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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
4	6	13	15	16	25					01/NHS/B R							
<b>ROADWAY</b>																	
LUMP										LUMP		201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	4
				100						100		202	38000	100	FT	GUARDRAIL REMOVED	
				4						4		202	47000	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
					95					95		203	10000	95	CY	EXCAVATION	
					6					6		203	20001	6	CY	EMBANKMENT, AS PER PLAN	
0.04										0.04		209	15050	0.04	MILE	RESHAPING UNDER GUARDRAIL	
				100						100		605	15050	100	FT	GUARDRAIL, TYPE MGS	
				4						4		606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
<b>EROSION CONTROL</b>																	
690										690		659	00500	690	SY	SEEDING AND MULCHING, CLASS 1	
1,940										1,940		659	00541	1,940	SY	SEEDING AND MULCHING, CLASS 3C, AS PER PLAN	4
131										131		659	14000	131	SY	REPAIR SEEDING AND MULCHING	
0.35										0.35		659	20000	0.35	TON	COMMERCIAL FERTILIZER	
0.54										0.54		659	31000	0.54	ACRE	LIME	
14.2										14.2		659	35000	14.2	MGAL	WATER	
										10,000		832	30000	10,000	EACH	EROSION CONTROL	
										LUMP		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
										LUMP		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
										LUMP		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
<b>PAVEMENT</b>																	
			2,938							2,938		254	01000	2,938	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.75)	
			31							31		254	01600	31	SY	PATCHING PLANED SURFACE	
			250							250		407	20000	250	GAL	NON-TRACKING TACK COAT	
			144							144		441	50000	144	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
			15							15		617	10100	15	CY	COMPACTED AGGREGATE	
			0.31							0.31		617	25000	0.31	MGAL	WATER	
			0.25							0.25		618	41000	0.25	MILE	RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE)	
<b>TRAFFIC CONTROL</b>																	
				14						14		621	00100	14	EACH	RPM	
				14						14		621	54000	14	EACH	RAISED PAVEMENT MARKER REMOVED	
				6						6		626	00102	6	EACH	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)	
				4						4		626	00116	4	EACH	BARRIER REFLECTOR, TYPE 5 (BI-DIRECTIONAL)	
				0.01						0.01		642	00100	0.01	MILE	EDGE LINE, 4", TYPE 1	
				0.08						0.08		642	00104	0.08	MILE	EDGE LINE, 6", TYPE 1	
				0.05						0.05		642	00300	0.05	MILE	CENTER LINE, TYPE 1	
				36						36		642	00400	36	FT	CHANNELIZING LINE, 8", TYPE 1	
				72						72		642	01500	72	FT	DOTTED LINE, 4", TYPE 1	
				108						108		642	30000	108	FT	REMOVAL OF PAVEMENT MARKING	
				0.15						0.15		642	30030	0.15	MILE	REMOVAL OF PAVEMENT MARKING	
<b>STRUCTURE REPAIR (GRE-US68-9.57)</b>																	
																	21
<b>STRUCTURE REPAIR (GRE-US68-13.35)</b>																	
																	31
<b>MAINTENANCE OF TRAFFIC</b>																	
	120									120		614	1110	120	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	6
	LUMP	3								3		614	12338	3	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	7
		18								LUMP		614	12420	LS		DETOUR SIGNING	
		4								18		614	13310	18	EACH	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)	
		0.15	0.38							4		614	13360	4	EACH	OBJECT MARKER, TWO WAY	
		0.15								0.53		614	21100	0.53	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
		0.3	0.46							0.15		614	21550	0.15	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		0.3								0.76		614	22110	0.76	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
										0.3		614	22360	0.3	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
		48								48		614	26200	48	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
		LUMP								LUMP		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
		144								144		615	25001	144	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	4
		880								880		622	41100	880	FT	PORTABLE BARRIER, UNANCHORED	
<b>INCIDENTALS</b>																	
	LUMP									LUMP		614	11000	LS		MAINTAINING TRAFFIC	
	LUMP									LUMP		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	4
										LUMP		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

GRE-US68-9.57 / 13.35

**DESIGN SPECIFICATIONS**

NEW PORTIONS OF THIS STRUCTURE CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, LRFD 8TH EDITION, AND THE 2020 ODOT BRIDGE DESIGN MANUAL.

**ORIGINAL DESIGN LOADING**

HS20-44 AND THE ALTERNATE MILITARY LOADING

**DECK PROTECTION METHOD**

SEALING OF CONCRETE DECK SURFACES WITH HMWM RESIN

**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 CMS SECTIONS 102.05 & 105.02.

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.

**EXISTING BRIDGE PLANS**

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

**GRANULAR MATERIAL, TYPE E**

THE VOLUME OF GRANULAR MATERIAL, TYPE E PLACED TO PROVIDE A DRIVABLE SURFACE ON THE TEMPORARY ACCESS FILL SHALL BE INCLUDED WITH ITEM 530 - STRUCTURE MISC.: TEMPORARY CONSTRUCTION SITE ACCESS FOR PAYMENT.

**MASONRY REPAIR**

THIS WORK SHALL CONSIST OF EXCAVATING THE EXISTING STREMBED, PERFORMING FINAL GRADING AND RESTORATION OF MASONRY MORTAR AT THE GRE-US 68-9.57 BRIDGE TO THE LIMITS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL ADHERE TO THE CMS AND THE STONE MASONRY RESTORATION AND REPAIR SPECIAL PROVISIONS. WHEN COMPLETED, REPAIRS SHALL MATCH THE APPEARANCE OF THE EXISTING MASONRY. PAYMENT FOR THE ABOVE WORK SHALL INCLUDE ALL EARTHWORK BELOW GRADE, MATERIAL, EQUIPMENT, LABOR, SURVEY AND ANY OTHER APPURTENANCES REQUIRED TO COMPLETE THE MASONRY REPAIRS.

THE FOLLOWING PAY ITEMS HAVE BEEN PROVIDED FOR THIS WORK:

ITEM 602 - MASONRY MISC.: STONE MASONRY RESTORATION AND REPAIRS (S.Y.)

ITEM 602 - MASONRY MISC.: STONE MASONRY RESTORATION AND REPAIRS (C.Y. - FOR DEEP MORTAR REPAIRS)

**CHANNEL SCOUR PREVENTION SYSTEM**

THIS WORK SHALL CONSIST OF EXCAVATING THE EXISTING STREMBED, PERFORMING FINAL GRADING, PLACEMENT OF GEOTEXTILE FABRIC AND AGGREGATE BASE AS NEEDED AND INSTALLATION OF A CHANNEL LINER TYPE OF SCOUR PROTECTION UNDER THE GRE-US 68-9.57 BRIDGE AND BEYOND TO THE LIMITS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL ADHERE TO THE CMS AND THE CHANNEL SCOUR PREVENTION SYSTEM SPECIAL PROVISIONS CONTAINING THE MANUFACTURER'S SPECIFICATIONS FOR MATERIAL QUALITY AND PROPER INSTALLATION OF THE CHANNEL LINER. WHEN COMPLETED, FLOW THROUGH THE CHANNEL SHALL BE POSITIVE AND UNIFORM ACROSS THE CHANNEL WIDTH.

THE FOLLOWING SCOUR PROTECTION SYSTEMS HAVE BEEN APPROVED FOR USE:

- RIPRAP TYPE D (6" THICK REINFORCED CONCRETE SLAB)
- ARTICULATED GROUT FILLED BLOCK AB600LL OR BETTER PRODUCT FROM SYNTHETEX

SYNTHETEX, LLC.  
5550 TRIANGLE PARKWAY, SUITE 220  
PEACHTREE CORNERS, GA 30092 USA  
1-800-253-0561  
770-399-9051

- 9" THICK GABION MATTRESS  
2.5"x2.5" WELDED WIRE GALVANIZED MESH WITH ADDITIONAL PVC COATING AND 12 GAUGE MINIMUM WIRE THICKNESS PER SS 838

- ARMORFLEX CLASS 40 (OPEN) ARTICULATED CONCRETE BLOCK BY CONTECH
- BLOCKS SHALL BE HAND PLACED BELOW THE BRIDGE AND CONNECTED TOGETHER WITH LONGITUDINAL CABLES AFTER PLACEMENT. MATTED BLOCK SECTIONS MAY BE USED OUTSIDE OF THE BRIDGE LIMITS.

CONTECH ENGINEERED SOLUTIONS  
9025 CENTRE POINTE DRIVE  
SUITE 400  
WEST CHESTER TOWNSHIP, OHIO 45069

BARRIE KING, P.E.  
AREA MANAGER - ARMORTEC NORTHEAST  
(O) 513.645.7241  
(M) 513.320.2010

PAYMENT FOR THE ABOVE WORK SHALL INCLUDE ALL EARTHWORK BELOW FINISHED CHANNEL GRADE, AGGREGATE BEDDING, GEOGRID, CHANNEL LINER MATERIAL, EQUIPMENT, LABOR, SURVEY AND ANY OTHER APPURTENANCES REQUIRED TO INSTALL A COMPLETED CHANNEL SCOUR PREVENTION SYSTEM.

THE FOLLOWING ALTERNATE PAY ITEMS HAVE BEEN PROVIDED FOR THIS WORK:

ITEM 601 - RIPRAP, TYPE D

ITEM 601 - ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1 ( ALTERNATE 2 - ARMORFLEX BY CONTECH )

ITEM 601 - ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, TYPE 1, AS PER PLAN ( ALTERNATE 3 - SYTHETEX GROUT FILLED MATTRESS )

ITEM 828 - GABIONS WITH ADDITIONAL COATING, AS PER PLAN ( ALTERNATE 4 - GABION MATTRESS )

**ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (FOR BRIDGE No. GRE-US 68-0957)**

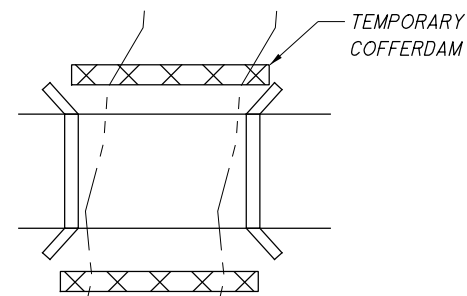
COFFERDAMS AND EXCAVATION BRACING INSTALLED FOR THE PROJECT ARE FOR DEWATERING THE WORK AREA. COFFERDAMS AND EXCAVATION BRACING DESIGN, CONSTRUCTION, AND REIMBURSEMENT FOR DAMAGE IS BASED ON CMS 503. THE CONTRACTOR MUST COMPLY WITH ALL IN-STREAM RESTRICTIONS LISTED IN THE SPECIAL PROVISIONS WATERWAY PERMIT. ADDING FILL TO OR EXCAVATING FROM THE STREAM TO DEWATER THE WORK AREA REQUIRES A TEMPORARY ACCESS FILL (TAF) SUBMISSION PER THE SPECIAL PROVISIONS. FILLING THE EXCAVATED AREA AFTERWARDS IS CONSIDERED A PERMANENT FILL AND MAY VIOLATE THE WATERWAY PERMIT'S THRESHOLDS OF IMPACTS.

IF THE CONTRACTOR WILL USE PUMPS TO DEWATER THE SITE, THEN THE CONTRACTOR WILL NEED TO SIZE THE PUMP(S) TO HANDLE TWICE THE HIGHEST MONTHLY FLOW WITHOUT PRODUCING A RISE IN THE BACKWATER ABOVE THE OHWM. ACCORDING TO STREAMSTATS, TWICE THE HIGHEST MONTHLY FLOW THAT NEEDS TO BYPASS THE DEWATERED WORK SITE IS 9.8 CFS.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM DURING THE MONTHS OF APRIL THROUGH OCTOBER: ALL REQUIREMENTS OF CMS 503 APPLY, UNLESS STIPULATED ELSEWHERE IN THIS NOTE. THE REHABILITATION WORK REQUIRED IN THE PLANS MUST BE COMPLETED IN SECTIONS. THE LONGEST SECTION THAT CAN BE COMPLETED AT ONE TIME IS 300 FEET. IF THE CONTRACTOR CHOOSES TO COMPLETE SECTIONS GREATER THAN 300 FEET AT A TIME, THEN THE DEPARTMENT WILL ONLY REIMBURSE THE CONTRACTOR FOR RESULTING DAMAGE TO 300 FEET OF WORK PROTECTED BY THE COFFERDAM, PROVIDED THE CONTRACTOR HAS EXERCISED DUE DILIGENCE AS DETERMINED BY THE ENGINEER.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM AT ANY TIME IN THE MONTHS OF NOVEMBER THROUGH MARCH: EVEN IF THE ACTUAL WATER ELEVATION EXCEEDS 3 FEET ABOVE THE STATED ORDINARY HIGH WATER MARK, THE DEPARTMENT WILL NOT REIMBURSE THE CONTRACTOR FOR RESULTING DAMAGE TO THE WORK PROTECTED BY THE COFFERDAM. ALL OTHER REQUIREMENTS OF CMS 503 APPLY.

ALL WORK ASSOCIATED WITH COFFERDAMS AND EXCAVATION BRACING, INCLUDING ALL REQUIREMENTS OF THE TAF SUBMISSION, SHALL BE PAID FOR WITH THE COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN PAY ITEM.



**TEMPORARY COFFERDAM/STREAM DIVERSION DETAIL FOR BRIDGE**  
(NOT ACTUAL SITE LAYOUT)

**PROPOSED WORK FOR BRIDGE No. GRE-US 68-0957**

1. PROTECT THE ABUTMENTS FROM SCOUR USING ROCK CHANNEL PROTECTION ALONG WITH A RIP RAP CONCRETE SLAB, AN ARTICULATING BLOCK PRODUCT FROM SYNTHETEX, GABION MATTRESS OR ARMORFLEX BY CONTECH.
2. RESHAPE THE CHANNEL UNDER THE BRIDGE TO KEEP THE CHANNEL CENTERED UNDER THE BRIDGE. THE PROPOSED CHANNEL CROSS-SECTION SHALL NOT INCREASE THE 100 YEAR FLOOD.
3. SEAL THE DECK WITH HIGH MOLECULAR WEIGHT METHACRYLATE.
4. REPAIR DISTURBED GRASS AREAS USING ITEM 659 - SEEDING AND MULCHING CLASS 1.
5. REPOINT SPECIFIED AREAS WHERE MORTAR IS LOST PER THE STONE MASONRY RESTORATION AND REPAIR SPECIAL PROVISION.

REPOINT MORTAR UNDER THE 18" DIAMETER PIPE LOCATED THROUGH THE NORTH ABUTMENT SEAT UNDER THE WEST SIDEWALK FOR WIDTH OF 5 FEET BELOW THE OUTLET. (REPAIR AREA = 25 SF)



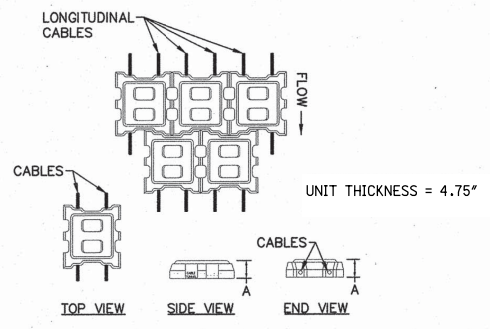
REPOINT MORTAR UNDER THE 18" DIAMETER PIPE LOCATED THROUGH THE SOUTH ABUTMENT SEAT UNDER THE EAST SIDEWALK FOR WIDTH OF 5 FEET BELOW THE OUTLET. (REPAIR AREA = 25 SF)



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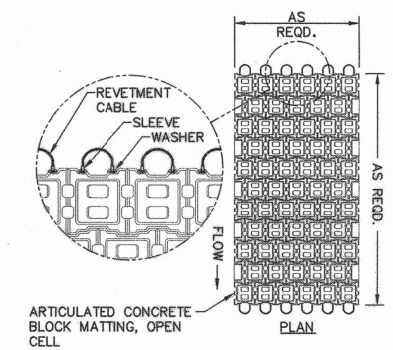
DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 BRIDGE DEPT.	DATE 2901447	REVIEWED STRUCTURE FILE NUMBER	DRAWN CAH	CHECKED CAH	DESIGNED CAH	STRUCTURE NOTE -1 BRIDGE NO. GRE-US 68-0957 OVER SHAWNEE RUN	GRE-US 68-9.57 / 13.35 PID No. 98510	3 / 6	19 / 42
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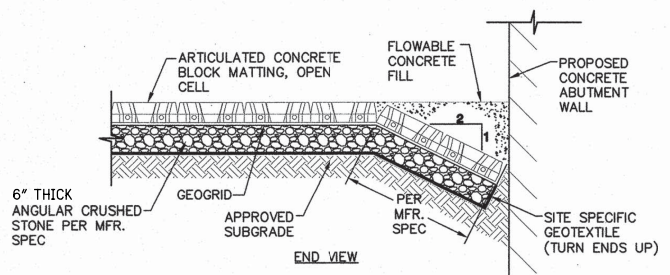


1 ARTICULATED CONCRETE BLOCK (NON-TAPERED)  
NOT TO SCALE

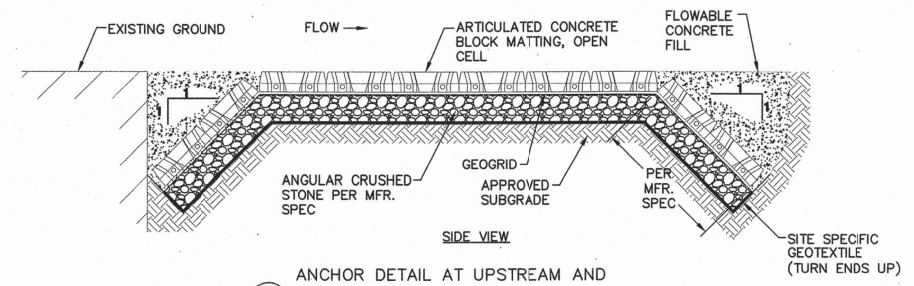
- NOTES:**
1. ARMORFLEX UNITS MAY HAVE TO BE HAND PLACED.
  2. ARMORFLEX CABLES SHALL BE ORIENTED PARALLEL WITH FLOW.
  3. ALL ARMORFLEX BLOCK DIMENSIONS TO BE PER MANUFACTURER'S SPECIFICATIONS.
  4. ALL INSTALLATIONS TO BE PERFORMED IN THE DRY.
  5. ARMORFLEX OPEN CELLS TO BE BACKFILLED WITH WELL GRADED AND WASHED AASHTO #57 CRUSHED STONE AFTER INSTALLATION.
  6. GAPS LESS THAN 2" BETWEEN ARMORFLEX UNITS MUST BE FILLED WITH GROUT. GAPS 2" OR MORE MUST BE FILLED WITH CONCRETE. FLOWABLE CONCRETE FILL TO BE USED ONLY WHERE CALLED OUT IN THE CONSTRUCTION DETAILS.
  7. THE OPENINGS IN THE GEOGRID ARE TO BE SIZED TO PREVENT THE ANGULAR CRUSHED STONE FROM PASSING THROUGH IT.
  8. SEE THE SPECIAL PROVISIONS FOR PERFORMANCE DESIGN CRITERIA FOR EACH SCOUR PROTECTION SYSTEM.
  9. GABION MATTRESS AND HYDROTEX SYSTEMS SHALL BE STAKED IN PLACE AS NEEDED.
  10. EXCAVATION, GROUT OR CONCRETE, CRUSHED STONE BEDDING, GEOGRID, ETC. SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE SCOUR PROTECTION SYSTEM FOR PAYMENT UNLESS ITEMIZED SEPARATELY.
  11. DETAILS SHOWN BELOW ARE NOT TO SCALE.
  12. GROUT SHALL BE 4,000 PSI
  13. GRADING OF STREAMBED SHALL REMOVE LARGE ROCKS AND DEBRIS TO PROVIDE A UNIFORM BEDDING SURFACE.



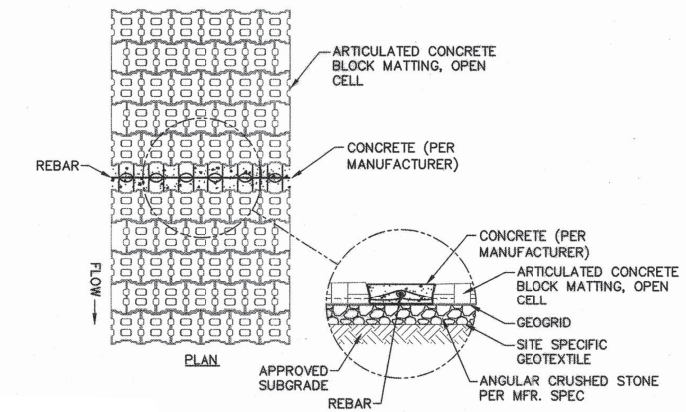
3 ARTICULATED CONCRETE BLOCK MATTRESS  
NOT TO SCALE



4 ANCHOR DETAIL ALONG CULVERT AND WINGWALLS  
NOT TO SCALE



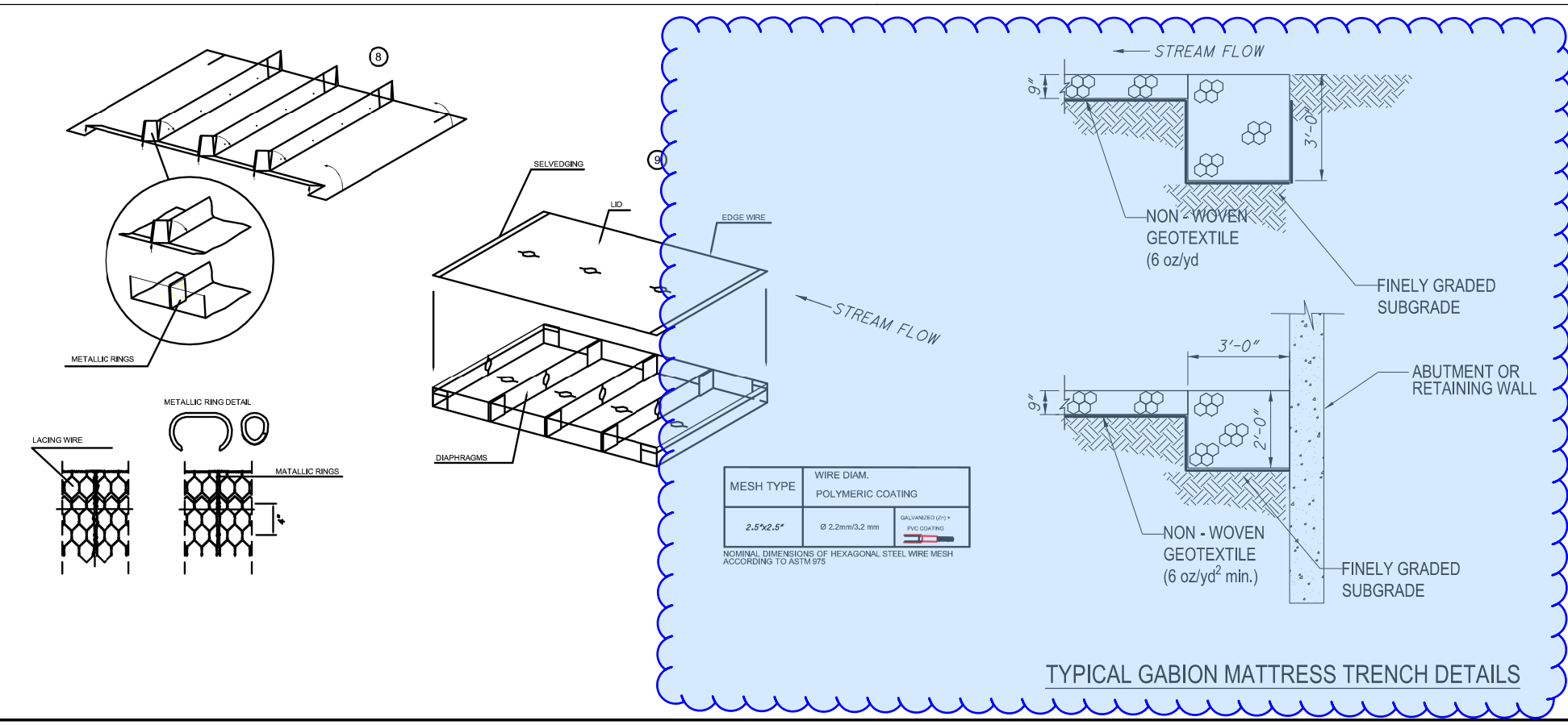
5 ANCHOR DETAIL AT UPSTREAM AND DOWNSTREAM ENDS OF CULVERT  
NOT TO SCALE



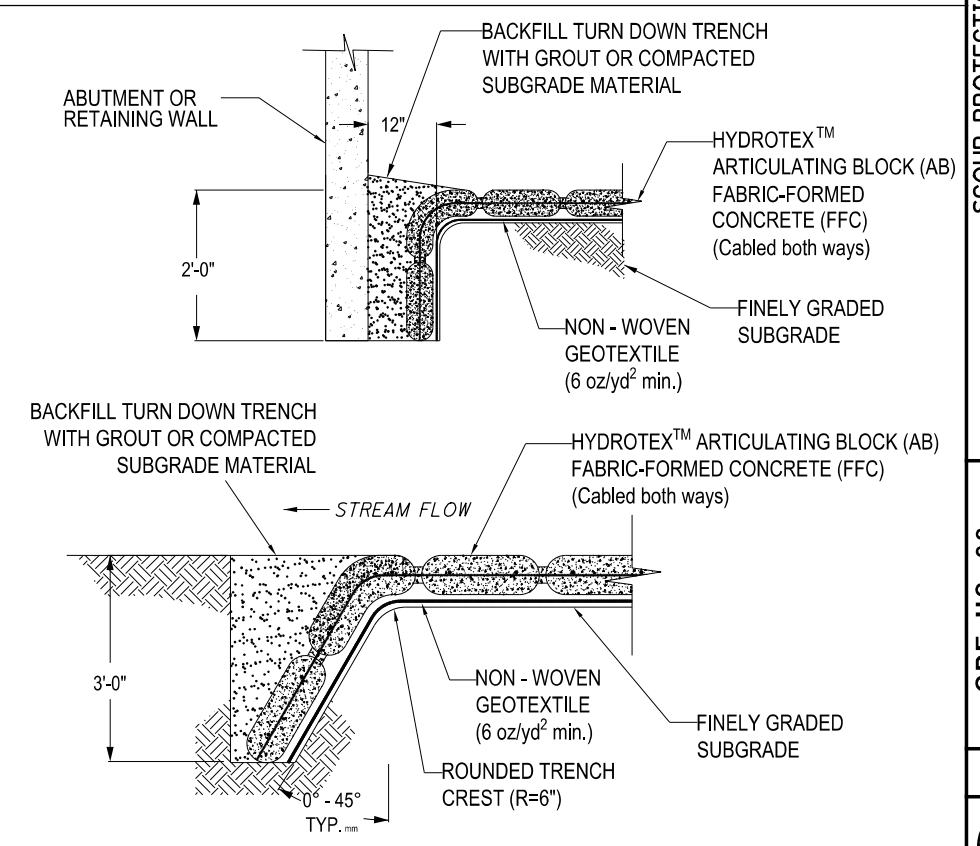
6 MAT TO MAT CONNECTION  
NOT TO SCALE

**TYPICAL ARMORFLEX ARTICULATING BLOCK DETAILS**  
NOT TO SCALE

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**TYPICAL GABION MATTRESS TRENCH DETAILS**



**TYPICAL HYDROTEX ARTICULATING BLOCK TRENCH DETAILS**



**REFER TO THE FOLLOWING STANDARD DRAWINGS**

PCB-91 DATE 01-18-13  
DS-1-92 DATE 07-18-03  
TST-1-99 DATE 07-20-18  
CS-1-08 DATE 01-19-18  
AS-1-15 DATE 07-17-15

**AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS**

844 DATED 04-20-18  
846 DATED 04-17-15  
848 DATED 01-20-17

**DESIGN SPECIFICATIONS**

NEW PORTIONS OF THIS STRUCTURE CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, LRFD 8TH EDITION, AND THE 2020 ODOT BRIDGE DESIGN MANUAL.

**ORIGINAL DESIGN LOADING**

HS20-44 AND THE ALTERNATE MILITARY LOADING

**DESIGN STRESSES**

CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE  
- 4500 PSI COMPRESSIVE STRENGTH  
CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE  
- 4000 PSI COMPRESSIVE STRENGTH (MIN.)  
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

**DECK PROTECTION METHOD**

SDC OVERLAY  
STEEL DRIP STRIP  
SEALING OF CONCRETE SURFACES

**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 CMS SECTIONS 102.05 & 105.02.

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.

**HMM CONCRETE SEALER**

THE CONTRACTOR SHALL SEAL ALL CONSTRUCTION JOINTS IN THE APPROACH SLABS WITH A HIGH MOLECULAR WEIGHT METHACRYLATE SEALER PER CMS 511.22. SEALING SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE CONCRETE ITEM.

**EXISTING BRIDGE PLANS**

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

**CONSTRUCTION RESTRICTIONS**

THE CONTRACTOR'S WORK MUST STAY WITHIN THE EXISTING R/W AND CHANNEL EASEMENTS AS SHOWN IN THE PLANS. NO ADDITIONAL EASEMENTS OR R/W HAVE BEEN OBTAINED FOR THIS WORK. ACCESS TO THE SITE(S) MAY REQUIRE LOWERING OF EQUIPMENT BY CRANE INTO THE STREAMBED, DUMPING MATERIAL OVER THE SIDE OF THE STRUCTURE, USE OF SPECIALIZED EQUIPMENT, ETC.

**ITEM 511 CONCRETE, MISC.: EMBEDDED GALVANIC ANODES (EGA)**

IN ADDITION TO THE REQUIREMENTS OF CMS 511, THIS SECTION ALSO INCLUDES FURNISHING ALL LABOR, TOOLS, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO PROPERLY INSTALL EMBEDDED GALVANIC ANODES.

**GENERAL:**

EMBEDDED GALVANIC ANODES ARE DESIGNED TO PROVIDE LOCALIZED CORROSION PROTECTION. WHEN PLACED AT THE APPROPRIATE SPACING ALONG THE PERIMETER OF CONCRETE PATCHES OR ALONG THE INTERFACE BETWEEN NEW/EXISTING CONCRETE, THE ANODES MITIGATE THE FORMATION OF NEW CORROSION SITES IN THE EXISTING CONCRETE.

EMBEDDED GALVANIC ANODES SHALL MEET THE REQUIREMENTS OF SS 844 EXCEPT AS MODIFIED BELOW.

**CONCRETE REPLACEMENT:**

COMPLETE THE REPAIR FOLLOWING NORMAL CONCRETE REPAIR PROCEDURES, TAKING CARE NOT TO CREATE ANY AIR VOIDS AROUND THE EMBEDDED GALVANIC ANODE. PLACE CONCRETE WITHIN 48 HOURS AFTER INSTALLATION OF THE ANODES.

**PAYMENT:**

EGA PROVIDED AND INSTALLED SHALL BE PAID FOR AT THE PRICE BID FOR ITEM 511 - CONCRETE, MISC.: EMBEDDED GALVANIC ANODES (EGA) - EACH.

THIS WORK WILL BE PAID FOR AT THE CONTRACT PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, AND TO THE SATISFACTION OF THE ENGINEER.

**ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN**

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN: REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

**ITEM 512 - SEALING OF CONCRETE SURFACES, (EPOXY-URETHANE)**

THIS ITEM INCLUDES SEALING THE CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE SURFACES AS SHOWN ON THE PLANS. THE COLOR OF THE URETHANE COATING SHALL BE FEDERAL COLOR STANDARD NO. 17778 (LIGHT NEUTRAL).

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE PER SQUARE YARD.

**PROPOSED WORK FOR BRIDGE No. GRE-US 68-1340**

1. REMOVE 1" OF THE ORIGINAL DECK AND APPROACH SLABS USING HYDRODEMOLITION AND REPLACE WITH A 1 3/4" SUPERPLASTICIZED DENSE CONCRETE OVERLAY.
2. REPLACE 4 FEET OF THE EXISTING DECK EDGES ON EITHER SIDE FULL DEPTH. SALVAGE HORIZONTAL REINFORCING AND REPLACE LONGITUDINAL REINFORCING. UPGRADE BARRIER TO THE TST-1-99 RAILING STANDARD. BRIDGE WIDTH AND FACE TO FACE OF RAILING SHALL BE 45'-4".
3. INSTALL GALVANIC ANODES AS A PASSIVE CATHODIC PROTECTION SYSTEM IN THE RECONSTRUCTED PORTIONS OF THE SUPERSTRUCTURE OVERHANGS. DESIGN SHALL MEET THE REQUIREMENTS OF SS 844 INCLUDING DESIGNER NOTES.
4. INSTALL POLYMER MODIFIED ASPHALT EXPANSION JOINTS BETWEEN THE DECK AND APPROACH SLABS.
5. ENCASE THE PIER PILINGS USING AN APPROVED SYSTEM. THE ENCASEMENT SHALL EXTEND FROM 4 FEET BELOW THE STREAMBED TO THE BOTTOM OF THE PIER CAP.
6. TEMPORARY WORKPADS IN THE STREAM SHALL NOT BE USED FOR THE RECONSTRUCTION OF THE DECK EDGES.
7. RECONSTRUCT ABUTMENT WING WALLS TO ACCOMMODATE MOUNTED BRIDGE RAILING POSTS.
8. SEAL EXPOSED PORTIONS OF THE ABUTMENTS, DECK EDGES, AND PIER 3 FEET OF EACH PIER END PER THE BRIDGE DESIGN MANUAL WITH EPOXY URETHANE SEALER, FEDERAL COLOR 17778.
9. REPLACE EXISTING APPROACH GUARDRAIL INCLUDING BRIDGE TERMINAL ASSEMBLIES AND END TERMINAL ASSEMBLIES.
10. MILL AND FILL THE SURFACE COURSE OF THE APPROACH ROADWAY TO THE LIMITS OF THE MOT.
11. REPAIR DISTURBED GRASS AREAS PER ITEM 659 - SEEDING AND MULCHING USING AND ODNR APPROVED SEED MIX.

**FALSEWORK AND FORMS**

ALL FALSEWORK SHALL BE DESIGNED AND PLACED SO AS TO NOT UNDULY OBSTRUCT ANY WATERWAY AND SHALL NOT USE EXPANSION ANCHORS TO SUPPORT THE FALSEWORK ON PIERS OR ABUTMENTS PER CMS 508. FOR COMPLETE SLAB REPLACEMENT, PHASE 1 FALSEWORK SHALL REMAIN IN PLACE AND PROVIDE CONTINUOUS DECK SUPPORT UNTIL THE DECK CONCRETE OF PHASES 1 & 2 HAVE FULLY CURED PER CMS 511.14. AT THAT POINT, ALL FALSE-WORK SHALL BE REMOVED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FALSEWORK THAT WILL SUPPORT NOT ONLY THE DEAD LOAD OF THE SUPERSTRUCTURE BUT ALSO THE LIVE LOADS THAT ARE TO BE APPLIED TO THE STRUCTURE AS SPECIFIED IN THESE PLANS. PAYMENT FOR THESE FALSEWORK RESTRICTIONS SHALL BE INCLUDED WITH ITEM 511- CLASS QC3 CONCRETE WITH QC/QA SUPERSTRUCTURE, AS PER PLAN.

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN**

THIS WORK CONSISTS OF THE REMOVAL OF THE EXISTING BRIDGE SUPERSTRUCTURE SLAB EDGES FOR BRIDGE GRE-US68-1335. PORTIONS OF THE EXISTING ABUTMENTS SHALL ALSO BE REMOVED. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK AND ABUTMENT REMOVALS TO PROTECT PORTIONS OF SUCH

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN**

SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY ALL REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUPERSTRUCTURE REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS. PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

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DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 BRIDGE DEPT.	DATE	REVIEWED	DRAWN	DESIGNED
	FILE NUMBER 2901498	JAC	JAC	JAC
STRUCTURAL GENERAL NOTES - 1				
BRIDGE NO. GRE-US 68-1340				
OVER MASSIES CREEK				
GRE-US 68- 9.57 / 13.35 PID No. 98510				
2 / 17				
27 42				



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**ITEM SPECIAL: PILE ENCASEMENT (cont'd)**

PAYMENT FOR THE ABOVE WORK SHALL INCLUDE ALL MATERIAL, EQUIPMENT, LABOR, SURVEY, TEMPORARY BRACING AND ANY OTHER APPURTENANCES REQUIRED TO INSTALL A COMPLETED PIER PILE ENCASEMENT SYSTEM ( PER FOOT) UNLESS ITEMIZED SEPARATELY.

PAYMENT FOR STREAMBED EARTHWORK SHALL BE INCLUDED UNDER ITEM 503 - UNCLASSIFIED EXCAVATION.

PAYMENT FOR SELF-CONSOLIDATING CONCRETE SHALL BE INCLUDED UNDER ITEM 511 - CLASS QC SCC CONCRETE WITH QC/QA, PIER, AS PER PLAN.

THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING AERIAL OR BURIED UTILITIES OR THE BRIDGE ITSELF. ANY DAMAGE TO THE EXISTING BRIDGE OR UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

**ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION**

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS 455.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S) AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

**ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION (cont'd)**

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

- UPON APPROVAL OF CONSULTANT ..... 20%
- PROGRESSIVE EQUIVALENT PAYMENTS ..... 50%
- UPON SUBMISSION OF FINAL REPORT ..... 30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

**DECK SURVEY**

THE DECK SLAB AND APPROACH SLAB ELEVATIONS PROVIDED SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL SURVEY THE EXISTING DECK SLAB AND APPROACHES TO THE BRIDGE TO ENSURE THAT A PROFILE IS RE-ESTABLISHED THAT TRANSITIONS SMOOTHLY FROM THE ASPHALT APPROACH PAVEMENT ONTO THE BRIDGE.

WHEN REQUIRED, THE SURVEY SHALL ALSO BE USED TO MANUFACTURE THE NEW STEEL EXPANSION JOINTS WITH A PROPER CROSS SLOPE THAT MATCHES EXISTING. ALL COSTS ASSOCIATED WITH THE DECK SURVEY SHALL BE CONSIDERED INCIDENTAL TO ITEM 848.

**ITEM SPECIAL - STRUCTURE, MISC.: TEMPORARY CONSTRUCTION SITE ACCESS FOR GRE-68-13.35**

IN ADDITION TO THE REQUIREMENTS SET FORTH IN THE WATERWAY PERMIT FOR THE CONSTRUCTION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL TEMPORARY ACCESS ROADS AND FILL, THE CONTRACTOR SHALL ALSO MAKE NOTE OF AND COMPLY WITH THE FOLLOWING:

THE CONSTRUCTION MATERIALS SHALL BE STORED ABOVE THE 100 YEAR FLOOD ELEVATION UNLESS PERFORMING ACTUAL INSTALLATIONS. UPON COMPLETION OF THE PROJECT, THE TEMPORARY FILLS WILL BE REMOVED AND DISPOSED OF IN AN UPLAND LOCATION OUTSIDE THE 100 YEAR FLOOD PLAIN OF THE STREAM AND ITS TRIBUTARIES.

ALL PERMANENT FILL MATERIAL SHALL BE LIMESTONE OR CONCRETE AND SHALL BE FREE OF SOILS AND ROCK FINES. ANY CONSTRUCTION FILL PLACED BELOW ELEVATION 815.54. MUST COMPLY WITH ALL ENVIRONMENTAL REQUIREMENTS. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ENGINEER PRIOR TO THE INITIATION OF ANY WORK IN THE MASSIE CREEK.

THE CONTRACTOR SHALL ENSURE THAT PERMANENT AND/OR TEMPORARY ACCESS FILL MATERIALS ARE NOT DISCHARGED BEYOND THE ODOT PROJECT RIGHT-OF-WAY LIMITS. THE CONTRACTOR IS REQUIRED TO NOTIFY ODOT IMMEDIATELY OF ANY MATERIAL THAT MOVES BEYOND THE PROJECT RIGHT-OF-WAY BOUNDARIES. THE CONTRACTOR SHALL BE SUBJECT TO ALL PERMITS, REQUIREMENTS AND PENALTIES SET BY THE WATERWAY PERMIT(S) FOR FAILING TO MEET THE DISCHARGE REQUIREMENTS AND SHALL BE RESPONSIBLE FOR RECLAMATION OF DISCHARGED MATERIALS.

THE CONTRACTOR AND THE ENGINEER SHALL PERFORM A PRE-CONSTRUCTION INSPECTION OF THE SITE. WITH THE EXCEPTION OF THE PERMANENT FILL SHOWN IN THE PLAN, THE CONTRACTOR IS REQUIRED TO RESTORE THE SITE TO PRE-CONSTRUCTION CONDITIONS. ONCE THE PERMANENT CHANNEL SCOUR PROTECTION IS PLACED, THE CONTRACTOR SHALL ALSO PERFORM SEEDING AND MULCHING OF THE WORK AREA. PRIOR TO COMPLETION OF PHYSICAL WORK, THE CONTRACTOR AND THE ENGINEER SHALL PERFORM A FINAL SITE INSPECTION TO ENSURE THAT THE SITE IS RESTORED TO PRE-CONSTRUCTION CONDITIONS. ANY VIOLATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM ODOT THAT THE RESTORATION IS SATISFACTORY. RESTORATION SHALL ADHERE TO ENVIRONMENTAL COMMITMENTS.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT THIER CONSTRUCTION WORK PLAN TO THE PROJECT ENGINEER FOR APPROVAL. THE WORK PLAN SHALL INCLUDE PROPOSED METHODS FOR COFFERDAMS, DEWATERING AND MAINTAINING STREAM FLOW WHICH ADHERE TO ENVIRONMENTAL AND FLOOD PROTECTION REQUIREMENTS. ANY MODIFICATION TO THE APPROVED CONSTRUCTION WORK PLAN REQUIRES WRITTEN APPROVAL FROM THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN. THE CONTRACTOR IS REQUIRED TO INSTALL CONSTRUCTION BMP'S IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 832. ALL COSTS ASSOCIATED WITH CONSTRUCTION BMPS AND RELATED GRADING IS INCIDENTAL TO THE WORK PERFORMED.

**ITEM SPECIAL - STRUCTURE, MISC.: TEMPORARY CONSTRUCTION SITE ACCESS FOR GRE-68-13.35 (cont'd)**

THE CONTRACTOR IS REQUIRED TO PERFORM ALL IN-STREAM WORK IN ACCORDANCE WITH IN-STREAM AND WETLAND RESTRICTIONS AND INTERIM COMPLETION DATES WHERE APPLICABLE. THE CONTRACTOR IS REQUIRED TO COMPLETELY REMOVE ALL EQUIPMENT AND STORED MATERIALS FROM THE STREAM TO AN ELEVATION AT OR ABOVE THE 100 YEAR FLOOD ELEVATION WHEN FLOODING IS ANTICIPATED. AT NO TIME SHALL ANY CONSTRUCTION EQUIPMENT BE LEFT IDLE OR ALLOWED TO WORK IN A PARTIALLY SUBMERGED CONDITION. NO DEBRIS OR TEMPORARY EARTHWORK FILL/EXCAVATION SHALL BE LEFT IN THE STREAM OR ALONG THE STREAM BANKS. ALL EXCAVATED RIVER BOTTOM MATERIALS SHALL BE DISPOSED AND/OR STORED OFF-SITE AS NECESSARY. THE DISPOSAL/STORAGE SITE SHALL BE UPLAND AND LOCATED OUTSIDE OF THE 100 YEAR FLOOD BOUNDARY OF THE MASSIE CREEK.

THE CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING AND GRADING AS REQUIRED TO ACCESS THE SITE. THE CONTRACTOR MAY CHOOSE AN ALTERNATE ENTRY LOCATION AND WILL BE RESPONSIBLE FOR ANY ACCESS AGREEMENTS. ANY MANIPULATION OF GUARDRAIL FOR TEMPORARY SITE ACCESS SHALL BE SUBMITTED IN PLAN FORM TO THE WORK ZONE MAINTENANCE ENGINEER FOR APPROVAL.

UNLESS ITEMIZED SEPERATELY, ALL EQUIPMENT, MATERIAL, LABOR AND ANY MISCELLANEOUS APPURTENANCES ASSOCIATED WITH THE CONSTRUCTION, MAINTENANCE AND SUBSEQUENT REMOVAL OF THE TEMPORARY CONSTRUCTION ACCESS AND FILL AS WELL AS SITE INSPECTIONS, SURVEY, MANIPULATION OF THE GUARDRAIL, GRADING/EARTHWORK FOR SITE ACCESS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - TEMPORARY CONSTRUCTION SITE ACCESS.

CLEARING AND GRUBBING, EXCAVATION, EMBANKMENT AND SEEDING AND MULCHING FOR SITE RESTORATION HAVE BEEN SEPERATELY ITEMIZED IN THE PLANS.

DESIGN AGENCY STATE OF OHIO DEPT. OF TRANSPORTATION DISTRICT 8 BRIDGE DEPT.	DATE	REVIEWED	DRAWN	DESIGNED	STRUCTURAL GENERAL NOTES - 4 BRIDGE NO. GRE-US 68-1340 OVER MASSIES CREEK
	STRUCTURE FILE NUMBER 2901498	CAH	CAH	CAH	
<p>GRE-US 68- 9.57 / 13.35 PID No. 98510</p>					<p>5 / 17</p> <p>30 42</p>

ESTIMATED QUANTITIES

100% 01/NHS/BR FUNDING

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP		27
503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LUMP				28
503	21100	118	CY	UNCLASSIFIED EXCAVATION	5	113			
509	10000	22,556	LB	EPOXY COATED REINFORCING STEEL	179		22,377		
509	20001	200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	50		150		27
510	10000	24	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	24				
511	43221	19	CY	CLASS QC SCC CONCRETE, PIER, AS PER PLAN		19			28
511	53014	85	CY	CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN			85		29
511	53014	6	CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN	6				29
511	81300	280	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODES (EGA)			280		27
512	10100	138	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	49	11	78		
512	10300	43	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			31	12	
512	10600	2	FT	CONCRETE REPAIR BY EPOXY INJECTION	2				
512	33000	14	SY	TYPE 2 WATERPROOFING	14				
516	13600	10	SF	1" PREFORMED EXPANSION JOINT FILLER	10				
517	70000	299	FT	RAILING (TWIN STEEL TUBE)			299		
518	21200	6	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	6				
SPECIAL	51822300	345	FT	STEEL DRIP STRIP			345		41
519	11101	10	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	10				
SPECIAL	53000200	LS	LS	STRUCTURES, MISC.: TEMPORARY CONSTRUCTION SITE ACCESS				LUMP	30
SPECIAL	53000200	LS	LS	STRUCTURES, MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	LUMP		LUMP		30
601	32105	192	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC, AS PER PLAN				192	
846	00110	41	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			41		
848	10201	955	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (T=1 3/4")			703	252	28
848	20000	955	SY	SURFACE PREPARATION USING HYDRODEMOLITION			703	252	
848	30201	27	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN			20	7	28
848	50000	6	SY	HAND CHIPPING			6		
848	50100	LS		TEST SLAB			LUMP	LUMP	
<b>ALTERNATES</b>									
SPECIAL	50771200	286	FT	PILE ENCASEMENT (ALTERNATE 1 - OCTAFORM PVC PILE JACKET)		286			29
SPECIAL	50771200	286	FT	PILE ENCASEMENT (ALTERNATE 2 - DENSO FIBERGLASS PILE JACKET)		286			29
SPECIAL	50771200	286	FT	PILE ENCASEMENT (ALTERNATE 3 - FIVE STAR FIBERGLASS PILE JACKET)		286			29
SPECIAL	50771200	286	FT	PILE ENCASEMENT (ALTERNATE 4 - MFG FIBERGLASS PILE JACKET)		286			29

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**PHASE CONSTRUCTION - 2**  
BRIDGE NO. GRE-US 68-1340  
OVER MASSIES CREEK

**GRE-US 68-9.57 / 13.35**  
PID No. 98510

6 / 17

31  
42

DESIGN AGENCY: STATE OF OHIO  
DEPT. OF TRANSPORTATION  
DISTRICT 8 BRIDGE DEPT.

DATE: 2901498

REVIEWED: STRUCTURE FILE NUMBER

DRAWN: JAC  
JAC  
REVISOR: CAH

DESIGNED: JAC  
JAC  
CHECKED: CAH