		1			S	HEET NUN	л. 1	1					PART.	ITEM	ITEM	GRAND	UNIT	
3	5	7	9	11	21	22	23	62	74	86	99	100	01/NHS/BR		EXT	TOTAL		
			LS										LS	201	11000	LS		CLEARING AND GRUBBING
					1,483								1,483	202	23000	1,483	SY	PAVEMENT REMOVED
					117								117	202	35100	117	FŤ	PIPE REMOVED, 24" AND UNDER
						2,272							2,272	202	38000	2,272	FT	GUARDRAIL REMOVED
						70							70	202	75000	70	FT	FENCE REMOVED
					718								718	203	10000	718	CY	EXCAVATION
					82								82	203	20000	82	CY	EMBANKMENT
					1,911	4 750							1,911	204	10000	1,911	SY	SUBGRADE COMPACTION
						1,356 9							1,356 9	606 606	15050 26150	1,356 9	FT EACH	GUARDRAIL, TYPE MGS ANCHOR ASSEMBLY, MGS TYPE E
						9							9	000	20150	9	EACH	ANCHOR ASSEMBLT, MGS ITPE E
						1							1	606	26551	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T, AS PER PL
						10							10	606	34600	10	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE TST
						2							2	606	34601	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, THE TST
						2					3		3	623	38500	3	EACH	MONUMENT ASSEMBLY, TYPE C
												1	1	623	40520	1	EACH	RIGHT-OF-WAY MONUMENT, TYPE B
						1							1	SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE
			070										070	050	00700	070	01/	
			230										230	659	00300	230	CY	
			2,069										2,069	659 659	10000 14000	2,069	SY	SEEDING AND MULCHING
			103 103										103 103	659	14000	103 103	SY SY	REPAIR SEEDING AND MULCHING
			10.5										10.5	033	13000	10.5	31	INTER-SEEDING
			0.28										0.28	659	20000	0.28	TON	COMMERCIAL FERTILIZER
			0.43										0.43	659	31000	0.43	ACRE	LIME
			12										12	659	35000	12	MGAL	WATER
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN
													LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSP
													LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSP
													5,000	832	30000	5,000	EACH	EROSION CONTROL
					229								229	601	32100	229	СҮ	ROCK CHANNEL PROTECTION, TYPE B WITH F
					0.6								0.6	602	20000	0.6	СҮ	CONCRETE MASONRY
23	25	71											119	605	31100	119	FT	AGGREGATE DRAINS
					100								100	611	06100	100	FT	15" CONDUIT, TYPE C
					13								13	611	07600	13	FT	18" CONDUIT, TYPE C
					040								010	055				
					210								210	255	20000	210	FT	FULL DEPTH PAVEMENT SAWING
					445			L					445	301	56000	445	CY	ASPHALT CONCRETE BASE, PG64-22, (449)
					710										00000	740	0V	
					346								346	304	20000	346	CY	AGGREGATE BASE
					203								203	407	10000	203	GAL	TACK COAT
																		TACK COAT
					203								203	407	10000	203	GAL	TACK COAT
					203	39							203 147 39	407 441 626	10000 70000 00110	203 147 39	GAL CY EACH	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2
					203	3							203 147 39 3	407 441 626 630	10000 70000 00110 85100	203 147 39 3	GAL CY EACH EACH	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE
					203	3 3							203 147 39 3 3 3	407 441 626 630 630	10000 70000 00110 85100 86010	203 147 39 3 3	GAL CY EACH EACH EACH	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO
					203	3 3 0.76							203 147 39 3 3 0.76	407 441 626 630 630 642	10000 70000 00110 85100 86010 00104	203 147 39 3 3 0.76	GAL CY EACH EACH EACH MILE	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1
					203	3 3							203 147 39 3 3 3	407 441 626 630 630	10000 70000 00110 85100 86010	203 147 39 3 3	GAL CY EACH EACH EACH	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPC
					203	3 3 0.76							203 147 39 3 3 0.76	407 441 626 630 630 642	10000 70000 00110 85100 86010 00104	203 147 39 3 3 0.76	GAL CY EACH EACH EACH MILE	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1
					203	3 3 0.76							203 147 39 3 0.76 0.38	407 441 626 630 630 642 642 642	10000 70000 00110 85100 86010 00104 00300	203 147 39 3 3 0.76 0.38	GAL CY EACH EACH EACH MILE	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE OVER 2
					203	3 3 0.76			LS 80				203 147 39 3 0.76 0.38 LS	407 441 626 630 630 642 642 642 202	10000 70000 00110 85100 86010 00104 00300 11003	203 147 39 3 0.76 0.38 LS	GAL CY EACH EACH EACH MILE MILE	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPC EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE OVER 20 FOOT SPAN,
					203	3 3 0.76		80	80	80			203 147 39 3 0.76 0.38 LS 240	407 441 626 630 630 642 642 642 202 202	10000 70000 00110 85100 86010 00104 00300 11003 22900	203 147 39 3 0.76 0.38 LS 240	GAL CY EACH EACH EACH MILE MILE SY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE NEMOVED STRUCTURE REMOVED, OVER 20 FOOT SPAN, APPROACH SLAB REMOVED
					203	3 3 0.76		80 80	80 259	80 259			203 147 39 3 0.76 0.38 LS 240 598	407 441 626 630 630 642 642 202 202 202 202	10000 70000 00110 85100 86010 00104 00300 11003 22900 23500	203 147 39 3 3 0.76 0.38 LS 240 598	GAL CY EACH EACH EACH MILE MILE SY SY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPC EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE NEMOVED STRUCTURE REMOVED, OVER 20 FOOT SPAN, APPROACH SLAB REMOVED WEARING COURSE REMOVED
					203	3 3 0.76		80 80 LS	80 259	80 259 LS			203 147 39 3 0.76 0.38 LS 240 598 LS	407 441 626 630 630 642 642 202 202 202 202	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100	203 147 39 3 3 0.76 0.38 LS 240 598	GAL CY EACH EACH EACH MILE MILE SY SY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE NEMOVED 1 STRUCTURE REMOVED, OVER 20 FOOT SPAN, APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING
					203	3 3 0.76		80 80 LS 	80 259 286	80 259 			203 147 39 3 0.76 0.38 LS 240 598 LS 844	407 441 626 630 630 642 642 642 202 202 202 202 202 202 202 202 202 2	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100 21100	203 147 39 3 0.76 0.38 LS 240 598 LS 240 598 LS 240	GAL CY EACH EACH EACH MILE MILE SY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE OVER 20 FOOT SPAN APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING UNCLASSIFIED EXCAVATION
					203	3 3 0.76		80 80 LS 374 LS	80 259 286 LS LS	80 259 LS 184 LS			203 147 39 3 3 0.76 0.38 LS 240 598 LS 240 598 LS 844 LS 469	407 441 626 630 630 642 642 202 202 202 202 202 202 202 503 503 503 503	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100 21303 31120	203 147 39 3 0.76 0.38 LS 240 598 LS 844 LS 469	GAL CY EACH EACH EACH MILE MILE SY SY SY CY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE REMOVED, OVER 20 FOOT SPAN APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING UNCLASSIFIED EXCAVATION— UNCLASSIFIED EXCAVATION, INCLUDING SHAL SHALE EXCAVATION—
					203	3 3 0.76		80 80 LS 	80 259 286	80 259 		~~~~~	203 147 39 3 0.76 0.38 LS 240 598 LS 240 598 LS 844 LS	407 441 626 630 630 642 642 202 202 202 202 202 202 202 202 503 503	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100 21303	203 147 39 3 0.76 0.38 LS 240 598 LS 844 LS	GAL CY EACH EACH EACH MILE MILE SY SY CY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE REMOVED, OVER 20 FOOT SPAN APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING UNCLASSIFIED EXCAVATION— UNCLASSIFIED EXCAVATION, INCLUDING SHAL SHALE EXCAVATION—
					203	3 3 0.76		80 80 	80 259 LS 286 LS	80 259 LS 184 LS 135		~~~~~	203 147 39 3 3 0.76 0.38 LS 240 598 LS 240 598 LS 844 LS 469	407 441 626 630 630 642 642 202 202 202 202 202 202 202 503 503 503 503	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100 21303 31120	203 147 39 3 0.76 0.38 LS 240 598 LS 844 LS 469	GAL CY EACH EACH EACH MILE MILE SY SY SY CY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPC EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE OVER 20 FOOT SPAN, APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING UNCLASSIFIED EXCAVATION— UNCLASSIFIED EXCAVATION, INCLUDING SHAL SHALE EXCAVATION—
BSM	8-8-23	REVISED	EXCAVATI	ON PAY II	203 147	3 3 0.76		80 80 LS LS LS LS 33,835	80 259 286 LS LS 182 29,209	80 259 184 LS 135 26,841			203 147 39 3 0.76 0.38 LS 240 598 LS 240 598 LS 844 LS 469 89,885	407 441 626 630 642 642 202 202 202 202 202 202 202 202 202 2	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100 21303 31120 10000	203 147 39 3 0.76 0.38 LS 240 598 LS 240 598 LS 8944 LS 89,885	GAL CY EACH EACH EACH MILE MILE SY SY CY CY LB	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPC EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE REMOVED, OVER 20 FOOT SPAN, APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING UNCLASSIFIED EXCAVATION UNCLASSIFIED EXCAVATION, INCLUDING SHAL SHALE EXCAVATION EPOXY COATED STEEL REINFORCEMENT CLASS QC2 CONCRETE, SUPERSTRUCTURE
BSM				ON PAY IT	203 147	3 3 0.76		80 80 LS LS LS 33,835 90	80 259 LS 286 LS 182 29,209 81	80 259 LS 184 LS 135 26,841 84			203 147 39 3 0.76 0.38 LS 240 598 LS 240 598 LS 844 LS 469 89,885 255	407 441 626 630 630 642 642 202 202 202 202 202 202 202 202 202 2	10000 70000 85100 86010 00104 00300 11003 22900 23500 11100 21303 31120 10000 34410	203 147 39 3 0.76 0.38 LS 240 598 LS 240 598 LS 240 598 LS 240 598 LS 240 598 255	GAL CY EACH EACH EACH MILE MILE SY SY CY CY LB CY	TACK COAT ASPHALT CONCRETE SURFACE COURSE, TYPE BARRIER REFLECTOR, TYPE 2 REMOVAL OF GROUND MOUNTED SIGN AND RE REMOVAL OF GROUND MOUNTED POST SUPPO EDGE LINE, 6", TYPE 1 CENTER LINE, TYPE 1 STRUCTURE OVER 20 FOOT SPAN, APPROACH SLAB REMOVED WEARING COURSE REMOVED COFFERDAMS AND EXCAVATION BRACING UNCLASSIFIED EXCAVATION, INCLUDING SHAL SHALE EXCAVATION EPOXY COATED STEEL REINFORCEMENT

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DESCRIPTION	SEE SHEET NO.		CALCULATED BSM CHECKED JBD
ROADWAY			
PLAN	10		
ST-2			
ST-2, AS PER PLAN	10		
			X
	10		B
			4
EROSION CONTROL			2
			2
			SUMMARY
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AN			GENERAL
SPECTIONS			Ш
			5
SPECTION SOFTWARE			
DRAINAGE			
FILTER			
PAVEMENT			
PE 1, (449), PG64-22			
TRAFFIC CONTROL			
DEEDEOTION			(
REERECTION PORT AND REERECTION			41
			5
			5)(
			6
20 FOOT SPAN (MED-18-0172/0193/0242) N, AS PER PLAN			1
N, AS PER PLAN			1)
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~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			MED-18-(1,71)(1,92)(2,41)
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ALE, AS PER PLAN	62,74,86		-
	لممدد		D
			ME
NENT INCLUDING FOOTING			
URETHANE)			(19)

## STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

AS-1-15 REVISED 7/17/2015 AS-2-15 REVISED 1/18/2019 DS-1-92 REVISED 7/15/2022 PCB-91 REVISED 07/17/2020 SB-1-08 REVISED 1/15/2021 TST-2-21 DATED 7/16/2021

#### DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS. 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

### LOAD MODIFIER FOR 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, 2020.

## DESIGN LOADING

HL-93 WITH FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

### DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED: CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE) CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE) CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.0 KSI (DRILLED SHAFT) EPOXY COATED REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

### MONOLITHIC WEARING SURFACE

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

### DRILLED SHAFTS

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 132 KIPS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 0 KIPS, ASSUMED TOACT ALONG THE BOTTOM 5 FEET OF THE BEDROCK SOCKET.THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 132 KIPS.

ITEM 503 - UNCLASSIFIED EXCAVATION, INCLUDING SHALE, AS PER PLAN

THIS ITEM IS TO PERFORM ALL EXCAVATION, INCLUDING EXCAVATION OF SHALE, TO THE LIMITS NECESSARY TO CONSTRUCT THE STRUCTURE AS PER THE DETAILS IN THE PLANS AND MEET THE REQUIREMENTS OF C&MS 503. THIS ITEM SHALL ALSO INCLUDE THE BACKFILL OF THE EXCAVATED AREAS PER C&MS 503.08.

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BSM	8-8-23	REVISED EXCAVATION PAY ITEM	
REV.BY	DATE	DESCRIPTION	
DATE CO	MPLETED	08-08-2023	

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GEN	ABUT	PIER	SUPER	SEE SHEET NO.
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					10/114
202	22900	80	SY	APPROACH SLAB REMOVED	80				
202	23500	80	SY	WEARING COURSE REMOVED	80				
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
503	21100	374	CY	UNCLASSIFIED EXCAVATION	374				
ζ 503	21303	LS		UNCLASSIFIED EXCAVATION, INCLUDING SHALE, AS PER PLAN					2/12
L_ <u>503</u>	31120	152	<u> </u>	SHALE EXCAVATION		152			لسبا
509	10000	33835	LB	EPOXY COATED REINFORCING STEEL		16179		17656	
511	33412	90	СҮ	CLASS QC2 CONCRETE, SUPERSTRUCTURE				90	
511	43512	333	СҮ	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING		333			
512	10100	202	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		191		11	
516	13600	44	SF	1" PREFORMED EXPANSION JOINT FILLER				44	
516	14020	102	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				102	
516	43200	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (11 3/4"x11 3/4"x2")				12	
517	70100	78	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)				78	
518	21200	200	СҮ	POROUS BACKFILL WITH GEOTEXTILE FABRIC		200			
SPECIAL	51822300	50	FT	STEEL DRIP STRIP				50	10/12
518	40000	202	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		202			
518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE		40			
524	94804	140	FT	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK		140			
526	30000	293	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")	293				
526	90010	88	FT	TYPE A INSTALLATION	88				
613	41200	60	СҮ	LOW STRENGTH MORTAR BACKFILL		60			

# **ABBREVIATIONS**

STA.	-	STATION
F.A.	-	FORWARD ABUTMENT
R.A.	-	REAR ABUTMENT
EL.	-	ELEVATION
SPA.	-	SPACED
PEJF	-	PREFORMED EXPANSION JOINT FILLER
F	-	FRONT
В	-	BACK
TYP.	-	TYPICAL
NPCPP	-	NON-PERFORATED CORRUGATED PLASTI
PCPP	-	PERFORATED CORRUGATED PLASTIC PIF
PROP.	-	PROPOSED
CONST.	-	CONSTRUCTION
EX.	-	EXISTING

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BSM BSM QUANTITIE . NOTES AND ESTIMATED C BRIDGE NO. MED-18-0172 SR 18 OVER CENTER CREEK GENERAL 92 --18-(1.71)(1.9 (2.41) ID No.88876 PID MED

> 2 12

> > 62 114

DESIGN AGENCY TENBECK 28366 KENSINGTON LACK PERRYSBURG, OHIO 4551 PHONE:(419) 841-4704 FAX:(419) 841-2:

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JT. C.J. – EF – STD.DWG.– CLR. – В LT. RT. N.F. F.F. BRG.

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JOINT CONSTRUCTION JOINT FACH FACE STANDARD DRAWING CLEAR TOP BOTTOM LEFT RIGHT NEAR FACE FAR FACE BEARING

TIC PIPE 'PE

# STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

AS-1-15 REVISED 7/17/2015 AS-2-15 REVISED 1/18/2019 DS-1-92 REVISED 7/15/2022 PCB-91 REVISED 07/17/2020 SB-1-08 REVISED 1/15/2021 TST-2-21 DATED 7/16/2021

### DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

#### LOAD MODIFIER FOR 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, 2020.

#### DESIGN LOADING

HL-93 WITH FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

### DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED: CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE) CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE) CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.0 KSI (DRILLED SHAFT) EPOXY COATED REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

# MONOLITHIC WEARING SURFACE

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

#### DRILLED SHAFTS

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 155 KIPS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 0 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 5 FEET OF THE BEDROCK SOCKET.THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 155 KIPS.

ITEM 503 - UNCLASSIFIED EXCAVATION, INCLUDING SHALE, AS PER PLAN

THIS ITEM IS TO PERFORM ALL EXCAVATION, INCLUDING EXCAVATION OF SHALE, TO THE LIMITS NECESSARY TO CONSTRUCT THE STRUCTURE AS PER THE DETAILS IN THE PLANS AND MEET THE REQUIREMENTS OF C&MS 503. THIS ITEM SHALL ALSO INCLUDE THE BACKFILL OF THE EXCAVATED AREAS PER C&MS 503.08.

BSM	8-8-23	REVISED EXCAVATION PAY ITEM	
REV.BY	DATE	DESCRIPTION	
DATE CO	MPLETED	08-08-2023	

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GEN	ABUT	PIER	SUPER	SEE SHEET NO.
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					10/114
202	22900	80	SY	APPROACH SLAB REMOVED	80				
202	23500	259	SY	WEARING COURSE REMOVED	259				
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
-503	21100	286	CY.	UNCLASSIFIED EXCAVATION	* * * * *	286			m
503	21303	LS		UNCLASSIFIED EXCAVATION, INCLUDING SHALE, AS PER PLAN					2/12
-503-	31120	182	СҮ	SHALE EXCAVATION		182			·····
509	10000	29209	LB	EPOXY COATED REINFORCING STEEL		13983		15226	
511	33412	81	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE				81	
511	43512	285	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING		285			
512	10100	187	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		178		9	
516	13600	41	SF	1" PREFORMED EXPANSION JOINT FILLER				41	
516	14020	102	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				102	
516	43200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (11 3/4" × 11 3/4" × 2")				10	
517	70100	70	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)				70	
518	21200	198	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		198			
SPECIAL	51822300	41	FT	STEEL DRIP STRIP				41	10/12
518	40000	201	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		201			
518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE		40			
524	94704	126	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK		126			
526	30000	293	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")	293				
526	90010	88	FT	TYPE A INSTALLATION	88				
613	41200	30	СҮ	LOW STRENGTH MORTAR BACKFILL		30			

# **ABBREVIATIONS**

STASTATIONF.AFORWARD ABUTMENTR.AREAR ABUTMENTELELEVATIONSPASPACEDPEJF-PREFORMED EXPANSION JOINT FILLERF-FRONTB-BACKTYPTYPICALNPCPP-NON-PERFORATED CORRUGATED PLASTIC PIPEPCPP-PREFORATED CORRUGATED PLASTIC PIPEPROPPROPOSEDCONSTCONSTRUCTIONEXEXISTING	JT. C.J. EF STD. DI CLR. T B LT. RT. RT. F.F. BRG.	- - - - - - - - - - - - - - - - - - -	JOINT CONSTRUCTIC EACH FACE STANDARD DR CLEAR TOP BOTTOM LEFT RIGHT NEAR FACE FAR FACE BEARING
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ION JOINT DRAWING

(	MED-18-(1 71)(1 02)	GENERAL NOTES AND ESTIMATED OLIANTITIES	DESIGNED	DRAWN	DRAWN REVIEWED DATE	
			BSM	BSM	EEC 1-20-23	-23 FISHBECK 28366 KENSINGTON LANE, SUITE 3
4		7	CHECKED	REVISED	STRUCTURE FILE NUMBER	PERRYSBURG, OHIO 43551
)	DID No. 88876	SR 18 OVER CENTER CREEK	JBD		5200513	PHONE:(419) 841-4704 FAX:(419) 841-2979

# STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

AS-1-15 REVISED 7/17/2015 AS-2-15 REVISED 1/18/2019 DS-1-92 REVISED 7/15/2022 PCB-91 REVISED 07/17/2020 SB-1-08 REVISED 1/15/2021 TST-2-21 DATED 7/16/2021

## DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

# LOAD MODIFIER FOR 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, 2020.

# DESIGN LOADING

HL-93 WITH FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

### DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED: CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE) CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE) CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.0 KSI (DRILLED SHAFT) EPOXY COATED REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

### MONOLITHIC WEARING SURFACE

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

## DRILLED SHAFTS

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 157 KIPS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 0 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 5 FEET OF THE BEDROCK SOCKET. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 157 KIPS.

#### ITEM 503 - UNCLASSIFIED EXCAVATION, INCLUDING SHALE, AS PER PLAN

THIS ITEM IS TO PERFORM ALL EXCAVATION, INCLUDING EXCAVATION OF SHALE, TO THE LIMITS NECESSARY TO CONSTRUCT THE STRUCTURE AS PER THE DETAILS IN THE PLANS AND MEET THE REQUIREMENTS OF C&MS 503. THIS ITEM SHALL ALSO INCLUDE THE BACKFILL OF THE EXCAVATED AREAS PER C&MS 503.08.

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GEN	ABUT	PIER	SUPER	SEE SHEET NO.
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					10/114
202	22900	80	SY	APPROACH SLAB REMOVED	80				
202	23500	259	SY	WEARING COURSE REMOVED	259				
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
<u>ς -503</u>	21100	184	CY	UNCLASSIFIED EXCAVATION		184	$\sim$		m
503	21303	LS		UNCLASSIFIED EXCAVATION, INCLUDING SHALE, AS PER PLAN					2/12
-503	31120	135	CY	SHALE EXCAVATION		135			
509	10000	26841	LB	EPOXY COATED REINFORCING STEEL		10993		15848	
511	33412	84	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE				84	
511	43512	189	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING		189			
512	10100	138	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		128		10	
516	13600	41	SF	1" PREFORMED EXPANSION JOINT FILLER				41	
516	14020	102	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				102	
516	43200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE)(11 3/4" X 11 3/4" X 2")				10	
517	70100	72	FT	RAILING (THREE STEEL TUBE BRIDGE RAILING)				72	
518	21200	142	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		142			
SPECIAL	. 51822300	44	FT	STEEL DRIP STRIP				44	10/12
518	40000	172	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		172			
518	40012	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE		40			
524	94704	98	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK		98			
526	30000	293	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")	293				
526	90010	88	FT	TYPE A INSTALLATION	88				
613	41200	30	CY	LOW STRENGTH MORTAR BACKFILL		30			

# **ABBREVIATIONS**

STA. F.A. R.A. EL.	- - -	STATION FORWARD ABUTMENT REAR ABUTMENT ELEVATION	JT. C.J. EF STD. DN	- - /G	JOINT CONSTRUCTION JOINT EACH FACE STANDARD DRAWING
SPA. PEJF	_	SPACED PREFORMED EXPANSION JOINT FILLER	CLR. T	_	CLEAR TOP
F	-	FRONT	B	-	BOTTOM
В	-	BACK	LT.	-	LEFT
TYP.	-	TYPICAL	RT.	-	RIGHT
NPCPP	-	NON-PERFORATED CORRUGATED PLASTIC PIPE	N.F.	-	NEAR FACE
PCPP	-	PERFORATED CORRUGATED PLASTIC PIPE	F.F.	-	FAR FACE
PROP.	-	PROPOSED	BRG.	-	BEARING
CONST.	-	CONSTRUCTION			
EX.	-	EXISTING			

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	PERRYSBURG, OHIO 43551 PHONE:(419) 841–4704 FAX:(419) 841–2979
REVIEWED DATE EEC 1-20-23	STRUCTURE FILE NUMBER 5200548
DRAWN BSM	REVISED
DESIGNED BSM	СНЕСКЕD JBD
	BRIDGE NO. MED-18-0242 SR 18 OVER CENTER CREEK
MED-18-(1,71)(1,92) (2,41)	PID No. 88876

BSM	8-8-23	REVISED EXCAVATION PAY ITEM
BSM	7-12-23	REVISED DRILLED SHAFT QUANTITY
REV.BY	DATE	DESCRIPTION
DATE COMPLETED		08-08-2023