

PROJECT SITE .....●  
STATE ROUTES .....  
COUNTY ROADS .....  
TOWNSHIP ROADS .....

**DESIGN DESIGNATION**

CURRENT ADT (2025) ..... 4,400  
DESIGN YEAR ADT (2045) ..... 4,400  
DESIGN HOURLY VOLUME (2045) ..... 607  
DIRECTIONAL DISTRIBUTION ..... 0.58  
TRUCKS (24 HOUR B&C) ..... 132  
DESIGN SPEED ..... 55 MPH  
LEGAL SPEED ..... 45 MPH  
DESIGN FUNCTIONAL CLASSIFICATION: ..... Rural Minor Arterial  
NHS PROJECT ..... No

**DESIGN EXCEPTIONS**

NONE

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

**OHIO811.org**  
Before You Dig

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

PLAN PREPARED BY:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 10 - CAPITAL PROGRAMS  
MARIETTA, OHIO

**STATE OF OHIO**  
**DEPARTMENT OF TRANSPORTATION**  
**WAS-550-16.24**  
**WARREN TOWNSHIP**  
**WASHINGTON COUNTY**

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RIGHT OF WAY .....	

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: ..... 0.73 Acres  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: ..... 0.16 Acres  
NOTICE OF INTENT EARTH DISTURBED AREA: ..... 0.89 Acres  
\* - NOI EDA Less Than One Acre: ..... No NOI is Required.

ENGINEER'S SEAL:	STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
<div>ROADWAY ENGINEER</div> <div><p>KURT W. KLESKI E-87812 REGISTERED PROFESSIONAL ENGINEER</p></div> <div>SIGNED: _____</div>	BP-3.1	1/19/24	MT-96.11	7/21/23	800-2023	7/19/24
	MGS-1.1	7/21/21	MT-96.20	7/21/23	832	7/19/24
	MGS-2.1	1/18/19	MT-96.26	1/18/19	902	7/19/19
	MGS-5.3	7/15/16	MT-97.10	4/19/19		
	HW-1.1	7/19/24	MT-101.70	7/19/24		
	DM-2.1	1/18/13	MT-101.75	7/21/23		
	DM-4.4	1/15/16	MT-101.90	7/17/20		
			MT-105.10	1/17/20		
	RM-1.1	1/20/23			SPECIAL PROVISIONS	
	RM-4.2	7/19/24	TC-42.20	10/18/13		

**FEDERAL PROJECT NUMBER**

E240-(384)

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

THIS PROJECT WILL CONSIST OF THE REPLACEMENT OF EXISTING 24" CLAY PIPE, WAS-550-16.24, (CFN 1885152), WITH A 36" CONDUIT, TYPE A, (CFN 1995547), BORED AND JACKED IN PLACE WITH HEADWALLS. THE PROJECT WILL ALSO INCLUDE THE PLACEMENT OF ROCK CHANNEL PROTECTION AND DITCH CLEANOUT.

**2023 SPECIFICATIONS**

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

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

Rich Oster  
DISTRICT 10 DEPUTY DIRECTOR

Pamela Boratyn  
DIRECTOR, DEPARTMENT OF TRANSPORTATION



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.

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.

UTILITIES

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

AMERICAN ELECTRIC POWER 38831 SR 7 Reedsville, OH 45769 Clarke Saunders	614-312-5807
WASHINGTON ELECTRIC COOP 440 Highland Ridge Road Marietta, OH 45750 Don Paisley	740-373-2141
ENBRIDGE / DOMINION 320 Springside Drive Akron, OH 44333 Adam Kearns	330-620-9127
AT&T 160 North Sixth Street Zanesville, OH 43701 Barrett Tamasovich	740-454-3552
WARREN WATER 17300 SR 550 Marietta, OH 45750 Tony Lang	740-373-8476
SUDDENLINK 1737 East Seventh Street Parkersburg, WV 26101 Bill Brown	304-865-4067
ENERGEX POWER Inc. 353 East Lincoln Highway Coatesville, PA 19320	724-622-0093

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.

SEEDING AND MULCHING

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.

ITEM 642 - EDGE LINE, 6" TYPE 1 & CENTER LINE, TYPE 1

THE NEW EDGE LINE AND CENTER LINE SHALL MATCH THE OFFSET OF THE EXISTING PAVEMENT MARKINGS OF THE APPROACH PAVEMENT.

ENDANGERED BAT HABIT REMOVAL

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

EXISTING CULVERT VERIFICATION

EXISTING CULVERT VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING CULVERT HAVE BEEN OBTAINED FROM PLANS AND FROM FIELD OBSERVATIONS AND MEASUREMENTS.

CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING CULVERT AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING CULVERT. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE SPACED AT 50 FOOT INTERVALS, STAGGERED EVERY 25 FOOT ON EACH SIDE OF NORMAL CROWN PAVEMENT.

WAS-550-16.24, (Rt. Side Only)
Sta. 855+50, 12.6'
Sta. 856+00, 12.7'
Sta. 856+50, 10.0'
Sta. 857+00, 7.3'
Sta. 857+50, 7.3'
Sta. 858+00, 7.3'
Sta. 858+50, 7.3'
Sta. 859+00, 8.0'
Sta. 859+50, 13.5'

AN ESTIMATED QUANTITY OF 86 FOOT HAS BEEN CARRIED TO THE GENERAL SUMMARY, SHT. 8 OF 23.

REMOVAL MISC.: TEST AND CAP ABANDONED LINES

THIS ITEM SHALL INCLUDE TESTING/CAPPING THE LINES LABELED "ABANDONED" ON SHEET 10. THESE LINES SHALL BE TESTED FOR THE PRESENCE OF GAS BY A CERTIFIED GAS TECHNICIAN. AFTER TESTING, THE LINES SHALL BE CAPPED IN ACCORDANCE WITH APPLICABLE STANDARDS. THE CONTRACTOR SHALL DETERMINE WHERE THE LINES SHALL BE CAPPED SO AS NOT TO INTERFERE WITH CONSTRUCTION ACTIVITIES.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 202 - REMOVAL MISC.: TEST AND CAP ABANDONED LINES AND SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

A TOTAL OF 5 EACH TO BE CARRIED TO THE GENERAL SUMMARY.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 24" DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

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

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

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

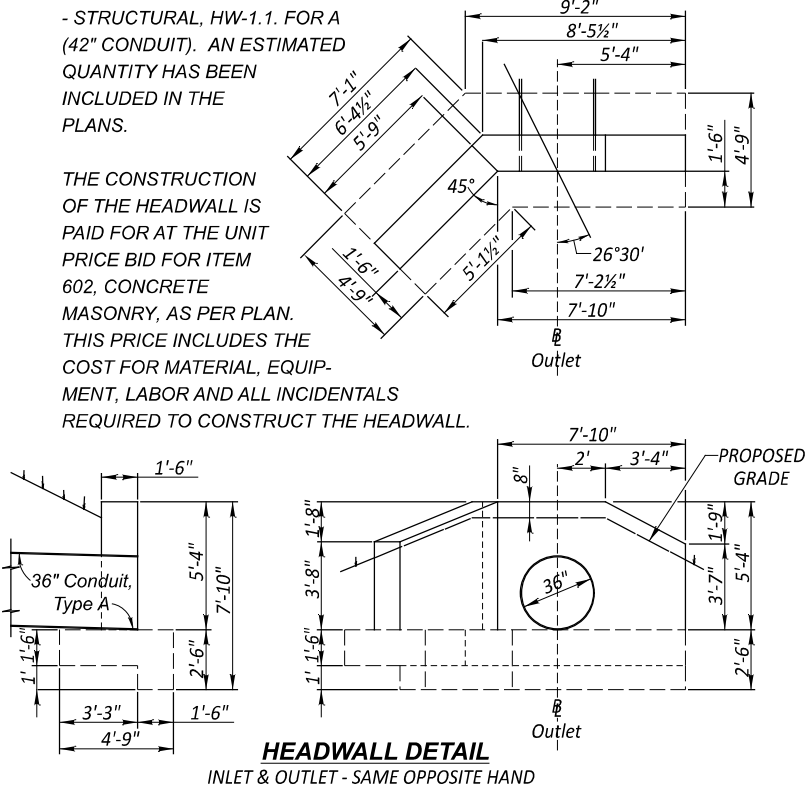
ITEM 611 - CONDUIT BORED AND JACKED

WHERE IT IS SPECIFIED A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 20 FEET TO THE EDGE OF PAVEMENT. PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06. SEAL JOINTS WITH A CIRCUMFERENCE FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER OR WITH A MACHINED INTERLOCKING JOINT. THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

ITEM 602 - CONCRETE MASONRY, AS PER PLAN

THIS WORK CONSISTS OF CONSTRUCTING A HEADWALL FOR A 36" CONDUIT AS DETAILED BELOW. ALL OTHER SPECIFICATIONS SHALL BE AS PER STD. CONST. DWGS. - STRUCTURAL, HW-1.1. FOR A (42" CONDUIT). AN ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS.

THE CONSTRUCTION OF THE HEADWALL IS PAID FOR AT THE UNIT PRICE BID FOR ITEM 602, CONCRETE MASONRY, AS PER PLAN. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR AND ALL INCIDENTALS REQUIRED TO CONSTRUCT THE HEADWALL.



SURVEYING PARAMETERS

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

PROJECT CONTROL

POSITIONING METHOD: ODOT REAL TIME NETWORK (2011)  
MONUMENT TYPE: B (3/4" x 30" REBAR WITH ODOT CONTROL CAP)

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: GEOID 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011) (epoch 2010.0)  
ELLIPSOID: GRS80  
OHIO COUNTY COORDINATE SYSTEM: WASHINGTON COUNTY  
WASHINGTON COUNTY LDP PROJECTION PARAMETERS:  
PROJECTION: LAMBERT CONFORMAL CONIC 1 PARALLEL  
CENTRAL MERIDIAN: E 278° 36' 00"  
STANDARD PARALLEL: N 39° 24' 00"  
FALSE NORTING: 100,000 METERS  
FALSE EASTING: 50,000 METERS  
PROJECTION SCALE FACTOR: 1.000031  
FOOT DEFINITION: U.S. SURVEY FOOT

NOTE:

THE LOW DISTORTION PROJECTION (LDP) IS A LOCAL COUNTY PROJECTION DEVELOPED BY O.D.O.T. THE DISTORTION BETWEEN GROUND AND GRID IS SO MINIMAL THAT THERE IS NO NEED FOR A SCALE FACTOR TO ADJUST BETWEEN GRID AND GROUND DISTANCES. CONTACT THE DISTRICT SURVEY DEPARTMENT FOR INFORMATION OR QUESTIONS.

NOTE:

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

BASIS OF BEARINGS:

BEARINGS ARE BASED ON GRID NORTH OF THE O.D.O.T. LOW DISTORTION PROJECTION - WASHINGTON COUNTY

PROJECT CONTROL POINTS				
Point	Description	Northing	Easting	Elevation
*SV10	3/4" I.P. w/ODOT Cap	325,403.198	117,078.500	766.436
*SV11	3/4" I.P. w/ODOT Cap	325,424.981	117,229.991	773.866
*SV12	3/4" I.P. w/ODOT Cap	325,495.482	117,435.100	786.278
SV13	3/4" I.P. w/ODOT Cap	325,520.328	117,587.067	794.481

NOTE: \* FOR PROJECT CONTROL POINT LOCATIONS, SEE SHT. 10 OF 23

SR 550 ¢ COORDINATES		
Station	Northing	Easting
855+00	325,416.911	117,052.428
¢ 857+75 = ¢ 1+00	325,457.197	117,306.251
860+25	325,429.206	117,570.938

CHANNEL ¢ COORDINATES		
Station	Northing	Easting
0+00	325,553.403	117,317.403
0+40	325,514.425	117,324.275
2+00	325,361.815	117,276.311



SHEET NUMBER													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
3	4	5	6	9	20	21	22						01/STR/04		EXT	TOTAL			SHEET
																			NO.
																		ROADWAY	
LS						2							LS	201	11000	LS		CLEARING AND GRUBBING	3
						15							2	202	20010	2	EACH	HEADWALL REMOVED	
													15	202	35100	15	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
				505									505	202	38000	505	FT	GUARDRAIL REMOVED	
						43							43	SPECIAL	20270000	43	FT	FILL AND PLUG EXISTING CONDUIT, 24" CONDUIT	3
5													5	202	98100	5	EACH	REMOVAL MISC.: TEST AND CAP ABANDONED LINES	3
					1,086		22						1,108	203	10000	1,108	CY	EXCAVATION	
					2,300		122						2,422	203	20000	2,422	CY	EMBANKMENT	
				258									258	204	10000	258	SY	SUBGRADE COMPACTION	
				425									425	606	15050	425	FT	GUARDRAIL, TYPE MGS	
				4									4	606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
																		EROSION CONTROL	
						12							12	601	32100	12	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
				125									125	601	39000	125	FT	PAVED GUTTER, TYPE 4	
				3,553									3,553	659	10000	3,553	SY	SEEDING AND MULCHING	
				0.32									0.32	659	20000	0.32	TON	COMMERCIAL FERTILIZER	
				0.74									0.74	659	31000	0.74	ACRE	LIME	
				20									20	659	35000	20	MGAL	WATER	
													4,000	832	30000	4,000	EACH	EROSION CONTROL	
																		DRAINAGE	
						LS							LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
						15.6							15.6	602	20001	15.6	CY	CONCRETE MASONRY, AS PER PLAN	3
86													86	605	31100	86	FT	AGGREGATE DRAINS	3
						100							100	611	96600	100	FT	CONDUIT, BORED OR JACKED, 36" CONDUIT, TYPE A, 748.06	3
																		PAVEMENT	
				1,228									1,228	254	01000	1,228	SY	PAVEMENT PLANING, ASPHALT CONCRETE, (T Varies, 1.50" Avg.)	
				47									47	301	56000	47	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
				75									75	304	20000	75	CY	AGGREGATE BASE	
				115									115	407	20000	115	GAL	NON-TRACKING TACK COAT	
				52									52	441	70000	52	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
																		TRAFFIC CONTROL	
				11									11	621	54000	11	EACH	RAISED PAVEMENT MARKER REMOVED	
				9									9	626	00110	9	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
				2									2	630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				2									2	630	86010	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION	
				0.37									0.37	642	00104	0.37	MILE	EDGE LINE, 6", TYPE 1	3
				0.2									0.2	642	00300	0.2	MILE	CENTER LINE, TYPE 1	
																		MAINTENANCE OF TRAFFIC	
	1	2	2										4	614	12384	4	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	4
													1	614	12740	1	EACH	WORK ZONE LIGHTING SYSTEM	4
		22	22										44	614	13310	44	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	4
		22	6										28	614	13360	28	EACH	OBJECT MARKER, TWO WAY	4
		0.1											0.1	614	21000	0.1	MILE	WORK ZONE CENTER LINE, CLASS I	
		0.38	0.38										0.76	614	22000	0.76	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
		43											43	614	26000	43	FT	WORK ZONE STOP LINE, CLASS I	
		516	96										612	622	41100	612	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
	LS												LS	614	11000	LS		MAINTAINING TRAFFIC	4
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	3
													LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER  
CAK


REVIEWER  
KWK 12/24

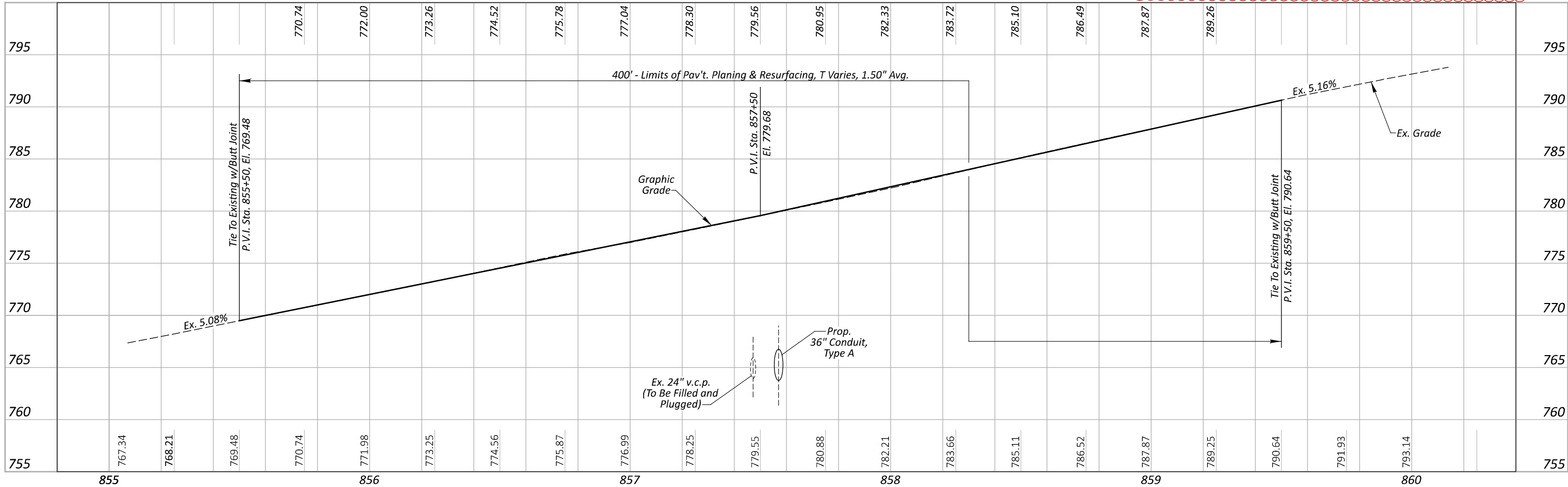
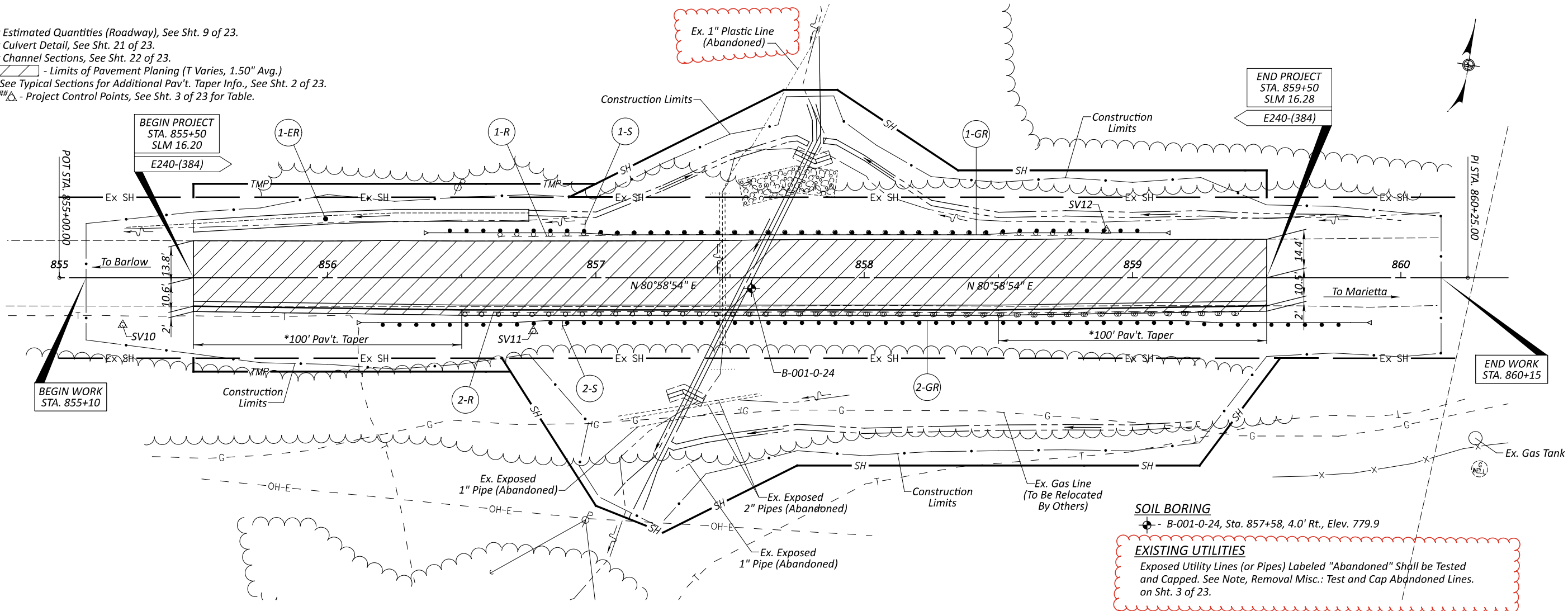
PROJECT ID  
117257

SHEET  
8

TOTAL  
23



- NOTE:
- 1.) For Estimated Quantities (Roadway), See Sht. 9 of 23.
  - 2.) For Culvert Detail, See Sht. 21 of 23.
  - 3.) For Channel Sections, See Sht. 22 of 23.
  - 4.)  - Limits of Pavement Planing (T Varies, 1.50" Avg.)
  - 5.) \* - See Typical Sections for Additional Pav't. Taper Info., See Sht. 2 of 23.
  - 6.) SV### - Project Control Points, See Sht. 3 of 23 for Table.



HORIZONTAL  
SCALE IN FEET

0 10 20 40

PLAN & PROFILE  
Sta. 855+50 to Sta. 859+50

DESIGN AGENCY



DESIGNER  
CAK

REVIEWER  
KWK 12/24

PROJECT ID  
117257

SHEET  
10

TOTAL  
23