

## LOCATION MAP

LATITUDE: N39°24'38.8" LONGITUDE: W82°15'57.0"

SCALE IN MILES



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

## UNDERGROUND UTILITIES

CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**



CALL  
1-800-362-2764  
(TOLL FREE)



1-800-555-1212  
**OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY**

OIL & GAS PRODUCERS UNDERGROUND  
PROTECTION SERVICE CALL: 1-800-925-0988

## ATHENS COUNTY ENGINEER

# ATH-TR275-1.37

## BOX CULVERT

# YORK TOWNSHIP ATHENS COUNTY

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## PROJECT DESCRIPTION

REMOVAL OF A 6' DIAMETER CMP CULVERT AND CONSTRUCTION OF A 8'x7' CONCRETE BOX CULVERT, INCLUDING ROAD REPAIR AND NEW GUARDRAIL.

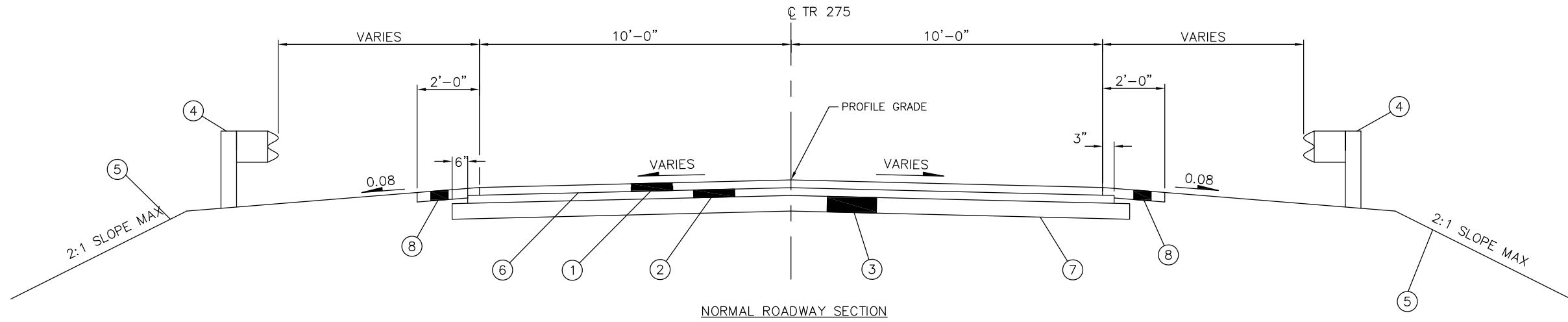
2023 SPECIFICATIONS

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



PLANS PREPARED BY:  
ATHENS COUNTY ENGINEER'S OFFICE  
16000 CANAANVILLE RD  
ATHENS, OHIO 45701

ENGINEER'S SEAL	STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
 The seal is circular with a double-line border. The outer ring contains the text "STATE OF OHIO" at the top and "PROFESSIONAL ENGINEER" at the bottom. The inner circle contains the name "Rex Jeffrey Maiden" and the registration number "E-51405" in the center, with a small star on each side.	BP-3.1	1-19-24	SS-800	7-18-2
	MCS-1.1	7-16-21	SS-832	7-18-2
	MGS-2.1	7-18-25		
	MGS-2.3	7-18-25		
	MT-97.10	7-18-25		
	MT-97.12	7-18-25		
	MT-101.60	1-17-25		
SIGNED: <i>Rex Maiden</i>	SPECIAL PROVISIONS			
DATE: 1/23/26				

LEGEND

①	ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE (449), TYPE 1, PG64-22
②	ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE (449), TYPE 2, PG64-22
③	ITEM 304 - 8" AGGREGATE BASE
④	ITEM 606 - GUARDRAIL, TYPE MGS
⑤	ITEM 659 - SEEDING AND MULCHING
⑥	ITEM 407 - TACK COAT
⑦	ITEM 204 - SUBGRADE COMPACTION
⑧	ITEM 617 - COMPACTED AGGREGATE, 3" THICK

CONTRACT SPECIFICATIONS

THE JANUARY 1, 2023 VERSION OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AS PUBLISHED BY THE OHIO DEPARTMENT OF TRANSPORTATION SHALL GOVERN ALL ASPECTS OF THE CONTRACT WORK. THE CONTRACTOR SHOULD BE FAMILIAR WITH THESE SPECIFICATIONS AND THEIR PROCEDURAL REQUIREMENTS.

STANDARD DRAWINGS

REFERENCE SHOULD BE MADE TO THE STANDARD DRAWINGS SHOWN IN THE TABLE ON THE COVER SHEET.

O.U.P.S CALL

THE CONTRACTOR IS RESPONSIBLE FOR CALLING THE OHIO UTILITIES PROTECTION SERVICE AT LEAST TWO DAYS BEFORE DIGGING. THE TOLL-FREE NUMBER IS (800) 362-2764.

UTILITIES

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

(1) CABLE TV: NELSONVILLE TV CABLE INC  
1120 E. CANAL ST  
NELSONVILLE, OHIO 45764  
PHONE: 740-753-2686

(2) WATER: LE-AX WATER  
PHONE: 740-594-0123

(3) ELECTRIC: AMERICAN ELECTRIC POWER  
9135 SR 682  
ATHENS, OHIO 45701  
CONTACT: CHRIS McDANIELS  
PHONE: 740-594-1911

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

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988(NAVD 88) AND THE GEODETIC 12A. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE SOUTH ZONE 3402.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9:00 P.M. AND 7:00 A.M. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ITEM 201 - 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.

SEEDING AND MULCHING

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

659, SEEDING AND MULCHING - 92 SQ. YD.

659, COMMERCIAL FERTILIZER - 0.04 TON

659, AGRICULTURAL LIME - 0.02 ACRES

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE EASEMENT LINES. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM 617 - COMPAKED AGGREGATE

CONTRACTOR MAY USE ITEM 617 COMPAKED AGGREGATE OR 304 AGGREGATE BASE FOR SHOULDER.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN ON THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC

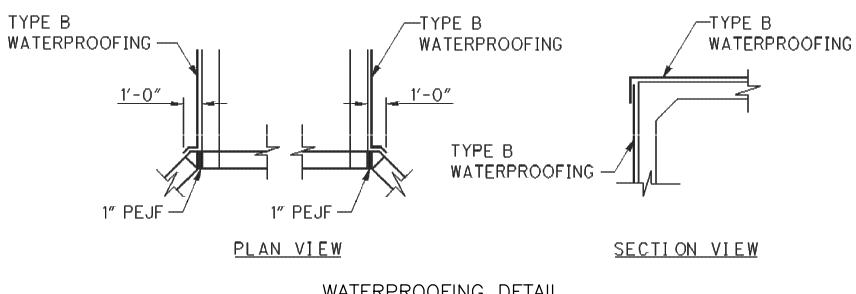
THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48"x30" ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES, GATES AND LIGHTS AS DETAILED IN SCD MT-101.60 AT BOTH ENDS OF THE PROJECT DURING THE PERIOD IN WHICH THE ROAD IS CLOSED TO TRAFFIC. THE CONTRACTOR SHALL ALSO PLACE AND MAINTAIN THE THREE SIGNS LEADING IN TO BOTH ENDS OF THE PROJECT PER SCD MT-101.60.

THE CONTRACTOR SHALL ADVISE THE YORK TOWNSHIP TRUSTEES A MINIMUM OF FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF THE ROAD CLOSURE. THE DURATION OF THE ROAD CLOSURE IS NOT TO EXCEED FORTY (40) CALENDAR DAYS. LIQUID DAMAGES WILL BE ASSESSED AS PER CMS 108.07.

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

ITEM 512 - TYPE 2 WATERPROOFING

TYPE 2 WATERPROOFING SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. IT SHALL ALSO BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

ITEM 611 - 8' X 7' CONDUIT, TYPE A, 706.05, AS PER PLAN

THIS ITEM INCLUDES THE COST OF ALL LABOR, EQUIPMENT, AND MATERIAL TO CONSTRUCT THE NEW 8'X7'X32' CONCRETE BOX CULVERT AS DETAILED IN THESE PLANS. IT SHALL ALSO INCLUDE THE COST OF PROVIDING AND INSTALLING THE PRECAST HEADWALLS AS SHOWN IN THESE PLANS. THE MATERIALS USED FOR THE PRECAST HEADWALLS SHALL BE PER ODOT CMS 509 AND 511.

THIS CONDUIT SHALL BE DESIGNED TO MEET HL-93 DESIGN LOADING. THE LOAD RATING BOOKLET FOR THE STRUCTURE SHALL BE PROVIDED ALONG WITH THE CURRENT ODOT BR100 FORM STAMPED BY A PROFESSIONAL ENGINEER.

ITEM 511 - CONCRETE, MISC.: PRECAST WINGWALL

THIS ITEM INCLUDES THE COST OF ALL LABOR, EQUIPMENT, AND MATERIAL TO PROVIDE AND INSTALL THE PRECAST WINGWALLS AS DETAILED IN THESE PLANS. THE MATERIALS USED FOR THE PRECAST WINGWALL SHALL BE PER ODOT CMS 509 AND 511.

ITEM 832 - EROSION CONTROL

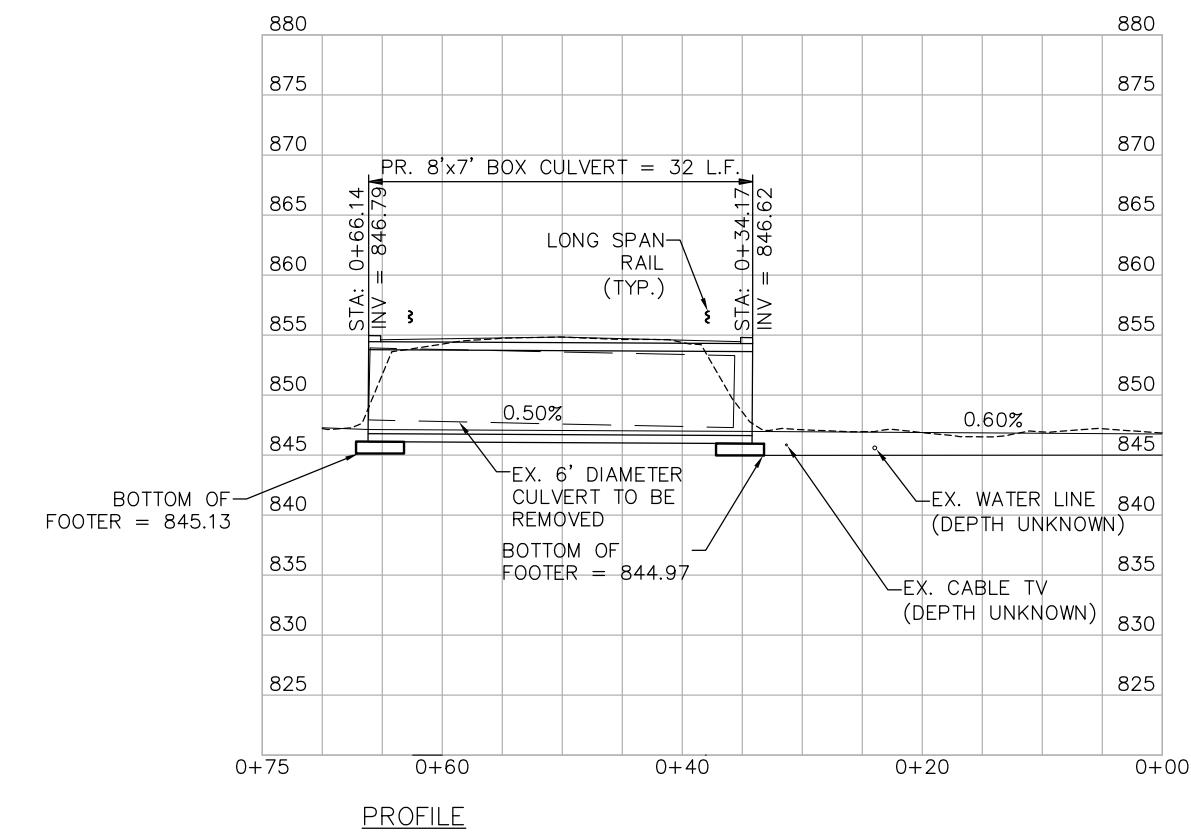
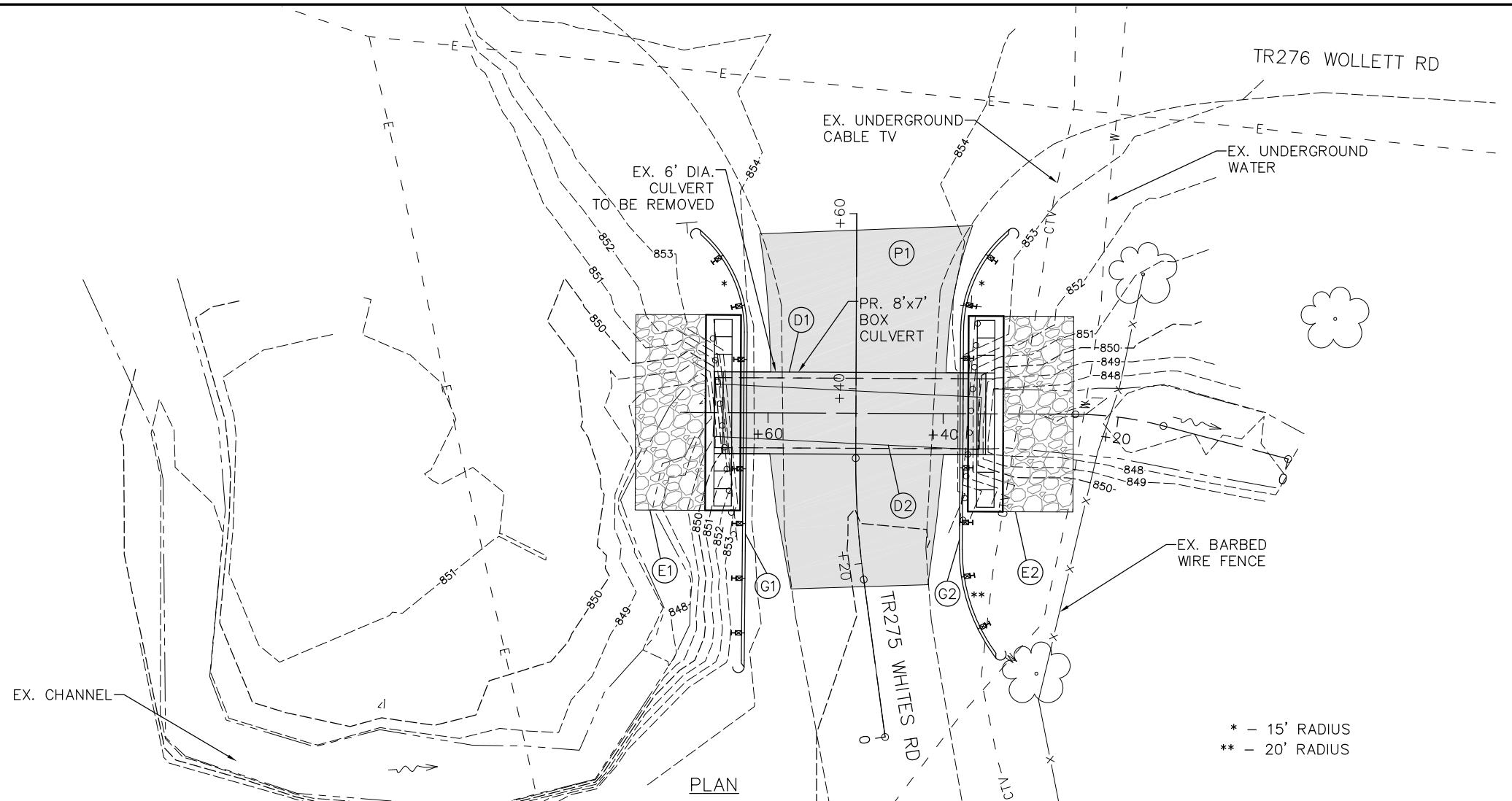
THIS ITEM SHALL BE BID AT \$1.00 PER EACH AND WILL BE USED TO PAY FOR EROSION CONTROL ITEMS SUCH AS SILT FENCE, ETC.

GENERAL SUMMARY

REF NO.	ITEM NO.	ITEM DESCRIPTION	QTY	UNIT
1	201	CLEARING AND GRUBBING	1	LS
2	204	SUBGRADE COMPACTION	97	SY
3	606	GUARDRAIL, TYPE MGS	100	FT
4	601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	28	CY
5	659	SEEDING AND MULCHING	92	SY
6	659	COMMERCIAL FERTILIZER	0.04	TON
7	659	LIME	0.02	ACRE
8	832	EROSION CONTROL	1000	EACH
9	304	AGGREGATE BASE	16	CY
10	407	TACK COAT	10	GAL
11	441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	4	CY
12	441	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), PG64-22	5	CY
13	617	COMPACTED AGGREGATE	2	CY
14	202	PIPE REMOVED, OVER 24" DIAMETER	30	FT
15	503	UNCLASSIFIED EXCAVATION (FOOTERS)	1	LS
16	509	EPOXY COATED STEEL REINFORCEMENT	504	LB
17	511	CLASS QC1 CONCRETE, FOOTING	7	CY
18	511	CONCRETE, MISC.: PRECAST WINGWALLS, AS PER PLAN	1	LS
19	512	TYPE 2 WATERPROOFING	92	SY
20	611	8' X 7' CONDUIT, TYPE A, 706.05, AS PER PLAN	32	FT
21	614	MAINTAINING TRAFFIC	1	LS
22	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS
23	624	MOBILIZATION	1	LS

ITEM 201 - CLEARING AND GRUBBING

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REF #	TR 275 STATION	PIPE REMOVED, OVER 24" DIAMETER	SIDE	202	204	441	304	407	441	601	606	611	617
				FT	FT	SY	SY	8" AGGREGATE BASE	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG-64-22	TACK COAT (0.10 GAL/SY)	1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG-64-22	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	GUARDRAIL, TYPE MGS
D1	0+32.5	0+42											
D2	0+34.5	0+39											
E1	0+26.9	0+48.4	Lt										
E2	0+24	0+48.4	Rt										
G1	0+09.6	0+58.3	Lt										
G2	0+06.9	0+58.4	Rt										
P1	0+17.7	0+58.5											
TOTALS TO GENERAL SUMMARY				30	97	5	16	10	4	28	100	32	2

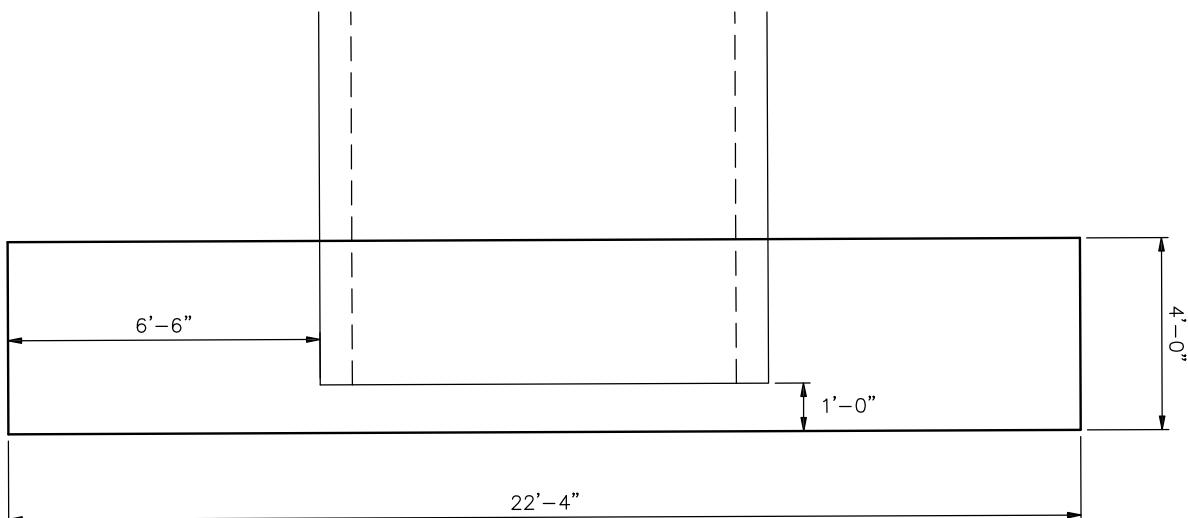
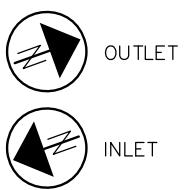
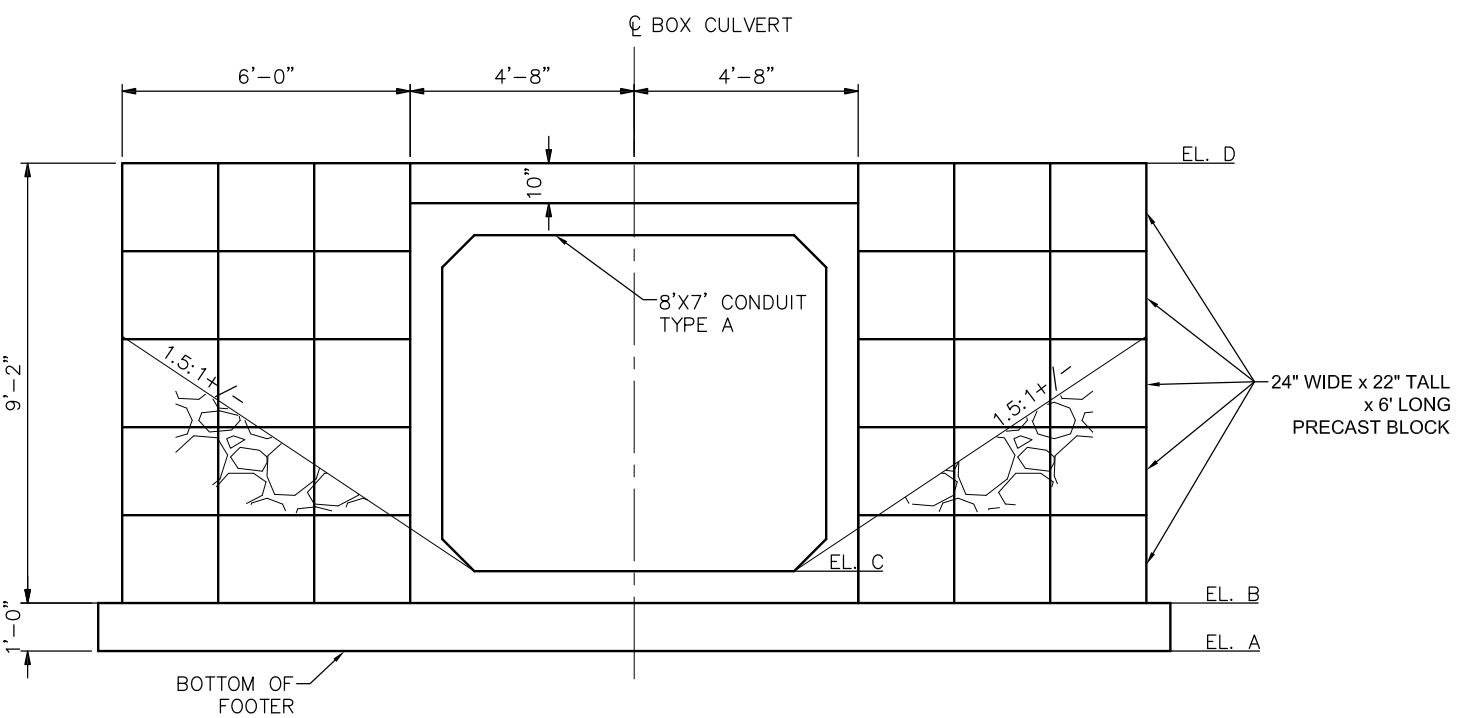


TABLE OF ELEVATIONS				
LOCATION	EL. A	EL. B	EL. C	EL. D
INLET	845.13	846.13	846.80	855.30
OUTLET	844.97	845.97	846.64	855.14

TYPICAL PLAN



TYPICAL ELEVATION

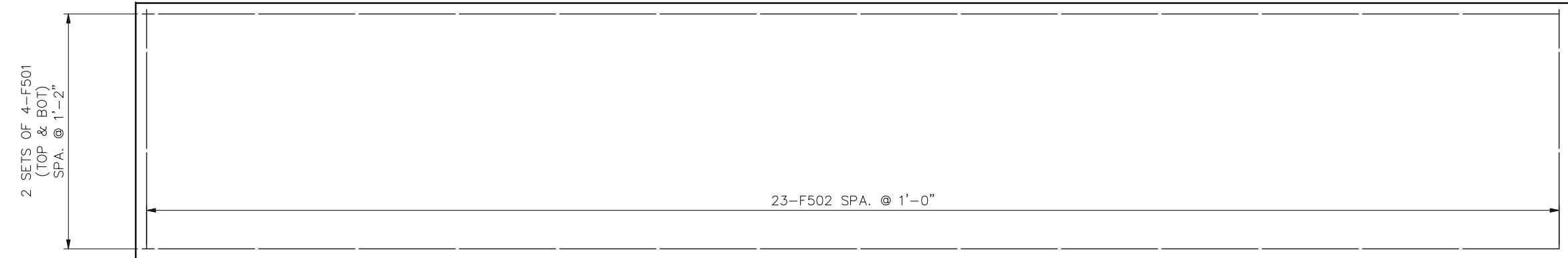
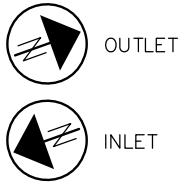
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TYPICAL WINGWALL PLAN & ELEVATION

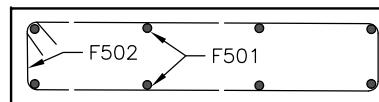
CALCULATED  
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4  
HORIZONTAL  
SCALE IN FEET

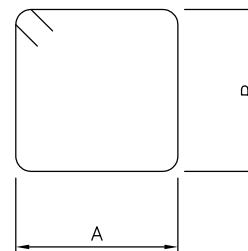
5  
6



TYPICAL FOOTING REINFORCING PLAN



TYPICAL FOOTING SECTION



TYPE 1

NOTES:

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, F501 IS A NO. 5 BAR.
2. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED.
3. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
4. "ST" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
5. REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. IF BARS ARE FIELD CUT, REPAIR ALL DAMAGE TO EPOXY COATING ACCORDING TO C&MS 709.00.

FOOTER												
MARK	REAR QTY.	FWD QTY.	TOTAL QTY.	LENGTH	WEIGHT	TYPE	DIM. A	DIM. B	DIM. C	DIM. D	SERIES INC.	COMMENTS
F501	8	8	16	22 ft 1 in	237	ST						
F502	23	23	46	8 ft 8 in	267	1	3'-8"	0'-7"				
SUBTOTAL-FOOTERS =											504	