

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**GRE CULVERTS  
FY2021**  
SPRING VALLEY, XENIA, AND  
BEAVERCREEK TOWNSHIPS  
GREENE COUNTY

**PROJECT DESCRIPTION**

INVERT PAVING OF CULVERTS GRE-380-2.16, GRE-35-10.1, GRE-675-5.79, AND GRE-675-5.95. SPALL PATCHING OF GRE-35-10.3. END SECTION REPAIR OF GRE-675-5.95R.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: \* ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: \* ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: \* ACRES  
\* SEE INDIVIDUAL CULVERT DETAIL SHEETS

**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.

**2019 SPECIFICATIONS**

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

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

APPROVED \_\_\_\_\_  
DATE 10/8/2020 DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.  
**E170920**

PID NO.  
**100909**

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
**NONE**

**GRE CULVERTS  
FY2021**

1  
21

SEE SHEET 2 FOR LOCATION MAPS

**LOCATION MAP**

**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
GRE-380-0216 LANE WIDTH PAVEMENT CROSS SLOPE SHOULDER WIDTH	9/29/2020	6-8

**INDEX OF SHEETS:**

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**UNDERGROUND UTILITIES**

Contact Two Working Days  
Before You Dig



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

PLAN PREPARED BY:  
OHIO DEPARTMENT OF  
TRANSPORTATION  
DISTRICT 8 - ENGINEERING

**ENGINEERS SEAL:**



**STANDARD CONSTRUCTION DRAWINGS**

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
HW-2.1	7/20/18	MT-95.30	7/19/19	800-2019 10/16/20	WATERWAY
DM-1.1	7/21/17	MT-97.10	7/18/14	821 4/20/12	PERMIT
DM-4.3	1/15/16	MT-98.10	1/17/20	832 10/19/18	CONDITIONS
DM-4.4	1/15/16	MT-98.20	4/19/19	833 10/20/17	09/20/2019
		MT-98.28	1/17/20	821 4/20/12	
TC-61.30	7/19/19	MT-105.10	1/17/20	878 1/17/20	
CB-3.4	1/15/16				

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**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

GRE-380-0216

ATT OHIO  
7201 FAR HILLS AVE.  
DAYTON OHIO 45459  
937-296-3588 (HOWARD LAUDERMILK)  
HL1596@ATT.COM

ATT METRO/LNS

THAYER POWER AND COMMUNICATION  
LINE CONSTRUCTION CO., LLC  
950 FREEWAY DRIVE N.  
COLUMBUS, OH 43229  
(614) 431-9292 (CHRISTOPHER MCCLOSKEY)  
CHRISMCCLOSKEY@THAYERPC.COM

AT&T TRANSMISSION LONG DISTANCE  
7555 E. PLEASANT VALLEY RD. SUITE 140  
INDEPENDENCE, OH 44131  
216-750-0135 (MICHAEL DIEDERICH)  
MD4145@ATT.COM

DAYTON POWER AND LIGHT  
1900 DRYDEN RD  
DAYTON, OH 45439  
937-554-9063 (WILLIAM WARD)  
WILLIAM.WARD@AES.COM

GREENE COUNTY WATER AND SEWER  
667 DAYTON-XENIA ROAD  
XENIA, OH 45385  
937-562-7462 (TIM GROW)  
TGROW@CO.GREENE.OH.US

FRONTIER COMMUNICATIONS  
241 SOUTH NELSON AVENUE  
WILMINGTON, OH 45177  
937-283-5735 (DAVID LONGWORTH)  
DAVID.M.LONGWORTH@FTR.COM

**CONTRACTOR COORDINATION**

THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTOR FOR PROJECT GRE-675-0.00 (PID 94254) WHICH WILL PERFORM PAVEMENT REPAIR AND RESURFACING ON I-675.

**BENCHING OF FOUNDATION SLOPES**

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

**ITEM 203 - EXCAVATION, AS PER PLAN**  
**ITEM 203 - EMBANKMENT, AS PER PLAN**

PRIOR TO EMBANKMENT CONSTRUCTION, REMOVE UNSUITABLE EMBANKMENT TO THE LIMITS ILLUSTRATED IN THE CROSS-SECTIONS. THE ESTIMATED DEPTH OF REMOVAL IS 2 FT. BELOW THE EXISTING GROUND SURFACE. REMOVE THE EXISTING SOIL PER ITEM 203 - EXCAVATION. REPLACE THE EXCAVATED SOIL PER ITEM 203 - EMBANKMENT. PAYMENT FOR THESE ITEMS INCLUDE ALL MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THE WORK. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION, AS PER PLAN	110 CY
ITEM 203 - EMBANKMENT, AS PER PLAN	110 CY

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF TWO (2) PRIVATE USE AIRPORTS AND ONE (1) PUBLIC USE AIRPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT, AT MAXIMUM OPERATING HEIGHT, SHALL EXCEED THE HEIGHTS SHOWN IN THE TABLE BELOW:

CULVERT WORK LOCATION	AIRPORT TYPE	MAX. OPERATING HEIGHT
GRE-380-0216	PUBLIC USE	75 FT.
GRE-35-1030	PUBLIC USE	75 FT.
GRE-35-1030	PUBLIC USE	75 FT.
GRE-675-0579	NONE	N/A
GRE-675-0595	NONE	N/A
GRE-675-0595R	NONE	N/A

IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THESE HEIGHTS, COORDINATION WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT.

FOR PRIVATE USE AIRPORTS, COORDINATE WITH THE AIRPORT OWNER AND THE ODOT OFFICE OF AVIATION.

FOR PUBLIC USE AIRPORTS, COORDINATE WITH THE FEDERAL AVIATION ADMINISTRATION (FAA) AND THE ODOT OFFICE OF AVIATION. 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 HEIGHTS SHOWN IN THE TABLE, UNTIL COORDINATION IS MET AND DOCUMENTATION HAS BEEN FURNISHED TO THE PROJECT ENGINEER. DOCUMENTATION CONSISTS OF A COPY OF FAA PERMIT APPROVAL, IF APPLICABLE, AND THE ODOT OFFICE OF AVIATION PERMITS. IF COORDINATION IS NOT OBTAINED, THEN THE PROJECT ENGINEER WILL HAVE THE AUTHORITY TO PROVIDE RESTRICTIONS AS REQUIRED.

IF COORDINATION WITH PRIVATE AIRPORT OWNERS AND THE ODOT OFFICE OF AVIATION IS REQUIRED DUE TO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT EXCEEDING THE MAXIMUM OPERATING HEIGHTS SHOWN IN THE TABLE, CONTACT THE FOLLOWING OFFICES.

GREENE COUNTY LEWIS A JACKSON REGIONAL AIRPORT  
MANAGER: DAVE KUSHNER  
140 N VALLEY ROAD  
XENIA, OH 45385  
937-376-8107

SKYDIVE GREENE COUNTY INC. AIRPORT  
177 S MONROE-SIDING ROAD  
XENIA, OH 45385  
937-372-0700  
OWNER: JAMES R WEST  
1790 FOUST ROAD  
XENIA, OH 45385  
937-372-6116

**ITEM 659-SEEDING AND MULCHING**

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

IN ADDITION TO THE QUANTITIES SHOWN ON THE CROSS SECTIONS, AN ESTIMATED QUANTITY OF 2,073 SQ YDS OF SEEDING AND MULCHING HAS BEEN INCLUDED FOR THOSE LOCATIONS THAT DO NOT HAVE CROSS SECTIONS. THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS AT ALL PROJECT LOCATIONS:

ITEM 659 - TOPSOIL	27 CY
ITEM 659 - SEEDING AND MULCHING	2313 SY
ITEM 659 - COMMERCIAL FERTILIZER	0.3 TON
ITEM 659 - LIME	0.48 ACRE
ITEM 659 - WATER	12.7 MGAL

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**DEMOLITION DEBRIS**

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS AND/OR EMBANKMENT SOIL FROM ENTERING THE STREAM. ANY DEBRIS MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

**ITEM SPECIAL - PIPE CLEANOUT**

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 ADN 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED ON SHEETS 6 AND 9-13.

**ITEM 833 - CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, CATCH BASIN, AS PER PLAN**

THIS WORK SHALL CONSIST OF APPLYING SPRAY LINER TO INTERIOR OF CATCH BASIN, INCLUDING CONNECTIONS TO CMP PIPES. MUNICIPAL & CONTRACTORS SEALING PRODUCTS, HYDRATECH, ECOCAST, OR CENTRIPIPE ARE CONSIDERED ACCEPTABLE PRODUCTS FOR THIS WORK.

**ENDANGERED BAT HABITAT REMOVAL**

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

**ITEM 202 - CLEARING AND GRUBBING**

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

**ITEM 607 - FENCE REMOVE AND REBUILT, AS PER PLAN**

REMOVE AND REBUILD FENCE AS NECESSARY AT UPSTREAM END OF CULVERT WHERE INDICATED ON SHEET 6. THIS WORK INCLUDES REMOVAL OF EXISTING FENCE AND POSTS AND REBUILDING ACCORING TO C&MS 607.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK FOR TYPE 47 FENCE:

607, FENCE REMOVE AND REBUILT, AS PER PLAN: 100 FT

**CATCH BASIN, MISC.: TUCK POINT EX. CATCH BASIN MORTAR JOINTS**

THIS WORK CONSISTS OF REMOVING LOOSE AND DISINTEGRATED MORTAR, PREPARING THE JOINT, AND PLACING NEW MORTAR. MORTAR SHALL ALSO BE PLACED IN EXISTING GAPS WHERE EXISTING MORTAR HAS ALREADY DETERIORATED. THE EXISTING JOINTS SHALL BE CLEANED AND PREPARED IN ACCORDANCE WITH THE MANUFACUTER SPECIFICATIONS.

**COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN**

COFFERDAMS AND EXCAVATION BRACING INSTALLED FOR THE PROJECT ARE FOR DEWATERING THE WORK AREA. COFFERDAMS AND EXCAVATION BRACING DESIGN, CONSTRUCTION, AND REIMBURSEMENT FOR DAMAGE IS BASED ON CMS 503. THE CONTRACTOR MUST COMPLY WITH THE IN-STREAM RESTRICTION IN THE SPECIAL PROVISIONS WATERWAY PERMIT. ADDING FILL TO OR EXCAVATING FROM THE STREAM TO DEWATER THE WORK AREA REQUIRES A TEMPORARY ACCESS FILL (TAF) SUBMISSION PER THE SPECIAL PROVISIONS. FILLING THE EXCAVATED AREA AFTERWARDS IS CONSIDERED A PERMANENT FILL AND MAY VIOLATE THE WATERWAY PERMIT'S THRESHOLDS OF IMPACTS.

IF THE CONTRACTOR WILL USE PUMPS TO DEWATER THE SITE, THEN THE CONTRACTOR WILL NEED TO SIZE THE PUMP(S) TO HANDLE TWICE THE HIGHEST MONTHLY FLOW WITHOUT PRODUCING A RISE IN THE BACKWATER ABOVE THE OHWM. ACCORDING TO STREAMSTATS, TWICE THE HIGHEST MONTHLY FLOW THAT NEEDS TO BYPASS THE DEWATERED WORK SITE IS SHOWN ON THE TABLE BELOW.

LOCATION	2X MONTHLY FLOW
GRE-380-0216	2.06 CFS
GRE-35-1010	0.29 CFS
GRE-35-1030	4.22 CFS
GRE-675-0579	0.55 CFS
GRE-675-0595	0.55 CFS
GRE-675-0595R	2.12 CFS

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM DURING THE MONTHS OF APRIL THROUGH OCTOBER: ALL REQUIREMENTS OF CMS 503 APPLY, UNLESS STIPULATED ELSEWHERE IN THIS NOTE. THE REHABILITATION WORK REQUIRED IN THE PLANS MUST BE COMPLETED IN SECTIONS. THE LONGEST SECTION THAT CAN BE COMPLETED AT ONE TIME IS 300'. IF THE CONTRACTOR CHOOSES TO COMPLETE SECTIONS GREATER THAN 300' AT A TIME, THEN THE DEPARTMENT WILL ONLY REIMBURSE THE CONTRACTOR FOR RESULTING DAMAGE TO 300' OF WORK PROTECTED BY THE COFFERDAM, PROVIDED THE CONTRACTOR HAS EXERCISED DUE DILIGENCE AS DETERMINED BY THE ENGINEER.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM AT ANY TIME IN THE MONTHS OF NOVEMBER THROUGH MARCH: EVEN IF THE ACTUAL WATER ELEVATION EXCEEDS 3 FEET ABOVE THE STATED ORDINARY HIGH WATER MARK, THE DEPARTMENT WILL NOT REIMBURSE THE CONTRACTOR FOR RESULTING DAMAGE TO THE WORK PROTECTED BY THE COFFERDAM. ALL OTHER REQUIREMENTS OF CMS 503 APPLY.

ALL WORK ASSOCIATED WITH COFFERDAMS AND EXCAVATION BRACING, INCLUDING ALL REQUIREMENTS OF THE TAF SUBMISSION, SHALL BE PAID FOR WITH THE COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN PAY ITEM.

**ACCESS BEHIND GUARDRAIL**

REMOVE AND RE-ERECT GUARDRAIL AS NECESSARY FOR ACCESS TO A WORK LOCATION. REMOVE GUARDRAIL ONLY WHEN IT CAN BE REPLACED ON THE SAME DAY. OBTAIN APPROVAL FROM THE ENGINEER FOR EACH LOCATION, PRIOR TO PERFORMING THE WORK. THIS WORK INCLUDES REMOVAL OF EXISTING GUARDRAIL AND POSTS AND RE-ERECTION OF THE SAME MATERIALS. EXISTING RAIL ELEMENTS AND BARRIER REFLECTORS MAY BE REUSED.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN LUMP SUM CONTRACT PRICE FOR ITEM 614-MAINTAINING TRAFFIC.

**ITEM 518 - STRUCTURE DRAINAGE MISC.: RESEAL JOINTS WITH HYDROPHOBIC GROUT**

THIS WORK CONSISTS OF SEALING THE ENTIRE PERIMETER OF EXISTING JOINTS IN THE PRECAST ELLIPTICAL PIPE CULVERT THROUGH THE INSTALLATION OF AN ALL-WEATHER CONCRETE COMPATIBLE HYDROPHOBIC GROUT. JOINTS TO BE REPAIRED SHALL BE AT THE DIRECTION OF THE ENGINEER AND SHOULD SHOW VISIBLE SIGNS OF MOISTURE/WATER INFILTRATION. THE EXISTING JOINT SHALL BE CLEANED AND PREPARED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND HYDROPHOBIC GROUT SHALL BE INSTALLED AS DIRECTED BY THE MANUFACTURER.

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CALCULATED  
MLB  
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GENERAL NOTES

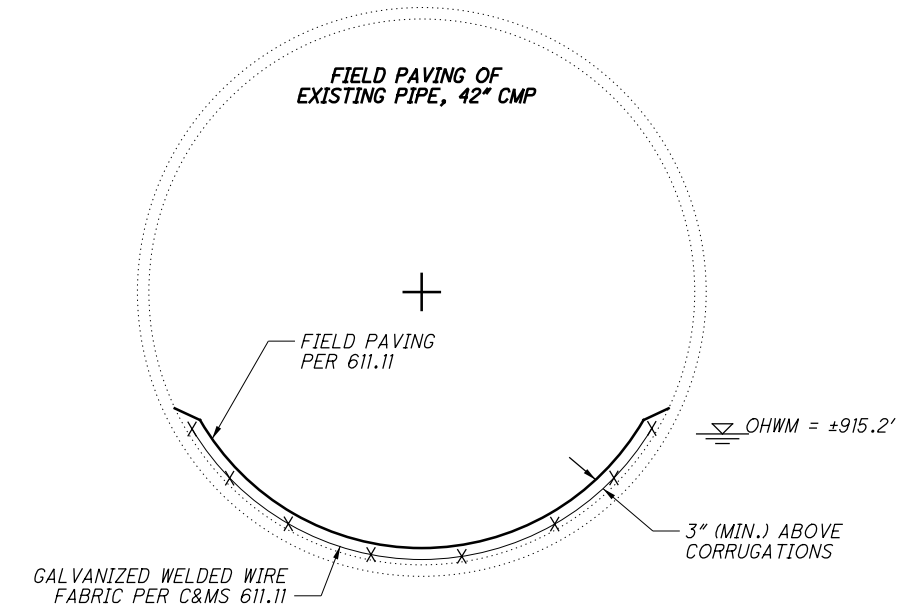
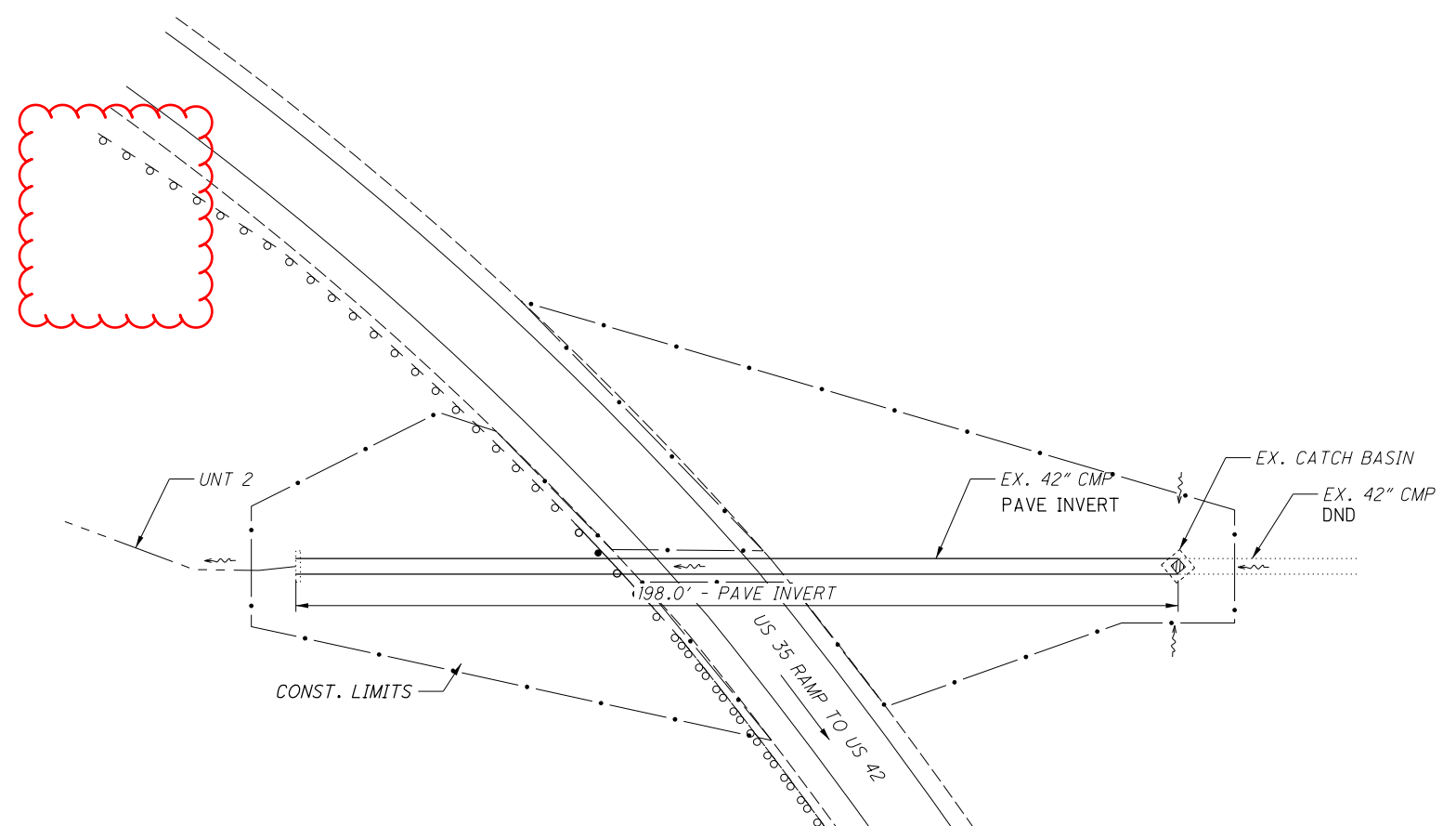
GRE CULVERTS  
FY 2021

EXISTING STRUCTURE	
TYPE:	CMP
SIZE:	42", 300' LONG
SKEW:	41°41'27"
ALIGNMENT:	TANGENT
CFN:	1804617
DATE BUILT:	1989
CONDITION:	SATISFACTORY
LATITUDE:	N 39° 39' 42.74"
LONGITUDE:	W 83° 57' 0.08"
STREAM NAME:	UNT 2
OHWM:	915.2

PROJECT EARTH DISTURBED AREA: 0.26 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQ'D)

**REHABILITATE CULVERT GRE-35-1010 BY PERFORMING THE FOLLOWING WORK:**

1. CLEAN CULVERT INTERIOR OF SEDIMENT, BITUMINOUS COATING AND DEBRIS.
2. FIELD PAVE INVERT OF THE STRUCTURE.
3. CONTRACTOR SHALL REMOVE AND REPLACE GUARDRAIL AS NECESSARY TO PROVIDE ACCESS THE CULVERT. REPLACE WITH TYPE 5 GUARDRAIL PER SHEETS 14-18.



**ITEM 202 - PIPE CLEANOUT**

REMOVE ANY LOOSE EXISTING BITUMINOUS COATING AND REMAINING BITUMINOUS MATERIAL COATING. REMOVE THE MATERIAL USING METHODS ACCORDING TO 512.03.F, MECHANICAL MEANS OR OTHER METHODS APPROVED BY THE ENGINEER. ANY BITUMINOUS COATING OR MATERIAL THAT SURVIVES A 7,000 PSI WATER BLASTING MAY REMAIN IN PLACE. ENSURE THAT ALL WASTES GENERATED BY THE SURFACE PREPARATION OPERATION ARE MANAGED IN ACCORDANCE WITH 107.19.

**ITEM 611 - FIELD PAVING OF EXISTING PIPE**

FIELD PAVE THE EXISTING PIPE PER THE REQUIREMENTS OF 611.11. PROVIDE A 2:1 SLOPE AT THE TOP OF THE PAVED INVERT TO PREVENT WATER FROM SITTING ON THE TOP EDGE AS SHOWN IN THE PLAN DETAIL.

DUE TO THE EXCESSIVE EFFORTS REQUIRED TO REMOVE THE BITUMINOUS COATING AT THIS LOCATION, THE PIPE CLEANOUT PRIOR TO FIELD PAVING OF THE EXISTING PIPE IS ITEMIZED SEPARATELY AND SHALL BE PAID FOR USING THE PAY ITEM PIPE CLEANOUT. SEE NOTE ON THIS SHEET FOR ADDITIONAL INFORMATION.

**EXISTING STRUCTURE VERIFICATION**

DETAILS AND DIMENSIONS SHOWN ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ESTIMATED QUANTITIES (TOTALS CARRIED TO GENERAL SUMMARY)			
ITEM	QUANTITY	UNIT	DESCRIPTION
202	198	FT	PIPE CLEANOUT, 27" TO 48"
611	198	FT	FIELD PAVING OF EXISTING PIPE, 42" CMP

CALCULATED  
MLB  
CHECKED  
TRB

0 20 40  
HORIZONTAL  
SCALE IN FEET

**STRUCTURE PLAN AND DETAILS  
GRE - 35 - 1010**

**GRE CULVERTS  
FY 2021**

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**STRUCTURE PLAN AND DETAILS**  
**GRE-35-1030**

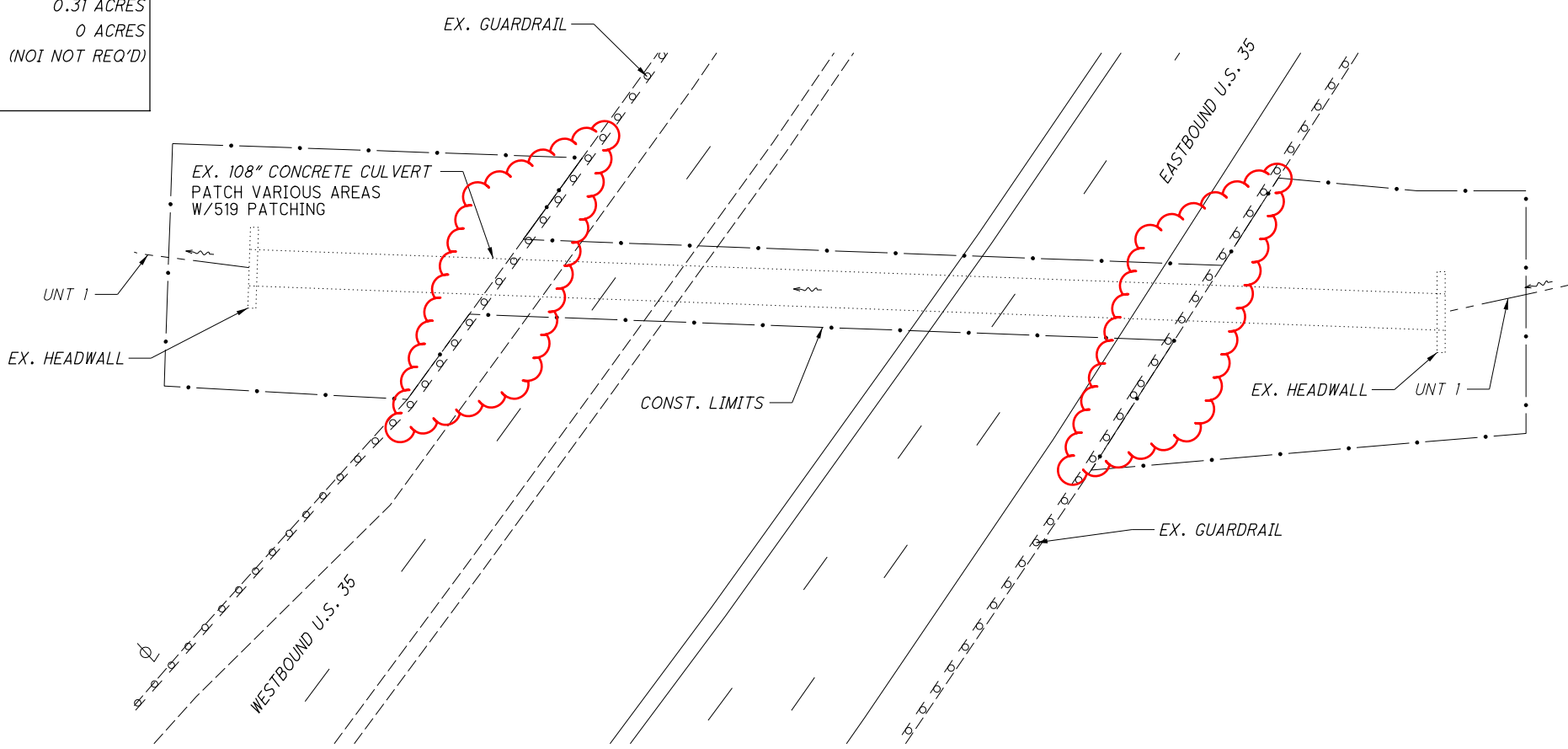
**GRE CULVERTS**  
**FY 2021**

EXISTING STRUCTURE	
TYPE:	CONCRETE
SIZE:	108", 300' LONG
SKEW:	30°30'31.7"
ALIGNMENT:	TANGENT
CFN:	1819060
DATE BUILT:	1989
CONDITION:	FAIR
LATITUDE:	N 39° 39' 41.95"
LONGITUDE:	W 83° 56' 44.11"
STREAM NAME:	UNT 1
OHWM:	924.2

PROJECT EARTH DISTURBED AREA: 0.31 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQ'D)

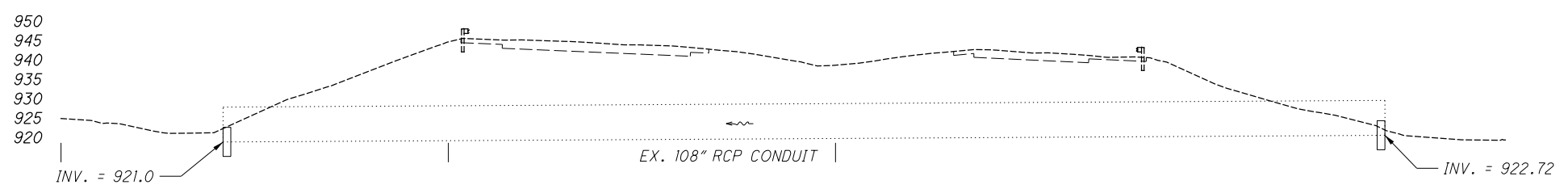
**REHABILITATE CULVERT GRE-35-1030 BY PERFORMING THE FOLLOWING WORK:**

1. CLEAN CULVERT INTERIOR OF SEDIMENT AND DEBRIS.
2. PATCH VARIOUS SPALLED AREAS WITH ITEM 519.
3. CONTRACTOR SHALL REMOVE AND REPLACE GUARDRAIL AS NECESSARY TO PROVIDE ACCESS TO THE CULVERT. REPLACE WITH TYPE 5 GUARDRAIL PER SHEETS 14-18.



**AREAS OF REPAIR**

Section From Outlet	Location	Size	Area
1	Side	2'x2'	4 sf
4	Side	3'x3'	9 sf
6	Top & Side	4'x3' & 2'x2'	16 sf
7	Side	1'x1'	1 sf
8	Side	4'x4'	16 sf
15	Top	1'x1'	1 sf
17	Top & Side	1'x3' & 1'x1'	4 sf
19	Top	8'x6'	48 sf
20	Top	2'x7'	14 sf
21	Top	3'x4'	12 sf
23	Top	2'x8'	16 sf
25	Top	8'x8'	64 sf
26	Top	1'x4'	4 sf
28	Top & Side	2'x2' & 1'x2'	6 sf
29	Top & Side	2'x2' & 3'x6'	22 sf
31	Top	1'x4'	4 sf
32	Top	1'x3'	3 sf
33	Bottom	2'x3'	6 sf
35	Side	2'x3'	6 sf
37	Top & Side	1'x8' & 1'x1'	9 sf
total =			265 sf



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**EXISTING STRUCTURE VERIFICATION**

DETAILS AND DIMENSIONS SHOWN ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ESTIMATED QUANTITIES (TOTALS CARRIED TO GENERAL SUMMARY)			
ITEM	QUANTITY	UNIT	DESCRIPTION
202	296	FT	PIPE CLEANOUT, OVER 48"
519	265	SF	PATCHING CONCRETE STRUCTURE