

DECK SLAB CONCRETE QUANTITY

THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES AN AVERAGE HAUNCH THICKNESS OF 3" AND NO HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THERE IS NO ALLOWABLE TOLERANCE FOR HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.

ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN: ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PREQUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.06 OR SUPPLY THE ENGINEER WITH "AS-BUILT" DRAWINGS MEETING 513.06 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE OFFICE OF STRUCTURAL ENGINEERING FOR RECORD PURPOSES. THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM: STIFFENER PLATES AND INTERMEDIATE CROSSFRAMES.

ITEM 526 REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALS, WATERPROOFING, AND ANY OTHER INCIDENTALS SHOWN ON THE APPROACH SLAB DETAIL SHEETS. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING BACKWALL IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE EXISTING WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED.

THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE 1 SHALL CONFORM TO CMS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PERFORM ALL THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 511 CLASS OC2 CONCRETE WITH OC/OA, SUPERSTRUCTURE, AS PER PLAN

IN ADDITION TO ALL OTHER REQUIREMENTS FOR ITEM 511, ALL VERTICAL HAUNCH BRACKETS DESIGNED TO STAY IN PLACE AFTER CONCRETE IS POURED SHALL BE GALVANIZED. SEE C&MS 711.02 FOR GALVANIZATION REQUIREMENTS.

STEEL NOTCH TOUGHNESS REQUIREMENT (CHARPY V-NOTCH)

CVN: WHERE A SHAPE OR MATERIAL IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS SPECIFIED IN 711.01.

ELASTOMERIC BEARINGS

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DEFORMATION OF THE ELASTOMERIC BEARING HAS BEEN TAKEN INTO ACCOUNT WHEN CALCULATING SCREED AND BEARING SEAT ELEVATIONS. BEARINGS ARE EXPECTED TO VERTICALLY DEFORM APPROXIMATELY 0.016".

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURE TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING AND SET THE PROPOSED BEARINGS AT EACH ABUTMENT. IT WILL ALSO BE USED TO TEMPORARILY SUPPORT ANY BEAMS WHICH MAY HAVE BEARINGS UNDERMINED WHILE PERFORMING ITEM 519- PATCHING CONCRETE STRUCTURE.

THIS STRUCTURE IS BEING PERMANENTLY RAISED BY OVER 9" TO ACCOMMODATE NEW BEARINGS. SEE EXISTING PLANS AND STANDARDS AND THE PROPOSED BEARING SHEET FOR DIMENSIONS.

ALL PLANNED JACKING OPERATIONS FOR THIS PROJECT SHALL OCCUR PRIOR TO PLACEMENT OF THE PROPOSED DECK.

IF UNFORSEEN NEED EXISTS AFTER PLACEMENT OF THE PROPOSED DECK, THE FOLLOWING SPECIFICATIONS SHALL APPLY.

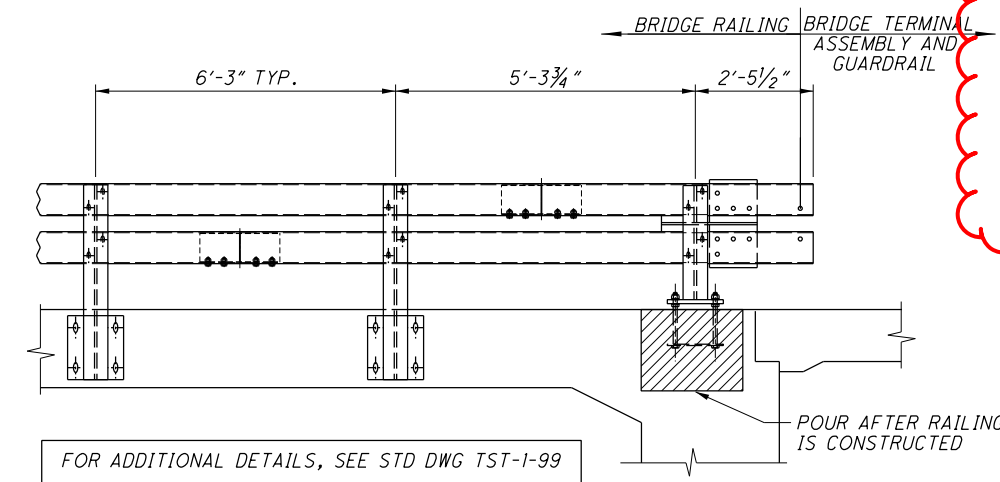
IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 517 RAILING (TWIN STEEL TUBE), AS PER PLAN

POUR CONCRETE FOR THE SECTION OF WINGWALL SURROUNDING THE END POSTS AFTER THE REST OF THE BRIDGE RAILING HAS BEEN CONSTRUCTED. SEE STD DWG TST-1-99 FOR CONSTRUCTION JOINT LOCATION.

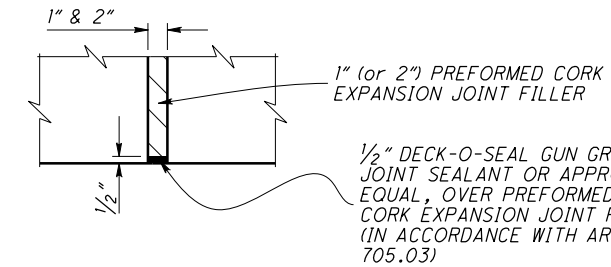


FOR ADDITIONAL DETAILS, SEE STD DWG TST-1-99

ITEM 516 1" (or 2") PREFORMED EXPANSION JOINT FILLER, AS PER PLAN

ALL 1" (or 2") P.E.J.F. CALLED FOR IN THE PLANS SHALL BE PREFORMED CORK JOINT FILLER (IN ACCORDANCE WITH ARTICLE 705.03). RECESS JOINT FILLER 1/2" FOR ALL JOINTS (SEE DETAIL). SEAL ALL JOINTS WITH DECK-O-SEAL GUN GRADE-JOINT SEALANT OR AN APPROVED EQUAL. THE COLOR SHALL BE STONE GRAY. APPROVED MANUFACTURER'S APPLICATION METHODS SHALL BE FOLLOWED DURING SURFACE PREPARATION AND APPLICATION FOR MAXIMUM EFFECTIVENESS.

DECK-O-SEAL
P.O. BOX 397
HAMPSHIRE, IL 60140
PHONE: 800-542-7665



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 516 - 1" (or 2") PEJF, A.P.P., SQ.FT., AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK DESCRIBED.

BRIDGE PAINTING - BEAM ENDS AND PORTIONS OF FASCIA BEAMS

SURFACE PREPARATION AND APPLICATION OF PRIME COAT TO BEAM ENDS SHALL OCCUR PRIOR TO PLACEMENT OF THE DIAPHRAGM REINFORCING STEEL AND CONCRETE. SURFACE PREPARATION AND APPLICATION OF PRIME COAT TO AREAS AFFECTED BY REMOVAL OF EXISTING WELDED ATTACHMENTS AND ENCASED IN CONCRETE BY THE OVERHANG SHALL OCCUR PRIOR TO PLACEMENT OF THE DECK REINFORCING STEEL AND CONCRETE.

ITEM 514 - FIELD PAINTING MISC.: PRIMARY MEMBER ENDS

THIS ITEM SHALL INCLUDE PAINTING AND SURFACE PREPARATION OF THE PRIMARY MEMBER ENDS AND AREAS AFFECTED BY REMOVAL OF THE EXISTING WELDED ATTACHMENTS ON THE FASCIA BEAMS IN THE FIELD WITH PRIME COAT AS DIRECTED BY THE ENGINEER. THE WORK INDICATED IS LOCATED AT THE REAR AND FORWARD DIAPHRAGMS AND EXTERIORS OF THE FASCIA BEAMS. APPLY PRIME COAT ONLY TO WELDED ATTACHMENT AREAS THAT WILL BE ENCASED IN CONCRETE BY THE PROPOSED OVERHANG. ALL STEEL BEARING DEVICES, BEARING STIFFENERS, AND BEAM ENDS THAT ARE TO BE ENCASED IN CONCRETE AT THE REAR AND FORWARD DIAPHRAGMS SHALL BE TREATED. THE PRIME COAT MAY BE APPLIED BY BRUSH ACCORDING TO 514.17.E. SOLVENT CLEAN THE PRIMARY MEMBER ENDS AS PER SSPC-SP 1 AND SSPC-SP 2, RESPECTIVELY, PRIOR TO PLACING THE PRIME COAT ACCORDING TO ITEM 514.

CONTRACTOR SHALL PROVIDE CONTAINMENT TO MAINTAIN PROPER CURING TEMPERATURES.

THE CONTRACTOR WILL BE FINANCIALLY RESPONSIBLE FOR ANY DAMAGE OR INJURY TO PUBLIC OR PRIVATE PROPERTY DURING THE FIELD PAINTING OPERATION.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND CONTAINMENT FOR CURING SHALL BE INCLUDED IN THE SQUARE FOOT CONTRACT BID FOR ITEM 514 FIELD PAINTING, MISC.: PRIMARY MEMBER ENDS

ITEM 509 - REINFORCING STEEL, AS PER PLAN

ALL REINFORCING STEEL SHALL BE GALVANIZED STEEL CONFORMING TO ASTM A767, CLASS 1. THE GALVANIZED COATED REINFORCING STEEL WILL MEET ALL OTHER REQUIREMENTS OF 509. THE GALVANIZED COATING WILL BE APPLIED AFTER REINFORCING HAS BEEN FABRICATED. IF THE GALVANIZED SURFACE BECOMES DAMAGED DURING HANDLING IN THE FIELD, REPAIRS WILL CONFORM TO ASTM A780. USE BAR SUPPORTS AND TIE WIRES WHICH ARE PLASTIC COATED OR EPOXY COATED. ONLY SUPPLIERS CERTIFIED UNDER S1068 MAY PROVIDE THIS REINFORCING.

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DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5	
DATE	2/7/20	REVIEWED TAG	4505018
DRAWN JKS	REVISOR XXX	DESIGNED JKS	CHECKED TAG
BRIDGE NOTES			
BRIDGE NO. - LIC-79-1991 OVER WILKINS RUN			
LIC-79-19.90		PID No. 97988	
3 / 25		21 43	

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SUPER.	ABUT.	PIER	GENERAL	PARTICIPATION		ALT. (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
				01/STR/BR								
STRUCTURE OVER 20 FOOT SPAN (BRIDGE NO. LIC-79-1991)												
	37			37			202	11301	37	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUBSTRUCTURE (CONCRETE)	2/25
40				40			202	11301	40	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, SUPERSTRUCTURE (CONCRETE)	2/25
			80	80			202	22900	80	SY	APPROACH SLAB REMOVED	
90				90			202	38500	90	FT	BRIDGE RAILING REMOVED	
LS				LS			202	98000	LS		REMOVAL MISC.: EXISTING INTERMEDIATE CROSSFRAMES	2/25
	14			14			202	98100	14	EACH	REMOVAL MISC.: BEARINGS	2/25
			LS	LS			503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	3/25
14,823	1,858			16,681			509	25001	16,681	LB	REINFORCING STEEL, AS PER PLAN	3/25
	136			136			510	10000	136	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
89				89			511	21521	89	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	3/25
	2			2			511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	16/25
	19			19			511	50210	19	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	
	247			247			512	10050	247	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
1,108				1,108			513	10201	1,108	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	3/25
280				280			513	20000	280	EACH	WELDED STUD SHEAR CONNECTORS	
2,460				2,460			514	00050	2,460	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
2,460				2,460			514	00056	2,460	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
2,460				2,460			514	00060	2,460	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
2,460				2,460			514	00066	2,460	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
5				5			514	00504	5	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
4				4			514	10000	4	EACH	FINAL INSPECTION REPAIR	
250				250			514	27700	250	SF	FIELD PAINTING, MISC.: PRIMARY MEMBER ENDS	3/25
	90			90			516	13901	90	SF	2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	3/25
124				124			516	14020	124	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
			83	83			516	31011	83	FT	2" DEEP JOINT SEALER, AS PER PLAN	2/25
	14			14			516	44300	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-6"x1'-4"x4.7226")	15/25
			LS	LS			516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	3/25
93.58				93.58			517	70001	93.58	FT	RAILING (TWIN STEEL TUBE), AS PER PLAN	3/25
4				4			518	12000	4	EACH	SCUPPERS, INCLUDING SUPPORTS	3/25
	48			48			518	21200	48	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
	182			182			519	11100	182	SF	PATCHING CONCRETE STRUCTURE	
			252	252			526	30011	252	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/OA (T=17"), AS PER PLAN	23-25/25

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REVIEWED	TRANSPORTATION, DISTRICT 5
DATE	2/7/20
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DRAWN	4505018
JKS	XXX
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CHECKED	TAG
BRIDGE QUANTITIES	BRIDGE NO.: LIC-79-1991
LIC-79-19.90	OVER WILKINS RUN
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4/25	
22	
43	