

ESTIMATED QUANTITIES									
ITEM	EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	FOOTINGS	SUPER	GENERAL	SEE SHT.
503	11100	1	LS	COFFERDAMS AND EXCAVATION BRACING				LS	
503	21301	1	LS	UNCLASSIFIED EXCAVATION, AS PER PLAN		1			
507	00101	150	FT	STEEL PILES HP 10X42, FURNISHED, AS PER PLAN	150				
507	92201	93	FT	PREBORED HOLES, AS PER PLAN	120				
509	10001	5,219	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	1,916	1,274	2,029		
511	46510	18	CY	CLASS QC1 CONCRETE, FOOTING		18			
511	44110	34	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	34				
511	32210	19	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE			19		
512	10100	35	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHENE)	35				
513	95020	1	LS	STEEL STRUCTURE, MISC: WEATHERING STEEL PREFABRICATED PEDESTRIAN BRIDGE INCLUDING ANCHORS (INCLUDES STAMPED ENGINEERING PLANS) INCLUDES ERECTION			1		
516	10000	22	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL (705.11)	22				
516	13600	2	SF	1" PREFORMED EXPANSION JOINT FILLER	2				
517	76302	2	EA	RAILING, MISC.: SAFETY HANDRAIL ON RETURN WINGWALL, AS PER PLAN	2				
518	39800	46	LF	4" PERFORATED CORRUGATED PLASTIC PIPE	46				
518	39900	30	LF	4" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	30				
518	21230	1	LS	POROUS BACKFILL WITH GEOTEXTILE FABRIC	LS				
608	13001	210	SF	6" WALK INCLUDING BACKWALL, AS PER PLAN				210	
690	50610	2	EA	SPECIAL - BOLLARD, HINGED, AS PER PLAN				2	
690	98000	2	EA	SPECIAL - STAINLESS STEEL DRIP EDGE ON ABUTMENTS, AS PER PLAN	2				
690	12160	1	LS	SPECIAL - TESTING				LS	

BRIDGE NOTES:

- DESIGN STRESSES ARE IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" & "GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES" BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) 2025.
- BRIDGE MEMBERS ARE FABRICATED FROM HIGH STRENGTH, LOW ALLOY, ENHANCED ATMOSPHERIC CORROSION RESISTANT ASTM A847 COLD-FORMED WELDED SQUARE AND RECTANGULAR TUBING, AND ASTM A588, ASTM A606, OR ASTM A242 PLATE AND STRUCTURAL SHAPES (Fy=50,000 PSI).
- CONCRETE DECK: GALVANIZED FORM DECK SUPPLIED BY BRIDGE MANUFACTURE, CONCRETE, REINFORCING, AND EXPANSION MATERIAL SUPPLIED BY OTHERS.
- THE GAS METAL ARC WELDING PROCESS OR FLUX CORED ARC WELDING PROCESS WILL BE USED. WELDING TO BE IN ACCORDANCE WITH AWS D1.1.
- ALL TOP AND BOTTOM CHORD SHOP SPLICES TO BE COMPLETE PENETRATION TYPE WELDS. WELD BETWEEN TOP CHORD AND END VERTICAL SHALL BE AS DETAILED.
- UNLESS OTHERWISE NOTED, WELDED CONNECTIONS SHALL BE FILLET WELDS (OR HAVE THE EFFECTIVE THROAT OF A FILLET WELD) OF A SIZE EQUAL TO THE THICKNESS OF THE LIGHTEST GAGE MEMBER IN THE CONNECTION. WELDS SHALL BE APPLIED AS FOLLOWS:
 - BOTH ENDS OF VERTICAL, DIAGONALS, AND FLOOR BEAMS SHALL BE WELDED ALL AROUND.
 - BRACE DIAGONALS WILL BE WELDED ALL AROUND.
 - MISCELLANEOUS NON-STRUCTURAL MEMBERS WILL BE STICH WELDED TO THEIR SUPPORTING MEMBERS.
- BRIDGE DESIGN WAS ONLY BASED ON COMBINATIONS OF THE FOLLOWING LOADS WHICH WILL PRODUCE MAXIMUM CRITICAL MEMBER STRESSES:
 - 90 PSF UNIFORM LIVE LOADING ON THE FULL DECK AREA OR ONE 10,000 LB VEHICLE LOAD. THE LOAD SHALL BE DISTRIBUTED AS A FOUR-WHEEL VEHICLE WITH 80% OF THE LOAD ON THE REAR WHEELS. THE WHEEL TRACK WIDTH OF THE VEHICLE SHALL BE 6'-0" AND THE WHEEL BASE SHALL BE 10'-0". THE VEHICLE SHALL BE POSITIONED SO AS TO PRODUCE THE MAXIMUM STRESSES IN EACH MEMBER, INCLUDING DECKING.
 - 35 PSF WIND LOAD ON THE FULL HEIGHT OF THE BRIDGE, AS IF ENCLOSED.
 - 20 PSF UPWARD FORCE APPLIED AT THE WINDWARD QUARTER POINT OF THE TRANVERSE BRIDGE WIDTH (AASHTO 3.15.3).
- MINIMUM MATERIAL THICKNESS OF 1/4" ON ALL STRUCTURAL MEMBERS.

GENERAL STRUCTURAL NOTES:

SPECIFICATIONS: DESIGN STANDARD: AASHTO LRFD GUIDE SPECIFICATION FOR DESIGN OF PEDESTRIAN BRIDGES (2025) AND AISC MANUAL OF STEEL CONSTRUCTION, 16TH EDITION.

DESIGN LOADS:

- UNIFORM LIVE LOAD: 90 PSF (REDUCIBLE TO 90 PSF)
- VEHICLE LOAD: H-5 (10,000 LBS)
- WIND 35 PSF ON FULL TRUSS PROFILE & 20 PSF UPLIFT ON THE BOTTOM OF BRIDGE APPLIED AT THE WINDWARD QUARTER POINT OF DECK WIDTH.

GENERAL STRUCTURAL NOTES (CONT.):

STRUCTURAL STEEL:

- ALL STEEL SHALL BE HIGH STRENGTH LOW ALLOY (Fy = 50,000 PSI), SELF-WEATHERING AND ATMOSPHERIC CORROSION RESISTANT.
 - ALL STRUCTURAL STEEL TUBE SHAPED SHALL CONFORM TO ASTM A847
 - ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO A588
 - ALL BOLTS SHALL CONFORM TO ASTM A325 TYPE 3, U.N.O. TIGHTENED TO TURN OF NUT CONDITION AS DEFINED IN AISC, U.N.O. ANCHOR BOLTS, CARRIAGE BOLTS, AND ALL WASHERS AND NUTS SHALL BE HOT DIPPED GALVANIZED. ANCHOR BOLTS SHALL BEGRADE F1554-GR. 36, GALVANIZED, PROVIDED BY OTHERS.
- STRUCTURAL STEEL SHALL BE DESIGNED, DETAILED, AND FABRICATED ACCORDING TO THE LATEST PROVISIONS OF ASSHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND ASSHTO GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES.
- ALL STEEL SURFACES SHALL BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL STANDARD SSPC SP7.

WELDED CONNECTIONS:

- ALL STRUCTURAL STEEL WELDS SHALL CONFORM TO THE LATEST PROVISIONS OF THE STRUCTURAL WELDING CODE ANSI/AWS D1.1.
- ALL WELDERS SHALL BE QUALIFIED IN ACCORDANCE WITH THE ABOVE AWS CODE.
- WELDING SHALL BE ELECTRIC ARC PROCESS USING SMAW AND/OR FCAW.
- ALL WELDED CONNECTIONS ARE PRE-QUALIFIED JOINTS PER AWS CODE UNLESS OTHERWISE DETAILED.
- ALL WELDS OF TUBE SHAPES SHALL ASSURE A HERMETIC CONNECTION.
- MINIMUM FILLER METAL STRENGTH SHALL BE Fy = 70 KSI AND MINIMUM FILLET WELD SIZE SHALL BE 1/4" UNLESS NOTED ON PLANS. REFER TO AISC MANUAL SECTION J2 FOR OTHER MINIMUM REQUIREMENTS.

FOUNDATION:

A. ABUTMENT DESIGN IS PROVIDED FOR BIDDING PURPOSES BASED OFF ASSUMED BRIDGE REACTIONS AND ASSUMED BRIDGE GEOMETRY. AFTER A BRIDGE MANUFACTURER IS SELECTED, THE BRIDGE SUBMITTAL, DESIGN CALCS AND FINAL LOAD REACTIONS ARE TO BE SUBMITTED TO ODOT FOR APPROVAL. THE FINAL LOAD REACTIONS AND BRIDGE GEOMETRY WILL THEN BE CHECKED WITH THE ABUTMENT DESIGN, AND ANY NEEDED MODIFICATIONS WILL BE MADE, REVISED PLANS PROVIDED TO THE CONTRACTOR, AND PAY QUANTITIES ADJUSTED ACCORDINGLY.

CONCRETE TOPPING:

CONCRETE DECK SHALL BE NORMAL-WEIGHT CONCRETE AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI WITH TYPE II CEMENT. CONTROL JOINTS MAY BE TOLED OVER EVERY OTHER FLOOR BEAM. REINFORCING STEEL SHALL CONFROM TO ASTM A615 GR. 60. REINFORCEMENT IS NOT PERMITTED TO BE WELDED.

BRIDGE REACTIONS (UNFACTORED):

MAXIMUM REACTIONS IN KIPS PER BASE PLATE - (4 PER BRIDGE UNLES NOTED):

DEAD LOAD:	20.0 KIPS VERTICAL
PEDESTRIAN LOAD:	18.0 KIPS VERTICAL
VEHICLE LOAD:	4.9 KIPS VERTICAL
WIND LOAD:	6.2 KIPS HORIZONTAL
	10.7 KIPS VERTICAL LIFT
	2.9 KIPS VERTICAL DOWN
	5.8 KIPS LONGITUDINAL

GENERAL STRUCTURAL NOTES (CONT.):

BRIDGE LIFTING WEIGHT: 28,500 LBS ASSEMBLED W/O CONCRETE TOPPING

UNIFORM LIVE LOAD DEFLECTION: L/900

FUNDAMENTAL FREQUENCY: 2.8 HZ (VERTICAL)
2.1 HZ (HORIZONTAL)

NOTE: THE ABOVE LOADS AND REACTIONS ARE ASSUMED AND WILL NEED ADJUSTED TO THE ACTUAL LOADS AND REACTIONS PROVIDED BY THE SELECTED BRIDGE MANUFACTURER.

SHIPPING NOTES:

- BRIDGES WILL BE SHIPPED ON OVER-THE-ROAD TRUCKS. TRUCK MUST BE UNLOADED AS CLOSE AS POSSIBLE TO PAVED STREETS OR ROADS.
- PURCHASER IS RESPONSIBLE FOR COORDINATION AND SUPPLYING UNLOADING CRANES, SUPPORT DUNNAGE, AND OTHER NECESSARY ITEMS.
- STANDARD UNLOADING TIME IS 2 HOURS PER TRUCK. PURCHASER WILL BE RESPONSIBLE FOR ALL STANDBY TIME AND TIME OVER 2 HOURS, REQUIRED BY UNLOADING.

ITEM 513, STEEL STRUCTURE, MISC:

THE BRIDGE SHALL BE DESIGNED AS A SINGLE-SPAN, PRATT TRUSS SYSTEM, WITH ONE DIAGONAL PER PANEL (SINGLE DIAGONAL) AND PLUMB VERTICAL MEMBERS. THE STRUCTURE SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO AND THE MANUFACTURER IS REQUIRED TO BE AN ODOT PREQUALIFIED BRIDGE MANUFACTURER. THE TRUSS SHALL BE A "PONY TRUSS" (NO OVERHEAD BRACING) FEATURING A PRATT CONFIGURATION WHERE DIAGONALS SLANT DOWN TOWARD THE CENTER OF THE SPAN. THE BRIDGE SHALL BE DESIGNED UTILIZING AN H-SECTION CONFIGURATION WITH THE END OF THE FLOOR BEAMS WELDED ONLY TO THE INTERIOR FACE OF THE VERTICAL MEMBERS. THE TOP CHORD SHALL BE NOT LESS THAN 42 INCHES ABOVE THE DECK. HORIZONTAL SAFETY RAILS (PICKETS) SHALL BE PLACED ON THE INSIDE OF THE TRUSS MEMBERS. RAILING MEMBERS SHALL CONSIST OF 1-3/4"X 1-3/4"X 3/16" ANGLE MEMBERS WITH INTERMEDIATE SUPPORT POSTS TO PROVIDE A FULL HEIGHT ABOVE THE DECK SURFACE. THE HORIZONTAL RAILS SHALL BE DESIGNED TO PREVENT A 4-INCH SPHERE FROM PASSING THROUGH ANY OPENING. GALVANIZED HANDRAILS SHALL BE PROVIDED ON EACH SIDE OF THE BRIDGE AND IS TO BE 1 1/2" DIAMETER GALVANIZED PIPE CONNECTED TO THE BRIDGE WITH MINIMUM 3/8" DIAMETER BRACKETS. INTENT IS FOR THIS BRIDGE TO MATCH AS CLOSELY AS POSSIBLE TO THE STATE ROUTE 115 (NAPOLEON ROAD) OVER PLUM CREEK EXISTING PEDESTRIAN BRIDGE.

ITEM 507, PREBORED HOLES, AS PER PLAN:

PREBORED HOLES SHALL EXTEND AT LEAST FIVE (5) FEET INTO BEDROCK AT EACH PILE. THE DIAMETER OF THE PREBORED HOLES SHALL BE A MINIMUM OF 2 INCHES LARGER THAN THE DIAGONAL DIMENSION OF THE PILE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AN OPEN HOLE.

THE PREBORED HOLES SHALL BE CLEAN AND FREE OF ALL DELETERIOUS MATERIALS PRIOR TO BACKFILLING OPERATIONS. BACKFILL THE VOID BETWEEN THE PILE AND THE PREBORED HOLE WITH CLASS QC MISC. OR CLASS QC1 CONCRETE UP THE BOTTOM OF THE FOOTING ELEVATION. IF THE CONTRACTOR DETERMINES THAT DEWATERING IS NOT PRACTICAL OR PLACEMENT BY FREE FALL METHOD CANNOT BE ACCOMPLISHED, PLACE THE CONCRETE USING A TREMIE OR CONCRETE PUMP.

ABBREVIATION LIST:

THE FOLLOWING STANDARD ABBREVIATIONS ARE USED THROUGHOUT THE BRIDGE PLANS.

ABUT.	ABUTMENT
A.S.	APPROACH SLAB
BM	BENCHMARK
BOT.	BOTTOM
BRG.	BEARING
BTA	BRIDGE TERMINAL ASSEMBLY
C.I.P	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CPP	CORRUGATED PLASTIC PIPE
C/C	CENTER TO CENTER
CLR.	CLEARANCE
CONST.	CONSTRUCTION
DIA.	DIAMETER
DL	DEAL LOAD
DWG.	DRAWING
EB	EASTBOUND
E.F.	EACH FACE
EL. OR ELEV.	ELEVATION
EQ.	EQUAL
EX. OR EXIST.	EXISTING
EXP.	EXPANSION
FF	FAR FACE
F/F	FACE TO FACE
FA	FORWARD ABUTMENT
FIX.	FIXED
FTG.	FOOTING
FWD.	FORWARD
GFRP	GLASS FIBER REINFORCED POLYMER
JT.	JOINT
LT.	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
NF	NEAR FACE
NB	NORTHBOUND
O/O	OUT TO OUT
PEJF	PERFORMED EXPANSION JOINT FILLER
PG	PROFILE GRADE
PMAEJS	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
PROP.	PROPOSED
R.C.	REINFORCED CONCRETE
R.C.P.	ROCK CHANNEL PROTECTION
RA	REAR ABUTMENT
REF.	REFERENCE
REINF.	REINFORCING
REQ.	REQUIRED
RT.	RIGHT
SB	SOUTHBOUND
SER.	SERIES
SPA.	SPACE(S) OR SPACING
STA.	STATION
T/T	TOE TO TOE
T/S	TOP OF SLOPE
TYP.	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAR.	VARIES
VC	VERTICAL CURVE
WB	WESTBOUND
W/	WITH

ITEM 507, PREBORED HOLES, AS PER PLAN (CONT.):

PAYMENT FOR DRILLING AND BACKFILLING SHALL BE MADE AT THE UNIT PRICE BID PER FOOT FOR ITEM 507, PREBORED HOLES, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ITEM 509, EPOXY COATED REINFORCING STEEL, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO C&MS 709.00.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:

EXISTING UTILITIES LOCATED WITHIN EXCAVATION LIMITS SHALL BE PROTECTED AND CARE SHALL BE TAKEN TO NOT DAMAGE EXISTING UTILITIES BURDING EXCAVATION OPERATIONS.

PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 502 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM 690, BOLLARD, HINGED, AS PER PLAN:

HINGED BOLLARDS TO BE NO. 2190-RH TIMBERFORM REMOVABLE BOLLARD WITH HASP/HOLE COVER, OR APPROVED EQUAL.

DESIGN AGENCY	
Bockrath & Associates	
Engineering and Surveying, LLC	
115 S. Fair Avenue, Suite A - Ottawa - Ohio Phone: 419.523.5789	
DESIGNER	
CRS/KMB	
REVIEWER	
GAB 2-2-26	
PROJECT ID	
121886	
SUBSET	TOTAL
2	7
SHEET	TOTAL
136	144