

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## D10-GR-FY2022

**FEDERAL PROJECT NUMBER**

E210487

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF UPGRADING AND REPLACING GUARDRAIL IN VARIOUS LOCATIONS OF DISTRICT 10.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 0.0 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.0 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)\*  
 \* ROUTINE MAINTENANCE PROJECT

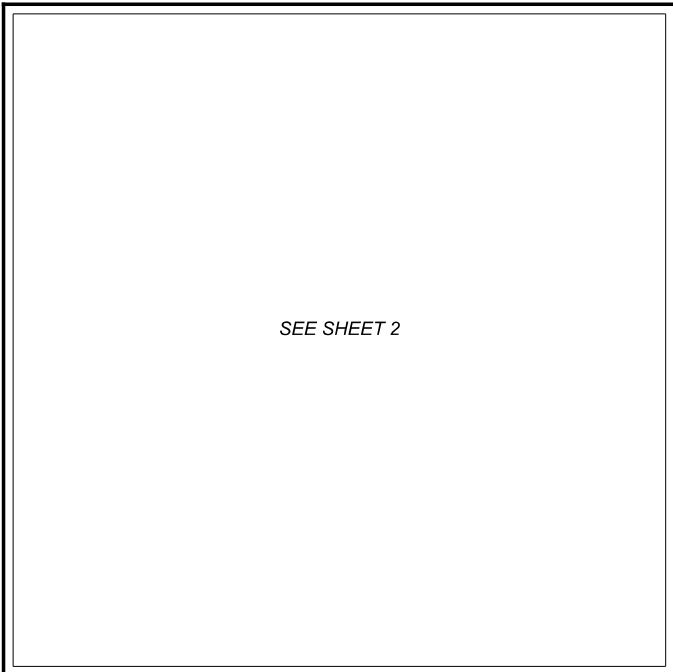
**LIMITED ACCESS**

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.



LOCATION MAP

**INDEX OF SHEETS:**

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NHS PROJECT ..... YES

**DESIGN EXCEPTIONS**

NONE

**ADA DESIGN WAIVERS**

NONE

<b>UNDERGROUND UTILITIES</b>
Contact Two Working Days Before You Dig
 OHIO811.org Before You Dig
OHIO 811, 8-1-1, or 1-800-362-2764 (Non members must be called directly)

PLAN PREPARED BY:  
 D10 - PLANNING AND ENGINEERING  
 OHIO DEPARTMENT OF ENGINEERING  
 MARIETTA, OHIO

ENGINEERS SEAL:

**MATTHEW R. FIRST**  
E-75677  
REGISTERED PROFESSIONAL ENGINEER

SIGNED:   
 DATE: 9/8/2021

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
MGS-1.1	3/16/21	MT-98.20	4/19/19	800-2021	10/15/21
MGS-2.1	1/19/18	MT-105.10	1/17/20	832	10/19/18
MGS-2.3	7/18/14				
MGS-3.1	1/19/18	TC-61.30	7/19/19		
MGS-4.1	1/20/17				
MGS-4.2	7/19/13				
MGS-4.3	1/18/13				
MGS-4.5	1/18/13				
MGS-5.2	7/15/16				
MGS-5.3	7/15/16				
MT-95.30	7/19/19				
MT-95.31	7/19/19				
MT-95.32	4/19/19				
MT-97.10	4/19/19				
MT-98.10	1/17/20				

APPROVED:   
 DATE: 9/8/2021 DISTRICT DEPUTY DIRECTOR

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

DESIGN AGENCY
DESIGNER
WBC
REVIEWER
MRF 08-27-21
PROJECT ID
102385
SHEET
1
TOTAL
12

D10-GR-FY2022

MODEL: Sheet PAPER: 17x11 (in.) DATE: 9/8/2021 TIME: 6:53:53 AM USER: mfirst pwc:\ohio\dot-pw-bentley.com\shahidoc\pww-02\Documents\01 Active Projects\District 10\_D10102385\00-Engineering\Roadway\Sheets\102385\_GT001.dgn

TITLE SHEET

SHEET NUM.						PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	9	10	12A	01/STR/OT	02/S<2/OT	03/NHS/OT						
<b>ROADWAY</b>														
27,650	17,187.5	23,250	27,025	5,637.5		99,862.5	887.5		202	38000	100,750	FT	GUARDRAIL REMOVED	
		1,862.5				1,862.5			202	38101	1,862.5	FT	GUARDRAIL REMOVED FOR STORAGE, AS PER PLAN	4
	162.5	750	287.5			1,200			202	38500	1,200	FT	BRIDGE RAILING REMOVED	
			24					24	202	47000	24	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
25,275	14,600	22,587.5	23,025	4,887.5		89,662.5	712.5		606	15050	90,375	FT	GUARDRAIL, TYPE MGS	
			1,275			1,275			606	15400	1,275	FT	MGS GUARDRAIL, TYPE 8	
			25			25			606	17360	25	FT	GUARDRAIL, TYPE MGS, LONG-SPAN	
70	67	42	1			180			606	25550	180	EACH	ANCHOR ASSEMBLY, MGS TYPE A	
	6	11	37	7		60	1		606	26050	61	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
7	8	15	21	11		60	2		606	26150	62	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
22	10	19	21	5		75	2		606	26550	77	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
		4				4			606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
8	11	12	14	24		44	1	24	606	35140	69	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
					2			2	606	60022	2	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL)60 MPH/24" WIDE	
27,650	17,187.5	25,112.5	27,025	5,637.5		101,725	887.5		SPECIAL	60650000	102,612.5	FT	RESHAPING BERM	4
<b>TRAFFIC CONTROL</b>														
615	403	573	606	130		2,305	22		626	00110	2,327	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
<b>MISCELLANEOUS STRUCTURE</b>														
		487.5				487.5			517	72205	487.5	FT	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 1 STEEL POSTS), AS PER PLAN	4
	162.5	262.5	287.5			712.5			517	72307	712.5	FT	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS), AS PER PLAN	4
<b>MAINTENANCE OF TRAFFIC</b>														
					360			360	622	41101	360	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	12A
					120			120	622	41111	120	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	12A
<b>INCIDENTALS</b>														
						LS	LS	LS	614	11000	LS		MAINTAINING TRAFFIC	
						LS	LS	LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

WBC

REVIEWER

MRF 08-27-21

PROJECT ID

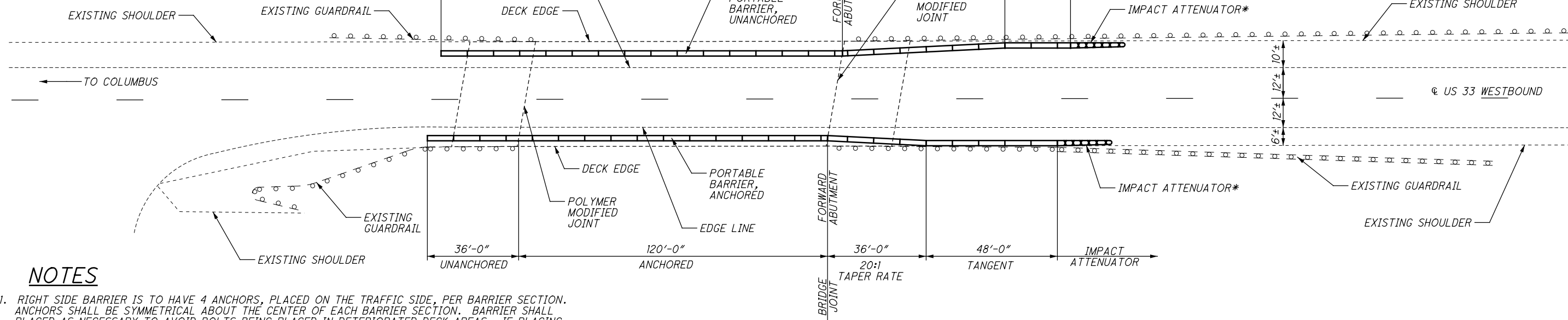
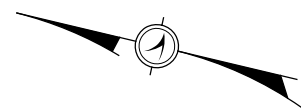
102385

SHEET

5

TOTAL

12

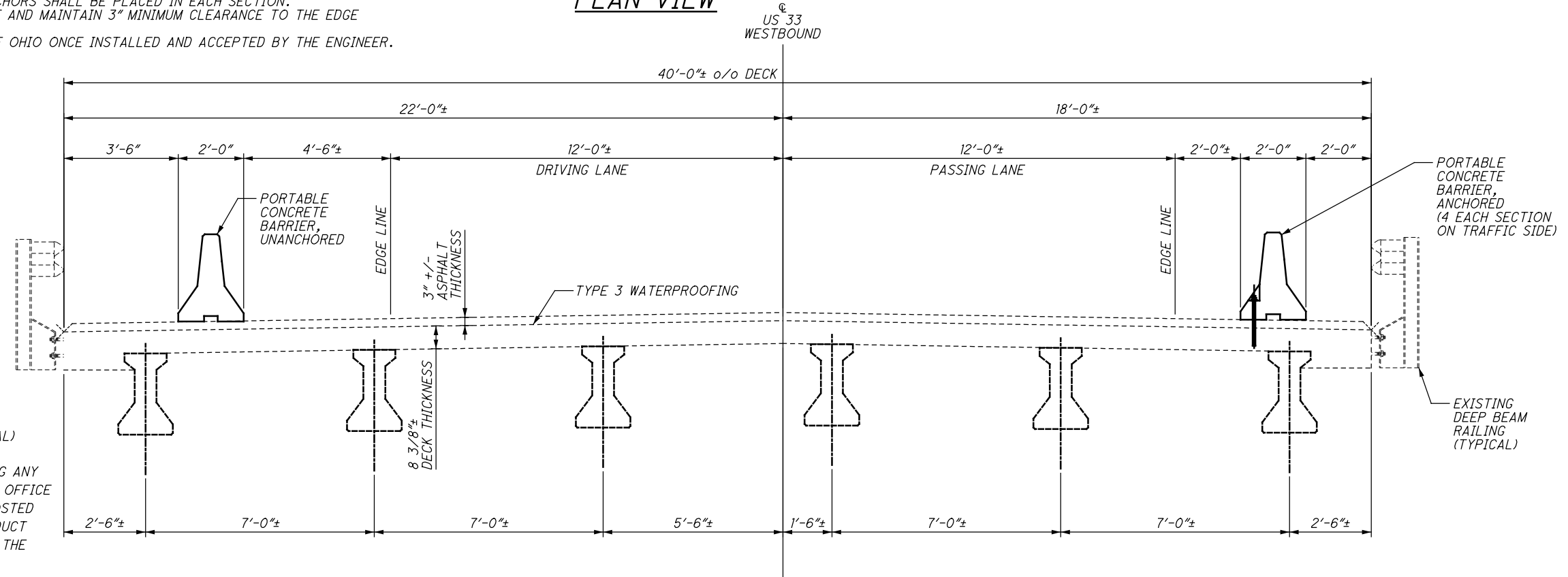


\* - EXISTING SHOULDER BUILD-UP IS 8"± ASPHALT. CONCRETE PAD IF REQUIRED BY THE MANUFACTURER SHALL BE INSTALLED WITHIN THE LIMITS OF THE EXISTING SHOULDER. PAYMENT FOR CONCRETE PAD TO BE INCLUDED WITH ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL)

**NOTES**

1. RIGHT SIDE BARRIER IS TO HAVE 4 ANCHORS, PLACED ON THE TRAFFIC SIDE, PER BARRIER SECTION. ANCHORS SHALL BE SYMMETRICAL ABOUT THE CENTER OF EACH BARRIER SECTION. BARRIER SHALL BE PLACED AS NECESSARY TO AVOID BOLTS BEING PLACED IN DETERIORATED DECK AREAS. IF PLACING BOLTS IN DETERIORATED DECK IS UNAVOIDABLE ANCHORS MAY BE PLACED UNSYMMETRICALLY WITHIN THE AFFECTED BARRIER SECTION BUT A MINIMUM OF 4 ANCHORS SHALL BE PLACED IN EACH SECTION.
2. DO NOT PLACE ANCHORS IN POLYMER MODIFIED JOINT AND MAINTAIN 3" MINIMUM CLEARANCE TO THE EDGE OF THE JOINT SYSTEM.
3. ALL ITEMS WILL BECOME PROPERTY OF THE STATE OF OHIO ONCE INSTALLED AND ACCEPTED BY THE ENGINEER.

**PLAN VIEW**



**TRANSVERSE VIEW**

ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL)  
 THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2 (60 MPH), HAZARD WIDTH (24 INCHES)), (UNIDIRECTIONAL), EACH AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM.  
 THIS SHALL INCLUDE ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

SUB-SUMMARY QUANTITIES					
STRUCTURE HOC-33-0.60L SFN: 3700097					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	
606	60022	2	EA	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) 60MPH/24" WIDE	
622	41101	360	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	
622	41111	120	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	

**BRIDGE RAIL DETAILS**  
**BRIDGE NO. HOC-33-0.60L**  
**OVER CLEAR CREEK**

SFN: 3700097  
 DESIGN AGENCY: JPH  
 DESIGNER/CHECKER: JPH  
 REVIEWER: JDC  
 PROJECT ID: 102385  
 SUBSET: 1 TOTAL: 1  
 SHEET: 12a TOTAL: 12

**D10-GR-FY2022**  
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