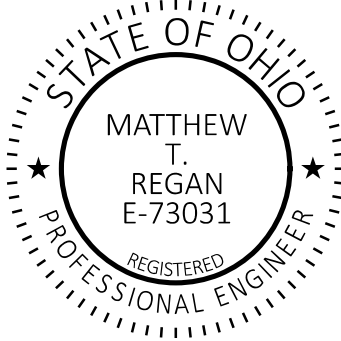
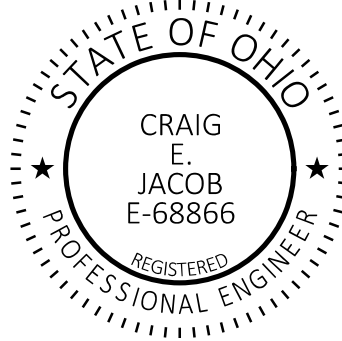
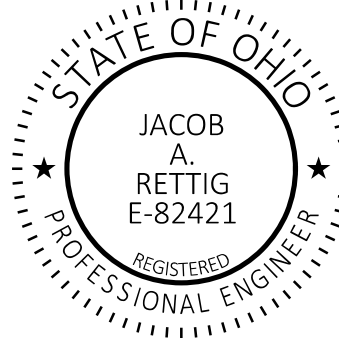
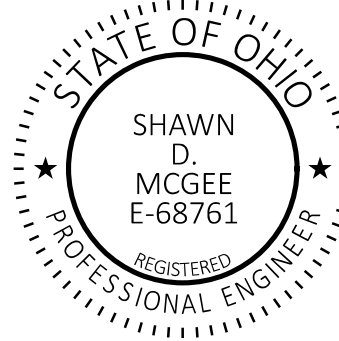


STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-1.1	7/28/00	RM-1.1	1/16/26	HL-30.22	1/17/25	TC-73.20	1/16/26	ITS-10.10	1/17/25	800	1/16/26	WATERWAY PERMIT 06/18/26
BP-2.1	1/21/22	RM-3.1	7/20/18	HL-30.31	7/18/25	TC-74.10	1/16/26	ITS-10.11	7/18/25	804	1/16/26	
BP-2.2	1/16/26	RM-4.1	1/17/20	HL-30.41	1/17/25	TC-83.20	1/16/26	ITS-11.10	1/17/25	807	1/17/25	ASBESTOS SURVEY CHARD PEDESTRIAN BRIDGE 08/27/21
BP-3.1	1/19/24	RM-4.2	1/16/26	HL-40.20	7/18/25	TC-85.10	1/16/26	ITS-12.10	1/16/26	808	7/19/24	
BP-3.2	1/18/19	RM-4.3	7/18/25	HL-50.11	1/16/15			ITS-12.11	1/16/26	809	1/16/26	ASBESTOS SURVEY MORGANA RUN BRIDGE 11/16/22
BP-4.1	7/19/13	RM-4.4	1/17/25	HL-50.21	1/16/26	MT-95.30	7/18/25	ITS-14.10	1/17/25	813	7/21/23	
BP-5.1	1/16/26	RM-4.5	1/16/26	HL-60.11	7/21/17	MT-95.31	7/18/25	ITS-14.11	1/16/26	821	4/20/12	ASBESTOS SURVEY RUFFINI COURT BRIDGE 11/16/22
BP-6.1	7/19/13	RM-4.6	7/18/25	HL-60.31	1/16/26	MT-95.40	7/18/25	ITS-14.50	7/18/25	825	7/19/24	
BP-7.1	1/16/26					MT-95.41	7/18/25	ITS-14.60	1/16/26	829	1/20/17	ASBESTOS SURVEY RETAINING WALLS 11/02/23
BP-8.2	1/18/19	I-2A	7/19/24	TC-12.31	1/16/26	MT-95.45	7/21/23	ITS-15.10	1/16/26	832	7/18/25	
BP-9.1	1/18/19	I-3B,3B1	1/17/25	TC-15.116	1/16/26	MT-95.50	7/21/17	ITS-15.11	1/16/26	836	1/19/24	
		I-3C,3C1	1/17/25	TC-21.11	1/16/26	MT-95.70	7/21/23	ITS-18.00	7/16/21	839	7/16/21	
CB-2-2B	7/19/24	I-3D	7/19/24	TC-21.21	7/18/25	MT-95.72	7/19/24	ITS-18.10	7/16/21	867	4/15/22	
CB-2-3,2-4	7/19/24			TC-21.50	1/16/26	MT-97.10	7/18/25	ITS-30.11	1/16/26	874	4/17/20	
CB-2-5,2-6	7/19/24	MH-3	7/19/24	TC-22.10	1/17/25	MT-98.10	1/17/20	ITS-30.12	1/16/26	875	1/17/25	
CB-3	1/16/26	MH-5	7/19/24	TC-22.20	7/18/25	MT-98.11	1/17/20	ITS-30.13	1/16/26	878	1/16/26	
CB-3A	1/16/26			TC-41.10	1/16/26	MT-98.20	4/19/19	ITS-50.10	1/16/26	895	4/18/14	
CB-5	7/19/24	DM-1.1	1/17/25	TC-41.20	10/18/13	MT-98.21	7/21/23	ITS-50.11	7/18/25	896	7/21/17	
CB-6	7/19/24	DM-1.2	1/17/25	TC-41.30	4/21/23	MT-98.22	1/17/20	ITS-50.12	7/19/24	904	7/15/22	
CB-8	7/19/24	DM-1.3	7/18/14	TC-41.40	1/16/26	MT-98.28	1/17/20			908	1/17/25	
		DM-2.1	1/18/13	TC-41.50	10/18/13	MT-98.29	1/17/20	AS-2-15	7/21/23	909	1/16/26	
F-1.1	7/18/25	DM-4.1	7/17/20	TC-42.10	10/18/13	MT-98.30	7/18/25	EXJ-6-17	1/19/24	913	4/16/21	
F-3.1	7/19/13	DM-4.2	7/20/12	TC-42.20	10/18/13	MT-99.20	4/19/19	HW-2.1	7/15/22	921	7/19/24	
F-3.3	7/19/13	DM-4.3	1/15/16	TC-51.11	7/18/25	MT-99.30	1/17/20	HW-2.2	7/20/18	929	7/21/23	
F-3.4	7/19/13	DM-4.4	1/15/16	TC-52.10	10/18/13	MT-99.50	7/18/25	PCB-91	7/17/20	939	1/17/20	
				TC-52.20	1/15/21	MT-99.60	7/19/24	SBR-1-20	7/19/24	996	7/21/23	
MGS-2.1	1/16/26	HL-10.11	1/16/26	TC-61.10	4/21/23	MT-100.00	1/19/24	VPF-1-24	7/17/26			
MGS-3.1	1/16/26	HL-10.12	1/16/26	TC-61.30	7/19/24	MT-101.60	1/17/25					
MGS-3.2	7/18/25	HL-10.13	1/20/23	TC-64.10	1/16/26	MT-101.70	7/19/24					
MGS-4.2	7/18/25	HL-20.11	1/16/26	TC-65.10	1/17/14	MT-101.75	7/21/23					
MGS-5.2	7/15/16	HL-20.13	7/18/25	TC-65.11	1/17/25	MT-101.80	1/17/20					
MGS-5.3	7/15/16	HL-30.11	1/16/26	TC-71.10	1/16/26	MT-101.90	7/17/20					
MGS-6.1	1/19/18	HL-30.21	4/17/20	TC-72.20	1/16/26	MT-102.10	7/21/23					
						MT-102.20	4/19/19					
						MT-102.30	10/16/15					
						MT-103.10	7/18/25					
						MT-104.10	1/19/24					
						MT-105.10	1/17/20					
						MT-110.10	7/19/13					

ROADWAY P.1-P.28, P.275-P.296, P.304-P.710, P.1178-1189		DRAINAGE P.297-P.303, P.711-832		SANITARY P.1015-P.1016		WATER P.1017-P.1032		RETAINING WALLS P.833-P.1014		TRAFFIC CONTROL P.1033-1096		GEOTECHNICAL P.1190-P.1274	
INTELLIGENT TRANSPORTATION SYSTEMS P.1097-P.1115		MAINTENANCE OF TRAFFIC P.29-P.274		LIGHTING P.1116-P.1139		STRUCTURES P.1140-P.1177		ENGINEER'S SEAL:		ENGINEER'S SEAL:		ENGINEER'S SEAL:	
ENGINEER'S SEAL:		ENGINEER'S SEAL:		ENGINEER'S SEAL:		ENGINEER'S SEAL:		ENGINEER'S SEAL:		ENGINEER'S SEAL:		ENGINEER'S SEAL:	
													
SIGNED: _____		SIGNED: _____		SIGNED: _____		SIGNED: _____		SIGNED: _____		SIGNED: _____		SIGNED: _____	

TITLE SHEET

DESIGN AGENCY



DESIGNER

NRE

REVIEWER

KKP 03/14/22

PROJECT ID

105743

SHEET

P.2

TOTAL

P.1274

GENERAL

ROUNDING

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

UTILITIES

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

AT&T
13630 LORAIN AVE. 2ND FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS
PHONE: 216-534-7285
EMAIL: PJ8191@ATT.COM

CLEVELAND PUBLIC POWER
1300 LAKESIDE AVE., ROOM 152
CLEVELAND, OHIO 44114
ATTN: CHRIS HIRZEL
PHONE: 216-563-7212
EMAIL: CHIRZEL@CPP.ORG

VILLAGE OF CUYAHOGA HEIGHTS
4863 EAST 71ST STREET
CUYAHOGA HEIGHTS, OHIO 44125
ATTN: TODD SCIANO,
VILLAGE ENGINEER
PHONE: (216) 642-1130, EXT. 123,
EMAIL: TSCIANO@DBOHNING.COM

CITY OF CLEVELAND -
DIVISION OF WATER
1201 LAKESIDE AVE.
CLEVELAND, OH 44114
ATTN: FRED ROBERTS
INSPECTION AND
ENFORCEMENT: 216-664-2342
EMERGENCY HOTLINE: 216-664-3060
EMAIL: FRED_ROBERTS
@CLEVELANDWATER.COM

UNITI (FORMERLY WINDSTREAM)
2165 STATE ROUTE 133
SOUTH BLANCHESTER,
OH 45107
ATTN: LEON TAYLOR
PHONE: 937-725-5358
EMAIL: LEON.TAYLOR
@UNITI.COM

NORTHEAST OHIO REGIONAL
SEWER DISTRICT
3900 EUCLID AVE.
CLEVELAND, OH 44115
ATTN: ROBERT STOERKEL
PHONE: 216-881-6600 x6802
EMAIL: STOERKELR@NEORS.D.ORG

CEI FIRST ENERGY
6896 MILLER RD., SUITE 101
BRECKSVILLE, OH 44141
ATTN: JOHN ZASSICK
PHONE: 440-546-8706
EMAIL: JIMZASSICK
@FIRSTENERGYCORP.COM

CHARTER COMMUNICATIONS
7820 DIVISION DR.
MENTOR, OH 44060
ATTN: EMIL SYMISTER
PHONE: 216-575-8016 x12165551158
EMAIL: EMIL.SYMISTER@CHARTER.COM

CEI FIRST ENERGY - TRANSMISSION
76 SOUTH MAIN STREET
AKRON, OH 44308,
A-GO-3
ATTN: ALAN D. SCHEMPP
RELOCATION FIRST CONTACT
PHONE: 330-384-5489
EMAIL: ASCHEMPP
@FIRSTENERGYCORP.COM

CITY OF CLEVELAND -
DIVISION OF WATER
POLLUTION CONTROL
12302 KIRBY AVE.
CLEVELAND, OHIO 44108
ATTN: ALAN SCHIELY
PHONE: 216-664-3638
EMAIL: ASCHIELY
@CLEVELANDWPC.COM

SUNOCO PIPELINE L.P.
525 FRITZTOWN RD.
SINKING SPRING, PA 19608
ATTN: DEB SCHNECK
PHONE: 610-670-3258
EMAIL: DEBRA.SCHNECK
@ENERGYTRANSFER.COM

BLUEBIRD (FORMERLY EVERSTREAM)
1228 EUCLID AVE., SUITE 250
CLEVELAND OHIO 44115
ATTN: GIO REILLO
PHONE: 216-905-0780
GIO.REILLO@BLUEBIRDFIBER.COM

ODOT - D12 TRAFFIC
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OH 44125

ENBRIDGE
320 SPRINGSIDE DR., SUITE 320
AKRON, OHIO 44333
ATTN: AARON CONNANT
PHONE: 330-801-1096
EMAIL: RELOCATION
@ENBRIDGE.COM

VILLAGE OF NEWBURGH HEIGHTS
ATTN: JAMES SICKELS, CITY ENGINEER
PHONE: 330-338-5349
EMAIL: JAMES.SICKELS
@OHM-ADVISORS.COM

CITY OF CLEVELAND -
DIVISION OF TRAFFIC ENGINEERING
601 LAKESIDE AVE., RM 25
CLEVELAND, OHIO 44114
ATTN: ROBERT MAVEC
PHONE: 216-857-7488
EMAIL: RMAVEC
@CITY.CLEVELAND.OH.US

DUCK CREEK ENERGY, INC.
7033 MILL RD.
BRECKSVILLE, OH 44141
ATTN: DAVID MANSBERY
PHONE: 440-668-9813
EMAIL: DMANSBERY@
DUCKCREEKENERGY.COM

CITY OF CLEVELAND -
DIVISION OF TRAFFIC ENGINEERING
601 LAKESIDE AVE., RM 25
CLEVELAND, OHIO 44114
ATTN: ROBERT MAVEC
PHONE: 216-857-7488
EMAIL: RMAVEC
@CITY.CLEVELAND.OH.US

ODOT OFFICE OF TSMO - ITS SECTION
1606 W BROAD ST
COLUMBUS, OH 43223
614-387-4113
CEN.ITS.LAB@DOT.OHIO.GOV

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.

EXISTING PLANS

EXISTING PLANS FOR THE PROJECT CORRIDOR MAY BE INSPECTED IN THE ODOT DISTRICT 12 OFFICE IN GARFIELD HEIGHTS, OHIO.

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, THE CONTRACTOR SHALL ABIDE BY ALL PROVISIONS REQUIRED IN THE LOCAL NOISE ORDINANCE VARIANCES. 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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.5 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: REFER TO SCHEMATIC PLAN P.3

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2012B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.999933365
ORIGIN OF COORDINATE SYSTEM: 0,0,0

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.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

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

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

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

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

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

CITY OF CLEVELAND PERMITS

IN THE CITY OF CLEVELAND, ALL STREET PERMITS MUST BE OBTAINED FROM THE DIVISION OF ASSESSMENTS AND LICENSES PRIOR TO BEGINNING ANY WORK. STREET PERMITS INCLUDE BUT ARE NOT LIMITED TO STREET OPENING PERMITS, OVERLOAD PERMITS, OBSTRUCTION PERMITS, AND OR SIDEWALK PERMITS, AND MAY BE OBTAINED THROUGH THE FOLLOWING CONTACT:

CITY OF CLEVELAND
DEPARTMENT OF FINANCE
DIVISION OF ASSESSMENTS AND LICENSES
601 LAKESIDE AVENUE, ROOM 122
CLEVELAND, OHIO 44114
PHONE: (216) 664-2260 / (216) 664-2174
FAX: (216) 664-4592
E-MAIL: DALPERMITS@CLEVELANDOHIO.GOV

NO PERMIT FEES WILL BE ASSESSED TO ODOT PROJECTS. ANY REFERENCE TO "CONTRACTOR" IN THE PERMIT APPLICATION SHALL INCLUDE "ON BEHALF OF ODOT"

DAL HAS ASSIGNED STP NUMBER STP26-00958 TO THIS PROJECT. THE CONTRACTOR SHALL CONTACT DAL AS DESCRIBED ABOVE USING THE GIVEN STP NUMBER FOR REFERENCE.

THE CONTRACTOR SHALL COMPLY WITH ALL OTHER CITY OF CLEVELAND ORDINANCES INCLUDING BUT NOT LIMITED TO REGISTRATION REQUIREMENTS. ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR PERTINENT WORK ITEMS.

ENBRIDGE - PIPELINE PROTECTION

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

DEO = THE EAST OHIO GAS COMPANY
DBA ENBRIDGE, 1-800-362-7557

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEETS NO. RW.8-RW.9.

ITEM 206- MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOIL

THE FOLLOWING QUANTITY IS PROVIDED TO ADDRESS LOCATIONS REQUIRING CHEMICALLY STABILIZED SOIL.

ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOIL LUMP SUM

FIRST ENERGY TRANSMISSION FACILITIES

MULTIPLE 138,000 VOLTS NOMINAL (144,900 VOLTS MAXIMUM) FIRST ENERGY TRANSMISSION FACILITIES ARE LOCATED WITHIN THE PROJECT AREA. THERE IS AN OVERHEAD CROSSING (JUNIPER-JENNINGS 138 KV Q-16) BETWEEN GRANT AVE. AND HARVARD AVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THERE IS NO OVERNIGHT PARKING OR STOCKPILING OF MATERIALS AND DEBRIS WITHIN THE FE/CEI RIGHT OF WAY.

IF ANY REVISIONS TO THE SUBMITTED PLANS OR CHANGES DURING CONSTRUCTION OCCUR WITHIN THE TRANSMISSION RIGHT-OF-WAY, WORK SHALL CEASE, AND REVISIONS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL. IT IS RECOMMENDED THAT HIGH VOLTAGE SIGNS BE USED TO WARN WORKERS OF THE PRESENCE OF OVERHEAD CONDUCTORS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KNOW AND MAINTAIN ALL OSHA REQUIRED CLEARANCES WHEN WORKING NEAR OVERHEAD WIRES. THE SAG IN WIRES MAY BE GREATER AT CERTAIN TIMES OF YEAR DEPENDING ON TEMPERATURE. THE OVERHEAD WIRES SHOULD BE CONSIDERED ENERGIZED AT ALL TIMES.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 46 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
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 RD.
COLUMBUS, OHIO 43235
OHIO.AIRPORT.PROTECTION
@DOT.OHIO.GOV

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.

FENCE REMOVAL AND REPLACEMENT

THE PROJECT IS PERFORMING GLOBAL REPLACEMENT OF THE LIMITED ACCESS RIGHT OF WAY (L/A) FENCING. UNLESS OTHERWISE INDICATED ON THE PLANS THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING L/A FENCING. THE CONSTRUCTION LIMITS SHOWN ON THE PROJECT PLANS ARE BASED ON GRADING AND OTHER PHYSICAL CONSTRUCTION ACTIVITIES INDEPENDENT OF FENCE REPLACEMENT ACTIVITIES. FOR FENCE REPLACEMENT ACTIVITIES OUTSIDE OF THE CONSTRUCTION LIMITS THE CONTRACTOR SHALL LIMIT TREE CUTTING AND EARTH DISTURBING ACTIVITIES TO A MAXIMUM WIDTH OF 10', OR AS NECESSARY TO ACCESS THE FENCE, AS APPROVED BY THE ENGINEER. AT THESE LOCATIONS THE PLAN INTENT IS TO REPLACE THE L/A FENCE AT THE EXISTING FENCE LOCATIONS. ALL FENCE REPLACEMENT AND CLEARING ACTIVITIES SHALL OCCUR WITHIN THE EXISTING L/A RIGHT OF WAY OR ADJACENT MUNICIPAL RIGHT OF WAYS.

SUBGRADE IMPROVEMENTS NEAR EXISTING UTILITIES

IN AREAS OF PROPOSED SUBGRADE IMPROVEMENTS THE CONTRACTOR SHALL VERIFY THE DEPTH OF ALL EXISTING UNDERGROUND UTILITIES AND SEWERS PRESENT TO ENSURE NO IMPACTS OR DAMAGE DURING CONSTRUCTION. IF UTILITIES ARE PRESENT IN THE STABILIZATION AREAS THEY SHALL BE MARKED AND CARE TAKEN TO WORK AROUND THEM AND COMPLETE THE WORK TO THE SATISFACTION OF THE ENGINEER.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

ITEM 202 - STRUCTURE REMOVED, AS PER PLAN

UNLESS OTHERWISE INDICATED IN THE PLANS, EXISTING RETAINING WALL REMOVALS SHALL BE PERFORMED TO THE EXTENT NECESSARY TO COMPLETE PROJECT WORK AND IN ACCORDANCE WITH CMS 202.03 EXCEPT WHERE THE EXISTING RETAINING WALLS WILL BE LOCATED UNDER PROPOSED PAVEMENTS, WHERE THE EXISTING WALLS SHALL BE REMOVED TO A MINIMUM DEPTH OF 3' BELOW SUBGRADE ELEVATION, OR DEEPER, AS REQUIRED TO COMPELTE PROJECT WORK. FULL REMOVAL OF RETAINING WALL STRUCTURES IS NOT ANTICIPATED AT EACH LOCATION.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK:

RAMP C1: ITEM 202 - STRUCTURE REMOVED, AS PER PLAN A LUMP SUM
RAMP C2: ITEM 202 - STRUCTURE REMOVED, AS PER PLAN B LUMP SUM
RAMP C3: ITEM 202 - STRUCTURE REMOVED, AS PER PLAN C LUMP SUM
CHARD AVE.: ITEM 202 - STRUCTURE REMOVED, AS PER PLAN D LUMP SUM

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.

DESIGN AGENCY



DESIGNER

EAP

REVIEWER

KKP 02/15/22

PROJECT ID

105743

SHEET

P.25

TOTAL

P.1274

ROADWAY (CONT.)

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE MASH 2016 TYPE E TANGENTIAL END TREATMENTS FOR TYPE MGS GUARDRAIL AS LISTED UNDER "PRODUCTS ACCEPTED FOR NEW INSTALLATIONS" ON THE ROADWAY APPROVED PRODUCTS LIST POSTED ON ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH SOLID FLUORESCENT YELLOW REBOUNDABLE RETROREFLECTIVE SHEETING, PER CMS 730.191.

WHEN THE FACE OF THE ADJACENT (ATTACHED) GUARDRAIL IS LESS THAN 4' OFFSET FROM THE PROPOSED EDGE LINE, AND PERMITTING SITE CONDITIONS EXIST: THE PROPOSED TYPE E ANCHOR ASSEMBLY SHALL BE INSTALLED AT A CONSISTENT FLARE RATE THROUGH THE FULL LENGTH OF THE SYSTEM. THE FLARE RATE SHALL BE A MAXIMUM OF 25:1 (RESULTING IN A 2' OFFSET). THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE SHOP DRAWINGS, PRODUCT INSTALLATION MANUAL/GUIDANCE, AND AS DIRECTED BY THE ENGINEER.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2 UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE MASH 2016 TYPE 2 IMPACT ATTENUATORS AS LISTED UNDER "PRODUCTS ACCEPTED FOR NEW, PERMANENT INSTALLATIONS" ON THE ROADWAY APPROVED PRODUCTS LIST POSTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS).

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2 [(SPEED (IN MPH), HAZARD WIDTH (IN INCHES)), (UNIDIRECTIONAL)], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 607 – FENCE, TYPE CLT, AS PER PLAN A

THIS ITEM SHALL CONSIST OF CONSTRUCTING CHAIN LINK FENCE IN ACCORDANCE WITH CMS ITEM 607 AND STANDARD CONSTRUCTION DRAWING F-1.1 WITH THE FOLLOWING MODIFICATIONS:

1. FENCE HEIGHT SHALL BE INCREASED FROM 60" TO 96"
2. TENSION WIRE SHALL BE OMITTED
3. LINE POSTS SHALL BE CONSTRUCTED AT 8' MAXIMUM SPACING AND SHALL BE: GRADE 2, 2.875" O.D. 0.203" WALL THICKNESS, 50,000 PSI YIELD STRENGTH. LINE POSTS SHALL BE EMBEDDED 36" BELOW GROUND.
4. END AND CORNER POSTS SHALL BE: GRADE 2, 4.0" O.D. 0.226" WALL THICKNESS, 50,000 PSI YIELD STRENGTH. END AND CORNER POSTS SHALL BE EMBEDDED 42" BELOW GROUND.
5. 1.66" O.D. GALVANIZED STEEP PIPE, ASTM F1083 RAILS SHALL BE CONSTRUCTED AT THE TOP AND BOTTOM OF EACH FENCE PANEL
6. ALL FENCE POSTS SHALL BE ENCASED IN CONCRETE. LINE POST ENCASEMENT SHALL BE 12" DIAMETER, 36" DEEP. END AND CORNER POST ENCASEMENT SHALL BE 18" DIAMETER, 42" DEEP.

ITEMS 607 – FENCE, TYPE CLT, AS PER PLAN B

THIS ITEM SHALL CONSIST OF CONSTRUCTING CHAIN LINK FENCE IN ACCORDANCE WITH CMS ITEM 607, STANDARD CONSTRUCTION DRAWING F-1.1 AND WITH THE FOLLOWING MODIFICATIONS:

1. FENCE HEIGHT SHALL BE INCREASED FROM 60" TO 72"
2. FENCE SHALL BE TOPPED WITH THREE STRANDS OF BARBED WIRE ATTACHED TO 12" TALL ANGLED ARM EXTENSIONS
3. FENCE POSTS, HARDWARE AND VINYL-COATED CHAIN LINK FABRIC SHALL BE MEDIUM GREEN COLOR.
4. LINE POSTS SHALL BE: GRADE 2, 2.375" O.D., 0.154" WALL THICKNESS, 50,000 PSI YIELD STRENGTH. LINE POSTS SHALL BE EMBEDDED 36" BELOW GROUND.
5. END AND CORNER POSTS SHALL BE: GRADE 2, 2.875" O.D., 0.203" WALL THICKNESS, 50,000 PSI YIELD STRENGTH. END AND CORNER POSTS SHALL BE EMBEDDED 48" BELOW GROUND.
6. ALL FENCE POSTS SHALL BE ENCASED IN CONCRETE. LINE POST ENCASEMENT SHALL BE 12" DIAMETER, 42" DEEP. END AND CORNER POST ENCASEMENT SHALL BE 15" DIAMETER, 54" DEEP.
7. SEE "ROW FENCE DETAIL", SHEETS P.1178-P.1189 FOR ADDITIONAL DETAILS.

ITEM 607 – FENCE, TYPE CLT, AS PER PLAN C

THIS ITEM CONSISTS OF INSTALLING TYPE CLT RIGHT-OF-WAY FENCE ON RETAINING WALLS AT THE LOCATIONS SPECIFIED IN THE PLANS. ALL WORK SHALL BE AS PER THE DETAILS IN THE PLANS, THE APPLICABLE PORTIONS OF STANDARD DRAWINGS F-1.1 AND TVPF-1-18, AND THE MANUFACTURER'S RECOMMENDATIONS.

INSTALL TYPE CLT FENCE IN ACCORDANCE WITH STANDARD DRAWING F-1.1 WITH ALL END POSTS AND LINE POSTS SIZED FOR INSTALLATION IN TOP-MOUNTED BASE PLATES WITH POST SLEEVES. FABRICATE AND INSTALL TOP-MOUNTED BASE PLATES WITH POST SLEEVES IN ACCORDANCE WITH STANDARD DRAWING TVPF-1-18 WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

- THE 1/2" DIAMETER HIGH STRENGTH THREADED ANCHORS AND NUTS SHALL MEET THE MATERIAL REQUIREMENTS SPECIFIED IN THE STANDARD DRAWING FOR ADHESIVE CONCRETE ANCHORS BUT SHALL BE CAST IN PLACE WITH A 7" MINIMUM EMBEDMENT LENGTH. HEADED HIGH-STRENGTH BOLTS WITH A 2" MINIMUM THREADED LENGTH AND A 7" MINIMUM EMBEDMENT LENGTH MAY BE USED INSTEAD OF 9" LONG HIGH-STRENGTH THREADED ROD.

- THE HOLES IN THE 1" THICK BASE PLATES FOR 1/2" DIAMETER HIGH STRENGTH THREADED ANCHORS SHALL BE UPSIZED FROM 11/16" DIAMETER TO 5/8" DIAMETER.

- TEMPLATES SHALL BE USED TO ACCURATELY SET THE ANCHORS IN THE PROPOSED RETAINING WALL CAP AND MAINTAIN THEIR POSITION DURING CONCRETE PLACEMENT.

PAYMENT FOR THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 607 – FENCE, TYPE CLT, AS PER PLAN C WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 622 - BARRIER, MISC: CONCRETE BARRIER END SECTION, TYPE C

BARRIER, MISC: CONCRETE BARRIER END SECTION, TYPE C SHALL FOLLOW THE STANDARD CONSTRUCTION DRAWING RM-4.6 (TYPE B1) BUT SHALL TRANSITION FROM 66" RATHER THAN 57".

THE REINFORCING STEEL SHALL BE MODIFIED TO ACCOUNT FOR THE ADDITIONAL BARRIER HEIGHT. HORIZONTAL BAR SPACING SHALL BE ADJUSTED WITHIN THE TRANSITION AREAS AND VERTICAL REINFORCEMENT LENGTHS EXTENDED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILING THE BARRIER TRANSITIONS AND REINFORCEMENT LAYOUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING REINFORCEMENT.

ITEM 623 - MONUMENT MISC: MONUMENT REFERENCING

THE CONTRACTOR SHALL LOCATE AND REFERENCE ALL EXISTING ROADWAY AND/OR CENTERLINE MONUMENTS WITHIN THE LIMITS OF THE PROPOSED WORK FOR THE PURPOSES OF RESETTING/REESTABLISHING THEIR EXACT LOCATION IN THE EVENT THEY ARE DISPLACED OR DAMAGED DURING CONSTRUCTION. ALL WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A LICENSED SURVEYOR PROVIDED BY THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO THE START OF ANY PROXIMATE GRADING, PAVING OR OPERATIONS THAT COULD DISTURB THE MONUMENTS. CARE AND PROTECTIVE MEASURES SHALL BE EMPLOYED BY THE CONTRACTOR TO PRESERVE EXISTING MONUMENTS.

UPON LOCATING THE EXISTING MONUMENTS, THE MONUMENT IRON PINS OR DRILL HOLES IN STONE (IF MONUMENT BOX IS EMPTY, NOTIFY CITY OF CLEVELAND IMMEDIATELY) SHALL BE CAREFULLY EXPOSED AND REFERENCED TO NO LESS THAN THREE (3) PERMANENT OBJECTS. ANY EXISTING MONUMENTS THAT MIGHT REQUIRE REPLACEMENT SHALL BE NOTED. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL DELIVER A COPY OF ALL SURVEY AND REFERENCE NOTES TO THE ENGINEER AND TO THE CHIEF SURVEYOR AT THE CITY OF CLEVELAND, DIVISION OF ENGINEERING AND CONSTRUCTION, 601 LAKESIDE AVENUE ROOM 518, CLEVELAND, OH 44114, ATTN GREG ESBER AT (216) 664-2460, GESBER@CITY.CLEVELAND.OH.US.

ITEM 623 - MONUMENT MISC: MONUMENT REFERENCING (CONT.)

ADJUSTMENTS OR REPLACEMENTS OF MONUMENT BOXES OR ASSEMBLIES MAY NOT COMMENCE UNTIL THE REFERENCES HAVE BEEN CHECKED/VERIFIED AND APPROVED BY THE ENGINEER. THE REFERENCES SHALL MEET THE FOLLOWING REQUIREMENTS:

- CONSIST OF DURABLE POINTS OUTSIDE OF THE CONSTRUCTION LIMITS SUCH AS PK OR MAG NAILS IN POLES OR PAVEMENT, DRILL HOLES, IRON PINS, SPECIFICALLY DEFINED BUILDING CORNERS, ETC.
- SPECIFICALLY DEFINED AND LOCATABLE TO WITHIN 0.01 FEET.
- TIED TO EXISTING MONUMENT TO WITHIN 0.01 FEET. ERROR IS NOT TO EXCEED THIS AMOUNT.
- A MINIMUM OF THREE POINTS PER MONUMENT REFERENCED.
- LOCATED 100 FEET OR LESS FROM MONUMENT, SUCH THAT A STEEL TAPE COULD BE USED TO RE-ESTABLISH POSITION.

THE PER EACH UNIT PRICE PAYMENT FOR THIS WORK SHALL INCLUDE LOCATING THE MONUMENTS, CAREFULLY CLEANING OUT THE MONUMENT BOXES AND/OR EXPOSING THE MONUMENT PINS/POINTS, REFERENCING THE MONUMENTS AND ALL RELATED NOTATION. THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED IN THE GENERAL SUMMARY FOR ALL MONUMENTS KNOWN TO EXIST OR INITIALLY FOUND/ENCOUNTERED WITHIN THE WORK LIMITS:

ITEM 623 MONUMENT MISC: MONUMENT REFERENCING 8 EACH

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

AFTER COMPLETION OF ALL WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING AND NEW BRIDGES WITHIN THE PROJECT LIMITS. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG EACH FASCIA BEAM AT THE EDGE OF SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM SHALL BE USED, WHERE APPLICABLE, TO DOCUMENT THE MEASUREMENTS. WHERE THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM IS NOT APPLICABLE, THE MEASUREMENTS SHALL BE DOCUMENTED ON A CONTRACTOR-DEVELOPED FORM THAT CLOSELY RESEMBLES THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM AND ACCURATELY DEPICTS THE BRIDGE AND THE LANE AND SHOULDER CONFIGURATION OF THE ROADWAY THAT PASSES BELOW THE BRIDGE. THE COMPLETED FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS AND SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM CAN BE DOWNLOADED FROM THE FOLLOWING FTP SITE:
FTP://FTP.DOT.STATE.OH.US/PUB/CONTRACTS/ATTACH/CUY-105743

ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN

WHERE DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE THE EXISTING MONUMENT ASSEMBLY AND REPLACE IT WITH A CITY OF CLEVELAND MONUMENT ASSEMBLY AS DETAILED ON THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING MB-1C. THE WORK SHALL INCLUDE FURNISHING AND INSTALLING ONE (1) ONE INCH (1") DIAMETER EPOXY STEEL DEFORMED REINFORCING BAR THIRTY-SIX INCHES (36") LONG, FLAT ON TOP WITH A ROUND POINTED END.

THE CONTRACTOR SHALL HIRE COMPETENT PERSONNEL AND USE SUITABLE EQUIPMENT FOR THE WORK TO BE PERFORMED UNDER DIRECT SUPERVISION OF A PROFESSIONAL SURVEYOR, LICENSED AND REGISTERED TO PRACTICE IN THE STATE OF OHIO.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 623 MONUMENT ASSEMBLY, AS PER PLAN 8 EACH

MEDIAN BARRIER REMOVAL

REMOVAL OF PLASTIC MEDIAN HEADLIGHT DEFLECTOR SHIELDS SHALL BE CONSIDERED INCIDENTAL TO ITEM 202 - CONCRETE BARRIER REMOVED. NO SEPARATE PAYMENT SHALL BE MADE.

EROSION CONTROL

SEEDING AND MULCHING

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

ITEM 659, SOIL ANALYSIS TEST	2 EACH
ITEM 659, TOPSOIL	15047 CY
ITEM 659, REPAIR SEEDING AND MULCHING	6778 SY
ITEM 659, INTER-SEEDING	6778 SY
ITEM 659, COMMERCIAL FERTILIZER	18.90 TON
ITEM 659, LIME	28.01 ACRES
ITEM 659, WATER	750 M. GAL.
ITEM 659, MOWING	305 M. SF

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.

PAVEMENT

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO AND TIED TO EXISTING CONCRETE, THE CONTRACTION JOINT SPACING REQUIRED IN STANDARD CONSTRUCTION DRAWING BP-2.2 WILL BE WAIVED. CONSTRUCT CONTRACTION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL CONTRACTION JOINTS IN THE EXISTING CONCRETE PAVEMENT. INSTALL EXPANSION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL EXPANSION JOINTS IN THE EXISTING CONCRETE PAVEMENT.

ITEM 302 - ASPHALT CONCRETE BASE, AS PER PLAN, 25.0 MM GYRATORY MIX

MIX DESIGN - FOLLOW THE REQUIREMENTS OF 302.02 EXCEPT AS MODIFIED BELOW:

THE TSR TEST PER SUPPLEMENT 1051 IS REQUIRED AND THE MINIMUM TSR IS 0.80 FOLLOWING THE 150 MM GYRATORY COMPACTED SPECIMEN PROCEDURE. USE ANTISTRIP ADDITIVE AS SPECIFIED IN 440.06.

USE 150 MM DIAMETER SUPERPAVE GYRATORY COMPACTOR MOLDS. FILL MOLDS DURING COMPACTION IN ONE LIFT AND NOT TWO AS YOU WOULD DO WITH 302 MIXES. DO NOT SPADE. VOLUMETRIC PILL HEIGHTS OF 110 TO 120 MM. USE A PILL HEIGHT OF 95 MM FOR STABILITY AND FLOW AND CONVERT, IF NEEDED, USING TABLE 302-02-2.

REPLACE TABLE 302-02-1 WITH THE FOLLOWING:

TABLE 302.02-1 MIX COMPOSITION

PROPERTY	LIMITS
1 1/2 INCH (37.5 MM)[1]	100
1 INCH (25.0 MM)[1]	90 TO 100
3/4 INCH (19.0 MM) [1][2]	90 MAX
1/2 INCH (12.5 MM)[1][2]	
3/8 INCH (9.5 MM)[1] [2]	
NO. 8 (2.36 MM)[1]	19 TO 45
NO. 200 (75 µM) [1]	1 TO 7
ASPHALT BINDER [3]	4.1 5.5 [4]
DESIGN GYRATIONS [5]	50
STABILITY, LB [6] (N)	3000 (13,345) [MIN]
FLOW, 0.25 MM [6]	28 [MAX]
DESIGN AIR VOIDS [7]	3.5
F/A, MAX. [8]	1.2
VMA, MIN. [9]	12.0
CTINDEX, MIN. [10]	60

- [1] SIEVE, PERCENT PASSING
- [2] PROVIDE AGGREGATE TO RETAIN A MINIMUM OF 7 PERCENT OF THE MATERIAL ON EACH OF THESE SIEVES. THIS REQUIREMENT APPLIES TO THE GRADATION OF THE IMF ONLY.
- [3] PERCENT OF TOTAL MIX. MINIMUM VIRGIN ASPHALT BINDER CONTENT IS 2.2% FOR METHOD 1 AND 2.0% FOR METHOD 2.
- [4] PERCENT OF TOTAL MIX
- [5] NINI AND NMAX DO NOT APPLY.
- [6] ASTM D5581
- [7] PERCENT, SUPPLEMENT 1036
- [8] CALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT.
- [9] PERCENT, SUPPLEMENT 1037
- [10] PERFORM THE IDEAL-CT AND REPORT RESULTS ACCORDING TO SUPPLEMENT 1033

DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

KKP 02/15/22

PROJECT ID

105743

SHEET

TOTAL

P.27

P.1274

PAVEMENT (CONT.)

ITEM 302 - ASPHALT CONCRETE BASE, AS PER PLAN, 25.0 MM GYRATORY MIX (CONT.)

QUALITY CONTROL AND ACCEPTANCE - FOLLOW THE REQUIREMENTS AS SPECIFIED IN 403 USING 446 ACCEPTANCE EXCEPT AS MODIFIED BELOW:

RUN MSG AND AIR VOIDS AND FOLLOW 403.06.G INSTEAD OF 403.06.F.

TABLE 403.06-1

MIX CHARACTERISTIC	OUT OF SPECIFICATION LIMITS
ASPHALT BINDER CONTENT ⁽¹⁾	-0.30% TO 0.30%
1/2 INCH (12.5 MM) SIEVE ⁽²⁾	-6% TO 6%
NO. 4 (4.75 MM) SIEVE ⁽³⁾	-5% TO 5%
NO. 8 (2.36 MM) SIEVE ⁽⁴⁾	-4% TO 4%
NO. 200 (75 M) SIEVE ⁽⁵⁾	-2.0% TO 2.0%
AIR VOIDS ⁽⁵⁾	2.5% TO 4.5%
MSG ⁽⁵⁾	-0.012 TO 0.012
F/A ⁽⁵⁾	1.2 MAX
VMA	11.5 MIN

- [1] DEVIATION FROM THE JMF.
- [2] FOR DESIGN AIR VOIDS OF 3.5%. USE A GYRATORY COMPACTOR.
- [3] DEVIATION FROM THE MTD.
- [4] CALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT.
- [5] DO NOT FOLLOW THE MINIMUM 7% RETAINED DURING PRODUCTION PER 403.06.F.5.

FOLLOW REQUIREMENTS OF 446 AND REPLACE MSG COMPARISON IN TABLE 403.10-1 WITH 0.012.

FOR INFORMATION ONLY AND WHEN REQUESTED BY THE DEPARTMENT UP TO FIVE DIFFERENT PRODUCTION DAYS, HOT-COMPACT 10 GYRATORY SPECIMENS PER SUPPLEMENT 1033. DO NOT TEST THESE PILLS.

NOTIFY ERIC BIEHL - OMM 614-275-1380 TWO WEEKS PRIOR TO PLANNED BEGINNING PRODUCTION AND PLACEMENT. YOU MAY EMAIL THEM AS WELL.

PLACEMENT - ENSURE THE COMPACTION DEPTH OF ANY ONE LAYER IS A MINIMUM OF 4.0 INCHES AND A MAXIMUM OF 6.0 INCHES. IF THE PLAN THICKNESS IS 6.0 TO 7.75 INCHES, THE 302 MAY BE PLACED IN TWO LIFTS IF REQUESTED BY THE CONTRACTOR.

DENSITY ACCEPTANCE - FOLLOW THE REQUIREMENTS OF 446 ASPHALT CONCRETE CORE DENSITY ACCEPTANCE, INCLUDING JOINT CORES, EXCEPT AS MODIFIED BELOW:

OBTAIN 6-INCH DIAMETER CORES ON EACH LIFT PLACED.

OBTAIN JOINT CORES AT COLD LONGITUDINAL JOINTS SUCH THAT THE CORE'S CLOSEST EDGE IS 6 INCHES (152 MM) FROM THE EDGE OF THEMAT.

PAY FACTORS FOR EACH LIFT OF 302 APP WILL BE AS SPECIFIED IN THE FOLLOWING TABLE.

MEAN OF LOT CORE DENSITY ⁽¹⁾	PAY FACTOR 302, APP
>98.0%	[2]
>97.0% TO 98.0%	[3]
93.0% TO 97.0%	1.00
92.0% TO 92.9%	0.90
91.0% TO 91.9%	0.80
90.0% TO 90.9%	0.70
<90.0%	[4]

- [1] MEAN OF CORES AS PERCENT OF AVERAGE MSG FOR THE PRODUCTION DAY.
- [2] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.
- [3] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.70.
- [4] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.

IF MATERIAL IS REMOVED AND REPLACED THE CONTRACTOR WILL REMOVE AND REPLACE THIS COURSE AND ALL COURSES PAVED ON THIS COURSE.

ITEM 302 - 302 ASPHALT CONCRETE BASE, (449), PG 64-22, AS PER PLAN

ITEM 302 - 302 ASPHALT CONCRETE BASE, (449), PG 64-22, AS PER PLAN SHALL BE CONSTRUCTED PER C&MS 302 HOWEVER IT SHALL HAVE A VARIABLE DEPTH AND BE CONSTRUCTED USING MULTIPLE LIFTS PER DETAIL ON P.20.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN SHALL BE CONSTRUCTED PER C&MS 254 HOWEVER IT SHALL HAVE A VARIABLE DEPTH.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (449), AS PER PLAN

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (449), AS PER PLAN SHALL BE CONSTRUCTED PER C&MS 442 HOWEVER IT SHALL HAVE A VARIABLE DEPTH.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (447), AS PER PLAN, PG76-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO. TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

STORM PIPES

THE FOLLOWING STORM PIPES WITHIN THE PAVEMENT LIMITS WILL NOT BE ABLE TO REACH THE RECOMMENDED 12" COVER AND WILL REQUIRE CHEMICAL STABILIZATION TO BE OMITTED AND THE POOR SUBGRADE SOILS TO BE UNDERCUT AND REPLACED WITH STONE AND GEOGRID.

D-56, D-57, AND D-57A
D-154, D-155, D-161, AND D-209
D-400, D-401, AND D-404

THE FOLLOWING QUANTITIES ARE PROVIDED FOR EXCAVATION, STONE AND GEOGRID:

ITEM 204, GRANULAR MATERIAL TYPE B	112	CY
ITEM 204, EXCAVATION OF SUBGRADE	112	CY
ITEM 204, GEOGRID	461	SY

LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)

LONGITUDINAL JOINTS BETWEEN A PAVEMENT LANE AND ADJOINING SHOULDER OR SPEED CHANGE LANE, AND BETWEEN A SPEED CHANGE LANE AND THE ADJOINING SHOULDER SHALL BE MADE THE SAME DAY. ALL LONGITUDINAL JOINTS SHALL BE HOT WITH THE EXCEPTION OF ONE COLD JOINT PER ROADWAY. LOCATE THE COLD JOINT ALONG THE CENTERLINE OR LANE LINE. LONGITUDINAL JOINT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER. EACH RAMP SHALL HAVE A MAXIMUM OF ONE LONGITUDINAL COLD JOINT LOCATED APPROXIMATED HALFWAY ACROSS THE RAMP.

ITEM 618- RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN

FOR ALL FREEWAYS, THE LATERAL POSITION OF EDGE LINE RUMBLE STRIPS SHOWN IN SCD BP-9.1 IS REVISED AS FOLLOWS:

1. MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDER LESS THAN 6': DIMENSION A AND B ARE EQUAL TO 6"
2. MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS 6' TO 12': DIMENSION A AND B ARE EQUAL TO HALF THE SHOULDER WIDTH MINUS 12".
3. MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS GREATER THAN 12': DIMENSION A AND B ARE EQUAL TO 5'

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK:

ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN 11.43 MILES

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

ENVIRONMENTAL

ASBESTOS

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE FOLLOWING STRUCTURES.

1. CHARD PEDESTRIAN BRIDGE OVER I-77 (SFN 1806548)
2. MORGANA RUN BRIDGE CARRYING I-77 OVER MORGANA RUN (SFN 1806572)
3. RUFFINI COURT BRIDGE CARRYING I-77 OVER RUFFINI COURT (SFN 1806610)
4. RETAINING WALLS BETWEEN STA 99+00 THROUGH STA 174+00 (SEE ASBESTOS REPORT FOR EXACT LOCATIONS)

THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURES AND RETAINING WALLS. ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

ASBESTOS PROGRAM OHIO EPA, DAPC
50 W. TOWN ST., SUITE 700
COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT [THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO 44125. BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

EXISTING MONITORING WELLS

EXISTING MONITORING WELLS MAY BE PRESENT WITHIN THE LIMITED ACCESS OR HARVARD AVENUE RIGHT OF WAY AT THE BP GAS STATION AT 4910 HARVARD AVENUE, NEWBURGH HEIGHTS. THE CONTRACTOR SHALL AVOID IMPACTS TO THE MONITORING WELLS. IF DEEP EXCAVATION IS REQUIRED ADJACENT TO THIS SITE A PRE-CERCLA SCREENING WILL BE REQUIRED.

ECOLOGICAL

- 1) ENSURE IMPACTS TO THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT AND THE STATE LISTED AND PROTECTED LITTLE BROWN BAT AND TRICOLORED BAT ARE AVOIDED AND MINIMIZED. DO NOT REMOVE TREES FROM APRIL 1 THROUGH SEPTEMBER 30. PERFORM ALL NECESSARY TREE REMOVAL FROM OCTOBER 1 THROUGH MARCH 31. DEMARCAT E CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.
- 2) IT IS THE INTENT OF THE PROJECT TO MINIMIZE TREE CLEARING ACTIVITIES AND EARTH DISTURBED AREAS TO THE EXTENT POSSIBLE. THE CONTRACTOR SHALL LIMIT TREE CUTTING AND CLEARING ACTIVITIES TO THAT REQUIRED TO CONSTRUCT THE PROJECT. FOR FENCE REPLACEMENT AREAS BEYOND THE CONSTRUCTION LIMITS, THE CONTRACTOR SHALL LIMIT TREE CUTTING AND CLEARING ACTIVITIES TO A 10' SWATH WIDTH, SEE NOTE "FENCE REMOVAL AND REPLACEMENT". THE CONTRACTOR SHALL MARK ALL TREES TO BE REMOVED FOR APPROVAL BY THE ENGINEER PRIOR TO PERFORMING TREE CUTTING ACTIVITIES.

SECTION 4(F)

- 1) THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING MORGANA RUN TRAIL TO E49TH STREET AT ALL TIMES DURING CONSTRUCTION. DURING CONSTRUCTION OF THE EAST MULTI-USE PATH THE CONTRACTOR SHALL UTILIZE FLAGGERS AND/OR PARTIAL WIDTH CLOSURES, AS APPROVED BY THE ENGINEER TO MAINTAIN ACCESS ALONG THE EXISTING MORGANA RUN TRAIL.
- 2) TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED ALONG THE CONSTRUCTION LIMITS ADJACENT TO THE EXISTING MORGANA RUN TRAIL PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE EXISTING 4(F) PROPERTY AND THE PUBLIC. SEE MT-110.10 FOR DETAILS OF THE FENCING.
- 3) APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF THE MORGANA RUN TRAIL OF CONSTRUCTION ACTIVITIES, AND ACCESS RESTRICTIONS.
- 4) THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND THE OFFICIAL WITH JURISDICTION (OWJ) PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE OWJ CONTACT INFORMATION IS:

FRANK D. WILLIAMS, MPA
CITY OF CLEVELAND
DIRECTOR, PUBLIC WORKS
FWILLIAMS3@CLEVELANDOHIO.GOV
PHONE 216-664-2485
MOBILE 216-857-1815

EXCAVATION AT PARCEL 131-13-002

SOILS AT CLEVELAND CLIFFS STEELWORKS RAILWAY INC (F.K.A. CLEVELAND ISG WORKS WHEELING), AUDITOR PARCEL NUMBER 131-13-002, ARE ABOVE THE VAP RESIDENTIAL STANDARDS. ANY EXCAVATED MATERIALS FROM THIS PROPERTY MAY BE REUSED IN THE PROJECT. IF THESE MATERIALS CAN'T BE REUSED ON THE PROJECT, THEY ARE TO BE DISPOSED OF AS A SOLID WASTE. ALL EXTRA COSTS FOR OFF SITE DISPOSAL, IF REQUIRED, SHALL BE THE RESPONSILITY OF THE CONTRACTOR.

DESIGN AGENCY



DESIGNER

EAP

REVIEWER

KKP 02/15/22

PROJECT ID

105743

SHEET

TOTAL

P.28

P.1274



SHEET NUMBER												PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.25	P.26	P.28	P. 286	P. 288	P. 290	P.294	P.296	P.711	P.727	P.1015	P.1030	01/IMS	02/IMS	03/IMS						
LS												LS			201	11000	LS		ROADWAY	P. 25
			192,047									192,047			202	23000	192,047	SY	PAVEMENT REMOVED	
			4,068									4,068			202	30000	4,068	SF	WALK REMOVED	
			11									11			202	30200	11	FT	STEPS REMOVED	
			15,947									15,947			202	30700	15,947	FT	CONCRETE BARRIER REMOVED	
			221									221			202	30800	221	SY	TRAFFIC ISLAND REMOVED	
			36,794									36,794			202	32000	36,794	FT	CURB REMOVED	
						7,109						7,109			202	23500	7,109	SY	WEARING COURSE REMOVED	
								2,000	8,752	383	162	11,297			202	35100	11,297	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
								500	2,129			2,629			202	35200	2,629	FT	PIPE REMOVED, OVER 24" DIAMETER	
			14,427									14,427			202	38000	14,427	FT	GUARDRAIL REMOVED	
			2									2			202	47800	2	EACH	IMPACT ATTENUATOR REMOVED	
								10	61	2		73			202	58000	73	EACH	MANHOLE REMOVED	
								10	135			145			202	58100	145	EACH	CATCH BASIN REMOVED	
								10	62			72			202	58200	72	EACH	INLET REMOVED	
									1			1			202	58401	1	EACH	INLET ABANDONED, AS PER PLAN	P.711
									2	4		6			202	58700	6	EACH	MANHOLE ABANDONED	
											228	228			SPECIAL	20270000	228	FT	FILL AND PLUG EXISTING CONDUIT, 12" WATER MAIN	P.1017
											281	281			SPECIAL	20270000	281	FT	FILL AND PLUG EXISTING CONDUIT, 36" WATER MAIN	P.1017
									11,812			11,812			SPECIAL	20270000	11,812	FT	FILL AND PLUG EXISTING CONDUIT, 24" AND UNDER	P.711
									7,450			7,450			SPECIAL	20270000	7,450	FT	FILL AND PLUG EXISTING CONDUIT, 27" TO 48"	P.711
									1,933			1,933			SPECIAL	20270110	1,933	FT	PIPE CLEANOUT, 24" AND UNDER	P.711
									499			499			SPECIAL	20270120	499	FT	PIPE CLEANOUT, 27" TO 48"	P.711
				23,469								23,469			202	75000	23,469	FT	FENCE REMOVED	
			329									329			202	38500	329	FT	BRIDGE RAILING REMOVED	
				3								3			202	75250	3	EACH	GATE REMOVED	
									1			1			202	98100	1	EACH	REMOVAL MISC.: MANUFACTURED SYSTEM, TYPE 1 REMOVED	P.711
				1,724								1,724			202	98200	1,724	FT	REMOVAL MISC.: RAILROAD RAILS AND TIES	P. 26
								466				466			202	98200	466	FT	REMOVAL MISC.: TRENCH DRAIN REMOVED	P.711
						152,342						152,342			203	10000	152,342	CY	EXCAVATION	
						48,459						48,459			203	20000	48,459	CY	EMBANKMENT	
							7,419					7,419			204	10000	7,419	SY	SUBGRADE COMPACTION	
			112									112			204	13000	112	CY	EXCAVATION OF SUBGRADE	P.28
			112									112			204	30010	112	CY	GRANULAR MATERIAL, TYPE B	P.28
						100	23					123			204	45000	123	HOUR	PROOF ROLLING	
			461									461			204	51000	461	SY	GEOGRID	P.28
						6,140	1,105					7,245			206	10500	7,245	TON	CEMENT	
						200,527	19,653					220,180			206	11000	220,180	SY	CURING COAT	
						200,527	19,653					220,180			206	15020	220,180	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
LS												LS			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
	2.1											2.1			209	15051	2.1	MILE	RESHAPING UNDER GUARDRAIL, AS PER PLAN	P. 26
						11,100						11,100			606	15050	11,100	FT	GUARDRAIL, TYPE MGS	
						16						16			606	26100	16	EACH	ANCHOR ASSEMBLY, TYPE E	
						11						11			606	26500	11	EACH	ANCHOR ASSEMBLY, TYPE T	
						24						24			606	35002	24	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						2						2			606	60022	2	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) (65MPH/34")	
						21,110						21,110			607	23000	21,110	FT	FENCE, TYPE CLT	
						992						992			607	23001	992	FT	FENCE, TYPE CLT, AS PER PLAN, A	P. 27
						2,213						2,213			607	23001	2,213	FT	FENCE, TYPE CLT, AS PER PLAN, B	P. 27
						1,621						1,621			607	23001	1,621	FT	FENCE, TYPE CLT, AS PER PLAN, C	P. 27
						3						3			607	61200	3	EACH	GATE, TYPE CLT	
						24,339						24.339			607	70000	24,339	FT	FENCELINE SEEDING AND MULCHING	
												1,027			608	10000	1,027	SF	4" CONCRETE WALK	
												3,457			608	52000	3,457	SF	CURB RAMP	
												3,029			622	10100	3,029	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
						3,029														

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

ASEP

REVIEWER

KKP 05/01/26

PROJECT ID

105743

SHEET

P.275

TOTAL

P.1274

MODEL: Unnamed Plan - Plan 2 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 10/7/2026 TIME: 1:31:16 PM PLTDRV: OHDOT_PDF.plt PENTBL: OHDOT_Pen.tbl USER: smah@mtb.com WORKSPACE: OHDOTCEv02 WORKSET: 105743 PRODUCT: OpenRoadsDesigner 24.00.00.205
pww:\trc-pw\benley.com\trc-pw-0\Documents\5 - Projects - External\Ohio Department of Transportation (ODOT)\301525 - CUY-77-11.21\105743\400-Engineering\Roadway\Sheets\105743 - CUY-77-11.21\105743.dgn

SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.27	P. 288	P. 290	P.303	P.711	P.728	P.744	P.753	P.1116			01/IMS	02/IMS	03/IMS						
																		ROADWAY (CONT.)	
	271										271			622	10120	271	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
	9,514										9,514			622	10140	9,514	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
	5,545										5,545			622	10160	5,545	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
	1										1			622	10200	1	EACH	BARRIER TRANSITION	
	16										16			622	25000	16	EACH	CONCRETE BARRIER END SECTION, TYPE D	
	24										24			622	25006	24	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
	7										7			622	25008	7	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	
	81										81			622	25014	81	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
	62										62			622	25050	62	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
	5										5			622	90200	5	EACH	BARRIER, MISC.: CONCRETE BARRIER END SECTION, TYPE C	P. 27
8											8			623	38501	8	EACH	MONUMENT ASSEMBLY, TYPE C, AS PER PLAN	P. 27
8											8			623	40900	8	EACH	MONUMENT, MISC.: MONUMENT REFERENCING	P. 27
	3										3			625	32000	3	EACH	GROUND ROD	
																		EROSION CONTROL	
				4	8		5.4				8			601	11000	8	SY	RIPRAP, TYPE D	
					70						9.4			601	21050	9.4	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
					300						70			601	32200	70	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
											300			601	37500	300	FT	PAVED GUTTER, TYPE 1-2	
	2										2			659	00100	2	EACH	SOIL ANALYSIS TEST	
	15,047										16,964			659	00300	16,964	CY	TOPSOIL	
		108,517	1,917								108,517			659	10000	108,517	SY	SEEDING AND MULCHING	
	6,778										6,778			659	14000	6,778	SY	REPAIR SEEDING AND MULCHING	
	6,778										6,778			659	15000	6,778	SY	INTER-SEEDING	
	18.90										18.90			659	20000	18.90	TON	COMMERCIAL FERTILIZER	
	28.01										28.01			659	31000	28.01	ACRE	LIME	
	750										750			659	35000	750	MGAL	WATER	
	305										305			659	40000	305	MSF	MOWING	
			13,406								13,406			670	00500	13,406	SY	SLOPE EROSION PROTECTION	
			5,375		2,541						7,916			670	00720	7,916	SY	DITCH EROSION PROTECTION MAT, TYPE B	
			LS								LS			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
			LS								LS			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
			LS								LS			832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
			700,000								700,000			832	30000	700,000	EACH	EROSION CONTROL	
					215						215			836	10000	215	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	
						0.81					0.81			602	20000	0.81	CY	CONCRETE MASONRY	
				500			92,043				92,543			605	11110	92,543	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				100			1,370				1,470			605	13300	1,470	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
				250			3,607	620			620			611	00400	620	FT	4" CONDUIT, TYPE E	
											3,857			611	00510	3,857	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
					9						9			611	00901	9	FT	6" CONDUIT, TYPE B, AS PER PLAN 1, 706.02	P.711
					35						35			611	00901	35	FT	6" CONDUIT, TYPE B, AS PER PLAN 1, 707.65	P.711
					5						5			611	01101	5	FT	6" CONDUIT, TYPE C, AS PER PLAN 1, 707.65	P.711
						8					8			611	01801	8	FT	8" CONDUIT, TYPE B, AS PER PLAN 1, 706.02	P.711
					20						20			611	02001	20	FT	8" CONDUIT, TYPE C, AS PER PLAN 1	P.711
					92						92			611	04401	92	FT	12" CONDUIT, TYPE B, AS PER PLAN 1, 706.02	P.711
					5,125						5,125			611	05901	5,125	FT	15" CONDUIT, TYPE B, AS PER PLAN 1	P.711
					56						56			611	05901	56	FT	15" CONDUIT, TYPE B, AS PER PLAN 1, 706.02	P.711
						30					30			611	05901	30	FT	15" CONDUIT, TYPE B, AS PER PLAN 1, 707.65	P.711
					181						181			611	05901	181	FT	15" CONDUIT, TYPE B, AS PER PLAN 3	P.712
					3						3			611	05901	3	FT	15" CONDUIT, TYPE B, AS PER PLAN 5	P.712
					721						721			611	06101	721	FT	15" CONDUIT, TYPE C, AS PER PLAN 1	P.711
					283						283			611	06101	283	FT	15" CONDUIT, TYPE C, AS PER PLAN 1, 706.02	P.711
					16						16			611	06101	16	FT	15" CONDUIT, TYPE C, AS PER PLAN 1, 707.65	P.711
					26						26			611	06101	26	FT	15" CONDUIT, TYPE C, AS PER PLAN 3	P.712

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

ASEP

REVIEWER

KKP 05/02/26

PROJECT ID

105743

SHEET

TOTAL

P.276

P.1274

SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.744	P.745	P.746									01/IMS	02/IMS	03/IMS						
																		DRAINAGE (CONT.)	
226											226			611	06101	226	FT	15" CONDUIT, TYPE C, AS PER PLAN 4	P.712
1,815											1,815			611	07401	1,815	FT	18" CONDUIT, TYPE B, AS PER PLAN 1	P.711
6											6			611	07401	6	FT	18" CONDUIT, TYPE B, AS PER PLAN 1, 706.02	P.711
10											10			611	07401	10	FT	18" CONDUIT, TYPE B, AS PER PLAN 1, 707.65	P.711
458											458			611	07401	458	FT	18" CONDUIT, TYPE B, AS PER PLAN 2	P.712
714											714			611	07601	714	FT	18" CONDUIT, TYPE C, AS PER PLAN 1	P.711
299											299			611	07601	299	FT	18" CONDUIT, TYPE C, AS PER PLAN 1, 706.02	P.711
317											317			611	08901	317	FT	21" CONDUIT, TYPE B, AS PER PLAN 1	P.711
11											11			611	08901	11	FT	21" CONDUIT, TYPE B, AS PER PLAN 3	P.711
371											371			611	09101	371	FT	21" CONDUIT, TYPE C, AS PER PLAN 1	P.711
87											87			611	10401	87	FT	24" CONDUIT, TYPE B, AS PER PLAN 1	P.711
259											259			611	10601	259	FT	24" CONDUIT, TYPE C, AS PER PLAN 1	P.711
224											224			611	10601	224	FT	24" CONDUIT, TYPE C, AS PER PLAN 1, 706.02	P.711
5											5			611	10601	5	FT	24" CONDUIT, TYPE C, AS PER PLAN 1, 707.01	P.711
98											98			611	11901	98	FT	27" CONDUIT, TYPE B, AS PER PLAN 1	P.711
189											189			611	12101	189	FT	27" CONDUIT, TYPE C, AS PER PLAN 1	P.711
831											831			611	13401	831	FT	30" CONDUIT, TYPE B, AS PER PLAN 1	P.711
211											211			611	13401	211	FT	30" CONDUIT, TYPE B, AS PER PLAN 2	P.712
88											88			611	13601	88	FT	30" CONDUIT, TYPE C, AS PER PLAN 5	P.712
	30										30			611	16601	30	FT	36" CONDUIT, TYPE C, AS PER PLAN 1	P.711
	8										8			611	16601	8	FT	36" CONDUIT, TYPE C, AS PER PLAN 1, 706.02	P.711
	18										18			611	19601	18	FT	42" CONDUIT, TYPE C, AS PER PLAN 1, 706.02	P.711
	410										410			611	20901	410	FT	48" CONDUIT, TYPE B, AS PER PLAN 1	P.711
	1,830										1,830			611	21101	1,830	FT	48" CONDUIT, TYPE C, AS PER PLAN 1	P.711
	8										8			611	21101	8	FT	48" CONDUIT, TYPE C, AS PER PLAN 1, 706.02	P.711
	550										550			611	22401	550	FT	54" CONDUIT, TYPE B, AS PER PLAN 1	P.711
	444										444			611	22601	444	FT	54" CONDUIT, TYPE C, AS PER PLAN 1	P.711
	4,427										4,427			611	23801	4,427	FT	60" CONDUIT, TYPE B, AS PER PLAN 1	P.711
	132										132			611	25201	132	FT	66" CONDUIT, TYPE B, AS PER PLAN 1, 706.02	P.711
	133										133			611	52203	133	FT	14" X 23" CONDUIT, TYPE B, 706.04, AS PER PLAN 1	P.711
	269										269			611	52303	269	FT	19" X 30" CONDUIT, TYPE B, 706.04, AS PER PLAN 1	P.711
	231										231			611	53003	231	FT	38" X 60" CONDUIT, TYPE B, 706.04, AS PER PLAN 1	P.711
	1,293										1,293			611	96601	1,293	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 15", TYPE B	P.711
	45										45			611	96601	45	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 18", TYPE B	P.711
	133										133			611	96601	133	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 21", TYPE B	P.711
	224										224			611	96601	224	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 24", TYPE B	P.711
	134										134			611	96601	134	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 27", TYPE B	P.711
	183										183			611	96601	183	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 30", TYPE B	P.711
	117										117			611	96601	117	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 36", TYPE B	P.711
	165										165			611	96601	165	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 60", TYPE B	P.711
	54										54			611	96601	54	FT	CONDUIT, BORED OR JACKED, AS PER PLAN 1, 14" X 23", TYPE B, 706.04	P.711
	64										64			611	97400	64	FT	CONDUIT, MISC.: 14" X 23" CONDUIT, TYPE C, 706.04, AS PER PLAN 1	P.711
	51										51			611	97400	51	FT	CONDUIT, MISC.: 24" X 38" CONDUIT, TYPE C, 706.04, AS PER PLAN 1	P.711
	3										3			611	98180	3	EACH	CATCH BASIN, NO. 3A	
	9										9			611	98300	9	EACH	CATCH BASIN, NO. 5	
	1										1			611	98301	1	EACH	CATCH BASIN, NO. 5, AS PER PLAN	P.712
	5										5			611	98371	5	EACH	CATCH BASIN, NO. 6, AS PER PLAN	P.712
	1										1			611	98430	1	EACH	CATCH BASIN, NO. 8 WITHOUT APRON	
	7										7			611	98510	7	EACH	CATCH BASIN, NO. 2-3	
	4										4			611	98520	4	EACH	CATCH BASIN, NO. 2-3 WITH BICYCLE SAFE GRATE	
	4										4			611	98580	4	EACH	CATCH BASIN, NO. 2-5 WITH BICYCLE SAFE GRATE	
	2										2			611	98610	2	EACH	CATCH BASIN, NO. 2-6 WITH BICYCLE SAFE GRATE	
	13										13			611	98630	13	EACH	CATCH BASIN ADJUSTED TO GRADE	
	2										2			611	98634	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
											9			611	98840	9	EACH	INLET, NO. 2-A-6	
											15			611	98850	15	EACH	INLET, NO. 2-A-8	
											26			611	98860	26	EACH	INLET, NO. 2-A-10	
											9			611	98870	9	EACH	INLET, NO. 2-A-12	
											1			611	98890	1	EACH	INLET, NO. 2-A-16	

GENERAL SUMMARY

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PROJECT ID

105743

SHEET

P.277

TOTAL

P.1274

SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P. 28	P. 286	P. 288	P.294	P.296	P.711	P.746	P.753	P.1030			01/IMS	02/IMS	03/IMS						
						8					8			611	99100	8	EACH	DRAINAGE (CONT.)	
						20					20			611	99110	20	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	
						2					2			611	99111	2	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN	P.712
						25					25			611	99114	25	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
						1					1			611	99115	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN1	P.712
						2					2			611	99115	2	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN2	P.712
						58					58			611	99500	58	EACH	INLET, MISC.: BARRIER INLET SCREEN	P.713
						19					19			611	99574	19	EACH	MANHOLE, NO. 3	
						12					12			611	99574	12	EACH	MANHOLE, NO. 3 WITH 60" BASE I.D.	
						2					2			611	99574	2	EACH	MANHOLE, NO. 3 WITH 72" BASE I.D.	
						7					7			611	99574	7	EACH	MANHOLE, NO. 3 WITH 84" BASE I.D.	
						1					1			611	99574	1	EACH	MANHOLE, NO. 3 WITH 90" BASE I.D.	
						1					1			611	99574	1	EACH	MANHOLE, NO. 3 WITH 96" BASE I.D.	
						1					1			611	99574	1	EACH	MANHOLE, NO. 3 WITH 108" BASE I.D.	
						1					1			611	99621	1	EACH	MANHOLE, NO. 5, AS PER PLAN	P.712
						1					1			611	99575	1	EACH	MANHOLE, NO. 3, AS PER PLAN	
						1					1			611	99575	1	EACH	MANHOLE, NO. 3, AS PER PLAN WITH 72" BASE I.D.	
						1					1			611	99575	1	EACH	MANHOLE, NO. 3, AS PER PLAN WITH 84" BASE I.D.	
						1					1			611	99575	1	EACH	MANHOLE, NO. 3, AS PER PLAN WITH 96" BASE I.D.	
						6					6			611	99654	6	EACH	MANHOLE ADJUSTED TO GRADE	
						1					1			611	99655	1	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	P.712
						3					3			611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE	
						5					5			611	99690	5	EACH	MANHOLE, MISC.: MANHOLE ADJUSTED TO GRADE WITH BOLTED COVER	P.712
						8					8			611	99690	8	EACH	MANHOLE, MISC.: MANHOLE NO. 3 WITH BOLTED COVER	P.712
						3					3			611	99690	3	EACH	MANHOLE, MISC.: MANHOLE NO. 3 WITH 60" BASE I.D. WITH BOLTED COVER	P.712
						1					1			611	99690	1	EACH	MANHOLE, MISC.: MANHOLE NO. 3 WITH 72" BASE I.D. WITH BOLTED COVER	P.712
						8					8			611	99690	8	EACH	MANHOLE, MISC.: MANHOLE NO. 3 WITH 90" BASE I.D. WITH BOLTED COVER	P.712
						11					11			611	99690	11	EACH	MANHOLE, MISC.: MANHOLE NO. 3 WITH 96" BASE I.D. WITH BOLTED COVER	P.712
					15,000		3				3			611	99710	3	EACH	PRECAST REINFORCED CONCRETE OUTLET	
											15,000			SPECIAL	61199820	15,000	LB	MISCELLANEOUS METAL	P.711
						1					1			611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: RESHAPE AND REESTABLISH EXISTING CONNECTION	P.712
																		PAVEMENT	
			712								712			254	01000	712	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
			9,697								9,697			254	01000	9,697	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 3.25"	
			5,105								5,105			254	01001	5,105	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 3.4" AVG.	P.28
			47,109								47,109			302	56001	47,109	CY	ASPHALT CONCRETE BASE, (449), AS PER PLAN, 25.0 MM GYRATORY MIX	P.27-P.28
			255								255			302	56001	255	CY	ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22	P.28
			33,204	5,033							38,237			304	20000	38,237	CY	AGGREGATE BASE	
			602	434							1,036			407	13900	1,036	GAL	TACK COAT, 702.13	
			35,224								35,224			407	20000	35,224	GAL	NON-TRACKING TACK COAT	
				257							257			441	50000	257	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
				356							356			441	50300	356	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
			289	78							367			441	70801	367	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	P.26
			10,697								10,697			442	10080	10,697	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	
			8,940								8,940			442	10301	8,940	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	P.28
			429								429			442	22401	429	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (449), AS PER PLAN	P.28
				17,551							17,551			452	15010	17,551	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
			4,376								4,376			609	14000	4,376	FT	CURB, TYPE 2-A	
			10,105								10,105			609	24510	10,105	FT	CURB, TYPE 4-C	
	275										275			609	26000	275	FT	CURB, TYPE 6	
	591										591			609	50000	591	SY	4" CONCRETE TRAFFIC ISLAND	
11.43											11.43			618	40601	11.43	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	P.28

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

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PROJECT ID

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SHEET

P.278

TOTAL

P.1274

[illegible]

SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.1038	P.1049	P.1050	P.1099								01/IMS	02/IMS	03/IMS						
			1,679								1,679			625	25507	1,679	FT	TRAFFIC SURVEILLANCE (CONT.)	P.1097
			812								812			625	25909	812	FT	CONDUIT, JACKED OR DRILLED, 725.052, AS PER PLAN, 2"	P.1097
			1,026								1,026			625	25909	1,026	FT	CONDUIT, JACKED OR DRILLED, 725.052, AS PER PLAN, 3"	P.1097
			197								197			625	25920	197	FT	CONDUIT, MISC.: CONDUIT REMOVED	P.1097
			355								355			625	25803	355	FT	CONDUIT, CONCRETE ENCASED, AS PER PLAN, 2"	P.1097
			1,677								1,677			625	29000	1,677	FT	TRENCH	
			5								5			625	30700	5	EACH	PULL BOX, 725.08, 18"	
			5								5			625	31510	5	EACH	PULL BOX REMOVED	
			1								1			625	31600	1	EACH	PULL BOX, MISC.: ENCOMPASSING WORK PAD FOR ITS INSTALLATION	P.1097
			2								2			625	31600	2	EACH	PULL BOX, MISC.: PULL BOX ADJUSTED TO GRADE	P.1097
			9								9			625	32000	9	EACH	GROUND ROD	
			1								1			625	75510	1	EACH	POWER SERVICE REMOVED	
			1								1			630	70044	1	EACH	OVERHEAD SIGN SUPPORT, DMS PEDESTAL	
			1								1			630	70060	1	EACH	CATWALK, DMS PEDESTAL	
			1								1			630	70082	1	EACH	OVERHEAD DMS SUPPORT FOUNDATION, TYPE ITS-30.12	
			3								3			633	67100	3	EACH	CABINET FOUNDATION	
			19								19			809	00530	19	EACH	ITS JUNCTION BOX, 17x24x6 INCHES	
			5								5			809	01900	5	EACH	ITS PULL BOX WITH PAD AND STANDARD LID ASSEMBLY, 32" WIDE, TYPE 1	
			2								2			809	02000	2	EACH	32" ITS PULL BOX WITH PAD AND STANDARD LID ASSEMBLY, TYPE 2	
			1								1			809	02002	1	EACH	32" ITS PULL BOX WITH PAD AND HINGED LID ASSEMBLY, TYPE 2	
			3								3			809	01920	3	EACH	ITS PULL BOX WITH PAD AND HINGED LID ASSEMBLY, 32" WIDE, TYPE 1	
			61,144								61,144			809	23100	61,144	FT	MICRO-DUCT INNERDUCT, ¹⁴ / ₁₀	
			60								60			809	23900	60	FT	CONDUIT, 2" DIAMETER, HDPE	
			586								586			809	24000	586	FT	CONDUIT, MULTICELL, JACKED OR DRILLED, 4"	
			1,257								1,257			809	24500	1,257	FT	CONDUIT, 4", MULTICELL, HDPE WITH 4 - 1" INNERDUCTS	
			1								1			809	56100	1	EACH	ITS POWER SERVICE, POLE MOUNTED, 240/480V, 100 AMP	
			2								2			809	60000	2	EACH	CCTV IP-CAMERA SYSTEM, PTZ	
			1								1			809	61040	1	EACH	CCTV POLE, 70' TALL	
			2								2			809	61090	2	EACH	CCTV LOWERING UNIT	
			1								1			809	63000	1	EACH	DYNAMIC MESSAGE SIGN (DMS), FULL-SIZE WALK-IN	
			300								300			809	64550	300	FT	ETHERNET CABLE, OUTDOOR-RATED	
			2								2			809	65000	2	EACH	ITS CABINET - GROUND MOUNTED	
			1								1			809	65040	1	EACH	ITS CABINET - DMS	
			1								1			809	65110	1	EACH	STEP-DOWN TRANSFORMER, 7.5KVA	
			2								2			809	65990	2	EACH	ITS DEVICE, MISC.: REMOVAL AND DELIVERY OF CCTV AND LOWERING UNIT	P.1097
			1								1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL AND DELIVERY OF DYNAMIC MESSAGE SIGN	P.1097
			1								1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF CCTV POLE, CAMERA, FOUNDATION, AND CABINET ASSEMBLY	P.1097
			1								1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF DMS SUPPORT STRUCTURE, FOUNDATIONS, AND CABINET ASSEMBLY	P.1097
			1								1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF ITS CABINET	P.1097
											LS			809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION	
											LS			809	70050	LS		AS-BUILT CONSTRUCTION PLANS	
1,102											1,102			621	00100	1,102	EACH	TRAFFIC CONTROL	
1,102											1,102			621	54000	1,102	EACH	RAISED PAVEMENT MARKER REMOVED	
		35									35			625	32000	35	EACH	GROUND ROD	
	424										424			630	02100	424	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
	976										976			630	03100	976	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	565										565			630	04100	565	FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
	234										234			630	06100	234	FT	GROUND MOUNTED SUPPORT, NO. 6 POST	
	110										110			630	06400	110	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	
	141										141			630	06500	141	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
	40										40			630	07000	40	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18	
	38										38			630	07600	38	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	
	54										54			630	08000	54	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W12X30	
	356										356			630	08004	356	FT	ONE WAY SUPPORT, NO. 3 POST	
	159										159			630	08600	159	EACH	SIGN POST REFLECTOR	

GENERAL SUMMARY

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PROJECT ID

105743

SHEET

P.280

TOTAL

P.1274

NO CHANGES TO QUANTITIES ON THIS SHEET - PAY ITEM FROM PREVIOUS SHEET NOW SHOWN ON THIS SHEET

SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.1038	P.1049	P.1050	P.1053	P.1096							01/IMS	02/IMS	03/IMS						
	22													630	09000	22	EACH	TRAFFIC CONTROL (CONT.)	
	22										22							BREAKAWAY STRUCTURAL BEAM CONNECTION	
	1										1			630	72320	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 6	
	4										4			630	72330	4	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 10	
	3										3			630	72340	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12	
	4										4			630	72410	4	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1	
	5										5			630	72420	5	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2	
		2									2			630	72540	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.22, DESIGN 12	
		26									26			630	75000	26	EACH	SIGN ATTACHMENT ASSEMBLY	
		6									6			630	79100	6	EACH	SIGN HANGER ASSEMBLY, MAST ARM	
	3										3			630	79500	3	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
		8									8			630	79610	8	EACH	SIGN SUPPORT ASSEMBLY, BARRIER MOUNTED	
		1,831									1,831			630	80100	1,831	SF	SIGN, FLAT SHEET	
		846									846			630	80200	846	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
		5,248									5,248			630	80224	5,248	SF	SIGN, OVERHEAD EXTRUSHEET	
		9									9			630	80300	9	SF	SIGN, OVERLAY	
		16									16			630	80600	16	EACH	SIGN, DOUBLE FACED, MILE MARKER	
		2									2			630	81000	2	EACH	MAINLINE REFERENCE MARKER	
		6									6			630	81010	6	EACH	RAMP REFERENCE MARKER	
		15									15			630	81020	15	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET	
		31									31			630	82000	31	EACH	SIGN BACKING ASSEMBLY	
		9									9			630	84010	9	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	
		18									18			630	84500	18	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
		22									22			630	84510	22	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
			176								176			630	84900	176	EACH	REMOVAL OF GROUND MOUNTED SIGN	
			2								2			630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
			14								14			630	85400	14	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN	
			179								179			630	86002	179	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT	
			28								28			630	86102	28	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT	
			46								46			630	87400	46	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN	
			14								14			630	87500	14	EACH	REMOVAL OF POLE MOUNTED SIGN	
			12								12			630	89706	12	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT, DUAL ARM CANTILEVER	
			13								13			630	89804	13	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115	
			2								2			630	89902	2	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM, MEDIAN FOUNDATION	
311											311			646	10400	311	FT	STOP LINE	
1,177											1,177			646	10510	1,177	FT	CROSSWALK LINE, 12"	
41											41			646	10520	41	FT	CROSSWALK LINE, 24"	
10											10			646	10600	10	FT	TRANSVERSE/DIAGONAL LINE, WHITE	
881											881			646	10620	881	FT	CHEVRON MARKING	
1,940											1,940			646	10800	1,940	SF	ISLAND MARKING, WHITE	
34											34			646	20300	34	EACH	LANE ARROW	
13											13			646	20320	13	EACH	WRONG WAY ARROW	
832											832			646	20502	832	FT	DOTTED LINE, 4", WHITE (2' LINE, 4' GAP)	
5,210											5,210			646	20504	5,210	FT	DOTTED LINE, 6", YELLOW (3' DASH, 9' GAP)	
9.39											9.39			807	10010	9.39	MILE	WET REFLECTIVE TRAFFIC PAINT, EDGE LINE, 6", WHITE	
9.39											9.39			807	10010	9.39	MILE	WET REFLECTIVE TRAFFIC PAINT, EDGE LINE, 6", YELLOW	
15.76											15.76			807	10110	15.76	MILE	WET REFLECTIVE TRAFFIC PAINT, LANE LINE, 6"	
13,478											13,478			807	10310	13,478	FT	WET REFLECTIVE TRAFFIC PAINT, CHANNELIZING LINE, 12"	
12,402											12,402			807	10410	12,402	FT	WET REFLECTIVE TRAFFIC PAINT, DOTTED LINE, 6", WHITE (3' DASH, 9' GAP)	
495											495			807	10430	495	FT	WET REFLECTIVE TRAFFIC PAINT, DOTTED LINE, 12", WHITE (3' DASH, 9' GAP)	
35.2											35.2			850	10010	35.2	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
8,902											8,902			850	10110	8,902	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
13,973											13,973			850	10130	13,973	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
																		TRAFFIC SIGNALS	
				80							80			625	25408	80	FT	CONDUIT, 2", 725.051	
				70							70			625	29000	70	FT	TRENCH	
				10							10			625	29400	10	FT	TRENCH IN PAVED AREA	
				2							2			625	30706	2	EACH	PULL BOX, 725.08, 24"	
				1							1			625	32000	1	EACH	GROUND ROD	

GENERAL SUMMARY

DESIGN AGENCY



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KKP 05/07/26

PROJECT ID

105743

SHEET

TOTAL

P.281 | P.1274

SHEET NUMBER											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.25	P.26	P.30	P.31	P.32	P.34	P.35	P.42	P.47	P.1096		01/IMS	02/IMS	03/IMS						
									2		2			630	79500	2	EACH	TRAFFIC SIGNALS (CONT.)	
									7.5		7.5			630	80100	7.5	SF	SIGN, FLAT SHEET	
									1		1			632	20731	1	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN (A)	P.1096
									1		1			632	20731	1	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN (B)	P.1096
									600		600			632	40500	600	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
									1		1			632	64020	1	EACH	PEDESTAL FOUNDATION	
									1		1			632	89920	1	EACH	PEDESTAL, 10.7' TALL, TRANSFORMER BASE	
																		RETAINING WALLS	
																		FOR RETAINING WALL 1A	P. 835
																		FOR RETAINING WALL 1B	P. 851
																		FOR RETAINING WALL 1C	P. 861
																		FOR RETAINING WALL 1D	P. 876
																		FOR RETAINING WALL 2A	P. 901
																		FOR RETAINING WALL 2	P. 907
																		FOR RETAINING WALL 3	P. 921
																		FOR RETAINING WALL 4	P. 935
																		FOR RETAINING WALL 5A	P. 946
																		FOR RETAINING WALL 5B	P.968
																		FOR RETAINING WALL 5C	P. 980
																		FOR RETAINING WALL 6	P. 986
																		FOR RETAINING WALL 7	P. 1001
																		FOR MOMENT SLABS	P. 1010
																		STRUCTURE OVER 20 FOOT SPAN	
																		FOR STRUCTURE CUY-77-1322	P. 1143
																		FOR STRUCTURE CUY-77-1331	P. 1168
																		MISCELLANEOUS STRUCTURE	
LS											LS			202	11001	LS		STRUCTURE REMOVED, AS PER PLAN A	P.25
LS											LS			202	11001	LS		STRUCTURE REMOVED, AS PER PLAN B	P. 25
LS											LS			202	11001	LS		STRUCTURE REMOVED, AS PER PLAN C	P. 25
LS											LS			202	11001	LS		STRUCTURE REMOVED, AS PER PLAN D	P. 25
	LS										LS			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN A	P. 26
		LS									LS			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN B	P. 26
		LS									LS			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN C	P. 26
		LS									LS			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN D	P. 26
		LS									LS			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN E	P. 26
																		MAINTENANCE OF TRAFFIC	
						3		1,834			1,834			202	23500	1,834	SY	WEARING COURSE REMOVED	
											3			202	58400	3	EACH	INLET ABANDONED	
								129,435			129,435			254	01000	129,435	SY	PAVEMENT PLANING, ASPHALT CONCRETE, T=1.5"	
								11,341			11,341			407	20000	11,341	GAL	NON-TRACKING TACK COAT	
								4,680			4,680			441	70101	4,680	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22	P. 36
											LS			503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
						575					575			611	05900	575	FT	15" CONDUIT, TYPE B	
						34					34			611	10400	34	FT	24" CONDUIT, TYPE B	
						947					947			611	97010	947	FT	SLOTTED DRAIN, TYPE 2, 15"	
						9					9			611	98470	9	EACH	CATCH BASIN, NO. 2-2B	
						6					6			611	99150	6	EACH	INLET ADJUSTED TO GRADE	
								3			3			611	99154	3	EACH	INLET RECONSTRUCTED TO GRADE	
								1			1			611	99574	1	EACH	MANHOLE, NO. 3	
					1,490						1,490			614	11110	1,490	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
								27,114			27,114			614	11630	27,114	FT	INCREASED BARRIER DELINEATION	
		10						41			51			614	12380	51	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
								16			16			614	12400	16	EACH	WORK ZONE IMPACT ATTENUATOR, MISC.: 48" WIDE HAZARD (UNIDIRECTIONAL)	P. 32
											LS			614	12420	LS		DETOUR SIGNING	
				42							42			614	12484	42	EACH	WORK ZONE INCREASED PENALTIES SIGN	
			40								40			614	12500	40	EACH	REPLACEMENT SIGN	
			2								2			614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

ASEP

REVIEWER

KKP 05/08/26

PROJECT ID

105743

SHEET

P.282

TOTAL

P.1274

GENERAL SUMMARY

MODEL: roadway subsum - Plan 3 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 1/07/2026 TIME: 2:54:44 PM PLTDRV: OHDOT_PDF.plt6g PENTBL: OHDOT_Pen.tbl USER: snair@hntb.com WORKSPACE: OHDOTCEv02 WORKSET: 105743 PRODUCT: OpenRoadsDesigner 24.00.00.205
pw:\trc-pw\benley.com\trc-pw-0\Documents\5 - Projects - External\Ohio Department of Transportation (ODOT)\301525 - CUY-77-11.21\105743\400-Engineering\Roadway\Sheets\105743_GS002.dgn

REF NO.	SHEET NO.	LOCATION	STATION TO STATION			SIDE	FENCE REMOVED	GATE REMOVED	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, TYPE E	ANCHOR ASSEMBLY, TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL)	FENCE, TYPE CLT	FENCE, TYPE CLT, AS PER PLAN A	FENCE, TYPE CLT, AS PER PLAN B	FENCE, TYPE CLT, AS PER PLAN C	GATE, TYPE CLT	FENCELINE SEEDING AND MULCHING	CURB, TYPE 2-A	CURB, TYPE 4-C	LENGTH DEDUCTED FOR SIGN STRUCTURES IN BARRIER	LENGTH DEDUCTED FOR LIGHTING STRUCTURES IN BARRIER	LENGTH DEDUCTED FOR DRAINAGE STRUCTURES IN BARRIER	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	BARRIER TRANSITION	CONCRETE BARRIER END SECTION, TYPE D	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	CONCRETE BARRIER, MISC.: CONCRETE BARRIER END SECTION, TYPE C	GROUND ROD					
							FT	EACH	FT	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
F-2	P.1179	I.R. 77	89+77.30	TO	91+04.10	LT	122							122					122																						
F-13	P.1179	I.R. 77	90+64.20	TO	93+80.20	RT	316	1						317				1	325																						
F-3	P.1179	I.R. 77	91+40.70	TO	95+20.20	LT	372							370					370																						
F-14	P.1179	I.R. 77	94+18.20	TO	95+68.00	RT	159							154					154																						
F-15	P.1179	I.R. 77	95+99.40	TO	98+49.40	RT	259							254					254																						
F-4	P.1179-P.1180	I.R. 77	96+91.00	TO	205+87.9 (RAMP B2)	LT	1510							1501					1501																						
F-17	P.1181-P.1183	I.R. 77	400+48.2 (RAMP B4)	TO	111+82.3 (RAMP C1)	RT	2715							2715					2715																						
F-6	P.1183	I.R. 77	141+21.20	TO	141+61.30	LT	47							47					47																						
F-5	P.1181-P.1183	I.R. 77	300+39.1 (RAMP B3)	TO	141+24.70	LT	2996							3038					3038																						
F-7	P.1183	I.R. 77	143+01.70	TO	147+18.70	LT	426							426					426																						
F-18	P.1183-P.1184	I.R. 77	300+99.0 (RAMP C3)	TO	154+84.50	RT	1163							1163					1163																						
F-19	P.1184-P.1185	I.R. 77	154+84.50	TO	171+00.00	RT	1621										1621																								
F-20	P.1185-P.1186	I.R. 77	171+00.00	TO	175+06.70	RT	433							433					433																						
F-21	P.1186-P.1187	I.R. 77	176+15.20	TO	197+20.10	RT	2184							2227					2227																						
F-23	P.1186-P.1187	I.R. 77	176+30.00	TO	208+30.2 (RAMP D2)	LT	2384							2141					2141																						
F-24	P.709	CHARD AVE	156+25.00	TO	157+08.00	LT	833																																		
F-1	P.1178-P.1179	RAMP A3	301+37.10	TO	89+45.2 (I.R. 77)	LT	1068							1080				2	1080																						
F-12	P.1178-P.1179	RAMP A4	400+24.20	TO	89+33.0 (I.R. 77)	RT	1393	2						1387					1403																						
F-16	P.1180-P.1181	RAMP B1	100+75.00	TO	109+58.10	RT	877							884					884																						
F-8	P.1184	RAMP C2	203+40.00	TO	209+93.40	LT								592					592																						
F-22	P.1187-P.1188	RAMP E1	100+09.80	TO	112+37.60	RT	1410							1407					1407																						
F-9	P.1184-P.1185	MUP WEST	12+30.00	TO	22+05.20	LT	772							992					992																						
F-10	P.1185-P.1186	MUP WEST	22+05.20	TO	30+52.50	LT	409							852			2213		852																						
F-11	P.1186-P.1187	MUP WEST	31+59.40	TO	52+71.10	LT													2213																						
GR-1	P.304	I.R. 77	51+09.00	TO	52+84.61	RT			162.5		1																														
GR-2	P.305	I.R. 77	73+12.89	TO	75+50.00	RT			175.0			1																													
GR-3	P.305	I.R. 77	77+40.00	TO	79+93.82	LT			162.5		1																														
GR-4	P.307-P.308	I.R. 77	103+05.40	TO	204+00.00 (RAMP B2)	LT			637.5		1																														
GR-5	P.306	I.R. 77	86+91.23	TO	88+75.00	RT			112.5		1																														
GR-6	P.307	I.R																																							

[illegible]

SHEET NO.	203	203	659	SPECIAL BENCHING
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	
	CY	CY	SY	CY
MOT				
P.203	26	0	111	
P.204	172	0	403	
P.205	675	0	1378	
P.206	306	0	838	
P.207	61	1	133	
P.208	265	23	552	
P.209	401	14	536	
P.210	462	0	322	
P.211	339	0	242	
P.212	300	0	272	
P.213	256	0	289	
P.214	241	0	314	
P.215	271	0	416	
P.216	198	0	394	
P.217	171	0	378	
P.218	632	0	961	
P.219	285	4	619	
P.220	111	0	192	
P.221	154	0	231	
P.222	167	0	219	
P.223	151	0	234	
P.224	124	0	156	
P.225	159	0	183	
P.226	393	0	439	
P.227	1175	0	1380	
P.228	397	1	670	
P.229	505	5	722	
P.230	1007	0	1017	
P.231	118	0	298	
P.232	69	0	194	
P.233	0	0	0	
P.234	45	128	817	
P.235	72	364	956	
P.236	22	453	678	
P.237	12	414	680	
P.238	49	671	1037	
P.239	8	280	725	
P.240	4	20	211	
P.241	10	32	216	
P.242	20	0	86	
P.243	26	0	86	
P.244	87	0	236	
P.245	46	7	275	
P.246	18	7	283	
P.247	20	2	306	
P.248	10	0	89	
P.249	35	0	117	
P.250	71	0	200	
P.251	80	0	206	
P.252	85	0	197	
P.253	63	0	169	
P.254	112	0	217	
P.255	69	0	177	
P.256	105	0	248	
P.257	128	0	286	
P.258	138	0	306	
P.259	435	0	895	
P.260	945	0	1384	
P.261	1192	0	1422	
P.262	531	0	622	
TOTAL SUMMARY A	14029	2426	27220	0

SHEET NO.	203	203	659	SPECIAL BENCHING
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	
	CY	CY	SY	CY
P.263	444	0	722	
P.264	261	0	325	
P.265	1611	0	1156	
P.266	1782	0	1000	
P.267	1864	0	936	
P.268	2037	0	977	
P.269	1963	0	1020	
P.270	2147	0	1038	
P.271	1715	0	1025	
P.272	1096	0	1008	
P.273	1072	0	1167	
P.274	277	0	317	
TOTAL SUMMARY B	16269	0	10691	0
ITS WORKPAD DRIVE				
P.361	0	0	0	
P.362	6	76	91	
P.363	6	12	41	
TOTAL SUMMARY C	12	88	132	0

SHEET NO.	203	203	659	SPECIAL BENCHING
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	
	CY	CY	SY	CY
I.R. 77				
P.364	431	0	303	
P.365	958	41	566	
P.366	569	41	258	
P.367	483	1	266	
P.368	369	5	144	
P.369	287	9	144	
P.370	548	6	299	
P.371	938	54	795	
P.372	630	42	484	
P.373	571	61	408	
P.374	475	93	403	
P.375	430	85	414	
P.376	538	75	400	
P.377	769	7	241	
P.378	810	214	89	
P.379	852	157	3	
P.380	923	61	0	
P.381	897	0	8	
P.382	888	49	55	
P.383	786	171	233	
P.384	594	197	111	
P.385	532	189	261	
P.386	598	1	484	
P.387	416	16	212	
P.388	329	7	78	
P.389	273	6	3	
P.390	226	15	8	
P.391	288	14	75	
P.392	372	2	250	
P.393	552	0	337	
P.394	761	1	336	
P.395	916	2	442	
P.396	879	5	483	
P.397	925	0	422	
P.398	777	0	227	
P.399	822	0	278	
P.400	878	0	417	
P.401	983	64	398	
P.402	1381	2	594	
P.403	1317	0	300	
P.404	1812	0	333	
P.405	1921	0	469	
P.406	1992	0	791	
P.407	1893	19	867	700
P.408	2050	84	1253	659
P.409	1795	181	1219	637
P.410	1657	377	1250	514
P.411	794	234	558	159
P.412	1655	396	1167	408
P.413	1875	413	1248	466
P.414	997	423	897	461
P.415	768	87	625	580
P.416	700	119	600	282
P.417	306	59	231	20
P.418	281	18	153	
P.419	271	0	128	
P.420	206	0	103	
P.421	112	20	89	
P.422	387	544	820	
P.423	42	1713	889	
TOTAL SUMMARY D	48485	6380	24919	4886

SHEET NO.	203	203	659	SPECIAL BENCHING
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	
	CY	CY	SY	CY
P.424	106	2416	972	
P.425	69	1344	567	
P.426	25	1409	539	
P.427	177	2185	964	
P.428	284	1232	722	
P.429	297	518	473	
P.430	399	164	433	
P.431	699	6	470	
P.432	978	56	959	
P.433	781	29	600	
P.434	524	75	216	
P.435	595	2	436	
P.436	369	3	311	
P.437	217	18	214	
P.438	409	99	214	
P.439	102	289	136	
P.440	34	519	123	
P.441	36	603	94	
P.442	122	995	69	
P.443	45	1097	131	
P.444	28	963	186	
P.445	61	464	80	
P.446	72	374	42	
P.447	91	315	19	
P.448	96	227	14	
P.449	82	171	36	
P.450	61	146	73	
P.451	35	120	123	
P.452	31	134	120	
P.453	45	133	58	
P.454	57	17	8	
P.455	97	2	0	
P.456	129	0	0	
P.457	166	0	0	
P.458	183	0	0	
P.459	148	0	0	
P.460	28	19	0	
P.461	107	37	24	
P.462	260	18	41	
P.463	290	41	320	
P.464	301	90	136	
P.465	200	81	33	
P.466	77	92	36	
P.467	238	92	133	
P.468	299	25	131	
P.469	257	34	125	
P.470	233	45	130	
P.471	211	39	84	
P.472	266	54	108	
P.473	453	97	217	
P.474	459	74	280	
P.475	448	78	209	
P.476	748	156	141	
P.477	816	163	167	
P.478	673	74	169	
P.479	672	29	339	
P.480	763	89	525	
P.481	736	90	783	
P.482	1434	110	1430	
P.483	1269	89	1250	
TOTAL SUMMARY E	18888	17841	16213	0

EARTHWORK SUBSUMMARY	
DESIGN AGENCY	
HNTB	
DESIGNER	
ASEP	
REVIEWER	
KKP 05/01/26	
PROJECT ID	
105743	
SHEET	TOTAL
P.289	P.1274

SHEET NO.	203	203	659	
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	SPECIAL BENCHING
	CY	CY	SY	CY
P.484	326	219	342	
P.485	1570	102	961	
P.486	1983	82	1083	
P.487	2068	95	925	
P.488	2133	141	875	
P.489	1972	208	836	
P.490	558	210	303	
P.491	70	177	230	
P.492	134	49	234	
P.493	199	46	298	
P.494	260	124	455	
P.495	296	92	481	
P.496	291	79	514	
P.497	289	29	481	
P.498	267	3	347	
P.499	228	0	84	
P.500	143	1	50	
P.501	79	1	0	
P.502	81	0	0	
P.503	70	4	53	
P.504	47	8	78	
P.505	50	2	64	
P.506	88	1	17	
P.507	50	1	25	
RAMP A3				
P.508	40	3	0	
P.509	325	34	488	
P.510	195	105	817	
P.511	352	20	803	
P.512	518	0	711	
P.513	663	0	667	
P.514	759	0	739	
P.515	496	0	389	
P.516	8	0	6	
RAMP A4				
P.517	40	0	4	
P.518	951	0	822	
P.519	1045	0	1000	
P.520	1028	0	908	
P.521	905	0	789	
P.522	583	0	566	
P.523	85	0	94	
RAMP B1				
P.524	25	1	9	
P.525	137	13	125	
P.526	111	114	320	
P.527	211	215	522	
P.528	491	45	644	
P.529	209	0	223	
P.530	16	1	15	
RAMP B2				
P.531	164	0	153	
P.532	478	0	475	
P.533	155	14	362	
P.534	19	8	71	
RAMP B3				
P.535	96	0	89	
P.536	959	0	707	
P.537	1334	0	889	
P.538	1359	0	916	
TOTAL SUMMARY F	27009	2247	23059	0

SHEET NO.	203	203	659	
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	SPECIAL BENCHING
	CY	CY	SY	CY
P.539	1263	0	745	
P.540	971	0	495	
P.541	495	10	373	
P.542	38	22	91	
RAMP B4				
P.543	62	0	140	
P.544	474	0	777	
P.545	961	0	1191	
P.546	1303	0	823	
RAMP C1				
P.547	0	48	53	
P.548	7	247	220	
P.549	24	323	289	
P.550	24	473	441	
P.551	25	600	425	
P.552	35	759	506	
P.553	94	812	708	
P.554	204	661	1072	
P.555	75	107	269	
RAMP C2				
P.556	0	0	0	
P.557	86	144	314	
P.558	93	224	265	
P.559	278	206	247	
P.560	398	118	251	
P.561	10	2	2	
RAMP C3				
P.562	32	0	88	
P.563	71	140	251	
P.564	334	381	608	
P.565	802	224	550	
P.566	877	154	441	
P.567	126	31	63	
RAMP D1				
P.568	91	3	151	
P.569	235	0	269	
P.570	314	0	450	
P.571	163	0	297	
RAMP D2				
P.572	101	6	85	
P.573	240	4	206	
P.574	650	1	546	
P.575	33	0	27	
RAMP E1				
P.576	612	25	259	
P.577	1830	148	919	
P.578	1094	441	1089	
P.579	659	761	1280	
P.580	430	812	1425	
P.581	455	673	1570	
P.582	663	245	825	
P.583	289	142	425	
P.584	124	37	19	
TOTAL SUMMARY G	17145	8984	21540	0

SHEET NO.	203	203	659	
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	SPECIAL BENCHING
	CY	CY	SY	CY
MUP WEST				
P.585	69	25	175	
P.586	41	96	350	
P.587	16	92	291	
P.588	32	44	358	
P.589	66	21	375	
P.590	292	0	266	
P.591	55	9	191	
P.592	3	69	208	
P.593	0	154	156	
P.594	0	131	142	
P.595	0	135	236	
P.596	18	68	194	
P.597	59	27	186	
P.598	38	11	100	
P.599	15	2	22	
P.600	14	2	25	
P.601	31	1	100	
P.602	44	0	169	
P.603	24	2	108	
P.604	4	30	53	
P.605	0	76	75	
P.606	269	48	128	
P.607	555	0	189	
P.608	531	0	192	
P.609	500	0	178	
P.610	533	0	183	
P.611	605	0	189	
P.612	677	0	222	
P.613	572	0	353	
P.614	8	1	14	
P.615	112	13	93	
P.616	1842	58	886	
P.617	2233	2	831	
P.618	1627	107	975	194
P.619	1183	260	1083	357
P.620	1315	170	1042	350
P.621	1657	22	781	81
P.622	2117	0	764	
P.623	1145	0	375	
P.624	1110	0	358	
P.625	1056	0	342	
P.626	972	0	328	
P.627	894	0	317	
P.628	819	0	300	
P.629	762	0	281	
P.630	744	59	394	100
P.631	713	143	519	193
P.632	1271	343	1033	385
P.633	596	165	511	191
P.634	608	165	511	174
P.635	1277	331	1025	355
P.636	1338	264	1038	458
P.637	1199	44	633	134
P.638	815	156	550	
P.639	231	739	728	
P.640	102	622	547	
P.641	110	9	200	
P.642	2	4	14	
TOTAL SUMMARY H	32921	4720	21887	2972

[illegible]

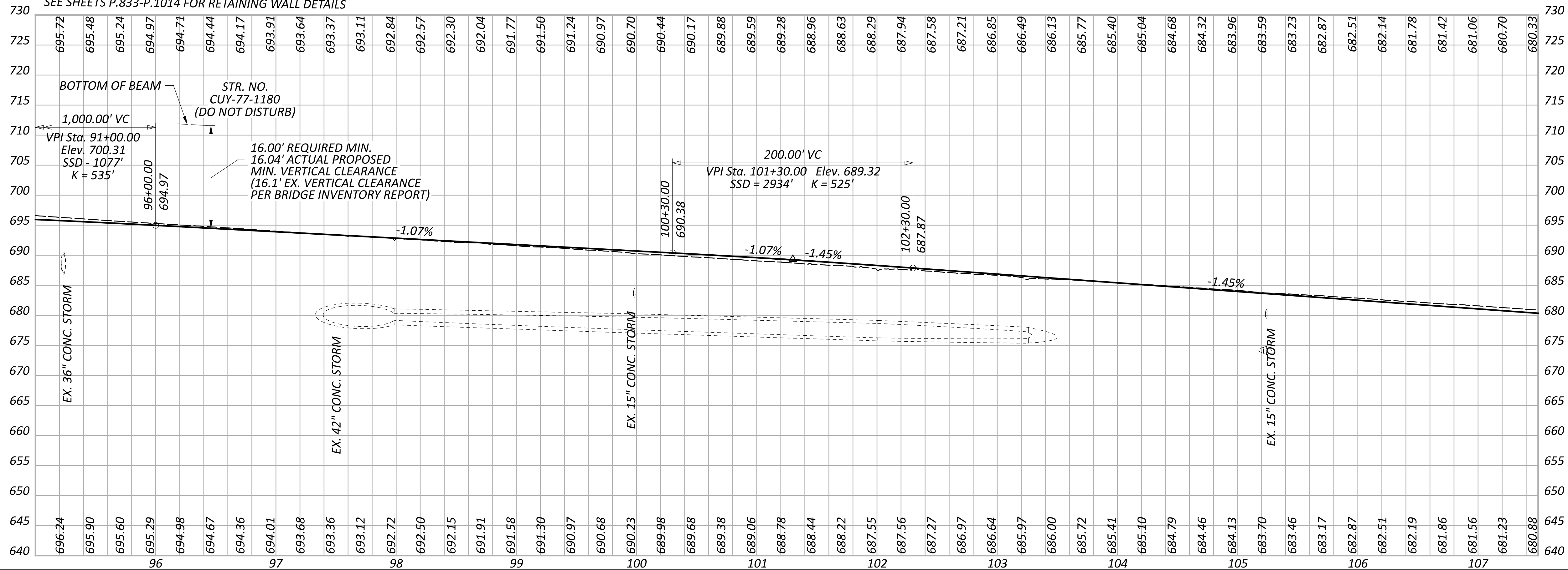
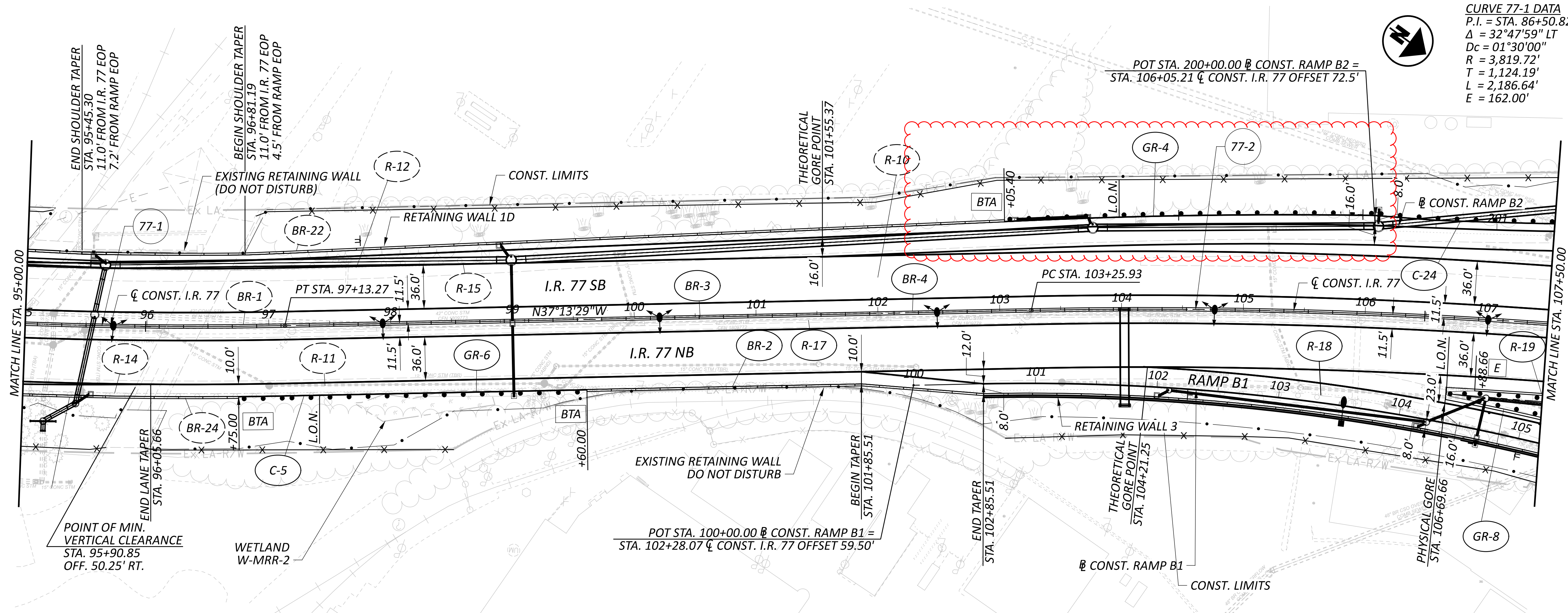
<div style="text-align: center;"> <h1>EARTHWORK SUBSUMMARY</h1> </div>		DESIGN AGENCY
		<div style="text-align: center;">  </div>
		DESIGNER
		ASEP
		REVIEWER
		KKP 05/01/26
PROJECT ID		105743
SHEET	TOTAL	
P.290	P.1274	

STATION TO STATION			SIDE	202	204	206	206	206	254	254	254	302	302	304	407	407	441	442	442	442								
				WEARING COURSE REMOVED	PROOF ROLLING	CEMENT	CURING COAT	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	PAVEMENT PLANING, ASPHALT CONCRETE, T=1.5"	PAVEMENT PLANING, ASPHALT CONCRETE, T=3.25"	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (T=0" MIN, 6.8" MAX)	ASPHALT CONCRETE BASE, (449), AS PER PLAN, 25.0MM GYRATORY MIX, T = 8.5"	ASPHALT CONCRETE BASE, PG64-22, (449), AS PER PLAN (VARIABLE)	AGGREGATE BASE, T = 6"	TACK COAT, 702.13, [0.085 GAL/SQ YD]	NON-TRACKING TACK COAT	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446), T = 1.75"	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN, T = 1.5"	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (449), AS PER PLAN (T= 0" MIN, 4.5" MAX)								
																					SY	hour	TON	SY	SY	SY	SY	SY
I.R. 77 SB																												
74+50.00	TO	75+00.00	LT		0.16	10	325	325				77	25	54		75		16	13	9								
75+00.00	TO	75+66.23	LT		0.22	13	430	430				100	27	72		98		21	17	10								
75+66.23	TO	77+40.00	LT		0.51	31	1027	1027				266	44	143		257		54	45	16								
77+40.00	TO	79+00.00	LT		0.52	32	1040	1040				242	9	173		231	5	50	42	3								
79+00.00	TO	79+93.82	LT		0.30	19	610	610				142		102		98	3	29	24									
79+93.82	TO	84+01.07	LT		1.32	80	2647	2647				615		441		426		126	106									
84+01.07	TO	84+30.13	LT		0.16	10	311	311				73		52		50		15	12									
84+30.13	TO	88+37.31	LT		1.83	111	3665	3665				866		611		605		182	150									
88+37.31	TO	89+37.30	LT		0.36	22	724	724				171		121		118		35	29									
89+37.30	TO	89+38.73	LT		0.00	1	10	10				3		2		2		1	1									
89+38.73	TO	89+79.58	LT		0.14	9	286	286				67		48		45		14	11									
89+79.58	TO	90+88.27	LT		0.37	23	739	739				175		123		120		36	29									
90+88.27	TO	91+31.67	LT		0.15	10	304	304				71		51		48		14	12									
91+31.67	TO	93+55.21	LT		0.76	46	1519	1519				359		253		246		74	60									
93+55.21	TO	94+94.40	LT		0.47	29	946	946				224		158		153		46	37									
94+94.40	TO	96+81.19	LT		0.65	40	1298	1298				303		216		206		62	50									
96+81.19	TO	99+90.00	LT		1.09	67	2188	2188				517		365		355		106	87									
99+90.00	TO	100+75.00	LT		0.32	20	646	646				153		108		105		31	26									
100+75.00	TO	103+05.40	LT		0.92	56	1845	1845				436		307		300		90	74									
103+05.40	TO	106+05.21	LT		1.30	79	2591	2591				604		432		419	9	124	105									
106+05.21	TO	107+88.14	LT		0.85	52	1698	1698				397		283		275	6	82	69									
107+88.14	TO	108+64.93	LT		0.38	24	764	764				179		127		124		37	31									
108+64.93	TO	111+80.00	LT		1.02	62	2048	2048				476		341		329		98	82									
111+80.00	TO	113+00.00	LT		0.41	25	813	813				190		136		129		39	31									
113+00.00	TO	115+36.53	LT		0.77	47	1537	1537				361		256		248	7	73	61									
115+36.53	TO	119+57.69	LT		1.37	83	2738	2738				642		456		441		131	109									
119+57.69	TO	122+84.63	LT		1.49	90	2979	2979				700		496		483	10	143	120									
122+84.63	TO	126+07.99	LT		1.23	75	2461	2461				578		410		398	10	118	99									
126+07.99	TO	127+07.99	LT		0.35	22	706	706				166		118		114	3	34	28									
127+07.99	TO	128+96.00	LT		0.61	37	1222	1222				287		204		197	6	58	49									
128+96.00	TO	129+28.04	LT		0.11	7	217	217				51		36		34		10	8									
129+28.04	TO	131+35.96	LT		0.68	42	1367	1367				323		228		224		66	56									
131+35.96	TO	131+64.00	LT		0.10	6	190	190				45		32		30		9	7									
131+64.00	TO	134+01.42	LT		0.77	47	1543	1543				362		257		249	7	74	62									
134+01.42	TO	134+80.00	LT		0.26	16	511	511				120		85		82	2	24	20									
134+80.00	TO	139+05.00	LT		1.38	84	2763	2763				648		460		445	13	132	110									
139+05.00	TO	140+40.00	LT		0.44	27	878	878				206		146		141	4	42	35									
140+40.00	TO	141+25.00	LT		0.28	17	553	553				130		92		89												

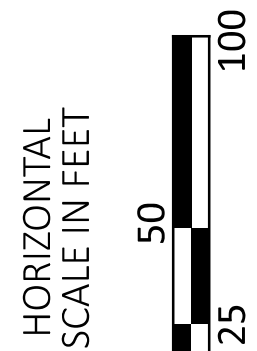
PAVEMENT SUBSUMMARY	
DESIGN AGENCY	
	
DESIGNER	ASEP
REVIEWER	KKP 05/01/26
PROJECT ID	105743
SHEET	P.291
TOTAL	P.1274

PAVEMENT SUBSUMMARY	
DESIGN AGENCY	
	
DESIGNER	ASEP
REVIEWER	
KKP	05/01/26
PROJECT ID	
	105743
SHEET	TOTAL
P.294	P.1274

SEE SHEETS P.321-P.348 FOR RAMP PLAN AND PROFILE SHEETS
SEE SHEETS P.361-P.651 FOR CROSS SECTIONS
SEE SHEETS P.711-P.832 FOR DRAINAGE DETAILS
SEE SHEETS P.833-P.1014 FOR RETAINING WALL DETAILS



PLAN AND PROFILE - I.R. 77
STA. 95+00.00 TO STA. 107+50.00



DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

KKP 04/01/22

PROJECT ID

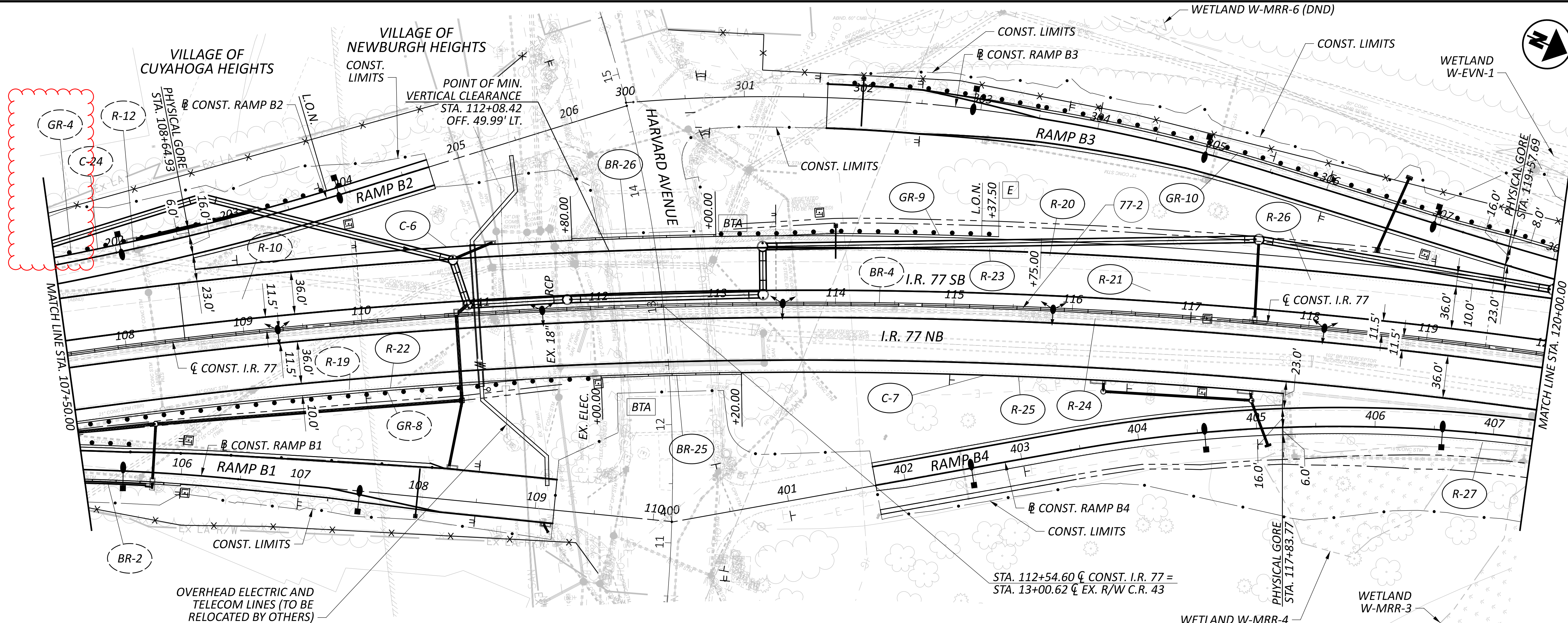
105743

SHEET

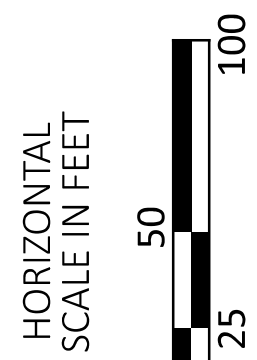
P.307

TOTAL

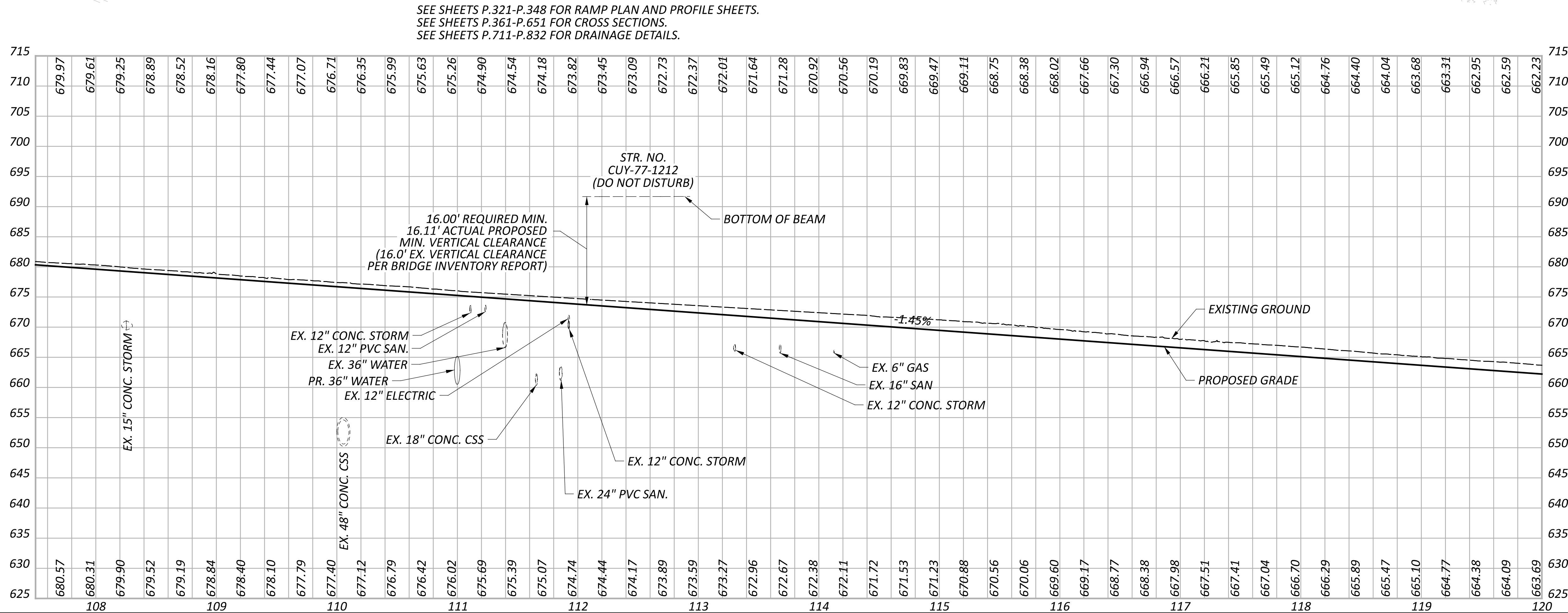
P.1274



CURVE 77-2 DATA
P.I. = STA. 117+76.34
 $\Delta = 35^\circ 07' 04''$ RT
 $D_c = 01^\circ 15' 00''$
 $R = 4,583.66'$
 $T = 1,450.41'$
 $L = 2,809.43'$
 $E = 224'$



PLAN AND PROFILE - I.R. 77
STA. 107+50.00 TO STA. 120+00.00



DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

KKP 04/01/22

PROJECT ID

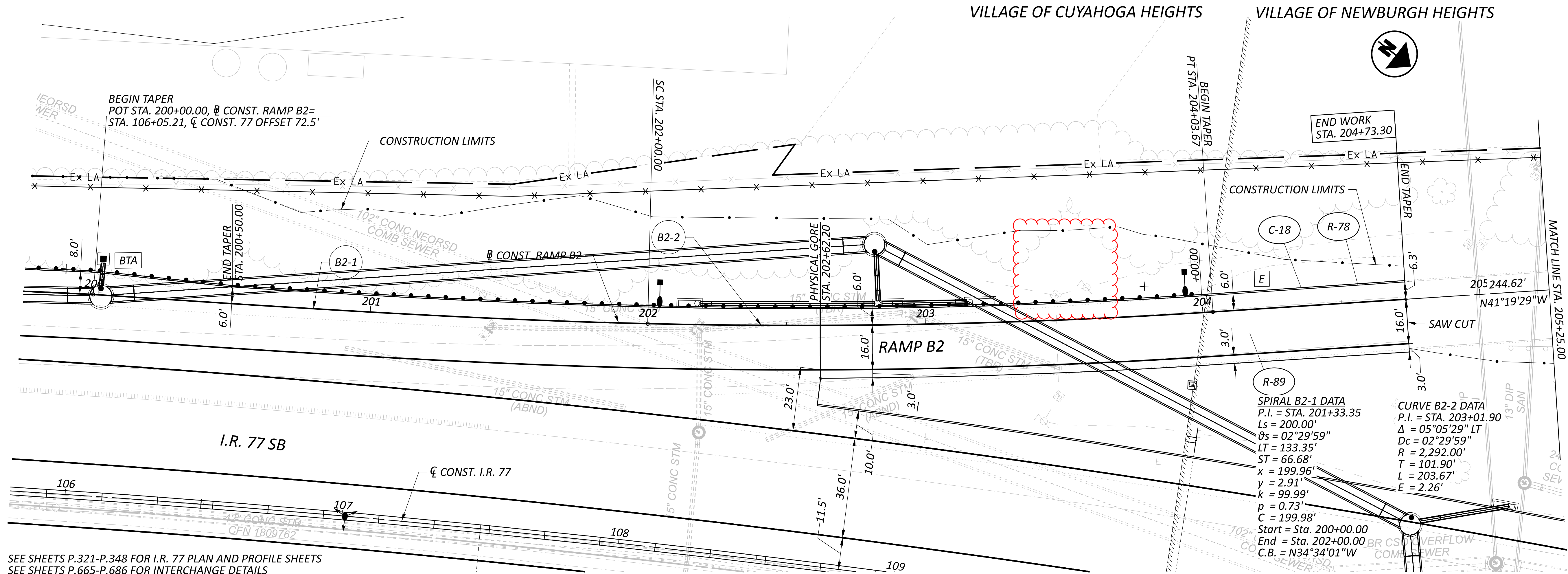
105743

SHEET

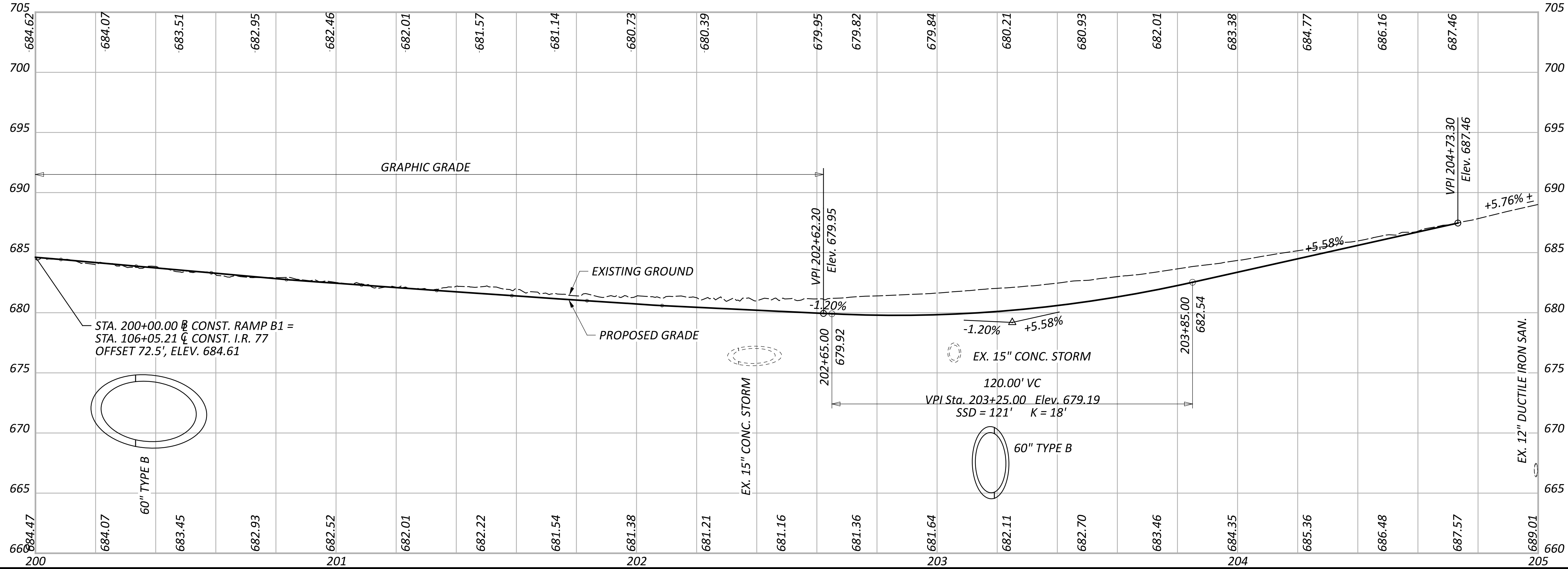
P.308

TOTAL

P.1274

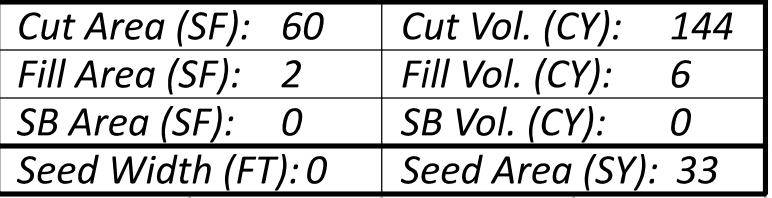
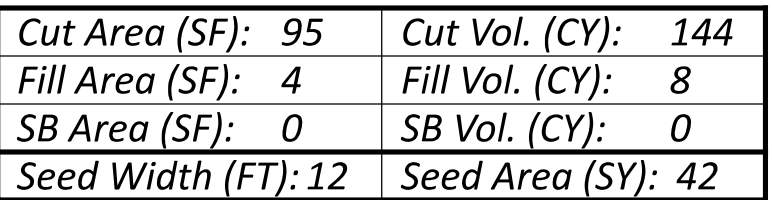


SEE SHEETS P.321-P.348 FOR I.R. 77 PLAN AND PROFILE SHEETS
SEE SHEETS P.665-P.686 FOR INTERCHANGE DETAILS
SEE SHEET P.361-P.651 FOR CROSS SECTIONS
SEE SHEET P.711-P.832 FOR DRAINAGE DETAILS



MODEL: CLP_1077 - 102+50.00-A PAPER/SIZE: 34x22 (in.) DATE: 10/5/2026 TIME: 11:36:07 AM PLTDRV: OHDOT_PDF.pltcfg PENTBL: OHDOT Pen.tbl USER: sman@hntb.com WORKSPACE: CHDOTCv02 WORKSET: 105743 PRODUCT: OpenRoadsDesigner 24.00.00.205
 pw:\trc-pw.bentley.com\trc-pw-01\Documents\5 - Projects - External\Ohio Department of Transportation (ODOT)\301525 - CUY-77-11.21\105743\400-Engineering\Roadway\Sheets\105743_XS101.dgn

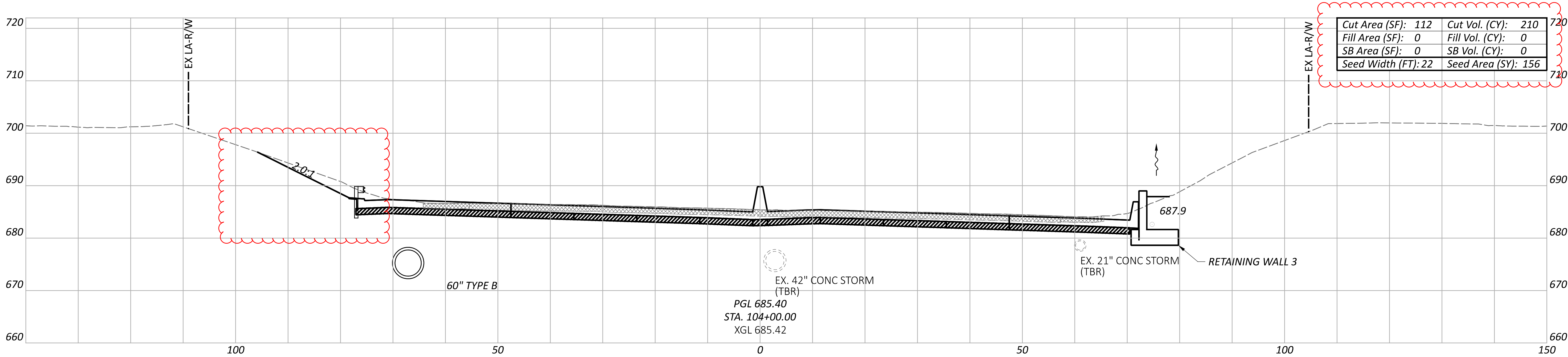
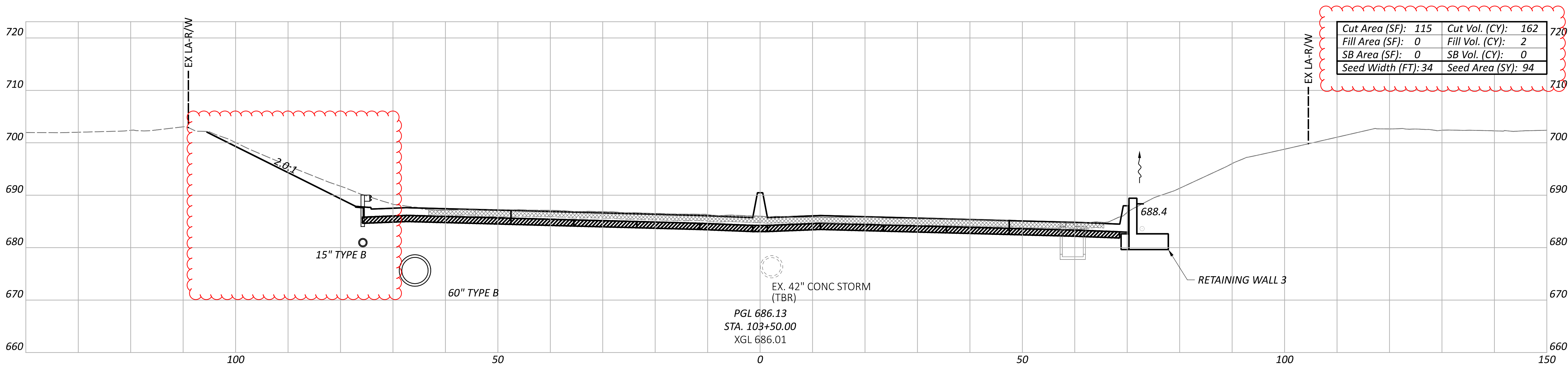
SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES
SEE WALL 1A-1D PLANS FOR DETAILS ON WALL CONSTRUCTION SEQUENCE



DESIGN AGENCY	
HNTB	
DESIGNER	
EAP	
REVIEWER	
MTR 04/01/22	
PROJECT ID	
105743	
SHEET	TOTAL
P.391	P.1274

CROSS SECTIONS - I.R. 77
STA. 102+50.00 TO STA. 103+00.00

SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES

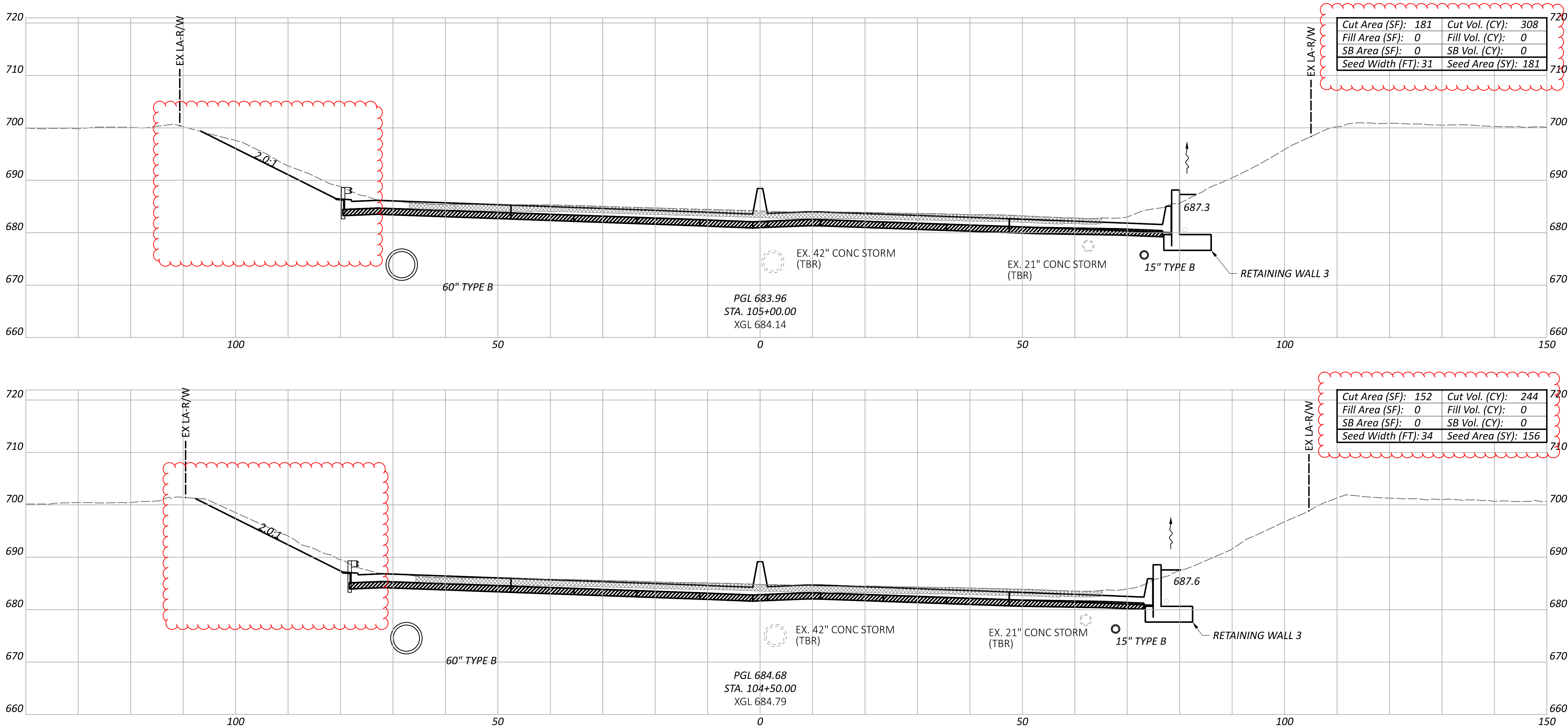


Sheet Totals			
Seeding (SY)	Cut (CY)	Fill (CY)	SB (CY)
250	372	2	0

DESIGN AGENCY
HNTB
DESIGNER
EAP
REVIEWER
MTR 04/01/22
PROJECT ID
105743
SHEET
P.392
TOTAL
P.1274

CROSS SECTIONS - I.R. 77
STA. 103+50.00 TO STA. 104+00.00

SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES



Cut Area (SF):	181	Cut Vol. (CY):	308
Fill Area (SF):	0	Fill Vol. (CY):	0
SB Area (SF):	0	SB Vol. (CY):	0
Seed Width (FT):	31	Seed Area (SY):	181

Cut Area (SF):	152	Cut Vol. (CY):	244
Fill Area (SF):	0	Fill Vol. (CY):	0
SB Area (SF):	0	SB Vol. (CY):	0
Seed Width (FT):	34	Seed Area (SY):	156

Sheet Totals			
Seeding (SY)	Cut (CY)	Fill (CY)	SB (CY)
337	552	0	0

DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

MTR 04/01/22

PROJECT ID

105743

SHEET

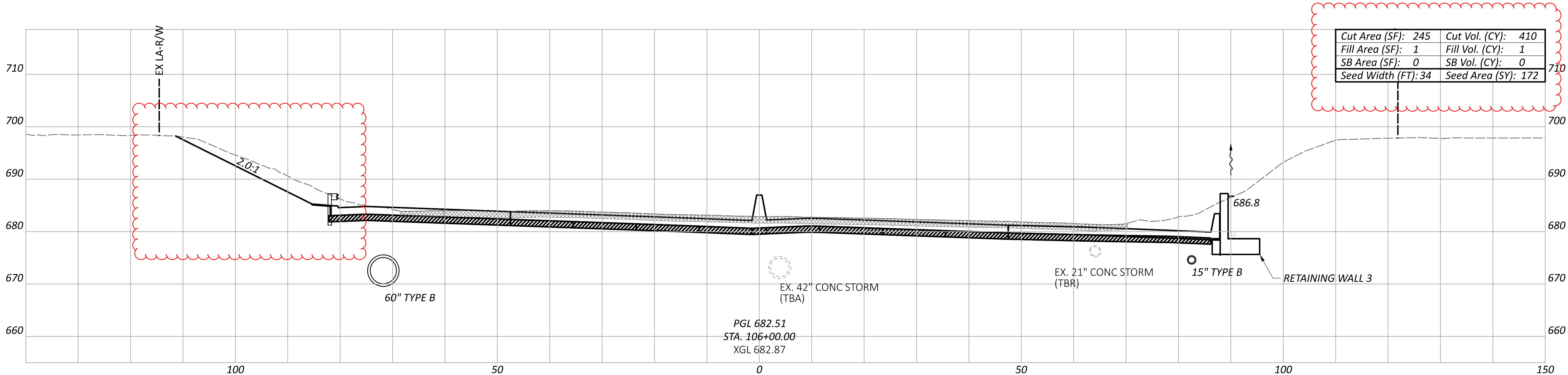
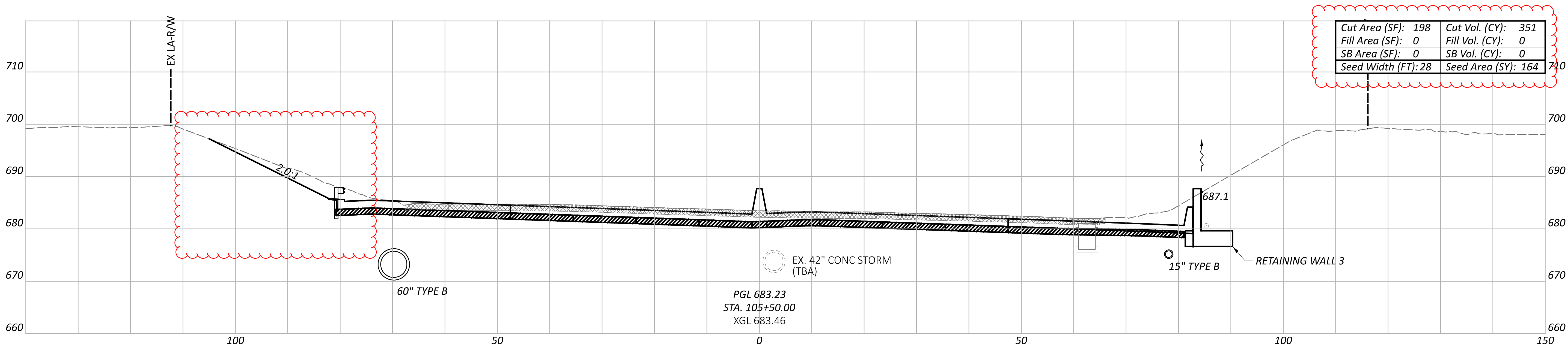
P.393

TOTAL

P.1274

CROSS SECTIONS - I.R. 77
STA. 104+50.00 TO STA. 105+00.00

SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES



Sheet Totals			
Seeding (SY)	Cut (CY)	Fill (CY)	SB (CY)
336	761	1	0

CROSS SECTIONS - I.R. 77
STA. 105+50.00 TO STA. 106+00.00

DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

MTR 04/01/22

PROJECT ID

105743

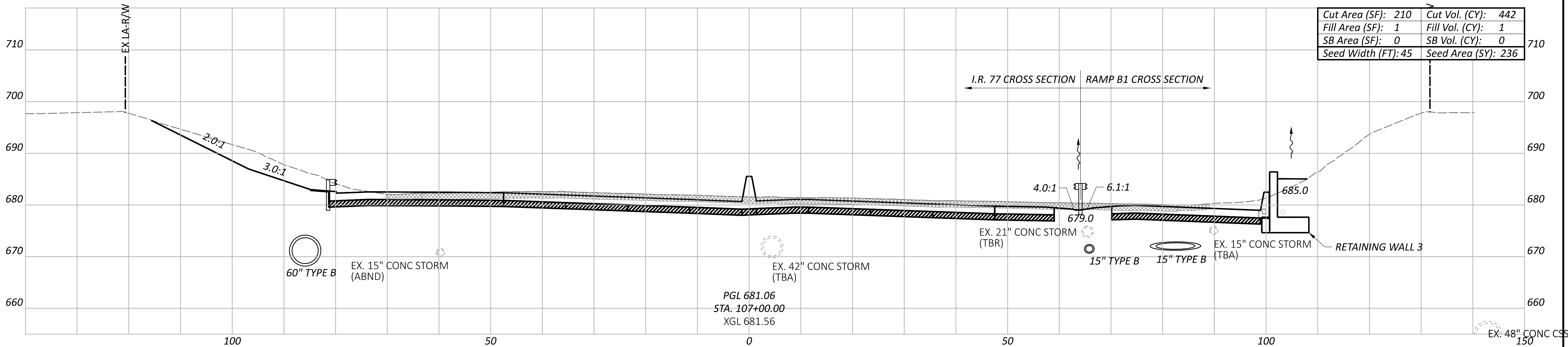
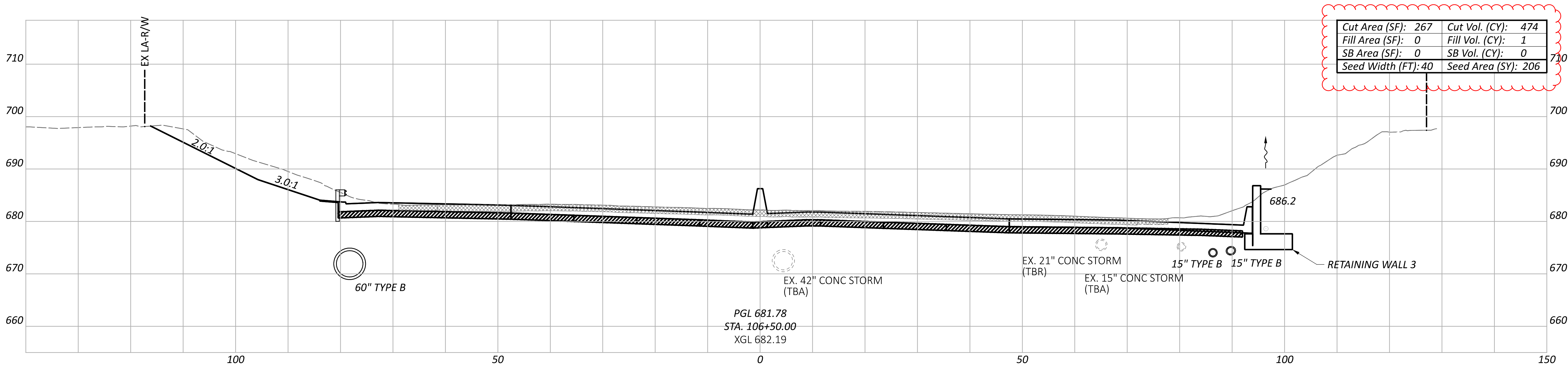
SHEET

P.394

TOTAL

P.1274

SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES



Sheet Totals			
Seeding (SY)	Cut (CY)	Fill (CY)	SB (CY)
442	916	2	0

DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

MTR 04/01/22

PROJECT ID

105743

SHEET

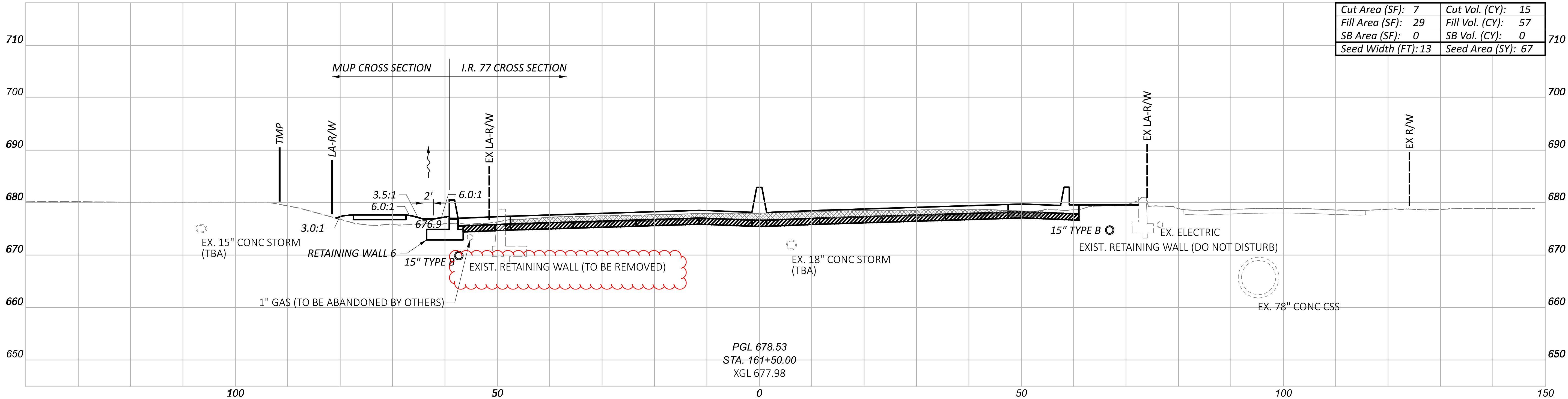
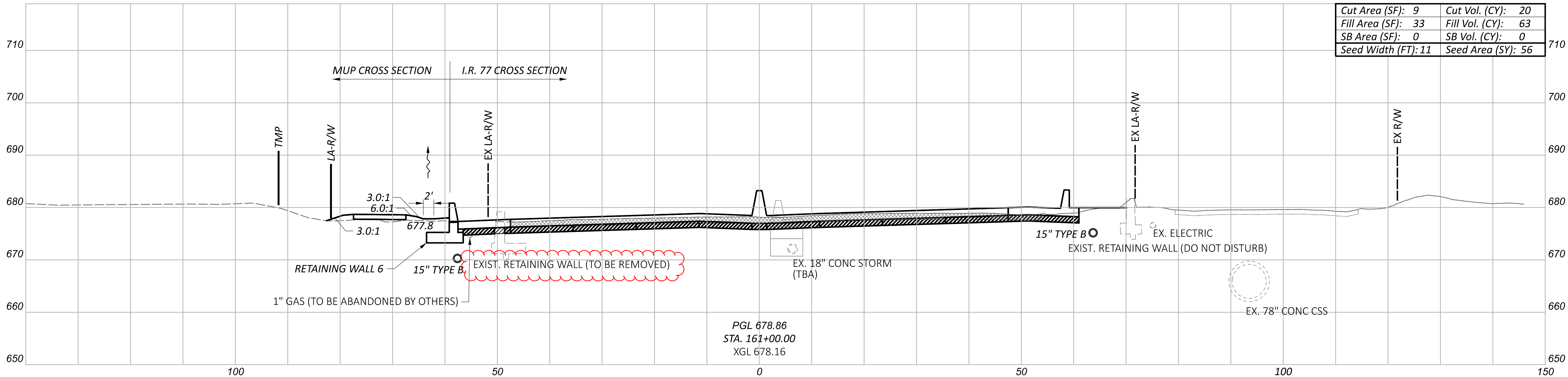
P.395

TOTAL

P.1274

CROSS SECTIONS - I.R. 77
STA. 106+50.00 TO STA. 107+00.00

SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES

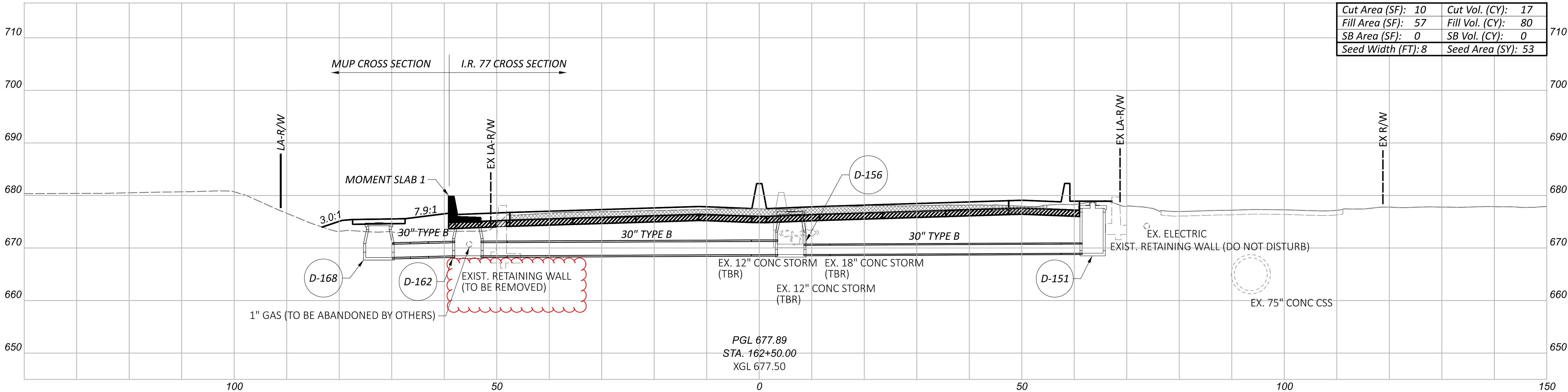
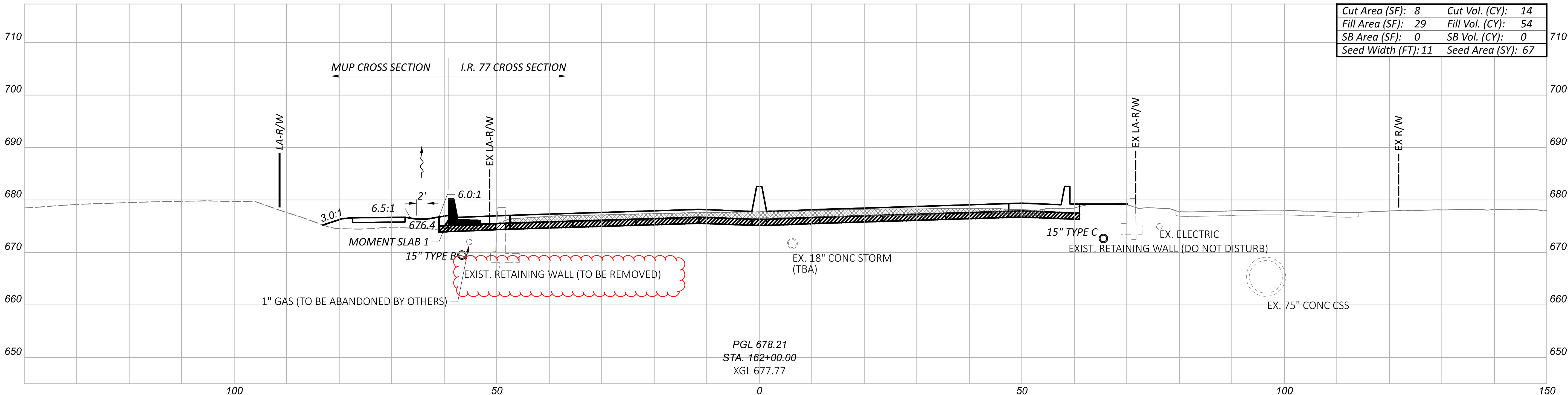


Sheet Totals			
Seeding (SY)	Cut (CY)	Fill (CY)	SB (CY)
123	35	120	0

CROSS SECTIONS - I.R. 77
STA. 161+00.00 TO STA. 161+50.00

DESIGN AGENCY	
HNTB	
DESIGNER	EAP
REVIEWER	MTR
PROJECT ID	105743
SHEET	P.451
TOTAL	P.1274

SEE SHEET P.361 FOR CROSS SECTION LEGEND AND NOTES



CROSS SECTIONS - I.R. 77
STA. 162+00.00 TO STA. 162+50.00

DESIGN AGENCY

HNTB

DESIGNER

EAP

REVIEWER

MTR 04/01/22

PROJECT ID

105743

Sheet Totals			
Seeding (SY)	Cut (CY)	Fill (CY)	SB (CY)
120	31	134	0

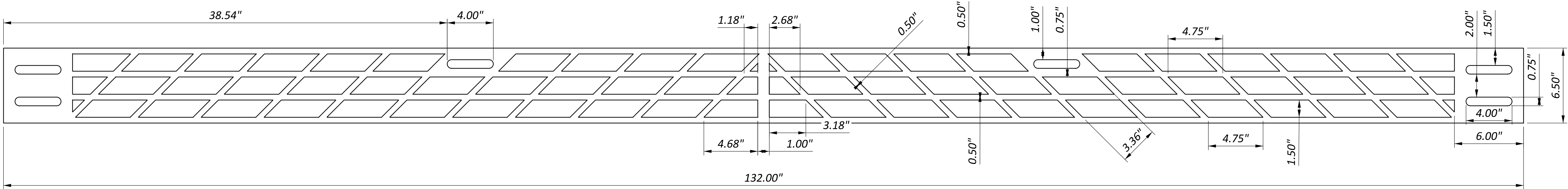
SHEET

P.452

TOTAL

P.1274

ITEM 611 - INLET MISC.: BARRIER INLET SCREEN



THIS ITEM OF WORK INCLUDES FURNISHING AND INSTALLING A BARRIER INLET SCREEN.

MANUFACTURE GRATES FROM 1/4" THICK ASTM A36 HOT ROLLED STEEL PLATE ACCORDING TO THE DETAIL ON THIS PAGE.

PRIOR TO INSTALLATION, APPLY A MINIMUM OF 3 COATS OF COLD GALVANIZING PAINT TO ALL SURFACES OF THE GRATE. COLD GALVANIZING COATING MUST MEET ASTM A780. APPLY THE COLD GALVANIZING ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.

SECURE THE GRATE TO THE CONCRETE BARRIER WITH 4 - 1/2" X 3" LONG CONCRETE ANCHOR SCREWS AND 9/16" ZINC COATED WASHERS.

INSTALL THE BARRIER INLET SCREEN ON THE CATCH BASIN SIDE OF THE INLET UNLESS OTHERWISE NOTED.

INCLUDE THE COSTS FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM THE WORK DESCRIBED ABOVE IN THE UNIT PRICE BID PER EACH FOR ITEM 611 - INLET MISC.: BARRIER INLET SCREEN.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

PROVIDE CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. FURNISH A STUB MEETING THE REQUIREMENTS OF 707 WITH A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THOROUGHLY CLEAN AND REGALVANIZE OR OTHERWISE SUITABLY REPAIR THE FIELD WELDED JOINT, IF USED. MEET WELDING REQUIREMENTS OF 513.21.

PROVIDE A MASONRY COLLAR PER STANDARD CONSTRUCTION DRAWING DM-1.1, TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS USED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, IS INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

TEMPORARY CONNECTION TO NEORS D SEWER

FOR TEMPORARY CONNECTION TO STRUCTURE D-43 (STA. 110+80.00 TO 111+12.50), LT. SIDE SEE SHEETS P.35 AND P.90 FOR ADDITIONAL DETAILS.

THE CONTRACTOR SHALL NOTE THAT AT THE TIME OF CONNECTION TO THE 48 INCH BRICK SEWER, A 1-INCH THICK GEOPOLYMER LINER WILL BE IN PLACE FROM A PREVIOUS NEORS D PROJECT.

FOR THE PENETRATION AND CONNECTION, PLEASE REFERENCE THE TEMPORARY CONNECTION TO NEORS D SEWER DETAIL (SEE THIS SHEET). EXCESSIVE GROUNDWATER INFLOW INTO THE CULVERT SHALL BE AVOIDED. THE TEMPORARY CONNECTION TO NEORS D SEWER DETAIL SHALL ASSIST IN MAINTAINING THE LONG-TERM CONDITION PRIOR TO THE BULKHEAD INSTALLATION.

ONCE THE PROPOSED STORM SEWER SYSTEM IS INSTALLED AND FULLY OPERATIONAL, THE CONTRACTOR SHALL THEN ABANDON AND PERMANENTLY PLUG THE TEMPORARY SEWER CONNECTION TO THE NEORS D SEWER SYSTEM FROM THE D-43 MANHOLE ACCESS POINT.

PRIOR TO ABANDONMENT, THE CONTRACTOR SHALL COORDINATE THE PROPOSED METHOD AND MATERIALS WITH THE PROJECT ENGINEER AND NEORS D. THE TEMPORARY SEWER SHALL BE CLEANED AND FREE OF DEBRIS, SEDIMENT, AND STANDING WATER.

ACCESS TO THE TEMPORARY SEWER SHALL BE PROVIDED FROM THE D-43 SIDE AS THE D-43 MANHOLE IS BOLTED RATHER THAN THE SZ-3 MANHOLE WHICH IS BURIED. THE CONTRACTOR SHALL INSTALL AN INTERNAL EXPANDABLE PLUG, BLADDER, OR EQUIVALENT SYSTEM WITHIN THE TEMPORARY SEWER PIPE. THE PLUG SHALL BE EXPANDED TO PROVIDE A TIGHT, CONTINUOUS CLOSURE OF THE TEMPORARY PIPE AND SHALL BE CAPABLE OF REMAINING IN PLACE PERMANENTLY.

FOLLOWING INSTALLATION OF THE INTERNAL PLUG, THE REMAINING ACCESSIBLE PORTION OF THE TEMPORARY SEWER SHALL BE COMPLETELY FILLED WITH AN APPROVED FLOWABLE, NON-SHRINK, OR CELLULAR MATERIAL TO PREVENT FUTURE COLLAPSE, SETTLEMENT, GROUNDWATER INFILTRATION, OR UNINTENDED FLOW THROUGH THE ABANDONED PIPE.

ACCEPTABLE FILL MATERIALS MAY INCLUDE CELLULAR CONCRETE (FOAMED CONCRETE), CONTROLLED LOW-STRENGTH MATERIAL (CLSM), POLYSTYRENE, OR OTHER EXPANDABLE/NON-SHRINK MATERIAL APPROVED BY THE PROJECT ENGINEER AND NEORS D.

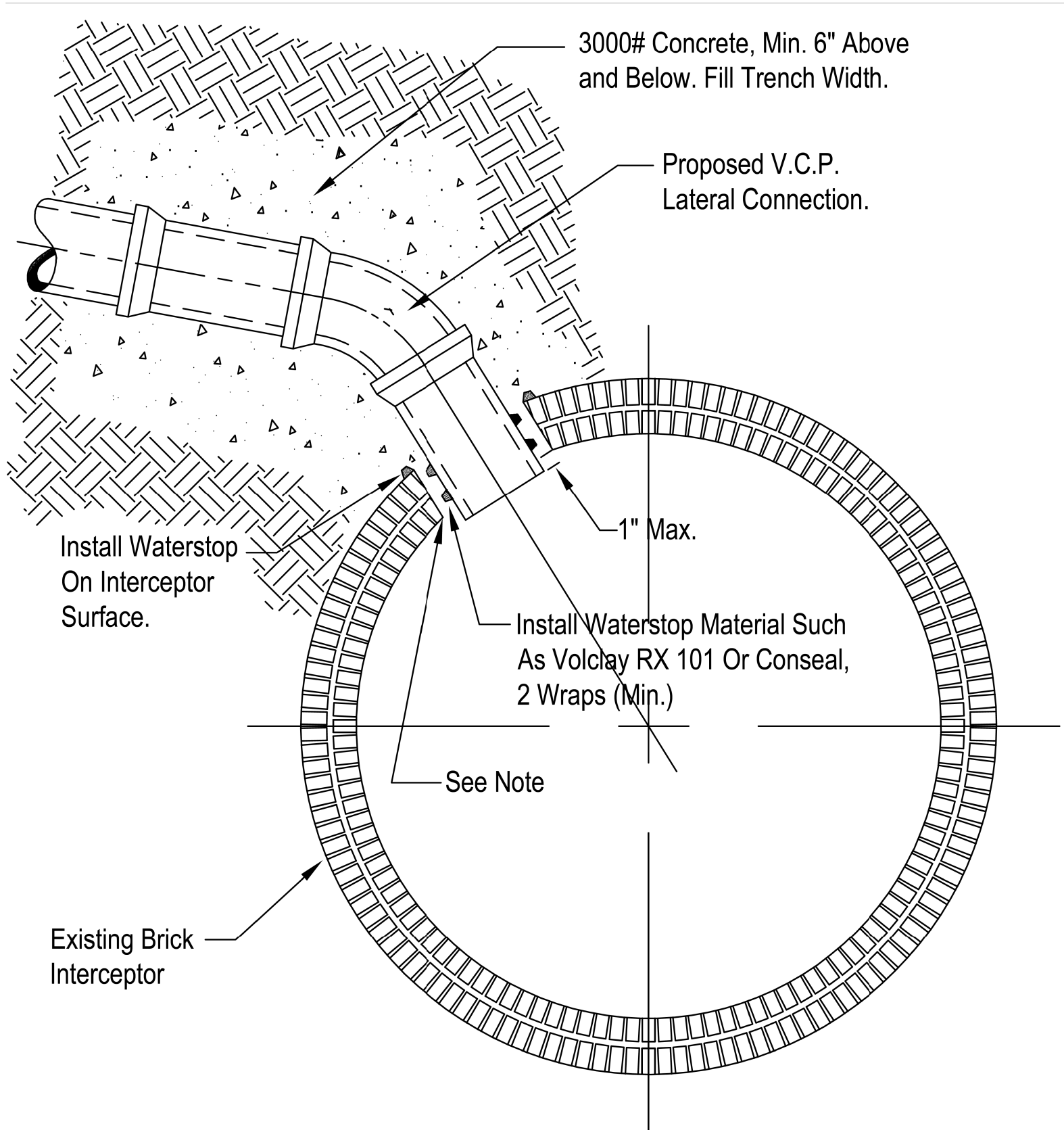
THE CONTRACTOR SHALL ENSURE THAT THE ABANDONMENT MATERIAL COMPLETELY FILLS THE ACCESSIBLE PORTION OF THE TEMPORARY SEWER AND PROVIDES A PERMANENT, STABLE OBSTRUCTION TO FLOW. NO VOIDS OR OPEN PATHWAYS THAT COULD PERMIT FUTURE FLOW THROUGH THE ABANDONED CONNECTION SHALL REMAIN.

THE CONTRACTOR SHALL PROTECT THE EXISTING NEORS D SEWER AND D-43 FACILITIES DURING THE ABANDONMENT OPERATION. NO MATERIAL, DEBRIS, OR GROUT SHALL BE ALLOWED TO ENTER THE ACTIVE NEORS D SEWER.

UPON COMPLETION, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF THE ABANDONMENT, INCLUDING THE LOCATION, METHOD, MATERIALS USED, AND PHOTOGRAPHS OR OTHER VERIFICATION ACCEPTABLE TO THE PROJECT ENGINEER AND NEORS D.

PAYMENT FOR ALL LABOR, EQUIPMENT, ACCESS, PLUGS, FILL MATERIAL, COORDINATION, AND INCIDENTAL WORK NECESSARY TO ABANDON AND PERMANENTLY PLUG THE TEMPORARY SEWER CONNECTION SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 - 24" CONDUIT, TYPE B, AS PER PLAN.

TEMPORARY CONNECTION TO NEORS D SEWER DETAIL



NOTE:
CORE DRILL HOLE WITH SUFFICIENT CLEARANCE FOR LATERAL PIPE. POSITION LATERAL CONNECTION IN WALL OF THE INTERCEPTOR SUCH THAT ALL RINGS OF BRICK REMAIN SUPPORTED. THE LATERAL SHALL NOT PROTRUDE INTO THE INTERCEPTOR MORE THEN ONE (1) INCH AT ANY POINT. THE CONTRACTOR SHALL TRIM THE CONNECTION END AS NEEDED, TO MEET BOTH OF THESE REQUIREMENTS. THE ANNULAR SPACE BETWEEN THE CORED HOLE AND THE LATERAL SHALL BE COMPLETELY FILLED TO THE INSIDE FACE OF THE INTERCEPTOR, WITH NON-SHRINK HYDRAULIC CEMENT.

MANHOLES WITHIN PAVEMENT

WHERE THE PLANS INDICATE THAT A PROPOSED MANHOLE BE PLACED WITHIN THE PAVEMENT LIMITS, EXCLUDING MANHOLES INDICATED FOR BOLTED LIDS, THE TOP OF CASTING ELEVATION SHALL BE SET AT THE TOP OF THE COMPACTED ITEM 304 - AGGREGATE BASE. THE LID SHALL BE SOLID WITHOUT HOLES. ONCE EACH MANHOLE IS SET IN PLACE AND PRIOR TO PAVING, A LICENSED SURVEYOR SHALL SURVEY THE CENTER OF THE LID OF EACH BURIED MANHOLE AND FURNISH THE GPS COORDINATES (EASTING, NORTHING) TO THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE AND WILL BE MADE AT THE UNIT PRICE BID FOR THE VARIOUS ITEM 611 - MANHOLE, NO. 3, AS PER PLAN PAY ITEMS.

THE FOLLOWING IS A LIST OF LOCATIONS WHERE BURIED MANHOLES ARE PROPOSED. STATIONS/OFFSETS SHOWN ARE TO THE CENTER OF THE MANHOLE LID. DESIGN ELEVATIONS AND GPD COORDINATES ARE PROVIDED FOR REFERENCE. CONTRACTOR SHALL FIELD VERIFY THE PROVIDED DATA, AND SUBMIT ANY ADJUSTMENTS USING THE BLANK TABLE BELOW TO THE ENGINEER.

COORDINATES OF STORM STRUCTURE CASTINGS BURIED IN ASPHALT										
STRUCTURE	ALIGNMENT	STATION	OFFSET	SIDE	RIM ELEVATION	NORTHING (Y)	EASTING (X)	RIM ELEVATION FIELD VERIFIED	NORTHING (Y) FIELD VERIFIED	EASTING (X) FIELD VERIFIED
D-13A	I-77	81+67.00	57.00	RT	695.28	647434.995'	2201713.864'			
D-22	I-77	85+99.00	57.50	LT	693.43	647816.431'	2201475.388'			
D-32A	I-77	95+56.94	8.93	LT	694.53	648676.164'	2201080.317'			
D-37	I-77	99+00.00	50.00	LT	690.56	648923.351'	2200839.037'			

COORDINATES OF STORM STRUCTURE CASTINGS BOLTED				
STRUCTURE	ALIGNMENT	STATION	OFFSET	SIDE
D-3A	I-77	75+56.50	51.00	LT
D-3B	I-77	77+70.00	50.50	LT
D-3D	I-77	78+50.00	51.00	LT
D-27	I-77	89+10.00	53.00	LT
D-30	I-77	89+98.44	61.06	RT
D-28	I-77	90+00.00	50.00	LT
D-31	I-77	92+94.00	47.00	LT
D-32	I-77	95+65.00	50.00	LT
D-39	I-77	103+77.00	67.00	LT
D-105	RAMP B1	102+10.00	2.00	RT
D-41	I-77	106+08.00	72.00	LT
D-106	RAMP B1	104+23.00	2.00	RT
D-43	I-77	110+80.00	46.50	LT
D-43C	I-77	110+90.00	8.00	LT
D-43D	I-77	111+74.00	8.00	LT
D-43B	I-77	113+39.00	8.00	LT
D-43A	I-77	113+39.00	48.50	LT
D-59	I-77	120+00.00	55.00	LT
D-59A	I-77	120+14.49	79.54	LT
D-61	I-77	125+78.00	62.00	LT
D-64A	I-77	129+06.00	48.00	LT
D-64	I-77	130+65.00	48.00	LT
D-71A	I-77	133+71.00	52.00	LT
D-84	I-77	141+57.00	51.00	LT
D-86	I-77	143+30.00	53.00	LT
D-156	I-77	162+50.00	6.00	RT
D-162	I-77	162+50.00	55.50	LT
D-158A	I-77	163+35.00	8.50	RT
D-151A	I-77	164+70.54	54.00	RT
D-195	I-77	196+89.00	50.00	LT
D-201	I-77	199+20.00	50.00	LT

STORM STRUCTURE ADJUST TO GRADE AND RECONSTRUCT TO GRADE ELEVATION TABLE		
STRUCTURE	EXISTING RIM ELEVATION	PROPOSED RIM ELEVATION
DZ-1	720.27	721.41
DZ-2	643.82	643.82
DZ-3	655.50	652.27
DZ-4A	665.45	663.10
DZ-4B	661.24	661.24
DZ-4	658.97	658.97
DZ-5	657.95	657.95
DZ-6	657.95	657.95
DZ-8	682.45	680.01
DZ-9	672.47	672.47
DZ-10	676.57	676.57
DZ-11	672.47	672.47
DZ-12	659.58	659.58
DZ-14	656.84	659.23
DZ-16	655.61	655.74
DZ-18	652.36	652.24
DZ-19	651.17	651.22
DZ-20	649.59	649.81
DZ-21	649.91	649.95
DZ-21A	650.61	650.63
DZ-22	649.48	649.70
DZ-23	649.60	649.85
DZ-24	650.94	650.94
DZ-25	650.48	650.56
DZ-26	651.88	651.91
DZ-27	652.14	652.18
DZ-28	654.14	654.14
DZ-29	656.99	657.41
DZ-31	656.32	656.35
DZ-32	644.27	643.88

NOTES:

1. FOR BOLTED STRUCTURES, SEE THE AS PER PLAN NOTE ON SHEET P.712.

DRAINAGE SUBSUMMARY	
DESIGN AGENCY	
	
DESIGNER	SMS
REVIEWER	
AKM	05/01/26
PROJECT ID	105743
SHEET	TOTAL
P.732	P.1274

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DRAINAGE SUBSUMMARY	
DESIGN AGENCY	
AECOM	
DESIGNER	SMS
REVIEWER	
AKM	05/01/26
PROJECT ID	105743
SHEET	TOTAL
P.734	P.1274

DESIGN AGENCY	
	
DESIGNER	
SMS	
REVIEWER	
AKM 05/01/26	
PROJECT ID	
105743	
SHEET	TOTAL
P.744	P.1274

REF NO.	CFN NO.	SHEET NO.	STATION TO STATION				ALIGNMENT	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
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DRAINAGE SUBSUMMARY

DESIGN AGENCY

AECOM

DESIGNER

SMS

REVIEWER

AKM 05/01/26

PROJECT ID

105743

SHEET

P.746

TOTAL

P.1274

FOR LEGEND AND DIAMOND
NOTES, SEE SHEET P.716



A horizontal scale bar with markings at 0, 10, 20, and 40 feet. The scale is oriented horizontally.

DRAINAGE PLAN - I.R. 77
STA. 102+00.00 TO STA. 107+00.00

DESIGN AGENCY

AECOM

DESIGNER

SMS

REVIEWER

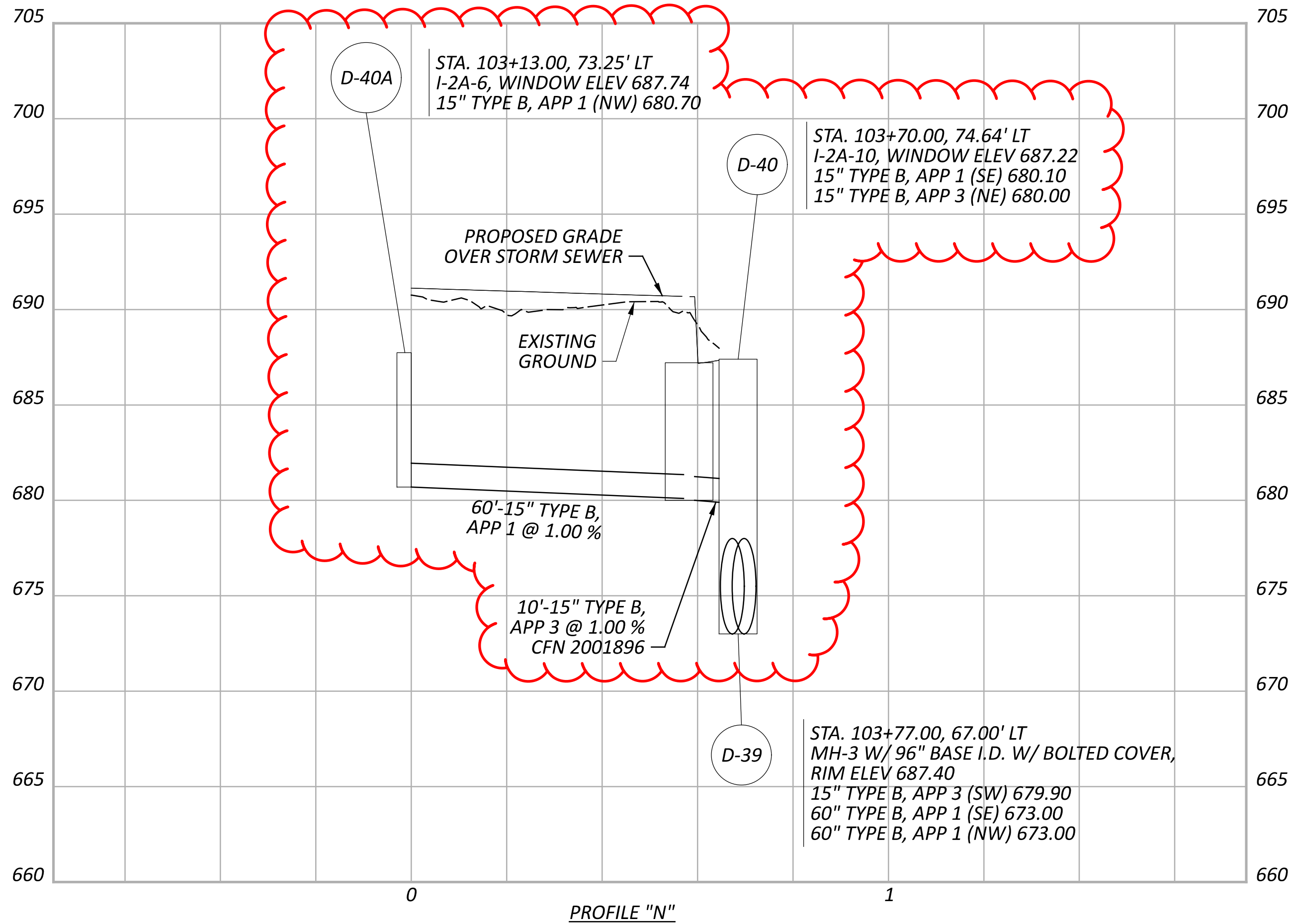
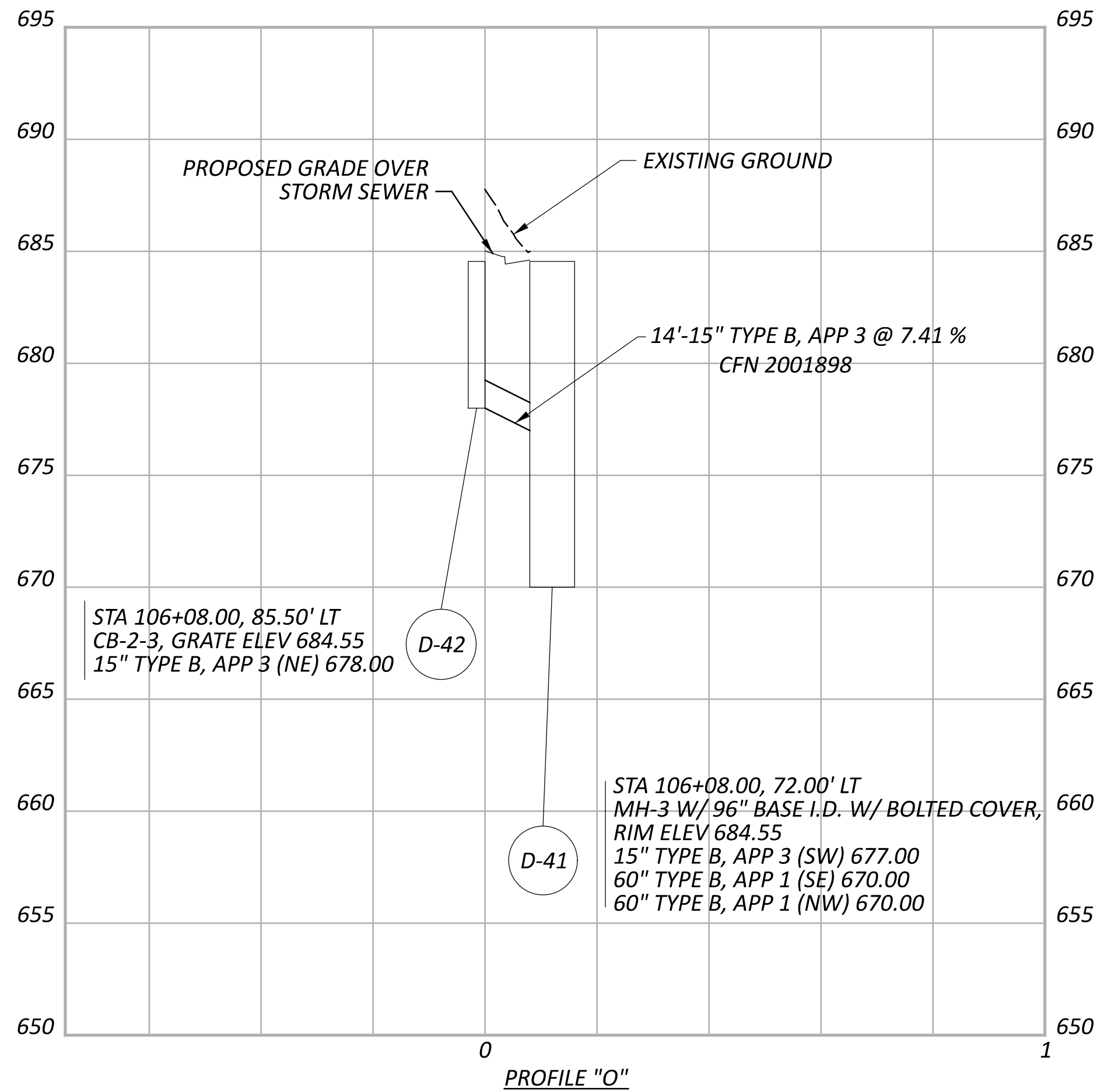
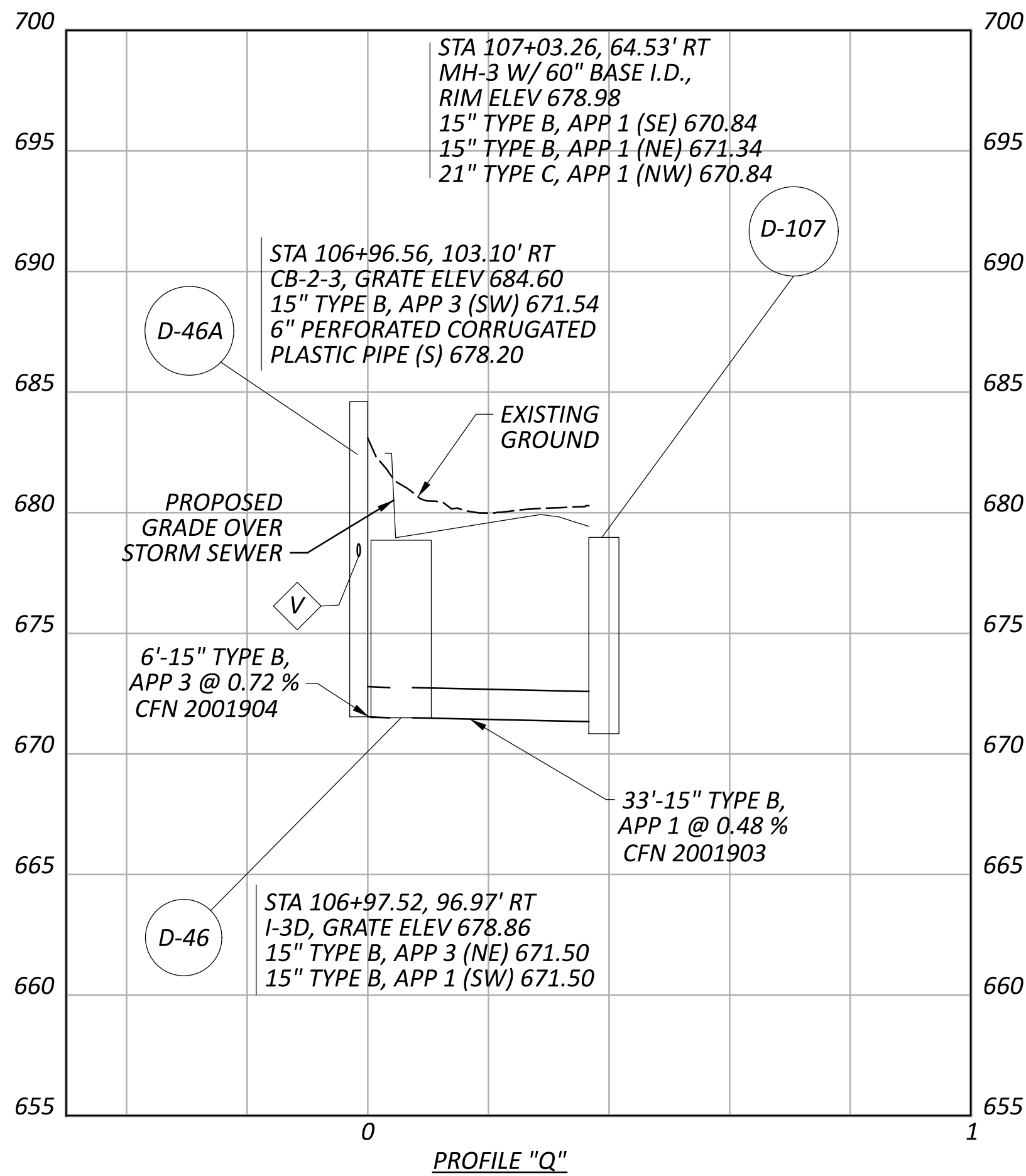
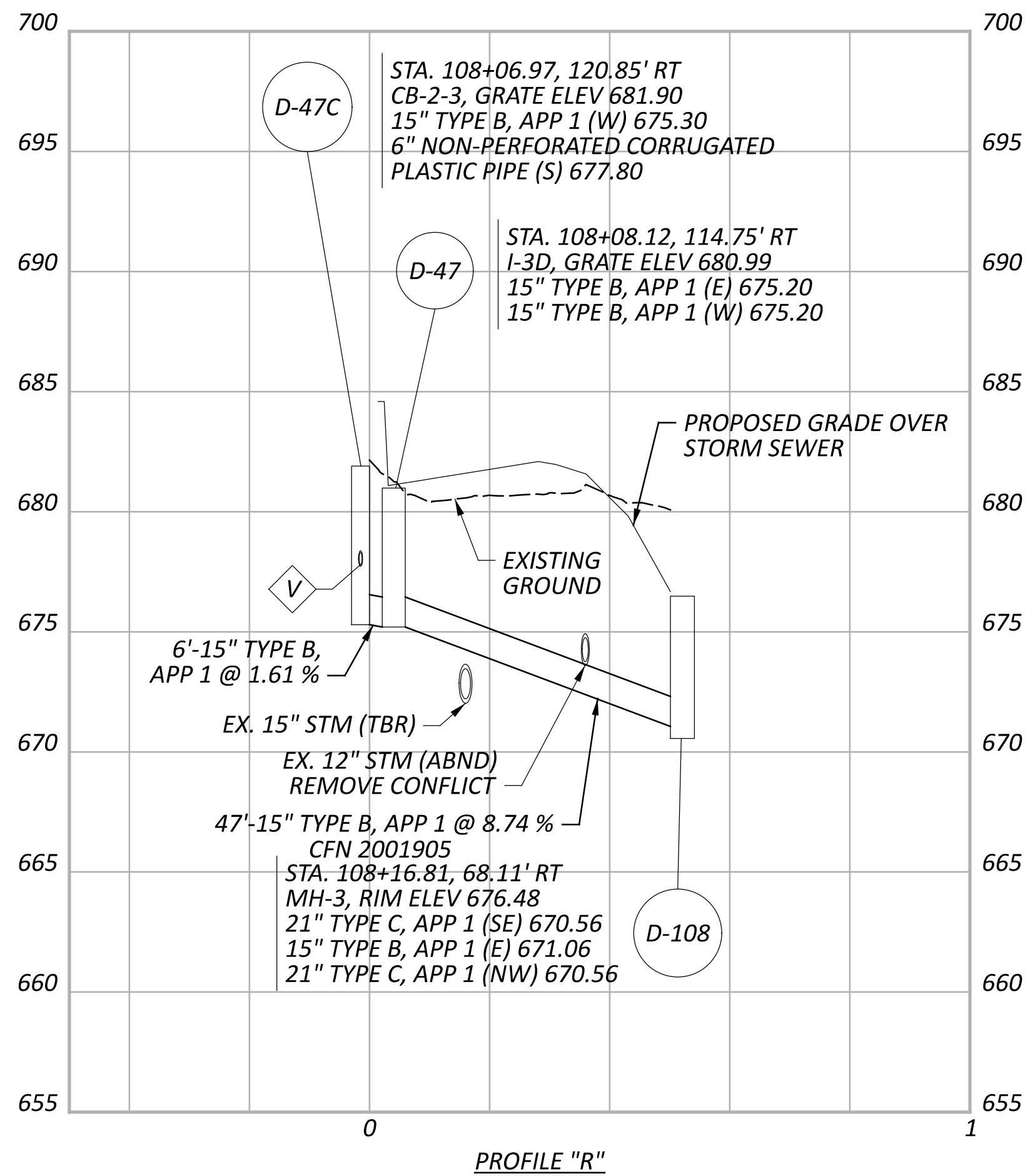
AKM 05/01/26

PROJECT ID

105743

SHEET	TOTAL
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P.761 | P.1274



ESTIMATED QUANTITIES (WALL 1A)					
ITEM	EXTENSION	TOTAL PART	UNIT	DESCRIPTION	SEE SHEET
203	200000	650	CY	EMBANKMENT	
503	21101	126	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	13
507	00400	235	FT	STEEL PILES, MISC.: SOLDIER PILES, W16x36	2
507	00400	206	FT	STEEL PILES, MISC.: SOLDIER PILES, W21x48	2
507	00400	227	FT	STEEL PILES, MISC.: SOLDIER PILES, W21x73	2
507	00400	368	FT	STEEL PILES, MISC.: SOLDIER PILES, W24x94	2
507	00400	810	FT	STEEL PILES, MISC.: SOLDIER PILES, W24x162	2
507	00400	351	FT	STEEL PILES, MISC.: SOLDIER PILES, W33X169	2
509	10000	30423	LB	EPOXY COATED STEEL REINFORCEMENT	
511	46013	268	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	15
512	10001	584	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	2
512	10101	584	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	2
512	33001	73	SY	TYPE 2 WATERPROOFING, AS PER PLAN	2
513	20001	1400	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN	2
516	13600	1832	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	21	SF	2" PREFORMED EXPANSION JOINT FILLER	
518	20000	519	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
518	21200	19	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
524	94503	200	FT	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN	2
524	94603	328	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	2
524	94703	252	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	2
524	94803	712	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	2
SPECIAL	53051020	3238	SF	RETAINING WALL, TIMBER LAGGING	2

ESTIMATED QUANTITIES
RETAINING WALL 1A

DESIGN AGENCY

TRC

DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET

3

TOTAL

16

SHEET

P.835

TOTAL

P.1274



TYPICAL SECTION
RETAINING WALL 1A

 503 UNCLASSIFIED EXCAVATION, AS PER PLAN

 203 EXCAVATION

1. AT THE CONTRACTOR'S OPTION, THE SOLDIER BEAM SIZE MAY BE INCREASED AT NO ADDITIONAL COST TO THE DEPARTMENT. THE PROPOSED BEAM SIZE MUST HAVE A SECTION MODULUS EQUAL TO OR GREATER THAN THE BEAM SIZE SPECIFIED. IN ADDITION, THE PROPOSED BEAM MUST ALLOW AT LEAST 3 INCHES OF CLEARANCE BETWEEN THE FLANGES AND THE SIDE OF THE DRILLED SHAFT.
2. THE NOMINAL CONCRETE FACING THICKNESS IS 12 INCHES. TO ADDRESS MISALIGNMENT OF SOLDIER BEAMS, THE CONTRACTOR MAY PROVIDE ADDITIONAL THICKNESS BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. INSTALL THE PREFABRICATED GEOCOMPOSITE DRAIN (PGD) BETWEEN SOLDIER BEAMS IN ACCORDANCE WITH CMS 518.06. WHERE TIMBER LAGGING IS PLACED, THE PGD SHALL BE SECURED TO THE LAGGING. IF LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, THE PGD SHALL BE ATTACHED TO THE BACK SURFACE OF THE CONCRETE WALL FACING. PGD SHALL EXTEND AT LEAST 6 INCHES INTO THE POROUS BACKFILL BELOW THE WALL FACING.
4. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 4/16.
5. FOR PILE AND DRILLED SHAFT DIMENSIONS AND ELEVATIONS, SEE SHEET 14/16.

DESIGN AGENCY



DESIGNER

FI

VIEWER

IW 11/17/2

PROJECT ID

10E743

103743

SUBSET	TOTAL
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13 | 16

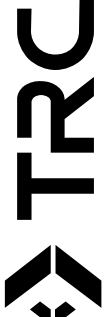
LEFT	TOTAL
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2 845 | 10 125

ESTIMATED QUANTITIES (WALL 1B)					
ITEM	EXTENSION	TOTAL PART 01/IMS	UNIT	DESCRIPTION	SEE SHEET
202	35100	112	FF	PIPE REMOVED, 24" DIAMETER AND UNDER	4
203	200000	710	CY	EMBANKMENT	
503	21101	35	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	8
507	00400	867	FT	STEEL PILES, MISC.: SOLDIER PILES, W30x211	2
509	10000	9551	LB	EPOXY COATED STEEL REINFORCEMENT	
511	46013	84	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	9
512	10001	209	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	2
512	10101	209	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	2
512	33001	21	SY	TYPE 2 WATERPROOFING, AS PER PLAN	2
513	20001	614	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN	2
516	13600	394	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	326	SF	2" PREFORMED EXPANSION JOINT FILLER	
518	20000	216	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
518	21200	4	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	42301	123	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN	2
524	94803	560	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	2
SPECIAL	53051020	887	SF	RETAINING WALL, TIMBER LAGGING	2

ESTIMATED QUANTITIES
RETAINING WALL 1B

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET

3

TOTAL

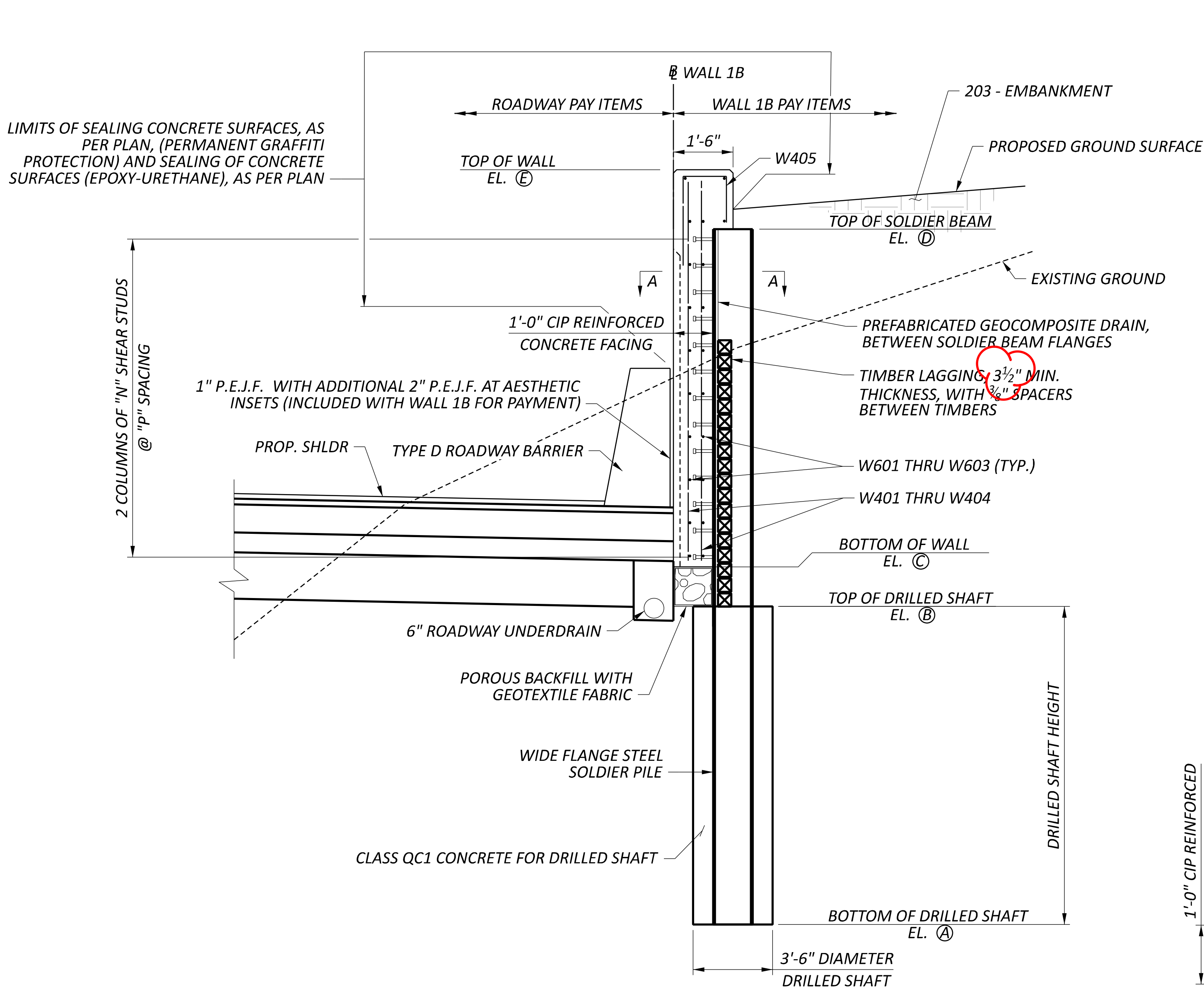
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SHEET

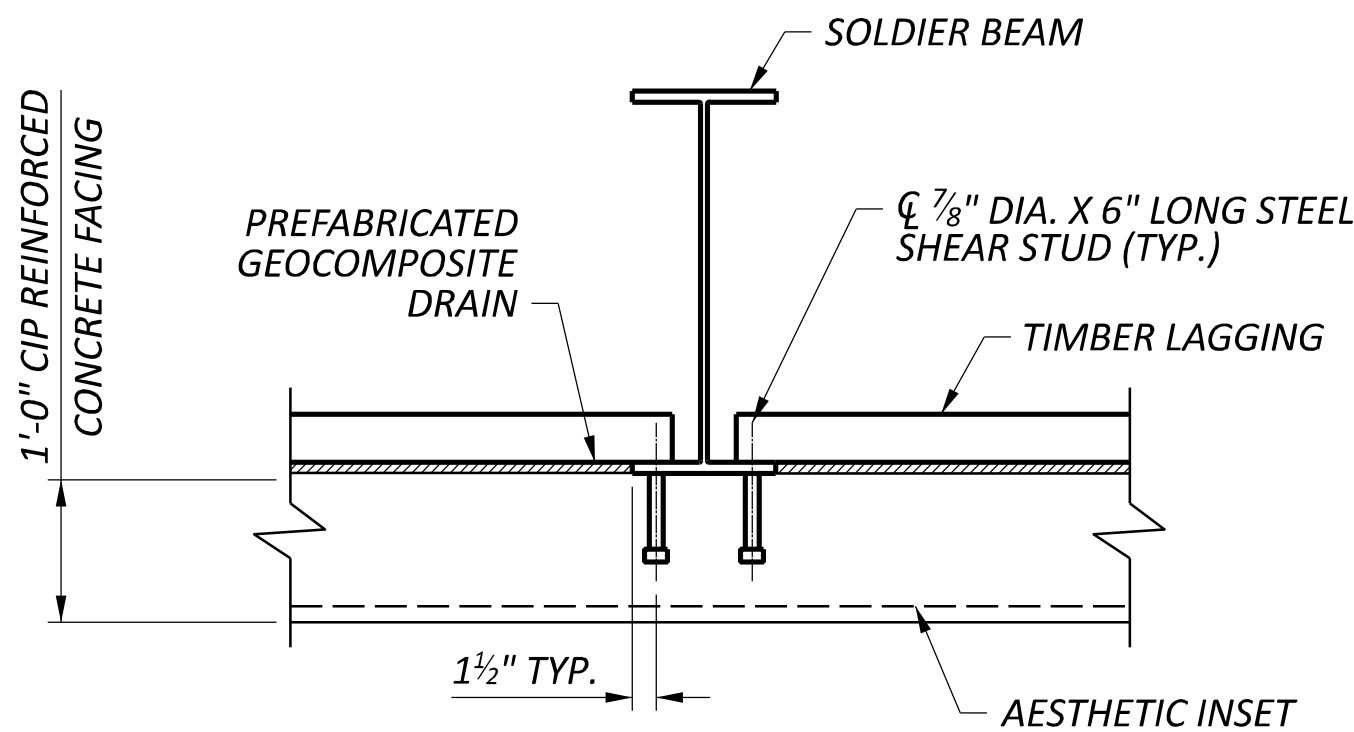
P.851

TOTAL

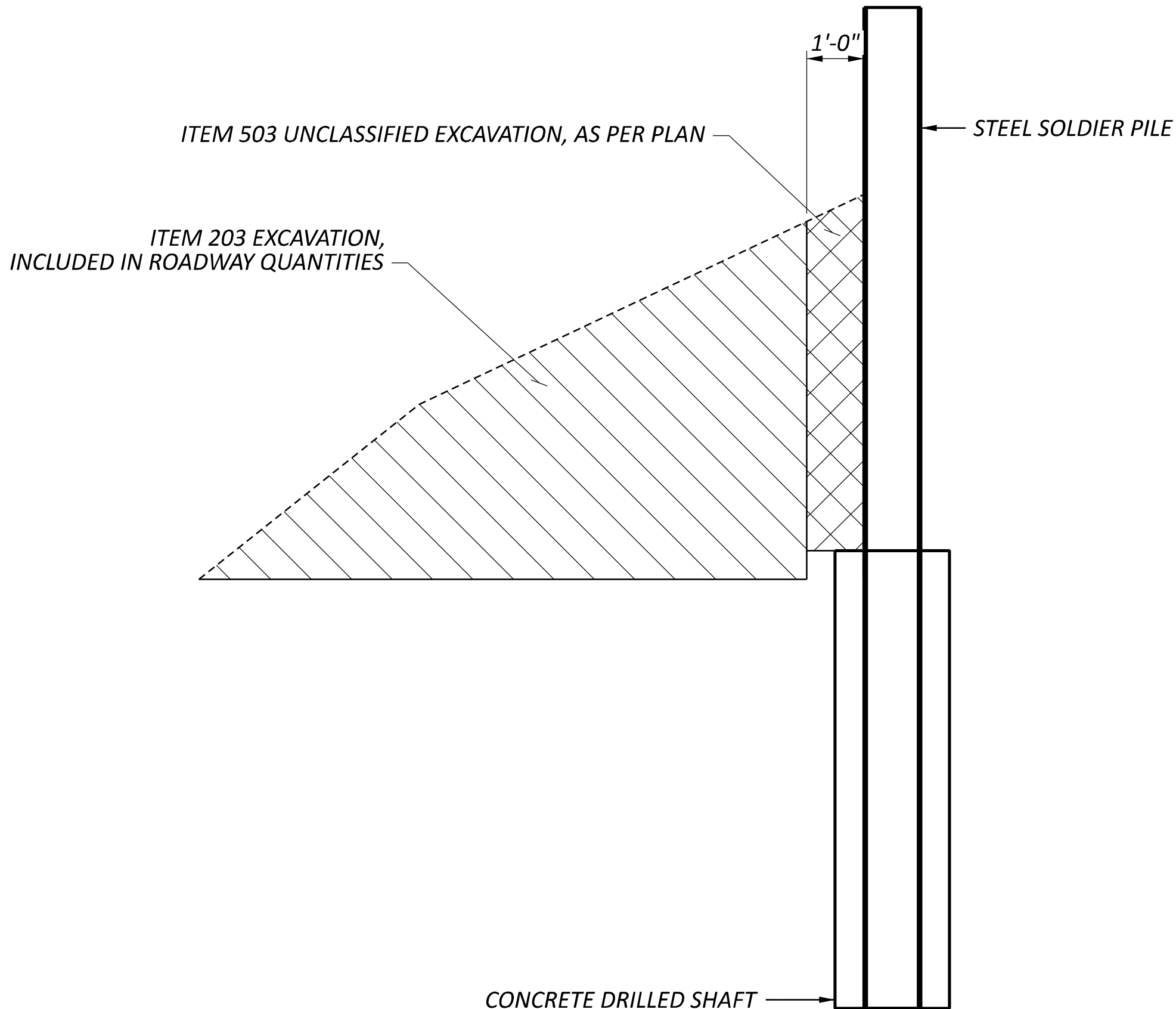
P.1274



WALL 1B TYPICAL SECTION



SECTION A-A



EXCAVATION SCHEMATIC

PILE AND DRILLED SHAFT SIZE AND DIMENSION TABLE

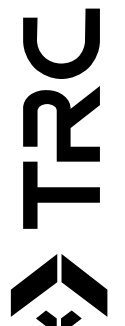
DRILLED SHAFT NUMBER	WALL 1B STATION	OFFSET	BOTT. OF SHAFT ELEVATION (EL. A)	TOP OF SHAFT ELEVATION (EL. B)	BOTT. OF WALL ELEVATION (EL. C)	TOP OF SOLDIER BEAM ELEV. (EL. D)	TOP OF WALL ELEVATION (EL. E)	LENGTH OF SOLDIER BEAM (FEET)	DRILLED SHAFT DIAMETER (INCHES)	SOLDIER BEAM SIZE	NUM. OF SHEAR STUD PAIRS (N)	SPACING OF SHEAR STUDS (P)
1	10+03.24	2.37 LT	658.47	693.47	694.47	713.18	715.18	54.71	42.00	W30X211	20	11.50 in
2	10+09.82	2.37 LT	658.47	693.47	694.47	713.11	715.11	54.64	42.00	W30X211	20	11.25 in
3	10+16.40	2.37 LT	658.47	693.47	694.47	713.03	715.03	54.56	42.00	W30X211	20	11.25 in
4	10+22.99	2.37 LT	658.47	693.47	694.47	712.96	714.96	54.49	42.00	W30X211	19	11.75 in
5	10+29.57	2.37 LT	658.47	693.47	694.47	712.88	714.88	54.41	42.00	W30X211	19	11.75 in
6	10+36.15	2.37 LT	658.47	693.47	694.47	712.81	714.81	54.34	42.00	W30X211	19	11.75 in
7	10+42.74	2.37 LT	658.47	693.47	694.47	712.73	714.73	54.26	42.00	W30X211	19	11.75 in
8	10+49.32	2.37 LT	658.47	693.47	694.47	712.66	714.66	54.19	42.00	W30X211	19	11.75 in
9	10+55.90	2.37 LT	658.47	693.47	694.47	712.58	714.58	54.11	42.00	W30X211	19	11.50 in
10	10+62.49	2.37 LT	658.47	693.47	694.47	712.51	714.51	54.04	42.00	W30X211	19	11.50 in
11	10+69.07	2.37 LT	658.47	693.47	694.47	712.43	714.43	53.96	42.00	W30X211	19	11.50 in
12	10+75.65	2.37 LT	658.47	693.47	694.47	712.36	714.36	53.89	42.00	W30X211	19	11.50 in
13	10+82.44	2.37 LT	658.47	693.47	694.47	712.28	714.28	53.81	42.00	W30X211	19	11.50 in
14	10+89.44	2.37 LT	658.47	693.47	694.47	712.20	714.20	53.73	42.00	W30X211	19	11.25 in
15	10+96.44	2.37 LT	658.47	693.47	694.47	712.12	714.12	53.65	42.00	W30X211	19	11.25 in
16	11+03.44	2.37 LT	658.47	693.47	694.47	712.04	714.04	53.57	42.00	W30X211	19	11.25 in

NOTES:

- AT THE CONTRACTOR'S OPTION, THE SOLDIER BEAM SIZE MAY BE INCREASED AT NO ADDITIONAL COST TO THE DEPARTMENT. THE PROPOSED BEAM SIZE MUST HAVE A SECTION MODULUS EQUAL TO OR GREATER THAN THE BEAM SIZE SPECIFIED. IN ADDITION, THE PROPOSED BEAM MUST ALLOW AT LEAST 3 INCHES OF CLEARANCE BETWEEN THE FLANGES AND THE SIDE OF THE DRILLED SHAFT.
- THE NOMINAL CONCRETE FACING THICKNESS IS 12 INCHES. TO ADDRESS MISALIGNMENT OF SOLDIER BEAMS, THE CONTRACTOR MAY PROVIDE ADDITIONAL THICKNESS BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.
- INSTALL THE PREFABRICATED GEOCOMPOSITE DRAIN (PGD) BETWEEN SOLDIER BEAMS IN ACCORDANCE WITH CMS 518.06. WHERE TIMBER LAGGING IS PLACED, THE PGD SHALL BE SECURED TO THE LAGGING. IF LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, THE PGD SHALL BE ATTACHED TO THE BACK SURFACE OF THE CONCRETE WALL FACING. THE PGD SHALL EXTEND AT LEAST 6 INCHES INTO THE POROUS BACKFILL BELOW THE WALL FACING.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/10.
- FOR WALL FACING ELEVATIONS, SEE SHEETS 6/10 AND 7/10.

TYPICAL SECTION AND PILE AND DRILLED SHAFT SIZE AND DIMENSION TABLE
RETAINING WALL 1B

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET TOTAL

8 10

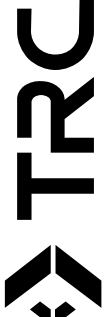
SHEET TOTAL

P.856 P.1274

ESTIMATED QUANTITIES (WALL 1C)					
ITEM	EXTENSION	TOTAL PART	UNIT	DESCRIPTION	SEE SHEET
203	200000	1564	CY	EMBANKMENT	
503	21101	131	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	11
507	00400	2567	FT	STEEL PILES, MISC.: SOLDIER PILES, W30x211	2
509	10000	31192	LB	EPOXY COATED STEEL REINFORCEMENT	
511	46013	271	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	11
512	10001	665	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	2
512	10101	665	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	2
512	33001	72	SY	TYPE 2 WATERPROOFING, AS PER PLAN	2
513	20001	1768	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN	2
516	13600	1306	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	1032	SF	2" PREFORMED EXPANSION JOINT FILLER	
518	20000	693	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
518	21200	14	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
524	94803	1680	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	2
SPECIAL	53051020	3369	SF	RETAINING WALL, TIMBER LAGGING	2

ESTIMATED QUANTITIES
RETAINING WALL 1C

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET

3

TOTAL

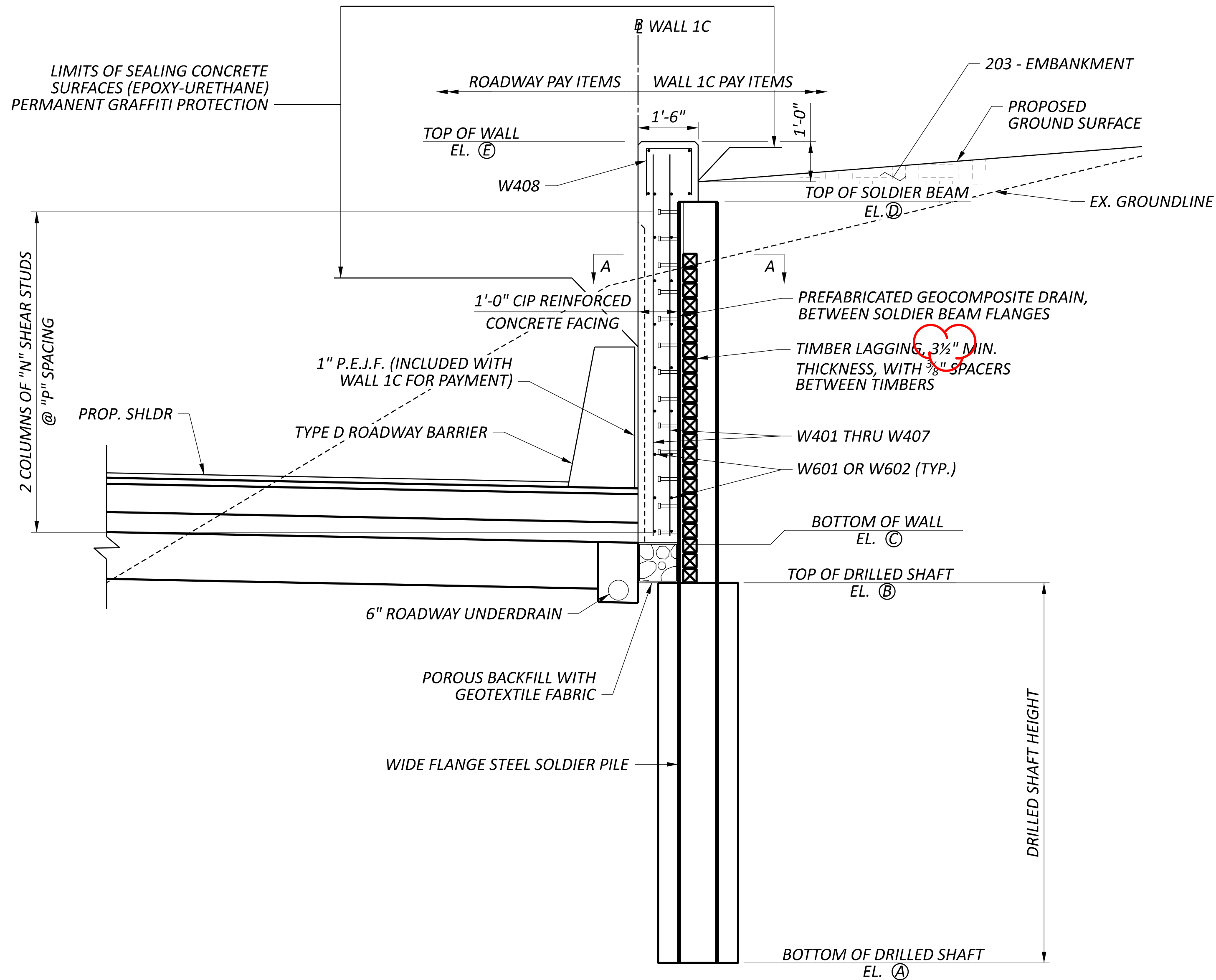
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SHEET

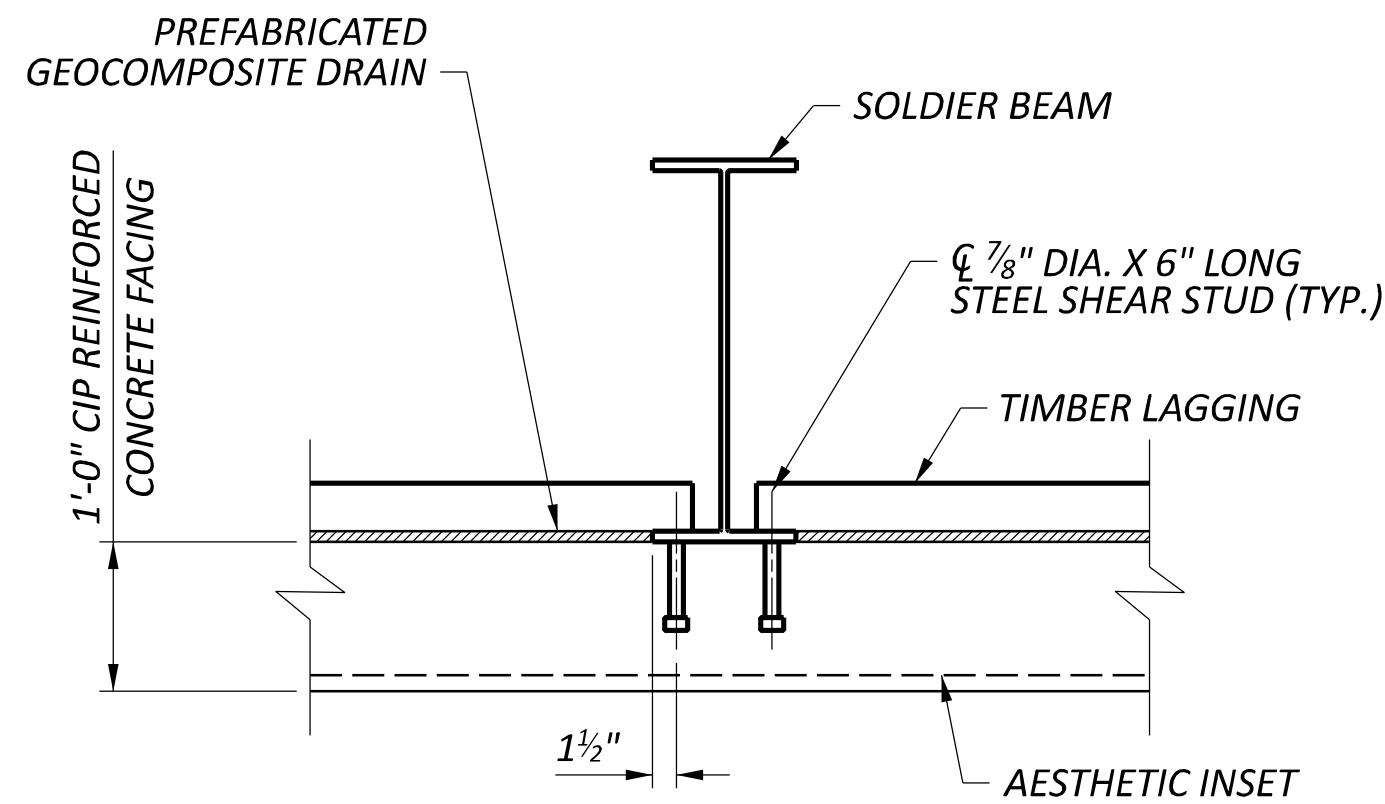
P.861

TOTAL

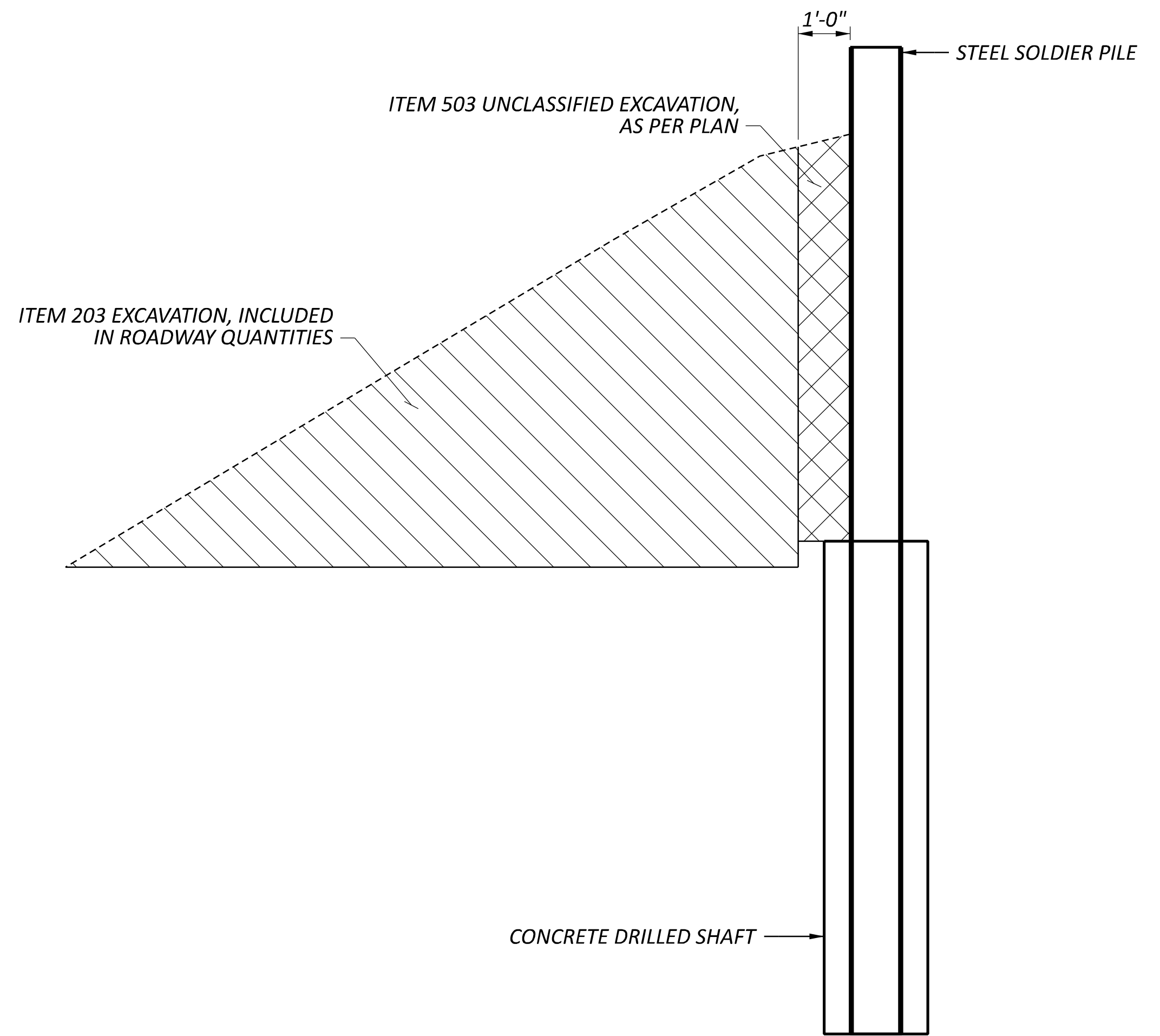
P.1274



WALL 1C TYPICAL SECTION



SECTION A-A



EXCAVATION SCHEMATIC

NOTES:

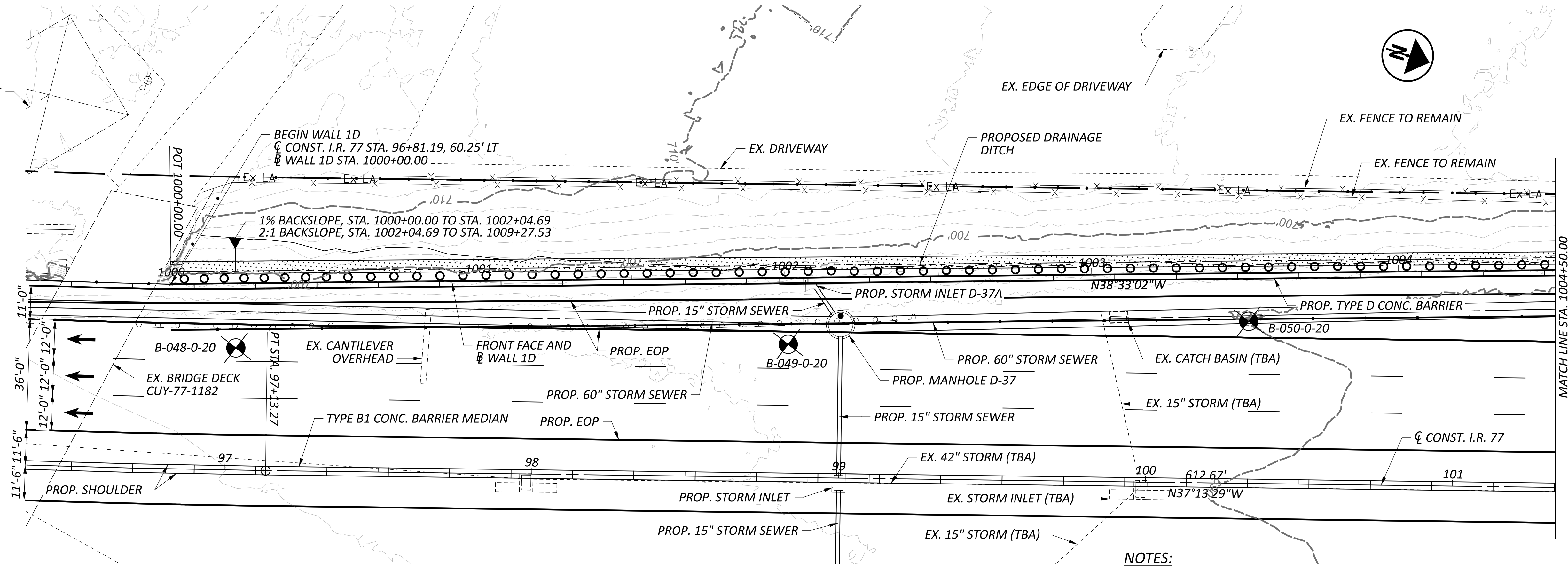
1. AT THE CONTRACTOR'S OPTION, THE SOLDIER BEAM SIZE MAY BE INCREASED AT NO ADDITIONAL COST TO THE DEPARTMENT. THE PROPOSED BEAM SIZE MUST HAVE A SECTION MODULUS EQUAL TO OR GREATER THAN THE BEAM SIZE SPECIFIED. IN ADDITION, THE PROPOSED BEAM MUST ALLOW AT LEAST 3 INCHES OF CLEARANCE BETWEEN THE FLANGES AND THE SIDE OF THE DRILLED SHAFT.
2. THE NOMINAL CONCRETE FACING THICKNESS IS 12 INCHES. TO ADDRESS MISALIGNMENT OF SOLDIER BEAMS, THE CONTRACTOR MAY PROVIDE ADDITIONAL THICKNESS BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. INSTALL THE PREFABRICATED GEOCOMPOSITE DRAIN (PGD) BETWEEN SOLDIER BEAMS IN ACCORDANCE WITH CMS 518.06. WHERE TIMBER LAGGING IS PLACED, THE PGD SHALL BE SECURED TO THE LAGGING. IF LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, THE PGD SHALL BE ATTACHED TO THE BACK SURFACE OF THE CONCRETE WALL FACING. PGD SHALL EXTEND AT LEAST 6 INCHES INTO THE POROUS BACKFILL BELOW THE WALL FACING.
4. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 4/14.
5. FOR PILE AND DRILLED SHAFT DIMENSIONS AND ELEVATIONS, SEE SHEET 12/14.

TYPICAL SECTION
RETAINING WALL 1C

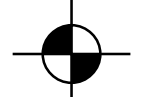
DESIGN AGENCY	
TRC	
DESIGNER	
CEJ	
REVIEWER	
CJW 11/17/25	
PROJECT ID	
105743	
SUBSET	TOTAL
11	14
SHEET	TOTAL
P.869	P.1274

CURVE DATA I.R. 77
P.I. = STA. 86+50.82
 $\Delta = 32^{\circ}47'59''$ LT
 $D_c = 01^{\circ}30'00''$
 $R = 3,819.72'$
 $T = 1,124.19'$
 $L = 2,186.64'$
 $E = 162.00'$

EX. OVERHEAD ELECTRIC



LEGEND:

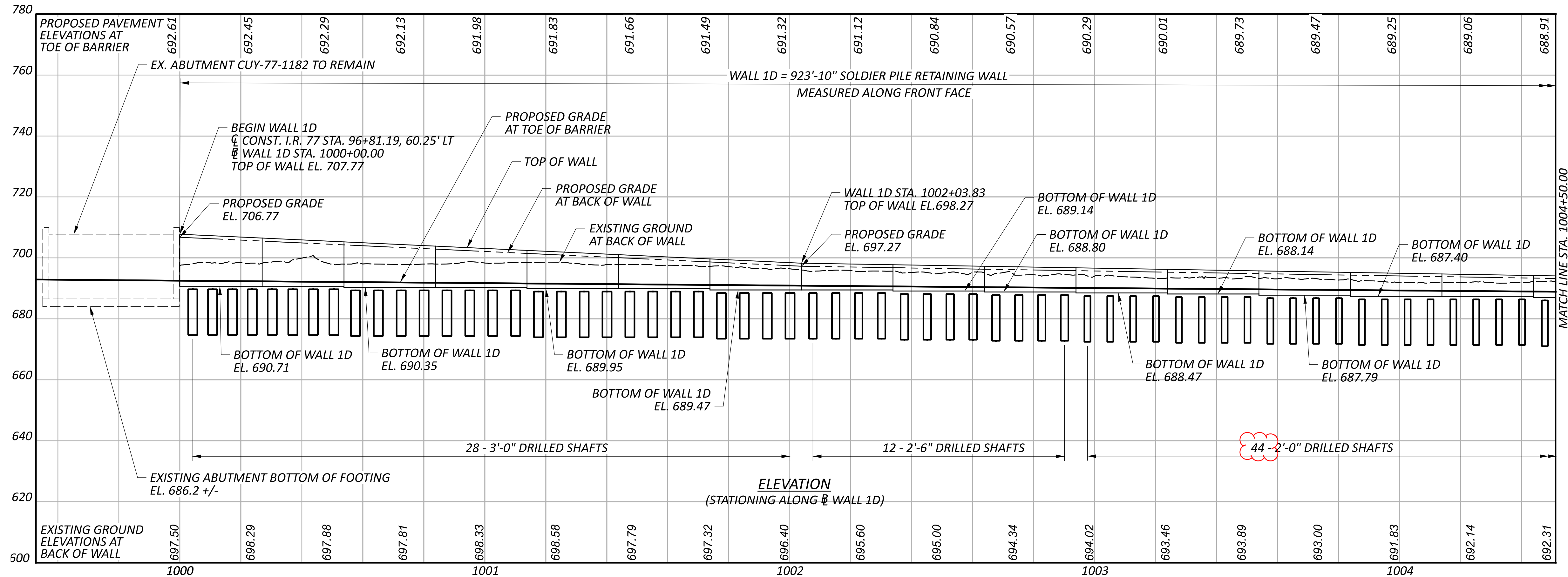


- SOIL BORING OR PAVEMENT CORING LOCATION.

PLAN

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. THE RETAINING WALL SHALL BE CONSTRUCTED IN MAINTENANCE OF TRAFFIC PHASES 1A AND 1B.





ESTIMATED QUANTITIES (WALL 1D)					
ITEM	EXTENSION	TOTAL PART	UNIT	DESCRIPTION	SEE SHEET
203	200000	144	CY	EMBANKMENT	
503	21101	163	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	22
507	00400	252	FT	STEEL PILES, MISC.: SOLDIER PILES, W16x36	3
507	00400	568	FT	STEEL PILES, MISC.: SOLDIER PILES, W16x45	3
507	00400	275	FT	STEEL PILES, MISC.: SOLDIER PILES, W21x93	3
507	00400	899	FT	STEEL PILES, MISC.: SOLDIER PILES, W27x114	3
507	00400	166	FT	STEEL PILES, MISC.: SOLDIER PILES, W27x129	3
509	10000	27545	LB	EPOXY COATED STEEL REINFORCEMENT	
511	46013	240	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	25
512	10001	409	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	3
512	10101	409	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	3
512	33001	60	SY	TYPE 2 WATERPROOFING, AS PER PLAN	3
513	20001	1254	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN	3
516	13600	67	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	2201	SF	2" PREFORMED EXPANSION JOINT FILLER	
518	20000	441	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
518	21200	24	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
524	94503	596	FT	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN	3
524	94603	122	FT	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	3
524	94703	752	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	3
SPECIAL	53051020	3917	SF	RETAINING WALL, TIMBER LAGGING	3

ESTIMATED QUANTITIES
RETAINING WALL 1D

DESIGN AGENCY

TRC

DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET

4

TOTAL

26

SHEET

P.876

TOTAL

P.1274

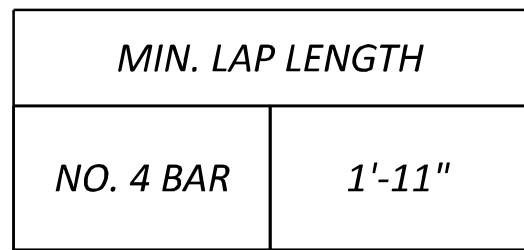


1. FOR WALL ELEVATION VIEW, SEE SHEET 6/26 THRU 21/26.
2. FOR SIZES AND OFFSET DIMENSIONS OF DRILLED SHAFTS AND SOLDIER BEAMS, SEE SHEET 23/26 AND 24/26.
3. FOR AESTHETIC GROOVE DETAILS, SEE SHEET 25/26.

 - DENOTES DRILLED SHAFT WITH SOLDIER BEAM.
 - CONTRACTION JOINT

 - DRILLED SHAFT NUMBER
 - EXPANSION JOINT



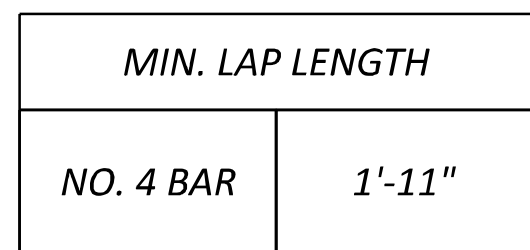


LEGEND:

- (H) - DRILLED SHAFT NUMBER
 (C) - CONTRACTION JOINT
 (E) - EXPANSION JOINT

NOTES:

1. ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
2. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.



LEGEND:

- (#) - DRILLED SHAFT NUMBER
 (C) - CONTRACTION JOINT
 (E) - EXPANSION JOINT

NOTES:

1. ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
2. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

DESIGNER
CEJ

REVIEWER
JW 11/17/25

PROJECT ID	105743
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SUBSET	TOTAL
8	26

MEET	TOTAL
P.880	P.1274

WALL ELEVATION RETAINING WALL 1D



LEGEND:

- (H) - DRILLED SHAFT NUMBER
 (C) - CONTRACTION JOINT
 (E) - EXPANSION JOINT

NOTES:

1. ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
2. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.



DESIGNER

CEJ

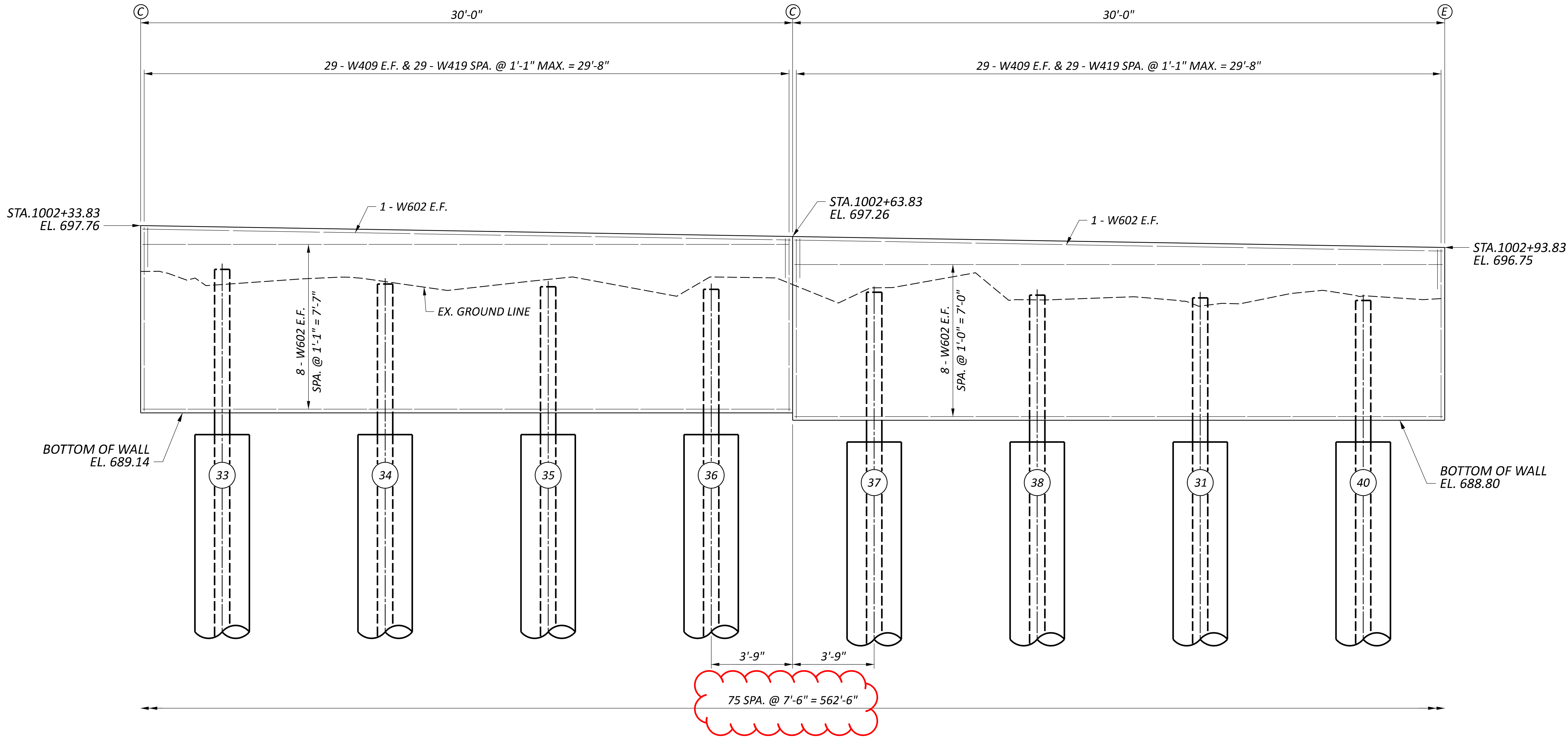
REVIEWER
CJW 11/17/25

PROJECT ID
105743

SUBSET	TOTAL
9	2

SHEET	TOTAL
P.881	P.1274

MIN. LAP LENGTH	
NO. 4 BAR	1'-11"



PARTIAL ELEVATION

LEGEND:

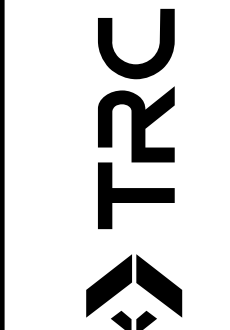
- (#) - DRILLED SHAFT NUMBER
- (C) - CONTRACTION JOINT
- (E) - EXPANSION JOINT

NOTES:

- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

WALL ELEVATION
RETAINING WALL 1D

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

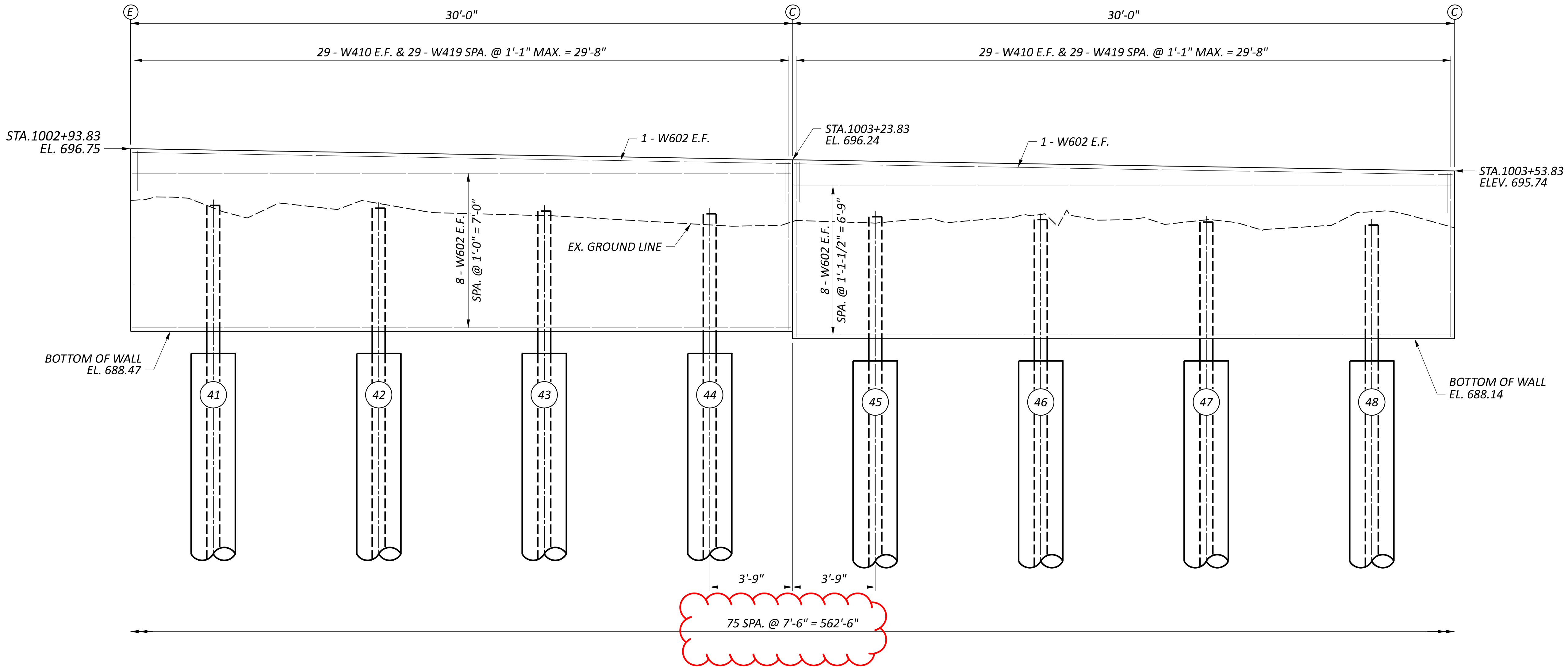
SUBSET TOTAL

10 26

SHEET TOTAL

P.882 P.1274

MIN. LAP LENGTH	
NO. 4 BAR	1'-11"



PARTIAL ELEVATION

LEGEND:

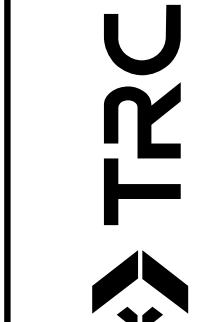
- (#) - DRILLED SHAFT NUMBER
- (C) - CONTRACTION JOINT
- (E) - EXPANSION JOINT

NOTES:

- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

WALL ELEVATION
RETAINING WALL 1D

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

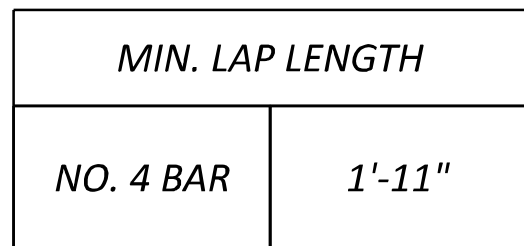
105743

SUBSET TOTAL

11 26

SHEET TOTAL

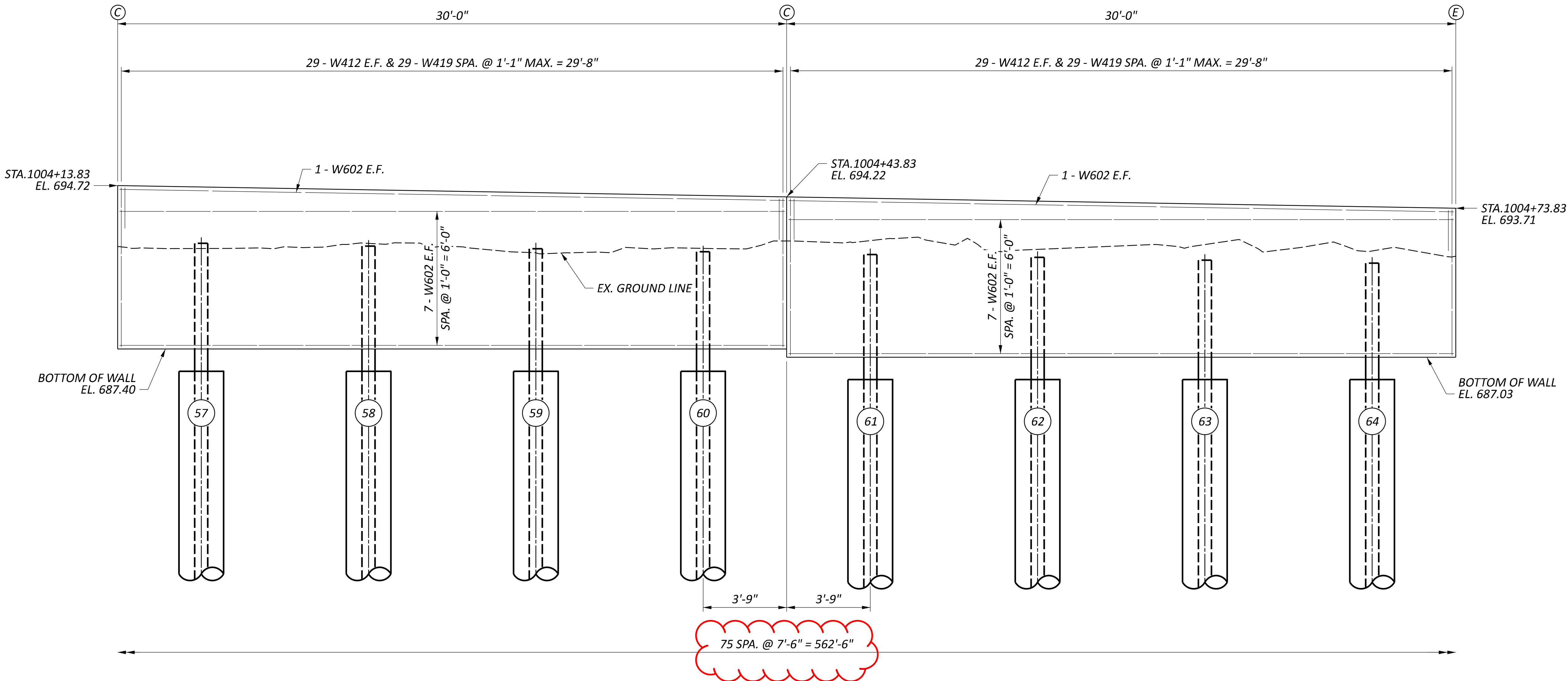
P.883 P.1274



(H) - DRILLED SHAFT NUMBER
 (C) - CONTRACTION JOINT
 (E) - EXPANSION JOINT

1. ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
2. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

MIN. LAP LENGTH	
NO. 4 BAR	1'-11"



PARTIAL ELEVATION

LEGEND:

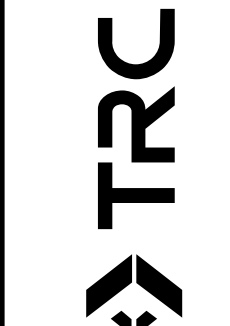
- ⑦ - DRILLED SHAFT NUMBER
- Ⓒ - CONTRACTION JOINT
- Ⓔ - EXPANSION JOINT

NOTES:

- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

WALL ELEVATION
RETAINING WALL 1D

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

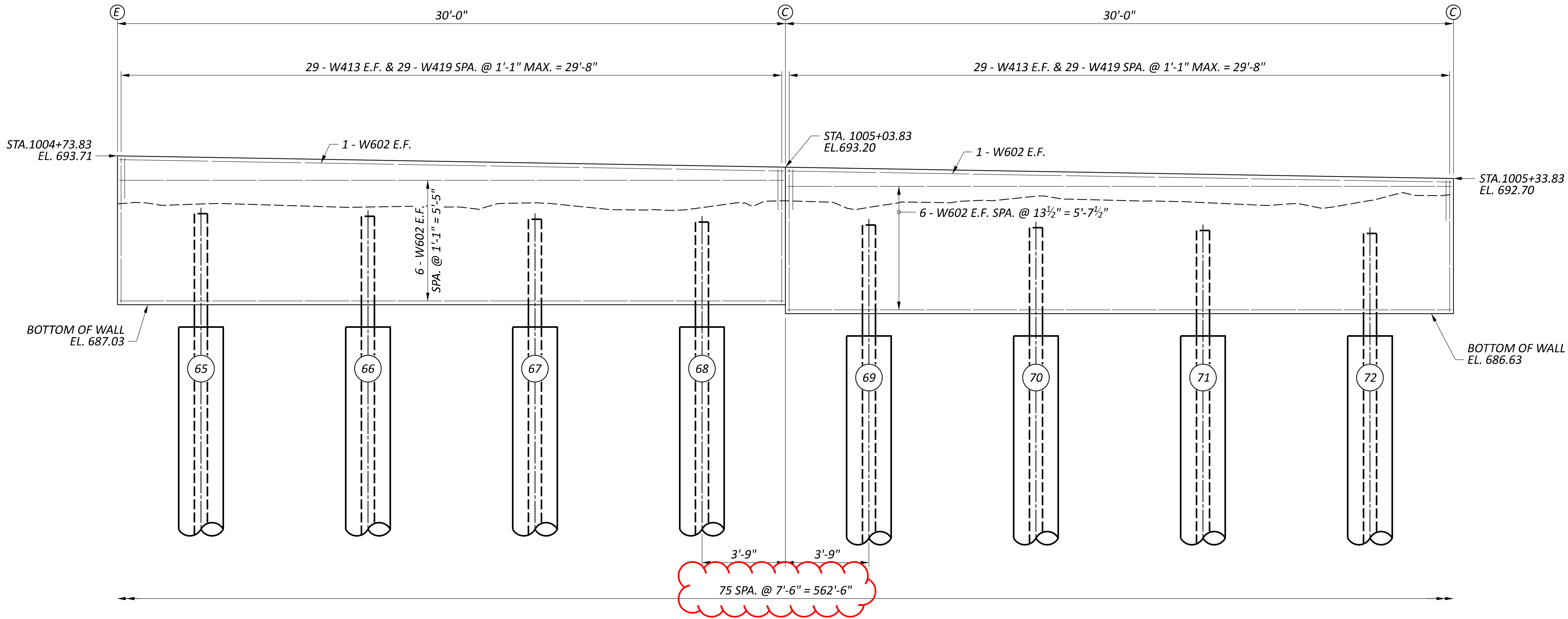
SUBSET TOTAL

13 26

SHEET TOTAL

P.885 P.1274

MIN. LAP LENGTH	
NO. 4 BAR	1'-11"



PARTIAL ELEVATION

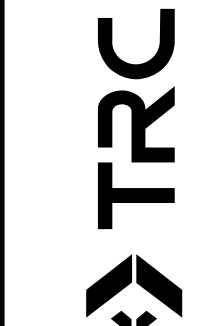
LEGEND:

- # - DRILLED SHAFT NUMBER
- C - CONTRACTION JOINT
- E - EXPANSION JOINT

NOTES:

- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET TOTAL

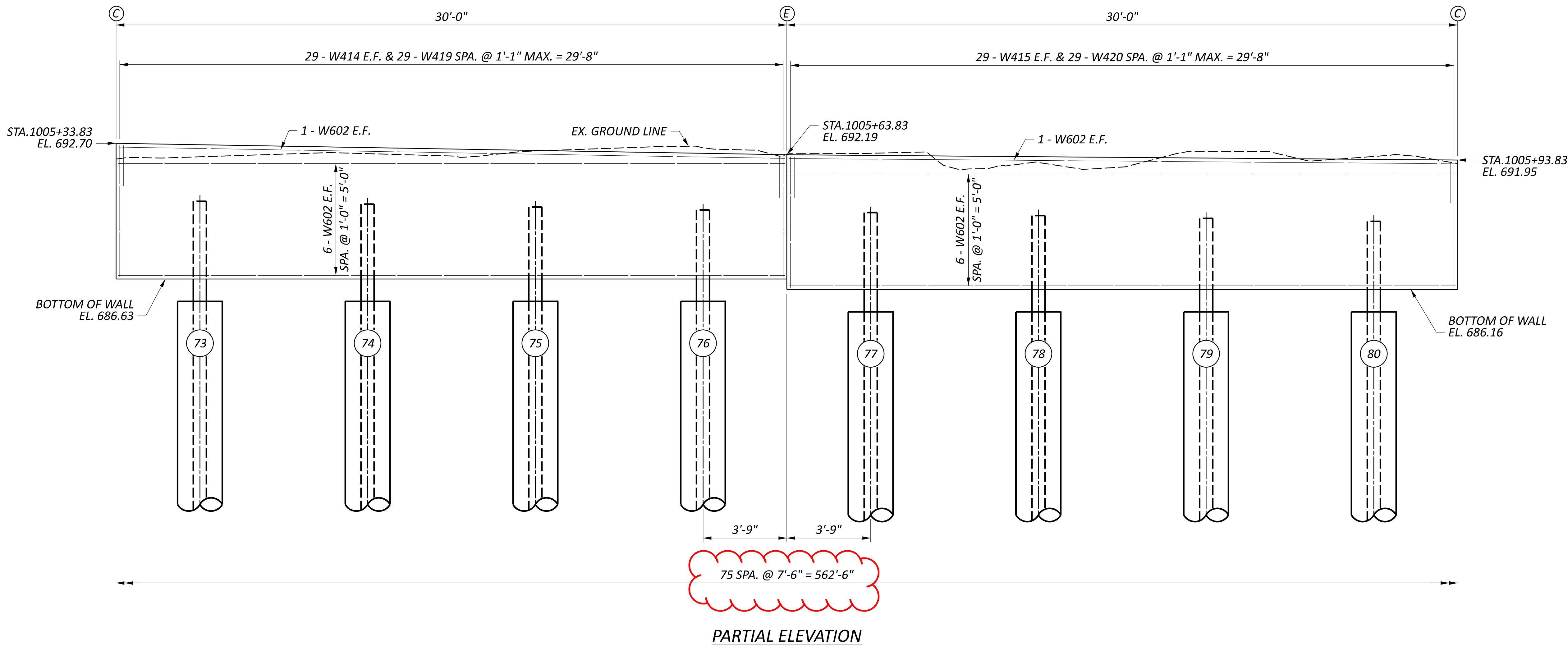
14 26

SHEET TOTAL

P.886 P.1274

WALL ELEVATION
RETAINING WALL 1D

MIN. LAP LENGTH	
NO. 4 BAR	1'-11"



LEGEND:

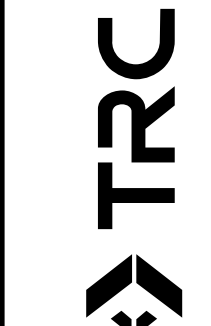
- Ⓐ - DRILLED SHAFT NUMBER
- Ⓒ - CONTRACTION JOINT
- Ⓔ - EXPANSION JOINT

NOTES:

- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

WALL ELEVATION
RETAINING WALL 1D

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

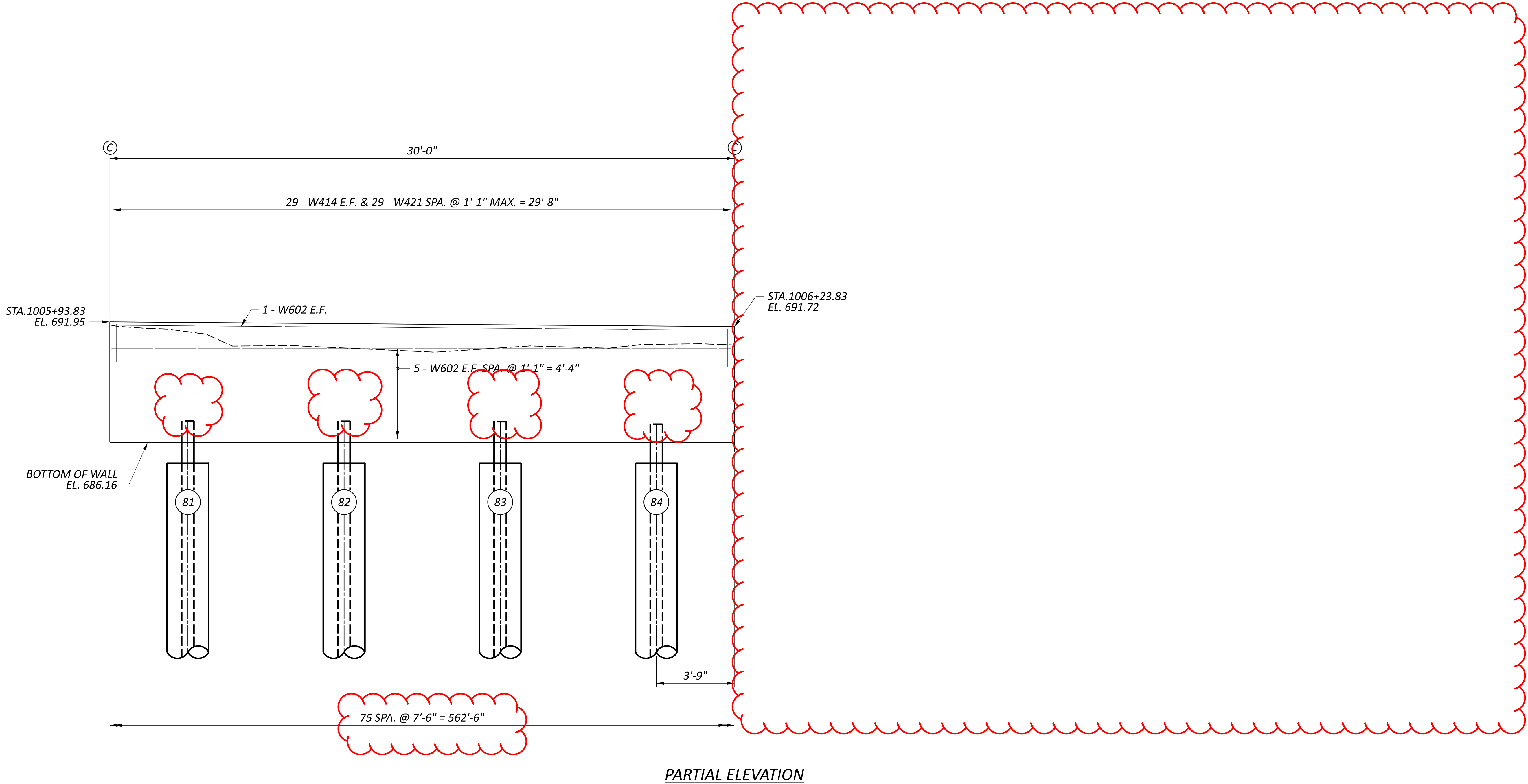
SUBSET TOTAL

15 26

SHEET TOTAL

P.887 P.1274

MIN. LAP LENGTH	
NO. 4 BAR	1'-11"



LEGEND:

- # - DRILLED SHAFT NUMBER
- C - CONTRACTION JOINT
- E - EXPANSION JOINT

NOTES:

- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.

WALL ELEVATION
RETAINING WALL 1D

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET

16

TOTAL

26

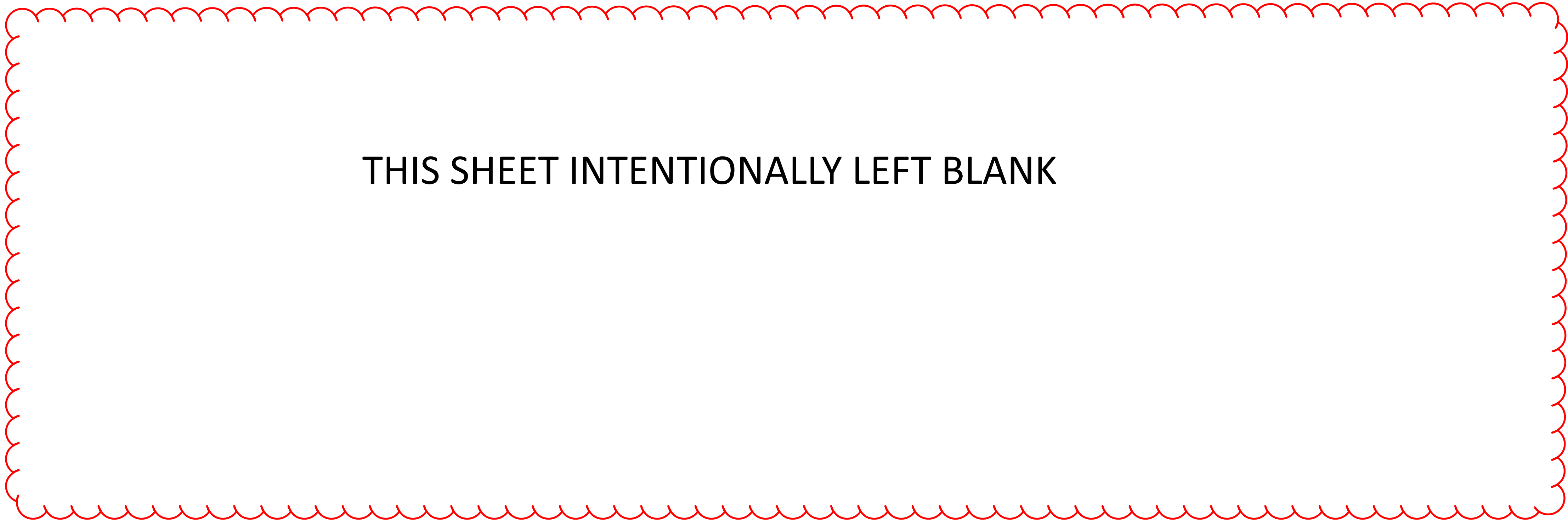
SHEET

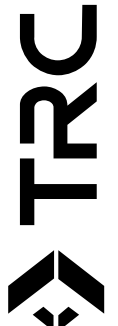
P.888

TOTAL

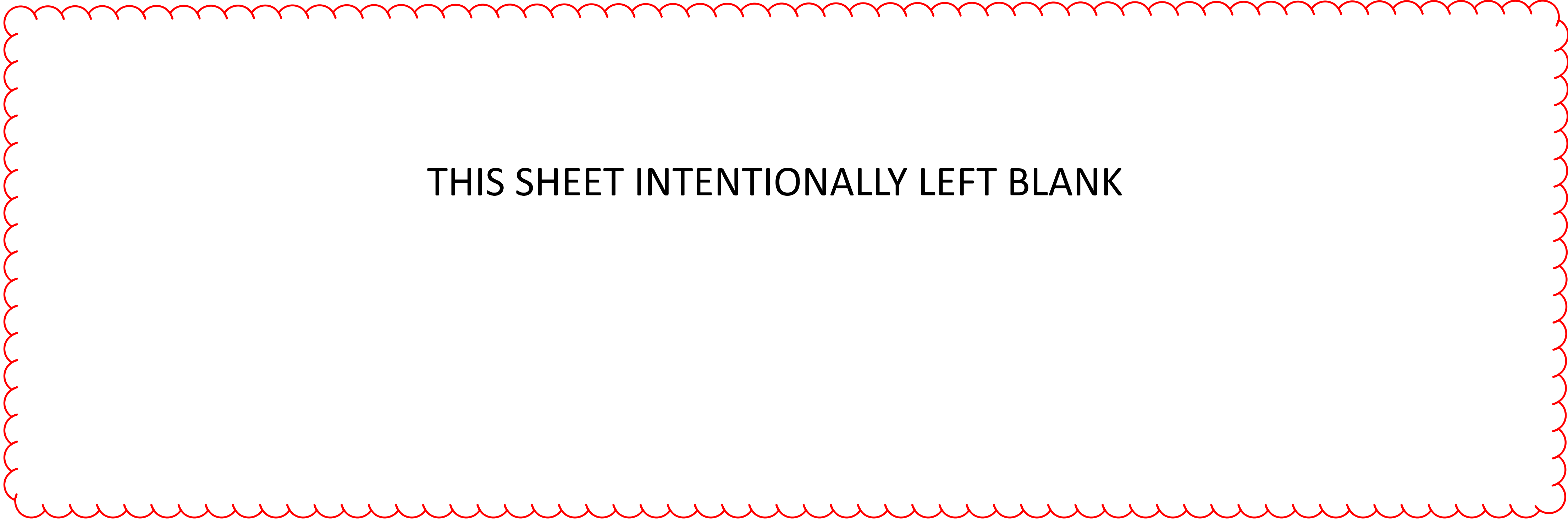
P.1274

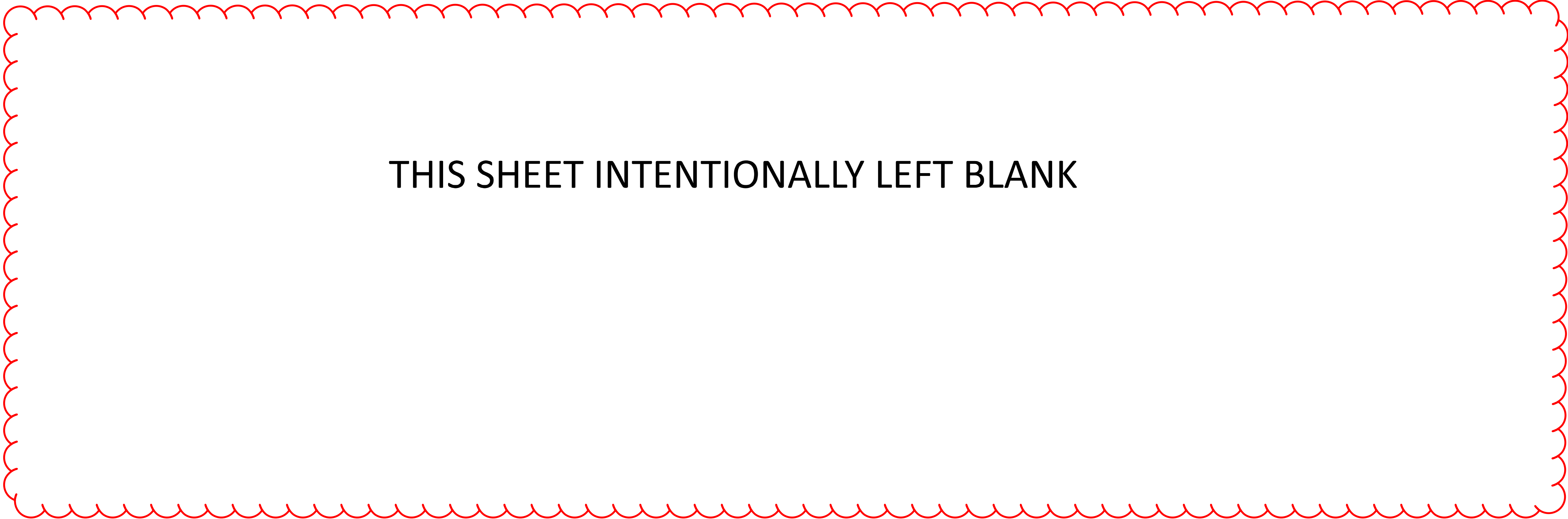
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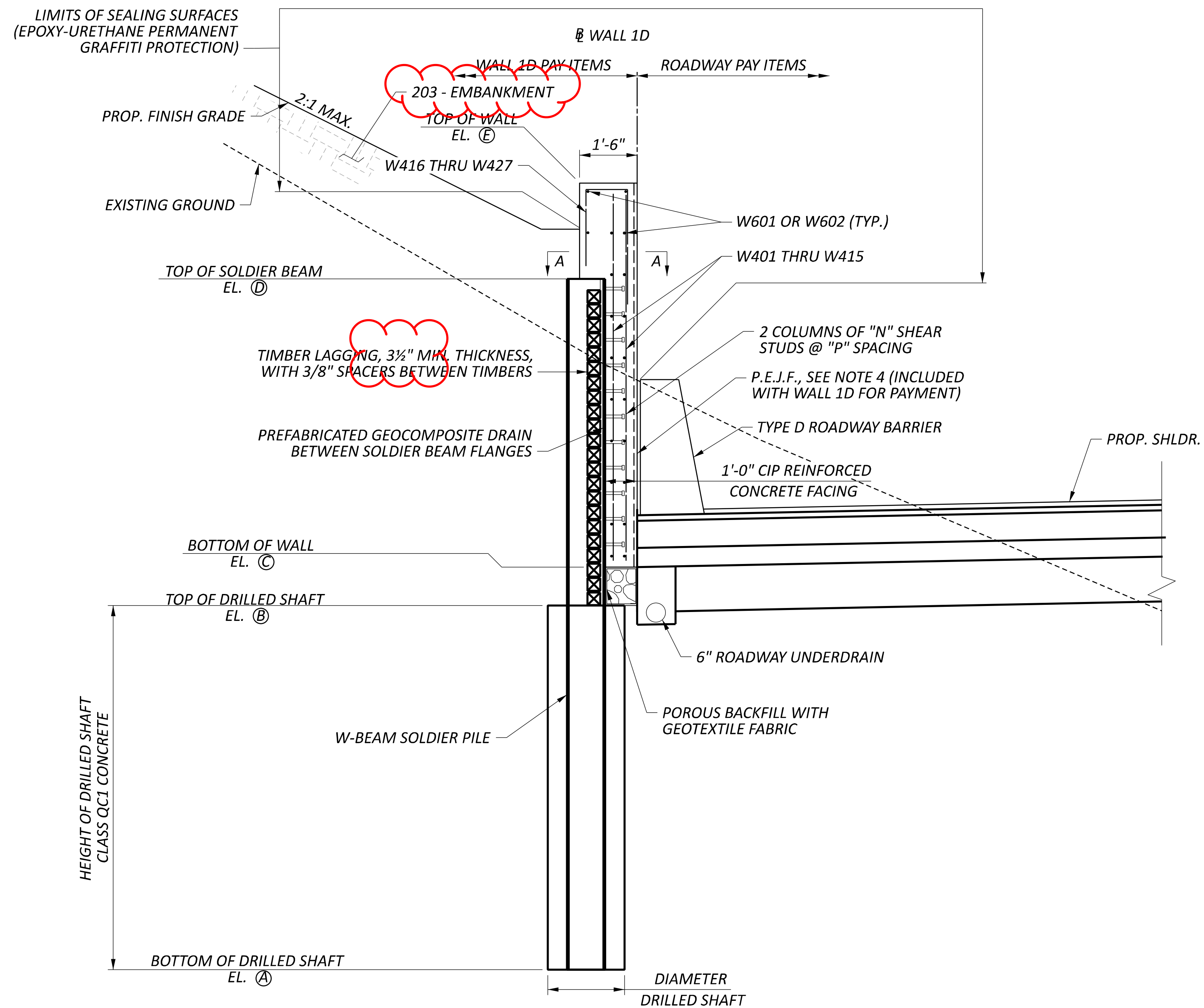
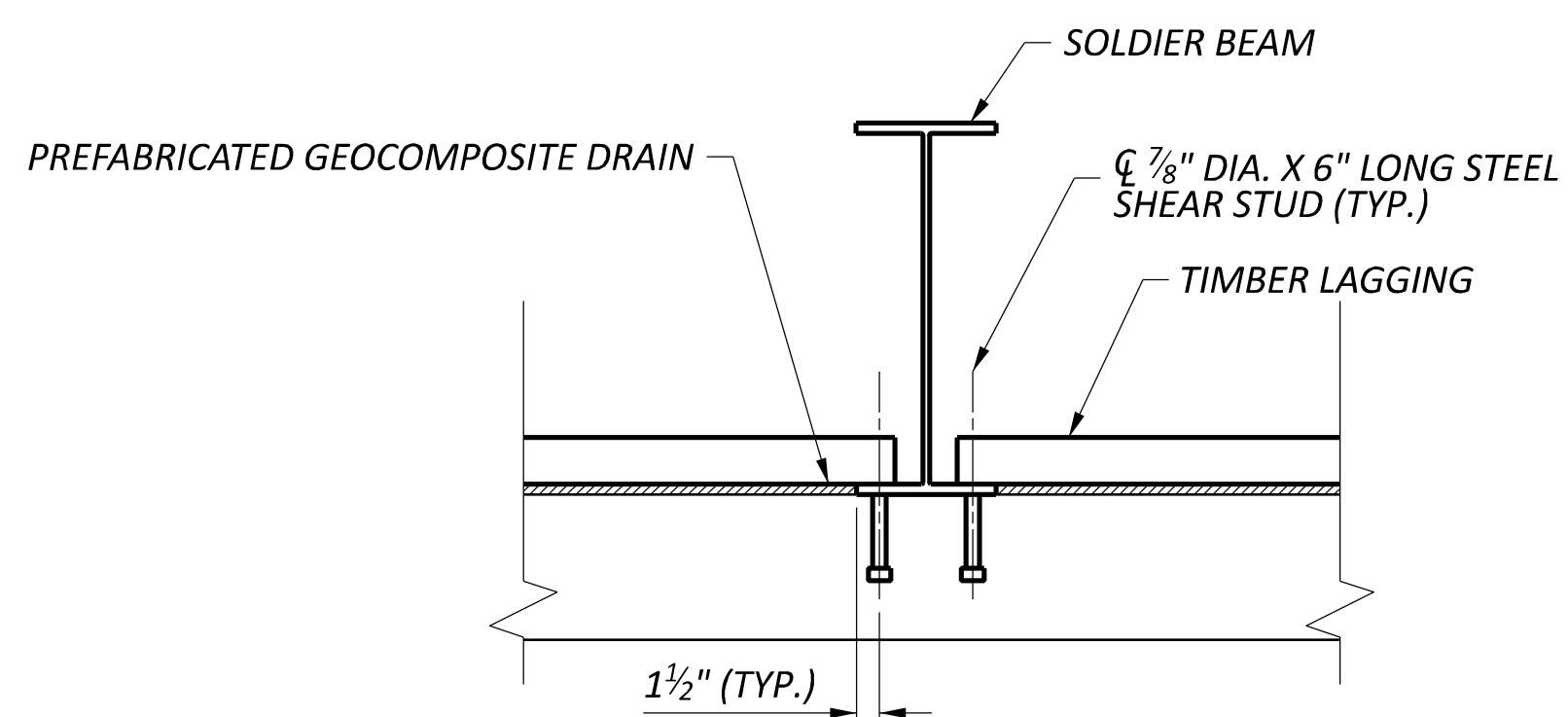
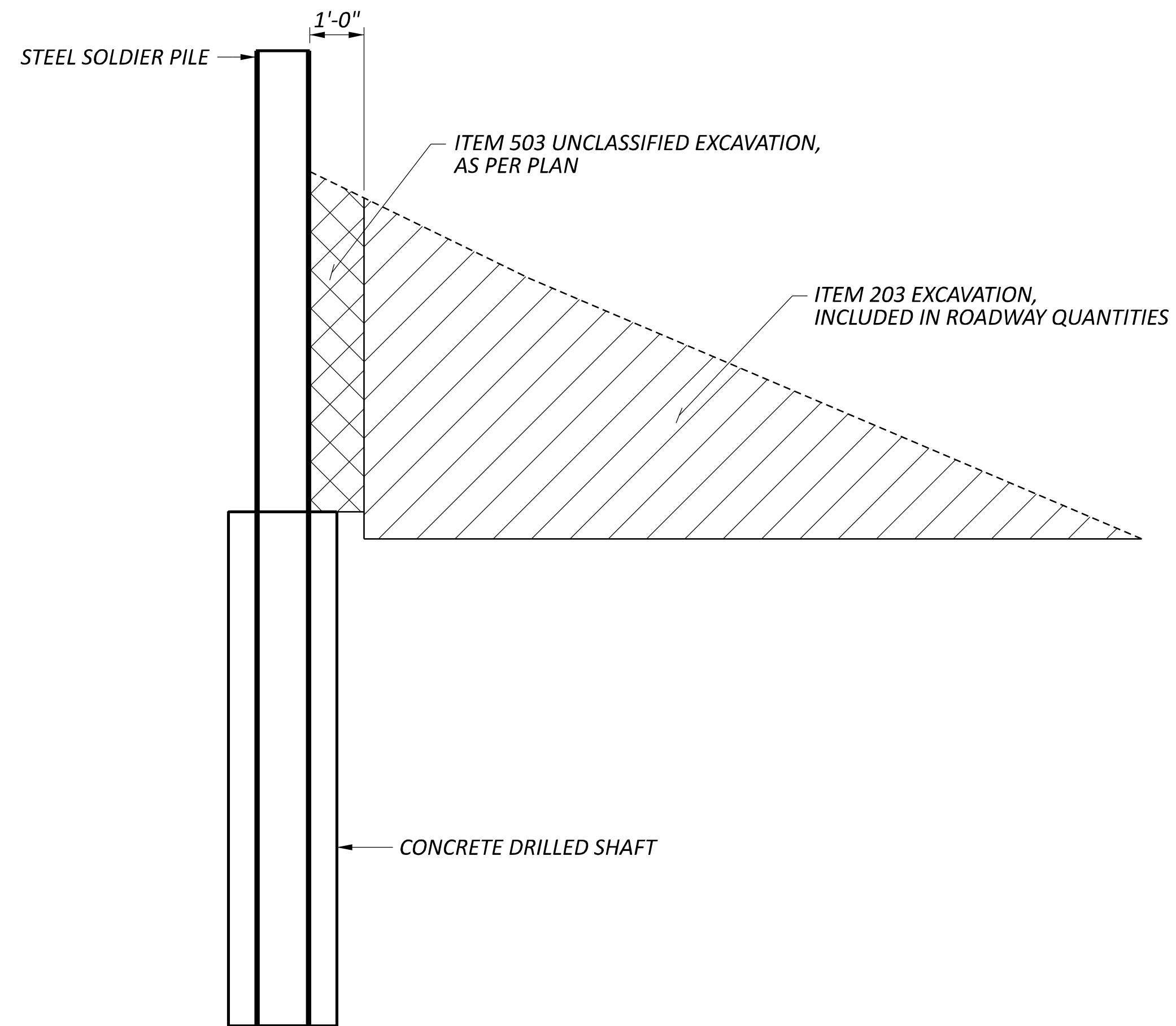
DESIGN AGENCY	
	
DESIGNER	
CEJ	
REVIEWER	
CJW	11/17/25
PROJECT ID	
105743	
SUBSET	TOTAL
18	26
SHEET	TOTAL
P.890	P.1274

WALL ELEVATION
RETAINING WALL 1D





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WALL 1D TYPICAL SECTIONSECTION A-AEXCAVATION SCHEMATICNOTES:

1. AT THE CONTRACTOR'S OPTION, THE SOLDIER BEAM SIZE MAY BE INCREASED AT NO ADDITIONAL COST TO THE DEPARTMENT. THE PROPOSED BEAM SIZE MUST HAVE A SECTION MODULUS EQUAL TO OR GREATER THAN THE BEAM SIZE SPECIFIED. IN ADDITION, THE PROPOSED BEAM MUST ALLOW AT LEAST 3 INCHES OF CLEARANCE BETWEEN THE FLANGES AND THE SIDE OF THE DRILLED SHAFT.
2. THE NOMINAL CONCRETE FACING THICKNESS IS 12 INCHES. TO ADDRESS MISALIGNMENT OF SOLDIER BEAMS, THE CONTRACTOR MAY PROVIDE ADDITIONAL THICKNESS BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. INSTALL THE PREFABRICATED GEOCOMPOSITE DRAIN (PGD) BETWEEN SOLDIER BEAMS IN ACCORDANCE WITH CMS 518.06. WHERE TIMBER LAGGING IS PLACED, THE PGD SHALL BE SECURED TO THE LAGGING. IF LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, THE PGD SHALL BE ATTACHED TO THE BACK SURFACE OF THE CONCRETE WALL FACING. PGD SHALL EXTEND AT LEAST 6 INCHES INTO THE POROUS BACKFILL BELOW THE WALL FACING.
4. THICKNESS OF PREFORMED EXPANSION JOINT FILLER VARIES FROM 1" TO 2 1/2". AN AVERAGE THICKNESS OF 2" IS ASSUMED FOR COST ESTIMATE.
5. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.
6. FOR PILE AND DRILLED SHAFT DIMENSIONS AND ELEVATIONS, SEE SHEETS 23/26 AND 24/26.

TYPICAL SECTION
RETAINING WALL 1D

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET TOTAL

22 26

SHEET TOTAL

P.894 P.1274

DRILLED SHAFT NUMBER	WALL 1D STATION	OFFSET	BOTT. OF SHAFT ELEVATION (EL. A)	TOP OF SHAFT ELEVATION (EL. B)	BOTT. OF WALL ELEVATION (EL. C)	TOP OF SOLDIER BEAM ELEV. (EL. D)	TOP OF WALL ELEVATION (EL. E)	LENGTH OF SOLDIER BEAM (FEET)	DRILLED SHAFT DIAMETER (INCHES)	SOLDIER BEAM SIZE	NUM. OF SHEAR STUD PAIRS (N)	SPACING OF SHEAR STUDS (P)
63	1004+62.58	1.67 LT	672.03	686.03	687.03	691.38	693.90	19.35	24.00	W16X45	5	11.50 in
64	1004+70.08	1.67 LT	672.03	686.03	687.03	691.25	693.77	19.22	24.00	W16X45	5	11.00 in
65	1004+77.58	1.67 LT	672.03	686.03	687.03	691.12	693.65	19.09	24.00	W16X45	5	10.75 in
66	1004+85.08	1.67 LT	672.03	686.03	687.03	691.00	693.52	18.97	24.00	W16X45	5	10.25 in
67	1004+92.58	1.67 LT	672.03	686.03	687.03	690.87	693.39	18.84	24.00	W16X45	5	10.00 in
68	1005+00.08	1.67 LT	672.03	686.03	687.03	690.74	693.27	18.71	24.00	W16X45	5	9.50 in
69	1005+07.58	1.66 LT	673.63	685.63	686.63	690.61	693.14	16.98	24.00	W16X36	5	10.25 in
70	1005+15.08	1.66 LT	673.63	685.63	686.63	690.49	693.01	16.86	24.00	W16X36	5	10.00 in
71	1005+22.58	1.66 LT	673.63	685.63	686.63	690.36	692.89	16.73	24.00	W16X36	5	9.50 in
72	1005+30.08	1.66 LT	673.63	685.63	686.63	690.23	692.76	16.60	24.00	W16X36	5	9.25 in
73	1005+37.58	1.66 LT	673.63	685.63	686.63	690.11	692.63	16.48	24.00	W16X36	4	11.75 in
74	1005+45.08	1.66 LT	673.63	685.63	686.63	689.98	692.51	16.35	24.00	W16X36	4	11.25 in
75	1005+52.58	1.66 LT	673.63	685.63	686.63	689.85	692.38	16.22	24.00	W16X36	4	10.75 in
76	1005+60.08	1.66 LT	673.63	685.63	686.63	689.72	692.25	16.09	24.00	W16X36	4	10.25 in
77	1005+67.58	1.66 LT	673.16	685.16	686.16	689.60	692.16	16.44	24.00	W16X36	4	11.50 in
78	1005+75.08	1.66 LT	673.16	685.16	686.16	689.47	692.10	16.31	24.00	W16X36	4	11.00 in
79	1005+82.58	1.66 LT	673.16	685.16	686.16	689.34	692.04	16.18	24.00	W16X36	4	10.50 in
80	1005+90.08	1.66 LT	673.16	685.16	686.16	689.21	691.98	16.05	24.00	W16X36	4	10.00 in
81	1005+97.58	1.66 LT	673.16	685.16	686.16	688.13	691.92	14.97	24.00	W16X36	4	9.50 in
82	1006+05.08	1.66 LT	673.16	685.16	686.16	688.00	691.86	14.84	24.00	W16X36	4	9.00 in
83	1006+12.58	1.66 LT	673.16	685.16	686.16	687.87	691.81	14.71	24.00	W16X36	4	8.50 in
84	1006+20.08	1.66 LT	673.16	685.16	686.16	687.75	691.75	14.59	24.00	W16X36	4	8.00 in

NOTES:

1. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 5/26.
2. FOR TYPICAL WALL SECTION, SEE SHEET 22/26.
3. FOR WALL FACING ELEVATIONS, SEE SHEETS 6/26 THRU 21/26.

DESIGN AGENCY

TRC

DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET

24

TOTAL

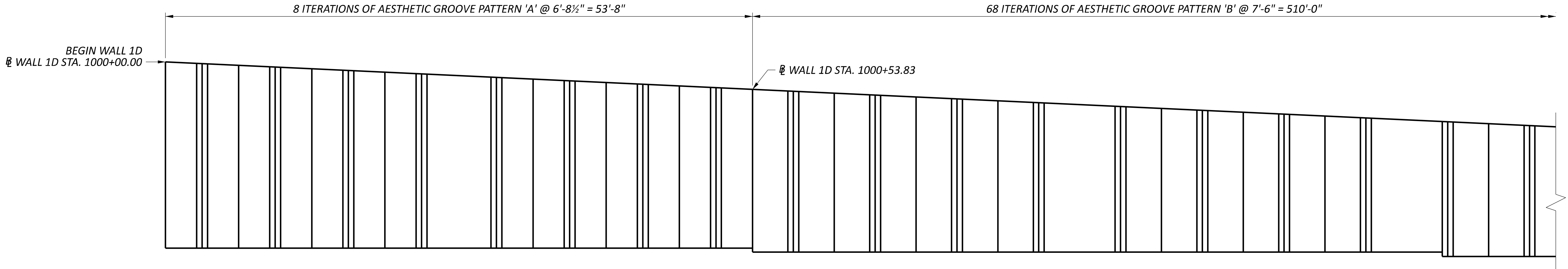
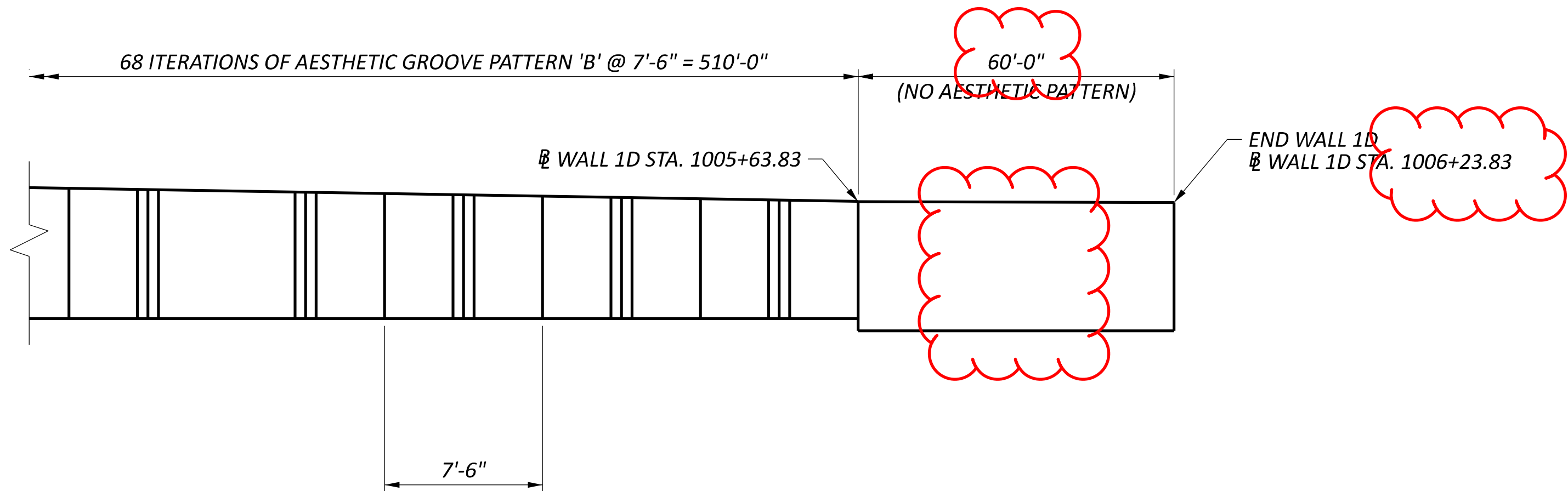
26

SHEET

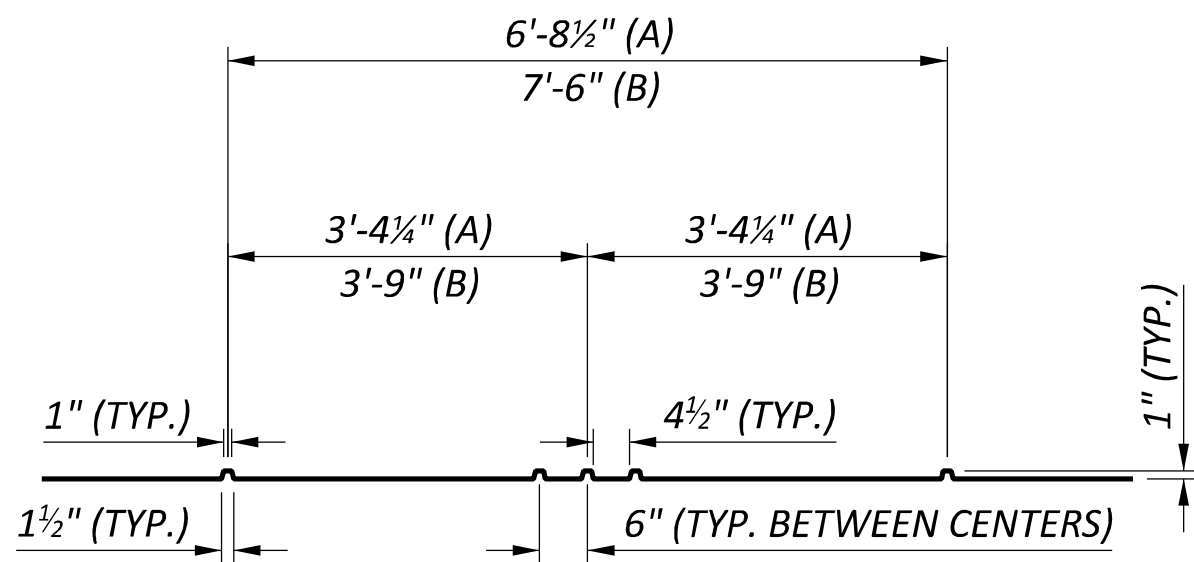
P.896

TOTAL

P.1274



AESTHETIC WALL FACING ELEVATION



AESTHETIC GROOVE DETAIL

LEGEND:

- (A) - AESTHETIC GROOVE PATTERN 'A'
- (B) - AESTHETIC GROOVE PATTERN 'B'

NOTES:

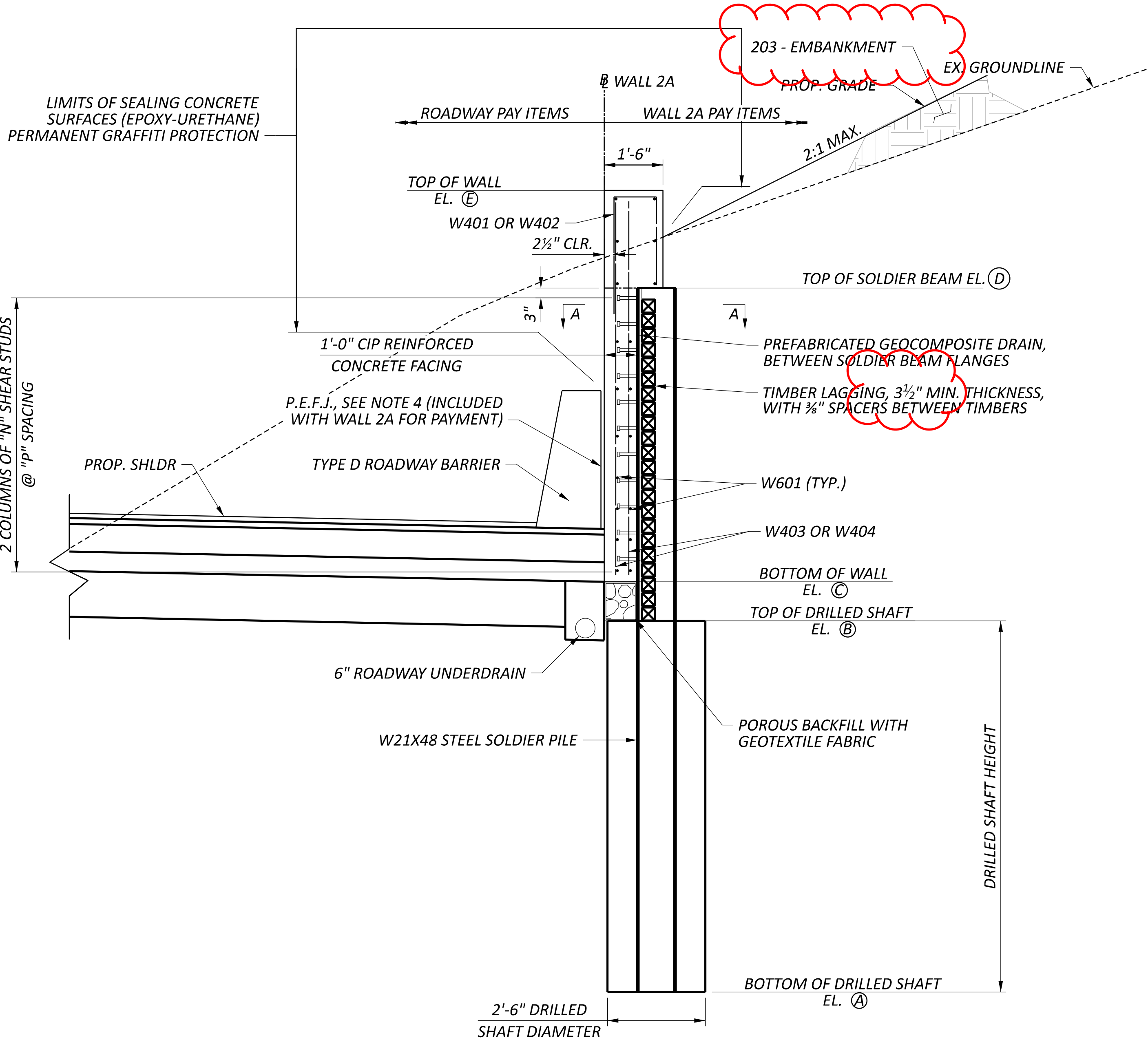
- ALL DIMENSIONS AND STATIONS ARE MEASURED ON THE FRONT FACE OF WALL.
- THE AESTHETIC VERTICAL GROOVE PATTERN MAY TERMINATE WITHIN THE FACING HEIGHT BUT AT MINIMUM MUST EXTEND FROM THE TOP TO 4'-0" FROM THE BOTTOM OF THE WALL.
- PAYMENT FOR ALL FORMWORK, MATERIALS, EQUIPMENT AND LABOR REQUIRED TO PRODUCE THE AESTHETIC WALL FACING PATTERN SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM 511, CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN.
- FOR WALL FACING ELEVATIONS, SEE SHEETS 6/26 THRU 21/26.

[illegible]

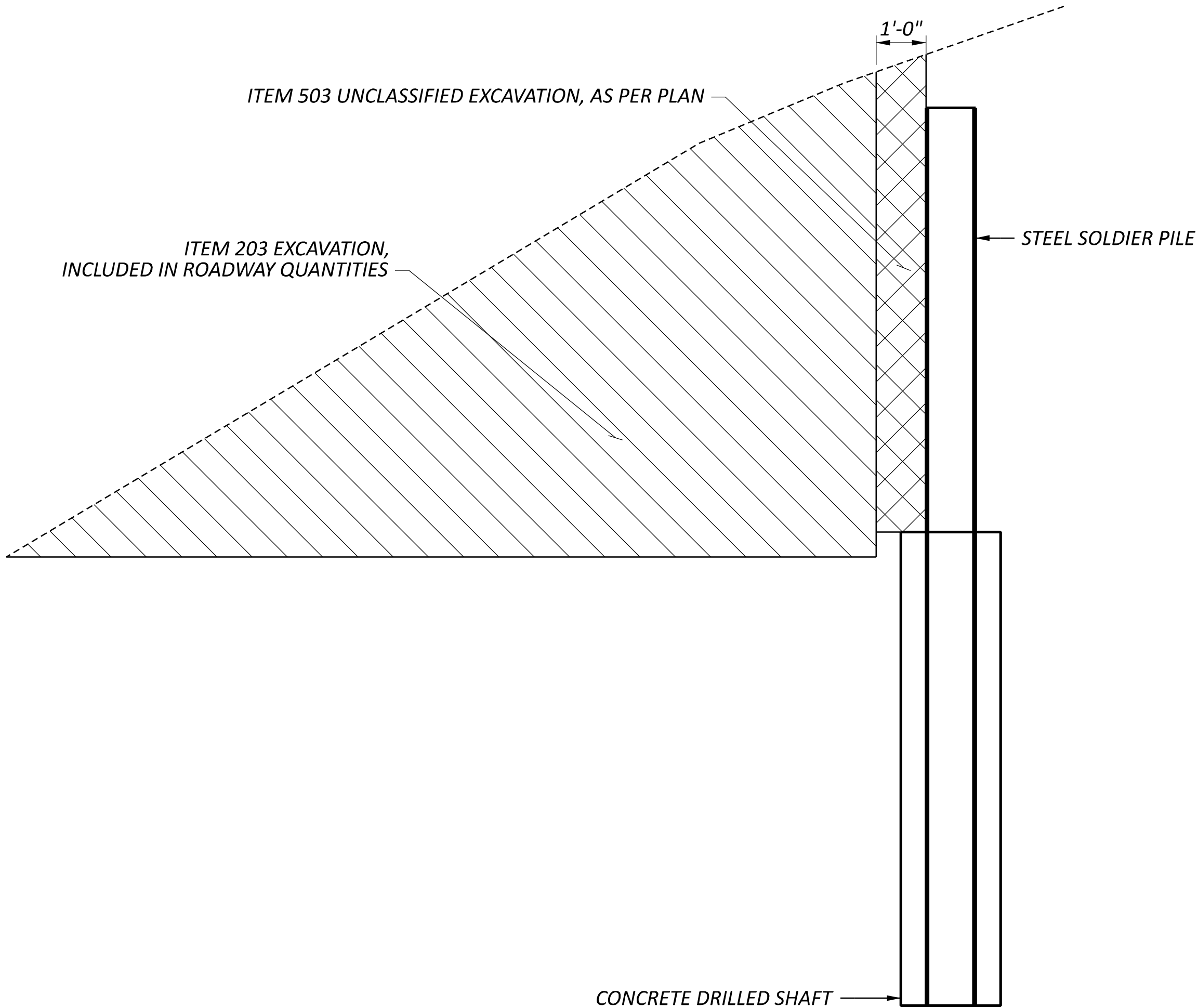
1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, W601 IS A NO. 6 BAR AND W1001 IS A NO. 10 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

DESIGN AGENCY	
	
DESIGNER	
CEJ	
REVIEWER	
CJW 11/17/25	
PROJECT ID	
105743	
SUBSET	TOTAL
26	26
SHEET	TOTAL
P.898	P.1274

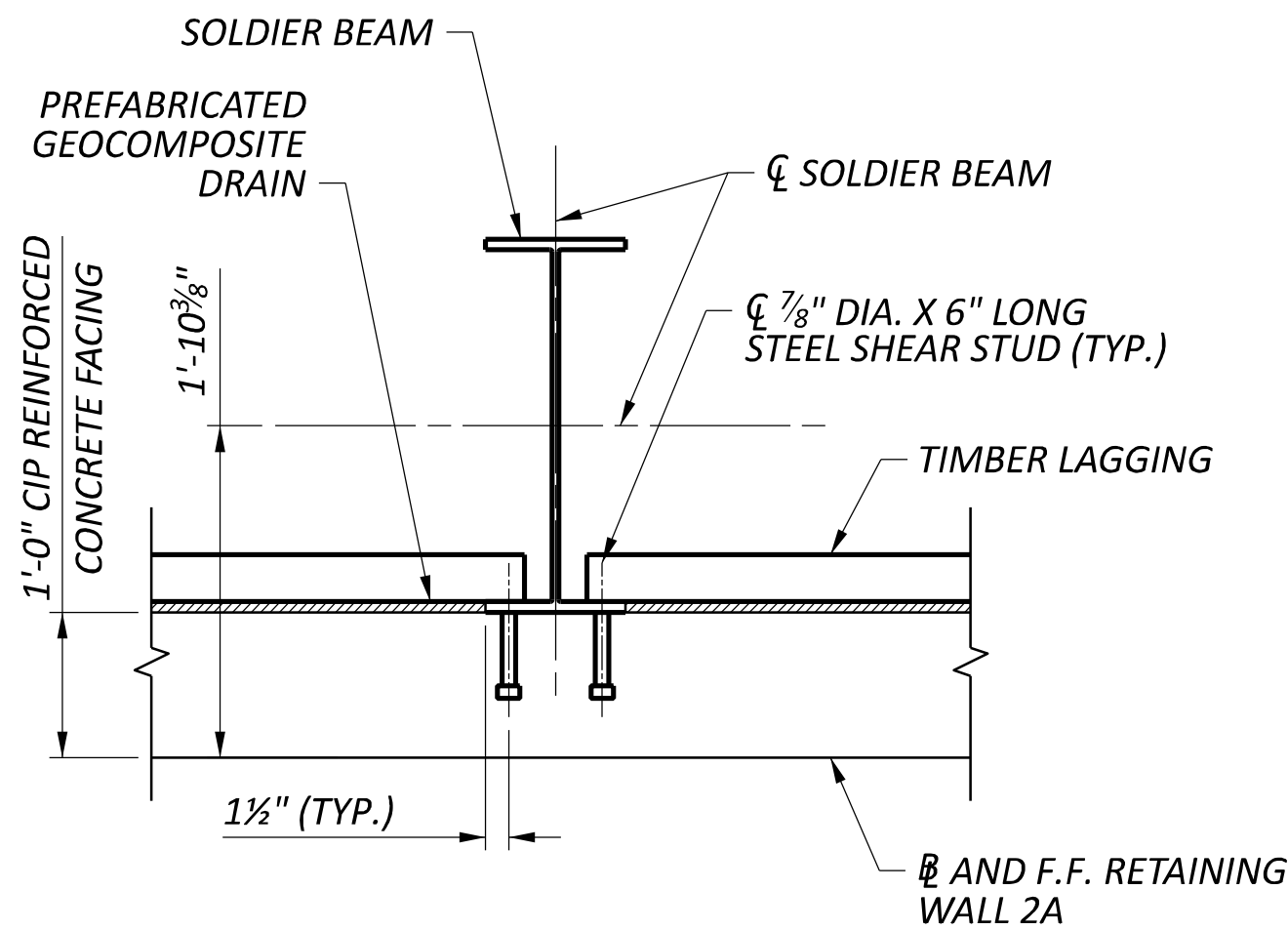
PILE AND DRILLED SHAFT SIZE AND DIMENSION TABLE												
DRILLED SHAFT NUMBER	WALL 2A STATION	OFFSET	BOTT. OF SHAFT ELEVATION (EL. A)	TOP OF SHAFT ELEVATION (EL. B)	BOTT. OF WALL ELEVATION (EL. C)	TOP OF SOLDIER BEAM ELEV. (EL. D)	TOP OF WALL ELEVATION (EL. E)	LENGTH OF SOLDIER BEAM (FEET)	DRILLED SHAFT DIAMETER (INCHES)	SOLDIER BEAM SIZE	NUM. OF SHEAR STUD PAIRS (N)	SPACING OF SHEAR STUDS (P)
1	200+03.75	1.86 RT	677.39	697.39	698.39	701.44	704.25	24.05	30.00	W21X48	4	10.00 in
2	200+11.25	1.86 RT	677.39	697.39	698.39	702.31	704.75	24.92	30.00	W21X48	5	10.00 in
3	200+18.75	1.86 RT	677.39	697.39	698.39	703.18	705.24	25.79	30.00	W21X48	6	10.25 in
4	200+26.25	1.86 RT	677.39	697.39	698.39	704.05	705.74	26.66	30.00	W21X48	7	10.25 in



WALL 2A TYPICAL SECTION



EXCAVATION SCHEMATIC



SECTION A-A

NOTES:

1. AT THE CONTRACTOR'S OPTION, THE SOLDIER BEAM SIZE MAY BE INCREASED AT NO ADDITIONAL COST TO THE DEPARTMENT. THE PROPOSED BEAM SIZE MUST HAVE A SECTION MODULUS EQUAL TO OR GREATER THAN THE BEAM SIZE SPECIFIED. IN ADDITION, THE PROPOSED BEAM MUST ALLOW AT LEAST 3 INCHES OF CLEARANCE BETWEEN THE FLANGES AND THE SIDE OF THE DRILLED SHAFT.
2. THE NOMINAL CONCRETE FACING THICKNESS IS 12 INCHES. TO ADDRESS MISALIGNMENT OF SOLDIER BEAMS, THE CONTRACTOR MAY PROVIDE ADDITIONAL THICKNESS BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. INSTALL THE PREFABRICATED GEOCOMPOSITE DRAIN (PGD) BETWEEN SOLDIER BEAMS IN ACCORDANCE WITH CMS 518.06. WHERE TIMBER LAGGING IS PLACED, THE PGD SHALL BE SECURED TO THE LAGGING. IF LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, THE PGD SHALL BE ATTACHED TO THE BACK SURFACE OF THE CONCRETE WALL FACING. PGD SHALL EXTEND AT LEAST 6 INCHES INTO THE POROUS BACKFILL BELOW THE WALL FACING.
4. THICKNESS OF PREFORMED EXPANSION JOINT FILLER VARIES FROM 1" TO 1½". THE REQUIRED AREA OF JOINT FILLER IS ASSUMED TO BE EQUALLY SHARED BY EACH MATERIAL THICKNESS FOR COST ESTIMATE.
5. FOR DRILLED SHAFT LAYOUT PLAN AND WALL ELEVATION, SEE SHEET 4/6.

TYPICAL SECTION AND SOLDIER PILE DIMENSION TABLE
RETAINING WALL 2A

DESIGN AGENCY



DESIGNER

CEJ

REVIEWER

CJW 11/17/25

PROJECT ID

105743

SUBSET TOTAL

5 6

SHEET TOTAL

P.903 P.1274



TYPICAL SECTION RETAINING WALL 2

1. AT THE CONTRACTOR'S OPTION, THE SOLDIER BEAM SIZE MAY BE INCREASED AT NO ADDITIONAL COST TO THE DEPARTMENT. THE PROPOSED BEAM SIZE MUST HAVE A SECTION MODULUS EQUAL TO OR GREATER THAN THE BEAM SIZE SPECIFIED. IN ADDITION, THE PROPOSED BEAM MUST ALLOW AT LEAST 3 INCHES OF CLEARANCE BETWEEN THE FLANGES AND THE SIDE OF THE DRILLED SHAFT.
2. THE NOMINAL CONCRETE FACING THICKNESS IS 12 INCHES. TO ADDRESS MISALIGNMENT OF SOLDIER BEAMS, THE CONTRACTOR MAY PROVIDE ADDITIONAL THICKNESS BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. INSTALL THE PREFABRICATED GEOCOMPOSITE DRAIN (PGD) BETWEEN SOLDIER BEAMS IN ACCORDANCE WITH CMS 518.06. WHERE TIMBER LAGGING IS PLACED, THE PGD SHALL BE SECURED TO THE LAGGING. IF LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, THE PGD SHALL BE ATTACHED TO THE BACK SURFACE OF THE CONCRETE WALL FACING. PGD SHALL EXTEND AT LEAST 6 INCHES INTO THE POROUS BACKFILL BELOW THE WALL FACING.
4. FOR DRILLED SHAFT LAYOUT PLAN, SEE SHEET 4/14.
5. FOR PILE AND DRILLED SHAFT DIMENSIONS AND ELEVATIONS, SEE SHEET 12/14.
6. THE VOID BETWEEN THE ROADWAY BARRIER AND THE NOMINAL FACE OF WALL SHALL BE FILLED WITH A STACKED COMBINATION OF 1" P.E.J.F. AND 2" P.E.J.F. UP TO A MAXIMUM THICKNESS OF 6 INCHES. VOIDS IN EXCESS OF 6 INCHES SHALL BE LEFT UNFILLED (APPROXIMATELY BETWEEN STA. 21+20.00 AND THE END OF WALL 2). ADDITIONAL 2" P.E.J.F. SHALL BE INSTALLED IN THE AESTHETIC INSETS WITHIN THE LIMITS OF STACKED JOINT FILLER.

ITEM 611 - 24" CONDUIT, TYPE B, AS PER PLAN, 748.01

THE CONTRACTOR SHALL PERFORM THIS ITEM BY USING AN OPEN CUT EXCAVATION FOR THE PIPE SPECIFIED AS 24" CONDUIT, TYPE B, AS PER PLAN, 748.01.

THE SANITARY PIPE IS TO BE DUCTILE IRON PIPE, ANSI A-21.51, CLASS 52 (AWWA C-151). THE SANITARY PIPE SHALL BE CONCRETE ENCASED. THE CONCRETE ENCASEMENT SHALL AT A MINIMUM BE 9-INCHES AROUND THE FULL PERIMETER OF THE PIPE. PER ODOT CMS ITEM 499 - CLASS QC 1, THE CONTRACTOR SHALL UTILIZE 4,000 PSI COMPRESSIVE STRENGTH CONCRETE.

ITEM 611 - MANHOLE MISC.: MANHOLE ADJUSTED TO GRADE WITH BOLTED COVER

INCLUDE THE COSTS TO FURNISH AND INSTALL AN ADJUSTED TO GRADE MANHOLE ACCORDING TO ODOT CMS 611, EXCEPT PROVIDE A BOLTED DOWN COVER, IN THE UNIT PRICE BID PER EACH FOR ITEM 611 – MANHOLE MISC.: MANHOLE ADJUSTED TO GRADE WITH BOLTED COVER.

FURNISH A BOLTED DOWN COVER MEETING THE FOLLOWING REQUIREMENTS:

- FOUR (4) EQUALLY SPACED HALF-INCH (1/2”) STAINLESS STEEL HEX CAP SCREWS CONFORMING TO ASTM F-593, ALLOY GROUP 1.
- PROVIDE COUNTERSINKS, HOLES, THREADING, AND PLACEMENT IN ACCORDANCE WITH THE CASTING MANUFACTURER’S RECOMMENDATIONS AND METHODS.
- TIGHTEN BOLTS ACCORDING TO MANUFACTURER’S TORQUE SPECIFICATIONS.

THE NEORSD WILL PROVIDE MCGUARD BOLTS (APPROX. 2 PER CASTING) TO UTILIZE AT LOCATIONS SZ-20, SZ-25, SZ-26A, SZ-34.

ITEM 611 - MANHOLE MISC.: MANHOLE RECONSTRUCTED TO GRADE WITH BOLTED COVER

INCLUDE THE COSTS TO FURNISH AND INSTALL A RECONSTRUCTED TO GRADE MANHOLE ACCORDING TO ODOT CMS 611, EXCEPT PROVIDE A BOLTED DOWN COVER, IN THE UNIT PRICE BID PER EACH FOR ITEM 611 – MANHOLE MISC.: MANHOLE RECONSTRUCTED TO GRADE WITH BOLTED COVER.

FURNISH A BOLTED DOWN COVER MEETING THE FOLLOWING REQUIREMENTS:

- FOUR (4) EQUALLY SPACED HALF-INCH (1/2”) STAINLESS STEEL HEX CAP SCREWS CONFORMING TO ASTM F-593, ALLOY GROUP 1.
- PROVIDE COUNTERSINKS, HOLES, THREADING, AND PLACEMENT IN ACCORDANCE WITH THE CASTING MANUFACTURER’S RECOMMENDATIONS AND METHODS.
- TIGHTEN BOLTS ACCORDING TO MANUFACTURER’S TORQUE SPECIFICATIONS.

THE NEORSD WILL PROVIDE MCGUARD BOLTS (APPROX. 2 PER CASTING) TO UTILIZE AT LOCATIONS SZ-2, SZ-9, SZ-11, SZ-18, SZ-21, SZ-26.

FOR LOCATIONS SZ-2, SZ-9, SZ-18, AND SZ-21, THE LOCATION OF THE CASTING SHALL BE RECONFIGURED TO BE AS FAR FROM THE PROPOSED TRAVELED LANE AS POSSIBLE WITHIN THE FOOTPRINT OF THE EXISTING STRUCTURE.

SANITARY MANHOLES WITHIN PAVEMENT

WHERE THE PLANS INDICATE THAT A MANHOLE BE ADJUSTED OR RECONSTRUCTED WITHIN THE PAVEMENT LIMITS, EXCLUDING MANHOLES INDICATED FOR BOLTED LIDS, THE TOP OF CASTING ELEVATION SHALL BE SET AT THE TOP OF THE COMPACTED ITEM 304 - AGGREGATE BASE. THE LID SHALL BE SOLID WITHOUT HOLES. ONCE EACH MANHOLE IS SET IN PLACE AND PRIOR TO PAVING, A LICENSED SURVEYOR SHALL SURVEY THE CENTER OF THE LID OF EACH BURIED MANHOLE AND FURNISH THE GPS COORDINATES (EASTING, NORTHING) TO THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE AND WILL BE MADE AT THE UNIT PRICE BID FOR ITEM 611 - MANHOLE, MISC.: MANHOLE ADJUSTED TO GRADE, BURIED MANHOLES OR ITEM 611 - MANHOLE, MISC.: MANHOLE RECONSTRUCTED TO GRADE, BURIED MANHOLES.

THE FOLLOWING IS A LIST OF LOCATIONS WHERE BURIED MANHOLES ARE PROPOSED. STATION/OFFSETS SHOWN ARE TO THE CENTER OF THE MANHOLE LID. DESIGN ELEVATIONS AND GPS COORDINATES ARE PROVIDED FOR REFERENCE. CONTRACTOR SHALL FIELD VERIFY THE PROVIDED DATA, AND SUBMIT ANY ADJUSTMENTS USING THE BLANK TABLE BELOW TO THE ENGINEER.

COORDINATES OF SANITARY OR COMBINED SEWER STRUCTURE CASTINGS BURIED IN ASPHALT											
STRUCTURE	ALIGNMENT	STATION	OFFSET	SIDE	RIM ELEVATION	NORTHING (Y)	EASTING (X)	RIM ELEVATION	NORTHING (Y)	EASTING (X)	
SZ-3	I-77	111+12.50	38.30	LT	675.06	649940.310'	2200169.571'				
SZ-13	I-77	111+81.63	37.85	LT	674.05	650002.521'	2200138.282'				
SZ-14	I-77	111+89.60	15.23	RT	672.85	650033.188'	2200182.405'				
SZ-15	I-77	112+97.42	37.54	LT	672.36	650107.586'	2200087.449'				
*SZ-17	I-77	113+39.12	24.43	RT	670.36	650167.751'	2200126.523'				
SZ-30	I-77	190+77.11	88.10	RT	670.30	657772.256'	2199099.588'				

*PRIOR TO BURIAL, COORDINATE WITH NEORSD FOR INSPECTION OF SZ-17.

REF NO.	SHEET NO.	STATION TO STATION				ALIGNMENT	EXISTING RIM ELEVATION (FT)	PROPOSED RIM ELEVATION (FT)	202	202	202	611	611	611	611	611	611	611	611
									PIPE REMOVED, 24" AND UNDER	MANHOLE REMOVED	MANHOLE ABANDONED	24" CONDUIT, TYPE B, AS PER PLAN, 748.01	MANHOLE, NO. 3	MANHOLE ADJUSTED TO GRADE	MANHOLE RECONSTRUCTED TO GRADE	MANHOLE, MISC.: MANHOLE ADJUSTED TO GRADE WITH BOLTED COVER	MANHOLE, MISC.: MANHOLE RECONSTRUCTED TO GRADE WITH BOLTED COVER	MANHOLE, MISC.: MANHOLE ADJUSTED TO GRADE, BURIED MANHOLES	MANHOLE, MISC.: MANHOLE RECONSTRUCTED TO GRADE, BURIED MANHOLES
									FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SZ-2	P.762	109+02.81	RT				CLP_I077	677.58	675.72								1		
SZ-3	P.762	111+12.50	LT				CLP_I077	676.67	675.06										1
SZ-4	P.762	111+17.49	LT				CLP_I077	679.48	678.78					1					
SZ-5	P.762	111+31.57	RT				CLP_I077	682.25	682.28					1					
SZ-6	P.762	111+42.99	LT				CLP_I077	678.74	677.69						1				
SZ-7	P.762	111+54.13	LT				CLP_I077	679.02	677.78						1				
SZ-10	P.762	111+62.04	LT				CLP_I077	679.39	678.02						1				
SZ-8	P.762	111+63.08	RT				CLP_I077	677.20	676.24					1					
SZ-11	P.762	111+65.58	LT				CLP_I077	676.67	675.59							1			
SZ-9	P.762	111+65.67	RT				CLP_I077	674.35	672.00							1			
SZ-13	P.762	111+81.63	LT				CLP_I077	675.85	674.05										1
SZ-14	P.762	111+89.60	RT				CLP_I077	673.25	672.85									1	
SZ-15	P.763	112+97.42	LT				CLP_I077	674.38	672.36										1
SZ-16	P.763	113+28.21	LT				CLP_I077	685.56	685.56						1				
SZ-17	P.763	113+39.12	RT				CLP_I077	672.75	670.36										1
SZ-18	P.763	113+39.57	RT				CLP_I077	672.11	670.40								1		
SZ-19	P.764	119+71.88	LT				CLP_I077	641.63	635.98						1				
SZ-20	P.765	126+48.25	LT				CLP_I077	653.22	652.62							1			
SZ-21	P.766	131+45.98	RT				CLP_I077	648.05	649.84							1			
SZ-24	P.767	135+15.63	LT				CLP_I077	631.31	632.30						1				
SZ-25	P.770	148+39.66	LT				CLP_I077	685.26	685.34								1		
SZ-26	P.772	157+39.35	RT				CLP_I077	680.81	682.57								1		
SZ-26A	P.773	165+64.87	RT				CLP_I077	677.30	677.23							1			
S-9	P.774	170+80.15	RT				CLP_I077												
S-10	P.776	179+60.51	LT				CLP_I077												
S8	P.776	179+60.51	LT	TO	180+27.52	LT	CLP_I077			74									
S-11	P.777	184+86.33	LT				CLP_I077						1						
S-12	P.777	185+66.50	LT				CLP_I077						1						
SZ-30	P.778	190+77.11	RT				CLP_I077	670.37	670.30									1	
SZ-33	P.779	193+21.39	LT				CLP_I077	676.45	670.60						1				
SZ-34	P.784	218+73.97	LT				CLP_I077	654.43	654.47								1		
S3	P.1016	74+94.54	RT	TO	74+94.69	LT	CLP_I077												
S4	P.1016	74+94.54	RT	TO	75+26.29	RT	CLP_I077					169	1						
S2	P.1016	74+94.69	LT	TO	75+29.02	LT	CLP_I077					33	1						
S5	P.1016	75+10.64	RT	TO	75+26.29	RT	CLP_I077			47									
S6	P.1016	75+10.64	RT	TO	75+39.99	LT	CLP_I077			101	1								
S1	P.1016	75+29.02	LT	TO	75+44.11	LT	CLP_I077												
S7	P.1016	75+39.99	LT	TO	76+40.87	LT	CLP_I077			161	1								
													</						

SANITARY NOTES AND SUB-SUMMARY

DESIGN AGENCY

AECOM

DESIGNER

MAW

REVIEWER

AKM 05/01/26

PROJECT ID

105743

SHEET

P.1015

TOTAL

P.1274

WATERWORK

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT, WATER MAIN

THIS ITEM SHALL ALSO FOLLOW THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS.

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

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

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

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM 638 - 12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, BOLTLESS-RESTRAINED JOINTS AND FITTINGS, AS PER PLAN

ALL WORK SHALL COMPLY WITH CMS ITEM 638 EXCEPT AS MODIFIED HERE:

ALL PIPE FURNISHED OR USED UNDER THIS ITEM SHALL BE CLASS 52 DUCTILE IRON PIPE (CEMENT LINED) AND BE TESTED FOR LEAKAGE AND BACTERIA AS REQUIRED BY THE SPECIFICATIONS AND THE EPA.

RESTRAINED MECHANICAL JOINTS AND FITTINGS SHALL BE USED AT ALL LOCATIONS OF TEES, HYDRANTS, VALVES, AND BENDS AND SHALL BE COMPLIANT WITH CLEVELAND WATER DEPARTMENT STANDARDS FOR RESTRAINED MECHANICAL JOINTS AND FITTINGS.

BOLTLESS-RESTRAINED JOINTS AND FITTINGS SHALL BE USED WHEN ABRUPT CHANGE IN THE GRADE IS NECESSARY TO AVOID EXISTING UTILITIES OR OTHER OBSTRUCTIONS. SUITABLE FITTINGS SHALL BE USED UNLESS OTHERWISE SPECIFIED, TO SECURE AN EASY FLOW OF LIQUID AND TO PROVIDE SUFFICIENT COVER UNDER OBSTRUCTIONS. PIPES AND FITTINGS SHALL BE COMPLIANT WITH THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS.

LOWERINGS SHALL BE SO LOCATED TO MAINTAIN A MINIMUM CLEARANCE OF 18 INCHES IN ALL DIRECTIONS WITH RESPECT TO OTHER UTILITIES, MEASURE FROM OUTSIDE TO OUTSIDE PIPE WALLS.

THIS ITEM SHALL INCLUDE ALL NECESSARY EXPLORATION, EXCAVATION, EMBANKMENTS, UTILITY COORDINATION/PROTECTION/REPLACEMENT, DEWATERING, SHEETING, PREPARATION OF TRENCH BOTTOM, ROCK EXCAVATION, JOINT RESTRAINT, DISINFECTION, BEDDING, BACKFILL OF THE TYPE REQUIRED BY THE PLANS AND SPECIFICATIONS, TESTING, ALL FLUSHING WATER, DISINFECTION, TESTING, CHLORINATION PITS, CLEANING UP AND ALL OTHER EXPENSES WHETHER SPECIFICALLY MENTIONED OR NOT TO COMPLY WITH THE STANDARD DETAILS OF C.W.D. AND TO PROVIDE A USABLE WATER MAIN.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR FOOT OF PIPE INSTALLED AS MEASURED THROUGH FITTINGS AND VALVES FROM CENTER TO CENTER OF FITTINGS AND VALVES ALONG THE CENTERLINE OF THE WATER MAIN, COMPLETE, TESTED, DISINFECTED, AND READY FOR SERVICE.

ITEM 638 - 12" GATE VALVE AND VALVE BOX, AS PER PLAN
ITEM 638 - 12" CUTTING-IN SLEEVE, VALVE AND VALVE BOX, AS PER PLAN

ALL WORK SHALL COMPLY WITH CMS ITEM 638 EXCEPT AS MODIFIED HERE:

THESE ITEMS SHALL ALSO FOLLOW THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS.

THIS ITEM SHALL INCLUDE ALL NECESSARY EXCAVATION; EMBANKMENT; DEWATERING; SHEETING; PREPARATION OF TRENCH BOTTOM; ROCK EXCAVATION; VALVE; VALVE BOX; JOINT MATERIAL; BLOCKING; ANODE CAPS; ADJUSTMENT; BEDDING; BACKFILL; TESTING; DISPOSAL OF WASTE AND ALL OTHER EXPENSES WHETHER SPECIFICALLY MENTIONED OR NOT, FOR THE INSTALLATION OF 12" GATE VALVES AND VALVE BOXES AND 12" CUT-IN-VALVES AND VALVE BOXES.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH GATE VALVE ASSEMBLY INSTALLED COMPLETE, TESTED, DISINFECTED, AND READY FOR SERVICE.

ITEM 638 - WATER WORK, MISC.: 36" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, BOLTLESS RESTRAINED JOINTS AND FITTINGS

ALL WORK SHALL COMPLY WITH CMS ITEM 638 EXCEPT AS MODIFIED HERE:

ALL PIPE FURNISHED OR USED UNDER THIS ITEM SHALL BE CLASS 52 DUCTILE IRON PIPE (CEMENT LINED) AND BE TESTED FOR LEAKAGE AND BACTERIA AS REQUIRED BY THE SPECIFICATIONS AND THE EPA.

RESTRAINED MECHANICAL JOINTS AND FITTINGS SHALL BE USED AT ALL LOCATIONS OF TEES, HYDRANTS, VALVES, AND BENDS AND SHALL BE COMPLIANT WITH CLEVELAND WATER DEPARTMENT STANDARDS FOR RESTRAINED MECHANICAL JOINTS AND FITTINGS.

BOLTLESS-RESTRAINED JOINTS AND FITTINGS SHALL BE USED WHEN ABRUPT CHANGE IN THE GRADE IS NECESSARY TO AVOID EXISTING UTILITIES OR OTHER OBSTRUCTIONS. SUITABLE FITTINGS SHALL BE USED UNLESS OTHERWISE SPECIFIED, TO SECURE AN EASY FLOW OF LIQUID AND TO PROVIDE SUFFICIENT COVER UNDER OBSTRUCTIONS. PIPES AND FITTINGS SHALL BE COMPLIANT WITH THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS.

LOWERINGS SHALL BE SO LOCATED TO MAINTAIN A MINIMUM CLEARANCE OF 18 INCHES IN ALL DIRECTIONS WITH RESPECT TO OTHER UTILITIES, MEASURE FROM OUTSIDE TO OUTSIDE PIPE WALLS.

THIS ITEM SHALL INCLUDE ALL NECESSARY EXPLORATION, EXCAVATION, EMBANKMENTS, UTILITY COORDINATION/PROTECTION/REPLACEMENT, DEWATERING, SHEETING, PREPARATION OF TRENCH BOTTOM, ROCK EXCAVATION, JOINT RESTRAINT, DISINFECTION, BEDDING, BACKFILL OF THE TYPE REQUIRED BY THE PLANS AND SPECIFICATIONS, TESTING, ALL FLUSHING WATER, DISINFECTION, TESTING, CHLORINATION PITS, CLEANING UP AND ALL OTHER EXPENSES WHETHER SPECIFICALLY MENTIONED OR NOT TO COMPLY WITH THE STANDARD DETAILS OF C.W.D. AND TO PROVIDE A USABLE WATER MAIN.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR FOOT OF PIPE INSTALLED AS MEASURED THROUGH FITTINGS AND VALVES FROM CENTER TO CENTER OF FITTINGS AND VALVES ALONG THE CENTERLINE OF THE WATER MAIN, COMPLETE, TESTED, DISINFECTED, AND READY FOR SERVICE.

ITEM 638 - WATER WORK, MISC.: 4" DRAIN ASSEMBLY

ALL WORK SHALL COMPLY WITH CMS ITEM 638 AND CLEVELAND DEPARTMENT OF PUBLIC UTILITIES STANDARD DETAILS FOR DRAIN ASSEMBLY DETAILS/OUTLET/DRAIN/VAULT DETAILS IN SM-STD7 SHOWN ON P. 1028.

THIS ITEM SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE GENERATION, DELIVERY AND ACCEPTANCE OF THE DRAIN ASSEMBLY WATER WORK COMPLETED WITH THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH DRAIN ASSEMBLY INSTALLED COMPLETE, TESTED, DISINFECTED, AND READY FOR SERVICE.

ITEM SPECIAL - 20" STEEL PIPE ENCASEMENT, BORED OR JACKED, CWD

20" STEEL PIPE ENCASEMENT DESIGNATED FOR INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS. PAYMENT FOR THIS WORK SHALL BE MADE AT THE UNIT PRICE BID PER FOOT, WHICH CONSTITUTES FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS TO COMPLETE THE WORK AT THE LOCATIONS SHOWN IN THE DRAWINGS.

ITEM SPECIAL - 56" STEEL PIPE ENCASEMENT, BORED OR JACKED, CWD

56" STEEL PIPE ENCASEMENT DESIGNATED FOR INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS. PAYMENT FOR THIS WORK SHALL BE MADE AT THE UNIT PRICE BID PER FOOT, WHICH CONSTITUTES FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS TO COMPLETE THE WORK AT THE LOCATIONS SHOWN IN THE DRAWINGS.

ITEM 638 - WATER WORK, MISC.: POTHOLING

POTHOLING SHALL BE UTILIZED AS DIRECTED BY THE ENGINEER PRIOR TO COMMENCEMENT OF ANY INSTALLATION OF THE PROPOSED WATER MAINS. THE INTENT OF THIS ITEM OF WORK IS TO LOCATE EXISTING UTILITIES AS WELL AS PREVENT EXCAVATION DAMAGE TO UNDERGROUND UTILITIES THAT ARE TO REMAIN.

THE RANGE IN DEPTH FOR POTHOLING SHALL BE FROM 8 FEET TO A MAXIMUM DEPTH OF 12 FEET.

ALLOWABLE POTHOLING METHODS INCLUDE VACUUM EXCAVATION AND HAND DIGGING. THE USE OF A BACKHOE IS NOT THE PREFERRED METHOD FOR THE PROPOSED POTHOLING. HOWEVER, IF A BACKHOE IS UTILIZED, IT IS ESSENTIAL THAT A SPOTTER BE PRESENT FOR THE ENTIRE EXCAVATION. THE CONTRACTOR SHALL ANTICIPATE THE NECESSITY OF HAND DIGGING.

THE CONTRACTOR IS REQUIRED TO COORDINATE WITH OUPS PRIOR TO ANY EXCAVATION ACTIVITY. FACILITY OWNERS THAT DO NOT PARTICIPATE WITH OUPS SHALL ALSO BE CONTACTED BY THE CONTRACTOR.

ONCE EXISTING UTILITIES ARE EXPOSED, RECORD THE HORIZONTAL AND VERTICAL POSITIONS AS WELL AS THE DEPTH BELOW THE SURFACE OF THE SURROUNDING PAVEMENT. THESE DIMENSIONS MUST BE INCLUDED IN THE AS-BUILT DRAWING PACKAGE REQUIRED FOR THE WATER WORK HEREIN. MEASUREMENTS SHALL BE TIED INTO A SURVEY BENCHMARK, AND SURVEY COORDINATES PROVIDED.

ONCE THE UTILITY HAS BEEN LOCATED, A POWERED SAW MAY BE USED TO CUT THROUGH EXISTING PAVEMENT. HEAVY EQUIPMENT MAY BE USED TO DIG WITHIN 3 FEET OF THE UTILITY'S LOCATION, OR AS REQUIRED PER THE RESPECTIVE UTILITY'S TOLERANCE ZONE. HEAVY EQUIPMENT MAY ALSO BE USED TO DIG UP TO CONCRETE ENCASEMENT OF A DUCT BANK ONCE EDGES ARE ESTABLISHED BY POTHOLING.

UTILITIES EXPOSED BY POTHOLING MUST BE PROTECTED THROUGHOUT THE PROJECT DURATION; AS NECESSARY, PLACE TEMPORARY SUPPORT OR SHORING TO SUPPORT SO THAT EXPOSED UTILITIES DO NOT SHIFT OR SAG WHEN THE SOIL THAT WAS SUPPORTING AND PROTECTING THEM IS REMOVED; AND/OR PLACE A BARRIER THAT PROTECTS EXPOSED UTILITIES FROM HEAVY AND SHARP ITEMS THAT COULD FALL INTO THE EXCAVATION.

ONCE THE UNDERGROUND UTILITY IS LOCATED, THE POTHOLE SHOULD BE MANAGED IN THE SAME MANNER AS ANY OTHER OPEN EXCAVATION TO PREVENT WORKER FALLS AND DAMAGE TO ANY EXPOSED UTILITIES: PLACE BARRICADES, TRAFFIC PLATES, OR OTHER MEASURES UNTIL BACKFILL AND RESTORATION IS CARRIED OUT. BACKFILLING AND THE RESTORATION OF PAVEMENT OR SURFACING MUST BE IN ACCORDANCE WITH THE DETAILS PROVIDED HEREIN. BACKFILL WILL BE INCLUDED FOR PAYMENT UNDER THIS ITEM OF WORK. PAVEMENT RESTORATION WILL BE PAID FOR UNDER THE RESPECTIVE CMS ITEMS OF WORK PROVIDED HEREIN.

AFTER THE UNDERGROUND UTILITY HAS BEEN LOCATED, THE POTHOLE SHOULD BE RESTORED WITHIN 24 HOURS OR AS OTHERWISE DIRECTED. APPROPRIATE SEDIMENT CONTROLS SHOULD BE UTILIZED DURING ALL POTHOLING ACTIVITIES TO PREVENT STORM WATER POLLUTION. THE POTHOLE SHOULD BE CLEAN AND DRY PRIOR TO BACKFILLING.

DRILLING MUD OR REMAINING SPOIL SHOULD BE CLEANED UP AND THE AREA RESTORED TO ORIGINAL CONDITION OR BETTER. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF ANY DRILLING MUD OR REMAINING SPOIL IN AN ENVIRONMENTALLY SUITABLE MANNER.

PAYMENT FOR THE WORK DESCRIBED HEREIN SHALL BE MADE AT THE BID UNIT PRICE PER EACH FOR "ITEM 638 - WATER WORK, MISC.: POTHOLING" WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, INCLUDING PROFESSIONAL SURVEY LOCATION SERVICES, DISPOSAL OF ANY SPOILS, EXCAVATION, PREMIUM BACKFILL AND TRAFFIC CONTROL. PAVEMENT RESTORATION WILL BE PAID FOR UNDER RESPECTIVE BID ITEMS HEREIN.

ITEM 638 - WATER WORK, MISC.: CHLORINATION PIT

ALL APPLICABLE PROVISIONS OF ITEM 638 SHALL APPLY EXCEPT AS MODIFIED HEREIN:

CHLORINATION PIT SHALL FOLLOW THE CITY OF CLEVELAND WATER DEPARTMENT STANDARDS FOR INSTALLING AND DISINFECTING WATER MAIN PIPES.

PAYMENT SHALL BE MADE PER EACH CHLORINATION PIT WHICH INCLUDES ALL MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY FOR THE WORK ITEMS.

CLEVELAND WATER DEPARTMENT FEES AND CHARGES
ITEM 638 - WATER WORK, MISC.: CITY OF CLEVELAND AND WATER DEPARTMENT CHARGES

1. PERMITS, INSPECTIONS AND FEES REQUIRED BY THE CITY OF CLEVELAND WATER DEPARTMENT (CWD) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND MEET COMPLIANCE INCLUDING WATER MAIN LOWERING FEES AND INSPECTION FEES. THE COST OF THESE FEES WILL BE APPROXIMATELY \$15,000. THE CONTRACTOR SHALL VERIFY ALL COSTS. ALL INVOICES FROM THE CLEVELAND WATER DEPARTMENT SHALL BE SUBMITTED TO THE OHIO DEPARTMENT OF TRANSPORTATION WITHOUT ANY MARK-UP. THIS WILL BE A DIRECT REIMBURSEMENT ONLY AND ANY BALANCE DUE OR BALANCE REMAINING SHALL BE ADJUSTED BY CHANGE ORDER.

2. ALL TESTING AND CHLORINATION REQUIRED BY ODOT CMS AND CWD FOR THE APPLICABLE ITEMS UNDER THIS CONTRACT SHALL BE ENFORCED, AND ALL COSTS SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM TO WHICH IT RELATES.

3. A TWO-YEAR WARRANTY, COMMENCING FROM THE DATE OF ACCEPTANCE OF THE FINAL CHLORINATION OF THE WATER MAIN INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR FOR ALL WATER MAINS AND SERVICE CONNECTION WORK PERFORMED, INCLUDING TAPS IF PERFORMED. SHOULD ANY LEAKS OCCUR AND REPAIRS BE REQUIRED DUE TO DEFECTIVE MATERIAL OR POOR WORKMANSHIP. A LETTER INDICATING THE COMMENCEMENT DATE AND END DATE OF THE WARRANTY SHALL BE INCLUDED WITH THE AS-BUILT SUBMISSION.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 638 - WATER WORK, MISC.: CITY OF CLEVELAND WATER DEPARTMENT CHARGES

15,000 EACH

ITEM 638 - WATER WORK, MISC.: AS-BUILT DRAWINGS

THIS ITEM SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE GENERATION, DELIVERY AND ACCEPTANCE OF AS-BUILT DRAWINGS FOR THE WATER WORK COMPLETED WITH THIS PROJECT. PRIOR TO PRESSURE TESTING AND CHLORINATION OF THE MAIN, THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF THE RECORD (AS-BUILT) PRINTS TO THE CITY OF CLEVELAND DIVISION OF WATER FOR ACCEPTANCE. THESE DRAWINGS SHALL INCLUDE THE EXACT LOCATION OF ALL NEW VALVES, METERS, REGULATORS AND HYDRANTS INSTALLED. THE DATE OF VALVE, METER, REGULATOR AND HYDRANT INSTALLATION SHALL BE INDICATED ON THE DRAWINGS. THE DRAWINGS SHALL SHOW THE EXACT LIMITS OF THE PIPE THAT WAS INSTALLED. ALL EXCAVATIONS SHALL BE RECORDED WITH LOCATION AND DIMENSIONS, DATE OPENED, DATE BACKFILLED, AND DATE PAVED SHALL BE SHOWN ON THE AS-BUILTS. A CURRENTLY REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF OHIO SHALL SEAL THE DRAWINGS. AS-BUILTS WILL BE REQUIRED PRIOR TO DISINFECTING THE WATER MAIN.

ALL WORK REQUIRED SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "AS-BUILT DRAWINGS".

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 638 - WATER WORK, MISC.: AS-BUILT DRAWINGS

LS

DESIGN AGENCY

AECOM

DESIGNER

MAW

REVIEWER

AKM 05/01/26

PROJECT ID

105743

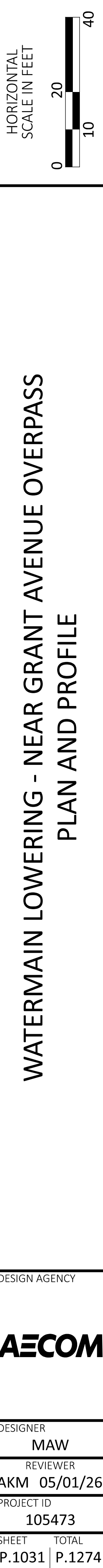
SHEET

P.1017

TOTAL

P.1274

STATION TO STATION						ALIGNMENT	202	SPECIAL	SPECIAL	638	638	638	SPECIAL	638	638	638	SPECIAL	638
							PIPE REMOVED, 24" AND UNDER	FILL AND PLUG EXISTING CONDUIT, 12" WATER MAIN	FILL AND PLUG EXISTING CONDUIT, 36" WATER MAIN	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, BOLTLESS- RESTRAINED JOINTS AND FITTINGS, AS PER PLAN	12" GATE VALVE AND VALVE BOX, AS PER PLAN	12" CUTTING-IN SLEEVE, VALVE AND VALVE BOX, AS PER PLAN	20" STEEL PIPE ENCASMENT, BORED OR JACKED, CWD	WATER WORK, MISC.: POTHOLING	WATER WORK, MISC.: CHLORINATION PIT	WATER WORK, MISC.: 36" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, BOLTLESS RESTRAINED JOINTS AND FITTINGS	56" STEEL PIPE ENCASMENT, BORED OR JACKED, CWD	WATER WORK, MISC.: 4" DRAIN ASSEMBLY
							FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	FT	FT	EACH
74+90.96	RT	TO	75+61.88	LT	CLP_I077		228											
74+71.40	RT	TO	75+61.88	LT	CLP_I077				302									
74+71.40	RT	TO	74+72.89	LT	CLP_I077							120						
74+90.96	RT	TO									1							
75+61.88	LT										1							
74+71.61	RT												1					
74+72.89	LT												1					
74+80.18	LT												1					
75+07.27	LT												1					
75+18.52	LT												1					
75+46.43	LT											1			1			
74+83.96	RT									1								
75+51.58	LT									1								
80+75.51	RT	TO	80+78.28	RT	CLP_I077	10												
80+79.94	RT	TO	80+82.65	RT	CLP_I077	10												
80+83.62	RT	TO	80+86.33	RT	CLP_I077	10												
179+73.92	LT	TO	180+01.45	LT	CLP_I077	132												
111+35.51	LT	TO	111+50.08	RT	CLP_I077			281								318		
111+35.51	LT	TO	111+50.08	RT	CLP_I077													
111+35.51	LT													1				
111+50.26	RT																	
110+96.96	LT	TO	110+97.49	RT	CLP_I077												120	
111+14.68	LT												1					
111+23.65	RT												1					
111+35.21	LT												1					
111+35.51	LT												1					
111+49.95	RT												1					
111+03.38	RT																	1
TOTALS CARRIED TO GENERAL SUMMARY						162	228	281	302	2	2	121	10	2	318	120	1	



SHEET NO.	STATION TO STATION				625	625	625	625	625	625	625	625	625	625	625	630	630	630	633	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	809	8
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ITS SUBSUMMARY

DESIGN AGENCY



DESIGNER

NSJ

REVIEWER

NRS 10/31/25

PROJECT ID

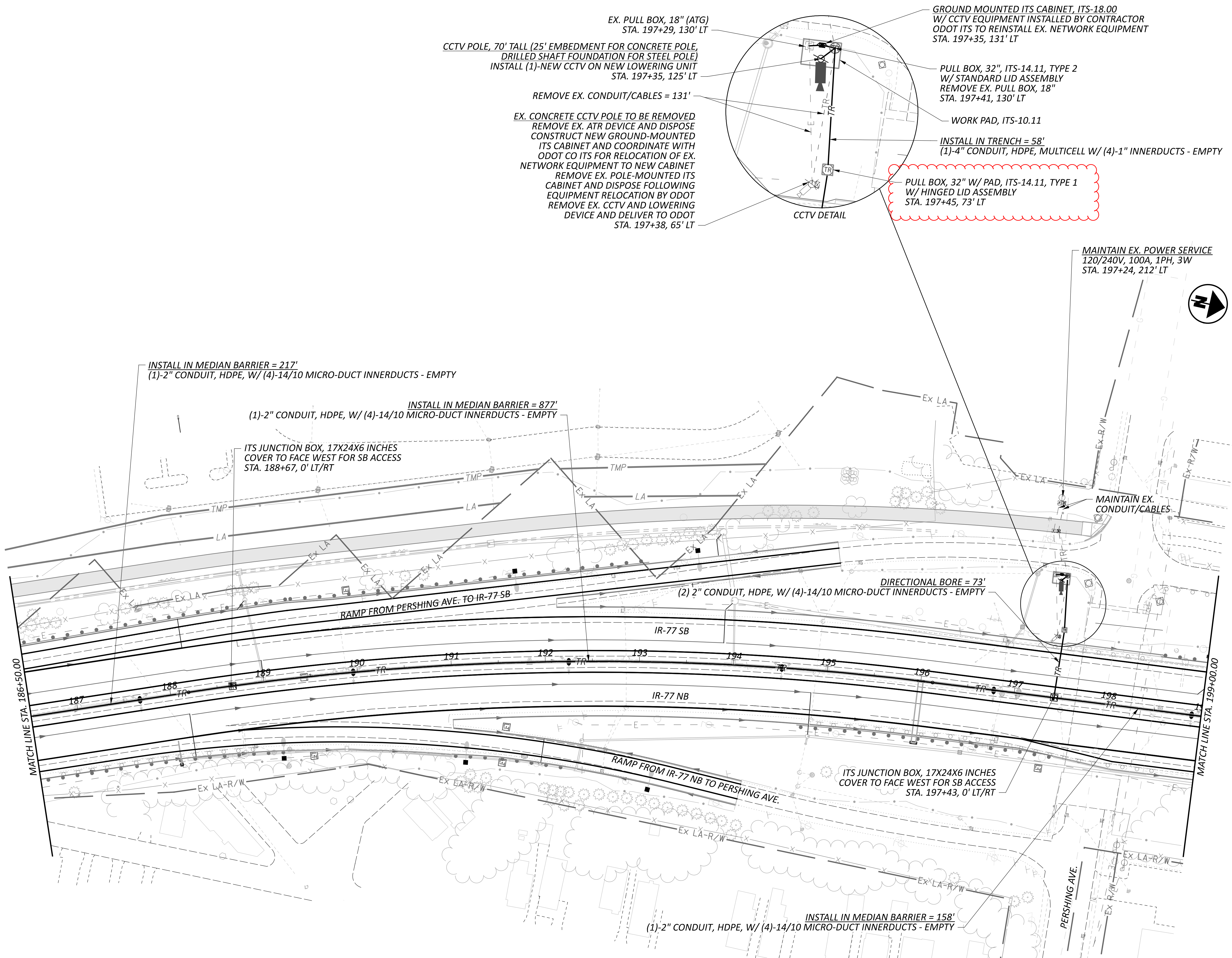
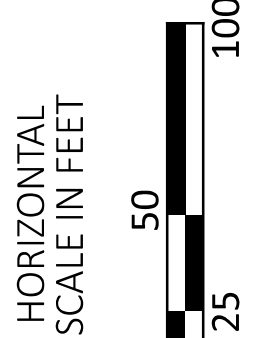
105743

SHEET

P.1099

TOTAL

P.1274



ITS PLAN
STA. 186+50 TO STA. 199+00

DESIGN AGENCY

HNTB

DESIGNER

NSJ

REVIEWER

NRS 10/31/25

PROJECT ID

105743

SHEET

P.1112

TOTAL

P.1274

SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEADCONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING. ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

WHEN THE PROJECT BEGINS AND THE CONTRACTOR HAS TAKEN OVER MAINTENANCE OF THE EXISTING FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED LAYOUTS AND LOCATIONS OF THE EXISTING AND PROPOSED ELECTRICAL CIRCUITS AND RELATED ITEMS WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL LOCATE AND MARK ALL UNDERGROUND ELECTRICAL CIRCUITS (INCLUDING TRAFFIC LOOPS AND LOOP LEAD-INS) FOR THE DURATION OF THE PROJECT.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE AND USE AS DIRECTED BY THE PROJECT ENGINEER:

ITEM SPECIAL MAINTAIN EXISTING LIGHTINGLS
ITEM SPECIAL REPLACEMENT OF EXISTING LIGHTING UNIT20 EACH

625, LIGHT POLE FOUNDATION REMOVED

A CONTINGENCY QUANTITY IS BEING PROVIDED TO REMOVE OLDER LIGHT POLE FOUNDATIONS ALONG THE OUTSIDES OF I-77 THAT WERE PREVIOUSLY LEFT IN PLACE DURING THE CONSTRUCTION OF PROJECTS PID 98658 AND PID 98816.

THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE AND USE AS DIRECTED BY THE PROJECT ENGINEER:

ITEM 625 LIGHT POLE FOUNDATION REMOVED.....198 EACH.

DISCONNECT CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR TRANSFORMER BASE.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED FROM THE PULL BOX SO THAT NO CABLE IS LEFT IN THE BOX.

DISCONNECTION AT A LIGHT POLE SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL CONNECTOR KITS. ALL DUCT-CABLE NOT TO BE REUSED SHALL BE REMOVED FROM THE TRANSFORMER BASE AND THE EXISTING CONDUIT IN THE FOUNDATION SHALL BE CLEANED OF ALL CABLE AND DEBRIS SO THAT THE NEW DUCT-CABLE CAN BE INSTALLED. ALL EXISTING CABLE TO REMAIN ACTIVE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT CABLE LEFT FOR RE-CONNECTION. THOSE WIRES THAT ARE TO REMAIN ON ACTIVE CIRCUITS SHALL HAVE A WATER-RESISTANT SEAL AT THE CUT END. THE WATER-RESISTANT SEAL SHALL BE ACCOMPLISHED BY PLUGGING THE DEACTIVATED PORT OF AN EXISTING CONNECTOR KIT OR BY INSTALLING A CABLE SPLICE KIT ON THE CUT END OF THE CABLE.

DESIGN AGENCY	
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DESIGNER	
CX	
REVIEWER	
TAS	04/08/26
PROJECT ID	
105743	
SHEET	TOTAL
P.1117	P.1274

ESTIMATED QUANTITIES (CUY-77-1322)					
ITEM	EXTENSION	TOTAL PART 02/IMS	UNIT	DESCRIPTION	SEE SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	3
202	22900	260	SY	APPROACH SLAB REMOVED	
203	35120	3578	CY	GRANULAR MATERIAL, TYPE C	
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
503	21100	1475	CY	UNCLASSIFIED EXCAVATION	
509	10000	103897	LB	EPOXY COATED STEEL REINFORCEMENT	
511	46013	73	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	22, 25
511	46512	387	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
511	46612	21	CY	CLASS QC1 CONCRETE WITH QC/QA, HEADWALL	
511	47012	353	CY	CLASS QC1 CONCRETE WITH QC/QA, CULVERT	
511	53012	10	CY	CLASS QC2 CONCRETE, MISC.: BARRIER ON HEADWALL/WINGWALL, WITH QC/QA	3
512	10101	922	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	3
512	33000	297	SY	TYPE 2 WATERPROOFING	
516	13600	198	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	111	SF	2" PREFORMED EXPANSION JOINT FILLER	
516	25001	78	SF	NYLON REINFORCED NEOPRENE SHEETING, AS PER PLAN	3, 23
518	20000	100	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
518	21200	266	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518	40000	356	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
607	39901	58	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	
611	71000	112	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE ARCH SECTIONS (20'-0" SPAN x 10'-0" RISE)	
867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	

ESTIMATED QUANTITIES
BRIDGE NO. CUY-77-1322 OVER
ABANDONED W&LE RR (FUTURE MORGANA RUN TRAIL)

SFN
1806573

DESIGN AGENCY


DESIGNER
NMC

CHECKER
CEJ

REVIEWER
CJW 11/17/25

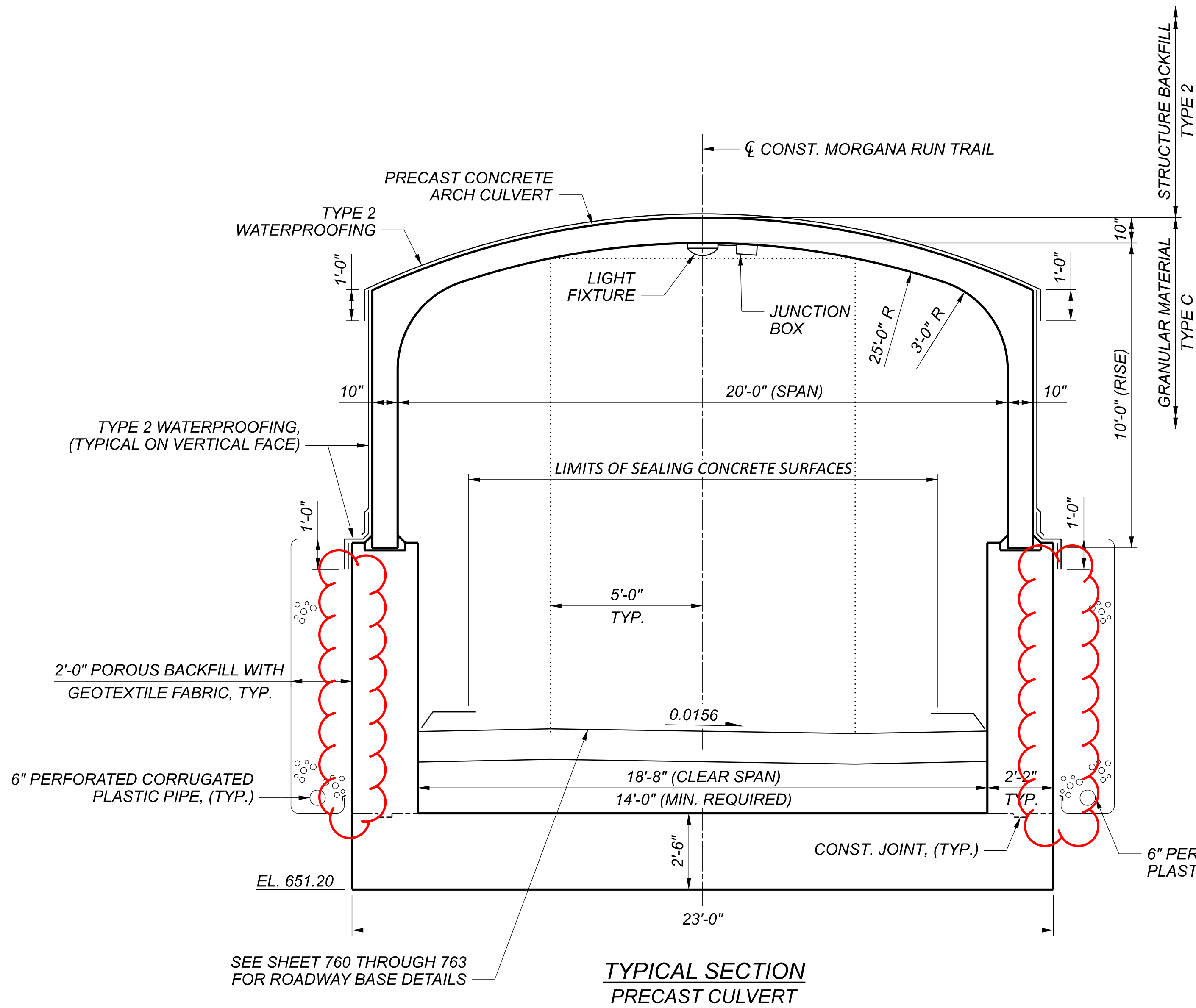
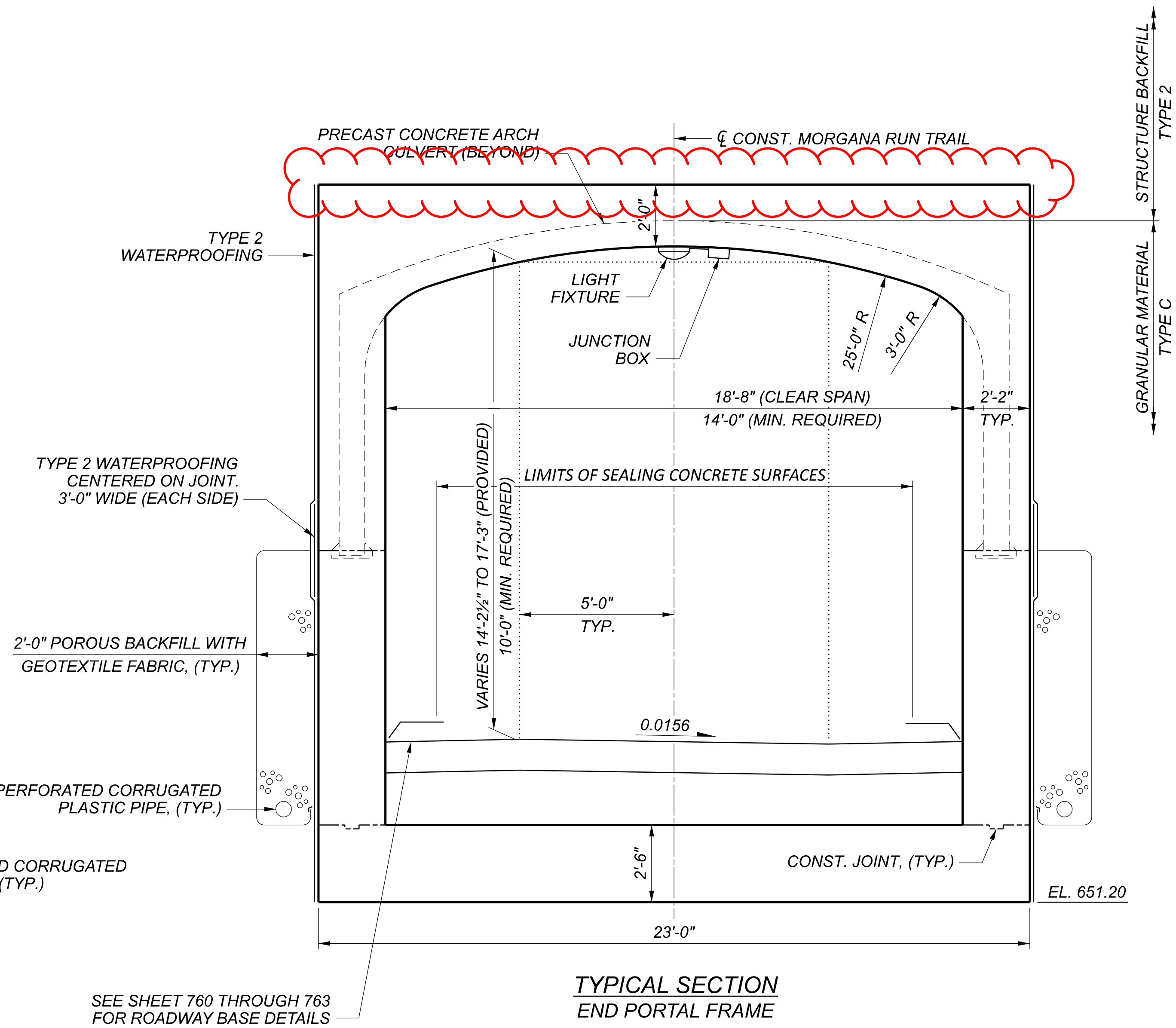
PROJECT ID
105743

SUBSET
4

TOTAL
25

SHEET
P.1143

TOTAL
P.1274

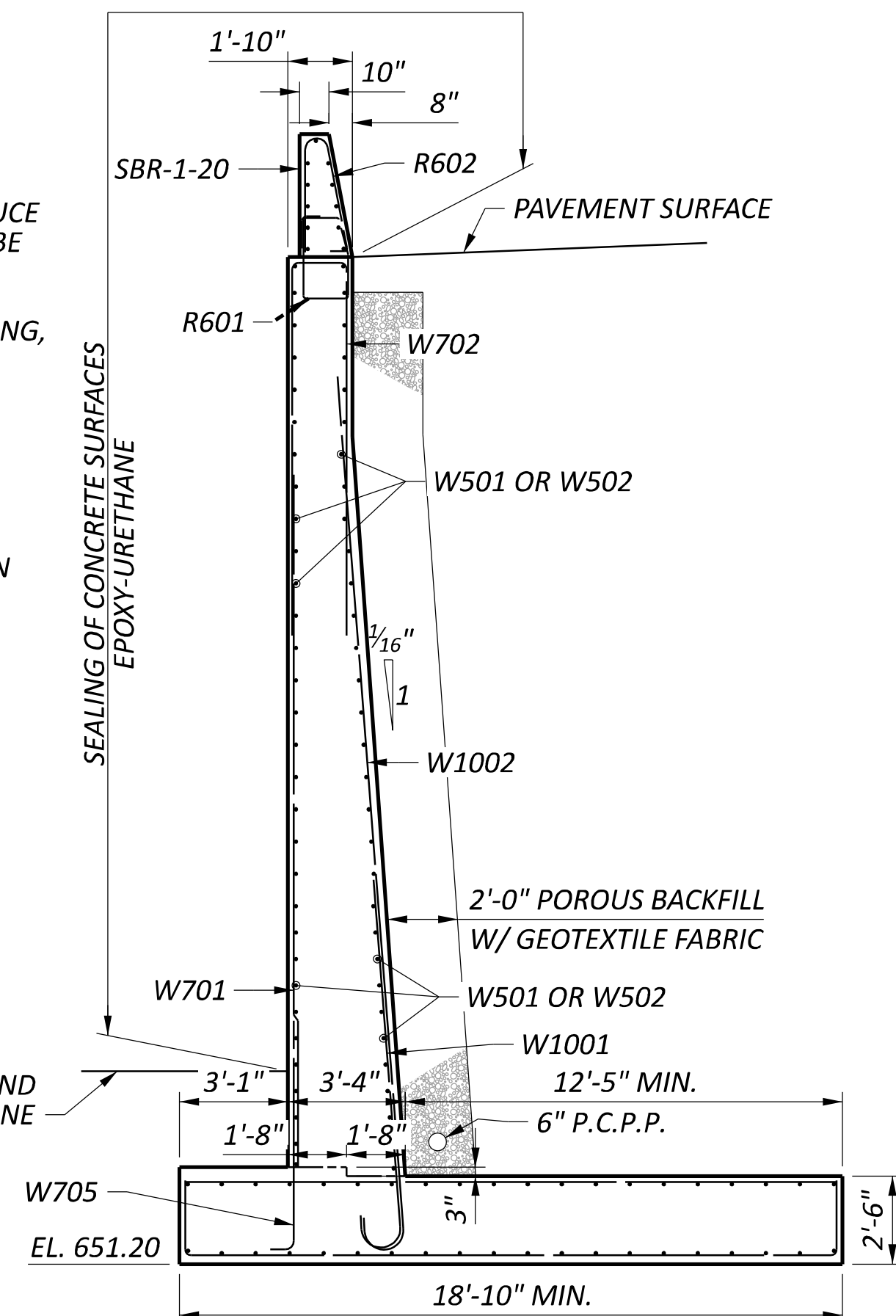


NOTE:

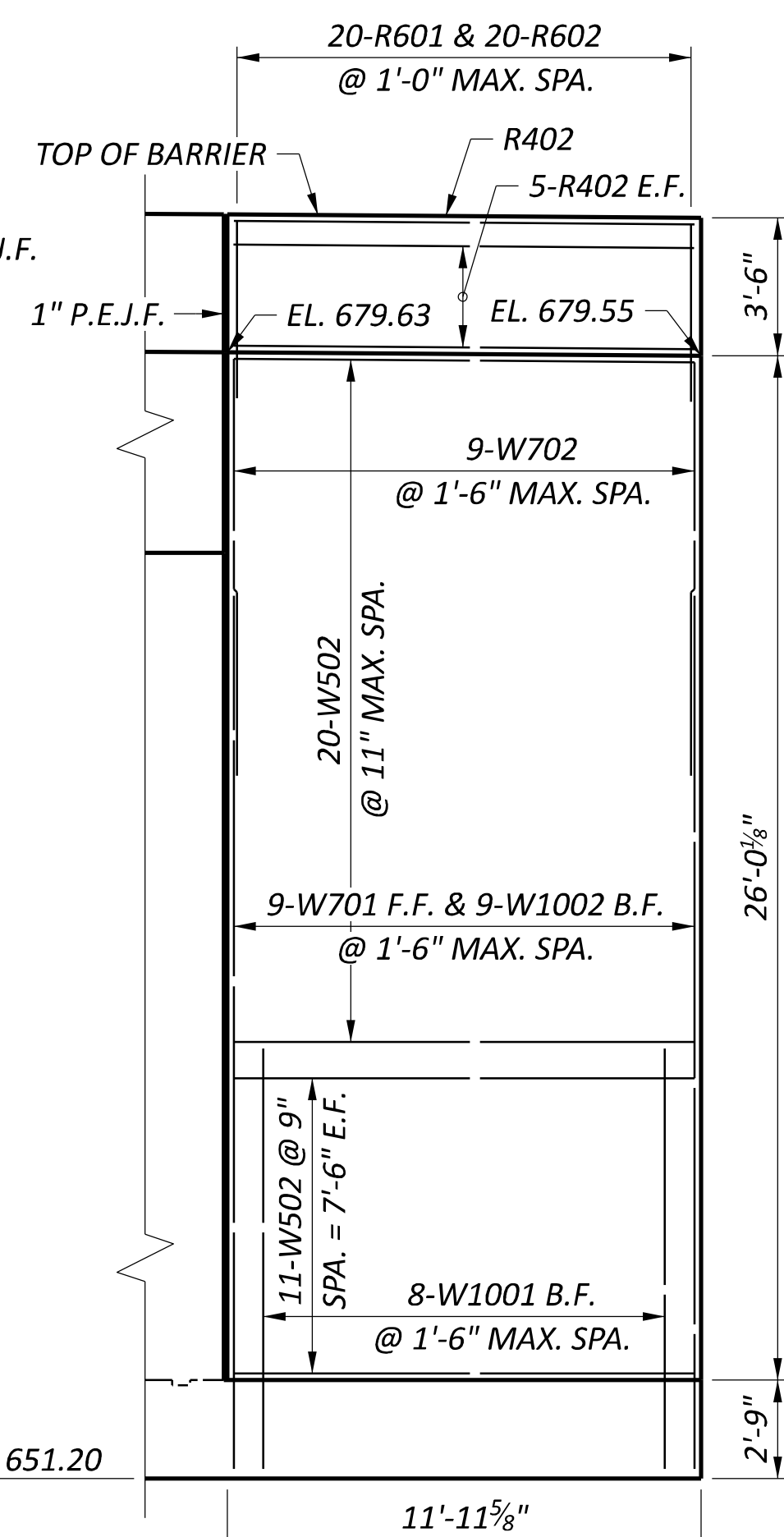
1. SEE LIGHTING PLANS FOR DETAILS OF LIGHT FIXTURES, WIRING AND CONDUIT FACILITIES.

**TRANSVERSE SECTION
BRIDGE NO. CUY-77-1322 OVER
ABANDONED W&LE RR (FUTURE MORGANA RUN TRAIL)**

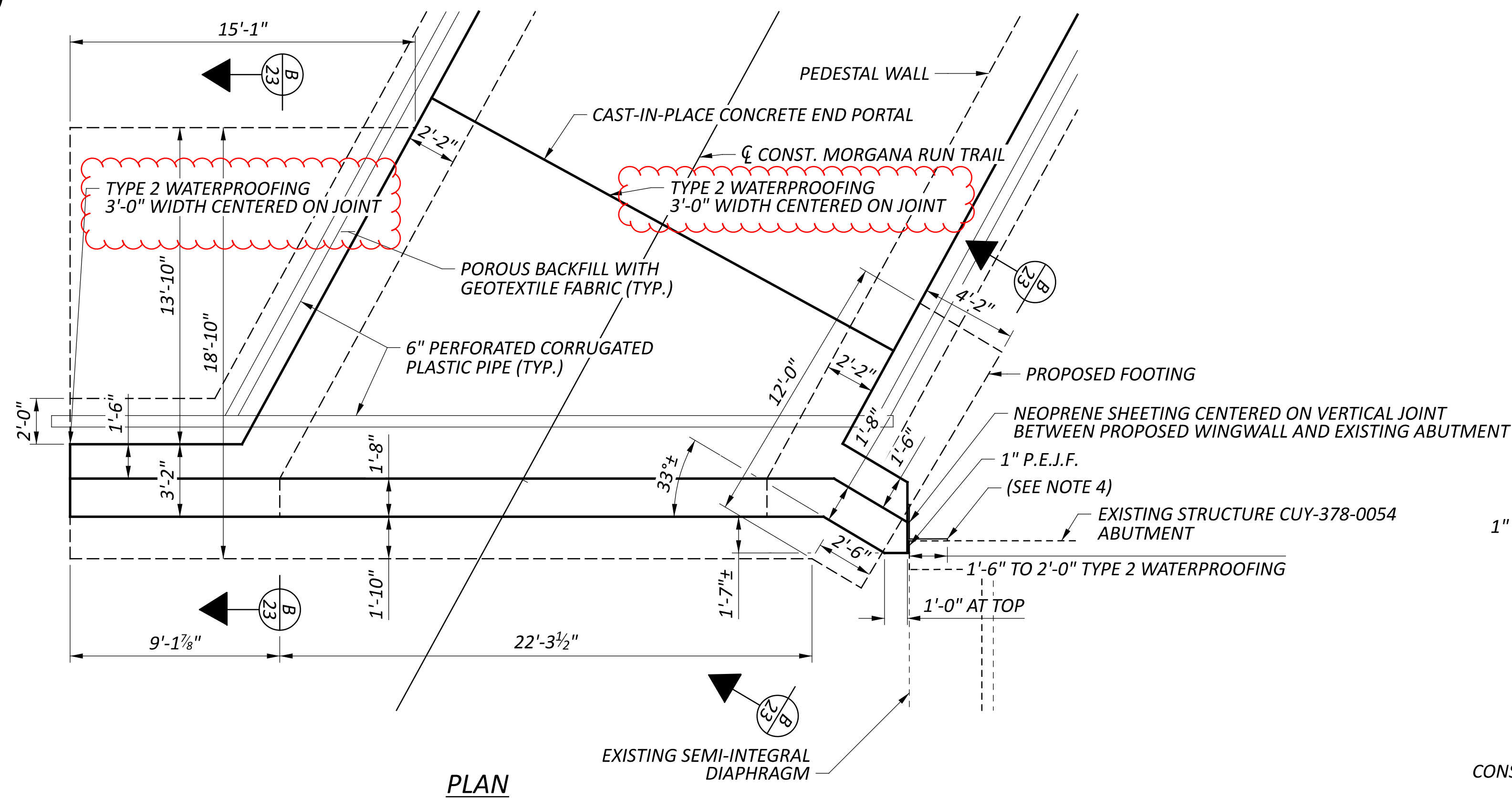
SFN	1806573
DESIGN AGENCY	TRC
DESIGNER/CHECKER	NMC CEJ
REVIEWER	CJW 11/17/25
PROJECT ID	105743
SUBSET	TOTAL
10	25
SHEET	TOTAL
P.1149	P.1274



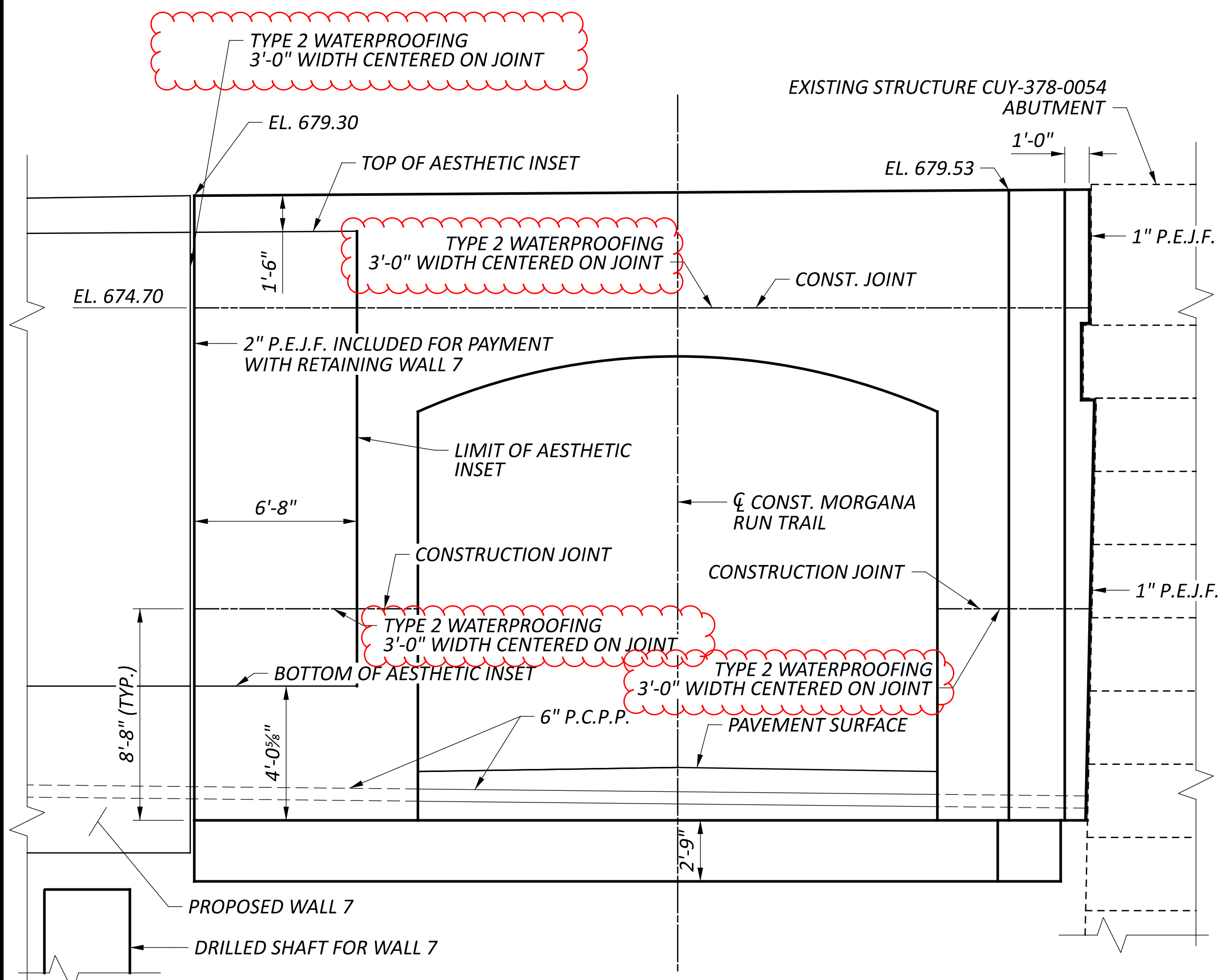
SECTION A-A



SOUTH WINGWALL ELEVATION



EXISTING SEMI-INTEGRAL
DIABURACA



EL. 679.30

25'-7 $\frac{1}{8}$ "

20-W503 @ 11" MAX. SPA. E.F.

11-W503 @ 9"
SPA. = 7'-6" E.F.

2'-9"

6-W704 @ 1'-6" MAX. SPA.

CONST. JOINT

TYPE 2 WATERPROOFING
3'-0" WIDTH CENTER LINE

CONST. JOINT

TYPE 2 WATERPROOFING
3'-0" WIDTH CENTER LINE

5-W1001 @ 1'-6" MAX. SPA. B.F.

6-W1002 @ 1'-6" MAX. SPA. B.F.

6-W701 @ 1'-6" MAX. SPA. F.F.

EXISTING STRUCTURE CUY-378-0054
ABUTMENT

4-W704 @ 1'-6" MAX. SPA.

EL. 679.53

CONST. JOINT

20-W503 @ 11" MAX. SPA. E.F.

CONST. JOINT

11-W503 @ 9" SPA. = 7'-6" E.F.

25'-10 1/2"

2'-9"

W1004 B.F. & W703 F.F.

TYPE 2 WATERPROOFING
3'-0" WIDTH CENTERED ON JOINT

TYPE 2 WATERPROOFING
3'-0" WIDTH CENTERED ON JOINT

W1003 B.F.

W1001 @ 1'-6" MAX. SPA. B.F.

W1002 @ 1'-6" MAX. SPA. B.F.

W701 @ 1'-6" MAX. SPA. F.F.

[illegible]

1. THE NEWLY CONSTRUCTED NORTH WINGWALL WILL ADJOIN THE EXISTING FORWARD ABUTMENT OF BRIDGE CUY-378-0054. DURING CONSTRUCTION OPERATIONS, CARE SHALL BE EXERCISED TO PROTECT FROM DAMAGE THE ADJACENT BRIDGE ABUTMENT AND WINGWALL.
2. THE NEWLY CONSTRUCTED NORTH WINGWALL IS TO BE CAST-IN-PLACE AGAINST THE EXISTING ABUTMENT STONE WALL AND CHEEKWALL. THE WINGWALL SHALL NOT INTERFERE WITH MOVEMENT OF THE CUY-378-0054 FORWARD ABUTMENT SEMI-INTEGRAL DIAPHRAGM.
3. PAYMENT FOR ALL FORMWORK, MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO PRODUCE THE AESTHETIC WALL FACING PATTERN SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM 511, CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN.
4. THE JOINT BETWEEN PROPOSED WINGWALL AND EXISTING BRIDGE ABUTMENT SHALL BE SEALED BY PLACEMENT OF WATERPROOFING AND NEOPRENE SHEETING. APPLY TYPE A WATERPROOFING TO THE SURFACES OF STONE MASONRY ABUTMENT AND CONCRETE CHEEKWALL AS DETAILED. INSTALL 3-FOOT WIDE VERTICAL NEOPRENE SHEETS ON THE BACKSIDE OF THE JOINT BETWEEN THE PROPOSED WINGWALL AND EXISTING ABUTMENT. ONE NEOPRENE STRIP SHALL EXTEND THE HEIGHT OF THE WINGWALL STEM. ANOTHER NEOPRENE STRIP SHALL EXTEND DOWN FROM 6 INCHES BELOW THE TOP OF HEADWALL AND OVERLAP THE LOWER STRIP BY AT LEAST 18 INCHES. CUT THE NEOPRENE STRIP AS NEEDED TO COVER IRREGULAR SURFACES AND BENDS. SECURE THE NEOPRENE SHEETING TO CONCRETE OF THE PROPOSED HEADWALL OR WINGWALL STEM WITH GALVANIZED FASTENERS AND WASHERS. SEE THE GENERAL NOTES FOR ADDITIONAL INFORMATION.

MINIMUM LAP LENGTHS	
NO. 7 BAR	4'-2"