHEET P.80

TRAFFIC CONTROL PLAN
STA. 44+75.00 TO STA. 50+20.00



DESIGN AGENCY



DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

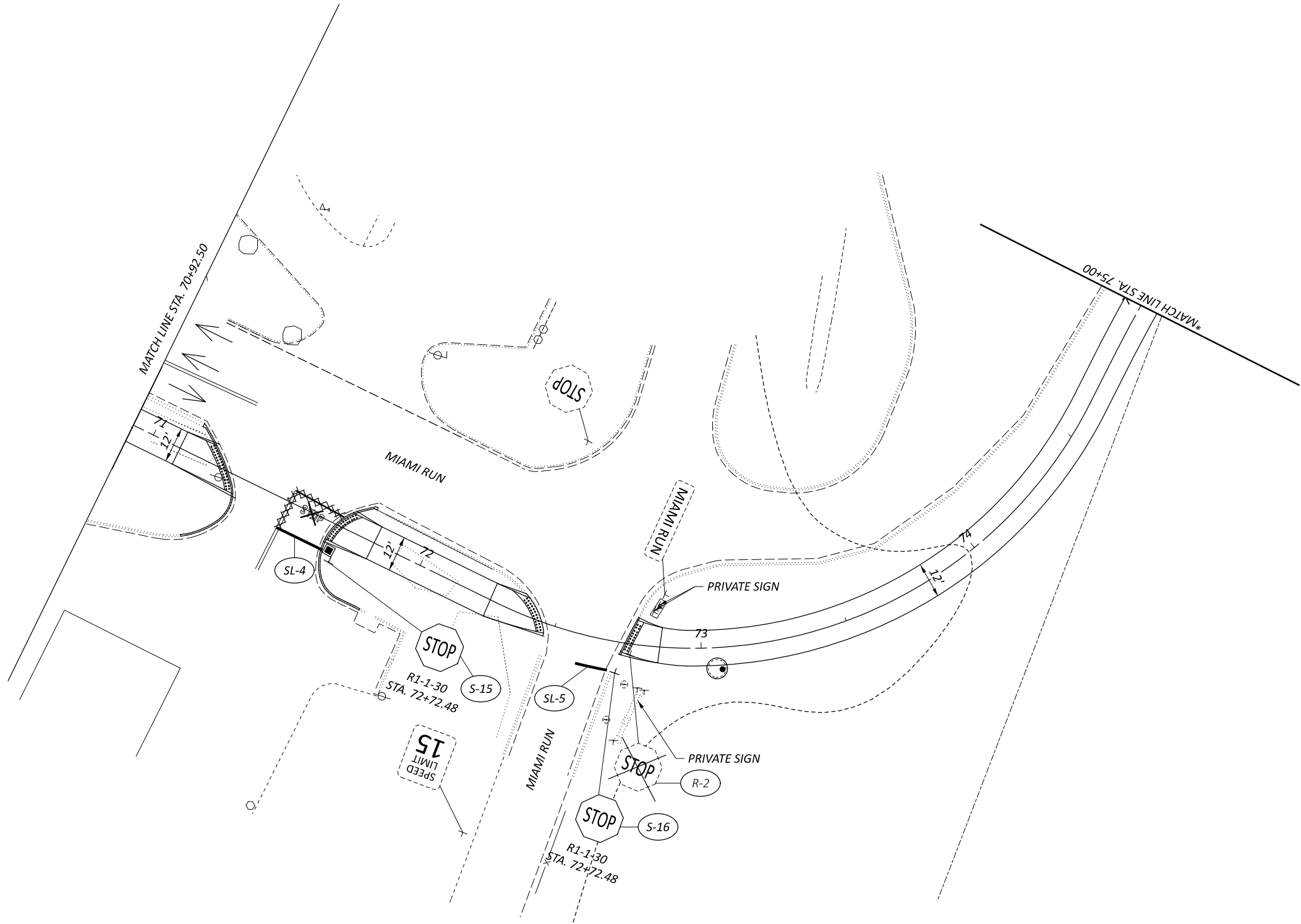
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SHEET

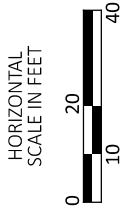
P.82

TOTAL

104



* CONNECTS TO STA. 85+00.00, NO EXISTING AND PROPOSED TRAFFIC CONTROL FROM STA. 75+00.00 TO STA. 85+00.00
FOR LEGEND, SEE SHEET P.80



TRAFFIC CONTROL PLAN
STA. 70+92.50 TO STA. 75+00.00

DESIGN AGENCY



DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

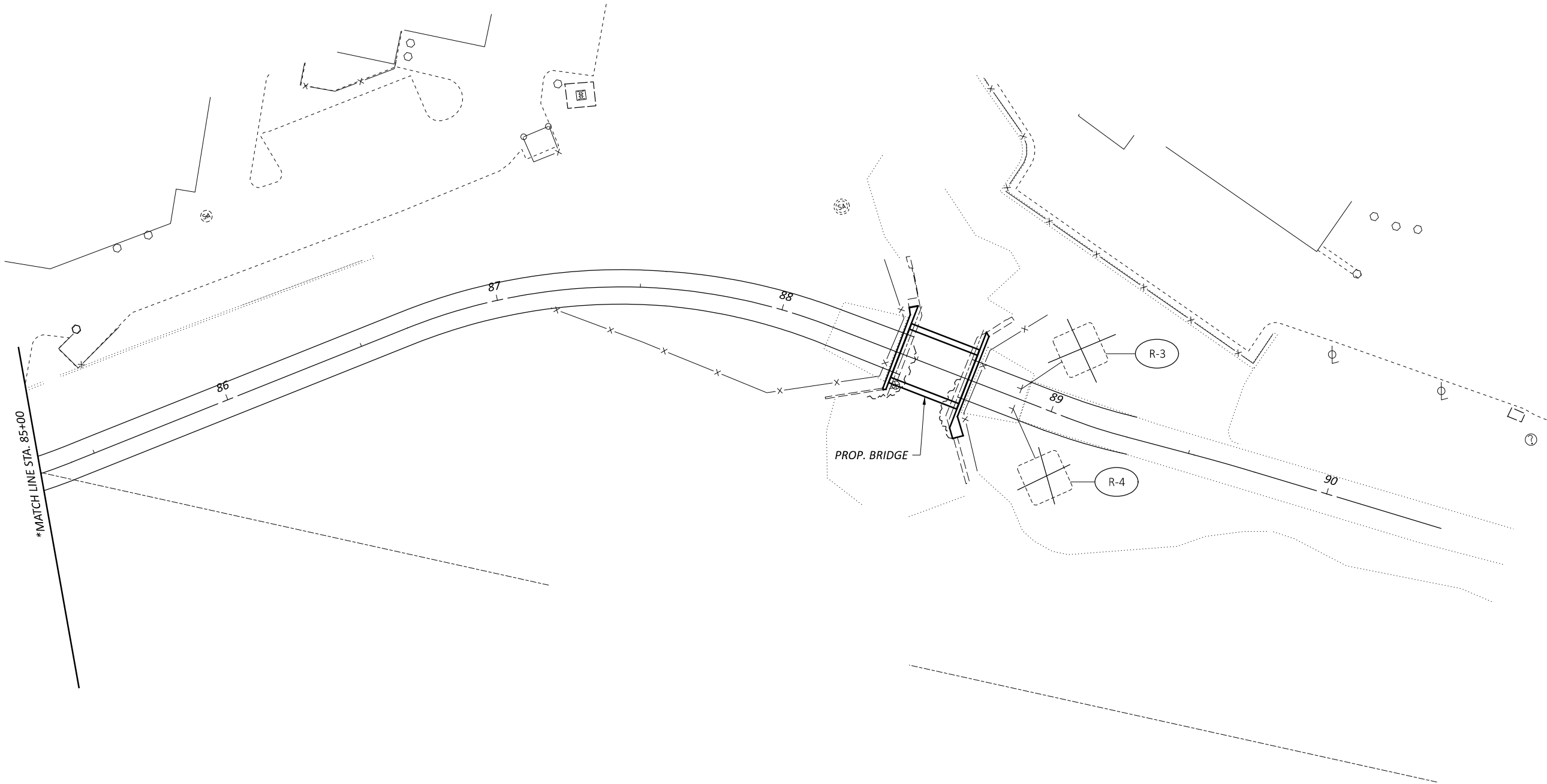
P.83

TOTAL

104

HAM-COLUMBIA CONNECTOR

MODEL: Plan 7 [Sheet] PAPER SIZE: 17x11 (in.) DATE: 7/30/2025 TIME: 3:26:52 PM USER: cgaerke
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* CONNECTS TO STA. 75+00.00, NO EXISTING AND PROPOSED TRAFFIC CONTROL FROM STA. 75+00.00 TO STA. 85+00.00

FOR LEGEND, SEE SHEET P.80

DESIGN AGENCY



10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

P.84

TOTAL

104

TRAFFIC CONTROL PLAN
STA. 85+00.00 TO STA. 90+65.02

HORIZONTAL
SCALE IN FEET



WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER WITH 72-HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

ITEM 632 REUSE OF PEDESTRIAN SIGNAL HEAD ,AS PER PLAN

PAYMENT FOR ITEM 632 REUSE OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD REUSED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE SUBSUMMARY:

ITEM 632 - REUSE OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN 1 EACH

ITEM 632 SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE

THE CONTRACTOR SHALL REMOVE EXISTING MESSENGER WIRE LASHING RODS AND REINSTALL THEM AS NECESSARY FOR THE INSTALLATION OF ANY NEW CABLES ON THE EXISTING INTERSECTION SIGNAL SPANS. THE CABLES SHALL ENTER THE EXISTING STRAIN POLE THROUGH THE POLE CABLE ENTRANCE FITTING AND USE THE EXISTING CONDUIT SYSTEM TO GET TO THE CONTROLLER CABINET. THE NEW CABLES SHALL BE SUPPORTED BY A NEW CABLE SUPPORT ASSEMBLY AT THE TOP OF THE STRAIN POLE.

THE NEW SIGNAL CABLES SHALL BE BID BY SEPARATE BID ITEMS.

PAYMENT FOR ITEM 632 "SIGNALIZATION MISC.: UNLASH AND RELASH MESSENGER WIRE" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT AND SHALL INCLUDE ALL LABOR, MATERIALS, CABLE SUPPORT ASSEMBLIES AND EQUIPMENT TO INSTALL NEW CABLES ON EXISTING SIGNAL SPAN WIRE INSTALLATIONS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE SUBSUMMARY:

ITEM 632 - SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE 90 FT

DESIGN AGENCY



Stantec

10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

QC

REVIEWER

LEO 08-04-25

PROJECT ID

114496

SHEET

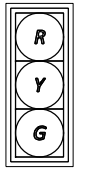
P.85

TOTAL

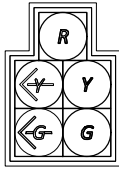
104

SHEET NUM.													ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.85	P.87																	
																	TRAFFIC SIGNALS	
	7												625	25408	7	FT	CONDUIT, 2", 725.051	
	1.5												630	80100	1.5	SF	SIGN, FLAT SHEET	
	1												630	87500	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
	1												632	20750	1	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON	
	180												632	40500	180	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
	180												632	65300	180	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
	1												632	90010	1	EACH	PEDESTAL, MISC.:TRANSFORMER BASE AND FOUNDATION	P.87
1													632	90203	1	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD, AS PER PLAN	P.85
1													632	90207	1	EACH	REUSE OF SIGNAL SUPPORT, AS PER PLAN	P.85
90													632	90500	90	FT	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	P.85
TOTALS CARRIED TO GENERAL SUMMARY																		

EXISTING SIGNAL HEADS



2A, 2B,
4A, 4B, 4C
6A, 6B,
8A, 8B



1

EXISTING SIGNAL DETAIL

PEDESTRIAN SIGNAL HEADS
(LED, COUNTDOWN, TYPE D2)



P1

EXISTING SIGN LEGEND



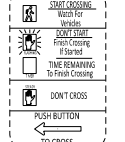
S1, S3, S4, S5
R3-5L-30



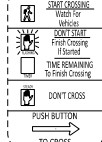
S2
R10-12



S6 ON SP-1
S7 ON SP-2
R9-3



RS8 ON PS-4
REMOVE R10-3e-9



S9 ON PS-3
R10-3e-9

PROPOSED SIGN DETAIL



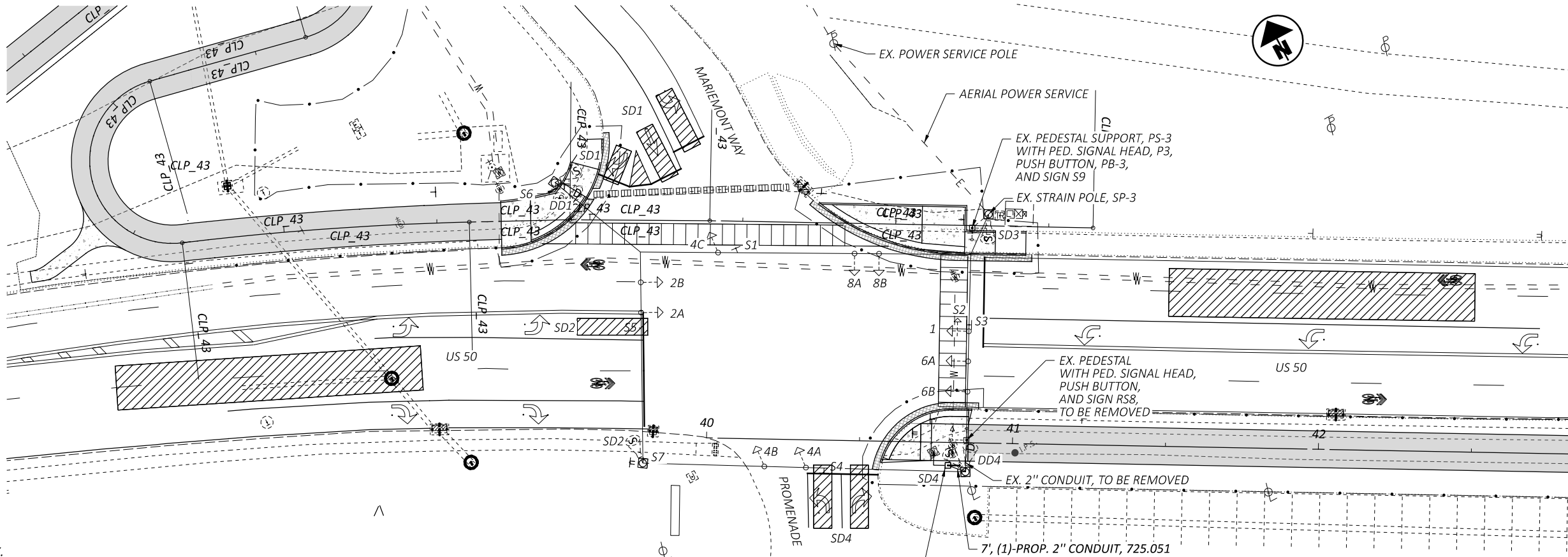
S10
R10-3e-9
9" x 15"



S11
R9-5-12
12" x 18"

LEGEND

TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	PR.	EX.
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
332 CONTROLLER AND WORK PAD		
TRAFFIC PULL BOX		
DILEMMA ZONE RADAR DETECTION UNIT		
STOP LINE RADAR DETECTION UNIT		
DETECTION ZONE		
CONDUIT		

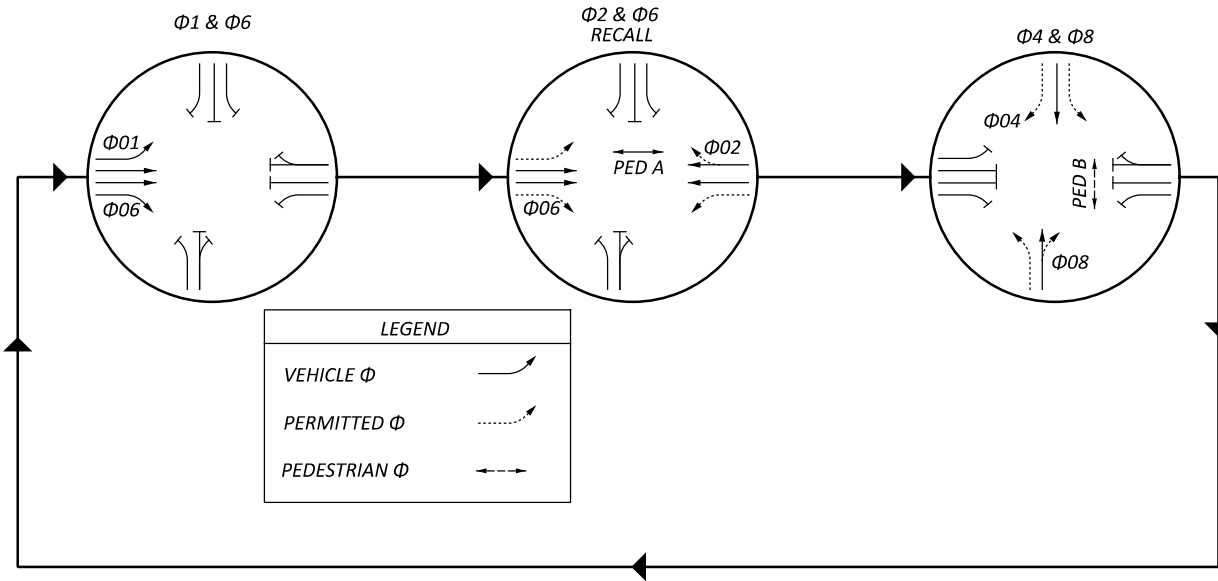


PROP. TRANSFORMER BASE AND FOUNDATION, PS-1 PER TC-83.20
REUSE EXISTING 8' PEDESTAL POLE
WITH EXISTING PED. SIGNAL HEAD, P1
PROP. PUSH BUTTON, PB-1, AND SIGN S10, SIGN S11

SIGNAL TIMING CHART (TEM FORM 496-3)

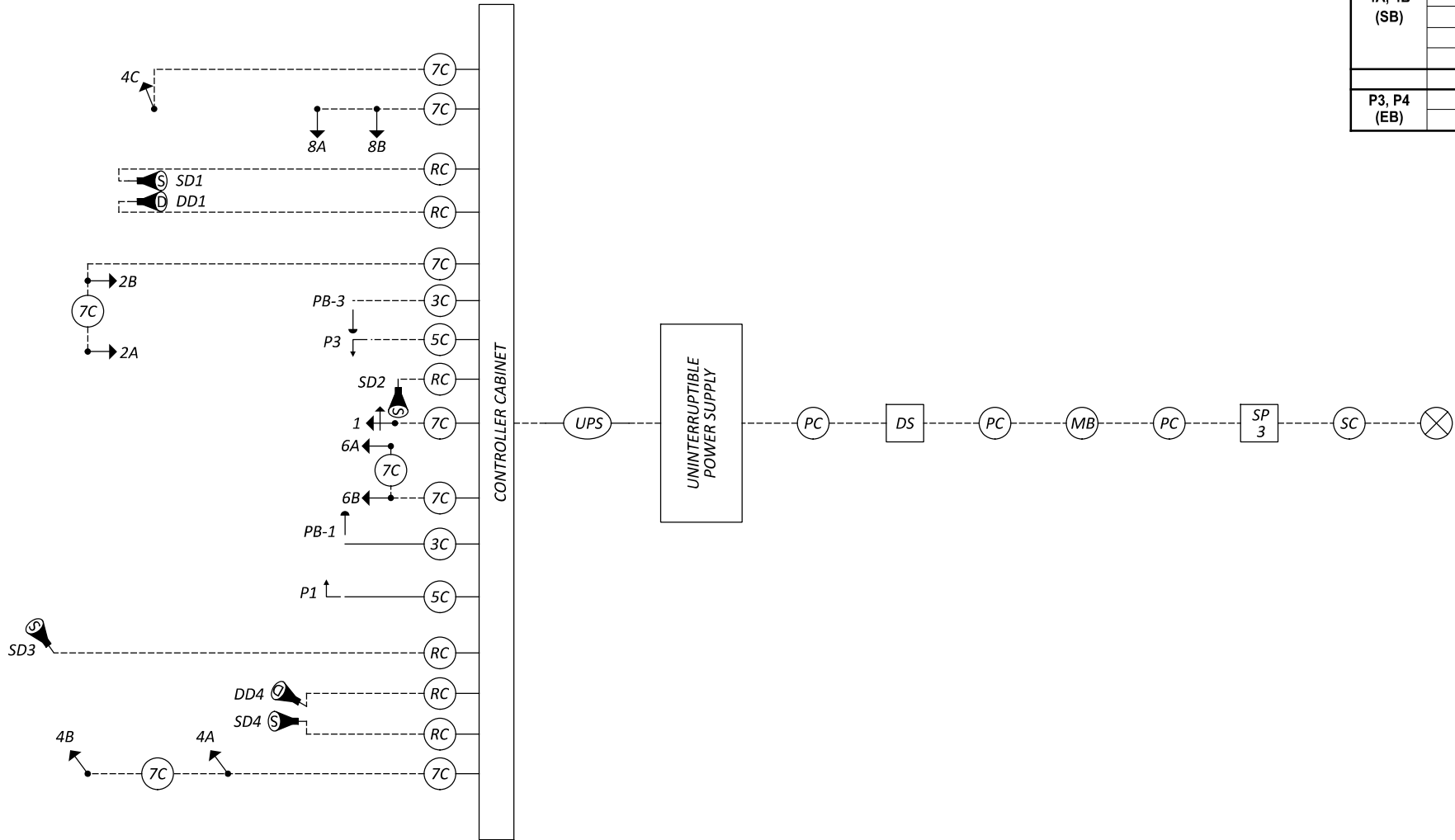
INTERSECTION: US-50 & PROMINADE/MARIMONT HS													
MAINTAINING AGENCY: ODOT													
START UP START IN: Y/R FLASH ☐ OR ALL RED ☒ TIME FOR: FLASH OR ALL RED (SEC.): 5 FIRST PHASE(S): 2 & 6 COLOR DISPLAYED: ☒ GREEN ☐ YELLOW		DUAL ENTRY: YES		PHASES: 2, & 6, 4 & 8									
		REST IN RED:		RING 1		-		RING 2		-			
		OVERLAP				A		B		C		D	
		PHASES				-		-		-		-	
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.											
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8				
DIRECTION		EB	WB	-	SB	-	EB	-	NB				
MINIMUM GREEN (INITIAL) (SEC.)		7	20	-	10	-	20	-	10				
ADDED INITIAL *(SEC./ACTUATION)		-	-	-	-	-	-	-	-				
MAXIMUM INITIAL *(SEC.)		-	-	-	-	-	-	-	-				
PASSAGE TIME (PRESET GAP) (SEC.)		3	2	-	3	-	2	-	3				
TIME BEFORE REDUCTION *(SEC.)		-	-	-	-	-	-	-	-				
MINIMUM GAP *(SEC.)		-	-	-	-	-	-	-	-				
TIME TO REDUCE *(SEC.)		-	-	-	-	-	-	-	-				
MAXIMUM GREEN I (SEC.)		15	60	-	25	-	60	-	25				
MAXIMUM GREEN II (SEC.)		-	-	-	-	-	-	-	-				
YELLOW CHANGE (SEC.)		3.0	4.4	-	3.0	-	4.4	-	3.0				
ALL RED CLEARANCE (SEC.)		1.0	1.0	-	2.4	-	1.2	-	1.8				
DELAYED GREEN (LPI) ^ (SEC.)		-	-	-	-	-	-	-	-				
FLASHING YELLOW ARROW DELAY^ (SEC.)		-	-	-	-	-	-	-	-				
WALK (SEC.)		-	-	-	-	-	17	-	12				
PEDESTRIAN CLEARANCE (SEC.)		-	-	-	-	-	27	-	12				
RECALL	MAXIMUM (ON/OFF)	OFF	OFF	-	OFF	-	OFF	-	OFF				
	MINIMUM (ON/OFF)	OFF	ON	-	OFF	-	ON	-	OFF				
	PEDESTRIAN (ON/OFF)	OFF	OFF	-	OFF	-	ON	-	OFF				
MEMORY (ON/OFF)		OFF	OFF	-	OFF	-	OFF	-	OFF				
*VOLUME DENSITY CONTROLS													
# FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET													
^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.													

PHASING DIAGRAM



RADAR DETECTION CHART (TEM FORM 496-4)

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC.)	EXTENSION PROGRAMMED IN CONTROLLER (SEC.)	DETECTOR NO.	PURPOSE	DETECTION ZONE LENGTH (FT)
SD1	SB	PRESENCE	4	8	-	-	STOP LINE	-
AD1	WB	PRESENCE	2	-	2	-	ADVANCE	150
SD2	EB	PRESENCE	1	-	-	-	STOP LINE	-
SD4	NB	PRESENCE	8	-	-	-	STOP LINE	-
AD4	EB	PRESENCE	6	-	2	-	ADVANCE	150
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-



FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A, 2B (WB)	R	Φ2 R	R	1 (EBLT)	R	Φ6 R	R
	Y	Φ2 Y			Y	Φ6 Y	
	G	Φ2 G			G	Φ6 G	
	-	-			Y	Φ1 G	
	-	-			G	Φ1 G	
4A, 4B (SB)	R	Φ4 R	R	6A, 6B (EB)	R	Φ6 R	R
	Y	Φ4 Y			Y	Φ6 Y	
	G	Φ4 G			G	Φ6 G	
	-	-		8A, 8B (NB)	R	Φ8 R	R
	-	-			Y	Φ8 Y	
PEDESTRIAN MOVEMENTS					G	Φ8 G	
P3, P4 (EB)	W	Φ8	OUT	-	-	-	
	DW	Φ8			-	-	

LEGEND

	TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG		POWER CABLE, 2 CONDUCTOR, NO. X AWG
	TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD 12"		SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		SIGNAL SUPPORT POLE NO. SP-3
	PEDESTRIAN SIGNAL		SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		METER BASE
	PEDESTRIAN PUSH BUTTON		RADAR DETECTION CABLE		SEPARATE LIGHTING & SIGNAL DISCONNECT SWITCHES
	DILEMMA ZONE RADAR DETECTION UNIT		POWER SOURCE		UNINTERRUPTIBLE POWER SUPPLY CABLE
	STOP LINE RADAR DETECTION UNIT		SERVICE CABLE, 3 CONDUCTOR, NO. X AWG		

ITEM 661 - DECIDUOUS TREE, 2" CALIPER, AS PER PLAN

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS WHILE PLANTING THE TREES ALONG THE SHARED USE PATH AS SHOWN IN SHEET P. 88 TO P.91:

1. ACCEPTABLE TREE SPECIES LIST BELOW (DERIVED FROM ODNR ACCEPTABLE TREE SPECIES LIST FOR PLANTING WITHIN 1,000 FEET OF SCENIC RIVERS).
2. ALL TREES TO BE STRAIGHT SPECIES. NO CULTIVARS, VARIETIES, NATIVARS, ETC.
3. NO MORE THAN 15% OF ANY ONE SPECIES.
4. CONTRACTOR TO SUBMIT PROPOSED PLANT SCHEDULE FOR REVIEW BY OWNER.
5. FINAL PLANTING LOCATIONS TO BE FLAGGED IN FIELD BY GREAT PARKS OF HAMILTON COUNTY (GPHC) STAFF.
6. TREES TO BE MULCHED AND INCLUDE DEER PROTECTION.

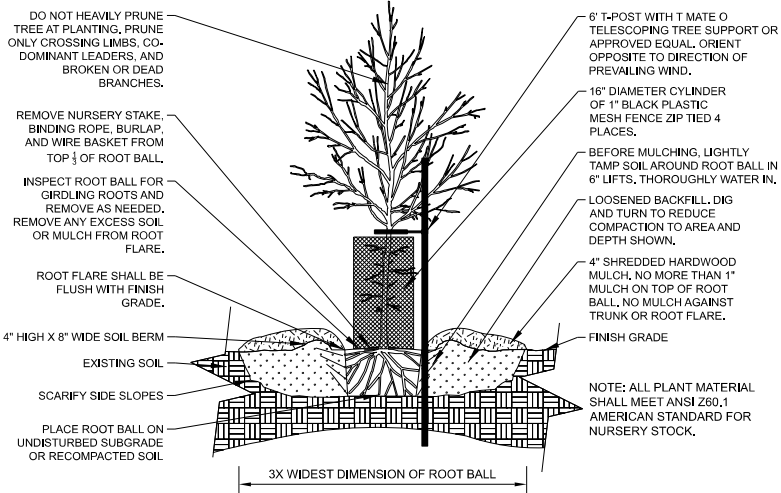
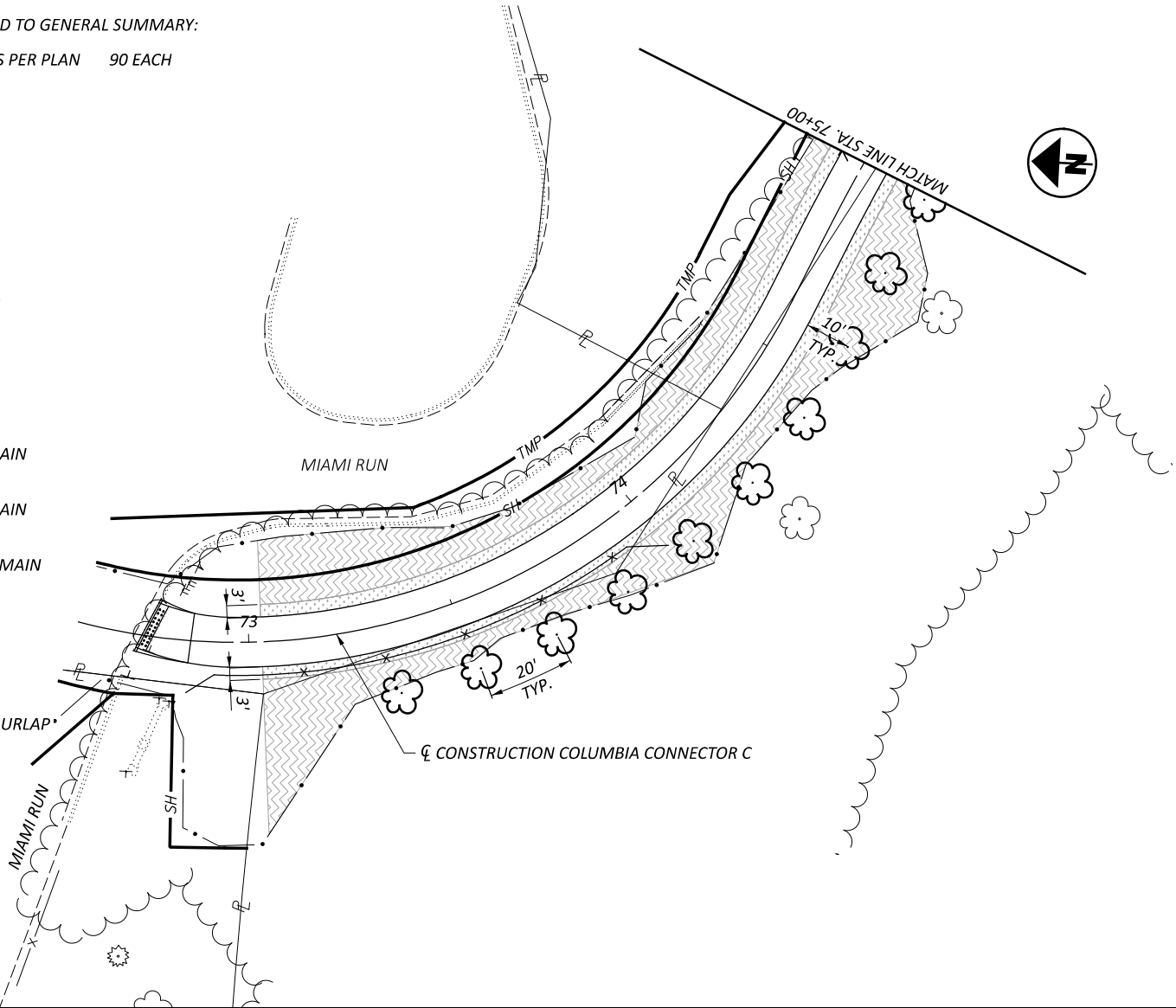
PLANT CODE	QTY.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
ACRU		ACER RUBRUM	RED MAPLE	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
ACSA2		ACER SACCHARINUM	SILVER MAPLE	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
A EGL		AESCULUS GLABRA	OHIO BUCKEYE	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
ASTR		ASIMINA TRILOBA	PAWPAW	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
CAC015		CARYA CORDIFORMIS	BITTERNUT HICKORY	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
CAGL8		CARYA GLABRA	PIGNET HICKORY	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
CALA21		CARYA LACINIOSA	SHELLBARK HICKORY	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
CAOV2		CARYA OVATA	SHAGBARK HICKORY	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
CEOC		CELTIS OCCIDENTALIS	HACKBERRY	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
CECA4		CERCIS CANADENSIS	EASTERN REDBUD	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
GYDI		GYMNOCLADUS DIOICUS	KENTUCKY COFFEE TREE	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
JUNI		JUGLANS NIGRA	BLACK WALNUT	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
LITU		LIRIODENDRON TULIPIFERA	TULIP TREE	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
PLAOCC		PLANTANUS OCCIDENTALIS	SYCAMORE	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
PODE3		POPULUS DELTOIDES	EASTERN COTTONWOOD	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
QUBI		QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
QUMA2		QUERCUS MACROCARPA	BUR OAK	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'
QUEMUE		QUERCUS MUEHLENBERGII	CHINQUAPIN OAK	2" CAL. B&B	GPHC STAFF	LIMBED TO 6'

THE FOLLOWING QUANTITY WILL BE CARRIED TO GENERAL SUMMARY:

ITEM 661 - DECIDUOUS TREE, 2" CALIPER, AS PER PLAN 90 EACH

LEGEND

- CONSTRUCTION LIMITS
- PROPERTY LINE
- EXISTING TREE LINE
- EXISTING TREE TO REMAIN
- EXSITING TREE TO REMAIN
- EXSITING SHRUB TO REMAIN
- TURF MOW STRIP
- BALANCE MIX
- PROPOSED 2" BALL & BURLAP



L1 TREE PLANTING

NOT TO SCALE

659 - SEEDING AND MULCHING, AS PER PLAN

SEEDING AND MULCHING IN AREAS AS SHOWN IN SHEET P.88 TO P.91 SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS OF GREAT PARKS OF HAMILTON COUNTY (GPHC):

1. TURF MOW STRIP SHOULD MEET THE SPECIFICATIONS IN THE TABLE BELOW:

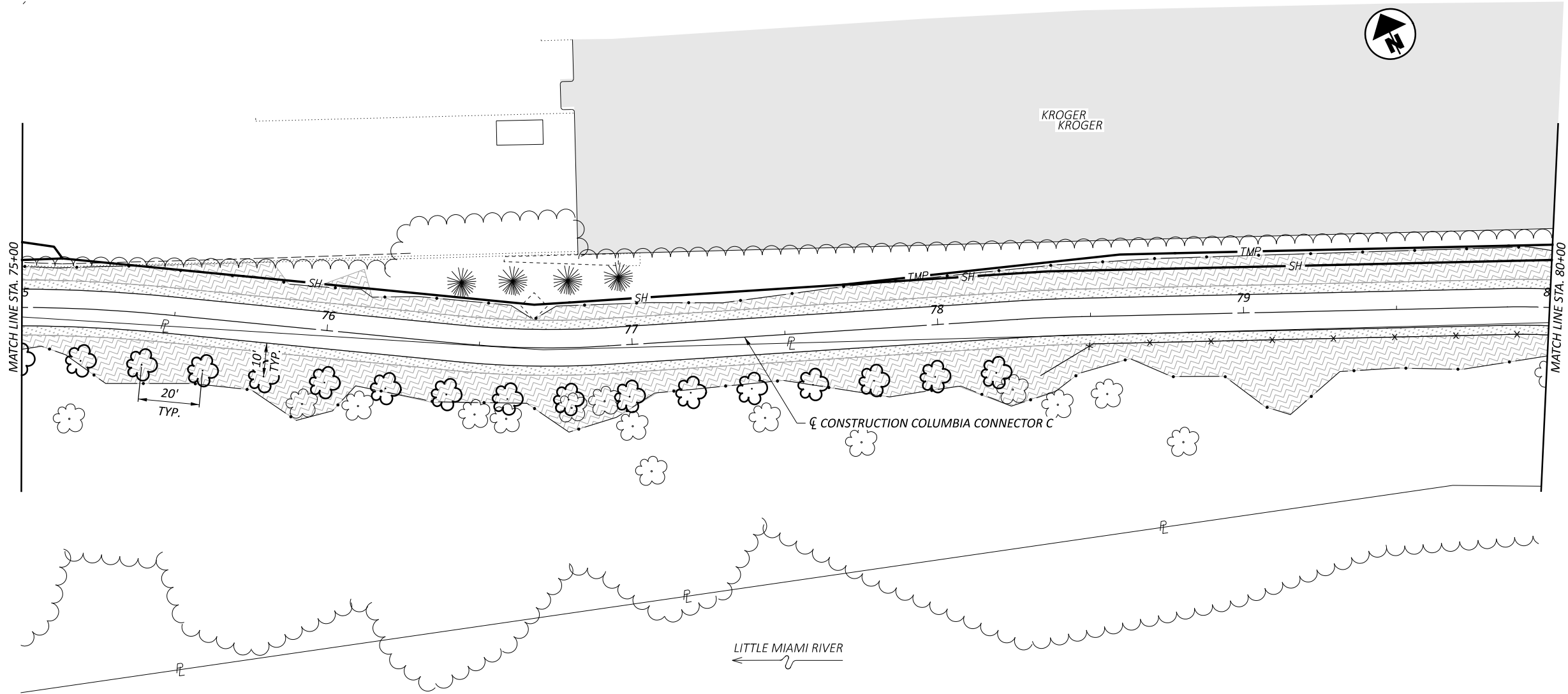
Class	Mix Type	Weight per Area	
		lb	kg
	Seeds	1000 ft ²	1000 m ²
1	Lawn Mixture Use for areas in front of residences, commercial properties, etc. between curb and sidewalk with slopes 3:1 or flatter.		
	Kentucky Bluegrass (Poa pratensis)	3	14.64
	Creeping Red Fescue (Festuca rubra)	3	14.64
	Annual Ryegrass (Lolium multiflorum)	2	9.76
	Perennial Ryegrass, turf type (Lolium perenne)	2	9.76

2. THE BALANCE MIX SHOULD BE SEEDDED WITH CLASS 5B NATIVE WILDFLOWER AND GRASS MIX, SUPPLEMENTED WITH ELYMUS CANADENSIS (CANADA WILD RYE) AT 0.046 LBS PER 1000 SF (2 LBS PER ACRE) AND ELYMUS VIRGINICUS (VIRGINIA WILD RYE) AT 0.034 LBS PER 1000 SF (1.5 LBS PER ACRE).

THE FOLLOWING QUANTITY WILL BE CARRIED TO GENERAL SUMMARY:

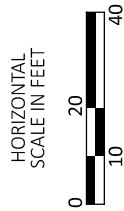
ITEM 659 - SEEDING AND MULCHING, AS PER PLAN (TURF MOW STRIP) 1030 SY
ITEM 659 - SEEDING AND MULCHING, AS PER PLAN (BALANCE MIX) 3085 SY





FOR LEGEND, SEE SHEET P.90

LANDSCAPING PLAN
STA. 75+00.00 TO STA. 80+00.00



DESIGN AGENCY



10200 Alliance Road,
Suite 300
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DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

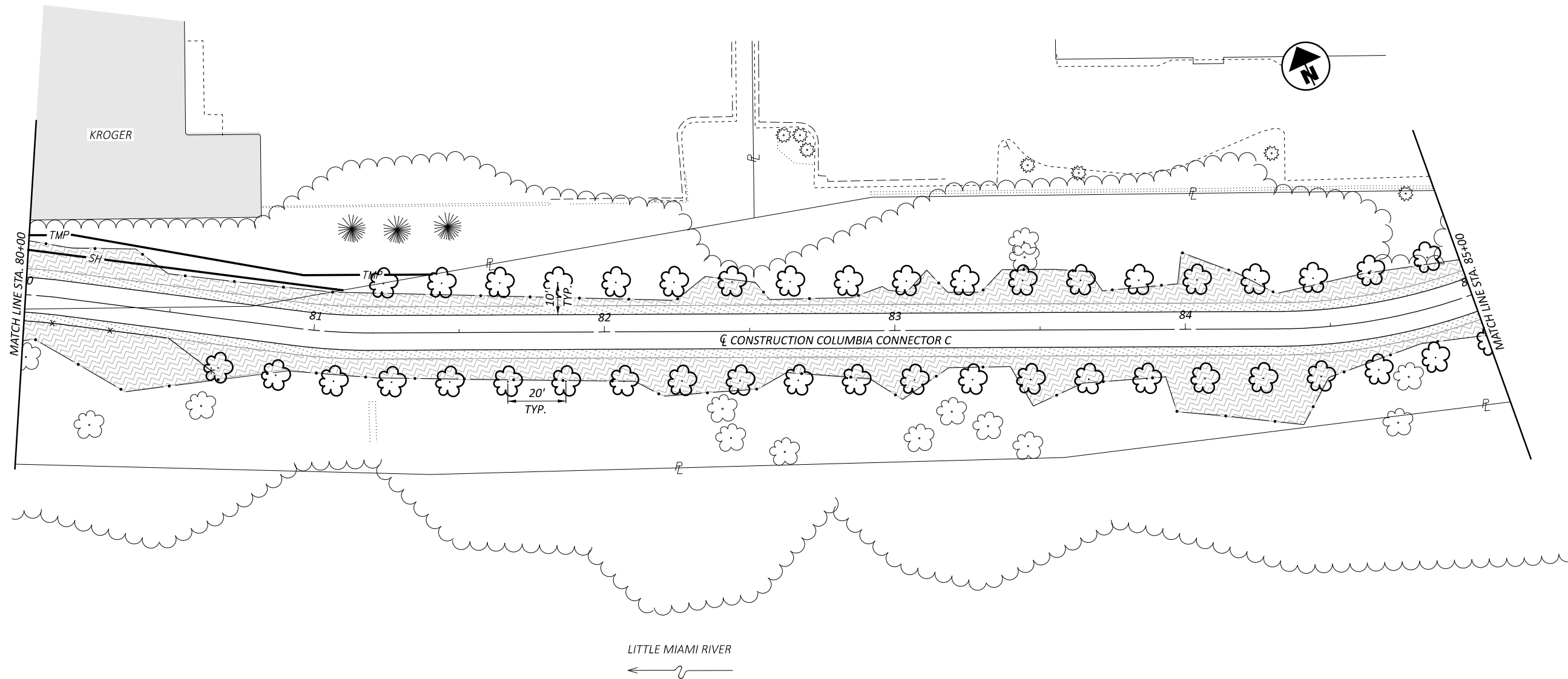
114496

SHEET

P.91

TOTAL

104



FOR LEGEND, SEE SHEET P.90

LANDSCAPING PLAN
STA. 80+00.00 TO STA. 85+00.00

DESIGN AGENCY



DESIGNER

QC

REVIEWER

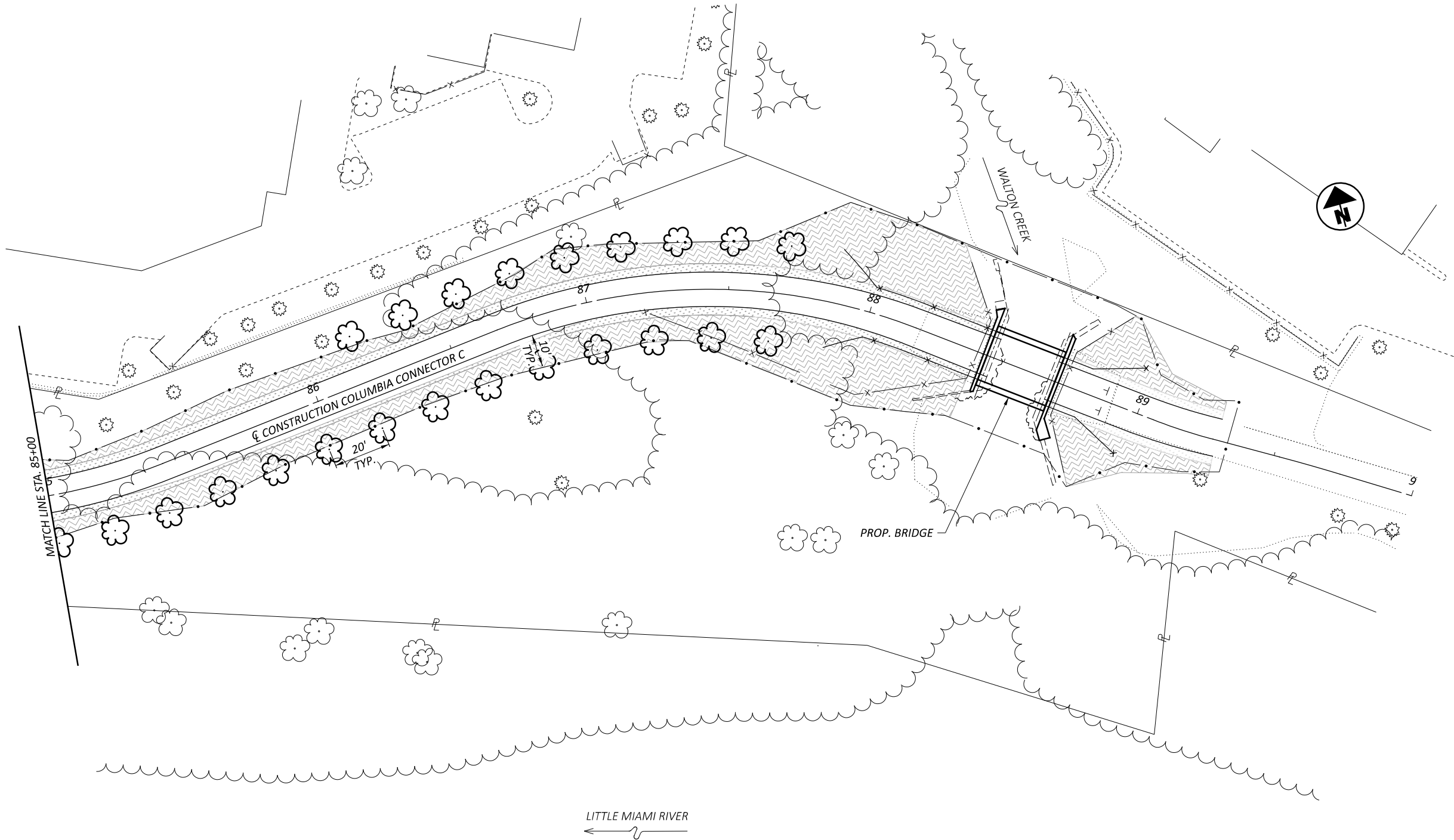
SNS 08-04-25

PROJECT ID

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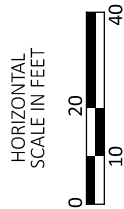
SHEET TOTAL

P.92 104



FOR LEGEND, SEE SHEET P.90

LANDSCAPING PLAN
STA. 85+00.00 TO STA. 90+00.00



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DESIGNER

QC

REVIEWER

SNS 08-04-25

PROJECT ID

114496

SHEET

P.93

TOTAL

104

GENERAL NOTES

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI
(CONCRETE LAGGING)
CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.5 KSI
(DRILLED SHAFT)
STRUCTURAL STEEL - ASTM A572 GRADE 50
YIELD STRENGTH - 50 KSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
MIN. YIELD STRENGTH - 60 KSI
STEEL SHEAR CONNECTORS, NUTS, PLATES - ASTM A572, GRADE 36
YIELD STRENGTH - 36 KSI

ITEM 507, STEEL PILES, MISC.: SOLDIER PILES W33x141

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572, GRADE 50. DO NOT FIELD WELD OR SPLICE THOSE PARTS OF THE STEEL SOLDIER PILES THAT WILL BE ABOVE GROUND.

THE INDIVIDUAL LENGTHS SHOWN IN THE DRILLED SHAFT SUMMARY TABLES AND THE TOTAL LENGTHS SHOWN IN THE ESTIMATED QUANTITIES ARE CALCULATED FROM THE ESTIMATED BOTTOM OF SHAFT ELEVATIONS AND THE ACTUAL LENGTH OF EACH STEEL BEAM MAY VARY. THE CONTRACTOR SHOULD ANTICIPATE THAT THE STEEL BEAMS WILL NEED TO BE TRIMMED OR SPLICED TO THE ACTUAL REQUIRED LENGTH. THE CONTRACTOR MAY WANT TO ORDER ADDITIONAL LENGTH OF EACH TYPE OF STEEL BEAM FOR SPLICING.

MEASUREMENT FOR PAYMENT WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF WALL ELEVATION AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. THE COUNTY WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES W33x141

ITEM 518, POROUS BACK FILL, AS PER PLAN

THE POROUS BACKFILL USED TO FILL BETWEEN THE HARDWOOD LAGGING AND THE CONCRETE LAGGING PANELS ALONG WITH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL IT IN PLACE IS PAID FOR UNDER ITEM 518 POROUS BACKFILL, AS PER PLAN.

ITEM 524, DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL DRILLED SHAFTS IN ACCORDANCE WITH CMS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFTS WITHIN 3 INCHES OF THE PLAN LOCATION IN THE HORIZONTAL PLANE. IF FIELD CONDITIONS INDICATE GREATER DEPTHS, NOTIFY THE ENGINEER FOR FURTHER EVALUATION.

PLACE THE SOLDIER PILE VERTICALLY WITHIN THE HOLE SO IT IS NOT INCLINED MORE THAN 1" BETWEEN THE TOP AND BOTTOM. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF CONSTRUCTION. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

USE CLASS QC5 CONCRETE ACCORDING TO CMS 511. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

PLACE PRECAST LAGGING SO THAT THE SOLDIER PILE FLANGE OVERLAPS THE END OF THE LAGGING BY AT LEAST 3 INCHES AT BOTH ENDS OF THE LAGGING.

THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS LESS THAN A 48 HOUR CURE. INSTALLING THE SHAFTS IN AN ALTERNATING SEQUENCE OR ANY OTHER SEQUENCE THAT MEETS THIS CRITERIA IS PERMISSIBLE. CASING MAY BE REQUIRED FRO THE CONSTRUCTION OF THE DRILLED SHAFTS.

CARE SHALL BE EXERCISED AS TO COVERING UNATTENDED OPEN SHAFTS. TEMPORARY COVERS SHALL BE OF ADEQUATE STRENGTH TO PREVENT A PERSON OR ANIMAL FROM FALLING IN. NO DRILLED SHAFT EXCAVATION SHALL BE LEFT UN-POURED OVERNIGHT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS AND PLACE CONCRETE PANELS. ANY TEMPORARY GRADING, EXCAVATION, EMBANKMENT, AGGREGATE, DRAINAGE, CASING, SHEETING, ETC. NEEDED TO COMPLETE THE WORK AREA SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFTS AND CONCRETE PANELS. NO SEPARATE PAYMENT WILL BE MADE.

PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE AND ITEM 613 LSM BACKFILL FROM TOP OF THE CONCRETE TO THE EXISTING GROUND SURFACE AT THE C/L OF THE PILE AND REMOVAL OF CONCRETE FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE PRECAST LAGGING. PAYMENT FOR SOIL OVERBURDEN DRILLING , WHICH IS GROUND LEVEL TO THE TOP OF THE SHAFT, SHALL BE INCLUSIVE OF ITEM 524 DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN

MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN, WILL BE MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE TOP OF THE SHAFT TO THE BOTTOM OF SHAFT.

ITEM 511, CONCRETE, MISC.: PRECAST CONCRETE PANEL

THIS WORK CONSISTS OF FURNISHING AND PLACING PRECAST REINFORCED CONCRETE PANELS BETWEEN THE SOLDIER PILES TO FUNCTION AS LAGGING FOR THE RETAINING WALL. PROVIDE PRECAST CONCRETE LAGGING FROM A PRECAST CONCRETE MANUFACTURER CERTIFIED UNDER SUPPLEMENT 1073. PROVIDE CONCRETE WITH A 28-DAY DESIGN STRENGTH OF AT LEAST 4000 PSI ACCORDING TO CMS 499. PROVIDE EPOXY COATED REINFORCING STEEL ACCORDING TO CMS 709.00. IN LIEU OF EPOXY COATING, A CORROSION INHIBITING CONCRETE ADMIXTURE MAY BE USED AT THE SPECIFIED DOSAGE RATE. A QUALIFIED PRODUCT LIST OF CORROSION INHIBITING ADMIXTURES IS ON FILE AT THE LABORATORY. MANUFACTURERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR MAY AFFECT THE STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE MANUFACTURER'S CHOICE TO USE ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING ALL DESIGN REQUIREMENTS. DO NOT ALLOW THE DIMENSIONS OF THE REINFORCING STEEL TO VARY BY MORE THAN 1/8 INCH. PERMANENTLY MARK EACH PANEL TO INDICATE THE FACE TO BE PLACED AGAINST THE SOIL. PLACE THE PANEL BETWEEN THE FLANGES OF THE SOLDIER PILES AND BEARING AGAINST THE FLANGES ON THE EXPOSED SIDE OF THE WALL.

THE COUNTY WILL PAY FOR PRECAST LAGGING AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 511, CONCRETE, MISC.: PRECAST CONCRETE PANEL.

ITEM 610, RETAINING WALL, MISC.: TEMPORARY HARDWOOD LAGGING

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING UNTREATED HARDWOOD LAGGING TO SERVE AS TEMPORARY LAGGING BELOW EXISTING GRADE FOR THE SOLDIER PILE WALL. THE LAGGING SHALL CONSIST OF HARDWOOD WITH NOMINAL 3"x8" DIMENSIONS. PAYMENT FOR THE HARDWOOD LAGGING INCLUDES MATERIAL SUPPLY, NON-DEGRADABLE SPACERS BETWEEN THE LAGGING BOARDS AND INSTALLATION AS INDICATED IN THE PROJECT PLANS. LAGGING SHALL BE PLACED IN A TOP-DOWN MANNER SUCH THAT NO MORE THAN 3 FEET OF UNSUPPORTED EXCAVATION IS EXPOSED. EXCAVATION FOR PLACEMENT OF THE LAGGING SHALL BE PERFORMED IN SUCH A MANNER THAT THE LAGGING IS TIGHT AGAINST THE EXCAVATED FACE. ANY VOIDS BEHIND THE LAGGING SHALL BE BACKFILLED WITH NO. 57 CRUSHED CARBONATE STONE AS DIRECTED BY THE ENGINEER. REDUCE UNSUPPORTED HEIGHT AS NECESSARY TO PREVENT CAVING AND SLOUGHING OF THE SOILS BETWEEN THE SOLDIER PILES. PROVIDE 1/4 " TO 7/8 " HORIZONTAL JOINT SPACING BETWEEN THE LAGGING BOARDS TO PERMIT DRAINAGE. CONNECT THE LAGGING TO THE SOLDIER PILES USING THREADED SHEAR CONNECTORS, LAGGING WASHERS AND NUTS PROVIDED AND INSTALLED PER CMS 513. LAGGING PLATES AND NUTS SHALL BE ASTM 709 GRADE 36, YIELD STRENGTH 36,000 PSI OR GREATER.

FINAL GRADING

CONTRACTOR SHALL GRADE AS NECESSARY IN FRONT OF THE DRILLED SHAFT WALL TO ENSURE POSITIVE DRAINAGE AWAY FROM THE FACE OF THE WALL. NO DEPRESSIONS WHICH MAY HOLD WATER SHALL BE PERMITTED TO REMAIN.

ALL FINAL GRADING, EXCAVATION, EMBANKMENT, AND SEEDING AND MULCHING, UNLESS OTHERWISE NOTED IN THE PLANS, SHALL BE INCLUDED IN VARIOUS BID ITEMS FOR THE DRILLED SHAFTS AND CONCRETE PANELS.

DESIGN AGENCY



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DESIGNER

MRS

REVIEWER

EDA 08-04-25

PROJECT ID

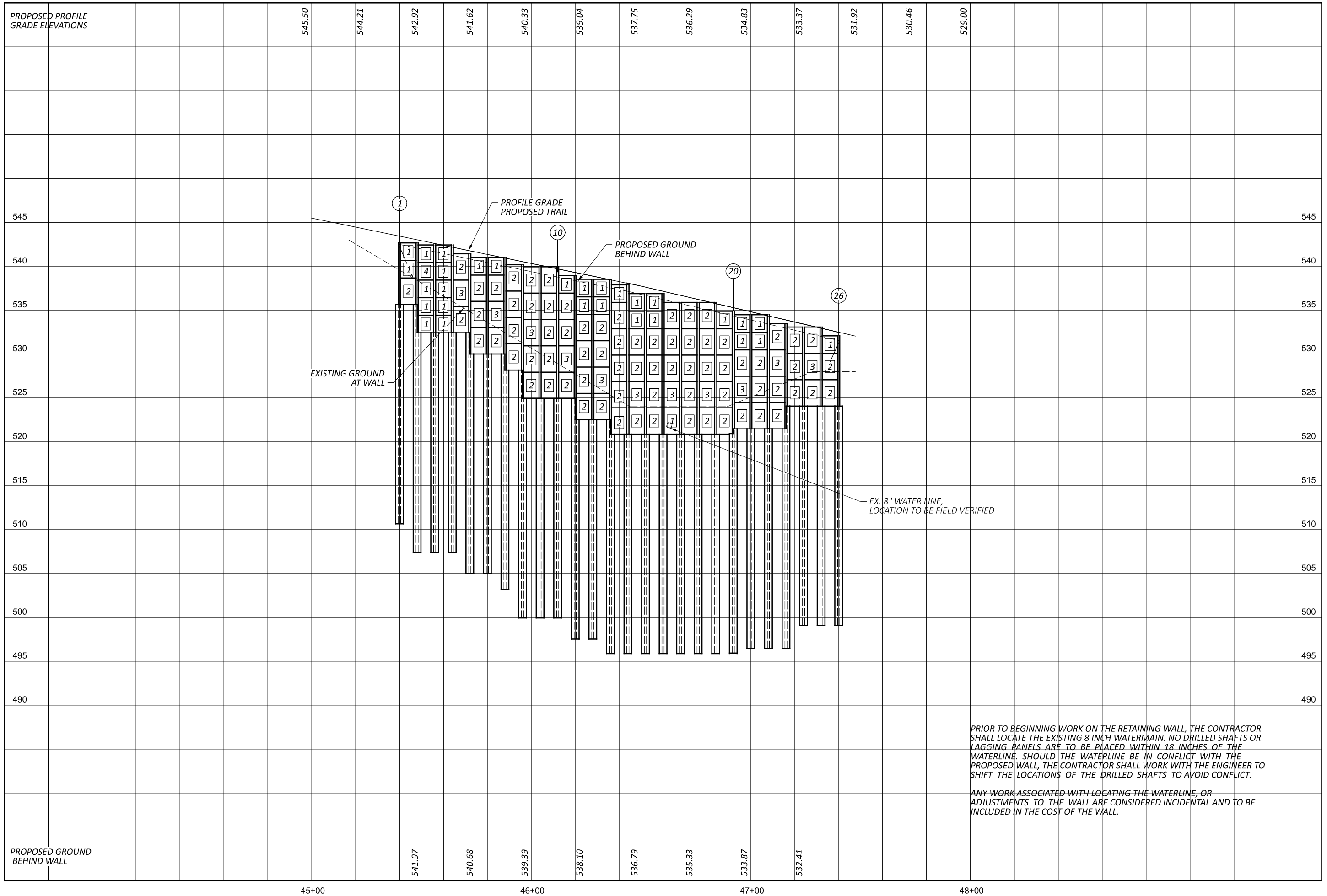
114496

SHEET TOTAL

P.94 104

HAM-COLUMBIA CONNECTOR

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WALL PROFILE
STA. 45+38.24 TO STA. 47+41.74

DESIGN AGENCY



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10200 Alliance Road,
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DESIGNER

MRS

REVIEWER

EDA 08 04 25

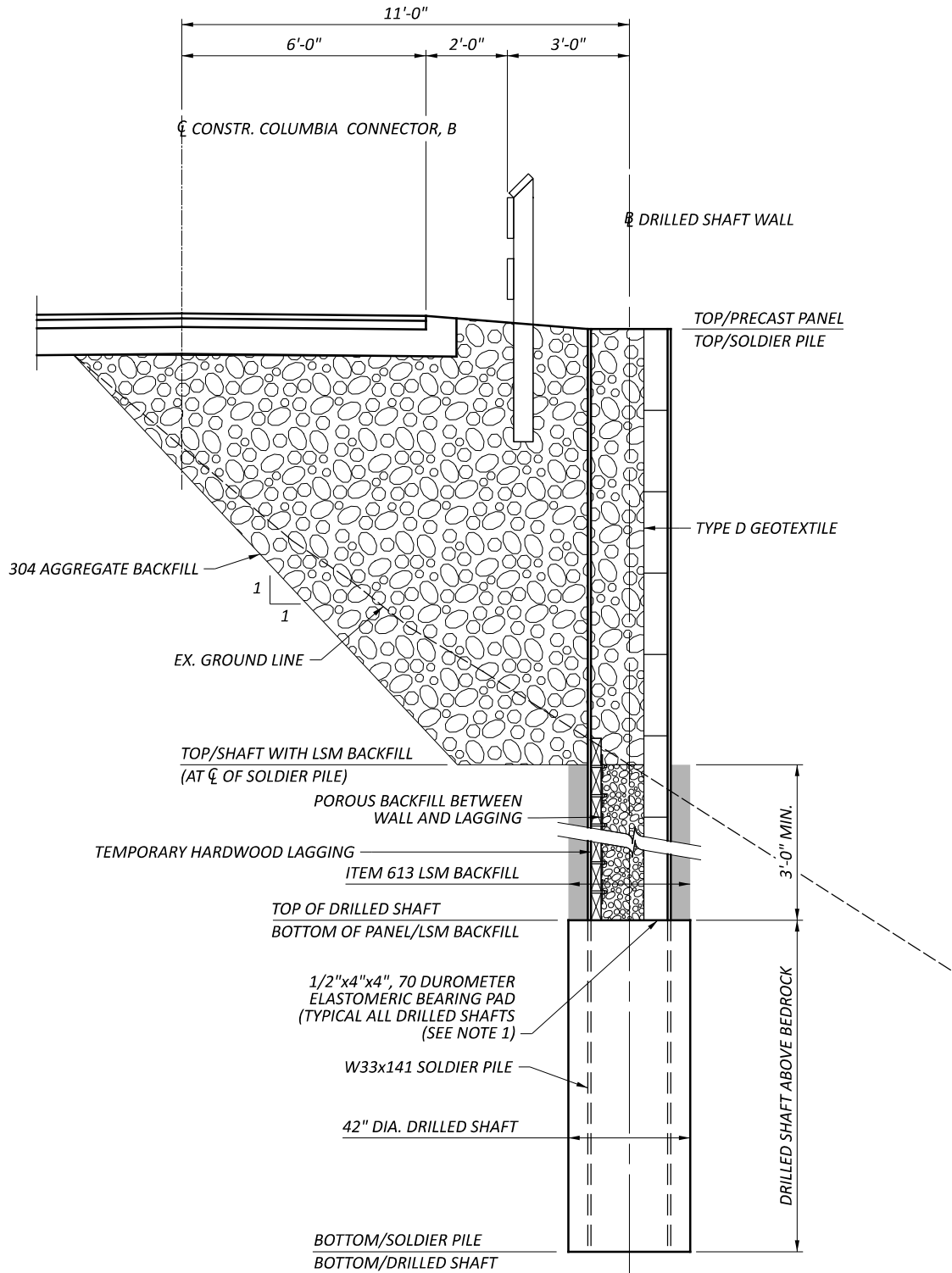
LDA 00-04-23

PROJECT ID
111122

114496

SHEET	TOTAL
1	1

SHAFT NO.	STATION	OFFSET RIGHT	TOP OF DRILLED SHAFT ELEVATION	APPROX. BOTTOM OF DRILLED SHAFT ELEVATION	TOP OF STEEL BEAM ELEVATION	ITEM 524	ITEM 507
						DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK	STEEL PILES, MISC.: SOLDIER PILES W33x141
		FT.				FT.	FT.
1	45+40.00	11.00	535.66	510.66	542.66	25.00	32.00
2	45+48.00	11.00	532.42	507.42	542.66	25.00	35.24
3	45+56.00	11.00	532.42	507.42	542.42	25.00	35.00
4	45+64.00	11.00	532.42	507.42	542.42	25.00	35.00
5	45+72.00	11.00	530.00	505.00	541.42	25.00	36.42
6	45+80.00	11.00	530.00	505.00	541.00	25.00	36.00
7	45+88.00	11.00	528.17	503.17	541.00	25.00	37.83
8	45+96.00	11.00	524.93	499.93	540.17	25.00	40.24
9	46+04.00	11.00	524.93	499.93	539.93	25.00	40.00
10	46+12.00	11.00	524.93	499.93	539.93	25.00	40.00
11	46+20.00	11.00	522.52	497.52	538.93	25.00	41.41
12	46+28.00	11.00	522.52	497.52	538.52	25.00	41.00
13	46+36.00	11.00	520.88	495.88	538.52	25.00	42.64
14	46+44.00	11.00	520.88	495.88	537.88	25.00	42.00
15	46+52.00	11.00	520.88	495.88	536.88	25.00	41.00
16	46+60.00	11.00	520.88	495.88	536.88	25.00	41.00
17	46+68.00	11.00	520.88	495.88	535.88	25.00	40.00
18	46+76.00	11.00	520.88	495.88	535.88	25.00	40.00
19	46+84.00	11.00	520.88	495.88	535.88	25.00	40.00
20	46+92.00	11.00	520.88	495.88	534.88	25.00	39.00
21	47+00.00	11.00	521.48	496.48	534.48	25.00	38.00
22	47+08.00	11.00	521.48	496.48	534.48	25.00	38.00
23	47+16.00	11.00	521.48	496.48	533.48	25.00	37.00
24	47+24.00	11.00	524.07	499.07	533.07	25.00	34.00
25	47+32.00	11.00	524.07	499.07	533.07	25.00	34.00
26	47+40.00	11.00	524.07	499.07	532.07	25.00	33.00
TOTAL						650.00	989.78
TOTALS CARRIED TO GENERAL SUMMARY						650	990



DRILLED SHAFT WALL SECTION

- NOTES:
- ELASTOMERIC BEARINGS ARE INCLUDED WITH ITEM 610, RETAINING WALL, MISC.: PRECAST CONCRETE PANEL FOR PAYMENT.
 - SECURE PRECAST CONCRETE PANELS AGAINST PILE FLANGE UNTIL VOID IS FILLED WITH POROUS BACKFILL.

WALL DETAILS - DRILLED SHAFT ELEVATIONS
STA. 45+38.24 TO STA. 47+41.74

DESIGN AGENCY



Stantec
10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER

MRS

REVIEWER

EDA 08-04-25

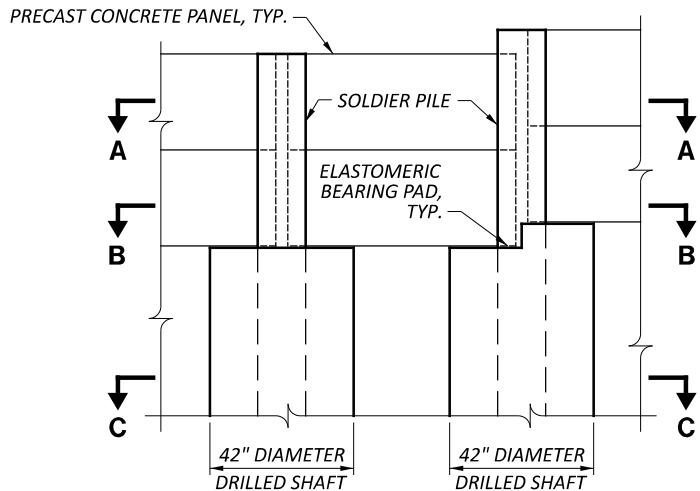
PROJECT ID

114496

SHEET

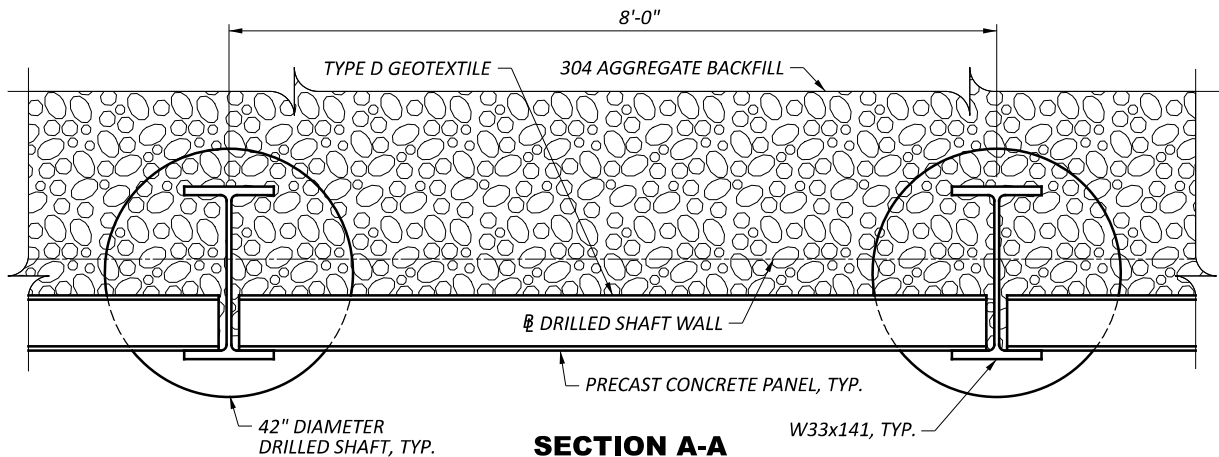
TOTAL

P.96 | 104

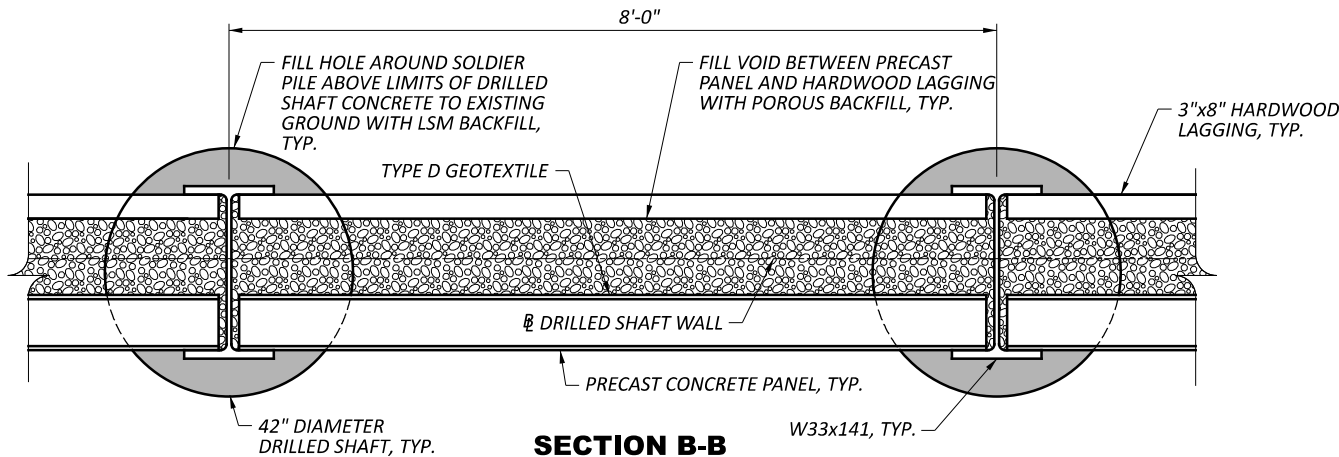


WALL ELEVATION

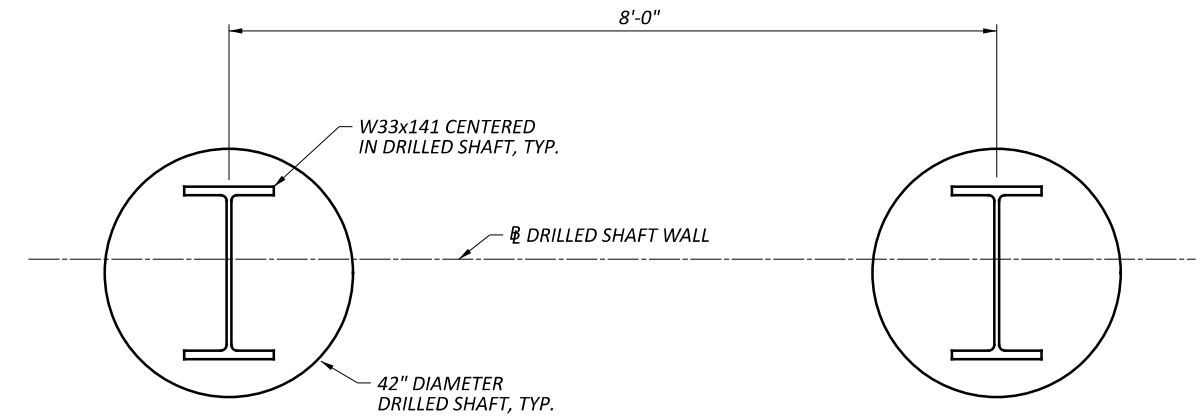
- NOTES:
1. ELASTOMERIC BEARINGS ARE INCLUDED WITH ITEM 610, RETAINING WALL, MISC.: PRECAST CONCRETE PANEL FOR PAYMENT.
 2. STEEL SOLDIER PILES SHALL BE GALVANIZED ABOVE TOP OF DRILLED SHAFT CONCRETE.
 3. SECURE PRECAST CONCRETE PANELS AGAINST PILE FLANGE UNTIL VOID IS FILLED WITH POROUS BACKFILL.



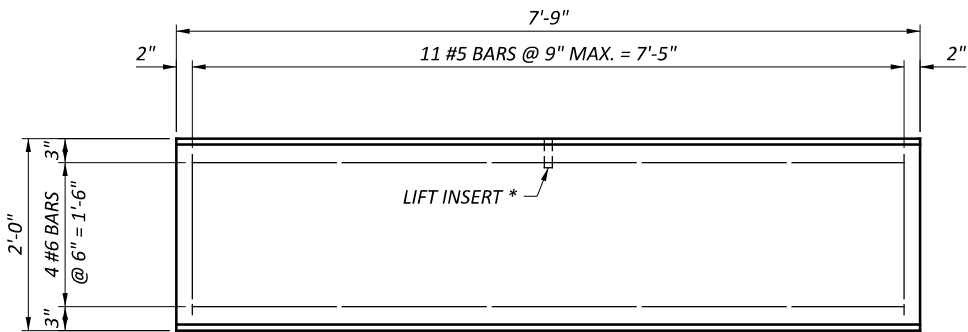
SECTION A-A



SECTION B-B

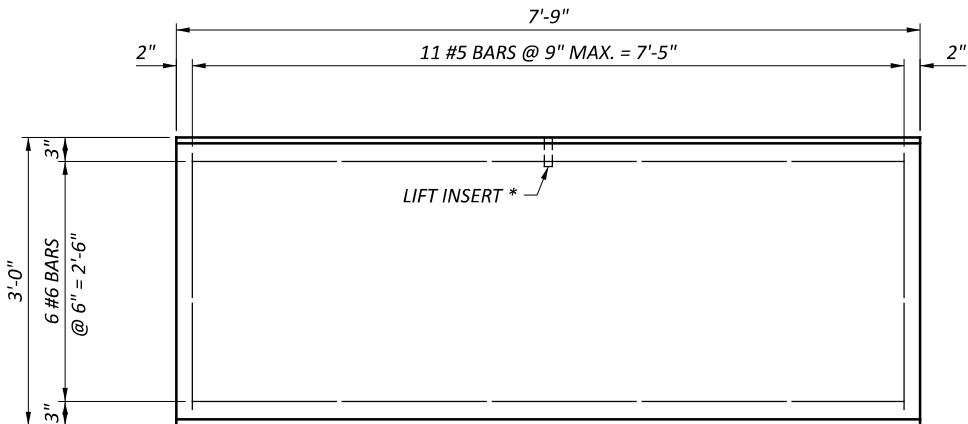


SECTION C-C



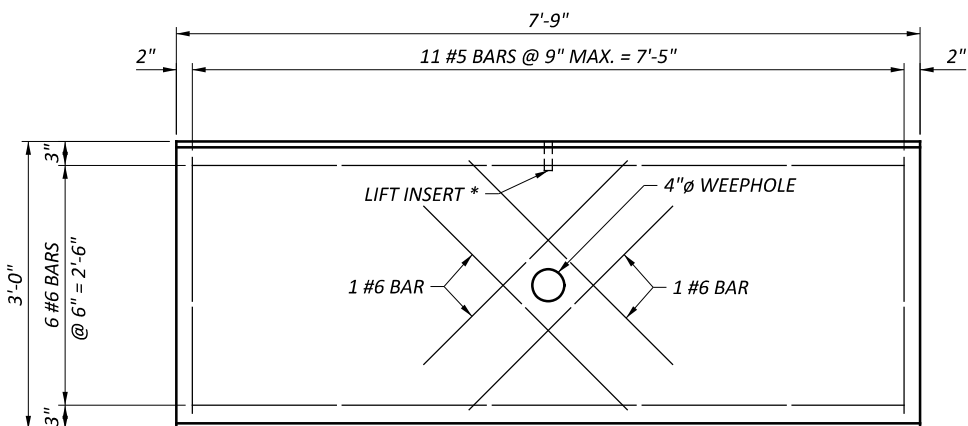
PRECAST CONCRETE PANEL 1

TOTAL REQUIRED = 29
QUANTITY CARRIED TO GENERAL SUMMARY



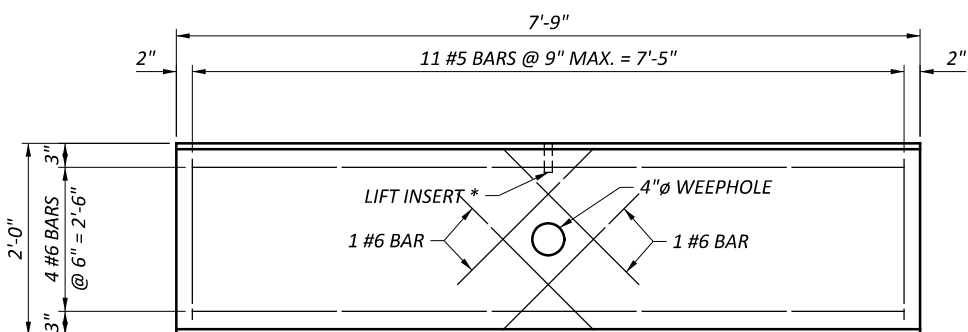
PRECAST CONCRETE PANEL 2

TOTAL REQUIRED = 75
QUANTITY CARRIED TO GENERAL SUMMARY



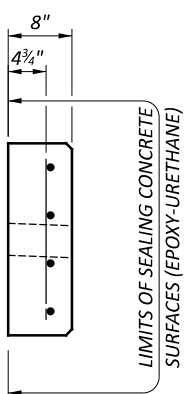
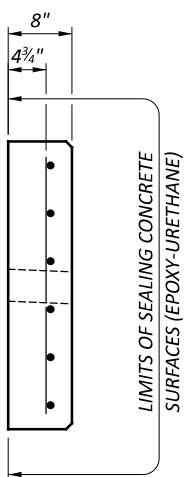
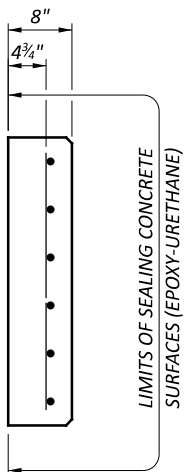
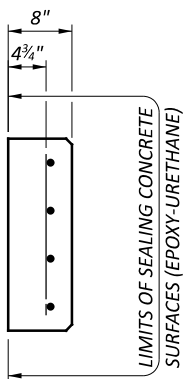
PRECAST CONCRETE PANEL 3

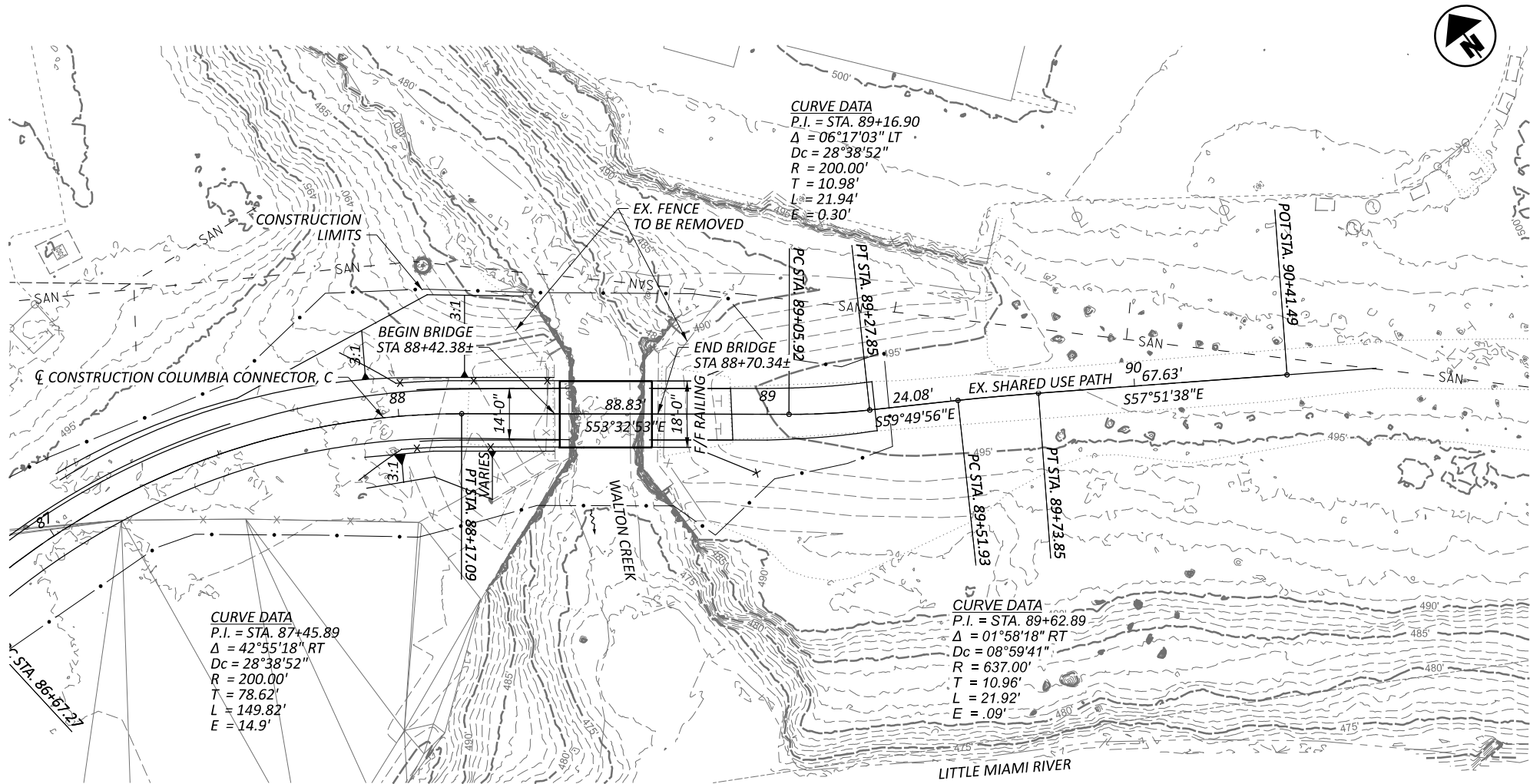
TOTAL REQUIRED = 11
QUANTITY CARRIED TO GENERAL SUMMARY



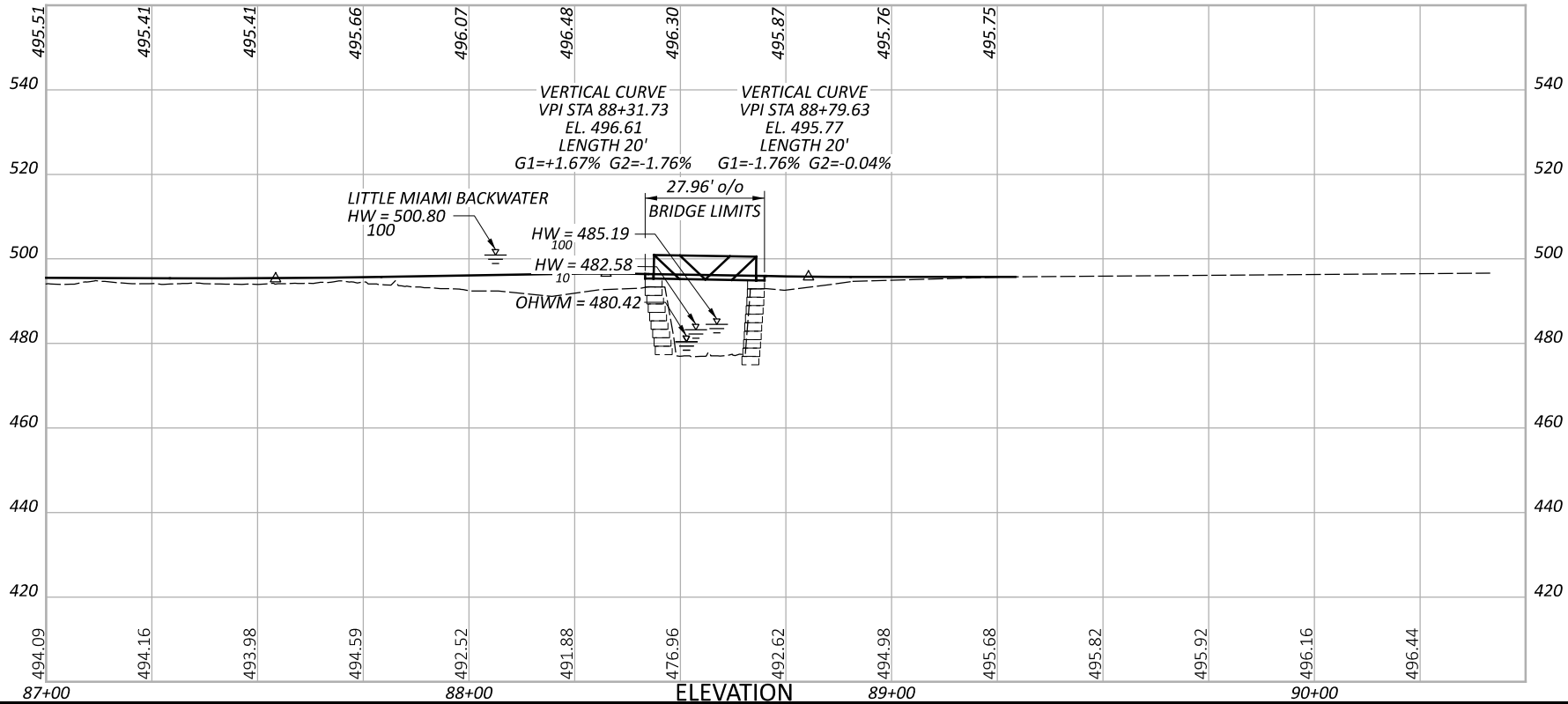
PRECAST CONCRETE PANEL 4

TOTAL REQUIRED = 1
QUANTITY CARRIED TO GENERAL SUMMARY





PLAN



NOTE:
BRIDGE PROFILE BASED ON 3'-0"
DIMENSION FROM PROFILE GRADE TO
BEAM SEAT. ADJUST PROFILE AS NEEDED
IF THE ACTUAL DIMENSION VARIES FROM
THIS.

BENCHMARK DATA

BM #1 STA.	85+25.95,	ELEV.	499.371,	OFFSET	34.21',	LT.
BM #2 STA.	86+76.93,	ELEV.	493.925,	OFFSET	48.93',	RT.
BM #3 STA.	89+11.25,	ELEV.	495.514,	OFFSET	10.01',	LT.
BM #4 STA.	,	ELEV.	,	OFFSET	,	

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET P.2

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

HYDRAULIC DATA

DRAINAGE AREA = 1.33 SQ. MILES
Q (100) = 1410 CFS V (100) = 9.82 FT/S
Q (10) = 687 CFS V (10) = 7.99 FT/S
STRUCTURE CLEARS THE 10 YEAR
DESIGN HW BY 12.50 FEET.

EXISTING STRUCTURE

TYPE: REHABILITATED STONE ABUTMENTS WITH GEOSYNTHETIC REINFORCED SOIL ABUTMENT EXTENSIONS

SPANS: 25'-0"
ROADWAY: NONE F/F SAFETY CURB
LOADING: UNKNOWN
SKEW: 0°

WEARING SURFACE: NONE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: NONE
STRUCTURE FILE NUMBER: NONE
DATE BUILT: UNKNOWN (ABUTMENTS REHABILITATED 2020)
DISPOSITION: NEW SUPERSTRUCTURE TO BE PLACED ON ABUTMENTS

PROPOSED STRUCTURE

TYPE: PROPOSED PREFABRICATED STEEL TRUSS ON EXISTING STONE AND GEOSYNTHETIC REINFORCED SOIL ABUTMENTS

SPANS: 23'-0"
ROADWAY: 18'-0" FACE/FACE RAILING
LOADING: PEDESTRIAN LIVE LOAD: 0.090 KIPS/FT2
VEHICULAR LIVE LOAD: H15-44 (TRUCK ONLY)

SKEW: 0°
WEARING SURFACE: 1" MONOLITHIC CONCRETE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
SUPERELEVATION: 0.01 FT/FT
DECK AREA: 504 SF

COORDINATES: LATITUDE N 39° 08' 26.12"
LONGITUDE W 84° 21' 31.18"



SFN

DESIGN AGENCY



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DESIGNER MRS
CHECKER EDA

REVIEWER
BSM 08-04-25

PROJECT ID
114496

SUBSET 1
TOTAL 7

SHEET P.98
TOTAL 104

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

[illegible][illegible]

ITEM 530, STRUCTURE MISC.: PREFABRICATED BRIDGE

1.0 GENERAL

1.1 SCOPE

THESE SPECIFICATIONS ARE FOR FULLY ENGINEERED HALF THROUGH TRUSS (NO OVERHEAD BRACING) BRIDGE OF STEEL CONSTRUCTION AND SHALL BE REGARDED AS MINIMUM STANDARDS FOR DESIGN AND FABRICATION. THE WORK INCLUDED UNDER THIS ITEM SHALL CONSIST OF DESIGN, FABRICATING, FINISHING AND TRANSPORTING THE STEEL TRUSS BRIDGE SUPERSTRUCTURE INCLUDING BEARINGS.

1.2 QUALIFIED BRIDGE MANUFACTURER

EACH CONTRACTOR IS REQUIRED TO IDENTIFY THEIR INTENDED SUPPLIER AS PART OF THE BID SUBMITTAL. QUALIFIED BRIDGE MANUFACTURERS MUST HAVE AT LEAST 5 YEARS OF EXPERIENCE FABRICATING THESE TYPES OF STRUCTURES. THE PREFABRICATED TRUSS SUPERSTRUCTURE SHALL BE SUPPLIED BY A MANUFACTURER ON ODOT'S PREQUALIFICATION LIST AS FOUND AT THE FOLLOWING WEBSITE:

HTTPS://WWW.DOT.STATE.OH.US/DIVISIONS/CONSTRUCTIONMGT/MATERIALS/MISCELLANEOUSLIST/STRUCTURALSTEELFABRICATORS.PDF

ALL SUPPLIERS SHALL FABRICATE THEIR PRODUCT UTILIZING A MODERN FABRICATION FACILITY OWNED AND OPERATED BY THE BRIDGE MANUFACTURER THAT INCLUDES THE USE OF CNC BEAM DRILLING MACHINES, NO BROKERS ARE ALLOWED.

1.3 BRIDGE MANUFACTURER'S DESIGN PROFESSIONAL AND SUBMITTALS

THE BRIDGE MANUFACTURER SHALL HAVE AS A DIRECT EMPLOYEE, AN ENGINEER WHO IS EXPERIENCED IN BRIDGE DESIGN TO BE IN RESPONSIBLE CHARGE OF ALL ENGINEERING RELATED TASKS AND DESIGN. THE ENGINEER SHALL HAVE A MINIMUM OF 10 YEARS OF EXPERIENCE IN BRIDGE DESIGN AND BE A CURRENTLY LICENSED CIVIL OR STRUCTURAL PROFESSIONAL ENGINEER IN THE STATE OF OHIO AND SHALL BE THE ENGINEER WHO WILL SEAL AND SIGN THE PLANS.

ENGINEERING DRAWINGS, 11X17 FORMAT, SHALL BE PREPARED AND SUBMITTED TO THE CONTRACTOR OR OWNER FOR THEIR REVIEW AFTER RECEIPT OF THE ORDER. SUBMITTAL DRAWINGS SHALL BE UNIQUE DRAWINGS, PREPARED TO ILLUSTRATE THE SPECIFIC PORTION OF THE BRIDGE BEING FABRICATED. ALL RELATIVE

DESIGN INFORMATION SUCH AS MEMBER SIZE, ASTM/AASHTO MATERIAL SPECIFICATION, DIMENSIONS NECESSARY TO FABRICATE AND REQUIRED WELDING SHALL BE CLEARLY SHOWN ON THE DRAWINGS. DRAWINGS SHALL HAVE REFERENCED DETAILS AND SHEET NUMBERS. ALL DRAWINGS SHALL BE STAMPED, SIGNED AND DATED BY THE BRIDGE MANUFACTURER'S DESIGN PROFESSIONAL.

STRUCTURAL CALCULATIONS FOR THE DESIGN OF THE BRIDGE SUPERSTRUCTURE SHALL BE PREPARED BY THE BRIDGE MANUFACTURER AND SUBMITTED FOR REVIEW AFTER RECEIPT OF THE ORDER. CALCULATIONS SHALL INCLUDE COMPLETE DESIGN, ANALYSIS AND CODE CHECKS FOR THE CONTROLLING MEMBERS, CONNECTIVITY AND SUPPORT CONDITIONS, TRUSS STABILITY CHECKS, DECK DESIGN, DEFLECTION CHECKS, BEARINGS AND ALL SPLICES.

2.0 APPLICABLE CODES AND STANDARDS

2.1 GOVERNING SPECIFICATIONS

BRIDGE SHALL BE DESIGNED IN COMPLIANCE WITH THE AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2009 (AASHTO PED) AND THE OHIO BRIDGE DESIGN MANUAL. CALCULATIONS SHALL BE IN ACCORDANCE WITH THIS DOCUMENT, AND FORMULAS SHALL REFERENCE THE APPROPRIATE SECTIONS.

2.2 OTHER REFERENCE CODES, SPECIFICATIONS AND STANDARDS

- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020 (AASHTO LRFD)
- AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, FIRST EDITION, 2015 (AASHTO SIGNS)
- AISC STEEL CONSTRUCTION MANUAL, 16TH EDITION, 2023 (AISC)
- ANSI/AISC 360-22 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, 2022 (AISC 360)
- AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE, D1.1, 2020 (AWS D1.1)
- SETRA TECHNICAL GUIDE FOR FOOTBRIDGES, 2006 (SETRA)

THE AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES SHALL CONTROL IF ANY CONFLICTING REQUIREMENTS OCCUR WITH THE OTHER REFERENCE DOCUMENTS AND/OR OTHER LOCAL CODES.

3.0 BRIDGE SYSTEM TYPE

3.1 TRUSS STYLE

THE TRUSS STYLE SHALL BE THE THE MOST ECONOMICAL STYLE FOR THE GIVEN SPAN LENGTHS. THE VERTICAL TRUSSES SHALL BE DESIGNED SUCH THAT THE TOP AND BOTTOM CHORD MEMBERS ARE PARALLEL FOR THE ENTIRE LENGTH OF BRIDGE. THE INTERIOR VERTICALS OF THE TRUSSES SHALL BE PERPENDICULAR TO THE TOP FACE OF THE BOTTOM CHORD AND THE END VERTICALS OF THE TRUSSES SHALL BE PLUMB. TRUSSES SHALL BE LAID OUT SUCH THAT DIAGONALS SHALL BE AT AN ANGLE OF 30-DEGREES OR MORE WITH RESPECT TO THE BOTTOM CHORD.

3.2 DIAGONAL STYLE

THE VERTICAL TRUSS SHALL USE A SINGLE-DIAGONAL, PRATT CONFIGURATION, WHERE ALL THE DIAGONALS ARE IN TENSION FOR GRAVITY LOADS.

3.3 FLOOR BEAM LOCATION

THE BRIDGE SHALL UTILIZE AN H-SECTION CONFIGURATION WHERE THE ENDS OF THE FLOOR BEAMS ARE WELDED ONLY TO THE INTERIOR FACE OF THE VERTICALS. THE DISTANCE FROM THE TOP OF DECK TO THE BOTTOM OF THE BOTTOM CHORD SHALL BE DETERMINED BY THE BRIDGE MANUFACTURER DURING FINAL DESIGN.

4.0 BRIDGE GEOMETRY

4.1 SPAN LENGTH

THE BRIDGES WILL CONSIST OF SIMPLE SPAN TRUSSES. THE TOTAL DISTANCE OF THE BRIDGE FROM CENTER TO CENTER OF BEARING AT THE ABUTMENTS WILL BE AS SHOWN IN THE PLANS.

4.2 WIDTH

THE BRIDGE WIDTH SHALL PROVIDE A MINIMUM CLEARANCE OF 18'-0" BETWEEN ALL INTERIOR RAILING ELEMENTS.

4.3 TOP OF TRUSS HEIGHT ABOVE DECK

THE TOP OF THE TOP CHORD SHALL NOT BE LESS THAN 48" ABOVE THE DECK (MEASURED FROM THE HIGH POINT OF THE DECK). NOTE THAT THIS DIMENSION MAY BE EXCEEDED DUE TO TRUSS HEIGHT REQUIREMENTS FOR STRUCTURAL, DEFLECTION AND VIBRATION REQUIREMENTS. THE SAME HEIGHT SHALL BE USED FOR BOTH SPANS.

4.4 LOWER STEEL CLEARANCE

THE BRIDGE MANUFACTURER SHALL DETERMINE THE DISTANCE FROM THE TOP OF THE DECK (MEASURED FROM THE HIGHEST POINT OF THE DECK) TO THE BOTTOM OF ANY STEEL MEMBER.

4.5 TRUSS BAY SPACING

THE NUMBER OF BAYS AND THE DIMENSION OF THE PANEL POINTS SHALL BE DETERMINED BY THE BRIDGE MANUFACTURER.

4.6 CAMBER

EACH SINGLE SIMPLE-SPAN BRIDGE SHALL HAVE A VERTICAL CAMBER DIMENSION AT THE MID-SPAN EQUAL TO 100% OF THE ANTICIPATED FULL DEAD LOAD DEFLECTION.

4.7 ELEVATION DIFFERENCE

THE TOP OF THE DECKS AT EACH END OF THE BRIDGE SHALL BE CONSTRUCTED WITH A VERTICAL ELEVATION DIFFERENCE AS SHOWN ON THE PLANS.

5.0 STRUCTURAL DESIGN LOADS

5.1 DEAD LOAD

THE BRIDGE STRUCTURE SHALL BE DESIGNED FOR THE TOTAL BRIDGE WEIGHT INCLUDING THE FINAL DECK SYSTEM.

5.2 PEDESTRIAN LOADING (PL)

THE BRIDGE STRUCTURE SHALL BE DESIGNED FOR A UNIFORM PEDESTRIAN LOADING OF 90 PSF OR AN H15 TRUCK. THIS LOADING SHALL BE PATTERNED TO PRODUCE THE MAXIMUM LOAD EFFECTS. CONSIDERATION OF DYNAMIC LOAD ALLOWANCE IS NOT REQUIRED WITH THIS LOADING.

5.3 VEHICLE LOAD (VL)

THE SUPERSTRUCTURE AND DECK SYSTEM SHALL BE DESIGNED FOR EACH OF THE FOLLOWING CONCENTRATED/VEHICULAR LOADS:

- A CONCENTRATED LOAD OF 1,000 POUNDS PLACED ON ANY AREA 2.5' BY 2.5' SQUARE.
- A SINGLE TRUCK SHALL BE PLACED TO PRODUCE THE MAXIMUM LOAD EFFECTS AND SHALL NOT BE PLACED IN COMBINATION WITH THE PEDESTRIAN LOAD. THE DYNAMIC LOAD ALLOWANCE NEED NOT BE CONSIDERED FOR THIS LOADING. THE TRUCK SHALL BE AN H15 VEHICLE.

5.4 WIND LOAD (WS)

PEDESTRIAN BRIDGES SHALL BE DESIGNED FOR WIND LOADS AS SPECIFIED IN AASHTO SIGNS, ARTICLES 3.8 AND 3.9. THE LOADING SHALL BE APPLIED OVER THE EXPOSED AREA IN FRONT ELEVATIONS OF BOTH TRUSSES INCLUDING ALL ENCLOSURES.

IN ADDITION TO THE WIND LOAD SPECIFIED ABOVE, A VERTICAL UPLIFT LINE LOAD AS SPECIFIED IN AASHTO LRFD ARTICLE 3.8.2 AND DETERMINED AS THE FORCE CAUSED BY A PRESSURE OF 20 PSF OVER THE FULL DECK WIDTH, SHALL BE APPLIED CONCURRENTLY. THIS LOADING SHALL BE APPLIED AT THE WINDWARD QUARTER POINT OF THE DECK WIDTH.

5.5 SEISMIC (EQ)

THE BRIDGE STRUCTURE SHALL BE DESIGNED FOR SEISMIC LOADING AS SPECIFIED IN SECTION 3.10 OF AASHTO LRFD. THE TRANSVERSE LOADS SHALL BE CALCULATED CONSIDERING THE TRANSVERSE PERIOD OF THE BRIDGE AND LONGITUDINAL LOADS SHALL BE CALCULATED USING A PERIOD OF ZERO. A RESPONSE MODIFICATION FACTOR OF 0.8 SHALL BE USED FOR THE CALCULATION OF FORCES APPLIED TO THE BRIDGE ANCHORAGE. A RESPONSE MODIFICATION FACTOR OF 1.0 SHALL BE USED FOR THE CALCULATION OF BEARING REACTIONS. THE TRANSVERSE SEISMIC LOAD SHALL BE APPLIED TO ALL THE BEARINGS AND THE LONGITUDINAL SEISMIC LOAD SHALL BE APPLIED TO THE FIXED BEARINGS ONLY. THE VERTICAL BEARING REACTIONS SHALL BE CALCULATED USING AN OVERTURNING FORCE ON THE BRIDGE BASED ON THE CENTER OF GRAVITY OF THE BRIDGE TIMES THE TRANSVERSE SEISMIC LOAD.

5.6 FATIGUE LOAD (FL)

THE FATIGUE LOADING SHALL BE AS SPECIFIED IN SECTION 11 OF AASHTO SIGNS. THE NATURAL WIND GUST SPECIFIED IN ARTICLE 11.7.1.2 AND THE TRUCK-INDUCED GUST SPECIFIED IN ARTICLE 11.7.1.3 OF AASHTO SIGNS ONLY NEED ONLY BE CONSIDERED, AS APPROPRIATE.

5.7 COMBINATION OF LOADS

THE LOAD COMBINATIONS AND LOAD FACTORS TO BE USED SHALL BE AS SPECIFIED IN AASHTO LRFD TABLE 3.4.1-1, WITH THE FOLLOWING EXCEPTIONS:
- LOAD COMBINATIONS STRENGTH II, STRENGTH IV, AND STRENGTH V NEED NOT BE CONSIDERED.
- THE LOAD FACTOR FOR FATIGUE I LOAD COMBINATION SHALL BE TAKEN AS 1.0, AND FATIGUE II LOAD COMBINATION NEED NOT BE CONSIDERED.

6.0 STRUCTURAL DESIGN CRITERIA

STRUCTURAL DESIGN OF THE BRIDGE STRUCTURE SHALL BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF OHIO, WHO IS EXPERIENCED IN TRUSS BRIDGE DESIGN, AND DONE IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRATICES AND PRINCIPLES.

6.1 MODELING

THE BRIDGE SHALL BE MODELED AND ANALYZED UTILIZING A THREE-DIMENSIONAL COMPUTER SOFTWARE WHICH SHALL ACCOUNT FOR MOMENTS INDUCED IN MEMBERS DUE TO JOINT FIXITY WHERE APPLICABLE. MOMENTS DUE TO BOTH TRUSS DEFLECTION AND JOINT ECCENTRICITY MUST BE CONSIDERED. ALL LOADS LISTED IN SECTION 5 OF THESE SPECIFICATIONS SHALL BE APPLIED TO THE MODEL AND ANALYZED APPROPRIATELY.

6.2 LATERAL FRAME AND MEMBER DESIGN

THE BRIDGE SHALL BE DESIGNED AND PROPORTIONED SUCH THAT APPROPRIATE LATERAL STIFFNESS IS PROVIDED LOCALLY AND GLOBALLY, TO ENSURE THAT THE STRUCTURE IS STABLE.

SFN

DESIGN AGENCY



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DESIGNER	CHECKER
MRS	EDA

REVIEWER

BSM 08-04-25

PROJECT ID
114496

SUBSET	TOTAL
3	7

SHEET	TOTAL
P.100	104

FOR BRIDGES WITHOUT ANY OVERHEAD MEMBERS (HALF-THROUGH TRUSSES), THE VERTICAL TRUSS MEMBERS, THE FLOOR BEAMS AND THEIR CONNECTIONS SHALL BE PROPORTIONED TO RESIST A LATERAL FORCE APPLIED AT THE TOP OF THE TRUSS VERTICALS AT THE CENTER OF THE TOP CHORD. THIS LATERAL FORCE SHALL BE APPLIED AS AN ADDITIONAL LOAD TO THE TOP OF THE VERTICAL AT THE CENTER OF THE TOP CHORD, CREATING A CANTILEVER MOMENT, WHICH IS THEN ADDED TO THE FORCES OBTAINED FROM THE THREE-DIMENSIONAL MODEL. THE MAGNITUDE OF THIS LATERAL FORCE SHALL NOT BE LESS THAN 0.01/K TIMES THE AVERAGE FACTORED DESIGN COMPRESSIVE FORCE IN THE TWO ADJACENT TOP CHORD MEMBERS INCREASED BY A FACTOR OF SAFETY OF 1.33.

THE TOP CHORD SHALL BE ANALYZED AS A COLUMN WITH ELASTIC LATERAL SUPPORTS AT THE PANEL POINTS, CONSIDERING ALL MOMENTS DUE TO IN-PLANE AND OUT-OF-PLANE BENDING, ALONG WITH MOMENTS DUE TO ECCENTRICITIES OF THE MEMBERS.

THE U-FRAME STIFFNESS OF THE VERTICALS AND FLOOR BEAMS SHALL BE AS SPECIFIED IN AASHTO PED ARTICLE 7.1.2, ASSUMING THAT THE VERTICAL AND FLOOR BEAM CONNECTION IS RIGID. THIS MEANS THAT THE FOLLOWING MUST BE MET:

- ON H-SECTION FLOOR BEAM CONNECTIONS, THE FLOOR BEAM WIDTH SHALL BE AT LEAST 80% OF THE VERTICAL FACE WIDTH IN ORDER TO PREVENT ANY DEFORMATION DUE TO TUBE WALL PLASTIFICATION OF THE VERTICAL MEMBER FACES UNDER SERVICE LOADS. THE CONNECTION DESIGN WILL BE CHECKED AT STRENGTH I & STRENGTH III LOAD COMBINATIONS.
- ON UNDERHUNG FLOOR BEAM CONNECTIONS, THE VERTICAL WIDTH SHALL MATCH THE BOTTOM CHORD WIDTH IN ORDER TO TRANSFER VERTICAL MOMENTS THROUGH THE WALLS OF THE BOTTOM CHORD TO THE VERTICALS WITH NO DEFORMATION OF THE CHORD SIDE WALLS DUE TO SIDEWALL YIELDING OR CRIPPLING UNDER SERVICE LOADS. THE CONNECTION DESIGN WILL BE CHECKED AT STRENGTH I & STRENGTH III LOAD COMBINATIONS.
- THE VERTICAL AND FLOOR BEAM MEMBERS SHALL NOT BE CONNECTED TO FACES OF THE BOTTOM CHORD AT A 90-DEGREES TO ONE ANOTHER.
- ALL FIXED END MOMENTS IN THE FLOOR BEAMS AND VERTICALS DUE TO FLOOR BEAM ROTATIONS, IN ADDITION TO THE LOADS DERIVED FROM A U-FRAME ANALYSIS HAVE BEEN ACCOUNTED FOR IN THE STRENGTH DESIGN OF THE CONNECTIONS.

THE VERTICAL AND FLOOR BEAM MEMBERS SHALL BE PROPORTIONED SUCH THAT THE EFFECTIVE LENGTH FACTOR, K, USED IN THE DESIGN OF THE TOP CHORD SHALL NOT BE GREATER THAN 2.0.

THE END VERTICALS SHALL BE DESIGNED AS A SIMPLE CANTILEVER TO CARRY THE LOADS OBTAINED FROM THE THREE-DIMENSIONAL MODEL, PLUS THE CANTILEVER MOMENT DUE TO A LATERAL LOAD OF 0.01 TIMES THE AXIAL FORCE IN THE END VERTICAL, APPLIED Laterally AT THE TOP END OF THE END VERTICAL AT THE CENTER OF THE TOP CHORD.

THE FLOOR BEAMS SHALL BE SIZED FOR THE FORCES OBTAINED FROM A SIMPLE SPAN, PINNED END ANALYSIS, OR FROM THE FORCES OBTAINED FROM THE THREE-DIMENSIONAL MODEL, WHICHEVER CONTROLS.

THE DIAGONALS AND BRACE DIAGONALS SHALL BE ANALYZED AS PINNED-END CONNECTION MEMBERS.

INTERIOR VERTICALS SHALL BE ANALYZED AS PINNED-END CONNECTIONS UNLESS LONGITUDINAL FORCES ARE APPLIED TO THE VERTICALS SUCH AS WHEN THE BRACE DIAGONALS ARE CONNECTED TO FLOOR BEAMS ON AN H-SECTION FLOOR BEAM CONFIGURATION. WHEN LONGITUDINAL FORCES ARE APPLIED TO THE VERTICALS THEY SHALL BE ANALYZED AS FIXED-END CONNECTIONS.

ALL OTHER MEMBERS SHALL BE ANALYZED AS FIXED-END CONNECTIONS.

HSS MEMBER CONNECTIONS SHALL BE EVALUATED PER THE REQUIREMENTS OF AISC 360 CHAPTERS J & K.

6.3 DEFLECTIONS
THE VERTICAL DEFLECTION OF THE BRIDGE DUE TO THE UNFACTORED PEDESTRIAN LIVE LOADING SHALL NOT EXCEED 1/360 OF THE SPAN LENGTH.DEFLECTIONS
THE VERTICAL DEFLECTION OF THE BRIDGE DUE TO THE UNFACTORED PEDESTRIAN LIVE LOADING SHALL NOT EXCEED 1/360 OF THE SPAN LENGTH.

THE HORIZONTAL DEFLECTION OF THE BRIDGE UNDER UNFACTORED WIND LOADING SHALL NOT EXCEED 1/360 OF THE SPAN LENGTH.

6.4 FRACTURE CRITICAL MEMBERS (FCM)
ALL ITEMS DESIGNATED FCM ARE FRACTURE CRITICAL MEMBERS AND COMPONENTS AND SHALL BE FURNISHED AND FABRICATED ACCORDING TO THE REQUIRMENTS OF SECTION 12 OF THE AASHTO/AWS BRIDGE WELDING CODE D1.5. TUBULAR FCM AND CMONENTS SHALL BE FURNISHED AND FABRICATED ACCORDING TO THE REQUIREMENTS OF SECTION 8.2.3 - TUBULAR FRACTURE CRITICAL MEMBERS OF THE LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES.

6.5 VIBRATIONS
VIBRATION OF THE STRUCTURE SHALL NOT CAUSE DISCOMFORT OR CONCERN TO THE USERS OF THE BRIDGES. TO ASSURE THIS, THE FUNDAMENTAL FREQUENCY (F) OF THE PEDESTRIAN BRIDGE IN THE VERTICAL DIRECTION, WITHOUT LIVE LOAD, SHALL BE GREATER THAN 3.0 HERTZ (HZ) TO AVOID THE FIRST HARMONIC. THE FUNDAMENTAL FREQUENCY OF THE PEDESTRIAN BRIDGE IN THE LATERAL DIRECTION, SHALL BE GREATER THAN 1.3 HZ. IF THE FUNDAMENTAL FREQUENCY CANNOT SATISFY THESE LIMITATIONS, THEN THE BRIDGE SHOULD BE PROPORTIONED SUCH THAT EITHER OF THE FOLLOWING CRITERIA ARE SATISFIED:

$$F > 2.86 * LN(180/W) \text{ OR } W > 180 * E^{(-0.35 * F)}$$

WHERE W IS THE WEIGHT OF THE BRIDGE IN KIPS AND F IS THE FUNDAMENTAL FREQUENCY IN THE VERTICAL DIRECTION IN HZ.

FOR BRIDGES LONGER THAN 85 FT AND SHORTER THAN 125 FT THE VERTICAL AND HORIZONTAL VIBRATION MUST ALSO MEET THE REQUIREMENTS FOR BRIDGE CLASS III WITH A MEAN COMFORT LEVEL IN ACCORDANCE WITH SETRA.

7.0 DECK SYSTEM
7.1 DECK SYSTEM
DECK TO BE COMPRISED OF REINFORCED CONCRETE DESIGNED TO SPAN FROM FLOOR BEAM TO FLOOR BEAM.

REINFORCED CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (145 POUNDS PER CUBIC FOOT MAXIMUM) AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS, WITH AN AIR CONTENT OF 6% +/- 1.5%.

CONCRETE MIX DESIGN, MATERIALS, QUALITY, MIXING, PLACEMENT, FINISHING AND TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT C&MS 499 AND 511.

THE SURFACE OF DECK CONCRETE SHALL BE FINISHED WITH A SIDEWALK FINISH ODOT C&MS 511.18.

STAY-IN-PLACE GALVANIZED (G90 COATING) METAL FORM DECK SHALL BE USED AND SHALL BE DESIGNED TO SUPPORT THE WEIGHT OF THE WET CONCRETE PLUS A 20 POUNDS PER SQUARE FOOT CONSTRUCTION LOAD. FORM DECK SHALL BE SHOP ATTACHED TO FLOOR BEAMS VIA SELF-DRILLING FASTENERS, WELDING OR POWER ACTUATED FASTENERS. WELDING SHALL NOT BE USED ON PAINTED OR GALVANIZED BRIDGES. THE LONGITUDINAL SHEET LAPS SHALL BE ATTACHED WITH SELF-DRILLING SELF-TAPPING FASTENERS AT 36-INCH MAXIMUM SPACING. THE ATTACHMENT OF THE FORM DECK TO THE FLOOR BEAMS IS ONLY NECESSARY TO KEEP THE FORM DECK IN PLACE DURING TRANSPORTATION AND DURING THE CONCRETE PLACEMENT. THE FORM DECK IS NOT TO BE USED FOR DIAPHRAGM ACTION OR COMPOSITE ACTION AND PROVIDES NO STRUCTURAL BENEFIT TO THE TRUSS OR THE DECK AFTER THE CONCRETE IS SET. METAL FORM DECK PANELS SHALL BE OF A LENGTH TO SPAN A MINIMUM OF TWO BAYS OF THE TRUSS SUPPORTS. THE TOP OF DECK TO BOTTOM OF FORM DECK SHALL BE AS REQUIRED TO SUPPORT THE ANTICIPATED LOADS BUT SHALL NOT BE LESS THAN 5".

THE CONCRETE DECK SHALL BE DESIGNED TO SPAN LONGITUDINALLY FROM FLOOR BEAM TO FLOOR BEAM AND TO SUPPORT THE LOADS SPECIFIED IN SECTION 5.0 OF THESE SPECIFICATIONS.

- A DISTRIBUTION WIDTH OF DECK IS ALLOWED, TO SUPPORT THE ANTICIPATED VEHICLE WHEEL LOADS. THIS DISTRIBUTION WIDTH (E IN FEET) SHALL BE THE NARROWER OF THE FOLLOWING:
- * $E = 4 + .06S$
 - WHERE S IS THE FLOOR BEAM SPACING MINUS ONE-HALF OF THE FLOOR BEAM WIDTH.
 - * ONE-HALF OF THE TOTAL DRIVING WIDTH OF THE BRIDGE
 - * 0.75 TIMES THE LATERAL WHEEL SPACING OF THE VEHICLE.
 - * $0.6S + \text{WHEEL WIDTH}$
 - WHERE S IS THE FLOOR BEAM SPACING MINUS ONE-HALF OF THE FLOOR BEAM WIDTH.
 - THE WHEEL WIDTH (IN INCHES) IS $2.5 * \sqrt{(0.01 * P) / 2.5}$, WHERE P IS THE WHEEL LOAD IN POUNDS

REINFORCING SHALL BE ASTM A767, CLASS 1 OR ASTM 1094 GRADE 60 GALVANIZED REINFORCING STEEL AND SHALL MEET THE REQUIREMENTS OF ODOT CMS 709.16. ALL BAR BENDS, ANCHORAGE AND SPLICES SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATIONS. TOP REINFORCING SHALL HAVE A MINIMUM CLEARANCE OF 2" TO THE TOP OF DECK.

BRIDGE MANUFACTURER SHALL DESIGNATE THE ESTIMATED SLAB THICKNESS AND REINFORCING REQUIREMENTS AT TIME OF QUOTATION. THESE ESTIMATES ARE TO BE USED FOR QUOTING PURPOSES ONLY. ACTUAL QUANTITIES MAY VARY DURING THE FINAL DESIGN PROCESS, WITH COSTS VARIANCES DUE TO ANY CHANGES TO THE QUANTITIES BEING THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL SUPPLY ALL CONCRETE AND REINFORCING MATERIALS.

8.0 MATERIALS OF CONSTRUCTION
8.1 STRUCTURAL STEEL
ALL MEMBERS OF THE TRUSS AND DECK SUPPORT SYSTEM SHALL BE FABRICATED FROM SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SHAPES (HSS), WITH THE EXCEPTION THAT FLOOR BEAMS MAY BE WIDE FLANGE SHAPES. ALL OPEN ENDS OF END POSTS AND FLOOR SUPPORT BEAMS SHALL BE CAPPED. DRAIN HOLES SHALL BE PROVIDED FOR ALL SECTIONS AT THE LOW POINT OF THE MEMBER THAT MAY BECOME FILLED WITH WATER.

ALL BRIDGES SHALL BE FABRICATED USING A847 FOR HSS SECTIONS AND A588 FOR STRUCTURAL SHAPES AND PLATES.

MINIMUM NOMINAL THICKNESS OF PRIMARY HOLLOW STRUCTURAL SHAPES SHALL BE 1/4". ROLLED SHAPES SHALL HAVE A MINIMUM THICKNESS OF 1/4".

8.2 FASTENERS
STRUCTURAL BOLTS USED TO FIELD SPLICE OR CONNECT ALL MAIN MEMBERS SHALL BE ASTM F3125 GRADE A325. THE NUTS FOR THESE STRUCTURAL BOLTS SHALL BE ASTM A563. THE BRIDGE MANUFACTURER SHALL DETERMINE THE FINISH OF THE STRUCTURAL BOLTS. THEY WILL BE EITHER TYPE 3 (WEATHERING) OR TYPE 1 (HOT-DIPPED OR MECHANICALLY GALVANIZED) AS SPECIFIED BY THE BRIDGE MANUFACTURER.

SELF-DRILLING FASTENERS FOR ATTACHMENT OF THE FORM DECKING SHALL BE #14 X 1" ZINC PLATED HEX WASHER HEAD TEK SCREWS.

POWER ACTUATED FASTENERS SHALL BE HILTI SHEET METAL NAIL X-ENP-19 FASTENER.

OTHER MISCELLANEOUS FASTENERS SHALL BE ASTM A307 ZINC PLATED OR GALVANIZED, AS DETERMINED BY THE BRIDGE MANUFACTURER.

9.0 FINISH
FOR CORROSION RESISTANT HIGH-STRENGTH LOW-ALLOY (WEATHERING) STEEL NO SURFACE FINISH TREATMENT IS NECESSARY. ALL EXPOSED SURFACES OF STRUCTURAL STEEL TO BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATIONS NO. 6, SSPC-SP6 COMMERCIAL BLAST CLEANING. EXPOSED SURFACES OF STEEL SHALL BE DEFINED AS THOSE SURFACES SEEN FROM THE DECK OR FROM THE OUTSIDE AND BOTTOM OF THE STRUCTURE. ALL OTHER SURFACES TO HAVE STANDARD MILL FINISH. THE STEEL WILL BE ALLOWED TO FORM A PROTECTIVE WEATHERING PATINA OVER TIME.

10.0 ATTACHMENTS
10.1 SAFETY RAILS
SAFETY RAIL SYSTEM SHALL BE PLACED ON THE INSIDE OF THE STRUCTURE, SPACED SO AS TO PREVENT A 4" SPHERE FROM PASSING THROUGH THE SIDE TRUSS FOR THE FULL HEIGHT OF THE SIDE TRUSS, OR 48", WHICHEVER IS LESS. THE TOP OF THE TOP CHORD MAY BE CONSIDERED THE TOP OF THE RAIL SYSTEM.

RAIL SYSTEM SHALL CONSIST OF VERTICAL PICKETS IN BETWEEN HORIZONTAL TOP AND BOTTOM RAILS. VERTICAL PICKETS SHALL BE ½" ROUND BAR WELDED TO THE TOP AND BOTTOM RAIL. THE MAXIMUM UNSUPPORTED LENGTH SHALL BE 7'-0" IF PLACED ON THE INSIDE OF THE STRUCTURE AND 8'-0" IF PLACED ON THE OUTSIDE OF THE STRUCTURE. IF THE VERTICAL SPACING IS GREATER THAN THE MAXIMUM UNSUPPORTED LENGTH, MID-BAY SUPPORTS WILL BE REQUIRED. WHEN THE RAIL SYSTEM IS PLACED ON THE INSIDE OF THE STRUCTURE AND NOT COVERED BY THE END VERTICAL, THE ENDS OF THE HORIZONTAL RAILS NEAR THE END OF THE BRIDGE SHALL BE CAPPED AND GROUND SMOOTH. IF A TOE PLATE IS ALSO SPECIFIED, THEN THE BOTTOM HORIZONTAL RAIL MAY BE MODIFIED TO BE USED AS A STEEL TOE PLATE AS SPECIFIED. IF A RUB RAIL IS ALSO SPECIFIED, THEN THE TOP HORIZONTAL RAIL MAY BE MODIFIED TO 8" WIDE TO BE USED AS A STEEL RUB RAIL AS SPECIFIED.

EACH ELEMENT OF THE PEDESTRIAN RAIL SYSTEM SHALL BE DESIGNED TO THE STANDARDS SET FORTH IN SECTION 13.10 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS - 10TH EDITION FOR COMBINATION RAILINGS.

SFN

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CHECKER EDA

REVIEWER
BSM 08-04-25

PROJECT ID
114496

SUBSET 4
TOTAL 7

SHEET P.101
TOTAL 104

10.2 EXPANSION JOINT
THE GAP BETWEEN THE END OF THE BRIDGE DECK AND THE BACK WALL OF THE FOUNDATION SYSTEM SHALL BE SIZED TO ACCOMMODATE BRIDGE MOVEMENTS DUE TO THERMAL EXPANSION OF THE BRIDGE OVER THE DESIGN TEMPERATURE RANGE. THE GAPS AT THE PIER AND ABUTMENTS SHALL BE COVERED WITH A STEEL COVER WHICH ATTACHES TO THE BRIDGE AND EXTENDS OVER THE GAP AND ONTO THE ADJOINING DECK OR TOP OF THE FOUNDATION SYSTEM BACK WALL. THE STEEL COVER SHALL HAVE ITS EDGES ROUNDED OR BEVELED AT A 45- DEGREE ANGLE.

11.0 BEARINGS
11.1 BEARING TYPE
BEARING TYPE AND SIZE SHALL BE DESIGNED BY THE BRIDGE MANUFACTURER BASED ON ANTICIPATED LOADS AND MOVEMENTS.

11.2 DESIGN TEMPERATURE RANGE THE DESIGN TEMPERATURE RANGE WILL BE 150 DEGREES PER ODOT BDM S1003.21 WITH AN ASSUMED ERECTION TEMPERATURE OF 60 DEGREES.

11.3 NON-SHRINK GROUTING
THE BRIDGE WILL BE SUPPLIED WITH A LOWER SETTING PLATE. THIS SETTING PLATE SHALL BE LEVELED AND SHIMMED TO THE PROPER ELEVATION. THE SPACE BETWEEN THE LOWER SURFACE OF THE SETTING PLATE AND THE FOUNDATION SURFACE SHALL BE FILLED WITH A NON-SHRINK GROUT CAPABLE OF ACHIEVING A MINIMUM COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE STRENGTH OF THE FOUNDATION CONCRETE. THE COST OF THE LEVELING, SHIMMING, AND NON-SHRINK GROUT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

12.1 FOUNDATION SYSTEM
FOUNDATION SYSTEM SHALL UTILIZE ABUTMENTS DESIGNED BY THE FOUNDATION ENGINEER IN CONJUNCTION WITH THE BRIDGE BEARING REQUIREMENTS AND DIMENSIONS PROVIDED BY THE BRIDGE MANUFACTURER AND THE SITE-SPECIFIC GEOTECHNICAL INFORMATION PROVIDED BY THE GEOTECHNICAL ENGINEER. ALL ABUTMENT DIMENSIONS AND MATERIALS SHALL BE SHOWN ON THE FINAL CONTRACT PLANS.

12.2 ANCHOR BOLTS
BRIDGE MANUFACTURER SHALL DESIGN THE DIAMETER AND GRADE OF ANCHOR BOLTS, BASED ON THE SHEAR AND TENSILE STRENGTH OF THE ANCHOR BOLT MATERIAL ONLY. ALL DESIGN CONSIDERATIONS REGARDING CONCRETE BREAKOUT STRENGTH IN SHEAR AND TENSION, PULLOUT STRENGTH, CONCRETE SIDE-FACE

BLOWOUT STRENGTH, CONCRETE PRY OUT STRENGTH, EMBEDMENT DEPTH, TYPE OF ANCHORAGE OR ANY OTHER CONCRETE FAILURE MODES ARE THE RESPONSIBILITY OF THE FOUNDATION ENGINEER AND SHALL BE SHOWN ON THE FINAL CONTRACT PLANS. ALL ANCHOR BOLTS SHALL BE GALVANIZED. THE FOUNDATION ENGINEER SHALL DETERMINE IF THE ANCHOR BOLTS SHALL BE CAST-IN-PLACE, DRILLED/EPOXY, OR EXPANSION ANCHORS. ANCHOR BOLTS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.

13.0 FABRICATION
13.1 WELDING
WELDING PROCEDURES AND WELD QUALIFICATION TEST PROCEDURES SHALL CONFORM TO THE PROVISIONS OF AWS D1.1. FILLER METAL SHALL BE IN ACCORDANCE WITH THE APPLICABLE AWS FILLER METAL SPECIFICATION AND SHALL MATCH THE CORROSION PROPERTIES OF THE BASE METAL.

13.2 WELDERS
WELDERS SHALL BE QUALIFIED FOR EACH PROCESS AND POSITION USED WHILE FABRICATING THE BRIDGE. QUALIFICATION TESTS SHALL BE IN ACCORDANCE WITH AWS D1.1. ALL WELD QUALIFICATIONS AND RECORDS SHALL BE KEPT IN ACCORDANCE WITH THE FABRICATOR'S QUALITY ASSURANCE MANUAL WHICH HAS BEEN APPROVED AND AUDITED BY AISC AS THE BASIS FOR CERTIFICATION.

13.3 SHOP SPLICES
SHOP SPLICES FOR MAIN TRUSS MEMBERS SHALL BE FULL PENETRATION WELDS ALL AROUND THE PERIMETER OF THE MEMBER. THESE SHOP SPLICES SHALL BE PERFORMED USING A FULL PERIMETER BACKING PLATE. AFTER WELDING OF THE SHOP SPLICES, THE WELD SHALL BE GROUND SMOOTH TO MATCH THE PERIMETER OF THE MEMBER. GRINDING THESE WELDS SMOOTH IS REQUIRED AND WILL BE GROUNDS FOR REJECTION OF THE BRIDGE UPON DELIVERY IF NOT COMPLETED.

SHOP SPLICES FOR ALL HORIZONTAL RAIL COMPONENTS TO BE LOCATED AT THE CENTERLINE OF THE TRUSS VERTICALS, EACH END WELDED TO THE TRUSS VERTICAL AND SEAL WELDED TOGETHER. EXPOSED SURFACE OF THE SEAL WELDS AS SEEN FROM THE DECK SHALL BE GROUND SMOOTH.

SHOP SPLICED FOR ALL HORIZONTAL STRINGERS TO BE LOCATED AT THE CENTERLINE OF THE FLOOR BEAMS, EACH END WELDED TO THE FLOOR BEAM AND SEAL WELDED TOGETHER.

13.4 BOLTED SPLICES
FOR SHIPPING PURPOSES, THE BRIDGE MAY BE FABRICATED IN SECTIONS. SECTIONS SHALL BE FIELD ASSEMBLED USING BOLTED CONNECTIONS. NO FIELD WELDING OF MEMBERS SHALL BE ALLOWED.

THE CHORD MEMBERS OF THE BRIDGE SHALL BE BOLTED SUCH THAT AT LEAST TWO FACES OF THE MEMBER ARE BOLTED. THIS IS TO PROVIDE REASONABLE FORCE DISTRIBUTION AROUND THE PERIMETER OF THE MEMBER. BOLTED SPLICES SHALL BE DESIGNED AND FABRICATED SUCH THAT THE HEAD OF THE BOLT AND WASHER ARE THE ONLY ITEM EXPOSED. NO THROUGH-BOLTING OF THE MEMBER IS ALLOWED. THE NUTS OF THE FASTENER CANNOT BE WELDED TO THE INTERNAL SPLICE PLATE AND SHALL BE HELD IN PLATE WITH A NUT CAPTURE SYSTEM PER PATENT US 10,267,345 B2 OR EQUAL.

THE DIAGONALS AND BRACE DIAGONALS SHALL BE BOLTED UTILIZING A THROUGH-BOLT SYSTEM WITH PLATES ON THE EXTERIOR FACES OF THE MEMBERS. AN INTERNAL STIFFENING PLATE IS REQUIRED TO KEEP THE MEMBER FROM CRUSHING DURING THE BOLT TIGHTENING PROCESS.

ALL BOLTED CONNECTIONS ARE CONSIDERED TO BE PRETENSIONED OR SLIP-CRITICAL CONNECTIONS. ALL BOLTS ARE TO BE PRETENSIONED PER THE REQUIREMENTS OF SECTION 8.2 OF THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS. RECOMMENDED TIGHTENING METHOD OF ALL STRUCTURAL BOLTS SHALL BE TURN-OF-THE-NUT PRETENSIONING.

14.0 QUALITY CONTROL
14.1 AISC CERTIFICATION
THE BRIDGE SHALL BE FABRICATED IN A SHOP OWNED BY THE BRIDGE MANUFACTURER. THIS FACILITY SHALL HAVE UP TO DATE QUALITY CERTIFICATION BY AISC AS CERTIFIED BRIDGE FABRICATOR - ADVANCED (MAJOR) WITH FRACTURE CRITICAL ENDORSEMENT AND COMPLEX COATING ENDORSEMENT (P1- ENCLOSED OR P2-COVERED).

14.2 CERTIFIED WELD INSPECTOR
THE BRIDGE MANUFACTURER SHALL EMPLOY AT LEAST TWO CERTIFIED WELD INSPECTORS (CWI), WITH ENDORSEMENT BY AWS QC1. AT LEAST ONE CWI SHALL BE PRESENT DURING THE COMPLETE FABRICATION OF THE BRIDGE. THE CWI SHALL PROVIDE WRITTEN DOCUMENTATION THAT THE BRIDGE HAS BEEN FABRICATED IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE APPROVED DESIGN DRAWINGS.

14.3 DOCUMENTATION
MATERIAL CERTIFICATIONS SHALL BE AVAILABLE FOR REVIEW FOR ALL MATERIALS WITHIN THE BRIDGE. TRACEABILITY OF HEAT NUMBERS IS REQUIRED FOR ALL STRUCTURAL STEEL.

DOCUMENTATION SHOWING THE PERFORMANCE OF ALL CRITICAL QUALITY CHECKS SHALL ALSO BE MADE AVAILABLE FOR REVIEW BY THE ENGINEER OR OWNER.

14.4 NON-DESTRUCTIVE TESTING
ALL WELDS WITHIN THE STRUCTURE, SHALL BE VISUALLY INSPECTED FOR CONFORMANCE TO SIZE, UNDER CUT, PROFILE AND FINISH.

ALL SHOP SPLICES OF MAIN TRUSS MEMBERS SHALL BE MAGNETIC PARTICLE

15.0 DELIVERY AND ERECTION
15.1 DELIVERY
DELIVERY SHALL BE MADE VIA TRUCK TO A LOCATION NEAREST THE SITE WHICH IS ACCESSIBLE TO NORMAL OVER-THE-ROAD EQUIPMENT. ALL TRUCKS DELIVERING BRIDGE MATERIALS WILL NEED TO BE UNLOADED AT THE TIME OF ARRIVAL. IF THE ERECTION CONTRACTOR NEEDS SPECIAL DELIVERY OR DELIVERY IS RESTRICTED, THEY SHALL NOTIFY THE BRIDGE MANUFACTURER PRIOR TO BID DATE. THIS INCLUDES SITE ISSUES WHICH MAY PREVENT OVER-THE-ROAD EQUIPMENT FROM ACCESSING THE SITE. STEERABLE DOLLIES ARE NOT USED IN THE COST PROVIDED BY THE BRIDGE MANUFACTURER. DETERMINING THE LENGTH OF BRIDGE SECTION WHICH CAN BE DELIVERED IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMMUNICATED TO THE BRIDGE MANUFACTURER PRIOR TO THE BID DATE.

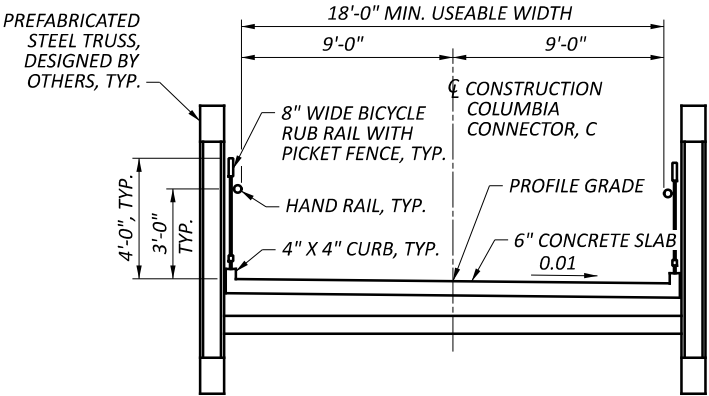
15.2 INSTALLATION & LIFTING PROCEDURES.
THE BRIDGE MANUFACTURER WILL PROVIDE STANDARD TYPICAL WRITTEN PROCEDURES FOR LIFTING AND SPLICING THE BRIDGE. ALL ACTUAL MEANS, METHODS, EQUIPMENT AND SEQUENCE OF ERECTION USED ARE THE RESPONSIBILITY OF THE CONTRACTOR.

16.0 WARRANTY
THE BRIDGE MANUFACTURER SHALL WARRANT, AT THE TIME OF DELIVERY, THAT IT HAS CONVEYED GOOD TITLE TO ITS STEEL STRUCTURE, FREE OF LIENS AND ENCUMBRANCES CREATED BY THE BRIDGE MANUFACTURER, AND THAT ITS STEEL STRUCTURE IS FREE OF DEFECTS IN DESIGN, MATERIAL AND WORKMANSHIP. THIS WARRANTY SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR FROM THE EARLIER DATE OF DELIVERY OR 60 DAYS AFTER FINAL FABRICATION IS COMPLETE. PAINT, GALVANIZING AND OTHER SPECIAL COATINGS, IF WARRANTED, SHALL BE WARRANTED BY THE COATING MANUFACTURER IN ACCORDANCE WITH THEIR WARRANTY PROVISIONS AND ARE NOT COVERED UNDER THE BRIDGE MANUFACTURER'S WARRANTY.

THIS WARRANTY SHALL NOT COVER DEFECTS IN THE STEEL STRUCTURE CAUSED BY ABUSE, MISUSE, OVERLOADING, ACCIDENT, IMPROPER INSTALLATION, MAINTENANCE, ALTERATION, OR ANY OTHER CAUSE NOT EXPRESSLY WARRANTED. THIS WARRANTY SHALL NOT COVER DAMAGE RESULTING FROM OR RELATING TO THE USE OF ANY KIND OF DE-ICING MATERIAL. THIS WARRANTY SHALL BE VOID UNLESS OWNER'S RECORDS ARE SUPPLIED THAT SHOW COMPLIANCE WITH THE MINIMUM GUIDELINES SPECIFIED IN THE IN THE BRIDGE MANUFACTURER'S INSPECTION AND MAINTENANCE PROCEDURES.

REPAIR, REPLACEMENT, OR ADJUSTMENT, IN BRIDGE MANUFACTURER'S SOLE DISCRETION, SHALL BE THE EXCLUSIVE REMEDY FOR ANY DEFECTS UNDER THIS WARRANTY. THIS WARRANTY SHALL EXCLUDE LIABILITY FOR ANY INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES.

17.0 PAYMENT
ITEM 530, SPECIAL - STRUCTURES, PREFABRICATED BRIDGE, WILL BE PAID FOR AT THE LUMP SUM CONTRACT UNIT PRICE. THIS WORK SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO DESIGN, FURNISH, UNLOAD, ERECT AND INSTALL THE ENTIRE SUPERSTRUCTURE WITH APPURTENANCES (INCLUDING, BUT NOT LIMITED TO: CONCRETE DECK, BEARINGS, RAILINGS AND JOINT PLATES)

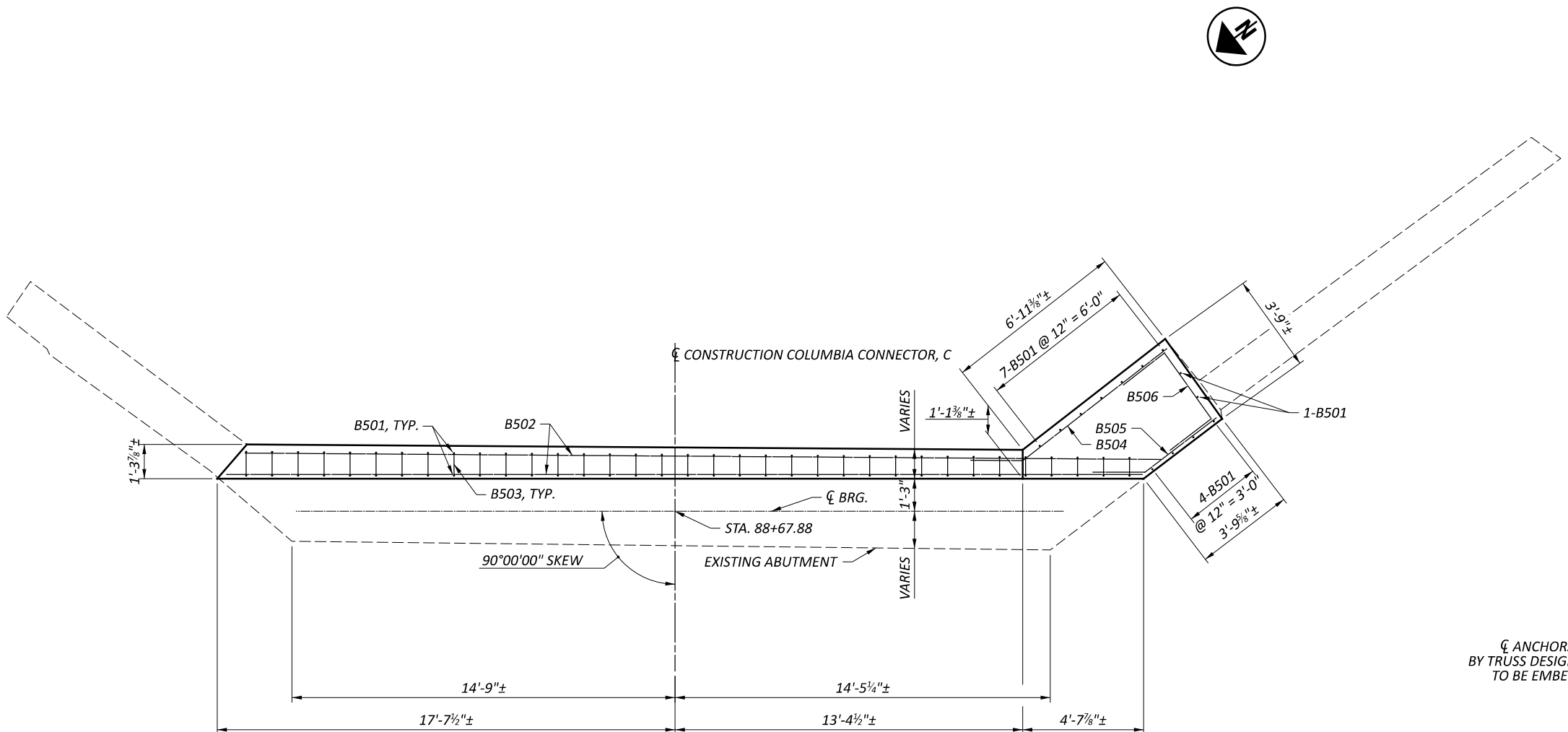


TYPICAL SECTION

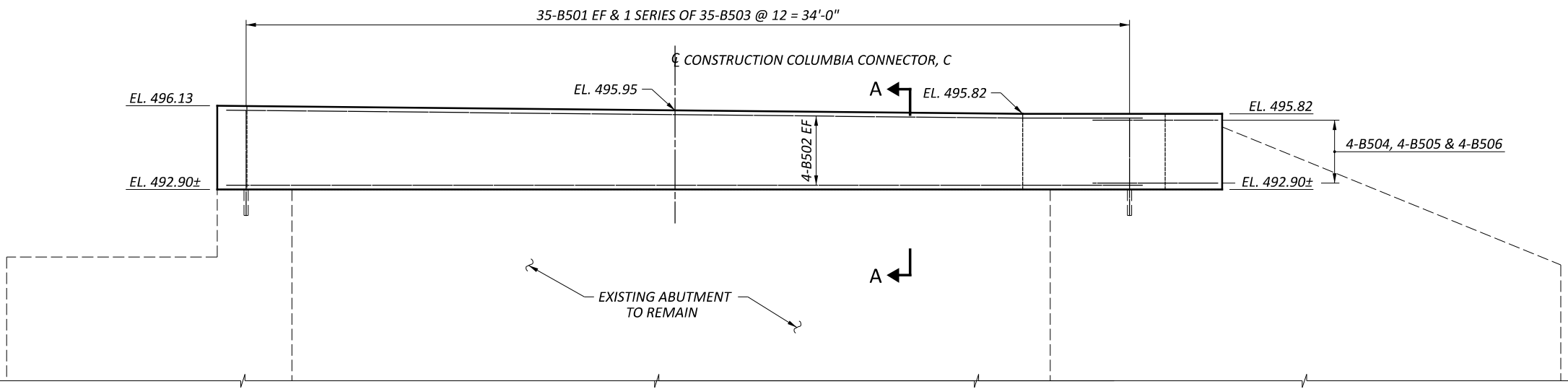
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- NOTES:
1. BRIDGE PROFILE BASED ON 3'-0" DIMENSION FROM PROFILE GRADE TO BEAM SEAT. ADJUST BRIDGE/TRAIL PROFILE AS NEEDED IF THE ACTUAL DIMENSION VARIES FROM THIS.
 2. STEEL SHIM PLATES SHALL BE PROVIDED BY THE TRUSS SUPPLIER AS NEEDED TO ACCOMMODATE NON-LEVEL BEAM SEATS. SHIMS SHALL NOT BE USED TO SET THE BRIDGE TO THE PROFILE SHOWN IN THE PLANS,

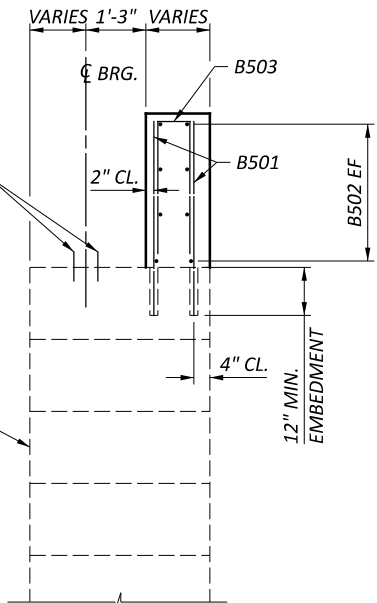


PLAN



ELEVATION

CL ANCHORS AS REQUIRED BY TRUSS DESIGNER. ANCHORS TO BE EMBEDDED 12" MIN.



SECTION A-A

- NOTES:
- BRIDGE PROFILE BASED ON 3'-0" DIMENSION FROM PROFILE GRADE TO BEAM SEAT. ADJUST BRIDGE/TRAIL PROFILE AS NEEDED IF THE ACTUAL DIMENSION VARIES FROM THIS.
 - STEEL SHIM PLATES SHALL BE PROVIDED BY THE TRUSS SUPPLIER AS NEEDED TO ACCOMMODATE NON-LEVEL BEAM SEATS. SHIMS SHALL NOT BE USED TO SET THE BRIDGE TO THE PROFILE SHOWN IN THE PLANS,

FORWARD ABUTMENT
HAM-COLUMBIA CONNECTOR
BRIDGE OVER WALTON CREEK

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REVIEWER	
BSM 08-04-25	
PROJECT ID	
114496	
SUBSET	TOTAL
7	7
SHEET	TOTAL
P.104	104