



LOCATION MAP

LATITUDE: N41°17'00" LONGITUDE: W83°39'10"



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

DESIGN DESIGNATION

CURRENT ADT (2027)	1500
DESIGN YEAR ADT (2047)	1900
DESIGN HOURLY VOLUME (2027)	200
DIRECTIONAL DISTRIBUTION	0.52
TRUCKS (24 HOUR B&C)	0.23
DESIGN SPEED	60 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 - RURAL MAJOR COLLECTOR	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

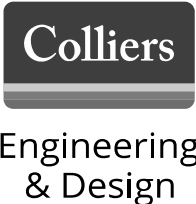
UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig


Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
COLLIERS ENGINEERING AND DESIGN
3410 BRIARFIELD BLVD., STE C
MAUMEE OHIO, 43537



STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

WOO-281-11.91

LIBERTY TOWNSHIP

WOOD COUNTY

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/19/24	TC-65.11	1/17/25			800 1/16/26	WATERWAY PERMIT 10/19/26
MGS-2.1	1/16/26	DM-1.1	1/17/25			832 7/18/25	
MGS-3.3	1/16/26	DM-1.2	1/17/25			846 4/17/15	ASBESTOS REPORT 8/19/25
MGS-4.2	7/18/25						
MGS-6.1	1/19/18	HW-2.1	7/15/22				
		HW-2.2	7/20/18				
MT-101.60	1/17/25						
MT-105.10	1/17/20	AS-1-15	1/20/23				
		AS-2-15	7/21/23				
TC-41.20	10/18/13						
TC-42.20	10/18/13	BD-1-11	7/20/18				
TC-52.10	10/18/13						
TC-52.20	1/15/21	PSBD-2-07	7/20/18				
TC-61.30	7/19/24						
TC-65.10	1/17/14	TST-1-99	1/15/21				

FEDERAL PROJECT NUMBER

E251(013)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

PROJECT TO REPLACE THE WOO-281-11.97 BRIDGE OVER CREPS DITCH IN WOOD COUNTY WITH A SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM BRIDGE. PERFORM NECESSARY APPROACH WORK.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.65 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A

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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 6.


Pat McColley, P.E., S.I.
District 02 Deputy Director


Pamela Boratyn
Director, Department of Transportation

ENGINEER'S SEAL



DESIGN AGENCY	Colliers
Engineering & Design	
DESIGNER	SNH
REVIEWER	MAS 06/15/26
PROJECT ID	113085
SHEET	TOTAL
1	38

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	1-20-23
AS-2-15	REVISED	7-21-23
BD-1-11	REVISED	7-20-18
PSBD-2-07	REVISED	7-20-18
TST-2-21	REVISED	1-17-25

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800 DATED 1/16/26

832 DATED 7/18/25

846 DATED 4/17/15

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS OF THE 10TH EDITION OF THE LRFD BRIDGE DEISGN SPECIFICATIONS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2024, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING INCLUDES:

VEHICULAR LIVE LOAD: HL-93

FUTURE WEARING SURFACE (FWS) OF 60 LB/SF

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL

2½" CONCRETE COVER

DESIGN DATA:

CONCRETE CLASS QC2

COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1

COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL MINIMUM YIELD STRENGTH 60 KSI

CONCRETE FOR BOX BEAMS:

COMPRESSIVE STRENGTH (FINAL) = 7.0 KSI

COMPRESSIVE STRENGTH (RELEASE) = 5.0 KSI

PRESTRESSING STRAND:

AREA = 0.167 IN^2

ULTIMATE STRENGTH = 270 KSI

INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02, AND 513.04. BASE 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.

BEARING PAD SHIMS:

BEARING PAD SHIMS: PLACE 1/8" THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 8 INCHES BY 8 INCHES, UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. FURNISH 3 SHIMS PER BEAM. THE DEPARTMENT WILL MEASURE THIS ITEM BY THE TOTAL NUMBER SUPPLIED. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - 1/8" PREFORMED BEARING PADS. ANY UNUSED SHIMS WILL BECOME PROPERTY OF THE STATE.

FOUNDATION BEARING RESISTANCE:

THE REAR AND FORWARD ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 3.5 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH I LIMIT STATE BEARING PRESSURE OF 4.7 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 1672 KIPS PER SQUARE FOOT.

FOOTINGS:

FOOTINGS SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN:

FURNISH MATERIAL MEETING THE REQUIREMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE. ALLOWABLE TOLERANCE FOR THE TOTAL THICKNESS OF THE MATERIAL SHALL BE -0", +1/2". DO NOT PLACE MORE THAN TWO LAYERS OF POLYSTYRENE TO ACHIEVE TOTAL THICKNESS.

ABBREVIATIONS:

ABUT. - ABUTMENT

AGG. - AGGREGATE

APP. OR APPR. - APPROACH

BOT. - BOTTOM

BRG. - BEARING

CLR. - CLEAR

CONC. - CONCRETE

C/C - CENTER TO CENTER

CONST. - CONSTRUCTION

DIA. - DIAMETER

EA. - EACH

EB OR E.B. - EASTBOUND

EL. OR ELEV. - ELEVATION

ES - EACH SIDE

EX. OR EXIST. - EXISTING

EXP. - EXPANSION

F.A. - FORWARD ABUTMENT

FS - FAR SIDE

FWD. - FORWARD

G/R - GUARDRAIL

INT. - INTEGRAL

JT. - JOINT

MECH. - MECHANICAL

MIN. - MINIMUM

NO. - NUMBER

NS - NEAR SIDE

P/G - PROFILE GRADE

PEJF - PREFORMED EXPANSION JOINT FILLER

PROP. - PROPOSED

R.A. - REAR ABUTMENT

R/W - RIGHT OF WAY

S.O. - SERIES OF

SPA. - SPACE, SPACES

STA. - STATION

STD. DWG. - STANDARD DRAWING

TYP. - TYPICAL

ITEM 846 - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM,

AS PER PLAN

CONTRACTOR SHALL HAVE A MANUFACTURER'S REPRESENTATIVE ON SITE DURING INSTALLATION OF THE POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.

SCOUR ELEVATIONS

THE DESIGN FLOOD AND CHECK FLOOD SCOUR ELEVATIONS ARE PROVIDED BELOW:

	REAR ABUTMENT	CHANNEL	FORWARD ABUTMENT
DESIGN FLOOD	677	670	677
CHECK FLOOD	677	670	676

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

COFFERDAMS AND EXCAVATION BRACING INSTALLED FOR THE PROJECT ARE FOR DEWATERING THE WORK AREA AND ARE CONSIDERED FILL. COFFERDAMS AND EXCAVATION BRACING DESIGN, CONSTRUCTION, AND REIMBURSEMENT FOR DAMAGE IS BASED ON CMS 503. THE CONTRACTOR MUST COMPLY WITH ANY IN-STREAM RESTRICTION IN THE SPECIAL PROVISIONS - WATERWAY PERMIT. ADDING FILL TO THE STREAM TO DEWATER THE WORK AREA REQUIRES A TEMPORARY ACCESS FILL (TAF) SUBMISSION PER THE SPECIAL PROVISIONS.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM DURING THE MONTHS OF JULY THROUGH SEPTEMBER: ALL REQUIREMENTS OF CMS 503 APPLY.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM AT ANY TIME IN THE MONTHS OF OCTOBER THROUGH JUNE: THE DEPARTMENT WILL NOT REIMBURSE THE CONTRACTOR FOR DAMAGE TO THE WORK PROTECTED BY THE COFFERDAM RESULTING FROM ANY WATER ELEVATION. ALL OTHER REQUIREMENTS OF CMS 503 APPLY.

GENERAL NOTES

BRIDGE NO. WOO-281-11.91
SR281 OVER CREPS DITCH

SFN 8706158	
DESIGN AGENCY <div>Colliers</div> Engineering & Design	
DESIGNER CJD	CHECKER JAM
REVIEWER MJQ 06/15/26	
PROJECT ID 113085	
SUBSET 2	TOTAL 14
SHEET 22	TOTAL 38

ESTIMATED QUANTITIES (01/STR)										
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	APP. SLABS	GEN.	SEE SHEET
202	11002	LS	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN					LS	
202	22900	84	SY	APPROACH SLAB REMOVED					84	
503	11101	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					LS	2/14
503	21100	207	CY	UNCLASSIFIED EXCAVATION	188	19				
503	21104	22	CY	UNCLASSIFIED EXCAVATION, INCLUDING ROCK	22					
509	10000	16452	LB	EPOXY COATED STEEL REINFORCEMENT	9341		7111			2/14
511	31611	50	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN			50			
511	43510	122	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	122					
512	10050	61	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	31		30			
512	33000	9	SY	TYPE 2 WATERPROOFING	9					
515	12030	8	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB17-48 (LENGTH = 54'-0")			8			
516	13900	28	SF	2" PREFORMED EXPANSION JOINT FILLER	28					
516	14020	80	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	80					
516	41100	32	EACH	1/8" PREFORMED BEARING PAD, TYPE CDP			32			
516	44000	32	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)			32			
517	70100	127	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)			127			
518	21200	48	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	48					
518	22300	134	FT	SPECIAL - STEEL DRIP STRIP			134			
518	40000	94	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	94					
518	40010	80	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	80					
526	15000	143	SY	REINFORCED CONCRETE APPROACH SLABS (T=13")				143		
526	90010	64	FT	TYPE A INSTALLATION				64		
601	32204	172	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC					172	
846	00111	27	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM, AS PER PLAN					27	2/14

ESTIMATED QUANTITIES
BRIDGE NO. WOO-281-11.91
SR281 OVER CREPS DITCH

SFN
8706158

DESIGN AGENCY

Colliers

Engineering & Design

DESIGNER
CJD

CHECKER
JAM

REVIEWER
MJQ 06/15/26

PROJECT ID
113085

SUBSET
3

TOTAL
14

SHEET
23

TOTAL
38