

G:\Project\TOH0017.PE\01\Drawing\Roadway\Design\00826\GC002.dgn 10/29/2020 4:37:33 PM MHebebrand

SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	9	16	17	18	35	38	43	73	01/NHS/BR							
									154,711			154,711	509	10000	154,711	LB	EPOXY COATED REINFORCING STEEL	
									293			293	510	10000	293	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
									2			2	511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	51, 54
									545			545	511	53014	545	CY	CLASS QC3 CONCRETE, MISC.: WITH QA/QC SUPERSTRUCTURE, AS PER PLAN	42
									29			29	511	53014	29	CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE	
									84			84	512	10101	84	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	41
									6			6	512	33000	6	SY	TYPE 2 WATERPROOFING	
									10			10	515	12071	10	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 54'-5 3/8")	41, 61
									25			25	515	12071	25	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 52'-5 1/4")	41, 61
									28			28	515	20001	28	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN	62, 70
									114			114	516	10010	114	FT	ARMORLESS PREFORMED JOINT SEAL	
									14			14	516	13900	14	SF	2" PREFORMED EXPANSION JOINT FILLER	
									403			403	516	25000	403	SF	NYLON REINFORCED NEOPRENE SHEETING	
									120			120	516	43300	120	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (1.924"x8"x16")	
									10			10	516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (3.074"x8"x28")	58
									775			775	517	70000	775	FT	RAILING (TYPICAL STEEL TUBE)	
									34			34	518	21200	34	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
									950			950	SPECIAL	51822300	950	FT	STEEL DRIP STRIP	
									73			73	519	11101	73	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	41
									223			223	526	25000	223	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")	
									114			114	526	90030	114	FT	TYPE C INSTALLATION	
									2,011			2,011	845	60000	2,011	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
									35			35	845	61000	35	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
									2,011			2,011	845	62000	2,011	SF	FIELD METALLIZING OF EXISTING STRUCTURAL STEEL	
																	STRUCTURE 20 FOOT SPAN AND UNDER (GRE-235-11.10)	
									LS			LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	75
									1,513			1,513	202	23500	1,513	SY	WEARING COURSE REMOVED	
									500			500	256	10200	500	SF	BONDED PATCHING OF PORTLAND CEMENT CONCRETE PAVEMENT, TYPE C	
									61			61	441	50000	61	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
									682			682	509	10000	682	LB	EPOXY COATED REINFORCING STEEL	
									1,000			1,000	509	20001	1,000	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	72
									6			6	511	34445	6	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN	72
									10			10	511	50210	10	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	
									LS			LS	513	10001	LS		STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	72
									19,145			19,145	514	00050	19,145	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
									19,145			19,145	514	00056	19,145	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
									19,357			19,357	514	00060	19,357	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
									19,357			19,357	514	00067	19,357	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN	72
									35			35	514	00504	35	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
									20			20	514	10000	20	EACH	FINAL INSPECTION REPAIR	
									83			83	516	11211	83	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	78
									14			14	516	44201	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(1.924"x12"x12")	77
									LS			LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	72
									575			575	517	75600	575	FT	DEEP BEAM BRIDGE RETROFIT RAILING	
									6			6	SPECIAL	51822300	6	FT	STEEL DRIP STRIP	
																	MAINTENANCE OF TRAFFIC	
		772										772	614	11630	772	FT	INCREASED BARRIER DELINEATION	
					8							8	614	12336	8	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
		5										5	614	13000	5	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		64										64	614	13310	64	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	
		46										46	614	13318	46	EACH	BARRIER REFLECTOR, TYPE 5, TWO-WAY	
		110										110	614	13360	110	EACH	OBJECT MARKER, TWO WAY	
			15									15	614	18601	15	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	9
		0.42			0.42							0.84	614	21100	0.84	MILE	WORK ZONE CENTER LINE, CLASS 1, 642 PAINT	
		1.57			1.57							3.14	614	22110	3.14	MILE	WORK ZONE EDGE LINE, CLASS 1, 6", 642 PAINT	
		50			50							100	614	26200	100	FT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	
		LS			LS							LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
					2,177							2,177	615	25000	2,177	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
		55										56	616	10000	56	MGAL	WATER	
					2,800							2,800	622	41100	2,800	FT	PORTABLE BARRIER, UNANCHORED	
					380							380	622	41110	380	FT	PORTABLE BARRIER, ANCHORED	
																	INCIDENTALS	
												LS	103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
												LS	614	11000	LS		MAINTAINING TRAFFIC	
												LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

GRE - 235 - 10.75 / 11.10

GRADING LIMITS - WEST BANK

#	STATION	OFFSET
1	STA. 23+09.30	37.01' LT.
2	STA. 23+04.76	58.97' LT.
3	STA. 23+07.75	83.92' LT.
4	STA. 23+16.95	110.64' LT.
5	STA. 23+23.10	108.59' LT.
6	STA. 23+56.91	132.70' LT.
7	STA. 23+14.97	37.02' LT.

GRADING LIMITS - EAST BANK

#	STATION	OFFSET
8	STA. 24+39.60	39.44' LT.
9	STA. 24+31.21	66.85' LT.
10	STA. 24+27.57	87.14' LT.
11	STA. 24+33.48	146.23' LT.
12	STA. 24+44.08	193.00' LT.
13	STA. 24+68.82	235.42' LT.
14	STA. 24+77.11	235.43' LT.
15	STA. 24+48.24	88.40' LT.
16	STA. 24+60.50	39.44' LT.

END VANE ARM STRUCTURE
STA. 23+68.31, 146.1' LT.
ELEV. 800.00

APPROX. LIMITS OF
COFFERDAM FOR
DEWATERING

EDGE NORMAL
WATER

PLACE EROSION CONTROL MAT
ON DISTURBED AREAS AS
DIRECTED BY THE ENGINEER

MAD RIVER

EDGE NORMAL
WATER

PLACE EROSION CONTROL MAT
ON DISTURBED AREAS AS
DIRECTED BY THE ENGINEER

CONSTRUCTION
LIMITS

PROPOSED GRADING
(CONTOURS @ 1 FT
INTERVALS) (SEE
NOTE 3)

PROPOSED GRADING
(CONTOURS @ 1 FT
INTERVALS)

BEGIN VANE ARM STRUCTURE
STA. 23+20.13, 36.2' LT.
ELEV. 808.00




EXIST. PIER WITH
SHEET PILING SCOUR
COUNTER MEASURES
(TYP.)

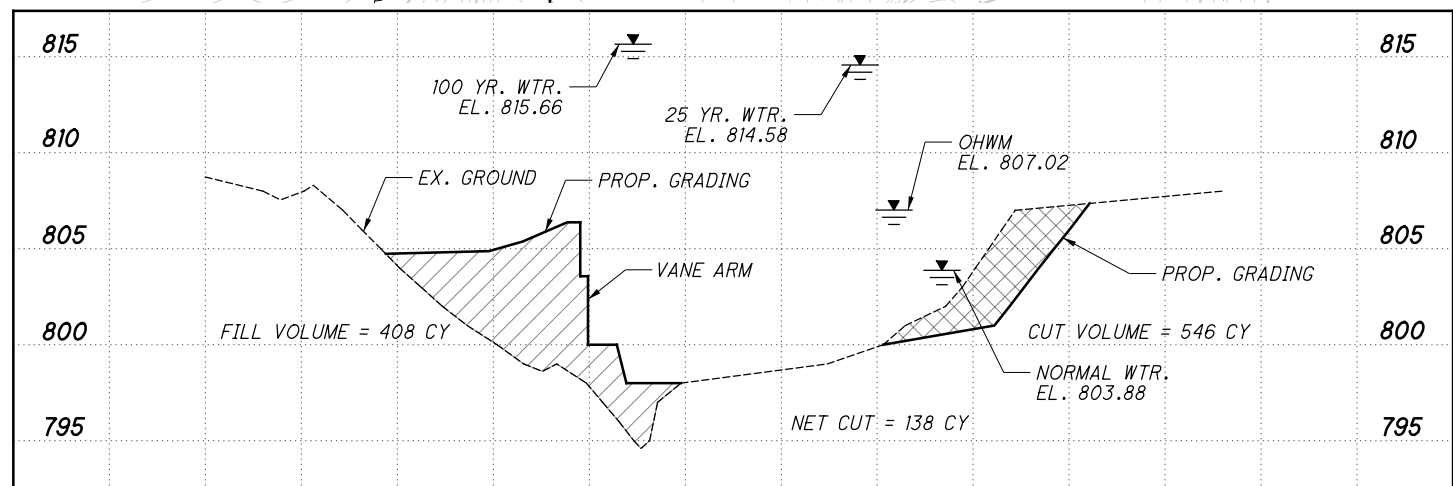
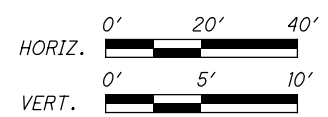
EX. STRUCTURE (SEE NOTE 1)

STATE ROUTE 235

S 84° 20' 53" E
EXIST. R/W AND CONSTRUCTION

LEGEND

-  FILL MATERIAL
-  CUT AREA
-  SEEDING AND MULCHING AREA



A CROSS SECTION

NOTES:

1. FOR BRIDGE REHABILITATION, SEE SHEETS 39 THRU 79.
2. FOR VANE ARM DETAILS SEE SHEETS 37 AND 38.
3. EAST BANK GRADING SHALL BE AS SHOWN. FELL TREE AS REQUIRED, LEAVING ROOTS INTACT BELOW GROUND SURFACE.

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DESIGN AGENCY: **ARCADIS**
 ARCADIS U.S., Inc.
 222 South Main Street, Suite 200 Akron, Ohio 44308
 Tel: 330-434-1995 Fax: 330-434-1995 www.arcadis.com

DESIGNER: RBB
 CHECKED: RBB
 DRAWN: CAF
 REVISIONS:

REVIEWED: JDH/MRD 3/06/20
 DATE: 2902222
 STRUCTURE FILE NUMBER:

VANE ARM - GRADING PLAN
 BRIDGE NO. GRE-235-1110 (STATE ROUTE 235)
 OVER MAD RIVER

GRE-235-10.75 / 11.10
 PID No. 100826

1 / 3
 36 / 79

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ESTIMATED QUANTITIES					CALC. BY:	MPB	DATE:	3/02/20	AS PER PLAN	
					CHK'D BY:	RBB	DATE:	3/05/20		
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GENERAL	STR. SHT. NO.	
202	11203		LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					3, 21	
202	22900	224	SY	APPROACH SLAB REMOVED				224		
202	23500	1,927	SY	WEARING COURSE REMOVED	1703			224		
503	11101		LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					3	
503	21301		LS	UNCLASSIFIED EXCAVATION, AS PER PLAN					3	
509	10000	154,711	LB	EPOXY COATED REINFORCING STEEL	137540	4445	12726			
510	10000	293	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		293				
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN		2			13, 16	
511	53014	545	CY	CLASS QC3 CONCRETE WITH QC/QA SUPERSTRUCTURE, AS PER PLAN	545				4	
511	53014	29	CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE		29				
512	10101	84	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN		84			3	
512	33000	6	SY	TYPE 2 WATERPROOFING		6				
515	12071	10	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 54'-5 3/8")	10				3, 23	
515	12071	25	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB27-48, AS PER PLAN (BEAM LENGTH = 52'-5 1/4")	25				3, 23	
515	20001	28	EACH	INTERMEDIATE DIAPHRAGMS, AS PER PLAN	28				24, 32	
516	10010	114	FT	ARMORLESS PREFORMED JOINT SEAL				114		
516	13900	114	SF	2" PREFORMED EXPANSION JOINT FILLER	114					
516	25000	403	SF	NYLON REINFORCED NEOPRENE SHEETING	403					
516	43300	120	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (1.924"x8"x16")	120					
516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (3.074"x8"x28")	10				20	
517	70000	775	FT	RAILING (TWIN STEEL TUBE)	775					
518	21200	34	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		34				
518	22300	950	FT	SPECIAL - STEEL DRIP STRIP	950					
519	11101	73	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		34	14	25	3	
526	25000	223	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				223		
526	90030	114	FT	TYPE C INSTALLATION				114		
845	60000	2,011	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			2011			
845	61000	35	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			35			
845	62000	2,011	SF	FIELD METALLIZING OF EXISTING STRUCTURAL STEEL			2011			

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REVIEWED DATE 3/06/20
 FUG STRUCTURE FILE NUMBER 2902184

DRAWN MPB REVISED
 DESIGNED RJB CHECKED CMD

ESTIMATED QUANTITIES
 BRIDGE NO. GRE-235-1075 (STATE ROUTE 235)
 OVER MUD RUN

GRE-235-10.75 / 11.10
 PID No. 100826

5 / 32

43
79