

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

D08-SAFETY GR-FY25

ANDERSON TOWNSHIP, JEFFERSON TOWNSHIP,
SPRING VALLEY TOWNSHIP, SUGARCREEK TOWNSHIP,
BATH TOWNSHIP, MIAMI TOWNSHIP,
CEDARVILLE TOWNSHIP, XENIA TOWNSHIP,
SILVERCREEK TOWNSHIP, JEFFERSON TOWNSHIP

CLERMONT, HAMILTON & GREENE COUNTY

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FEDERAL PROJECT NUMBER

NON-FEDERAL

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

GUARDRAIL IMPROVEMENTS ALONG VARIOUS ROUTES
IN GREENE COUNTY. CABLE BARRIER REPLACEMENT
ALONG IR-275 IN CLERMONT AND HAMILTON COUNTIES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 4.4 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.4 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND
HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION
OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION
5511.02 OF THE OHIO REVISED CODE.

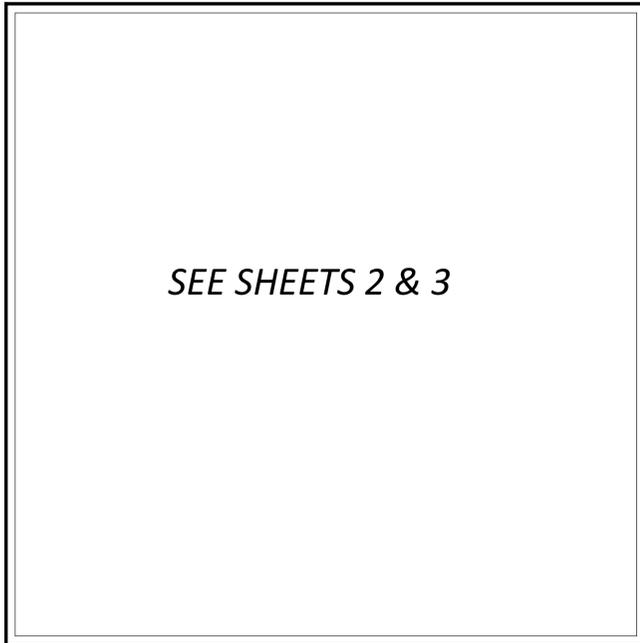
2023 SPECIFICATIONS

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

Tammy K. Campbell
District Deputy Director

Pamela Boratyn
Pamela Boratyn
Director, Department of Transportation



LOCATION MAP

LATITUDE: 39°03'25.6"N*
LONGITUDE: 84°19'29.9"W*

* LONGITUDE AND LATITUDE OF APPORX. CENTER OF PROJECT

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

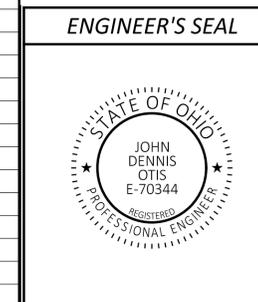
UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

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

PLAN PREPARED BY:
ODOT DISTRICT 8 ENGINEERING

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
MGS-1.1	7/16/21	MT-98.11	1/17/20	800-2023	7/19/24
MGS-2.1	1/19/18	MT-98.20	4/19/19	821	4/20/12
MGS-4.2	7/19/13	MT-98.22	1/17/20	832	7/19/24
MGS-4.3	1/18/13	MT-98.28	1/17/20	921	7/19/24
MGS-5.3	7/15/16	MT-101.90	7/17/20		
MGS-6.1	1/19/18	MT-105.10	1/17/20		
MGS-6.2	7/19/19				
		TC-41.20	10/18/13		
MT-95.30	7/19/19	TC-42.20	10/18/13		
MT-95.31	7/19/19	TC-61.30	7/19/24		
MT-95.32	4/19/19				
MT-95.45	7/21/23				
MT-95.50	7/21/17				
MT-95.61	4/19/19				
MT-97.10	4/19/19				
MT-98.10	1/17/20				



TITLE SHEET

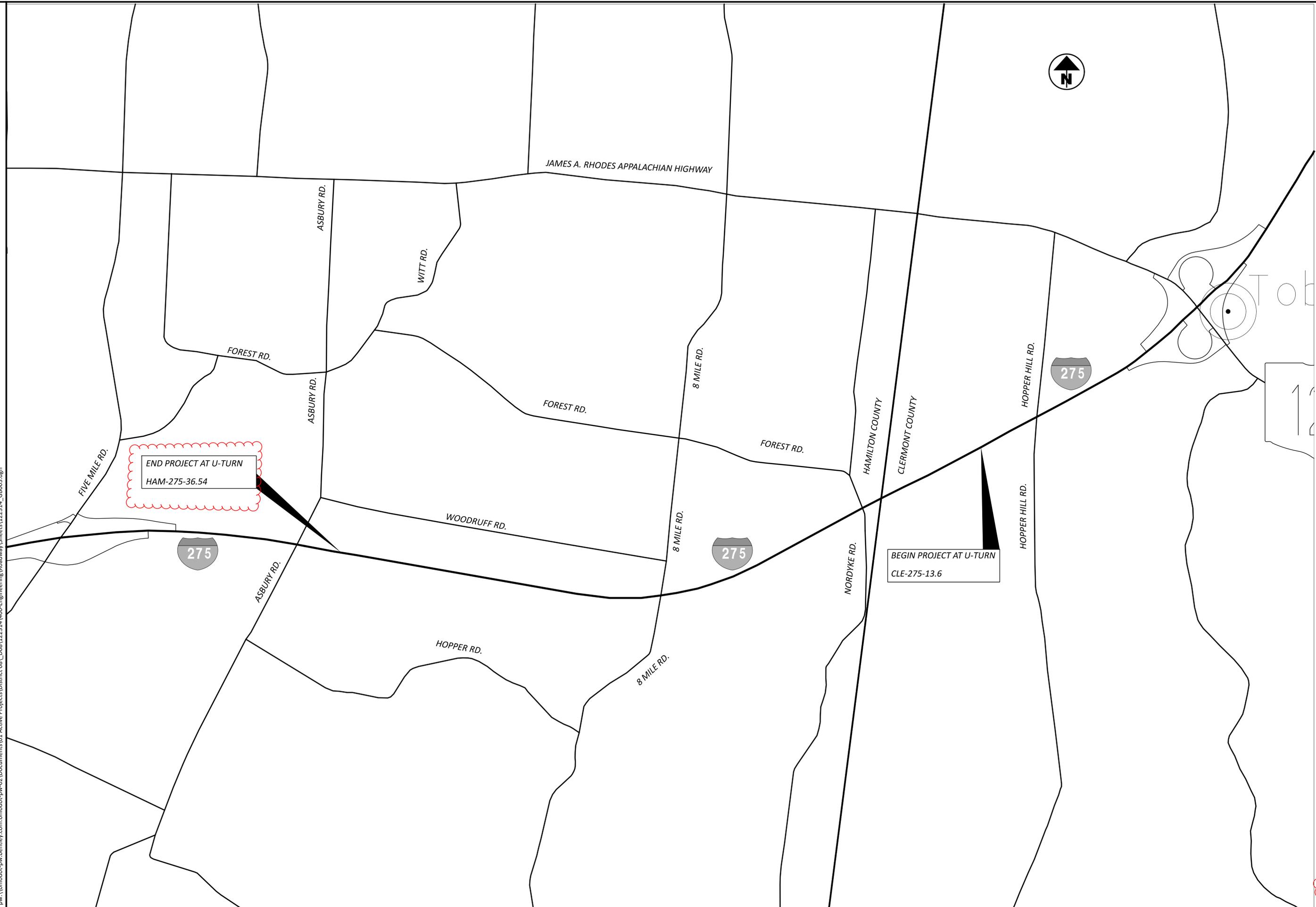
DESIGN AGENCY



DESIGNER	NCD
REVIEWER	JDO MM-DD-YY
PROJECT ID	122314
SHEET	1
TOTAL	27

D08 SAFETY GR FY25

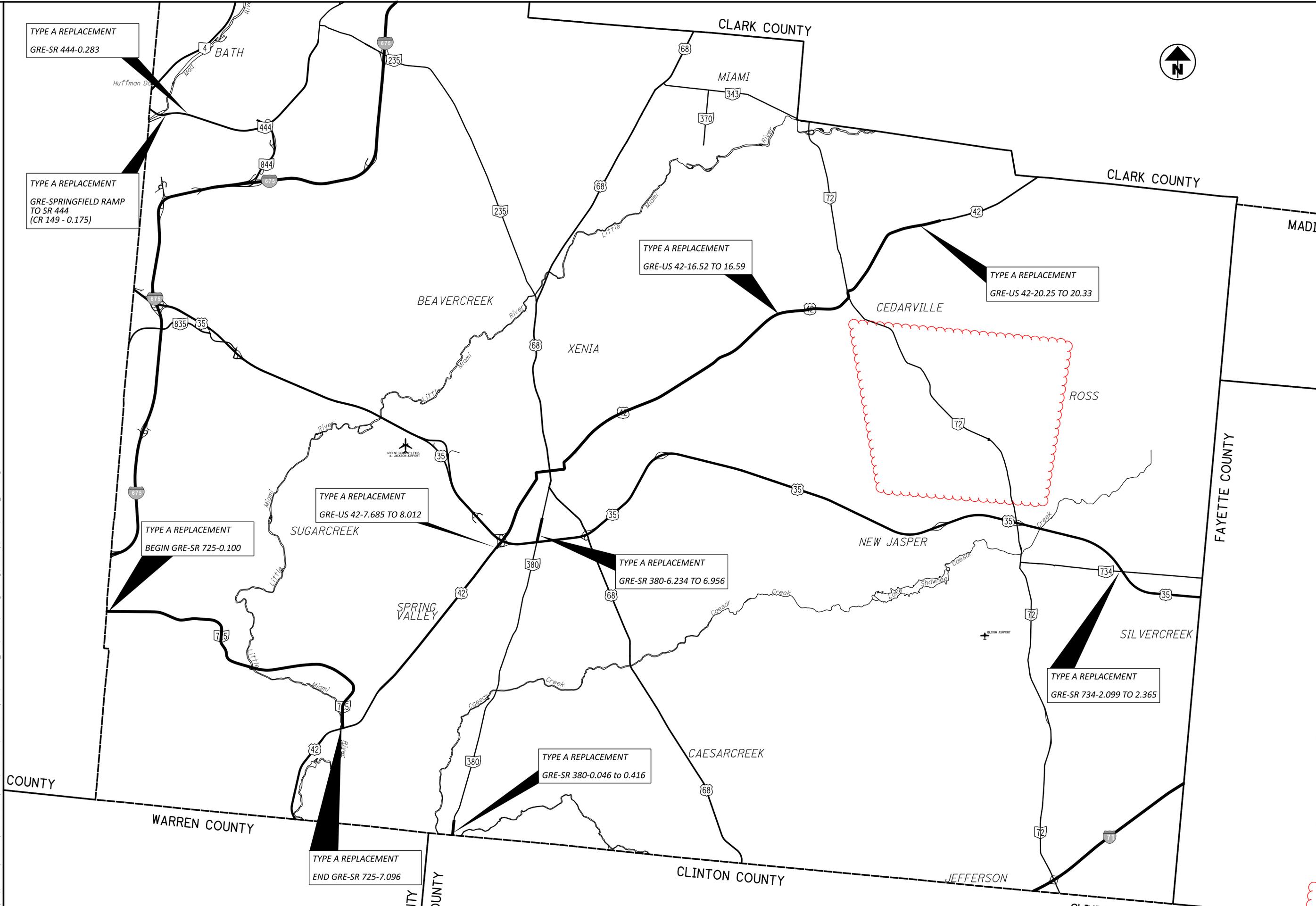
MODEL: Sheet PAPER: 34x22 (in.) DATE: 4/7/2025 TIME: 9:05:05 AM USER: ndavis
pvc:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 08_D08\122314\00-Engineering\Roadway\Sheets\122314_GT001.dgn



NOT TO SCALE

LOCATION MAP - CABLE BARRIER

DESIGN AGENCY	
DESIGNER	NCD
REVIEWER	JDO MM-DD-YY
PROJECT ID	122314
SHEET	TOTAL
2	27



TYPE A REPLACEMENT
GRE-SR 444-0.283

TYPE A REPLACEMENT
GRE-SPRINGFIELD RAMP
TO SR 444
(CR 149 - 0.175)

TYPE A REPLACEMENT
GRE-US 42-16.52 TO 16.59

TYPE A REPLACEMENT
GRE-US 42-20.25 TO 20.33

TYPE A REPLACEMENT
GRE-US 42-7.685 TO 8.012

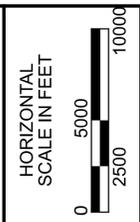
TYPE A REPLACEMENT
GRE-SR 380-6.234 TO 6.956

TYPE A REPLACEMENT
GRE-SR 380-0.046 to 0.416

TYPE A REPLACEMENT
GRE-SR 734-2.099 TO 2.365

TYPE A REPLACEMENT
BEGIN GRE-SR 725-0.100

TYPE A REPLACEMENT
END GRE-SR 725-7.096



LOCATION MAP - GUARDRAIL

DESIGN AGENCY



DESIGNER

NCD

REVIEWER

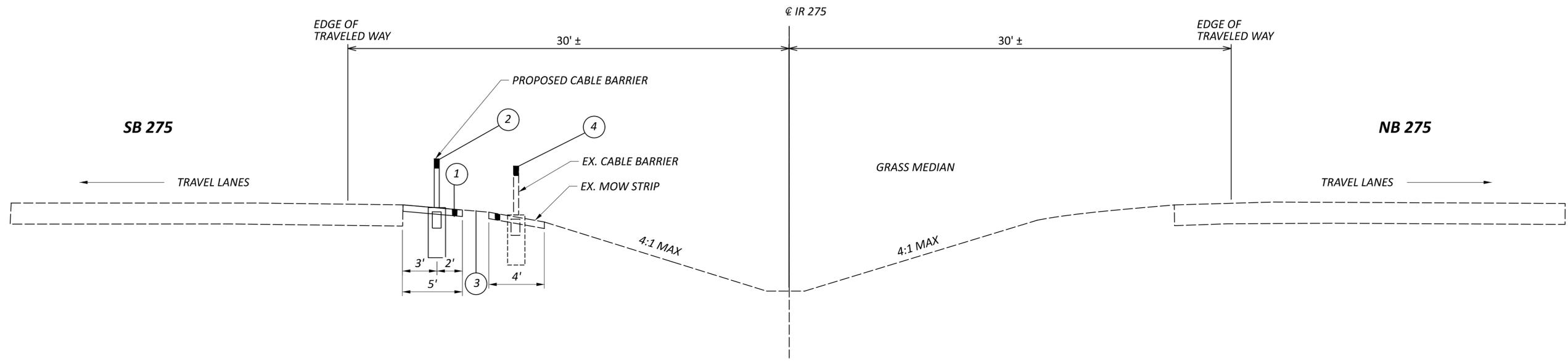
JDO MM-DD-YY

PROJECT ID

122314

SHEET TOTAL

3 | 27



TYPICAL SECTION

SECTION APPLIES: IR 275

LEGEND

- ① ITEM SPECIAL - 5' CONCRETE MOW STRIP
- ② ITEM 606 - SPECIAL - CABLE BARRIER
- ③ ITEM 659 - SEEDING AND MULCHING
- ④ ITEM 202 - CABLE BARRIER REMOVED FOR STORAGE

LEGEND

TYPICAL SECTIONS

DESIGN AGENCY



DESIGNER
NCD

REVIEWER
JDO MM-DD-YY

PROJECT ID
122314

SHEET	TOTAL
4	27

UTILITIES (CABLE BARRIER WORK)

THERE ARE NO UNDERGROUND UTILITY LINES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT COULD AFFECT THE UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

SINCE THERE ARE NOT PLAN AND PROFILE SHEETS, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 AT LEAST TWO WORKING DAYS BEFORE THE INSTALLATION OF THE CABLE GUARDRAIL TO HAVE THE FACILITIES MARKED IN THE FIELD.

THIS PROJECT REQUIRES THE INSTALLATION OF NEW CABLE BARRIER POSTS. SURVEY WORK HAS NOT BEEN PERFORMED ON THIS PROJECT, NOR HAVE THE UTILITY LOCATIONS BEEN CONFIRMED IN THE FIELD. IN ADDITION TO CMS 105.07, IF, DURING THE COURSE OF INSTALLING ANY NEW CABLE BARRIER COMPONENT, IT IS DETERMINED THAT A UTILITY CONFLICT MAY RESULT, THE CONTRACTOR IS TO NOTIFY THE PROJECT ENGINEER IMMEDIATELY. UTILITIES ARE NOT TO BE RELOCATED AS A RESULT OF THIS OPERATION. ADJUSTMENTS TO THE PROPOSED CABLE BARRIER WILL ACCOMMODATE THE EXISTING UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CABLE BARRIER VIA MEANS THAT WOULD BE COMPLIANT WITH THE IMPACTED UTILITY'S SAFETY GUIDELINES AS WELL AS STILL MEETING ODOT'S DESIGN CRITERIA. ANY MINOR ADJUSTMENTS MADE TO THE PROPOSED CABLE BARRIER INSTALLATION SHALL BE INCIDENTAL TO PAY ITEM 606.

UTILITY NOTIFICATION (CABLE BARRIER WORK)

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, AND ITS) WITHIN THE LIMITS OF THIS PROJECT.

IN ADDITION TO THE INFORMATION OUTLINED IN THE UTILITY NOTE OF THIS CONTRACT, THE CONTRACTOR SHALL TAKE THE FOLLOWING ACTION TO PROTECT ODOT'S FACILITIES DURING CONSTRUCTION:

HIGHWAY LIGHTING AND TRAFFIC SIGNALS:

EVEN THOUGH ODOT IS LISTED AS A MEMBER OF THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8 TRAFFIC MAINTENANCE DEPARTMENT DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY DISTRICT 8 TRAFFIC MAINTENANCE AT 513-933-6689 AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

ITS:

THE CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK FOR THE NEED TO MARK ODOT OWNED UTILITIES:

ODOT ITS LAB
1606 WEST BROAD STREET
COLUMBUS, OH 43223
614-387-4113
CEN.ITS.LAB@DOT.OHIO.GOV

UTILITY NOTIFICATION (CABLE BARRIER WORK CONT.)

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE UTILITY PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

ITEM 606 - SPECIAL - CABLE BARRIER (ALTERNATE 1)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE HIGH TENSION FOUR CABLE GUARDRAIL SYSTEMS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION, AND ITEM 606 CABLE BARRIER, ANCHOR ASSEMBLY AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL HIGH TENSION CABLE GUARDRAIL SYSTEM NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. THE LENGTH OF THE TENSIONED CABLE NECESSARY TO INSTALL A FUNCTIONAL ANCHOR SYSTEM SHALL BE INCLUDED IN ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION.

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

SYSTEMS SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 15 FEET.

INSTALLATION WILL BE A FOUR CABLE HIGH TENSION SYSTEM INSTALLED IN SOCKETED POSTS FOUNDATION WITH A FOUR FOOT WIDE "NO MOW STRIP".

DELINEATE THE CABLE BARRIER USING TYPE 6 BARRIER REFLECTORS PER ITEM 626 OR USING FLEXIBLE POSTS PER ITEM 620 AS CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.

ANCHOR TERMINAL STRUTS SHALL BE COVERED COMPLETELY ON BOTH SIDES WITH YELLOW TYPE J, ASTM D 4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

TRANSITIONS TO W-BEAM GUARDRAIL ARE NOT ALLOWED.

REFER TO MANUFACTURER FOR MAXIMUM OFFSET FROM BREAK POINT.

TORPEDO OR BULLET SPLICES ARE NOT ALLOWED. ALL CABLE SPLICES SHALL BE A SWAGED OR OPEN BODY DESIGN THAT ALLOWS FOR ANNUAL INSPECTION BETWEEN THE WEDGE AND STRANDS OF CABLE.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POSTS DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

ITEM 606 - SPECIAL - CABLE BARRIER (BRIFEN) (ALTERNATE 2)

ITEM 606 - SPECIAL - CABLE BARRIER (BRIFEN) SHALL BE SUBJECT TO THE REQUIREMENTS OF ITEM 606 - CABLE BARRIER (ALTERNATE 1), AND SHALL BE CONSTRUCTED WITH THE BRIFEN CABLE BARRIER SYSTEM.

ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR ASSEMBLY (ALTERNATE 1)

THE TENSIONED CABLE ANCHOR ASSEMBLIES SHALL FOLLOW THE MANUFACTURER'S SPECIFICATIONS FOR WEAK SOIL CONDITIONS. THE MANUFACTURER SHALL PROVIDE A DESIGN TO ADEQUATELY HANDLE THE STATIC LOAD, ANY IMPACT LOADS NEAR THE ANCHOR ASSEMBLY PLUS THE APPROPRIATE FACTORS OF SAFETY.

PAYMENT FOR THE ABOVE WORK SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL CABLE BARRIER ANCHOR ASSEMBLY, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR ASSEMBLY (BRIFEN) (ALTERNATE 2)

ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR ASSEMBLY (BRIFEN) (ALTERNATE 2) SHALL BE SUBJECT TO THE REQUIREMENTS OF ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR ASSEMBLY (ALTERNATE 1), AND SHALL BE CONSTRUCTED WITH THE BRIFEN CABLE BARRIER SYSTEM.

ITEM SPECIAL - MOW STRIP

THE CONTRACTOR SHALL CONSTRUCT A 5 FOOT WIDE BY 4 INCH DEPTH MOW STRIP WITH MATERIALS CONFORMING TO ITEM 608 - CONCRETE WALK AS SHOWN IN THE TYPICAL SECTIONS ON SHEET 4.

THE MOW STRIP SHALL BE PLACED ON COMPACTED EARTH AND CONSTRUCTED USING CLASS QC1 CONCRETE WITH A CURING COMPOUND MEETING THE SPECIFICATIONS OF 705.07 OF THE CMS. THE MOW STRIP SHALL BE INTEGRAL TO THE SOCKETED CONCRETE FOUNDATION.

THE MOW STRIP SHALL HAVE A TRANSVERSE JOINT EVERY 8 FEET AND AN EXPANSION JOINT EVERY 100 FEET. THE JOINTS AND MATERIALS TO CONSTRUCT THE JOINTS SHALL CONFORM TO 608.03 (C) OF THE CMS.

REMOVAL OF EXISTING ASPHALT PAVEMENT AND ANY EXCAVATION REQUIRED TO INSTALL THE MOW STRIP IS INCLUDED WITH THIS PAY ITEM. NOTE THERE IS EXISTING ASPHALT PAVEMENT PRESENT FROM A PREVIOUS MOT SCHEME AT VARIOUS LOCATIONS WITHIN THE LIMITS OF THE PROPOSED MOW STRIP.

IF MATERIAL FROM THE EXCAVATION OF THE MOW STRIP AND THE SOCKETED CONCRETE FOUNDATION IS WASTED ADJACENT TO THE MOW STRIP THE AREA SHALL BE SEEDED AND MULCHED TO THE SPECIFICATIONS OF ITEM 659 IN THE CMS. PAYMENT FOR SEEDING AND MULCHING SHALL BE MADE UNDER OTHER PAY ITEMS.

ALL MATERIAL, LABOR, AND EQUIPMENT TO CONSTRUCT THE CONCRETE MOW STRIP SHALL BE PAID FOR UNDER ITEM SPECIAL - MOW STRIP.

SEEDING AND MULCHING

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

659, SEEDING AND MULCHING	11948 SQ. YD.
659, COMMERCIAL FERTILIZER	1.61 TONS
659, LIME	2.47 ACRES
659, WATER	66 M. GAL.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY 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 AT THE ENGINEER'S DIRECTION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THE PROJECT.

ITEM SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

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

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

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

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

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

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

DESIGN AGENCY



DESIGNER
NCD

REVIEWER
JDO MM-DD-YY

PROJECT ID
122314

SHEET TOTAL
5 | 27

ITEM SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION (CONT.)

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

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

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

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

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

- UPON APPROVAL OF CONSULTANT 20%
- PROGRESSIVE EQUIVALENT PAYMENTS 50%
- UPON SUBMISSION OF FINAL REPORT 30%.

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

ADD THE FOLLOWING BID ITEMS:

ITEM 690 - SPECIAL - CONSULTANT FOR CONCRETE LS
QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ITEM 202 - CABLE BARRIER REMOVED FOR STORAGE

AFTER COMPLETE INSTALLATION OF THE PROPOSED CABLE BARRIER SYSTEM, THE EXISTING CABLE BARRIER POSTS ARE TO BE REMOVED AND DELIVERED TO THE ODOT MILFORD OUTPOST AT:

809 US 50
MILFORD, OHIO 45150

CONTACT MIKE THOMPSON AT 513-382-6948 TO COORDINATE THE DELIVERY TIMEFRAME AND OTHER DETAILS.

ALL OTHER CABLE BARRIER COMPONENTS ARE TO BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR.

SOIL INFORMATION AND PROPERTIES

REFER TO ODOT GDM SECTION 500 TABLE 500-2 FOR ASSUMED SOIL PROPERTIES OF EMBANKMENT FILL. REDUCE THE VALUES IN THE UPPER 3-4 FT. AS FREEZE THAW WOULD HAVE LIKELY DEGRADED THE MATERIAL. IT IS POSSIBLE THAT INTER-BEDDED SHALE AND LIMESTONE WILL BE ENCOUNTERED ON THE LOCATION AS SIGNIFICANT CUT/FILLS WERE REQUIRED TO CONSTRUCT I-275. TYPICALLY, THERE WILL BE AT LEAST 2 FT. OF FILL IN THESE LOCATIONS FOR MAIN LINE.

THE MAJORITY OF THE SITE WILL BE SILT AND CLAY (ODOT A6-A TO A7-6). REFER TO THE SUMMARY OF SOIL TEST DATA ON SHEET 26. SPT VALUES WERE NOT ALWAYS AVAILABLE IN ODOT HISTORICAL DATA, SEE THE SOIL DETAIL SHEETS WHICH PROVIDES A NOISE BARRIER SOIL PROFILE SUMMARY WITH SOME SPT FOR REFERENCE. SOIL PARAMETERS SHOULD NOT EXCEED TABLE 500-2 IN ANY CASE AND SHOULD BE REDUCED FOR CONSERVATISM.

REFER TO ODOT TIMS SYSTEM TO OBTAIN ADDITIONAL DATA. [HTTPS://TIMS.DOT.STATE.OH.US/TIMS](https://tims.dot.state.oh.us/tims)

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 48' FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

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

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

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

DESIGN AGENCY



DESIGNER
NCD

REVIEWER
JDO MM-DD-YY

PROJECT ID
122314

SHEET TOTAL
6 27

UTILITIES (GUARDRAIL WORK)

THERE ARE NO UNDERGROUND UTILITY LINES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT COULD AFFECT THE UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

SINCE THERE ARE NOT PLAN AND PROFILE SHEETS, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764 AT LEAST TWO WORKING DAYS BEFORE THE INSTALLATION OF THE CABLE GUARDRAIL TO HAVE THE FACILITIES MARKED IN THE FIELD.

THIS PROJECT REQUIRES THE INSTALLATION OF NEW CABLE BARRIER POSTS. SURVEY WORK HAS NOT BEEN PERFORMED ON THIS PROJECT, NOR HAVE THE UTILITY LOCATIONS BEEN CONFIRMED IN THE FIELD. IN ADDITION TO CMS 105.07, IF, DURING THE COURSE OF INSTALLING ANY NEW CABLE BARRIER COMPONENT, IT IS DETERMINED THAT A UTILITY CONFLICT MAY RESULT, THE CONTRACTOR IS TO NOTIFY THE PROJCT ENGINEER IMMEDIATELY. UTILITIES ARE NOT TO BE RELOCATED AS A RESULT OF THIS OPERATION. ADJUSTMENTS TO THE PROPOSED CABLE BARRIER WILL ACCOMODATE THE EXISTING UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE CABLE BARRIER VIA MEANS THAT WOULD BE COMPLIANT WITH THE IMPACTED UTILITY'S SAFETY GUIDLINES AS WELL AS STILL MEETING ODOT'S DESIGN CRITERIA. ANY MINOR ASJUSTMENTS MADE TO THE PROPOSED CABLE BARRIER INSTALLATION SHALL BE INCIDENTAL TO PAY ITEM 606.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY MASH 2016 GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS

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

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. 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.

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.

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 202 - ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN

WHERE DESIGNATED, EXISTING ANCHOR ASSEMBLIES INCLUDING ALL POST AND HARDWARE SHALL BE REMOVED. THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE ENTIRE CONCRETE ANCHOR AND CONCRETE ENCASEMENT. ALL HOLES LEFT AFTER REMOVAL OF ASSEMBLIES AND POSTS SHALL BE FILLED WITH GRANULAR MATERIAL AS DIRECTED BY THE ENGINEER. PAYMENT SHALL INCLUDE ALL NECESSARY LABOR AND EQUIPMENT REQUIRED TO PERFORM THE INDICATED ABOVE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL THE NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME THE ENGINEER IS ASSURED OF COMPLIANCE.

GUARDRAIL REPLACEMENT LAYOUT INTENT

THE INTENT OF THE GREENE COUNTY PROJECT WORK IS TO MATCH THE EXISTING BARRIER FOOTPRINT WHERE POSSIBLE. LOCATIONS WHERE THE FOOTPRINT MUST BE INCREASED OR DECREASED HAS BEEN SPECIFIED IN THE QUANTITY TABLES. THE PROJECT INTENT IS TO TAPER MGS HEIGHTS TO EXISTING HEIGHTS PER STANDARD WHERE FEASIBLE. VERIFY THE QUALITY OF EXISTING GUARDRAIL TO BE CONNECTED TO.

ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN

THIS PAY ITEM SHALL INCLUDE THE COST TO FURNISH AND INSTALL ALL GUARDRAIL COMPONENTS (NORMAL AND EXTRA) OF THE 25' LONG BRIDGE TERMINAL ASSEMBLY, TYPE 4 AS SEEN ON THE PLAN INSERT SHEET.

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHAL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO MSHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS, TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE).

ITEM - SPECIAL - MAIL BOX SUPPORT SYSTEM, SINGLE..... 4 EA.

ITEM 202 - BRIDGE TERMINAL ASSEMBLY REMOVED

THIS PAY ITEM IS TO INCLUDE REMOVAL OF ALL EXTRA GUARDRAIL COMPONENTS IN EXCESS OF NORMAL GUARDRAIL WITHIN THE LIMITS OF THE BRIDGE TERMINAL ASSEMBLY.

DRINKING WATER PROTECTION AREA: AVOID REFUELING IN SPECIFIC AREAS (GRE-444 0.2 TO 0.8)

THIS PROJECT IS LOCATED IN OR NEAR A DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL NOT PERFORM PROJECT RELATED REFUELING AND VEHICLE MAINTENANCE ACTIVITIES FROM GRE SR-444 SLM 0.2 TO SLM 0.8. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO THE DAYTON PUBLIC WATER SYSTEM 937-333-6099. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT BATH FIRE & RESCUE 330-666-3738 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL

SOLE SOURCE AQUIFER & DRINKING WATER PROTECTION AREA: GENERAL PROTECTIONS (GRE-725 2.9 TO 4.1)

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER AND DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO THE BELLBROOK WATER WORKS 937-848-4666. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT SUGARCREEK TOWNSHIP FIRE DEPARTMENT 937-848-7344 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

DESIGN AGENCY



DESIGNER

NCD

REVIEWER

JDO MM-DD-YY

PROJECT ID

122314

SHEET TOTAL

7 27

SOLE SOURCE AQUIFER: GENERAL PROTECTIONS (GRE-835 0.8 TO 0.9)

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER AND DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT BEAVERCREEK TOWNSHIP FIRE DEPARTMENT 937-426-1213 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

SOLE SOURCE AQUIFER: GENERAL PROTECTIONS (GRE-835 0.8 TO 0.9)

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER AND DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT BEAVERCREEK TOWNSHIP FIRE DEPARTMENT 937-426-1213 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

SOLE SOURCE AQUIFER: GENERAL PROTECTIONS (GRE-725 6.7 TO 7.1 & GRE-380 0.0 TO 0.5)

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER AND DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT SPRING VALLEY TOWNSHIP FIRE DEPARTMENT 937-426-1213 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

SOLE SOURCE AQUIFER: GENERAL PROTECTIONS (GRE-42 16.5)

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER AND DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT CEDARVILLE TOWNSHIP FIRE DEPARTMENT 937-426-1213 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

SOLE SOURCE AQUIFER: GENERAL PROTECTIONS (GRE-444 7.55 TO 7.59)

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER AND DRINKING WATER PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT FAIRBORN FIRE DEPARTMENT 937-426-1213 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

GENERAL NOTES (GUARDRAIL)

DESIGN AGENCY



DESIGNER
NCD

REVIEWER
JDO MM-DD-YY

PROJECT ID
122314

SHEET TOTAL
7A | 27

ITEM 614, MAINTAINING TRAFFIC

MAINTAIN ALL EXISTING LANES OF TRAFFIC AT ALL TIMES, EXCEPT LANES MAY BE CLOSED IN ACCORDANCE WITH THE LANE VALUE CONTRACT TABLE, BY USE OF THE EXISTING PAVEMENT. NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:

NEW YEAR'S (OBSERVED) GENERAL/REGULAR ELECTION DAY (NOV)
 THANKSGIVING
 MEMORIAL DAY CHRISTMAS (OBSERVED)
 FOURTH OF JULY (OBSERVED) EASTER
 LABOR DAY

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR SPECIAL EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY TIME ALL LANES
 OR SPECIAL EVENT MUST BE OPEN TO TRAFFIC

SUNDAY 12:00N FRIDAY THROUGH 6:00 AM MONDAY
 MONDAY 12:00N FRIDAY THROUGH 6:00 AM TUESDAY
 MONDAY (TOTAL SOLAR ECLIPSE)
 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
 TUESDAY 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
 TUESDAY (GEN./REG. ELECTION)
 5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY
 WEDNESDAY 12:00N TUESDAY THROUGH 6:00 AM THURSDAY
 THURSDAY 12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
 THURSDAY (THANKSGIVING ONLY)
 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
 FRIDAY 12:00N THURSDAY THROUGH 6:00 AM MONDAY
 SATURDAY 12:00N FRIDAY THROUGH 6:00 AM MONDAY

DURING THE SAME PERIODS, MAINTAIN PEDESTRAIN ACCESS IF PEDESTRIAN ACCESS WAS PRESENT PRIOR TO CONSTRUCTION.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

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

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

LANE VALUE CONTRACT TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT
IR 275	SEE PLCS	1 MINUTE	\$360
SR 444	6:00 - 9:00	1 MINUTE	\$105
	15:00 - 9:00		
ALL OTHER ROUTES	NO RESTRICTION	1 MINUTE	\$45

PERMITTED LANE CLOSURE SCHEDULE (PLCS)

LANE CLOSURE(S) SHALL CONFORM TO THE PLCS. PUBLISHED PLCS INFORMATION CAN BE FOUND ON THE ODOT WEBSITE AT: [HTTPS://WWW.TRANSPORTATION.OHIO.GOV/WPS/PORTAL/GOV/ODOT/WORKING/DATA-TOOLS/RESOURCES/PERMITTED-LANE-CLOSURE](https://www.transportation.ohio.gov/wps/portal/gov/odot/working/data-tools/resources/permited-lane-closure)

THE MONTHLY PUBLISHED SCHEDULES REQUIRED TO BE USED, FOR EACH PLCS SEGMENT WITHIN THE PROJECT AREA, ARE THOSE THAT COMPRISE THE CONSECUTIVE 12-MONTH PERIOD BEGINNING 15 MONTHS PRIOR TO THE MONTH AND YEAR OF SALE AND ENDING 4 MONTHS PRIOR TO THE MONTH AND YEAR OF SALE. THESE SAME 12 MONTHS APPLY FOR THE LIFE OF THE PROJECT AND SHALL BE APPLIED TO EACH RESPECTIVE MONTH OF CONSTRUCTION (MONTH OF LANE CLOSURE(S) SHALL MATCH MONTH OF PLCS USED). LANE CLOSURE(S) IN PLACE FOR MULTIPLE MONTHS SHALL ALWAYS COMPLY WITH THE CURRENT RESPECTIVE MONTH.

(FOR EXAMPLE: IF THE SALE DATE FOR THE PROJECT WAS MARCH OF 2021, THE MONTHLY PUBLISHED SCHEDULES FOR EACH APPLICABLE PLCS SEGMENT WOULD BE DECEMBER 2019 TO NOVEMBER 2020. IF THIS WAS A THREE-YEAR PROJECT, YEAR THREE WOULD STILL BE USING THE DECEMBER 2019 TO NOVEMBER 2020 MONTHLY SCHEDULES. IF THE PROJECT DESIRED TO CLOSE TWO LANES IN JUNE 2021, REFERENCE WOULD BE MADE TO THE JUNE 2020 SCHEDULE(S) FOR THE RESPECTIVE PLCS SEGMENT(S). IF THE SAME TWO LANES WERE DESIRED TO BE CLOSED AGAIN IN JULY 2021, REFERENCE WOULD BE MADE TO THE JULY 2020 SCHEDULE(S) FOR THE RESPECTIVE PLCS SEGMENT(S).)

MORE RESTRICTIVE CHANGES TO THE ALLOWABLE LANE CLOSURE HOURS ARE AT THE DISCRETION OF THE ENGINEER IN ORDER TO COMPLY WITH THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

LESS RESTRICTIVE CHANGES TO THE ALLOWABLE LANE CLOSURE HOURS ARE SUBJECT TO THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)) AND SHALL NOT BE IMPLEMENTED UNTIL, AND UNLESS, APPROVED BY THE PROPER ODOT AUTHORITY. [EXISTING MOT EXCEPTIONS THAT HAVE ALREADY BEEN APPROVED IN ACCORDANCE TO THE TRAFFIC MANAGEMENT IN WORK ZONES POLICY AND STANDARD PROCEDURE ARE DETAILED IN THE APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S) PLAN NOTE.]

ALLOWABLE LANE CLOSURE HOURS FOR FACILITIES NOT COVERED BY THE PLCS, IF ANY, SHALL BE AS SPECIFIED ELSEWHERE IN THE PLANS.

DUST CONTROL

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

ITEM 616, WATER 6.6 M. GAL.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
 ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
 AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION;
 AND,
 AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS

ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
 - THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR
 - OTHER LOCATION AS APPROVED BY THE ENGINEER.
- THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 450 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

DESIGN AGENCY



DESIGNER

NCD

REVIEWER

JDO MM-DD-YY

PROJECT ID

122314

SHEET TOTAL

8 27

INTERIM COMPLETION REQUIREMENTS

THE PROJECT HAS AN INTERIM COMPLETION DATE OF 60 CALENDAR DAYS AFTER DE-TENSIONING THE EXISTING CABLE BARRIER. ON OR BEFORE THE INTERIM COMPLETION DATE, THE EXISTING CABLE BARRIER SYSTEM SHALL BE REMOVED TO THE EXTENT REQUIRED BY THESE PLANS, THE PROPOSED CABLE BARRIER SYSTEM SHALL BE INSTALLED AND TENTIONED ACCORDING TO MANUFACTURER SPECIFICATIONS. THIS REQUIREMENT APPLIES INDIVIDUALLY TO ANY AND ALL INDIVIDUAL RUNS OF EXISTING CABLE BARRIER.

THE PROJECT HAS AN INTERIM COMPLETION DATE 10/15/2025. ON OR BEFORE THE INTERIM COMPLETION DATE, ALL PROPOSED CABLE BARRIER LOCATION(S) SHALL BE INSTALLED AND TENSIONED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. OTHER ANCILLARY WORK MAY BE PERFORMED AFTER THIS DATE PROVIDED THE CABLE BARRIER SYSTEM IS OPERATIONAL.

THE CONTRACTOR SHALL BE ASSESSED A DAILY DISINCENTIVE IN THE AMOUNT OF SPECIFIED IN THE TABLE BELOW PER DAY FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK AND ASSOCIATED INCIDENTALS RELATED TO THE WORK. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACTOR IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT.

Description or Location of Critical Work	Completion Date	Time Period	Disincentive \$ per Time Period
IR 275 cable barrier locations with existing cable barrier	60 days after de-tensioning	Day	\$10,000
IR 275 cable barrier; all locations	10/15/2025	Day	\$5,000

DESIGN AGENCY



DESIGNER

NCD

REVIEWER

JDO MM-DD-YY

PROJECT ID

122314

SHEET TOTAL

9 | 27

PLAN SPLIT	COUNTY	ROUTE	LOG POINT		SIDE	ITEM 202					ITEM 606					ITEM 626	NOTES (UNLESS OTHERWISE SHOWN THE INTENT IS TO REMOVE THE TYPE A, 75' EXISTING GUARDRAIL, AND REPLACE WITH A TYPE E AND 50' MGS WITH LONG POSTS FOR HEIGHT TRANSITION. FOOTPRINT TO ROUGHLY MATCH EXISTING.)	
						GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	ANCHOR ASSEMBLY REMOVED, TYPE T	GUARDRAIL REMOVED, BARRIER DESIGN	BRIDGE TERMINAL ASSEMBLY REMOVED	GUARDRAIL, TYPE MGS WITH LONG POSTS	GUARDRAIL, BARRIER DESIGN, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E	ANCHOR ASSEMBLY, MGS TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN			IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)
			FT	EACH		EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH			
01/SAE/21	GRE	380	0.046		RT	75.0	1				50.0		1			1	INSTALL NEW GUARDRAIL SO THAT THE TYPE E IS PLACED PARALLEL TO THE ROADWAY. THIS WILL BE ACCOMPLISHED BY PROVIDING RADIUS FLARES PER MGS-6.1 WITH THE NEW MGS GUARDRAIL.	
01/SAE/21	GRE	380	0.046		LT	75.0	1				50.0		1			1		
01/SAE/21	GRE	380	0.160		LT	75.0	1				50.0		1			1		
01/SAE/21	GRE	380	0.416	0.500	LT	150.0	2				100.0		2			2		CONTINUE ALONG ROXANNA NEW BURLINGTON DRIVE.
01/SAE/21	GRE	380	6.234	6.255	RT	50.0	1				25.0		1			1		FOOTPRINT WILL INCREASE BY 37.5'
01/SAE/21	GRE	380	6.286	6.267	LT	37.5	1				50.0		1			2		FOOTPRINT WILL INCREASE BY 12.5'
01/SAE/21	GRE	380	6.886	6.927	LT	150.0	2				100.0		2			2		
01/SAE/21	GRE	380	6.956	6.882	RT	150.0	2				100.0		2			2		
01/SAE/21	GRE	444	0.283		RT	50.0	1				62.5		1			2	ON THE SPRINGFIELD STREET RAMP TO SR 444, REPLACE 12.5' OF THE EXISTING GUARDRAIL WITH MGS LONG POST THEN EXTEND THE FOOTPRINT TOWARDS SR 444 BY ADDING 287.5' OF MGS LONG POST GUARDRAIL ENDING WITH A MGS TYPE T ANCHOR. THE TYPE T ANCHOR FOR THIS RAMP AND GRE-444 ARE TO BE PARALLEL TO ONE ANOTHER. INSTALL THE TYPE T ANCHOR ON THIS RAMP AND THE TYPE T ANCHOR ON SR 444 SUCH THAT THERE IS AT LEAST 5' BETWEEN THE BACK OF TYPE T POSTS	
01/SAE/21	GRE	149	0.175		LT	12.5		1			287.5		1			4		
01/SAE/21	GRE	725	0.100	0.250	RT	150.0	2				100.0		2			2		
01/SAE/21	GRE	725	2.993	3.126	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	3.195		RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	3.967	3.925	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	4.064	4.014	LT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	4.065	3.996	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	4.727	4.713	LT	47.5	1	1			60.0		2			2		
01/SAE/21	GRE	725	5.125	5.156	LT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	5.159	5.102	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	5.664	5.684	LT	75.0	1		1		50.0		1	1		2	FOOTPRINT WILL INCREASE BY 25'	
01/SAE/21	GRE	725	5.684	5.664	RT	75.0	1		1		25.0		1	1		1	FOOTPRINT WILL INCREASE BY 25'	
01/SAE/21	GRE	725	6.772	6.986	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	725	7.067	7.096	RT	62.5	1				37.5		1			1	TIE INTO EXISTING MGS TYPE E ANCHOR	
01/SAE/21	GRE	734	2.099	2.235	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	734	2.291	2.365	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	42	7.685	7.714	LT	112.5	1	1			87.5		1	1		2	REPLACE ENTIRE RUN	
01/SAE/21	GRE	42	7.849	7.874	MED	50.0	1		25			25			1	2	FOOTPRINT WILL INCREASE ROUHGLY 6.5'	
01/SAE/21	GRE	42	7.899	7.929	MED	50.0	1		25			25			1	2	FOOTPRINT WILL INCREASE ROUHGLY 6.5'	
01/SAE/21	GRE	42	7.905	7.929	RT	75.0	1			50.0		1				2		
01/SAE/21	GRE	42	7.977	8.012	LT	50.0	1		25			25			1	2	FOOTPRINT WILL INCREASE ROUGHLY 6.5'	
01/SAE/21	GRE	42	7.977	8.012	MED	50.0	1		25			25			1	2	FOOTPRINT WILL INCREASE ROUGHLY 6.5'	
01/SAE/21	GRE	42	16.536	16.591	LT	50.0	1			1	50.0		1	1		2	EXTEND FOOTPRINT BY ROUGHLY 25'	
01/SAE/21	GRE	42	16.536	16.591	LT	50.0	1			1	50.0		1	1		2	EXTEND FOOTPRINT BY ROUGHLY 25'	
01/SAE/21	GRE	42	16.536	16.591	RT	50.0	1			1	50.0		1	1		2	EXTEND FOOTPRINT BY ROUGHLY 25'	
01/SAE/21	GRE	42	16.536	16.591	RT	50.0	1			1	50.0		1	1		2	EXTEND FOOTPRINT BY ROUGHLY 25'	
01/SAE/21	GRE	42	20.251	20.331	RT	75.0	1				50.0		1			2		
01/SAE/21	GRE	42	20.251	20.331	LT	75.0	1				50.0		1			2		
01/SAE/21	GRE	42	20.251	20.331	LT	75.0	1				50.0		1			2	INSTALL NEW GUARDRAIL SO THAT THE TYPE E IS PLACED PARALLEL TO THE ROADWAY. THIS WILL BE ACCOMPLISHED BY PROVIDING RADIUS FLARES PER MGS-6.1 WITH THE NEW MGS GUARDRAIL.	
TOTALS CARRIED TO GENERAL SUMMARY						2798	41	3	100	6	2135	100	35	5	6	4	72	

GUARDRAIL SUBSUMMARY

DESIGN AGENCY



DESIGNER

NCD

REVIEWER

JDO MM-DD-YY

PROJECT ID

122314

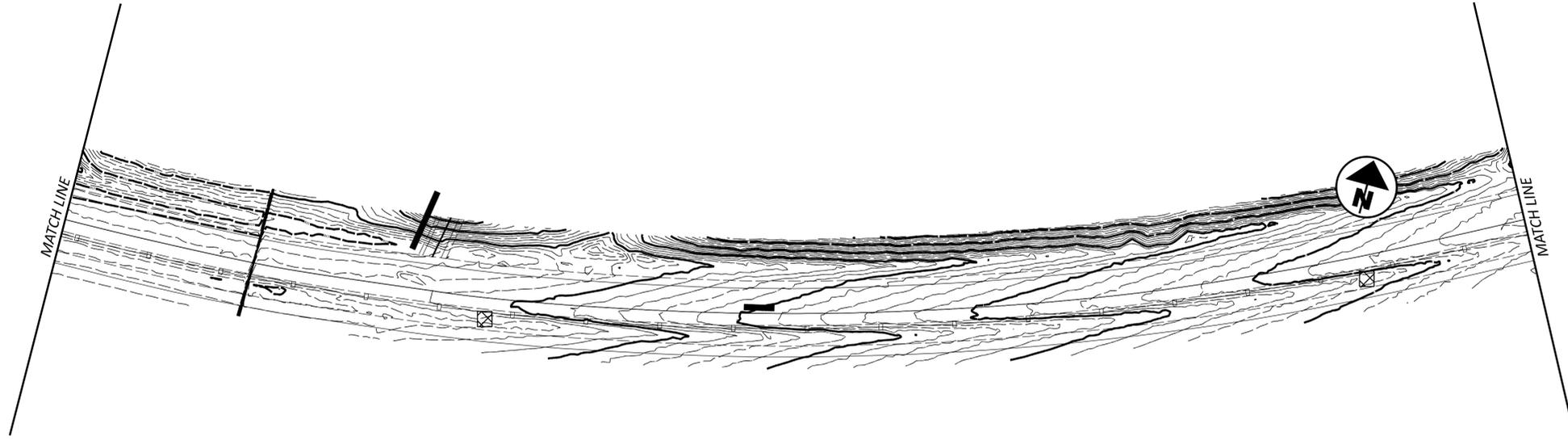
SHEET TOTAL

11 27

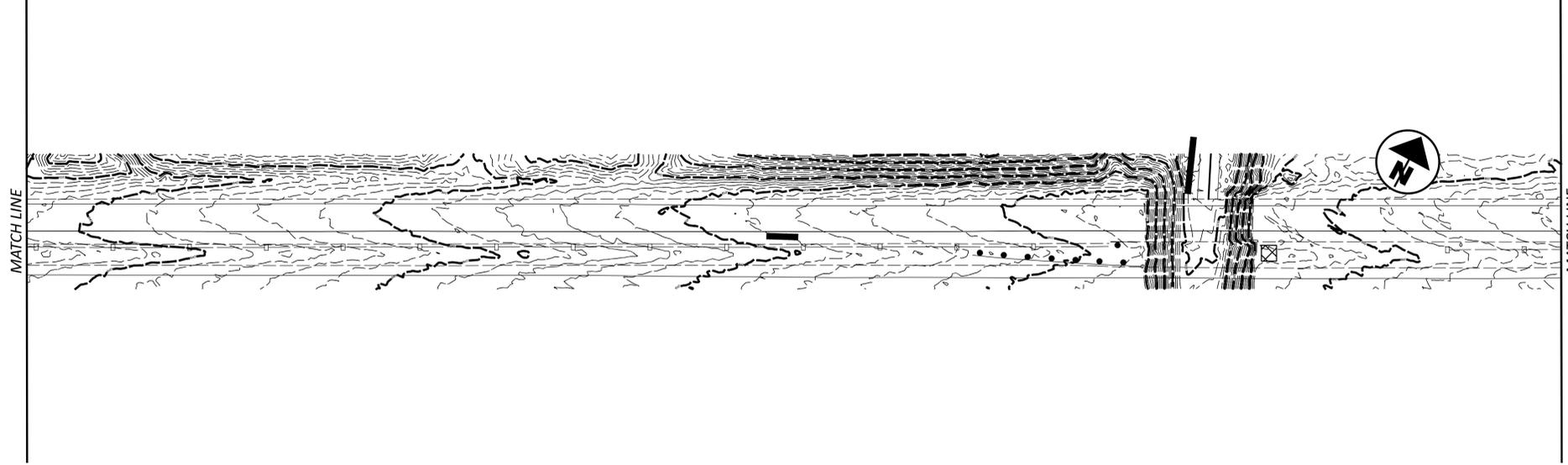
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9



SHEET	TOTAL
14	23

PROJECT ID
122314

REVIEWER
JDO MM-DD-YY

DESIGNER
NCD



DESIGN AGENCY

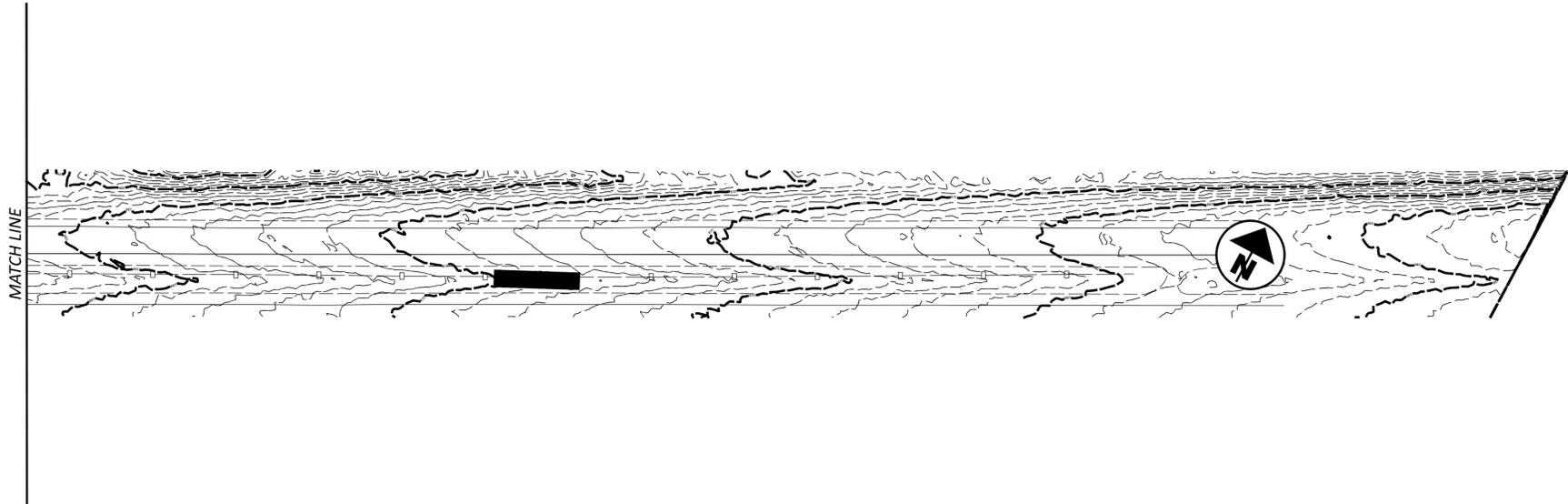
PROJECT SITE PLAN
HAMILTON COUNTY



D08 SAFETY GR FY25

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9



DESIGN AGENCY



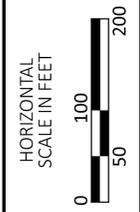
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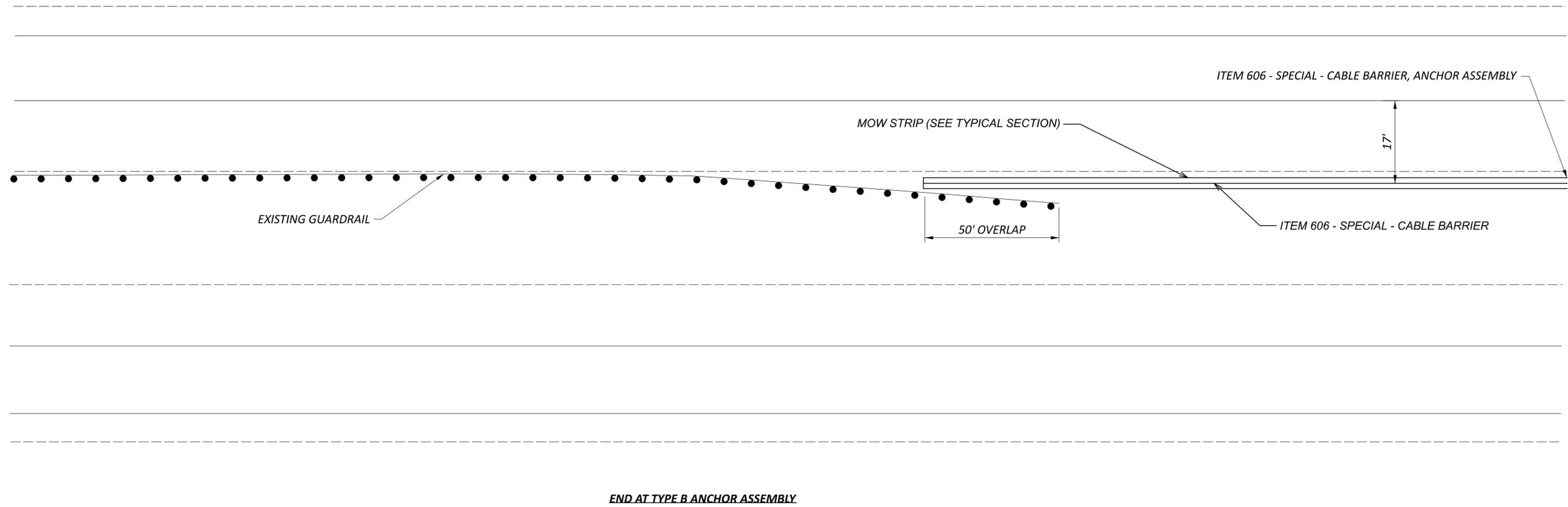
REVIEWER
JDO MM-DD-YY

PROJECT ID
122314

SHEET	TOTAL
15	27

PROJECT SITE PLAN
CLERMONT COUNTY





DESIGN AGENCY



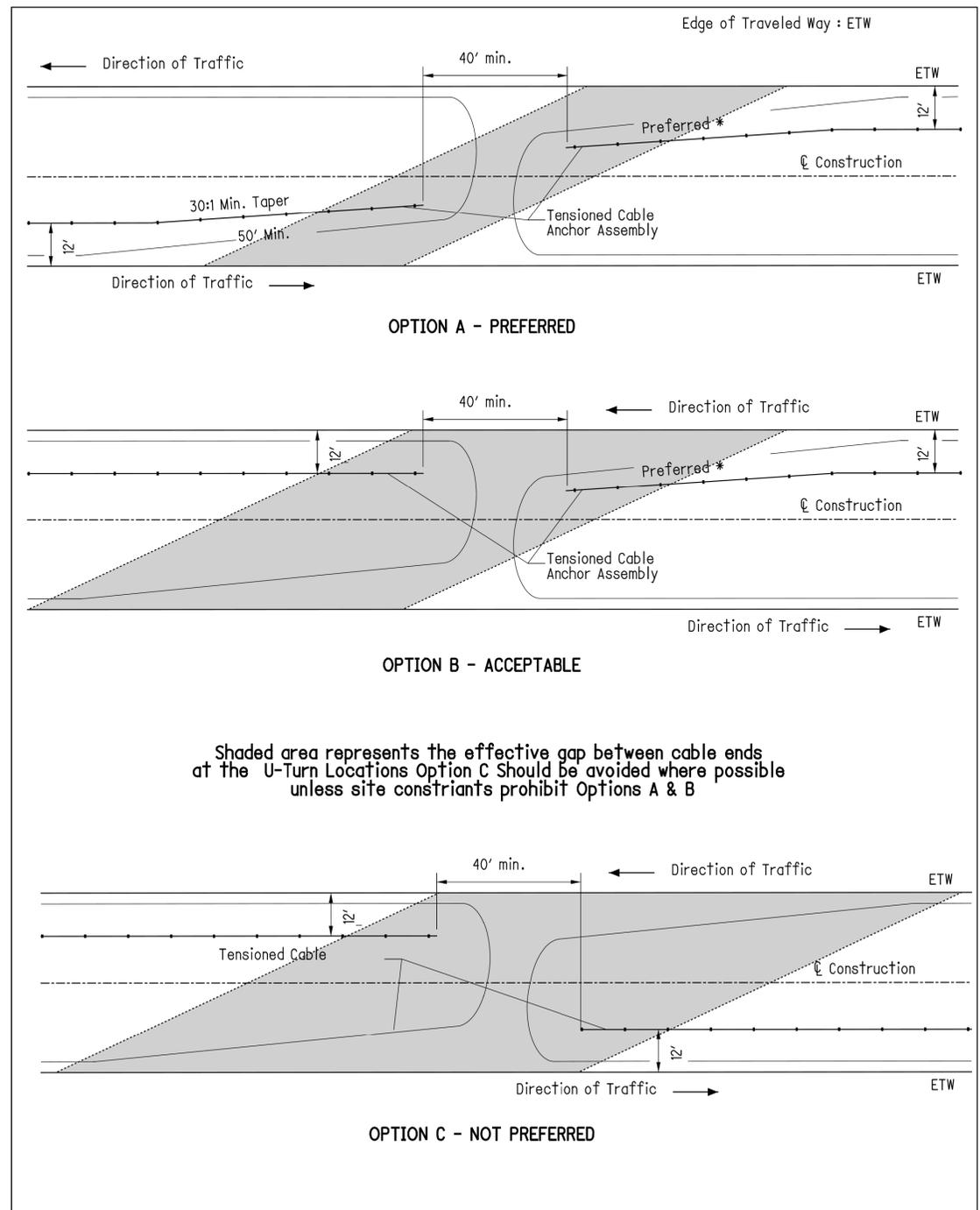
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REVIEWER
JDO MM-DD-YY

PROJECT ID
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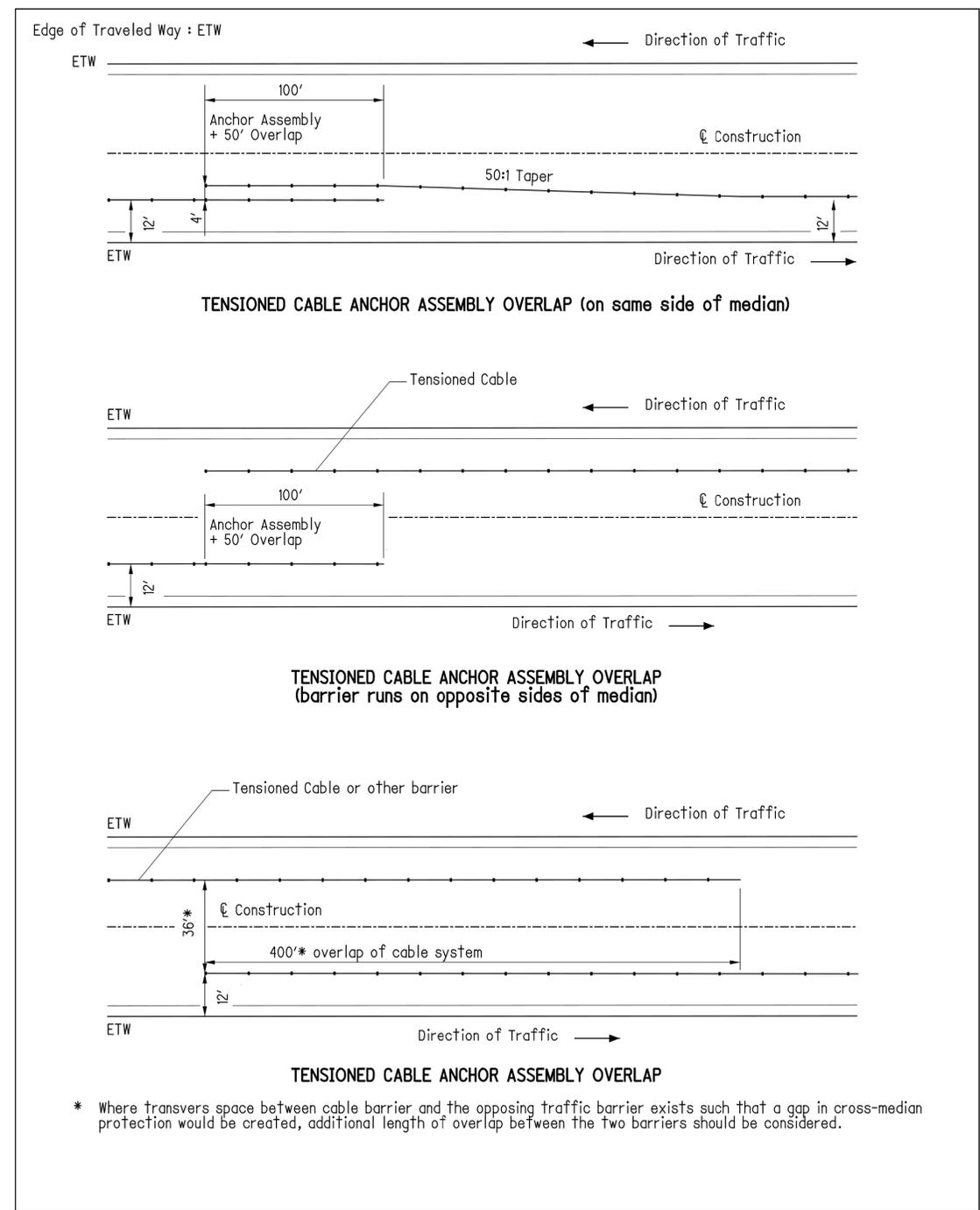
SHEET TOTAL
16 27

<h2>TENSIONED CABLE PLACEMENT AT U-TURNS</h2>	<h3>602-3a</h3>
	REFERENCE SECTIONS 602.2.2 & 603.1.1



January 2015

<h2>OVERLAPPING RUNS OF TENSIONED CABLE</h2>	<h3>602-4a</h3>
	REFERENCE SECTIONS 602.2.2 & 603.1.1



January 2015

DESIGN AGENCY	
	
DESIGNER	NCD
REVIEWER	JDO MM-DD-YY
PROJECT ID	122314
SHEET	TOTAL
17	27

NOTES

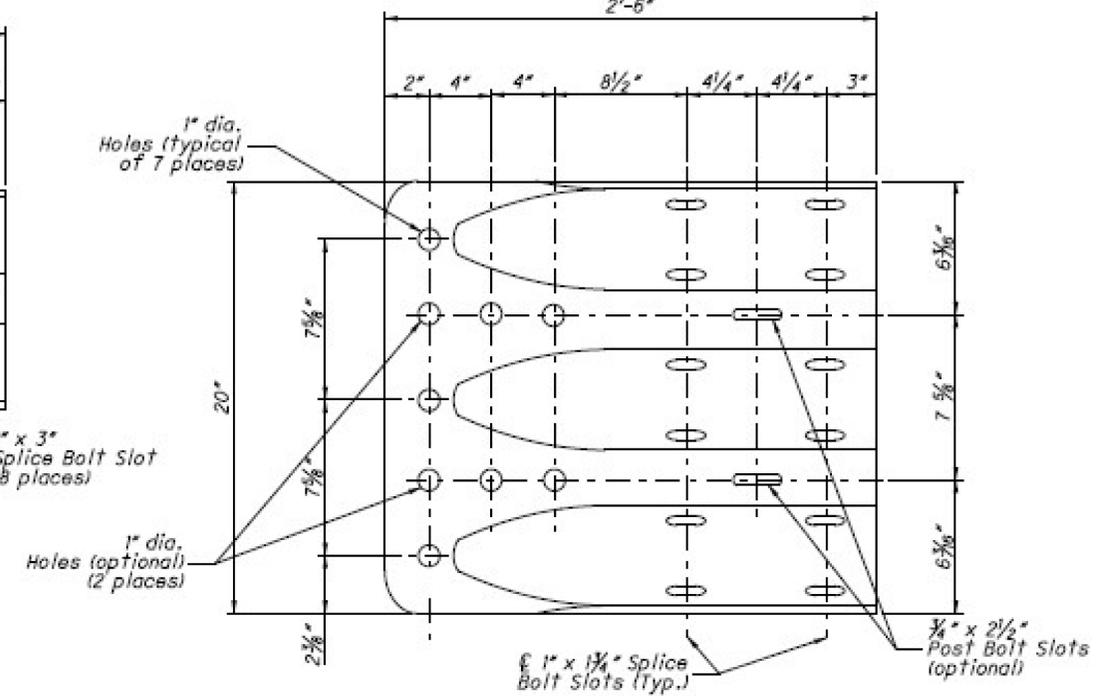
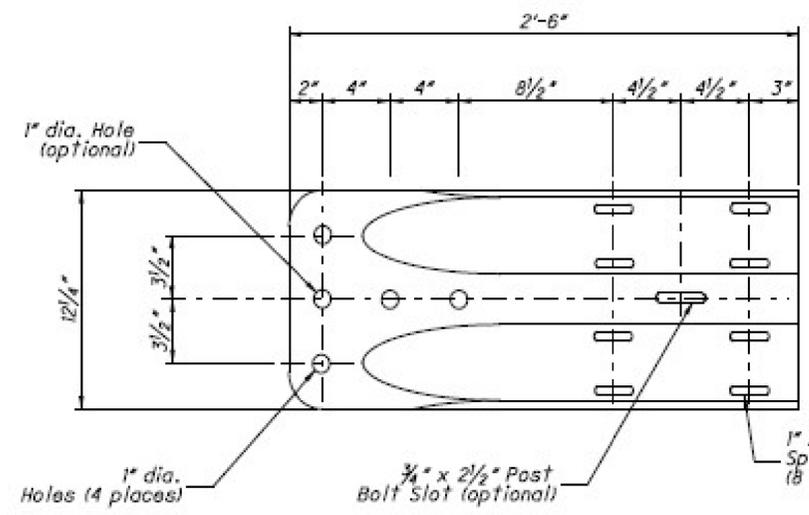
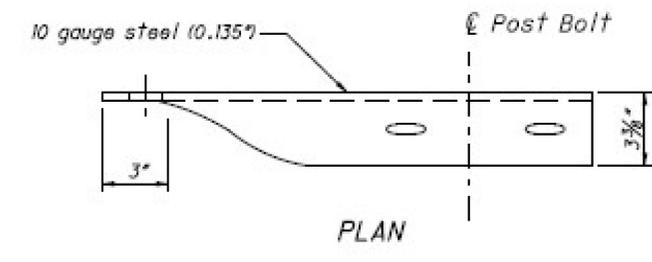
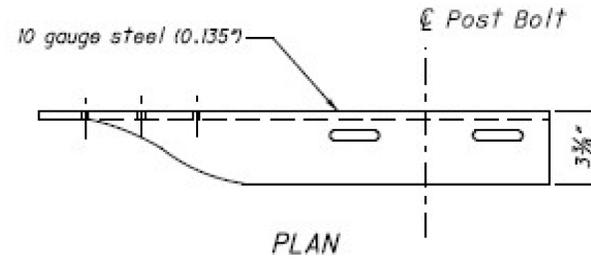
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type I W-Beam to Thrie-Beam Transition sections.

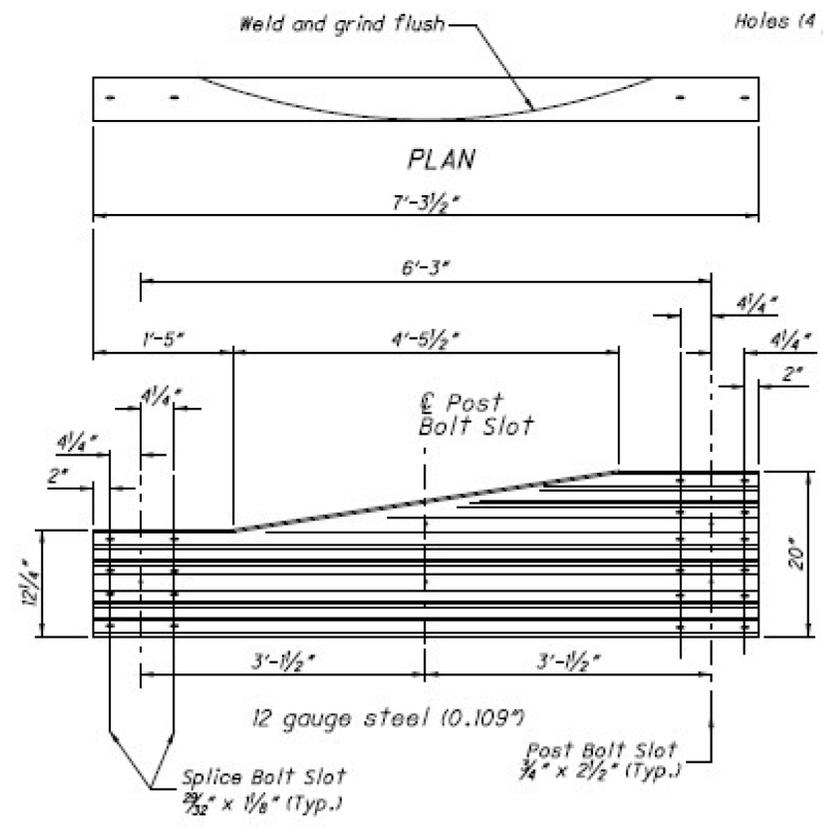
RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with 3/4" x 2 1/2" post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.



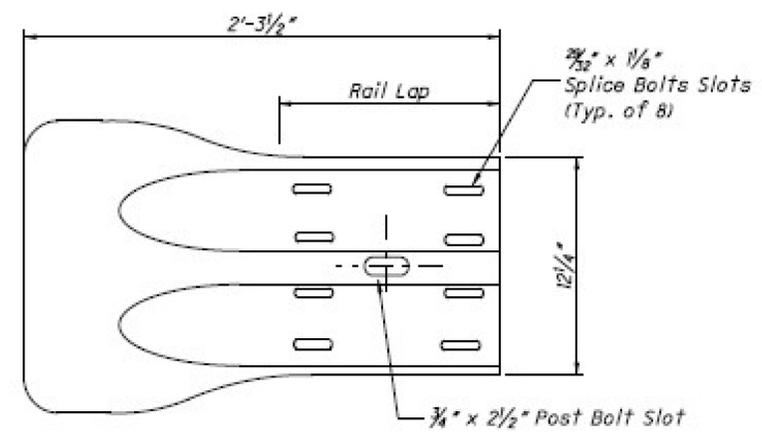
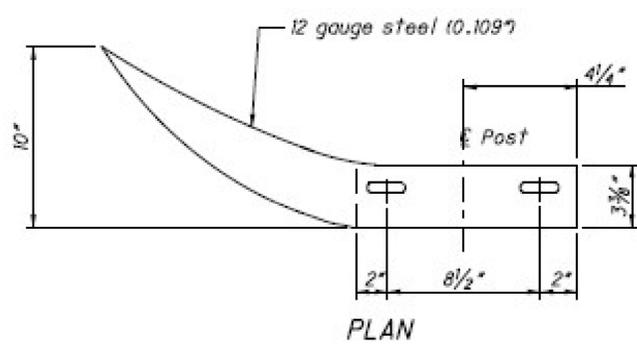
**ELEVATION
W-BEAM TERMINAL CONNECTOR**

**ELEVATION
THRIE-BEAM TERMINAL CONNECTOR**

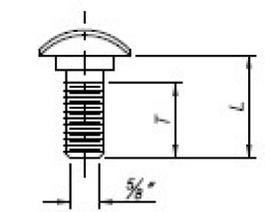


**ELEVATION
TYPE 2 TRANSITION SECTION
(Asymmetric W to Thrie-Beam)**

For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.



**ELEVATION
W-BEAM FLARED END SECTION**



GUARDRAIL BOLT (For Post and Splice Bolts)		
L	T min.	Bolt Use
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		Type 5: SP/WB, PB
10"	4"	Type 5: SP/WB, PB
1 1/4"	1 1/8"	Splice Bolt

WP = Wood Post WB = Wood Blockout
 SP = Steel Post PB = Plastic Blockout

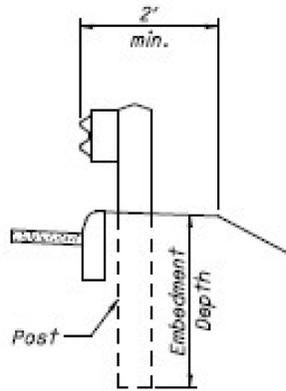
Longer Bolt may be needed for round Wood Post larger than 8" dia.

D08 SAFETY GR FY25

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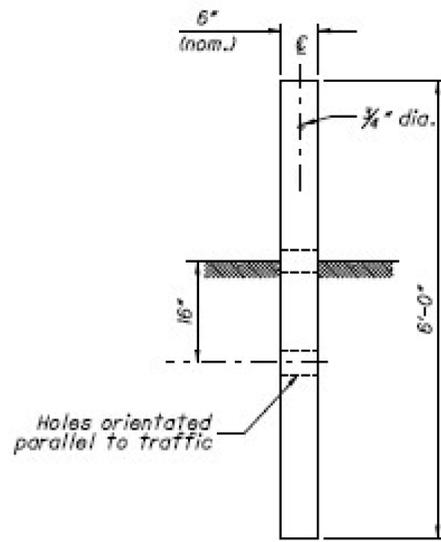
GUARDRAIL DETAILS
(RAIL COMPONENTS)
PIS GR-1.1

DESIGN AGENCY	
DESIGNER	NCD
REVIEWER	JDO MM-DD-YY
PROJECT ID	122314
SUBSET	TOTAL
18	27



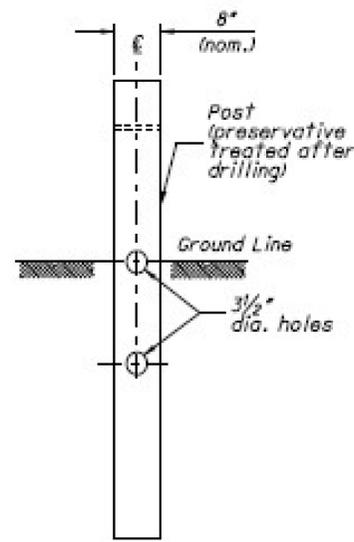
DETAIL A

See POST EMBEDMENT DEPTH Note

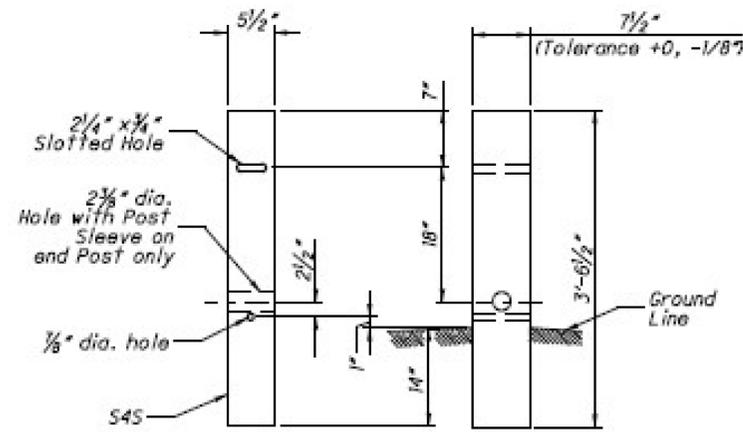


FRONT

TYPE 1 BREAKAWAY CRT POST



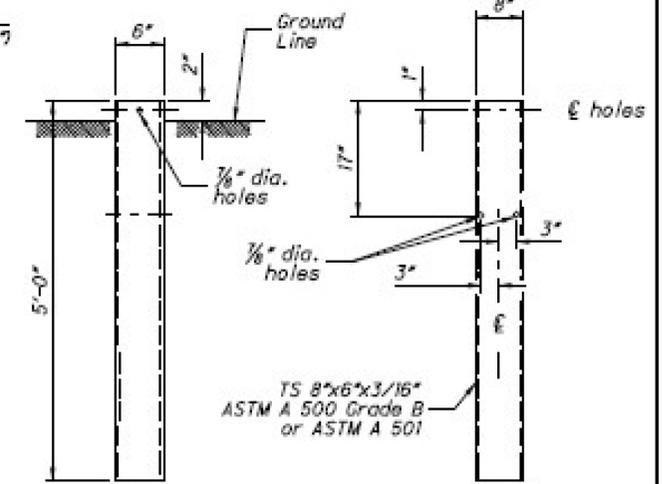
SIDE



FRONT

SIDE

TYPE 2 BREAKAWAY CRT POST



FRONT

SIDE

STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within ± 1" of the standard height, h, or 29" to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)
 When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within ± 2.5" of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for ITEM 606 - GUARDRAIL POST, 9', Each.

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on SCD GR-2.2.

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of SCD GR-2.2, may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

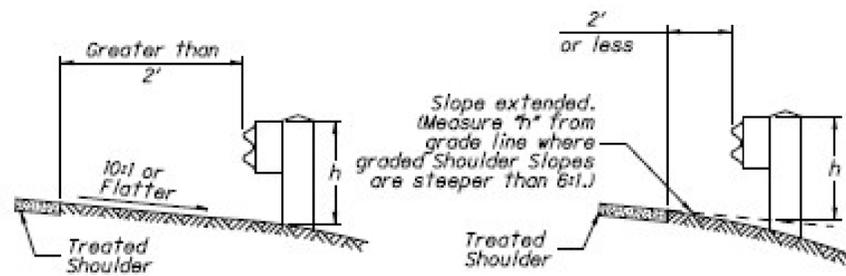
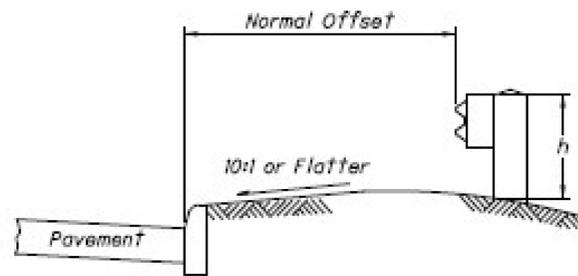
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

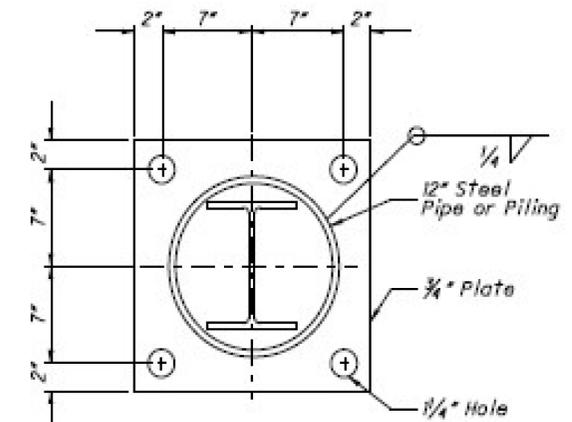
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)



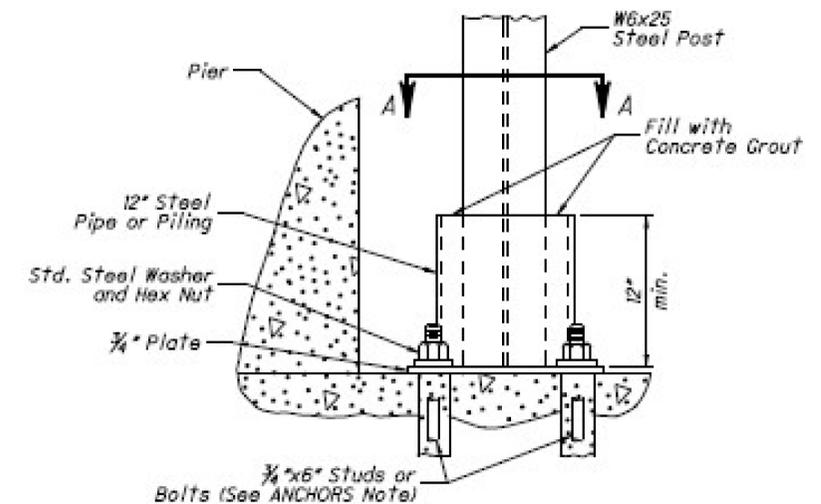
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

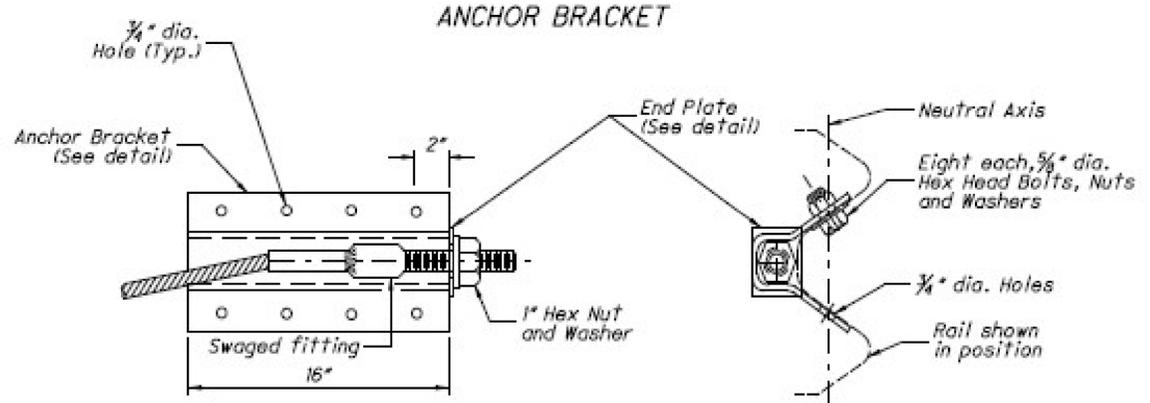
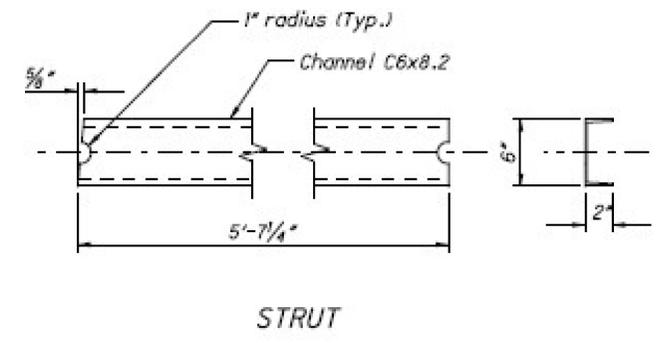
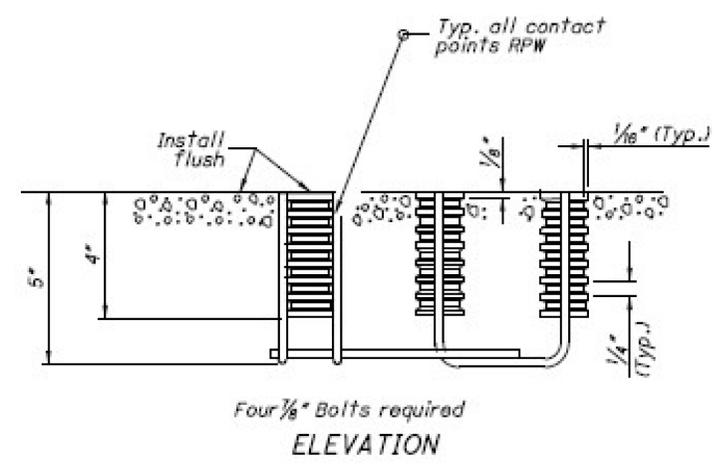
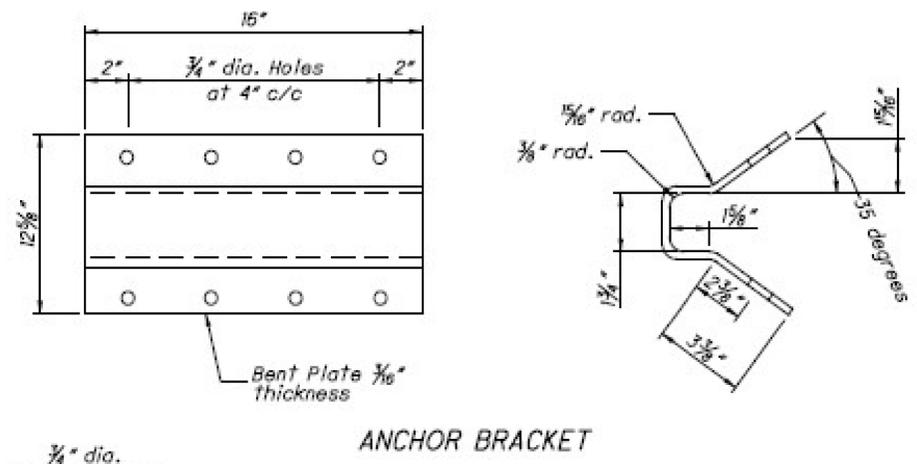
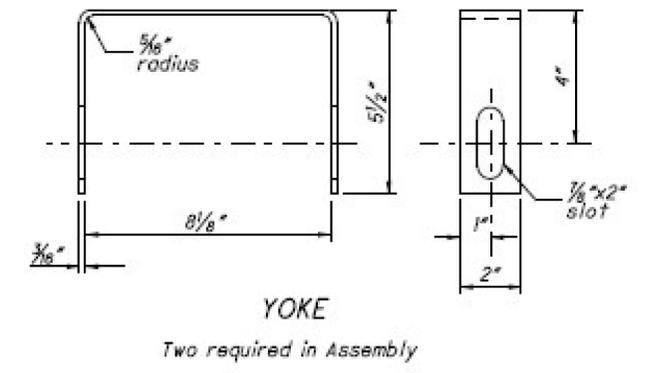
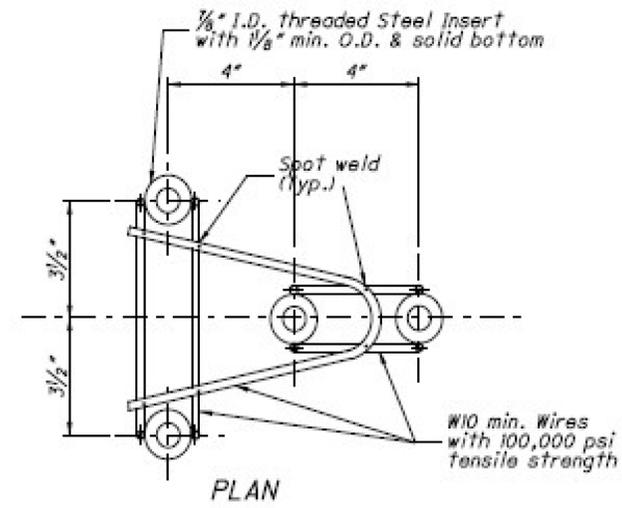
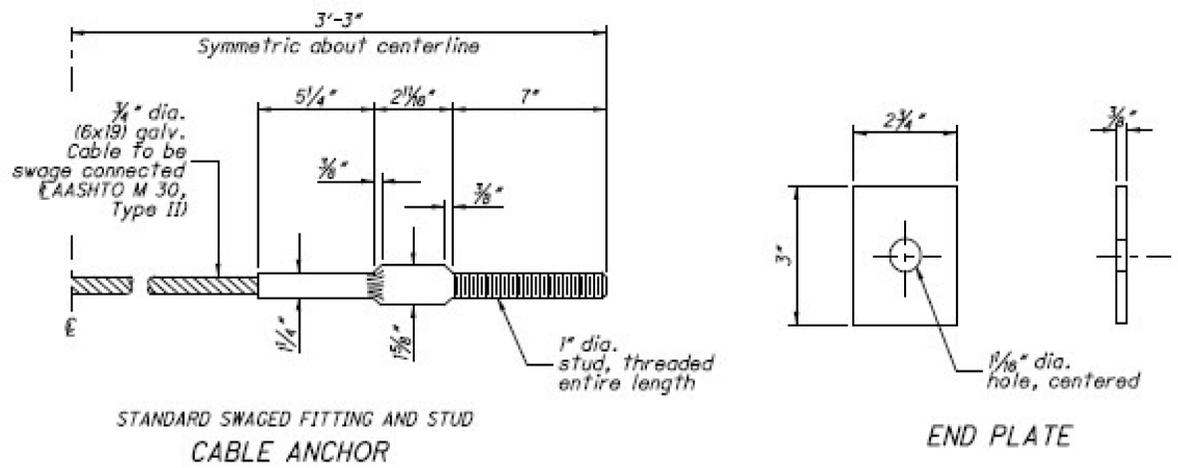
SECTION A-A



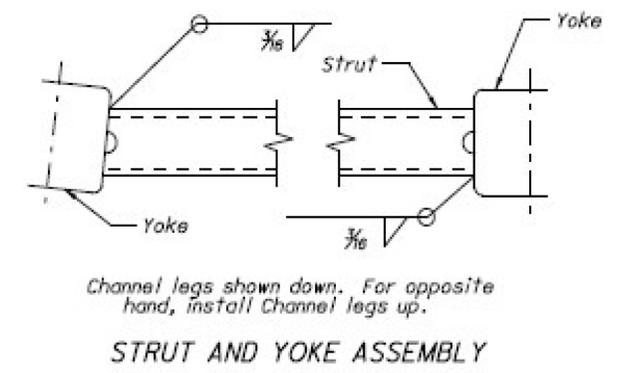
ELEVATION FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

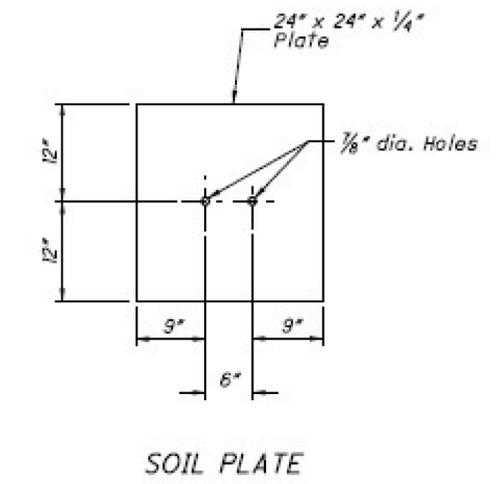
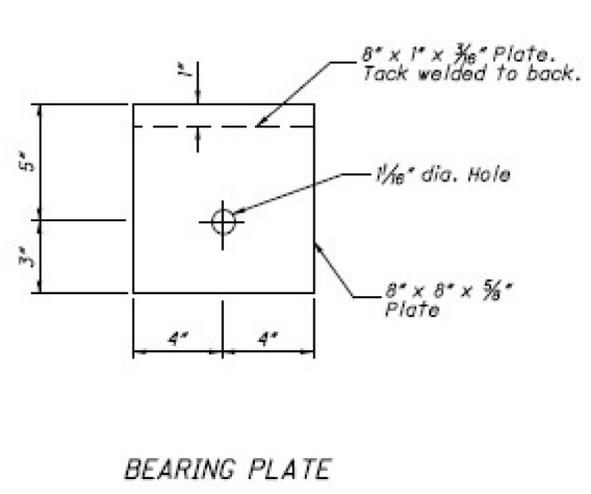
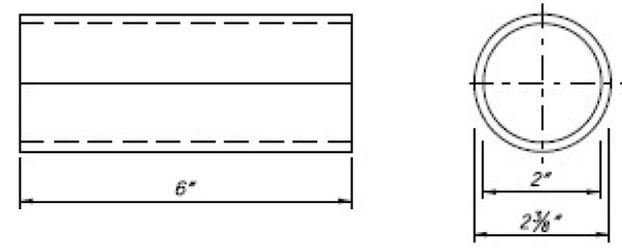




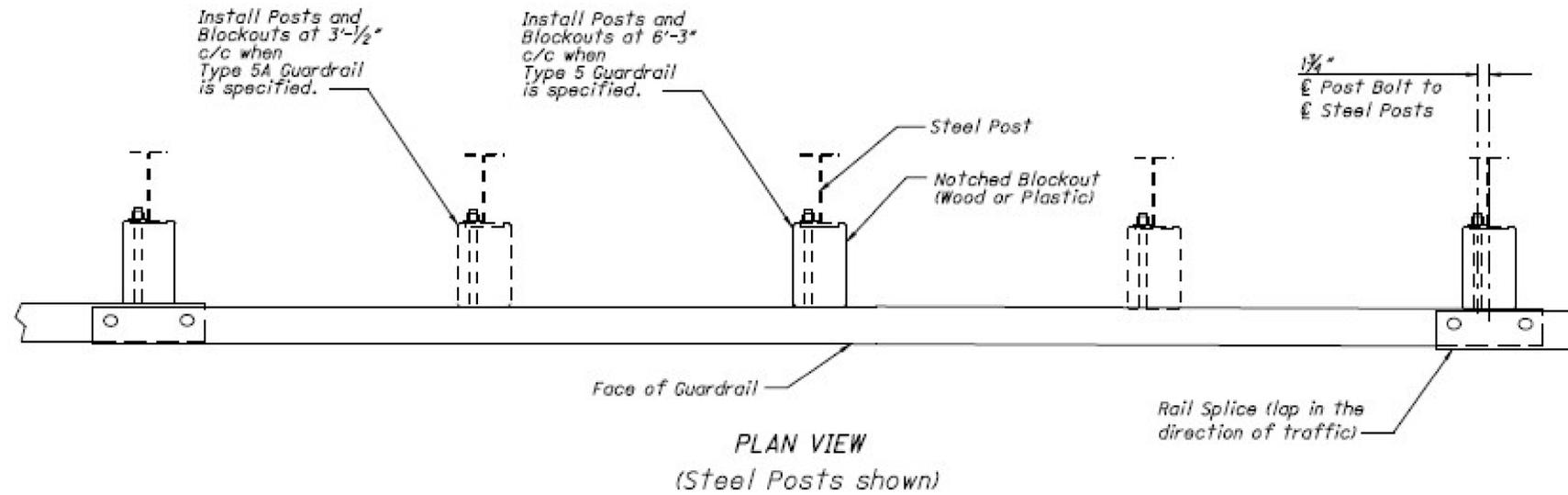
CONCRETE INSERT ANCHOR ASSEMBLY (W-BEAM ONLY)
 See ANCHORS and PROTECTIVE COATINGS Notes on Sheet 2



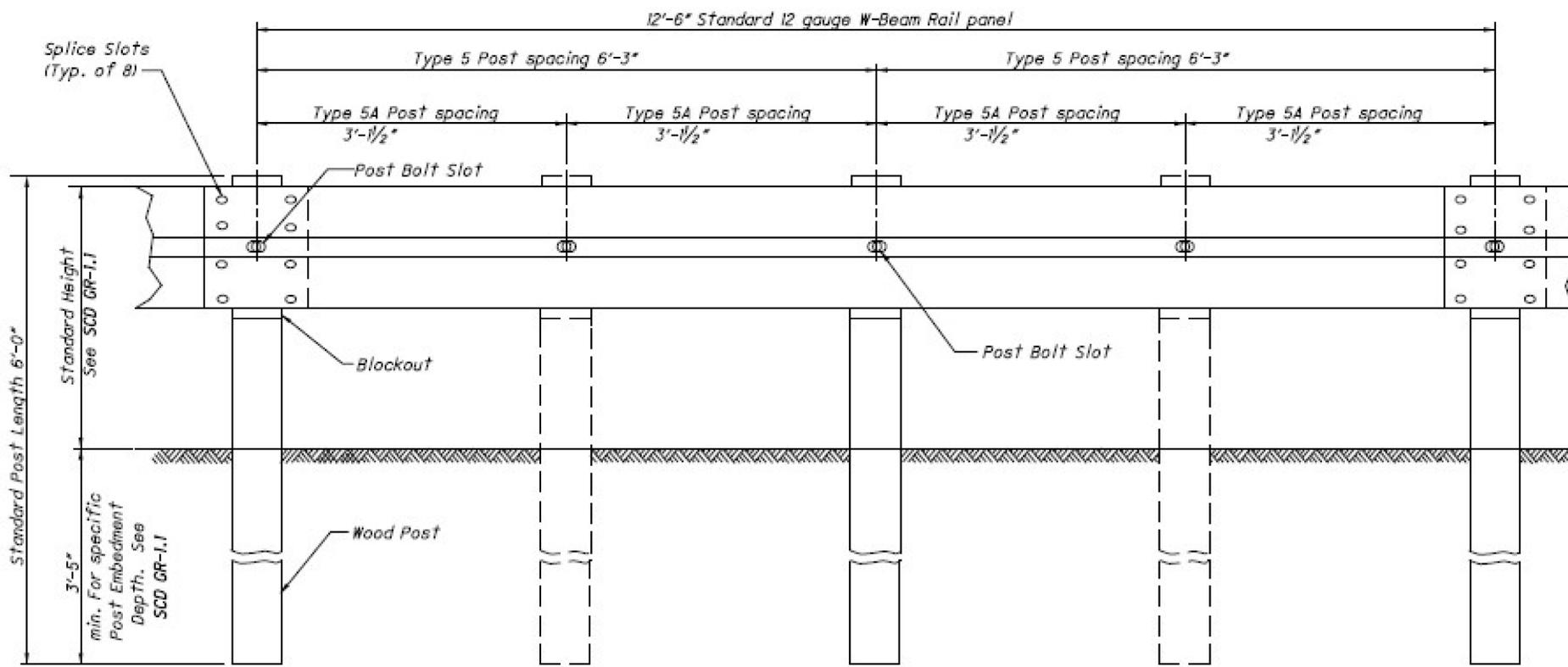
ANCHOR BRACKET ASSEMBLY DETAILS



DESIGN AGENCY		
DESIGNER	NCD	
REVIEWER	JDO MM-DD-Y	
PROJECT ID	122314	
SUBSET	TOTAL	
3	3	
SHEET	TOTAL	
20	27	



PLAN VIEW
(Steel Posts shown)



ELEVATION
(Wood Posts shown)

NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawn.

Use round wood posts on runs of single-sided rail. The round posts shall be 8" in diameter at the top and not more than 3" larger at the butt with a uniform taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel (250 MPa yield point) with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the Office of Materials Management's Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the Office of Roadway Engineering.

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see SCD GR-1.1.

STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

DESIGN AGENCY



DESIGNER
NCD

REVIEWER

JDO MM-DD-YY

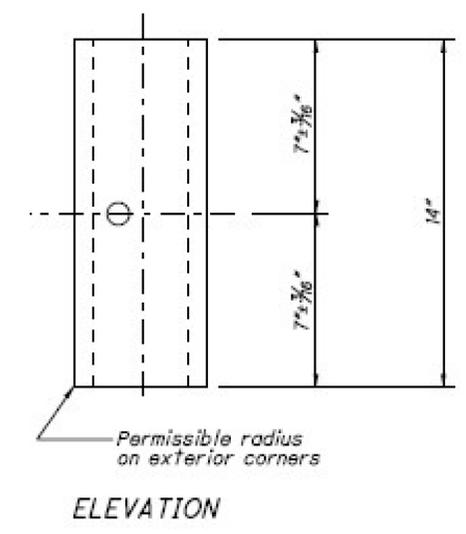
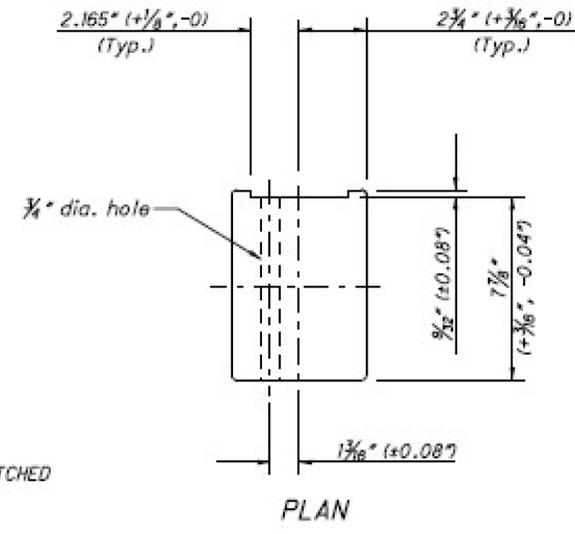
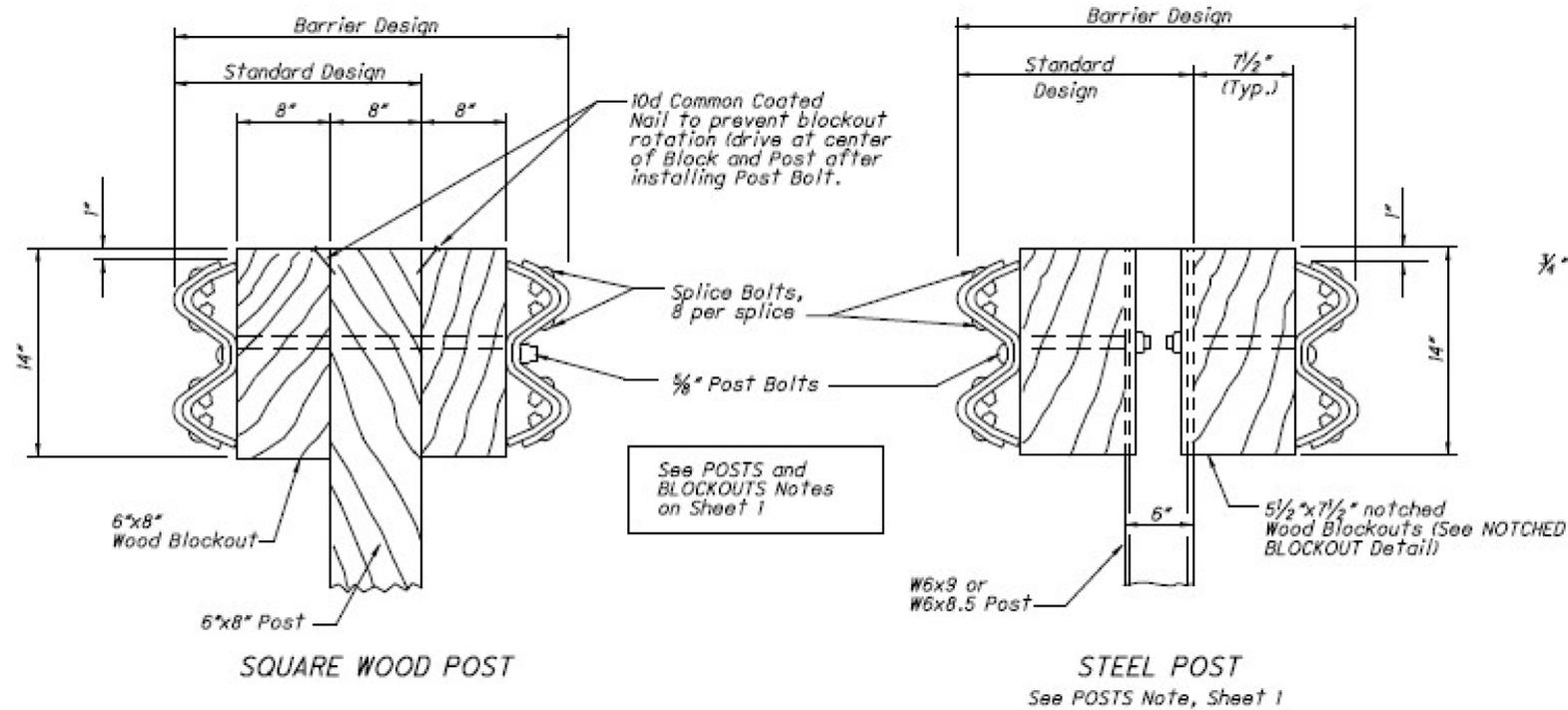
PROJECT ID
122314

SUBSET TOTAL

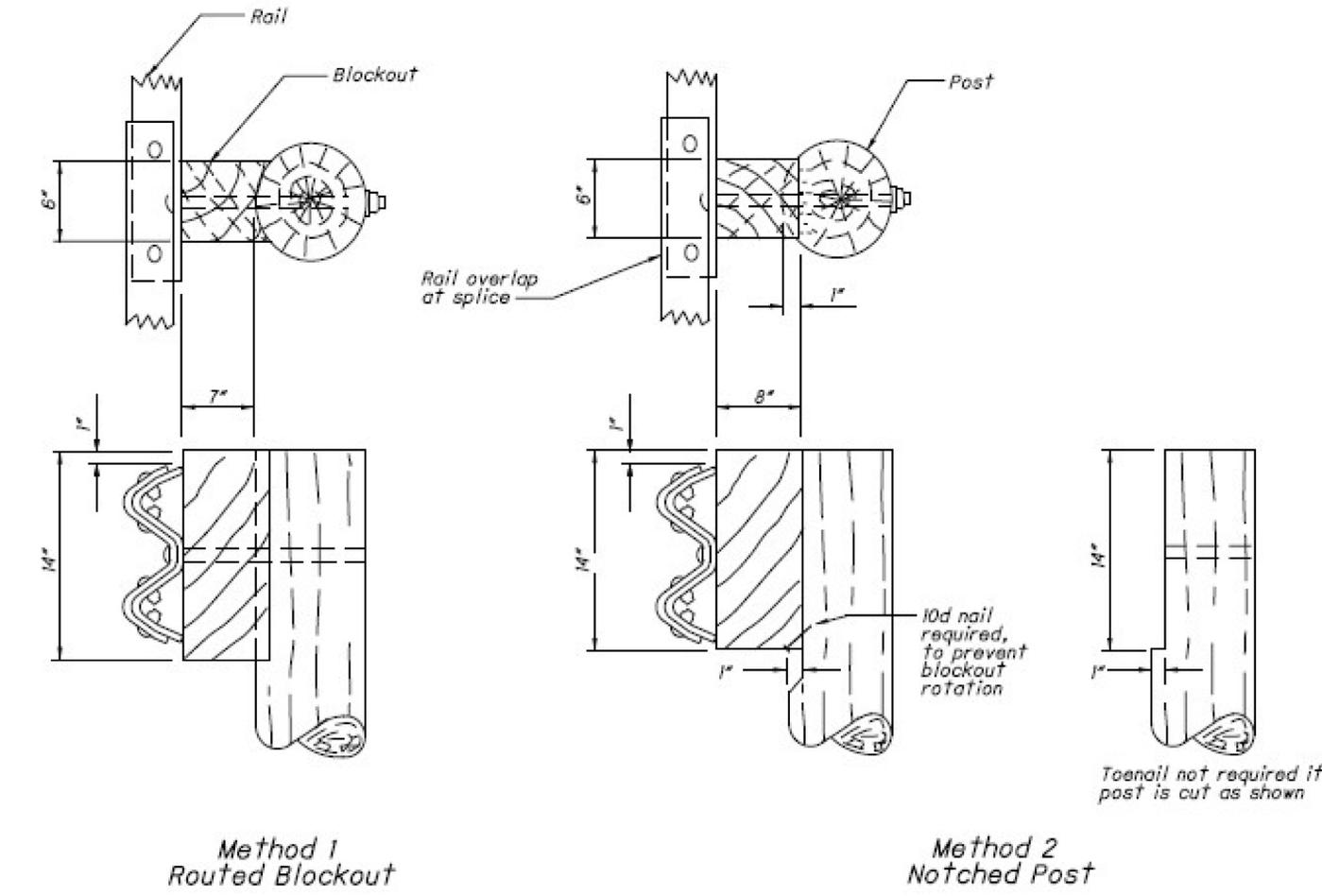
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SHEET TOTAL

21 27

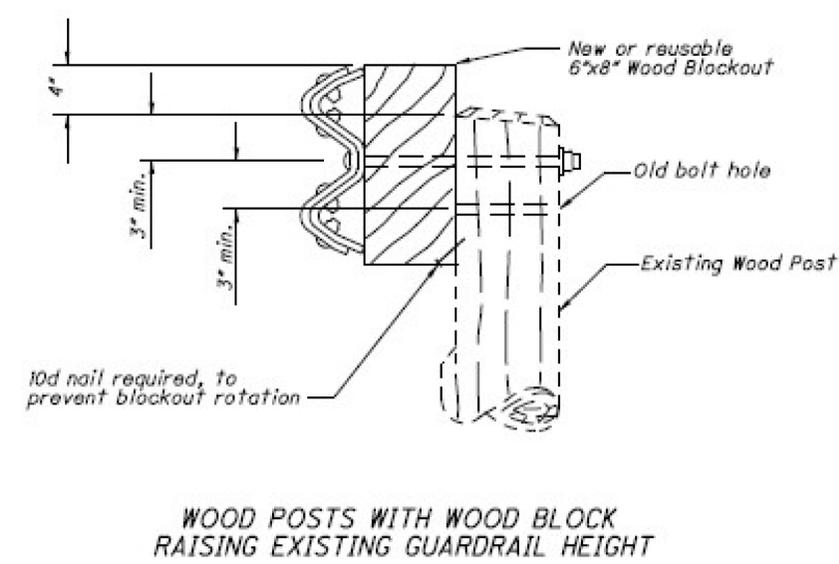


NOTCHED BLOCKOUTS FOR STEEL POSTS
 See BLOCKOUTS Note on Sheet 1

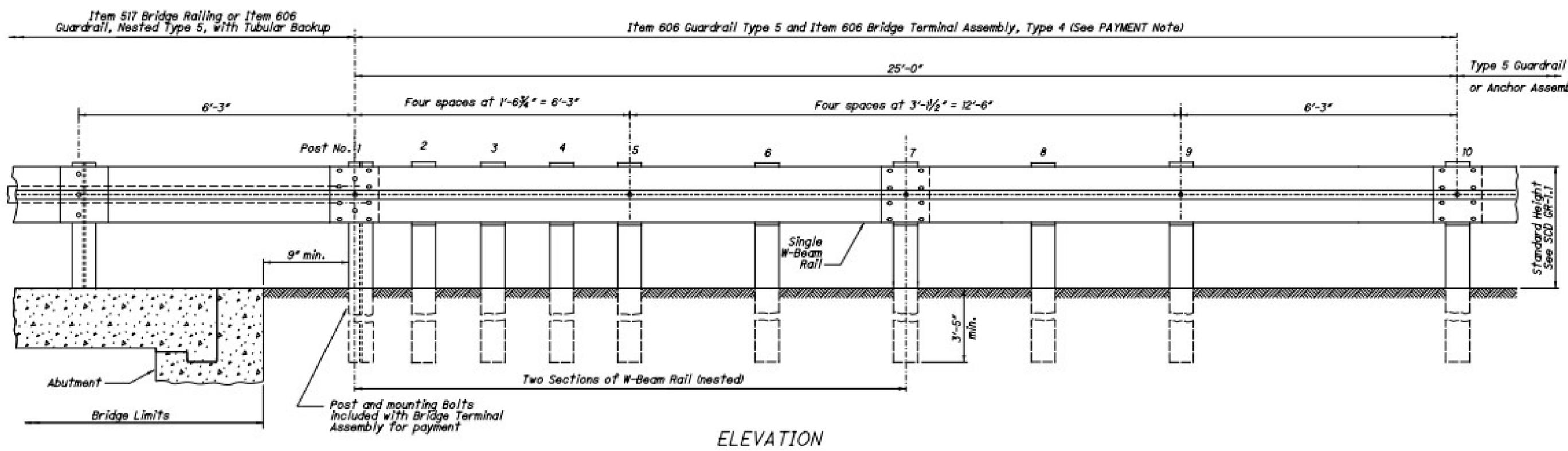
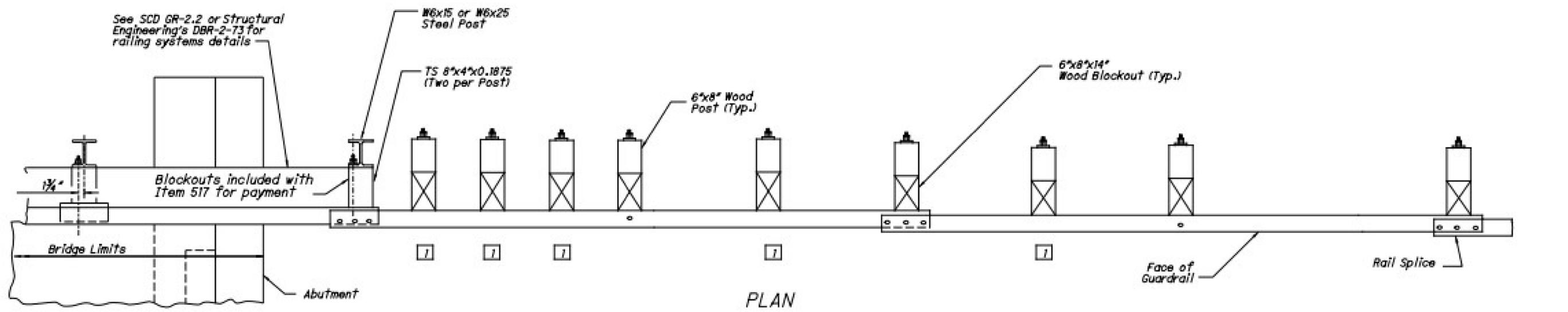


Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS
 Single Sided runs only (Standard Design)



DESIGN AGENCY	[Logo]	
DESIGNER	NCD	
REVIEWER	JDO MM-DD-YY	
PROJECT ID	122314	
SUBSET	TOTAL	
2	2	
SHEET	TOTAL	
22	27	



NOTES

GENERAL: For additional details, see SCD GR-1.1.
APPLICATION: The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or to Deep Beam Bridge Guardrail (as shown on Structural Engineering SCD DBR-2-73).
DETAIL INFORMATION: The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted 3/4"x2 1/2". Tighten the bolts as specified for expansion joints in Item 606.05.

POSTS: Posts may be set in drilled holes or driven to grade. See SCD GR-1.1 for additional Post embedment details. Guardrail is not attached to certain posts (see LEGEND).
WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.
STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.
BLOCKOUTS: Approved alternate blockouts can be found on the Office of Roadway Engineering website. Steel blockouts are not permitted.

FLARED GUARDRAIL: Start Standard Guardrail Flares as shown on SCD GR-5.1 at or beyond Post No. 10; however, the Flare may begin at Post No. 7.
PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with Item 517 - Railing, or Item 606 - Guardrail, Nested Type 5 with Tubular Backup, for payment.

LEGEND

1 Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.

GUARDRAIL DETAILS
(TYPE 4 ANCHOR)
(PIS GR-3.4)

DESIGN AGENCY	
DESIGNER	NCD
REVIEWER	JDO MM-DD-YY
PROJECT ID	122314
SUBSET	TOTAL
1	1
SHEET	TOTAL
23	27

LOG OF BORING

Date Started 11/21/00 Sampler Type SS Dia. 2" Water Elev. -
 Date Completed 11/21/00 Coring Length 9.0' Dia. 2"
 Boring No. SB-100 Station & Offset 1825+76.4, 130.4' Rt. Surface Elev. 826.2

Elev. (ft)	Depth (ft)	Std. Pen. /R.O.D.	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics											
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	WC	ODOT Class			
826.2	0																	
	1				Clay And Silt With A Trace Of Sand, brown and gray mottled, moist, very stiff													
	2																	
	3	6/7/12				1	0	2	5	46	47	42	23	24	A-7-6(14)			
	4																	
821.7	5					Top of Rock												
820.7	6				Begin Core													
	7				Shale (50%) With Interbedded Limestone (50%)													
	8																	
	9				Shale is brown to gray, silty, calcareous, soft to moderately hard													
	10	0	2.0	2.0	Limestone is light gray, fossiliferous, thin to medium bedded, hard -weathered to 811.7'													
	11																	
	12																	
	13																	
811.7	14	16	5.0	0.0														

Bottom of Boring

LOG OF BORING

Date Started 12/7/00 Sampler Type SS Dia. 2" Water Elev. -
 Date Completed 12/7/00 Coring Length N/A Dia. N/A
 Boring No. NB-75 Station & Offset 1867+05.2, 152.9' Lt. Surface Elev. 812.6

Elev. (ft)	Depth (ft)	Std. Pen. /R.O.D.	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics											
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	WC	ODOT Class			
812.6	0																	
	1				Clay With Some Silt And A Little Sand And A Trace Of Gravel, orangish brown, moist, very stiff to hard													
	2																	
	3	8/12/22				1	6	6	13	27	48	43	27	13	A-7-6(15)			
	4																	
	5																	
	6	9/10/12				2										22		
	7																	
804.7	8	23/25/37			Silty Clay With Some Sand And A Little Gravel, brown, moist, very stiff to hard	3	10	9	17	32	32	31	16	9	A-6b(8)			
	9																	
	10																	
	11	7/10/15				4											12	
	12																	
799.8	13	3/3/3			Sandy Silt With A Little Clay And A Trace Of Gravel, orangish brown, moist, loose to medium dense	5	2	10	52	24	12	NP	NP	12	A-4a(0)			
	14																	
	15																	
	16	5/6/8				6											8	
	17																	
794.8	18	7/17/17			Silt And Clay With Some Sand And A Little Gravel, gray, moist, hard	7	17	11	13	33	26	24	11	12	A-6a(5)			
	19																	
	20																	
	21	11/12/18				8											12	
	22																	
	23	15/50+																
	24																	
	25	18/50+																
786.9						10										9		

Bottom of Boring
No Refusal

DESIGN AGENCY



DESIGNER

NCD

REVIEWER

JDO MM-DD-Y

PROJECT ID

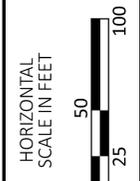
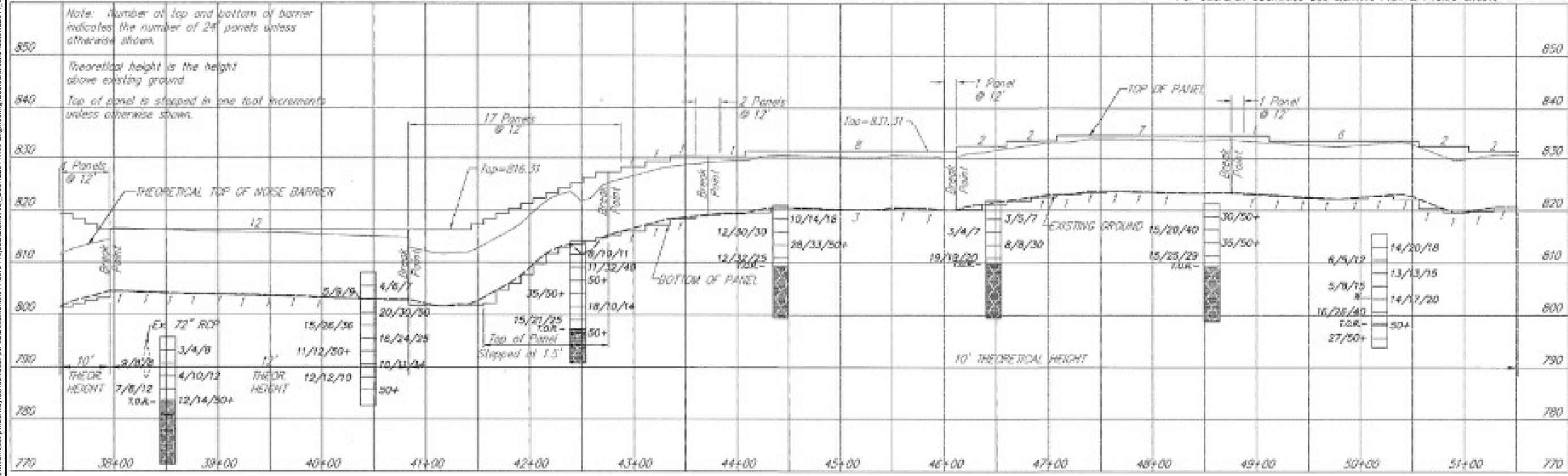
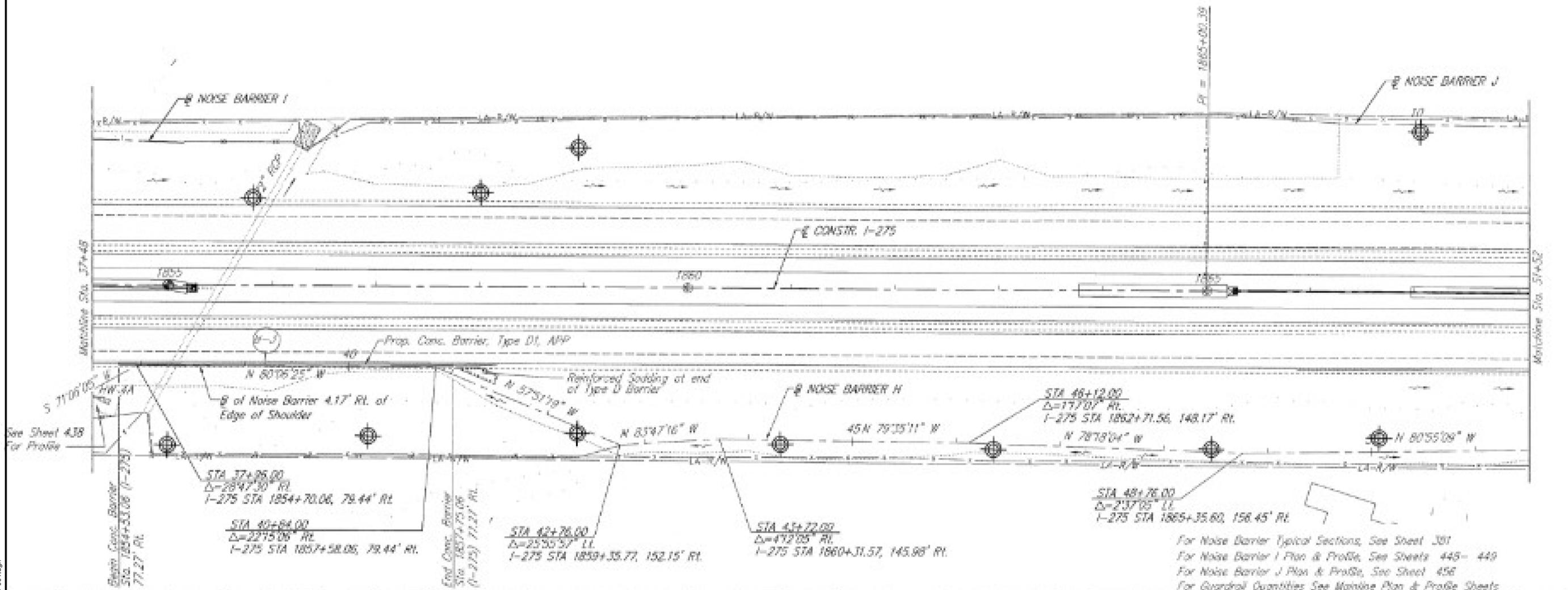
122314

SUBSET TOTAL

1 4

SHEET TOTAL

24 27



GEOTECHNICAL PLAN & PROFILE

DESIGN AGENCY

 DESIGNER: NCD
 REVIEWER: JDO MM-DD-Y
 PROJECT ID: 122314
 SUBSET: 2 TOTAL: 4
 SHEET: 25 TOTAL: 27

SUMMARY OF SOIL TEST DATA

NOTE: SP SHOWS IN LIQUID LIMIT AND PLASTICITY INDEX COLUMNS INDICATES THAT THE MATERIAL IS NON-PLASTIC.
 *INDICATES SAMPLE TAKEN AT OR NEAR USAGE.

STATION & OFFSET	DEPTH	W	C	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	SHL	CLASS.
PROPOSED IR 275											
MAINLINE											
1873+00 50'Lt	0.8-4.0	17	6	8	26	33	34	13	10	A-6a	
1873+00 100'Rt	0.8-4.0	2	3	5	44	56	36	12	13	A-6a	
	4.0-7.0	1	1	3	34	61	46	17	24	A-7-6	
1874+00 CL	0.8-4.0	5	4	13	25	42	34	13	13	A-6a	
	4.0-8.0	5	2	6	37	60	42	13	15	A-7-6	
1871+50 CL	0.8-4.0	11	10	11	27	41	35	12	16	A-6a	
	4.0-7.0	3	4	13	26	42	34	13	13	A-6a	
	7.0-10.0	10	9	7	23	38	34	15	15	A-7-6	
	12.0-13.0	7	6	6	23	37	31	14	14	A-7-6	
											VISUAL
1875+00 CL	0.8-5.0	9	10	13	41	58	41	7	9	A-6a	
	5.0-10.0	9	8	10	33	53	33	11	11	A-6a	
	10.0-15.0	18	14	14	24	38	28	11	10	A-6a	
	15.0-20.0	18	7	10	17	33	23	10	11	A-6a	
	20.0-25.0	9	9	10	17	33	23	10	11	A-6a	
	25.0-26.5	16	10	10	17	33	23	10	11	A-6a	
											VISUAL
1887+00 50'Lt	0.8-5.0	7	7	16	34	56	38	18	15	A-6a	
	5.0-10.0	18	15	23	24	35	25	15	9	A-6a	
1887+00 50'Rt	0.8-4.0	5	5	10	22	33	24	11	14	A-6a	
	4.0-7.0	5	5	10	22	33	24	11	14	A-6a	
	7.0-10.0	5	5	10	22	33	24	11	14	A-6a	
	10.0-15.0	5	5	10	22	33	24	11	14	A-6a	
1890+00 100'Lt	0.8-5.0	0	3	10	30	40	30	11	11	A-6a	
	5.0-10.0	10	7	10	22	33	24	11	14	A-6a	
	10.0-15.0	10	7	10	22	33	24	11	14	A-6a	
	15.0-20.0	10	7	10	22	33	24	11	14	A-6a	
	20.0-25.0	10	7	10	22	33	24	11	14	A-6a	
	25.0-29.0	10	7	10	22	33	24	11	14	A-6a	
1890+00 100'Rt	0.8-5.0	15	15	15	30	40	30	11	11	A-6a	
	5.0-10.0	15	15	15	30	40	30	11	11	A-6a	
	10.0-15.0	15	15	15	30	40	30	11	11	A-6a	
	15.0-20.0	15	15	15	30	40	30	11	11	A-6a	
	20.0-25.0	15	15	15	30	40	30	11	11	A-6a	
	25.0-29.0	15	15	15	30	40	30	11	11	A-6a	
1892+50 CL	0.8-5.0	15	15	15	30	40	30	11	11	A-6a	
	5.0-10.0	15	15	15	30	40	30	11	11	A-6a	
	10.0-15.0	15	15	15	30	40	30	11	11	A-6a	
	15.0-20.0	15	15	15	30	40	30	11	11	A-6a	
	20.0-25.0	15	15	15	30	40	30	11	11	A-6a	
	25.0-29.0	15	15	15	30	40	30	11	11	A-6a	
1893+00 35'Lt	0.8-5.0	15	15	15	30	40	30	11	11	A-6a	
	5.0-10.0	15	15	15	30	40	30	11	11	A-6a	
	10.0-15.0	15	15	15	30	40	30	11	11	A-6a	
	15.0-20.0	15	15	15	30	40	30	11	11	A-6a	
	20.0-25.0	15	15	15	30	40	30	11	11	A-6a	
	25.0-29.0	15	15	15	30	40	30	11	11	A-6a	
1894+00 50'Rt	0.8-5.0	10	10	10	20	30	20	11	11	A-6a	
	5.0-10.0	10	10	10	20	30	20	11	11	A-6a	
	10.0-15.0	10	10	10	20	30	20	11	11	A-6a	
	15.0-20.0	10	10	10	20	30	20	11	11	A-6a	
	20.0-25.0	10	10	10	20	30	20	11	11	A-6a	
	25.0-29.0	10	10	10	20	30	20	11	11	A-6a	
1895+00 45'Lt	0.8-5.0	10	10	10	20	30	20	11	11	A-6a	
	5.0-10.0	10	10	10	20	30	20	11	11	A-6a	
	10.0-15.0	10	10	10	20	30	20	11	11	A-6a	
	15.0-20.0	10	10	10	20	30	20	11	11	A-6a	
	20.0-25.0	10	10	10	20	30	20	11	11	A-6a	
	25.0-29.0	10	10	10	20	30	20	11	11	A-6a	
1895+00 50'Rt	0.8-5.0	10	10	10	20	30	20	11	11	A-6a	
	5.0-10.0	10	10	10	20	30	20	11	11	A-6a	
	10.0-15.0	10	10	10	20	30	20	11	11	A-6a	
	15.0-20.0	10	10	10	20	30	20	11	11	A-6a	
	20.0-25.0	10	10	10	20	30	20	11	11	A-6a	
	25.0-29.0	10	10	10	20	30	20	11	11	A-6a	
1899+75 50'Rt	0.8-6.0	8	2	5	41	48	35	13	15	A-6a	

GEOTECHNICAL DATA

DESIGN AGENCY



DESIGNER
NCD

REVIEWER
JDO MM-DD-Y

PROJECT ID
122314

SUBSET	TOTAL
3	4

SHEET	TOTAL
26	27

