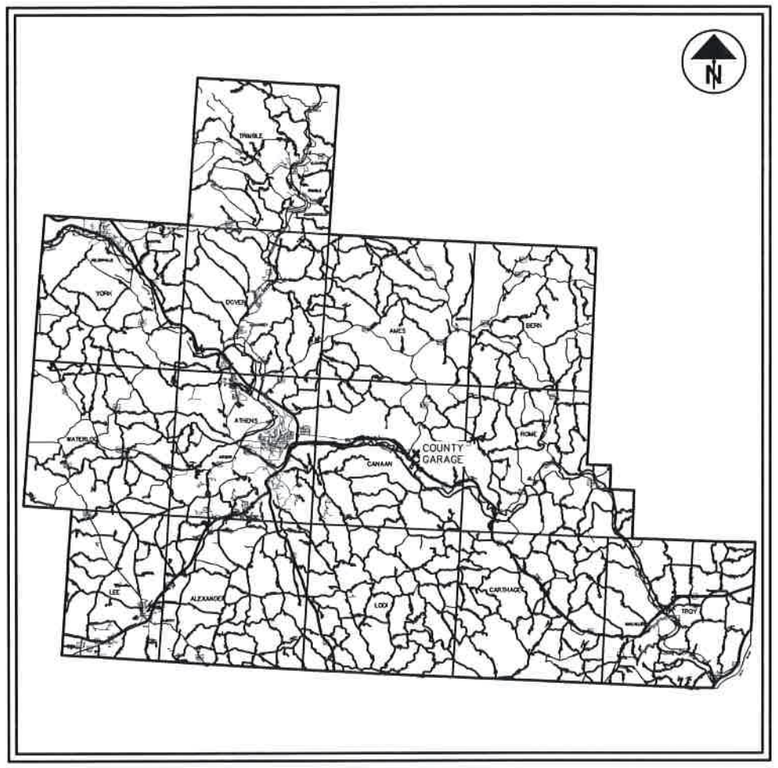

LOCATION MAP

COUNTY GARAGE - LATITUDE: N39°19'27" LONGITUDE: W81°59'34"

ATHENS COUNTY ENGINEER

ATH-OEMA LANDSLIDE REPAIRS

CR24-2.60, CR37-2.55, & CR75-4.46

INDEX OF SHEETS:

PROJECT DESCRIPTION

CR24-2.60 CONSISTS OF THE CONSTRUCTION OF A DRILLED PIER WALL (104 L.F.) AND GUARDRAIL ALONG HARMONY RD (CR24) LOCATED APPROXIMATELY 0.99 MILES EAST OF THE INTERSECTION WITH CR24A-S CANAAN RD.

CR37-2.55 CONSISTS OF THE CONSTRUCTION OF A DRILLED PIER WALL (56 L.F.) WITH PLUG PILES ALONG CONCORD CHURCH RD (CR37) LOCATED APPROXIMATELY 0.12 MILES WEST OF THE INTERSECTION WITH CR36-HOOPER RIDGE RD.

CR75-4.46 CONSISTS OF THE CONSTRUCTION OF A DRILLED PIER WALL (96 L.F.) AND GUARDRAIL ALONG ALONG COOLVILLE RIDGE RD (CR75) APPROXIMATELY 380 FEET SOUTH OF THE INTERSECTION WITH TR90-GRAHAM CHAPEL RD.

2016 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.

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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

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

ENGINEER'S SEAL	STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	
STATE OF OHIO · Rex Jeffrey Maiden · E-51405 · REGISTERED PROFESSIONAL ENGINEER	DM-1.1	7-21-17	MT-97.10	7-18-14		SS-800	4-20-18
SIGNED: Jeff Maiden	DM-1.2	1-18-13	MT-101.60	1-20-17		SS-832	1-17-14
DATE: 6/06/18			MT-101.70	1-17-14			
			MT-105.10	7-19-13			
	HW-2.1	7-21-17					
	GR-2.1	7-20-12					
	GR-4.2	7-20-12					

APPROVED Larry Ellerson
DATE 6/12/18 ATHENS COUNTY COMMISSIONER

OEMA DISASTER NO. SDRP-2017
PROJECT NO. 17111
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
ATH-OEMA LANDSLIDE REPAIRS
1 / 11

Z:\PROJECTS\ROAD Projects\Road Projects 2017\17111_ATH-OEMA Landslide Repairs\dwg\Plan Sets\Construction\17111_01-CV.dwg 06-Jun-18 1:31 PM

CR24-2.60
-LATITUDE: N39°19'50.1" LONGITUDE: W81°01'21.0"
-LOCATED ALONG HARMONY RD (CR24) APPROXIMATELY 0.99 MILES EAST OF THE INTERSECTION WITH CR24A-S CANAAN RD.

CR37-2.55
-LATITUDE: N39°27'09.5" LONGITUDE: W82°01'45.9"
-LOCATED ALONG CONCORD CHURCH RD (CR37) APPROXIMATELY 0.12 MILES WEST OF THE INTERSECTION WITH CR36-HOOPER RIDGE RD.

CR75-4.46
-LATITUDE: N39°16'00.2" LONGITUDE: W82°01'08.7"
-LOCATED ALONG COOLVILLE RIDGE RD (CR75) APPROXIMATELY 380 FEET SOUTH OF THE INTERSECTION WITH TR90-GRAHAM CHAPEL RD.

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LANDSLIDE LOCATIONS MAP

ATH-OEMA LANDSLIDE REPAIRS

CONTRACT SPECIFICATIONS
THE JANUARY 1, 2016 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) ELECTRIC
AMERICAN ELECTRIC POWER
9135 SR 682
ATHENS, OHIO 45701
CONTACT: CHRIS McDANIELS
PHONE: 740-532-9927

(2) TELEPHONE
FRONTIER COMMUNICATIONS
333 ELM ST
LOGAN, OHIO 43138
CONTACT: ALLISON GRAY
PHONE: 740-249-5219

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 EXPENSES 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.

WORK LIMITS
ALL PHYSICAL WORK SHALL BE COMPLETED WITHIN THE COUNTY RIGHT-OF-WAY 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.

ELEVATION DATUM
ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988(NAVD 88) AND THE GEOID 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.

ROAD CLOSED/MAINTENANCE OF TRAFFIC
THE COUNTY ROADS WILL BE CLOSED FOR A MAXIMUM OF 45 DAYS FOR EACH SITE. LOCAL TRAFFIC WILL BE DETOURED.

ITEM 614 - MAINTAINING TRAFFIC
THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" X 30" - "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT-101.60 AT LOCATIONS NEAR THE SLIPS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 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 614, MAINTAINING TRAFFIC.

THE ATHENS COUNTY ENGINEER WILL PROVIDE THE SIGNS FOR THE DETOUR ROUTE, AND WILL MAINTAIN THE DETOUR SIGNS.

ITEM 659 - SEEDING AND MULCHING
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 201 - CLEARING AND GRUBBING
CONTRACTORS SHOULD INSPECT THE AREAS WHERE THE RETAINING WALLS ARE TO BE CONSTRUCTED TO FIND THE BULK OF THIS WORK. SPECIFIC TREES TO BE REMOVED HAVE NOT BEEN DENOTED ON THESE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE SCOPE OF WORK REQUIRED TO CLEAR THE AREAS NEEDED TO CONSTRUCT THE VARIOUS ELEMENTS OF THIS PROJECT.

UNCLASSIFIED EXCAVATION
THIS ITEM CONSISTS OF EXCAVATING A BENCH IN ORDER TO CONSTRUCT THE DRILLED SHAFTS OR SHEET PILE WALL, AND PLACING A COMPACTED FILL AFTER THE WALL IS CONSTRUCTED. CONTRACTOR SHALL COMPACT THE FILL BEHIND THE WALL USING EITHER A VIBRATORY "HO-PAC" OR SIMILAR COMPACTION DEVICE.

ITEM 422 - DOUBLE CHIP SEAL
THIS ITEM INCLUDES THE COST OF ALL LABOR, EQUIPMENT, AND MATERIALS TO FURNISH AND PLACE TWO LAYERS OF CHIP SEAL. THE FIRST LAYER SHALL CONSIST OF SPRAYING THE FINISHED 304 SURFACE WITH MWS150 AT A RATE OF 0.6 GAL/SY AND PLACING #67 AGGREGATE AT A RATE OF 25#/SY. THE SECOND LAYER SHALL CONSIST OF SPRAYING THE #67 CHIP SEAL SURFACE WITH MWS90 AT A RATE OF 0.4 GAL/SY AND PLACING #8 AGGREGATE AT A RATE OF 23#/SY. ALL LAYERS OF CHIP SEAL SHALL BE ROLLED WITH A RUBBER TIRED ROLLER AFTER SPREADING THE AGGREGATE.

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC
POROUS BACKFILL, 1.5' MAXIMUM THICKNESS, WILL BE PLACED BEHIND THE CONCRETE LAGGING. IT WILL EXTEND FROM THE BOTTOM OF THE LAGGING TO WITHIN 2 FEET OF THE FINISH GRADE SURFACE. FILTER FABRIC WILL BE PLACED AROUND THE POROUS BACKFILL.

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES HP10x42 AND HP12x53 AND HP14x89
THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLIDER PILES INTO DRILLED HOLES. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBER THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572, GARDE 50. SOLDIER PILES SHALL HAVE A COAL TAR EPOXY COATING. DO NOT FILED WELD OR SPLICE SOLDIER PILES; WITH PANEL SEATS BEING THE EXCEPTION.

MEASUREMENT FOR PAYMENT WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF WALL ELEVATION AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES - HP10x42 OR HP12x53 OR HP14x89.

ITEM 530 - STRUCTURE, MISC.: PRECAST CONCRETE PANEL
THIS WORK CONSISTS OF FURNISHING AND PLACING PRECAST REINFORCED CONCRETE PANELS BETWEEN THE SOLDIER PILES TO FUNCTION AS LAGGING FOR THE RETAINING WALL. PROVIDE PRECAST CONCRETE LAGGING FROM A PRECAST CONCRETE MANUFACTURER CERTIFIED UNDER SUPPLEMENT 1073. PROVIDE CONCRETE WITH A 28-DAY DESIGN STRENGTH OF AT LEAST 4000 PSI ACCORDING TO CMS 499. PROVIDE EPOXY COATED REINFORCING STEEL ACCORDING TO CMS 709.00. IN LIEU OF EPOXY COATING, A CORROSION INHIBITING CONCRETE ADMIXTURE MAY BE USED AT THE SPECIFIED DOSAGE RATE. A QUALIFIED PRODUCT LIST OF CORROSION INHIBITING ADMIXTURES IS ON FILE AT THE LABORATORY. MANUFACTURERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR MAY AFFECT THE STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE MANUFACTURER'S CHOICE TO USE ONE OF THE THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING ALL DESIGN REQUIREMENTS. DO NOT ALLOW THE DIMENSIONS OF THE REINFORCING STEEL TO VARY BY MORE THAN 1/4 INCH. PERMANENTLY MARK EACH PANEL TO INDICATE THE FACE TO BE PLACED AGAINST THE SOIL. PLACE THE PANEL BETWEEN THE FLANGES OF THE SOLIDER PILES AND BEARING AGAINST THE FLANGES ON THE EXPOSED SIDE OF THE WALL.

THE DEPARTMENT WILL PAY FOR PRECAST LAGGING AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 530 - STRUCTURE, MISC.: PRECAST CONCRETE LAGGING.

ITEM 524 - DRILLED SHAFTS, 24" AND 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN
ITEM 524 - DRILLED SHAFTS, 24" AND 30" DIAMETER, INTO BEDROCK, AS PER PLAN

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

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

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

USE CLASS QC1 CONCRETE ACCORDING TO CMS 511. PLACE CONCRETE TO THE ELEVATION FOR THE BOTTOM OF THE PRECAST LAGGING. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

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

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

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

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

ACCESS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS AND PLACE CONCRETE PANELS. ANY TEMPORARY GRADING, AGGREGATE, DRAINAGE, SHEETING ETC. NEEDED FOR ACCESS TO THE WORK AREA SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFT AND CONCRETE PANELS NO SEPARATE PAYMENT WILL BE MADE. PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE AND REMOVAL OF CONCRETE FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE PRECAST LAGGING. PAYMENT FOR SOIL OVERBURDEN DRILLING, WHICH IS GROUND LEVEL TO THE TOP OF THE SHAFT, SHALL BE INCLUSIVE OF ITEM 524 DRILLED SHAFTS, 24" OR 30" DIAMETER, ABOVE BEDROCK.

MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN, WILL BE MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE TOP OF THE SHAFT TO THE TOP OF BEDROCK, AS DETERMINED BY THE ENGINEER. MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS INTO BEDROCK, AS PER PLAN, WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF BEDROCK AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER.

CALCULATED DES
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GENERAL NOTES

ATH-OEMA LANDSLIDE REPAIRS

ITEM 524 - PLUG PILES, 30" DIAMETER

THESE SHAFTS ARE TO BE UNREINFORCED NON-STRUCTURAL "PLUG PILES" SERVING THE PURPOSE OF LAGGING.

THIS WORK SHALL BE PER ITEM 524 EXCEPT REINFORCING WILL NOT BE USED IN THE SHAFT. EACH PLUG PILE SHALL BE CENTERED BETWEEN EACH REINFORCED 24" DIAMETER DRILLED SHAFT AND SHALL HAVE A LENGTH OF 8' AS SHOWN ON SHEET 9, AND BACKFILLED WITH UNREINFORCED CLASS QCI CONCRETE.

PAYMENT FOR LABOR, EQUIPMENT, AND MATERIALS FOR THE ABOVE SHALL BE INCLUDED IN THE PER FOOT CONTRACT PRICE FOR ITEM 524, PLUG PILES, 30" DIAMETER.

COAL TAR EPOXY COATING

DESCRIPTION

A. THIS WORK SHALL CONSIST OF PROVIDING ALL LABOR, MATERIALS, EQUIPMENT AND SUPERVISION NECESSARY TO PROVIDE A PROTECTIVE COAL TAR EPOXY COATING SYSTEM. THE COATING SHALL BE APPLIED TO ALL SPACER AND ALL EXTERIOR SURFACES OF THE SOLDIER PILE FROM APPROXIMATELY 4' BELOW THE TOP OF THE SHAFT TO THE TOP OF THE SOLDIER PILE. THE ANGLES USED FOR SEATS SHALL ALSO BE COATED IN THE PANEL SEATS ARE TO BE FILED WELDED, COAT THE ANTICIPATED PANEL SEAT AREA ON THE PILE.

COATING MATERIALS

A. THE COATING SHALL BE SELF CURING CONSISTING OF TWO COMPONENTS. THE MATERIAL USED SHALL MEET OR EXCEED ALL THE REQUIREMENTS OF THE CORPS OF ENGINEERS SPECIFICATION C-200, GOVERNMENT SPECIFICATION MIL -P-23236 AND STEEL STRUCTURES PAINTING COUNCIL PAINT SYSTEM SSPC- PAINT NO. 16, COAL TAR EPOXY-POLYAMIDE BLACK.

B. ALL COATINGS SHALL BE PROCESSED AND PACKAGED AS TO INSURE THAT WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF MANUFACTURE, THEY WILL NOT GEL, LIVER OR THICKEN DELETERIOUSLY OR FROM GASSES IN THE CLOSED CONTAINER.

PACKAGING AND LABELING

COATINGS AND VEHICLES SHALL BE PACKAGED IN STANDARD CONTAINERS NOT LARGER THAN FIVE GALLONS IN SIZE, WITH REMOVABLE FRICTION OR LUG-TYPE COVERS. EACH CONTAINER OF SEPARATELY PACKAGED COMPONENTS SHALL BE CLEARLY AND DURABLY LABELED TO INDICATE THE PURCHASERS ORDER NUMBER, DATE OR MANUFACTURE, MANUFACTURES BATCH NUMBER, QUANTITY, COLOR, COMPONENT IDENTIFICATION, AND THE DESIGNATED NAME AND FORMULA OR SPECIFICATION NUMBER OF THE COATING TOGETHER WITH SPECIAL INSTRUCTIONS.

CERTIFICATIONS

IN ADDITION TO MEETING THE OTHER QUALIFICATIONS, THE COATING MANUFACTURER SHALL CERTIFY THAT:

A. HE HAS BEEN A PRODUCER OF COATINGS OF THIS CLASS FOR A PERIOD OF AT LEAST TWO YEARS.

B. THE COATING BEING OFFERED UNDER THIS SPECIFICATION IS THE SAME FORMULATION WHICH HAS BEEN MANUFACTURED AND DISTRIBUTED BY HIM DURING THIS TWO YEAR PERIOD.

C. THE COATING BEING OFFERED UNDER THIS SPECIFICATION HAS BEEN SUCCESSFULLY USED IN SEA WATER IMMERSION SERVICE FOR AT LEAST TWO YEARS.

SURFACE PREPARATION

A. ALL SURFACES SHALL BE THOROUGHLY PREPARED FOR COATING APPLICATION IS STRICT ACCORDANCE WITH THE COATING MANUFACTURERS RECOMMENDATION. ALL CLEANING AND COATING WORK MUST BE PERFORMED IN A HEATED BUILDING. PRECEDING GRIT BLASTING, STEEL MUST BE HEATED TO AT LEAST 100 F TO ELIMINATE THE POSSIBILITY OF MOISTURE ON THE SURFACE TO BE CLEANED AND COATED.

B. GRIT BLASTING SHALL BE TO CLEAN NEAR-WHITE METAL, BLAST AS DEFINED BY SSPC SPECIFICATION SP-10. ALL WORK BLASTED IN ONE DAY MUST BE COATED ON THAT DAY.

C. ANY AREAS OF THE SURFACE WHICH SHOW TRACES OF OIL, GREASE, OR OTHER ORGANIC MATTER, SHALL BE REMOVED PRIOR TO BLASTING. THE CONTAMINATION SHALL BE REMOVED USING A SOLVENT WAS AS DEFINED BY STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION SP-1.

D. ALL SURFACES TO BE COATED MUST BE COMPLETELY DRY, FREE OF MOISTURE, SOIL, DUST AND GRIT AT THE TIME THE COATING IS APPLIED.

E. THE FINISHED COATING SHALL BE POST-CURED AT A TEMPERATURE OF APPROXIMATELY NO DEGREES F WHEREVER THE AMBIENT AVERAGE TEMPERATURE FALLS BELOW 70 DEGREES F.

APPLICATION OF COATING

ALL COATING SHALL BE APPLIED BY BRUSH OR SPRAY USING COMMERCIALLY AVAILABLE SPRAY EQUIPMENT. THE COATINGS SHALL EXHIBIT REASONABLE LEVELING WITHOUT EXCESSIVE SAGGING WHEN APPLIED AT THE REQUIRED FILM THICKNESS. COATING MANUFACTURERS RECOMMENDATIONS SHALL BE ADHERED TO STRICTLY. THE TEMPERATURE OF THE COATING SHALL NOT BE LESS THAN THE TEMPERATURE OF THE STEEL AT THE SUBSTRUCTURE MUST BE AT LEAST 5 DEGREES F ABOVE THE DEW POINT TEMPERATURE.

PROGRESS OF COATING WORK

WHERE COATING ON ANY TYPE OF SURFACE HAS COMMENCED, THE COMPLETE COATING OPERATION, INCLUDING PRIMING AND FINISHING COATS WHEN MULTIPLE COATS ARE USED ON THAT PORTION OF THE WORK, SHALL BE COMPLETED AS SOON AS PRACTICAL, WITHOUT PROLONGED DELAYS. WHERE NECESSARY, SUFFICIENT TIME SHALL ELAPSE BETWEEN SUCCESSIVE COATS TO PERMIT THEM TO DRY PROPERLY FOR RECOATING AND THIS PERIOD SHALL BE MODIFIED AS NECESSARY TO SUIT SHOP CONDITIONS, FASTER BETWEEN COAT APPLICATIONS ARE POSSIBLE AT HIGHER TEMPERATE, FOR EXAMPLE IF THE INITIAL COAT IS APPLIED AT 100 DEGREES F BY USE OF AN INLINE HEATER, A SECOND COAT MAY USUALLY BE APPLIED WITHIN THREE HOURS AFTER THE FIRST COAT.

COATING THICKNESS

A. THE MINIMUM THICKNESS OF 16 MILS DRY FILM IS REQUIRED ON ALL SURFACES TO BE COATED.

B. WHERE TO COATS ARE REQUIRED TO ACHIEVE THE RECOMMENDED FILM BUILD, THE INTERNAL BETWEEN COATS SHOULD BE AS SHORT AS POSSIBLE. TO INSURE MAXIMUM INTERCOAT ADHESION, IT IS RECOMMENDED THAT:

(1) THE NEXT COAT BE APPLIED AS SOON AS POSSIBLE AFTER THE PREVIOUS COAT IS FIRM.

(2) IF THE PREVIOUS COAT HAS CURED FOR MORE THAN THE RECOAT TIME SPECIFIED BY THE MANUFACTURER, BRUSH SAND BLAST FOLLOWED BY DRY CLEANING SUCH AS VACUUMING, USE OF AIR HOSES OR SWEEPING TO REMOVE DIRT ALL SURFACES TO BE RECOATED MUST SHOW A SURFACE PROFILE SUFFICIENT TO PROVIDE AN ADEQUATE MECHANICAL BOND. SURFACE PROFILE IS ESSENTIAL FOR INTERCOAT ADHESION.

FINAL CURING TIME

COATING SURFACES SHALL BE PERMITTED AS LONG A DRYING TIME AS PRACTICABLE, BUT IN ANY EVENT THE FOLLOWING MINIMUM REQUIREMENTS SHALL BE MET: THE STEEL COATED WITH THE COAL TAR EPOXY SYSTEM SHALL NOT BE PLACED UNTIL THE FINISHED COATING HAS CURED AT LEAST SEVEN DAYS AT 77 DEGREES F, OR BEEN POSTCURED AT HIGHER TEMPERATURES FOR A SHORT PERIOD OF TIME IN ACCORDANCE WITH THE COATING MANUFACTURERS RECOMMENDATIONS.

THINNING OF THE COATING MATERIAL FOR APPLICATION WILL BE PERMITTED ONLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

INSPECTION

A. SATISFACTION PERFORMANCE WILL BE BASED ON ACCEPTANCE BY THE ENGINEER OF THE COMPLETED WORK, ALL WORK WILL BE SUBJECT TO THE INSPECTION OF THE ENGINEER. THE GRIT BLASTING IS TO BE APPROVED BEFORE THE START OF THE COATING APPLICATION.

B. INSPECTION OF THE COMPLETED COATING WILL BE BASED UPON A NORDSON MIKROTEST OR OTHER MAGNETIC DETECTOR READINGS. DETECTION OF INADEQUATELY COATED SECTIONS WILL BE INDICATED BY CIRCLING WITH CHALK THE AREAS TO BE RECOATED.

APPEARANCE OF FINISHED COATING

A. THE FINISHED COATING SHALL BE GENERALLY SMOOTH AND FREE OF SHARP PROTUBERANCES WHICH COULD BE REMOVED BY ABRASION. A MINOR AMOUNT OF SAGGING, DIMPLING, OR CURTAINING WHICH DOES NOT EXCEED TWO TO THREE PERCENT OF THE SURFACE WILL NOT BE CONSIDERED CAUSE FOR REJECTION UNLESS THEY PRESENT SHARP EDGES WHICH MIGHT BE REMOVED BY ABRASION.

B. SHARP PROTUBERANCES SHALL BE CUT OFF USING A SHARP WOOD CHISEL LAID FLAT AGAINST THE SURFACE. THE AREA FROM WHICH MATERIAL HAS BEEN REMOVED SHALL BE RECOATED TO SMOOTH THE SURFACE.

PROTECTION OF COATED STEEL

THE CONTRACTOR SHALL EXERCISE EXTREME CARE HANDLING OF ALL COATED STEEL SO AS NOT TO DAMAGE THE COATED SURFACE. ANY DAMAGE TO THE COATING DUE TO HANDLING OR CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.

SAFETY

A. IF COATING IS APPLIED BY SPRAY IT SHALL BE PERFORMED IN AN ENCLOSED PLACE WITH A FORCED VENTILATION SYSTEM. THE SYSTEM SHALL BE CAPABLE OF POSITIVELY EXCHANGING THE AIR IN THE ENCLOSED PLACE FOR FRESH AIR AT THE RATE OF NOT LESS THAN 5000 CUBIC FEET PER MINUTE FOR EACH SPRAY GUN IN OPERATION, AND ALL PARTS OF THE SPACE SHALL BE SWEPT BY MOVING AIR. THE VENTILATION SYSTEM SHALL BE OPERATED DURING THE ENTIRE OPERATION OF APPLICATION AND SHALL BE CONTINUED AFTER THE SPRAYING HAS BEEN HALTED UNTIL THE APPLIED FILM IS NO LONGER GIVING OFF APPRECIABLE SOLVENT VAPORS. THE AIR IN THE ENCLOSED PAINTING SPACE SHALL BE SAFE AT ALL TIMES FROM FIRE AND EXPLOSION HAZARDS AS DETERMINED BY THE EXPLOSIMETER, MANUFACTURED BY THE MINE SAFETY APPLIANCE COMPANY. WHERE SPRAYING IS BEING CARRIED OUT IN ENCLOSED OR OTHER SPACES NOT FREELY SWEPT BY NATURAL WIND CURRENT, WORKMEN SHALL WEAR RESPIRATORS FED BY FRESH AIR. GRIT BLAST NOZZLE OPERATORS SHALL WEAR FRESH AIR FED HELMETS UNDER ALL CIRCUMSTANCES.

B. IN ADDITION TO NORMAL SAFETY PRECAUTIONS, WORKMEN SHALL TAKE EXTRA CARE TO AVOID CONTACT OF THE PAINT WITH THE SKIN AND TO AVOID INHALING FUMES OR ATOMIZED PARTICLES OF THE COATING.

MEASUREMENT AND PAYMENT

SEPARATE MEASUREMENT AND PAYMENT WILL NOT BE MADE FOR COAL TAR EPOXY COATING. THE COST SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES.

CALCULATED DES
CHECKED RJM

GENERAL NOTES

ATH-OEMA LANDSLIDE REPAIRS

PART 1: CR24-2.60 - GENERAL SUMMARY

REF NO.	ITEM NO.	ITEM DESCRIPTION	QTY	UNIT
1	201	CLEARING AND GRUBBING	1	LS
2	203	EXCAVATION	17	CY
3	203	EMBANKMENT	34	CY
4	606	GUARDRAIL, TYPE 5	100	FT
5	606	ANCHOR ASSEMBLY, TYPE T	2	EACH
6	617	COMPACTED AGGREGATE	8	CY
7	659	SEEDING AND MULCHING, AS PER PLAN	210	SY
8	611	PRECAST REINFORCED CONCRETE OUTLET	2	EACH
9	254	SUBGRADE COMPACTION	36	SY
10	301	ASPHALT CONCRETE BASE	4	CY
11	304	AGGREGATE BASE	8	CY
12	407	TACK COAT	22	GAL
13	441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	13	CY
14	642	EDGE LINE, 4"	0.06	MILE
15	642	CENTER LINE	0.03	MILE
16	503	UNCLASSIFIED EXCAVATION, AS PER PLAN	1	LS
17	507	STEEL PILES, MISC.:SOLDIER PILE HP12x53	336	FT
18	518	POROUS BACKFILL WITH GEOTEXTILE FABRIC	43	CY
19	518	6" PERFORATED CORRUGATED PLASTIC PIPE	110	FT
20	518	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	34	FT
21	524	DRILLED SHAFTS, 24" DIAMETER INTO BEDROCK, AS PER PLAN	168	FT
22	530	STRUCTURE, MISC.: PRECAST CONCRETE PANEL	65	EACH
23	614	MAINTAINING TRAFFIC	1	LS
24	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS
25	624	MOBILIZATION	1	LS
26	103	PREMIUM FOR PERFOMANCE BOND AND FOR PAYMENT BOND	1	LS

PART 2: CR37-2.55 - GENERAL SUMMARY

REF NO.	ITEM NO.	ITEM DESCRIPTION	QTY	UNIT
27	201	CLEARING AND GRUBBING	1	LS
28	202	FENCE REMOVED	80	FT
29	607	FENCE, BARBED WIRE, AS PER PLAN	80	FT
30	617	COMPACTED AGGREGATE	3	CY
31	659	SEEDING AND MULCHING, AS PER PLAN	97	SY
32	410	TRAFFIC COMPACTED SURFACE, TYPE A OR B	7	CY
33	507	STEEL PILES, MISC.:SOLDIER PILE HP10x42	300	FT
34	524	PLUG PILES, 30" DIAMETER	112	FT
35	524	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN	146	FT
36	524	DRILLED SHAFTS, 24" DIAMETER INTO BEDROCK, AS PER PLAN	158	FT
37	614	MAINTAINING TRAFFIC	1	LS
38	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS
39	624	MOBILIZATION	1	LS
40	103	PREMIUM FOR PERFOMANCE BOND AND FOR PAYMENT BOND	1	LS

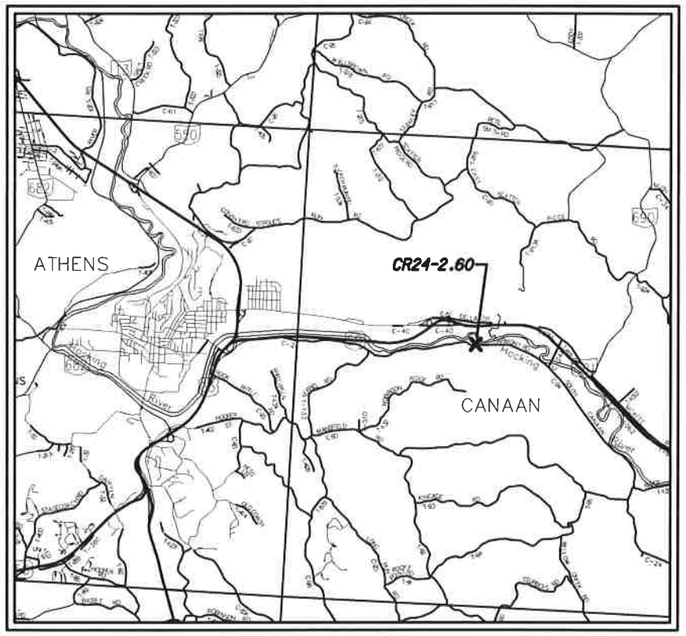
PART 3: CR75-4.46 - GENERAL SUMMARY

REF NO.	ITEM NO.	ITEM DESCRIPTION	QTY	UNIT
41	201	CLEARING AND GRUBBING	1	LS
42	203	EXCAVATION	5	CY
43	203	EMBANKMENT	20	CY
44	606	GUARDRAIL, TYPE 5	125	FT
45	606	ANCHOR ASSEMBLY, TYPE T	2	EACH
46	617	COMPACTED AGGREGATE	10	CY
47	659	SEEDING AND MULCHING, AS PER PLAN	190	SY
48	611	PRECAST REINFORCED CONCRETE OUTLET	1	EACH
49	254	SUBGRADE COMPACTION	44	SY
50	304	AGGREGATE BASE	10	CY
51	422	DOUBLE CHIP SEAL	390	SY
52	503	UNCLASSIFIED EXCAVATION, AS PER PLAN	1	LS
53	507	STEEL PILES, MISC.:SOLDIER PILE HP14x89	390	FT
54	518	POROUS BACKFILL WITH GEOTEXTILE FABRIC	37	CY
55	518	6" PERFORATED CORRUGATED PLASTIC PIPE	100	FT
56	518	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	20	FT
57	524	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK, AS PER PLAN	99	FT
58	524	DRILLED SHAFTS, 30" DIAMETER INTO BEDROCK, AS PER PLAN	143	FT
59	530	STRUCTURE, MISC.: PRECAST CONCRETE PANEL	53	EACH
60	614	MAINTAINING TRAFFIC	1	LS
61	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS
62	624	MOBILIZATION	1	LS
63	103	PREMIUM FOR PERFOMANCE BOND AND FOR PAYMENT BOND	1	LS

CALCULATED DES
CHECKED RJM

GENERAL SUMMARIES

ATH-OEMA LANDSLIDE REPAIRS

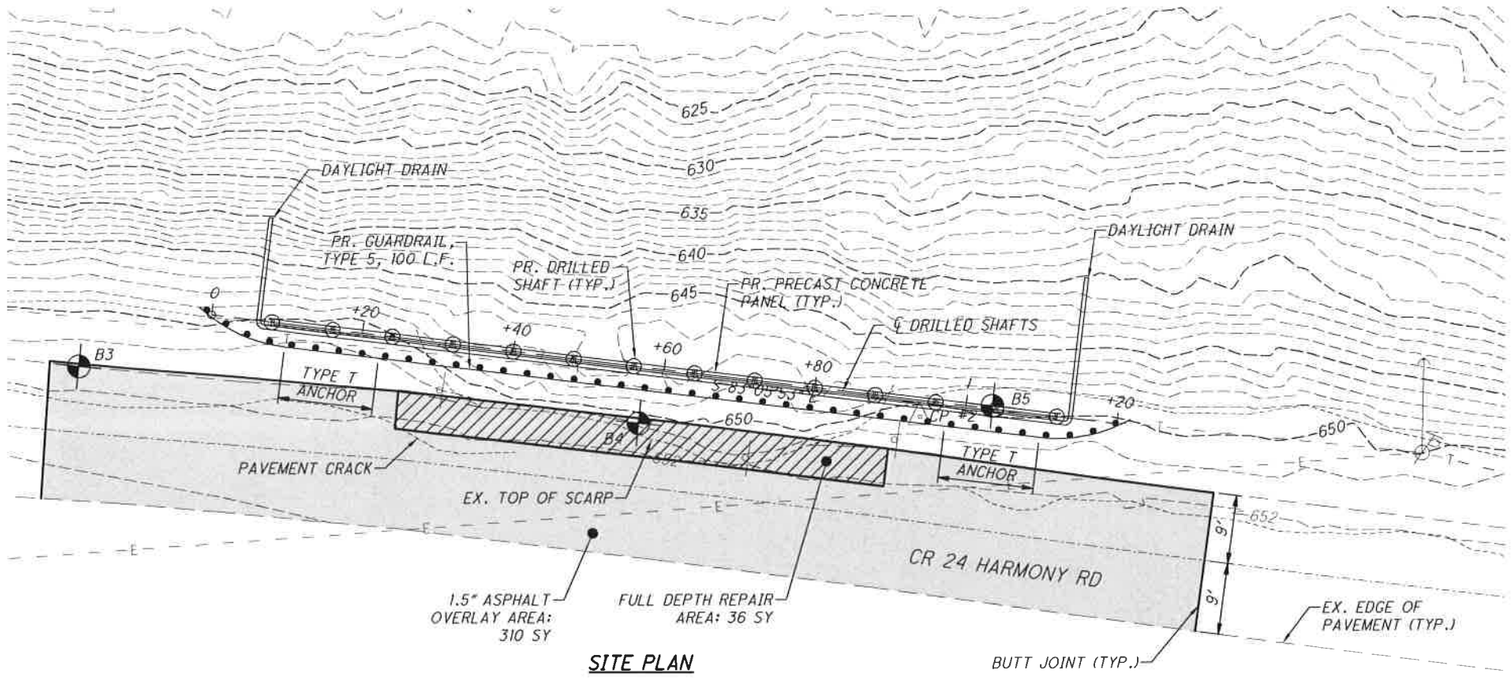


LOCATION MAP

LATITUDE: N39°19'50.0" LONGITUDE: W81°01'21.0"

SCALE IN MILES

0 1 2 3 4



SITE PLAN

LEGEND

- BORING LOCATION

- CONTROL POINT

2016 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.

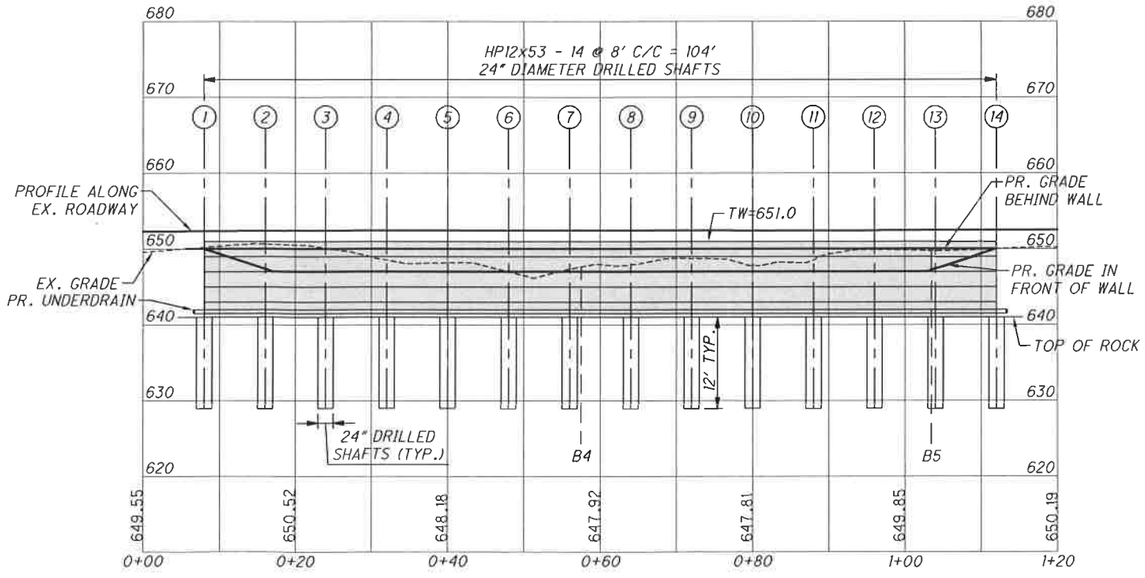
NOTES

1. THE ROAD WILL BE CLOSED DURING CONSTRUCTION SO THE CONTRACTOR SHALL SETUP AND MAINTAIN ROAD CLOSURE TRAFFIC CONTROL THROUGHOUT CONSTRUCTION
2. ORDER THE HP12x53 PILES AT 24 FEET LONG.

CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #1	484967.841	2103722.454	651.20	HUB
CP #2	484985.8450	2103588.019	650.53	HUB

SOIL BORINGS				
BORING	STATION	OFFSET	EX. GROUND SURFACE ELEV.	APPROX. TOP OF ROCK
B3			651.3	644.0
B4	0+57.5	7.4' Rt	648.5	642.5
B5	1+03.5	0.4' Lt	650.1	641.0

ESTIMATED QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
507	STEEL PILES, MISC.:SOLDIER PILE HP12x53	336	FT
524	DRILLED SHAFTS, 24" DIAMETER, INTO BEDROCK	168	FT
530	STRUCTURE, MISC.: PRECAST CONCRETE PANEL	65	EA
608	GUARDRAIL, TYPE 5	100	FT



PIER WALL PROFILE

CALCULATED DES
CHECKED RJM

HORIZONTAL SCALE IN FEET
0 5 10 20

CR24-2.60 - HARMONY RD SLIP
RETAINING WALL PLAN AND PROFILE

ATH-OEMA LANDSLIDE REPAIRS

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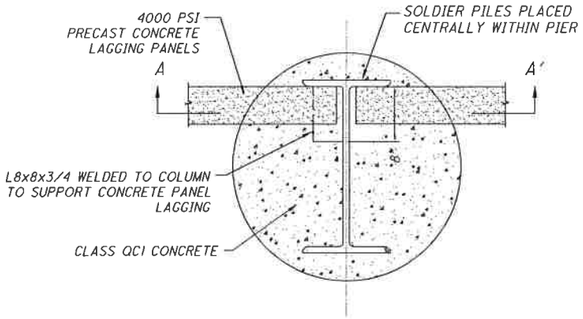
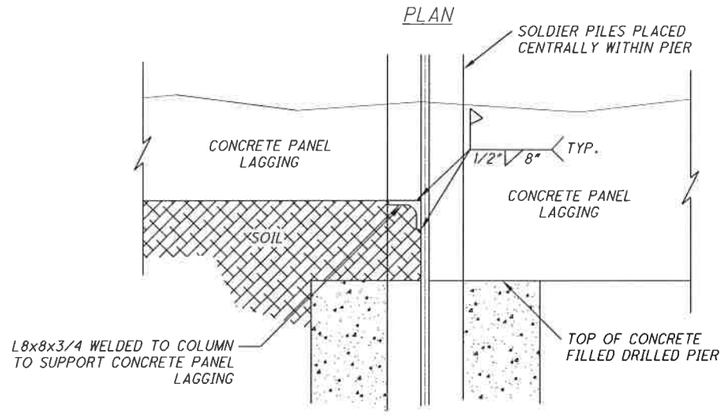
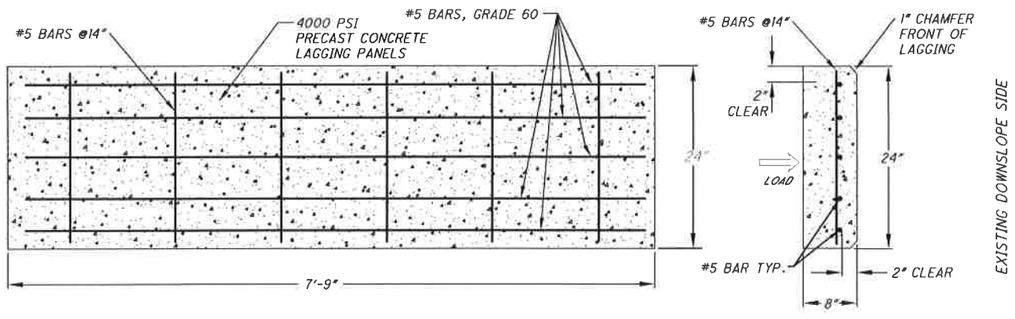




SECTION A-A'

CONCRETE PANEL LAGGING ATTACHMENT TO SOLDIER PILE

SCALE: NOT TO SCALE

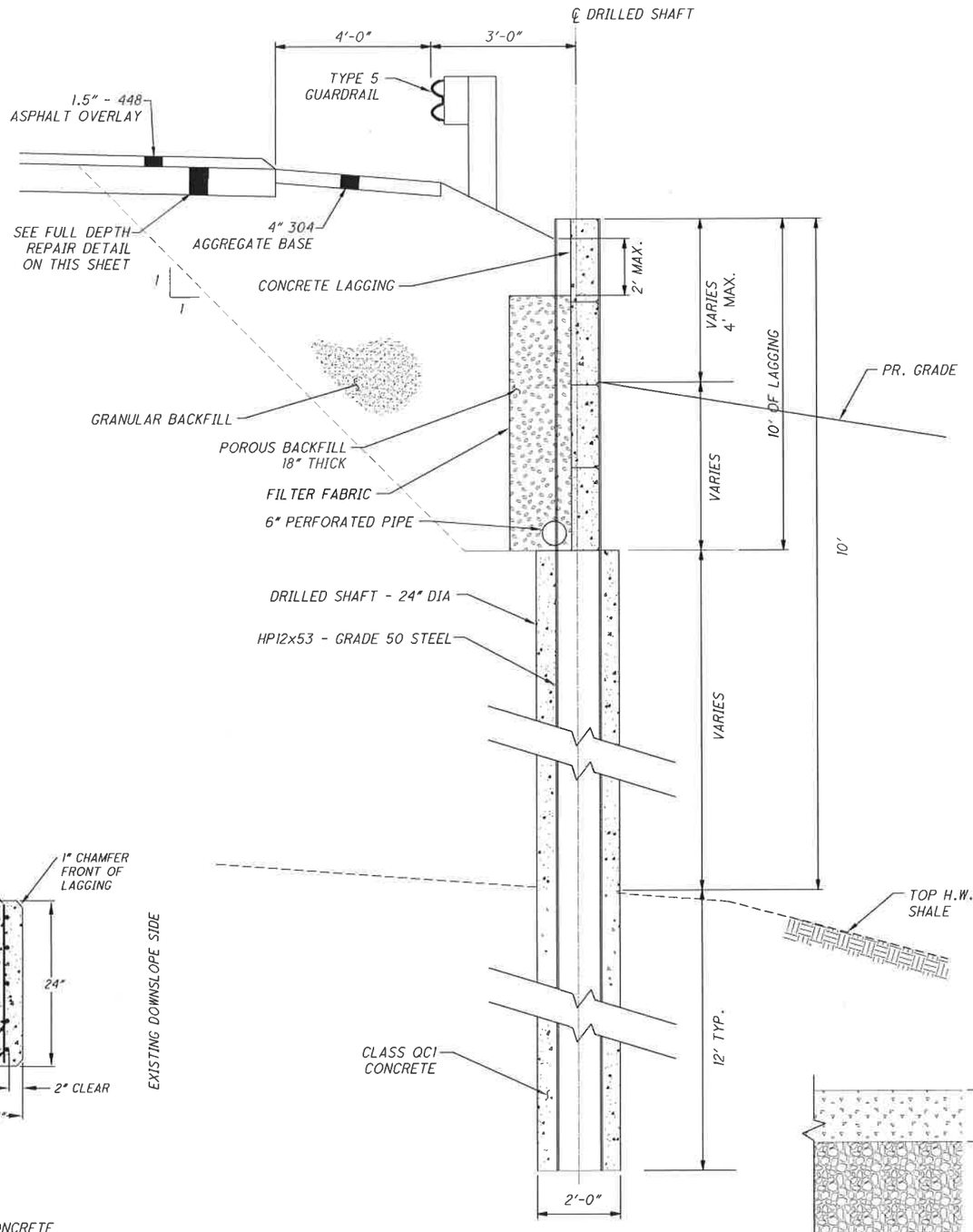


CONCRETE LAGGING DETAILS

SCALE: NOT TO SCALE

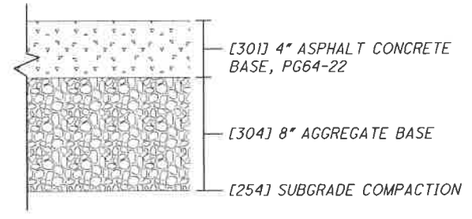
NOTES:

1. PRECAST REINFORCED CONCRETE PANELS SHALL BE CAST OFF-SITE. THE CONCRETE USED TO FABRICATE THE PANELS SHALL HAVE A MINIMUM 28-DAY UNCONFINED COMPRESSIVE STRENGTH OF 4000 PSI WITH 6% ± 2% AIR ENTRAINMENT. EACH PANEL SHALL INCLUDE PERMANENT MARKINGS APPLIED TO THE FACE OF THE PANEL BY THE MANUFACTURER INDICATING WHICH FACE SHALL BE PLACED AGAINST GRANULAR FILL.



RETAINING WALL DETAIL

HP12x53

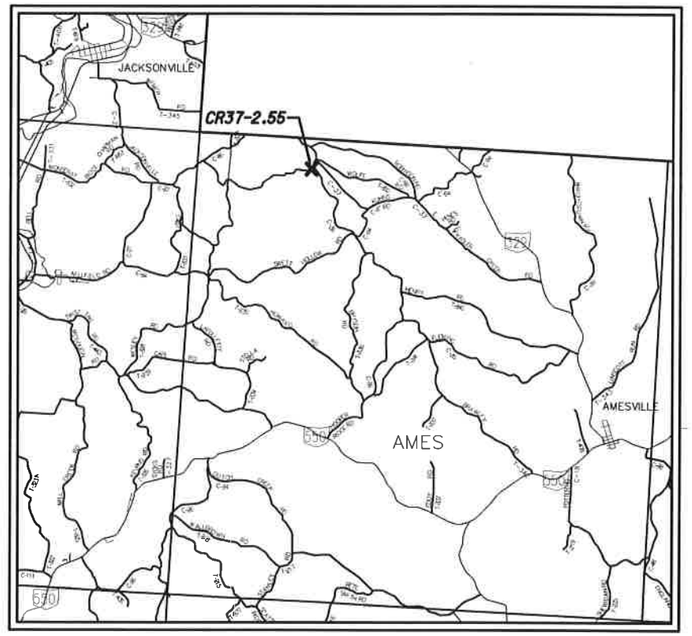


FULL DEPTH REPAIR DETAIL

CALCULATED DES
CHECKED RJM

CR24-2.60 - HARMONY RD SLIP
RETAINING WALL DETAILS

ATH-OEMA LANDSLIDE REPAIRS

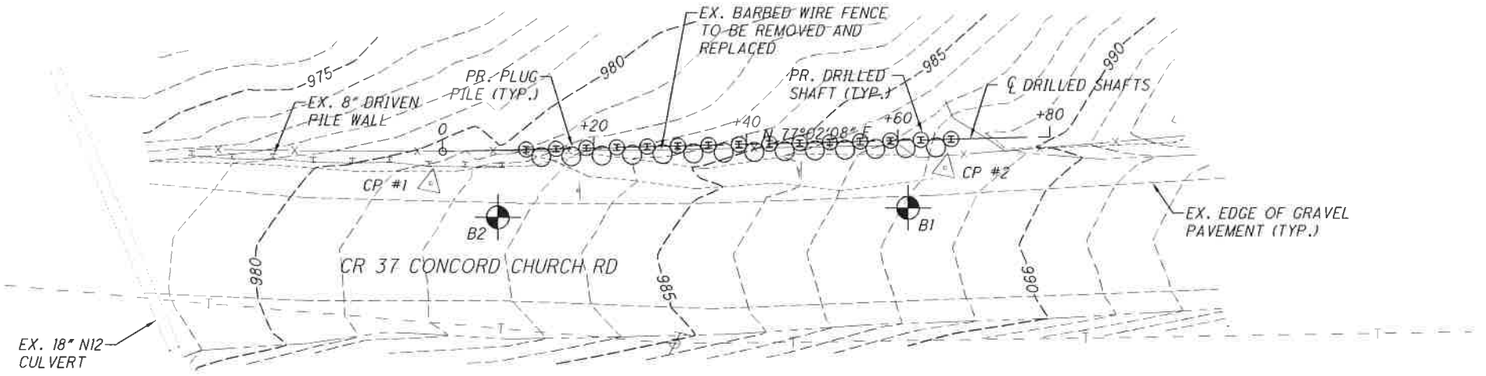


LOCATION MAP

LATITUDE: N39°27'09.5" LONGITUDE: W82°01'45.9"

SCALE IN MILES

0 1 2 3 4



SITE PLAN

LEGEND

- BORING LOCATION
- CONTROL POINT

2016 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.

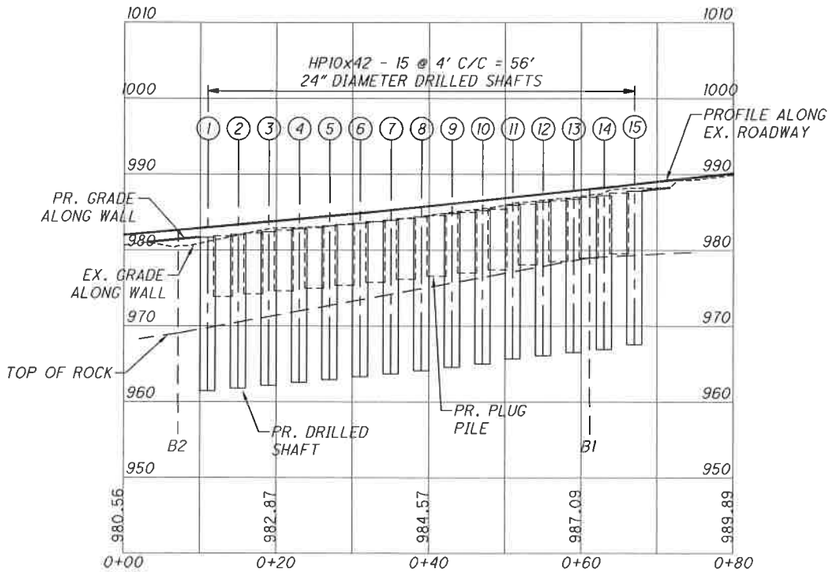
NOTES

1. THE ROAD WILL BE CLOSED DURING CONSTRUCTION SO THE CONTRACTOR SHALL SETUP AND MAINTAIN ROAD CLOSURE TRAFFIC CONTROL THROUGHOUT CONSTRUCTION
2. ORDER THE HP10x42 PILES AT 20 FEET LONG.

CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #1	529410.715	2101346.717	981.68	HUB
CP #2	529426.28	2101412.726	988.34	HUB

SOIL BORINGS				
BORING	STATION	OFFSET	EX. GROUND SURFACE ELEV.	APPROX. TOP OF ROCK
B1	0+61.1	8.9' Rt	988.1	979.0
B2	0+07.1	8.8' Rt	982.7	969.0

ESTIMATED QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
507	STEEL PILES, MISC.:SOLDIER PILE HP10x42	300	FT
524	PLUG PILES, 30" DIAMETER	112	FT
524	DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK	146	FT
524	DRILLED SHAFTS, 24" DIAMETER, INTO BEDROCK	158	FT



PIER WALL PROFILE

CALCULATED DES CHECKED RJM

HORIZONTAL SCALE IN FEET 0 5 10 20

CR37-2.55 - CONCORD CHURCH RD SLIP RETAINING WALL PLAN AND PROFILE

ATH-OEMA LANDSLIDE REPAIRS

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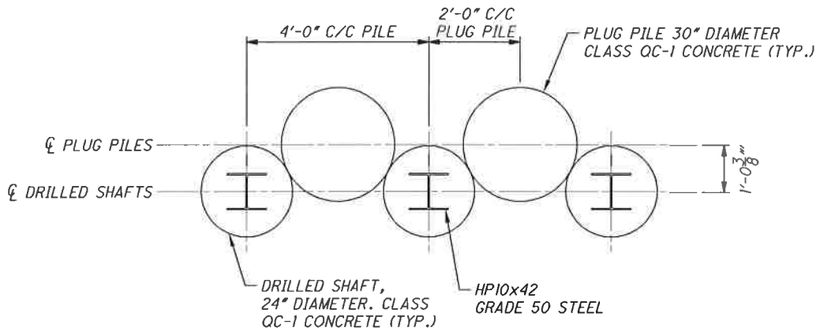
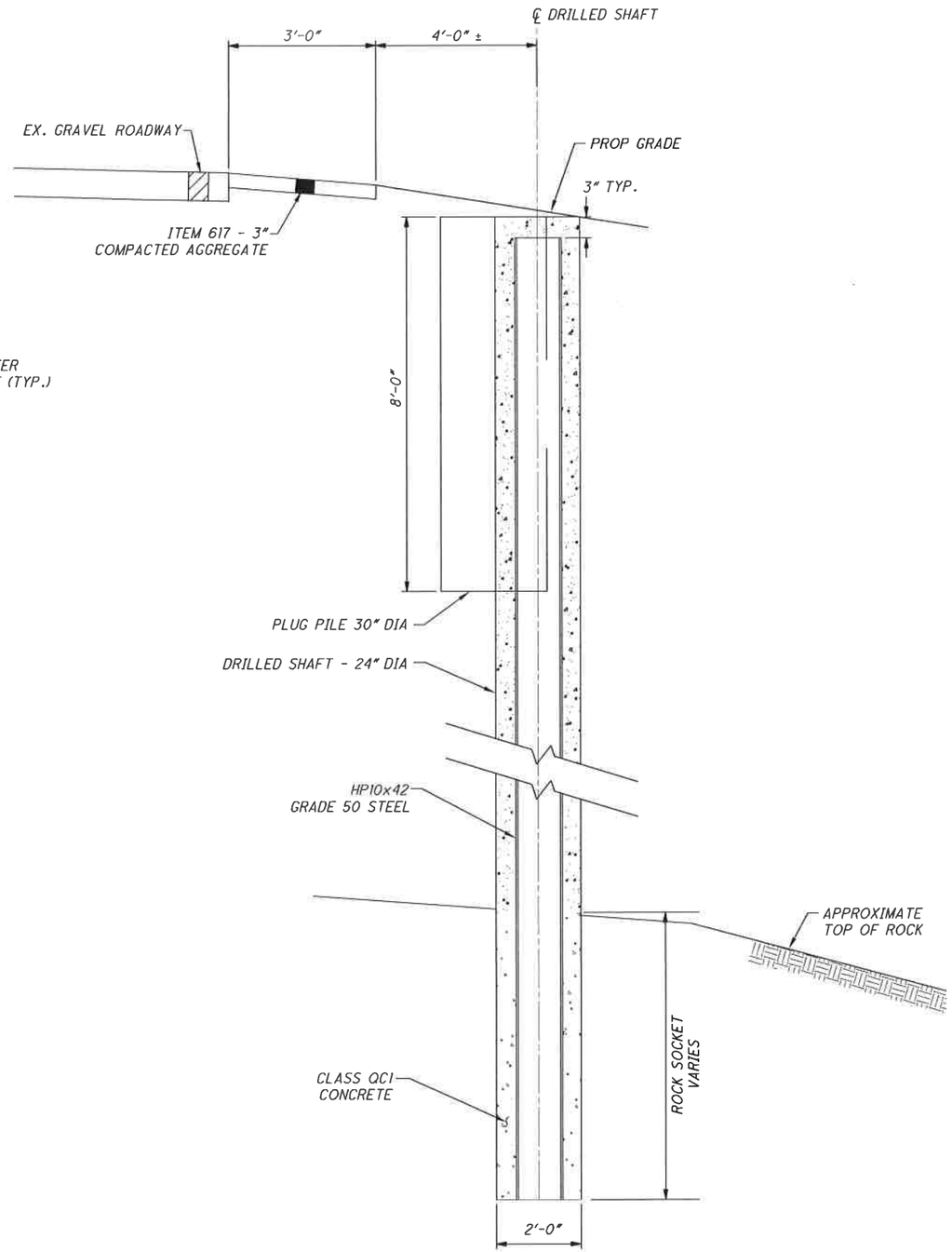


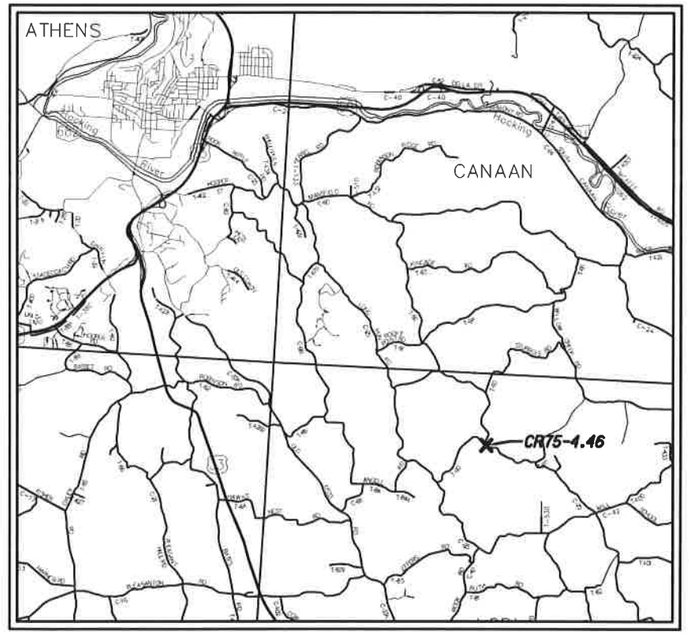


RETAINING WALL DETAIL
HP10x42

CALCULATED DES
CHECKED RJM

CR37-2.55 - CONCORD CHURCH RD SLIP
RETAINING WALL DETAILS

ATH-OEMA LANDSLIDE REPAIRS



LOCATION MAP

LATITUDE: N39°16'00.2" LONGITUDE: W82°01'08.7"

SCALE IN MILES

0 1 2 3 4

N

2016 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.

NOTES

1. THE ROAD WILL BE CLOSED DURING CONSTRUCTION SO THE CONTRACTOR SHALL SETUP AND MAINTAIN ROAD CLOSURE TRAFFIC CONTROL THROUGHOUT CONSTRUCTION
2. ORDER THE HP14x89 PILES AT 30 FEET LONG.

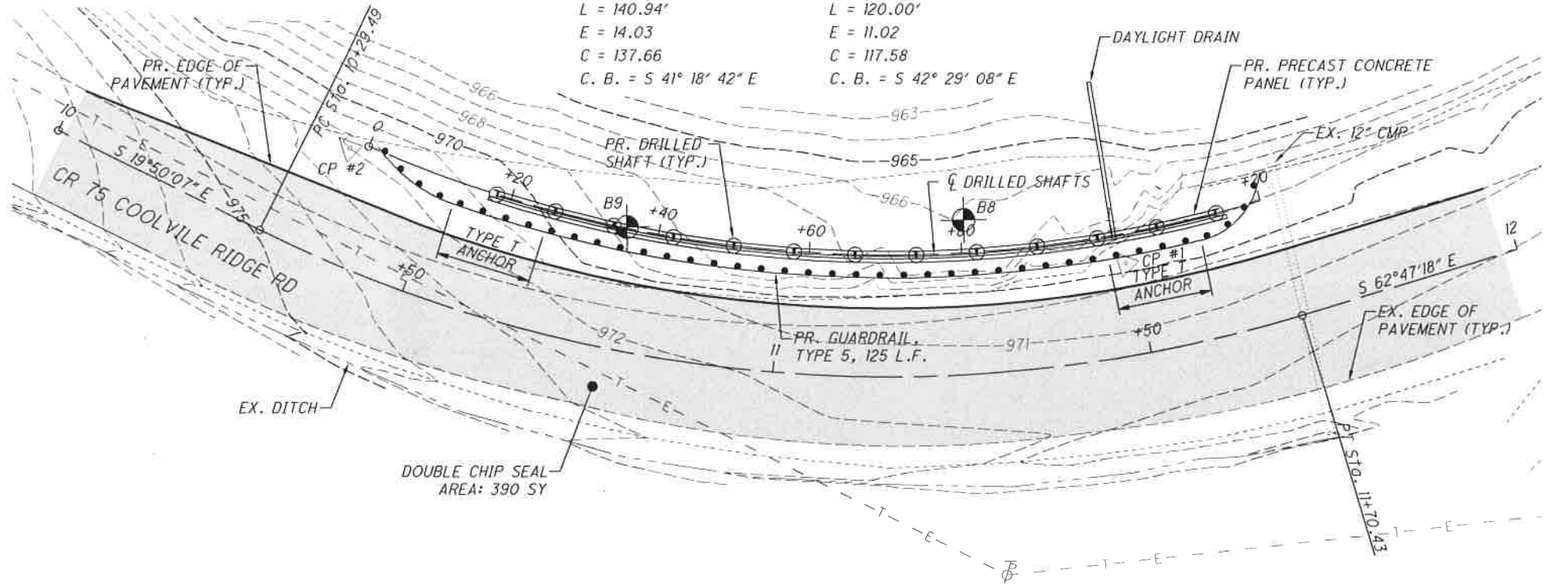
CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #1	461722.803	2104678.050	969.92	HUB
CP #2	461804.736	2104615.020	972.02	HUB

SOIL BORINGS				
BORING	STATION	OFFSET	EX. GROUND SURFACE ELEV.	APPROX. TOP OF ROCK
B8	0+35.7	0.2' Lt	965.6	954.0
B9	0+80.5	4.4' Lt	968.2	954.0

ESTIMATED QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
507	STEEL PILES, MISC.:SOLDIER PILE HP14x89	390	FT
524	DRILLED SHAFTS, 30" DIAMETER, ABOVE BEDROCK	99	FT
524	DRILLED SHAFTS, 30" DIAMETER, INTO BEDROCK	143	FT
530	STRUCTURE, MISC.: PRECAST CONCRETE PANEL	53	EA
606	GUARDRAIL, TYPE 5	125	FT

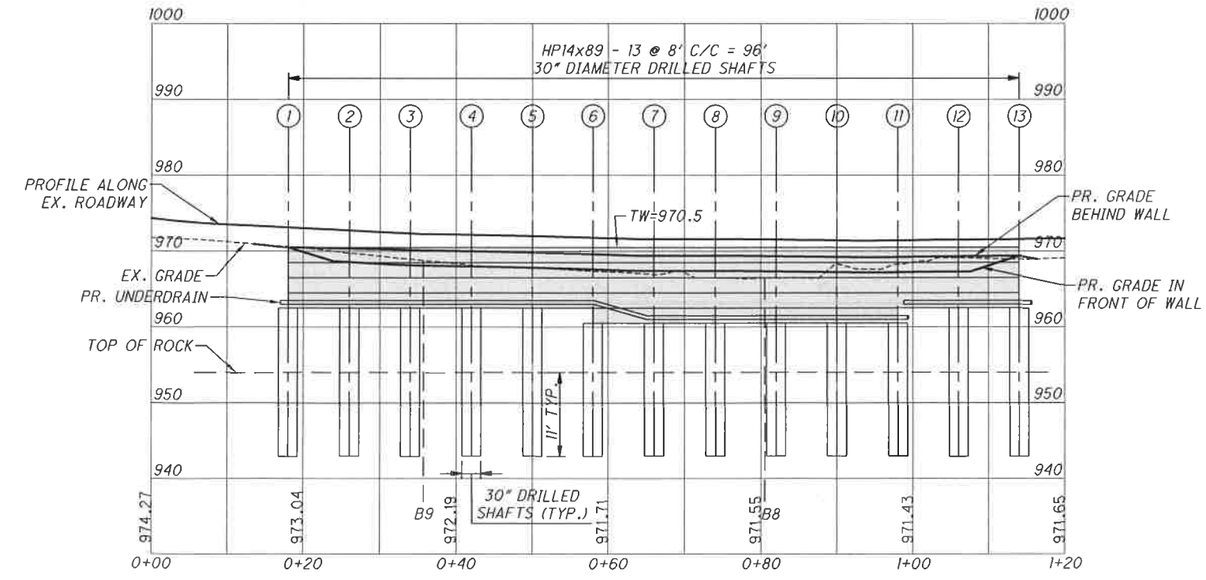
C.L. ROAD CURVE DATA
P.I.= Sta. 11+03.46
D = 42° 57' 10"
Dc = 30° 28' 35"
R = 188.000
T = 73.97'
L = 140.94'
E = 14.03
C = 137.66
C. B. = S 41° 18' 42" E

C.L. WALL CURVE DATA
P.I.= Sta. 0+62.56
D = 39° 58' 26"
Dc = 33° 18' 41"
R = 172.000
T = 62.56'
L = 120.00'
E = 11.02
C = 117.58
C. B. = S 42° 29' 08" E



SITE PLAN

LEGEND
- BORING LOCATION
- CONTROL POINT



PIER WALL PROFILE

CALCULATED DES CHECKED RJM

HORIZONTAL SCALE IN FEET 0 5 10 20

CR75-4.46 - COOLVILLE RIDGE RD SLIP
RETAINING WALL PLAN AND PROFILE

ATH-OEMA LANDSLIDE REPAIRS

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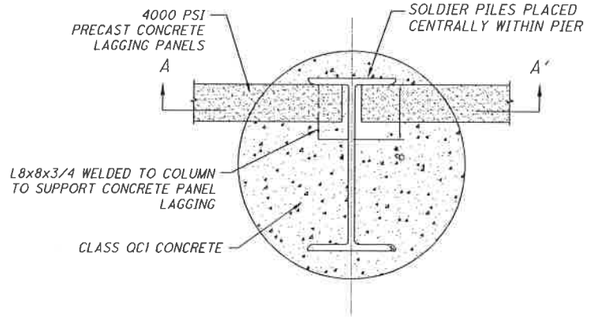
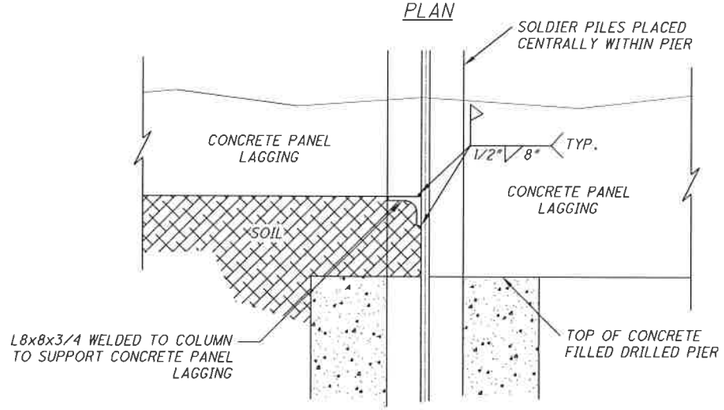
11



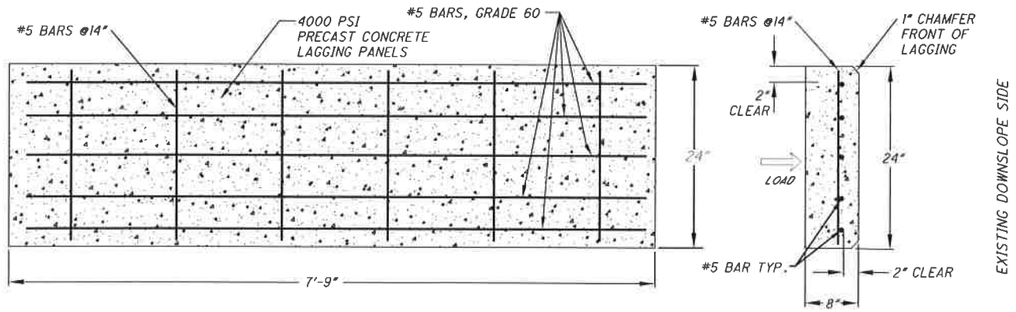
PLAN



SECTION A-A'

CONCRETE PANEL LAGGING ATTACHMENT TO SOLDIER PILE

SCALE: NOT TO SCALE

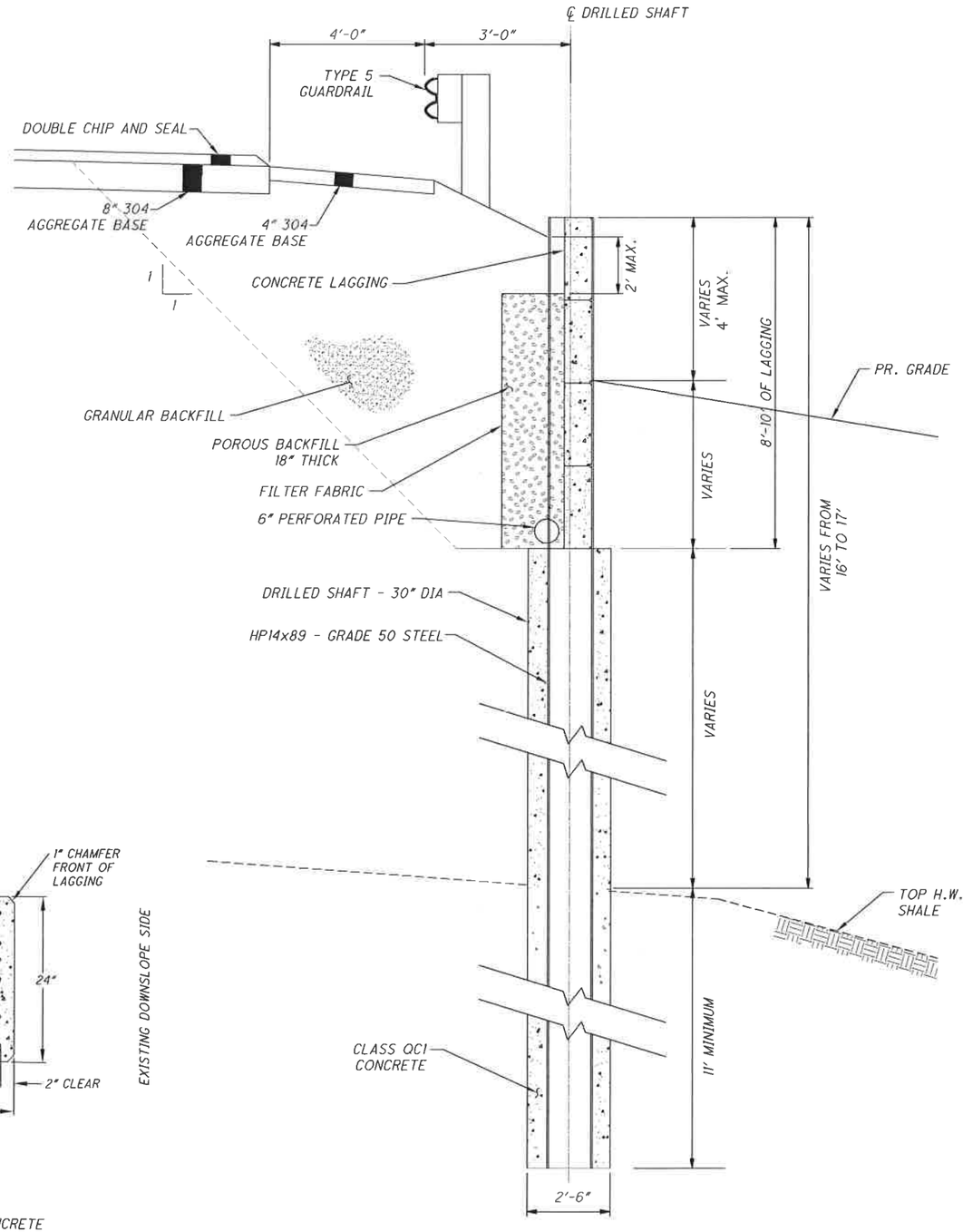


CONCRETE LAGGING DETAILS

SCALE: NOT TO SCALE

NOTES:

1. PRECAST REINFORCED CONCRETE PANELS SHALL BE CAST OFF-SITE. THE CONCRETE USED TO FABRICATE THE PANELS SHALL HAVE A MINIMUM 28-DAY UNCONFINED COMPRESSIVE STRENGTH OF 4000 PSI WITH 6% ± 2% AIR ENTRAINMENT. EACH PANEL SHALL INCLUDE PERMANENT MARKINGS APPLIED TO THE FACE OF THE PANEL BY THE MANUFACTURER INDICATING WHICH FACE SHALL BE PLACED AGAINST GRANULAR FILL.



RETAINING WALL DETAIL

HP14x89

CALCULATED DES | CHECKED RJM

CR75-4.46 - COOLVILLE RIDGE RD SLIP
RETAINING WALL DETAILS

ATH-OEMA LANDSLIDE REPAIRS

11
11