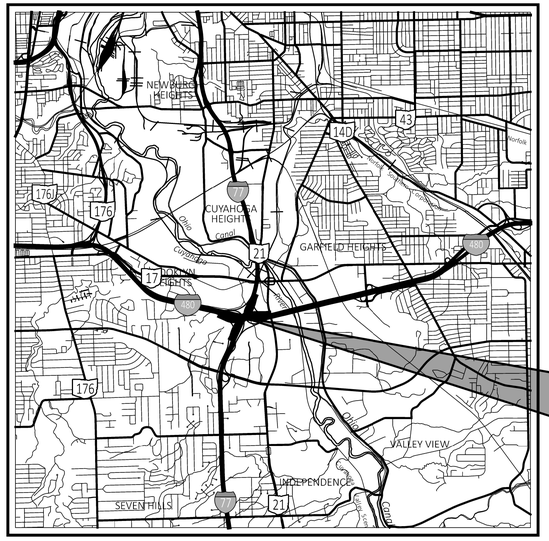
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY IR 480 17.87WN/ 17.90ES DECKS

CITY OF INDEPENDENCE
CUYAHOGA COUNTY



LOCATION MAP

LATITUDE: 41°24'26" N LONGITUDE: 81°38'49" W

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

RAMP ES		RAMP WN	
CURRENT ADT (2026)	14,800	CURRENT ADT (2026)	3,700
DESIGN YEAR ADT (2046)	16,000	DESIGN YEAR ADT (2046)	3,700
DESIGN HOURLY VOLUME (2046)	1,600	DESIGN HOURLY VOLUME (2046)	370
DIRECTIONAL DISTRIBUTION	100%	DIRECTIONAL DISTRIBUTION	100%
TRUCKS (24 HOUR B&C)	5%	TRUCKS (24 HOUR B&C)	9%
Td	4%	Td	5%
DESIGN SPEED	55 MPH	DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH	LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		DESIGN FUNCTIONAL CLASSIFICATION:	
01 - INTERSTATES (URBAN)		01 - INTERSTATES (URBAN)	
NHS PROJECT	YES	NHS PROJECT	YES

ADA DESIGN WAIVERS

N/A

INDEX OF SHEETS:

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SHEET NUMBERS
VERTICAL CLEARANCE (RAMP E-S)	04/24/2023	P.28, P.38, P.111
VERTICAL CLEARANCE (RAMP W-N)	04/05/2023	P.28, P.38, P.64, P.65
HORIZONTAL STOPPING SIGHT DISTANCE (RAMP W-N)	05/09/2023	P.37
SUPERELEVATION RATE (RAMP E-S)	05/09/2023	P.27, P.29, P.37, P.38, P.39
SUPERELEVATION RATE (RAMP W-N)	04/05/2023	P.27, P.29, P.37, P.38, P.39
SHOULDER WIDTH (RAMP E-S)	09/21/2023	P.27, P.29
SHOULDER WIDTH (RAMP W-N)	09/21/2023	P.35, P.37
DESIGN LOADING STRUCTURAL CAPACITY (RAMP E-S)	09/21/2023	P.111
DESIGN LOADING STRUCTURAL CAPACITY (RAMP W-N)	09/21/2023	P.64

FEDERAL PROJECT NUMBER

E240375

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF REPLACING THE DECKS OF THE IR-480 EB & WB RAMP BRIDGES TO IR-77 OVER MAINLINE IR-480 IN THE CITY OF INDEPENDENCE. ADDITIONAL WORK ALSO INCLUDES APPROACH SLABS, EXPANSION JOINTS, FULL DEPTH PAVEMENT AND RESURFACING RAMPS ES AND WN FOR AN APPROXIMATE LENGTH OF 5,550 FEET.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	2.0 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	3.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	5.1 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 16-18, AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

John Picuri, P.E., P.S.
District 12 Deputy Director

Jack Marchbanks, PhD
Director, Department of Transportation

PLAN PREPARED BY:

ms consultants, inc.
ENGINEERS, ARCHITECTS & PLANNERS
333 E. FEDERAL STREET
YOUNGSTOWN, OHIO 44503
PHONE (330) 744-5321

DLZ
4208 PROSPECT AVE., E
CLEVELAND, OHIO 44103

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

STANDARD CONSTRUCTION DRAWINGS

BP-2.2	1-15-21	TC-41.20	10/18/13	MT-95.30	07/19/19			SS 800	01/19/24
BP-3.1	1-19-24	TC-41.30	04/21/23	MT-95.45	07/21/23			SS 807	01/21/22
		TC-42.20	10/18/13	MT-98.29	01/17/20			SS 808	01/18/19
MGS-1.1	7-16-21	TC-52.10	10/18/13	MT-104.10	01/19/24			SS 821	04/20/12
MGS-3.1	1-19-18	TC-52.20	01/15/21	MT-105.10	01/17/20			SS 832	07/19/24
MGS-4.2	7-19-13	TC-61.10	04/21/23					SS 850	07/21/23
MGS-6.1	1-19-18	TC-61.30	07/19/19	AS-1-15	01/20/23			SS 869	10/17/14
		TC-65.10	01/17/14	AS-2-15	07/21/23			SS 908	10/20/17
DM-1.1	7-17-20	TC-65.11	01/19/24	EXJ-4-87	07/21/23			SS 921	04/20/12
DM-1.2	7-16-21	TC-87.10	07/21/23	GSD-1-19	01/15/21				
				SBR-1-20	07/21/23				
				A-1-20	01/21/22				

SUPPLEMENTAL SPECIFICATIONS

SS 800	01/19/24
SS 807	01/21/22
SS 808	01/18/19
SS 821	04/20/12
SS 832	07/19/24
SS 850	07/21/23
SS 869	10/17/14
SS 908	10/20/17
SS 921	04/20/12

SPECIAL PROVISIONS

WATERWAY PERMIT 1/5/24

ENGINEER'S SEAL
MS CONSULTANTS, INC.
STATE OF OHIO
JONATHAN DAVID HREN
E-69952
REGISTERED PROFESSIONAL ENGINEER

ENGINEER'S SEAL
DLZ
STATE OF OHIO
MARK DAVID POWELL
E-69758
REGISTERED PROFESSIONAL ENGINEER

TITLE SHEET

DESIGN AGENCY
ms consultants, inc.

DESIGNER MSN
REVIEWER SWG 02/01/24
PROJECT ID 110810
SHEET P.1 TOTAL 158

CUY IR 480 17.87WN/17.90ES DECKS

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 10/24/2024 TIME: 3:23:19 PM USER: srammo
N:\01\60\08393-00\110810\400-Engineering\Roadway\Sheets\110810_GT001.dgn

SHEET NUM.											PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
10	11	12	13	15	53	54					01/BRO/13						
																TRAFFIC CONTROL	
						24					24	620	00500	24	EACH	DELINEATOR, POST GROUND MOUNTED	
						6					6	620	11000	6	EACH	DELINEATOR, BRACKET MOUNTED	
						72					72	621	00100	72	EACH	RPM	
						2					2	625	32000	2	EACH	GROUND ROD	
						12					12	626	00102	12	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	
						4					4	626	00110	4	EACH	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL	
						52.5					52.5	630	02100	52.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
						141.6					141.6	630	03100	141.6	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
						8					8	630	08600	8	EACH	SIGN POST REFLECTOR	
					200	80.5					280.5	630	80100	280.5	SF	SIGN, FLAT SHEET	
						15					15	630	84900	15	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						17					17	630	86002	17	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
				1							1	630	89896	1	EACH	REMOVAL OF TEMPORARY OVERLAY SIGN AND REERECTION	
						2					2	630	97700	2	EACH	SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY	53
						2					2	632	64020	2	EACH	PEDESTAL FOUNDATION	
						2.1					2.1	807	12010	2.1	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
						1.68					1.68	850	10010	1.68	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
						0.42					0.42	850	20010	0.42	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
																STRUCTURE OVER 20 FOOT SPAN (CUY-00480-17.87) (FOR SUBSUMMARY SEE SHEET 67)	
																STRUCTURE OVER 20 FOOT SPAN (CUY-00480-17.90) (FOR SUBSUMMARY SEE SHEET 114)	
																MAINTENANCE OF TRAFFIC	
				100							100	519	12300	100	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
				250							250	614	11110	250	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		LS									LS	614	12421	LS		DETOUR SIGNING, AS PER PLAN	12
			6								6	614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	
			57								57	614	18601	57	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	13
		2									2	616	10000	2	MGAL	WATER	
				60							60	622	41101	60	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	15
			76								76	808	18700	76	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																INCIDENTALS	
LS											LS	614	11000	LS		MAINTAINING TRAFFIC	
	6										6	619	16021	6	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	11
	LS										LS	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	2, 11
											LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

CUY IR 480 17.87WN/17.90ES DECKS

DESIGN AGENCY

ms consultants, inc.

DESIGNER MGW

REVIEWER SWG 02/01/24

PROJECT ID 110810

SHEET P.22 | TOTAL 158

SIGNING SUBSUMMARY

SHEET NO.	REF. NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD (EACH)	630 GROUND MOUNTED SUPPORT, NO. 2 POST (FT)	630 GROUND MOUNTED SUPPORT, NO. 3 POST (FT)	630 SIGN POST REFLECTOR (EACH)	630 SIGN, FLAT SHEET (SF)	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL (EACH)	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL (EACH)	630 SIGNING, MISC.: SOLAR-POWERED RECTANGULAR RAPID FLASHING BEACON (RRFB) SIGN ASSEMBLY (EACH)	632 PEDESTAL FOUNDATION (EACH)
55		-	-	-	-	-									
	R1	RAMP E-S	57+57	LT	-	-						1	2		
	S1	RAMP E-S	57+57	LT	W4-3R	48" X 48"			28.0	2	16.00				
	R2	RAMP E-S	63+76	RT	-	-						1	1		
	S2	RAMP E-S	63+76	RT	I-H25A	12" X 12"		8.5			1.00				
56		-	-	-	-	-									
	R3	RAMP E-S	72+41	LT	-	-						1	1		
	S3	RAMP E-S	72+41	LT	OM-3R	12" X 36"		11.0			3.00				
	R4	RAMP E-S	72+91	RT	-	-						1	1		
	S4	RAMP E-S	72+91	RT	OM-3L	12" X 36"		11.0			3.00				
	R5	RAMP E-S	80+61	LT	-	-						1	1		
	S5	RAMP E-S	80+61	LT	D10-H5A	30" X 30"			13.0		6.25				
58		-	-	-	-	-									
	R6	RAMP W-N	56+54	RT	-	-						1	1		
	S6	RAMP W-N	56+54	RT	D10-H5A	30" X 30"			13.0		6.25				
59		-	-	-	-	-									
	R7	RAMP W-N	66+38	LT	-	-						1	1		
	S7	RAMP W-N	66+38	LT	OM-3L	12" X 36"		11.0			3.00				
	R8	RAMP W-N	66+93	RT	-	-						1	1		
	S8	RAMP W-N	66+93	RT	OM-3R	12" X 36"		11.0			3.00				
	R9	RAMP W-N	75+4	LT	-	-						1	2		
	S9	RAMP W-N	75+4	LT	W3-2	24" X 24"			29.8	2	16.00				
	R10	RAMP W-N	75+8	RT	-	-						1	2		
	S10	RAMP W-N	75+8	RT	W3-2	24" X 24"			29.8	2	16.00				
60		-	-	-	-	-									
	R11	RAMP W-N	81+22	RT	-	-						1	2		
	S11	RAMP W-N	81+22	RT	R1-2	24" X 24"			28.0	2	6.93				
61	R12											2	1		
	S12				RRFB		1							1	1
	R13											2	1		
	S12				RRFB		1							1	1
TOTALS CARRIED TO GENERAL SUMMARY							2	52.5	141.6	8	80.5	15	17	2	2

PAVEMENT MARKING SUBSUMMARY

REF NO.	SHEET NO.	STATION TO STATION					620 DELINEATOR, POST GROUND MOUNTED, TYPE C (WHITE) (EACH)	620 DELINEATOR, BRACKET MOUNTED,TYPE C (WHITE) (EACH)	621 RPM (EACH)		807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE (FT/MI)	807 WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW (FT/MI)	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) (FT/MI)	850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE) (FT/MI)
WE-1	55	56+68	BL	TO	66+79	BL					1011		1011	
YE-1	55	56+68	RT	TO	66+91	RT						1015	1015	
WE-2	55	66+79	BL	TO	68+00	BL					121			121
YE-2	55	66+91	RT	TO	68+00	RT						108		108
WE-3	56	68+0	BL	TO	72+43	BL					443			443
YE-3	56	68+0	RT	TO	72+71	RT						466		466
WE-4	56	72+43	BL	TO	80+00	BL					757		757	
YE-4	56	72+71	RT	TO	80+00	RT						723	723	
WE-5	57	80+00	BL	TO	82+72	BL					272		272	
YE-5	57	80+00	RT	TO	82+72	RT						272	272	
RAMP E-S		56+68		TO	82+72		11	3	34					
WE-6	58	53+46	BL	TO	65+00	BL					1154		1154	
YE-6	58	53+46	LT	TO	65+00	LT						1154	1154	
WE-7	59	65+00	BL	TO	66+87	BL					187		187	
YE-7	59	65+00	LT	TO	66+62	LT						159	159	
WE-8	59	66+87	BL	TO	72+20	BL					533			533
YE-8	59	66+62	LT	TO	72+09	LT						541		541
WE-9	59	72+20	BL	TO	77+00	BL					480		480	
YE-9	59	72+09	LT	TO	77+00	LT						485	485	
WE-10	60	77+00	BL	TO	82+90	BL					590		590	
YE-10	60	77+00	LT	TO	82+90	LT						590	590	
RAMP W-N		53+46		TO	82+90		13	3	38					
TOTAL FEET											5548	5513	8849	2212
TOTAL MILES											1.05	1.05	1.68	0.42
TOTALS CARRIED TO GENERAL SUMMARY							24	6	72		2.10		1.68	0.42

BARRIER REFLECTOR SUBSUMMARY

REF NO.	LOCATION	STATION TO STATION					626 BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL (WHITE/RED) (EACH)	626 BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL (WHITE/RED) (EACH)
PARAPET	RAMP E-S	66+87.00	LT	TO	72+14.00	LT	6	
GUARDRAIL		72+14.00	LT	TO	73+77.00	LT		2
GUARDRAIL	RAMP W-N	65+52.00	RT	TO	67+13.00	RT		2
PARAPET		67+13.00	RT	TO	72+13.00	RT	6	
TOTALS CARRIED TO GENERAL SUMMARY							12	4

TRAFFIC CONTROL SUBSUMMARY

DESIGN AGENCY
ms consultants, inc.

DESIGNER
CLB

REVIEWER
KWR 02/01/24

PROJECT ID
110810

SHEET P.54 | TOTAL 158

CUY IR 480 17.87WN/17.90ES DECKS

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED 01-20-23	GSD-1-19	REVISED 01-15-21
AS-2-15	REVISED 07-21-23	SBR-1-20	REVISED 07-21-23
EXJ-4-87	REVISED 07-21-23	A-1-20	REVISED 01-21-22

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800-2023 SEE PROPOSAL
869 DATED 10-17-14

DESIGN SPECIFICATIONS

THE SUPERSTRUCTURE, INCLUDING THE DECK AND HLMR BEARINGS, 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.

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.

DESIGN LOADING

DESIGN LOADING INCLUDES:

DECK:	VEHICULAR LIVE LOAD: HL-93 FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT
EXISTING BEAMS:	LOAD RATED WITH VEHICULAR LIVE LOAD: HL-93 FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT
EXISTING SUBSTRUCTURE:	VEHICULAR LIVE LOAD: CF-130(57) FUTURE WEARING SURFACE (FWS) OF 0.00 KIPS/SQ.FT
EXISTING FOUNDATION:	VEHICULAR LIVE LOAD: CF-130(57) FUTURE WEARING SURFACE (FWS) OF 0.00 KIPS/SQ.FT

THIS BRIDGE RECEIVED AN APPROVED DESIGN EXCEPTION FOR DESIGN LOADING STRUCTURAL CAPACITY.

DESIGN DATA

CONCRETE CLASS:
COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS:
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI

GFRP REINFORCEMENT (RAILINGS)

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE

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

MAXIMUM REMOVAL LIMITS

SOUND THE CONCRETE TO DETERMINE THE LIMITS OF THE CONCRETE TO BE REMOVED AND COMPARE THESE LIMITS TO THE AREAS SHOWN IN THE PLANS. IF NEW AREAS ARE DISCOVERED OR IF THE DIMENSIONS OF THE PLAN AREAS INCREASE BY MORE THAN 25% IN ANY DIRECTION, DOCUMENT THE AREAS AND NOTIFY THE ENGINEER FOR EVALUATION TWO WEEKS PRIOR TO REMOVAL. THE ENGINEER WILL DETERMIN IF PATCHING IN DISCRETE SECTIONS/STAGES IN IS NEEDED OR IF THE INSTALLATION OF TEMPORARY FALSWORK IS REQUIRED.

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

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, CONCRETE BRIDGE RAILINGS, DECK JOINTS, BEARINGS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS-FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH 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 C&MS 501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING BEGINS, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING 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. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

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 OVER STRUCTURAL MEMBERS (STEEL GIRDERS), 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. DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING 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. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN DESCRIPTION: (CONTINUED)

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

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, AS PER PLAN.

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.

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.

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 C&MS, SECTIONS 102.05, 105.02, AND 513.04. 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.

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

REMOVAL OF THE EXISTING ASPHALT WEARING COURSE SHALL BE INCLUDED WITH ITEM 202, APPROACH SLAB REMOVED, AS PER PLAN.

ITEM 503 - UNCLASSIFIED EXCAVATION

EXCAVATION IN FRONT OF THE EXISTING ABUTMENTS AND SIDES OF WINGWALLS AS PER C&MS 503.09 SHALL BE A LUMP SUM QUANTITY AND IS INCLUDED WITH ITEM 503, UNCLASSIFIED EXCAVATION.

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH CMS ITEM 503 EXCEPT THAT THE BACKFILL MATERIAL SHALL BE MATERIAL CONFORMING TO CMS 703.17 AND MEET THE COMPACTION REQUIREMENTS OF CMS 304.05. IN ADDITION, THE BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN 6" LIFTS. EXCAVATION OF THE EXISTING POROUS BACKFILL SHALL BE INCLUDED IN THIS ITEM.

ITEM 509 - CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT CONCRETE REINFORCEMENT BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING STEEL REINFORCEMENT 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 CONCRETE REINFORCEMENT OF THE SAME SIZE, COATING, AND MATERIAL AT NO COST TO THE DEPARTMENT.

A CONTINGENCY QUANTITY OF 300 POUNDS IS INCLUDED IN THE ESTIMATED QUANTITIES FOR EACH STRUCTURE.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL WITH AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. ABUTMENT BARS NO. A401, #6 DOWELS, A801 & A1001 SHALL BE GALVANIZED AND THE ADHESIVE MATERIAL FOR THE DOWEL HOLE SHALL MEET THE REQUIREMENTS OF ACI 355.4. ALL WORK AND EQUIPMENT REQUIRED FOR LOCATING EXISTING BARS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 510, DOWEL HOLES WITH NON-SHRINK, NONMETALLIC GROUT AS PER PLAN.

ITEM 513 - TRIMMING OF BEAM END, AS PER PLAN

PRIOR TO DECK REMOVAL OPERATIONS, THE CONTRACTOR SHALL INSPECT THE ENDS OF THE EXISTING GIRDERS TO DETERMINE IF TRIMMING IS REQUIRED. A CONTINGENCY QUANTITY OF

2 EACH (CUY-00480-17.870)
2 EACH (CUY-00480-17.900)

IS INCLUDED IN THE QUANTITIES FOR ESTIMATING. ANY ADDITIONAL TRIMMING OPERATIONS SHALL BE INCLUDED WITH THIS ITEM AND APPROVED BY THE ENGINEER.

AFTER TRIMMING, REMOVE FINS, TEARS, SLIVERS AND SHARP EDGES FROM THE STEEL BY GRINDING. CLEAN AND PRIME THE TRIMMED GIRDER ENDS. PRIME COAT SHALL BE INCLUDED WITH ITEM 514, FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT.

PAYMENT WILL BE MADE BASED ON ACTUAL WORK PERFORMED. REFER TO THE GIRDER TRIMMING DETAIL ON SHEETS 27/47 AND 31/48 FOR CRITERIA TO DETERMINE IF TRIMMING IS NECESSARY.

STRUCTURE NOTES (1 OF 2)
BRIDGE NO. CUY-00480-17.870/17.900
RAMP W-N & RAMP E-S UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806351
SFN 1806343
DESIGN AGENCY
ms consultants. inc.

DESIGNER	CHECKER
SJR	WER

REVIEWER JDH 06/14/24
PROJECT ID 110810

SUBSET	TOTAL
1	2

SHEET	TOTAL
P.62	158

CUY IR 480 17.87WN/17.90ES DECKS
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CALC. BY:	DFK	08/15/2023
CHECKED BY:	SJR	06/06/2024

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL	SHEET REF.
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					1 /2 *
202	22901	89	SY	APPROACH SLAB REMOVED, AS PER PLAN				89	1 /2 *
503	21300	LS		UNCLASSIFIED EXCAVATION					1 /2 *
509	10000	156,810	LB	EPOXY COATED STEEL REINFORCEMENT	14,344	2,305	140,161		
509	20001	300	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN				300	1 /2 *
509	26000	3,037	LB	GALVANIZED STEEL REINFORCEMENT	3,037				
509	30020	21,439	FT	NO. 4 DEFORMED GFRP REINFORCEMENT	1,244		20,195		
510	10001	685	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	323	362			1 /2 *
511	34447	437	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			437		37 /47
511	34450	156	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			156		
511	42510	14	CY	CLASS QC1 CONCRETE, PIER CAP		14			
511	45710	105	CY	CLASS QC1 CONCRETE, ABUTMENT	105				
512	10100	2,143	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	232	687	1,224		
512	33000	13	SY	TYPE 2 WATERPROOFING	13				
512	74000	687	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		687			
513	10201	2,150	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			2,150		2 /2 *
513	10281	13,080	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN			13,080		2 /2 *
513	20000	4,436	EACH	WELDED STUD SHEAR CONNECTORS			4,436		
513	21001	2	EACH	TRIMMING OF BEAM END, AS PER PLAN			2		1 /2 *
514	00201	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN					2 /2 *
516	11210	90	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			90		
516	13600	113	SF	1" PREFORMED EXPANSION JOINT FILLER	113				
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2 /2 *
518	12300	2	EACH	SCUPPERS, INCLUDING SUPPORTS			2		
518	20000	51	SY	PREFABRICATED GEOCOMPOSITE DRAIN	51				
518	21200	28	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	28				
518	40000	89	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	89				
518	40011	37	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	37				14 /47, 16 /47
519	11101	588	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	4	584			2 /2 *
526	30010	180	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				180	
526	90010	82	FT	TYPE A INSTALLATION				82	
869	00100	24	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS	8	16			

LEGEND

* SHEET REFERENCES 1/2 AND 2/2 ARE THE STRUCTURE NOTES THAT PRECEDE THE STRUCTURE PLANS.

ESTIMATED QUANTITIES
BRIDGE NO. CUY-00480-17.870
RAMP W-N UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806351

DESIGN AGENCY
ms consultants. inc.

DESIGNER	CHECKER
DFK	SJR

REVIEWER: JDH 06/14/24

PROJECT ID: 110810

SUBSET	TOTAL
4	47

SHEET	TOTAL
P.67	158

CUY IR 480 17.87WN/17.90ES DECKS

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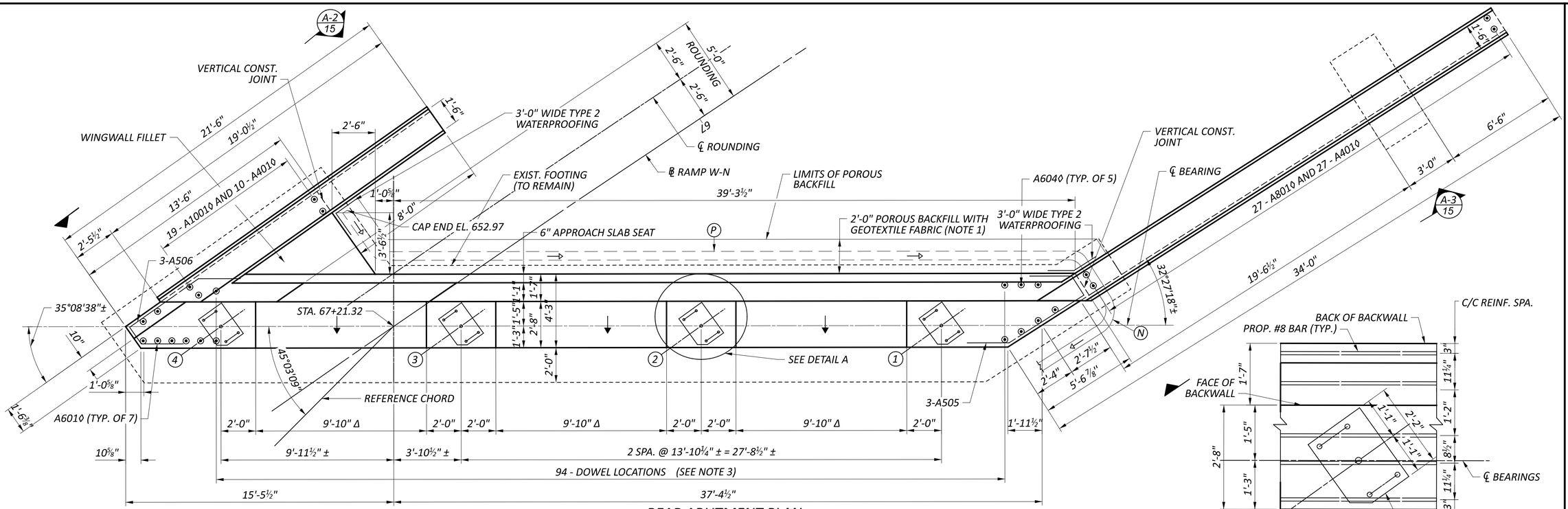
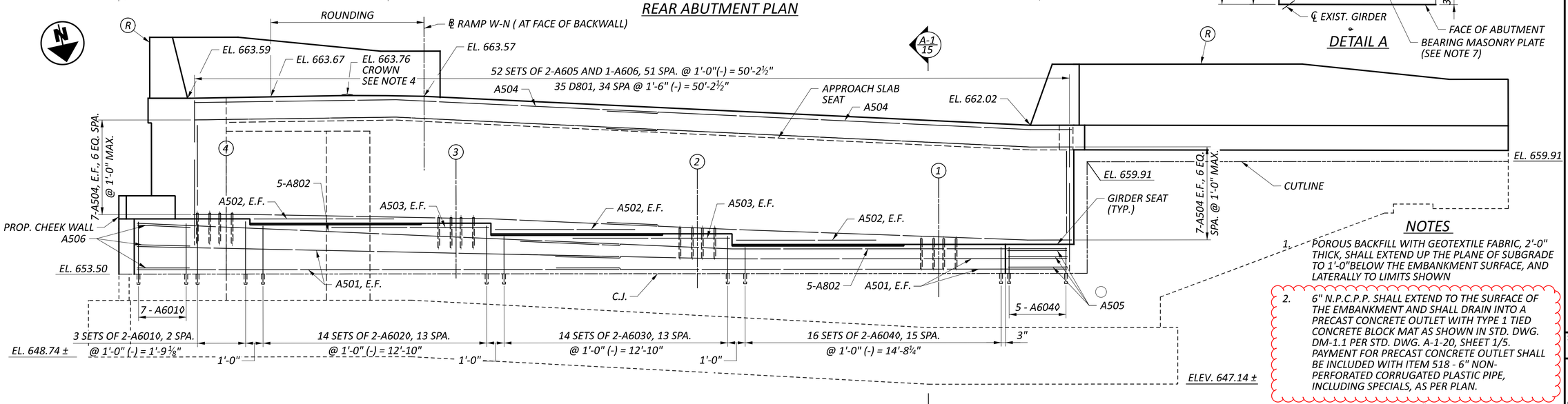


REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION

GIRDER SEAT ELEVATIONS				
GIRDER	1	2	3	4
ELEVATION	655.17	655.79	656.41	656.67

LEGEND

◊ - DOWEL BAR TO BE DRILLED AND GROUTED 9" INTO EXISTING CONCRETE GIRDER SEAT IN ACCORDANCE WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN. ALL DOWEL BARS SHALL BE GALVANIZED STEEL REINFORCEMENT.

(R) - SINGLE SLOPE CONCRETE BRIDGE RAILING ON BACKWALL PER STD. DWG. SBR-1-20. FOR REINFORCING STEEL DETAILS, SEE SHEET 39/47.

(P) - 6" PERFORATED CORRUGATED PLASTIC PIPE SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)

(N) - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, TIED TO 6" PERFORATED CORRUGATED PLASTIC PIPE AND SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)

△ - ¾" SLOPE BETWEEN BEAM SEATS AWAY FROM BACKWALL

NOTES

1. POROUS BACKFILL WITH GEOTEXTILE FABRIC, 2'-0" THICK, SHALL EXTEND UP THE PLANE OF SUBGRADE TO 1'-0"BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO LIMITS SHOWN
2. 6" N.P.C.P.P. SHALL EXTEND TO THE SURFACE OF THE EMBANKMENT AND SHALL DRAIN INTO A PRECAST CONCRETE OUTLET WITH TYPE 1 TIED CONCRETE BLOCK MAT AS SHOWN IN STD. DWG. DM-1.1 PER STD. DWG. A-1-20, SHEET 1/5. PAYMENT FOR PRECAST CONCRETE OUTLET SHALL BE INCLUDED WITH ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.
3. SHIFT DOWELS UP TO 3" AS NEEDED TO AVOID BEARING MASONRY PLATE.
4. THE FINAL TOP OF DECK ELEVATIONS AT THE CROWN DO NOT INCLUDE THE CORRECTION FOR ROUNDING. DEDUCT 0.07' FOR FINAL ELEVATION.
5. MINIMUM LAP LENGTH SHALL BE 2'-5" FOR #5 BARS, 3'-7" FOR #6 BARS, AND 4'-11" FOR #8 BARS.
6. FOR SECTION A-1, A-2 & A-3, SEE SHEET 15/47.
7. FOR REMOVAL DETAILS, SEE SHEET 7/47 & 8/47.
8. FOR BEARING DETAILS, SEE SHEET 31/47.
9. PILING NOT SHOWN FOR CLARITY.

REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. CUY-00480-17.870
RAMP W-N UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806351
DESIGN AGENCY DLZ
DESIGNER JPK | CHECKER ARA
REVIEWER MDP 06/14/24
PROJECT ID 110810
SUBSET 14 | TOTAL 47
SHEET P.77 | TOTAL 158

CUY IR 480 17.87WN/17.90ES DECKS

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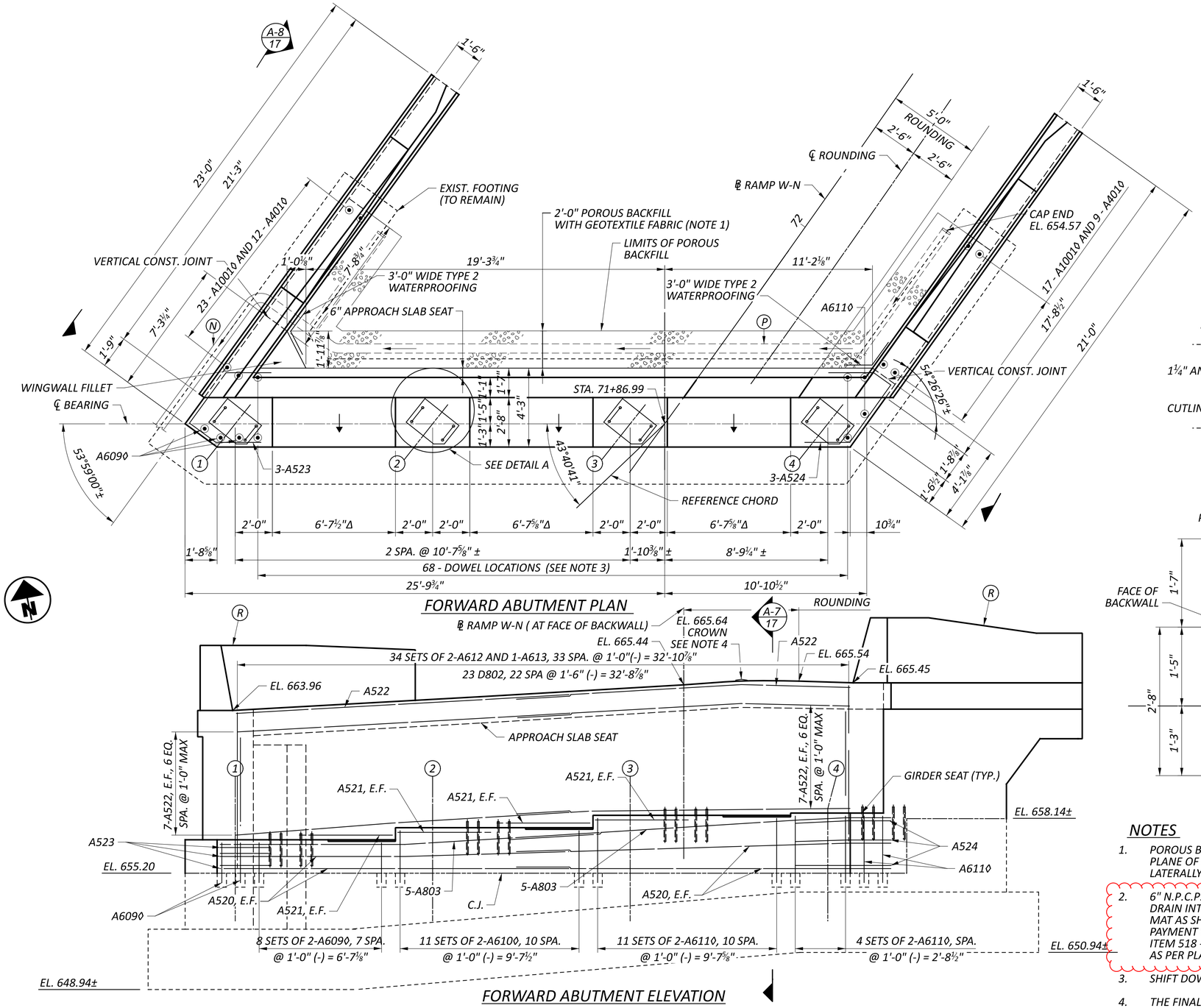
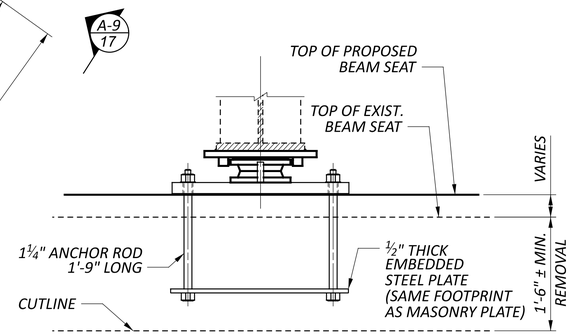


GIRDER SEAT ELEVATIONS				
GIRDER	1	2	3	4
ELEVATION	657.00	657.65	658.32	658.44

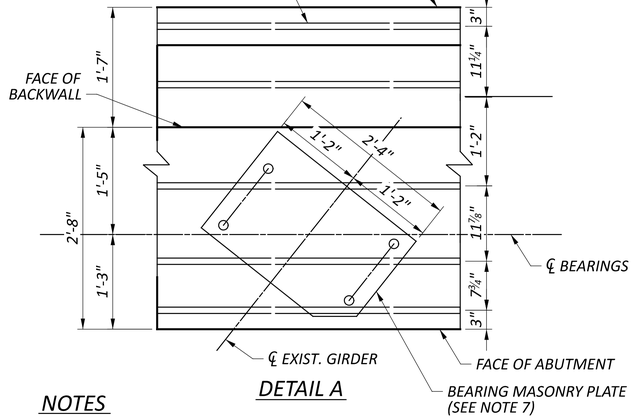
LEGEND

- ◊ - DOWEL BAR TO BE DRILLED AND GROUTED 9" INTO EXISTING CONCRETE GIRDER SEAT IN ACCORDANCE WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN. ALL DOWEL BARS SHALL BE GALVANIZED STEEL REINFORCEMENT.
- (R) - SINGLE SLOPE CONCRETE BRIDGE RAILING ON BACKWALL PER STD. DWG. SBR-1-20. FOR REINFORCING STEEL DETAILS, SEE SHEET 39/47.
- (P) - 6" PERFORATED CORRUGATED PLASTIC PIPE SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)
- (N) - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, TIED TO 6" PERFORATED CORRUGATED PLASTIC PIPE AND SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)
- △ - ¾" SLOPE BETWEEN BEAM SEATS AWAY FROM BACKWALL



BEARING ANCHOR DETAIL

EMBEDDED PLATE SHALL BE INCLUDED WITH ITEM 869 FOR PAYMENT.



DETAIL A

NOTES

1. POROUS BACKFILL WITH GEOTEXTILE FABRIC, 2'-0" THICK, SHALL EXTEND UP THE PLANE OF SUBGRADE TO 1'-0"BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO LIMITS SHOWN.
2. 6" N.P.C.P.P. SHALL EXTEND TO THE SURFACE OF THE EMBANKMENT AND SHALL DRAIN INTO A PRECAST CONCRETE OUTLET WITH TYPE 1 TIED CONCRETE BLOCK MAT AS SHOWN IN STD. DWG. DM-1.1 PER STD. DWG. A-1-20, SHEET 1/5. PAYMENT FOR PRECAST CONCRETE OUTLET SHALL BE INCLUDED WITH ITEM 518 - 6" NON- PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.
3. SHIFT DOWELS UP TO 3" AS NEEDED TO AVOID BEARING MASONRY PLATE.
4. THE FINAL TOP OF DECK ELEVATIONS AT THE CROWN DO NOT INCLUDE THE CORRECTION FOR ROUNDING. DEDUCT 0.07' FOR FINAL ELEVATION.
5. MINIMUM LAP LENGTH SHALL BE 2'-5" FOR #5 BARS, 3'-7" FOR #6 BARS, AND 4'-11" FOR #8 BARS.
6. FOR SECTIONS A-7, A-8, AND A-9, SEE SHEET 17/47.
7. FOR REMOVAL DETAILS, SEE SHEETS 7/47 AND 8/47.
8. FOR BEARING DETAILS, SEE SHEET 32/47.
9. PILING NOT SHOWN FOR CLARITY.

FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. CUY-00480-17.870
RAMP W-N UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806351
DESIGN AGENCY DLZ
DESIGNER JPK | CHECKER ARA
REVIEWER MDP 06/14/24
PROJECT ID 110810
SUBSET 16 | TOTAL 47
SHEET P.79 | TOTAL 158

CUY IR 480 17.87WN/17.90 ES DECKS
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CALC. BY:	DFK	08/15/2023
CHECKED BY:	SJR	06/06/2024

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL	SHEET REF.
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					1 /2 *
202	22901	89	SY	APPROACH SLAB REMOVED, AS PER PLAN				89	1 /2 *
503	21300	LS		UNCLASSIFIED EXCAVATION					1 /2 *
509	10000	165,149	LB	EPOXY COATED STEEL REINFORCEMENT	13,935	2,250	148,964		
509	20001	300	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN				300	1 /2 *
509	26000	2,854	LB	GALVANIZED STEEL REINFORCEMENT	2,854				
509	30020	22,304	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			22,304		
510	10001	664	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	288	376			1 /2 *
511	34447	461	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			461		38 /48
511	34450	163	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			163		
511	42510	16	CY	CLASS QC1 CONCRETE, PIER CAP		16			
511	45710	103	CY	CLASS QC1 CONCRETE, ABUTMENT	103				
512	10100	2,206	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	222	679	1,305		
512	10600	25	FT	CONCRETE REPAIR BY EPOXY INJECTION		25			
512	33000	12	SY	TYPE 2 WATERPROOFING	12				
512	74000	679	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		679			
513	10201	2,150	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			2,150		2 /2 *
513	10281	14,619	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN			14,619		2 /2 *
513	20000	4,488	EACH	WELDED STUD SHEAR CONNECTORS			4,488		
513	21001	2	EACH	TRIMMING OF BEAM END, AS PER PLAN			2		1 /2 *
514	00201	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN					2 /2 *
516	11210	95	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			95		
516	13600	89	SF	1" PREFORMED EXPANSION JOINT FILLER	89				
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2 /2 *
518	12300	2	EACH	SCUPPERS, INCLUDING SUPPORTS			2		
518	20000	53	SY	PREFABRICATED GEOCOMPOSITE DRAIN	53				
518	21200	28	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	28				
518	40000	97	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	97				
518	40011	34	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	34				14 /48, 16 /48
519	11101	697	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7	690			2 /2 *
526	30010	181	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				181	
526	90010	91	FT	TYPE A INSTALLATION				91	
869	00100	24	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS	8	16			

LEGEND

* SHEET REFERENCES 1/2 AND 2/2 ARE THE STRUCTURE NOTES THAT PRECEDE THE STRUCTURE PLANS.

ESTIMATED QUANTITIES
BRIDGE NO. CUY-00480-17.900
RAMP E-S UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806343
DESIGN AGENCY
ms consultants, inc.

DESIGNER	CHECKER
DFK	SJR

REVIEWER: JDH 06/14/24
PROJECT ID: 110810
SUBSET: 4 TOTAL: 48
SHEET: P.114 TOTAL: 158

CUY IR 480 17.87WN/17.90ES DECKS

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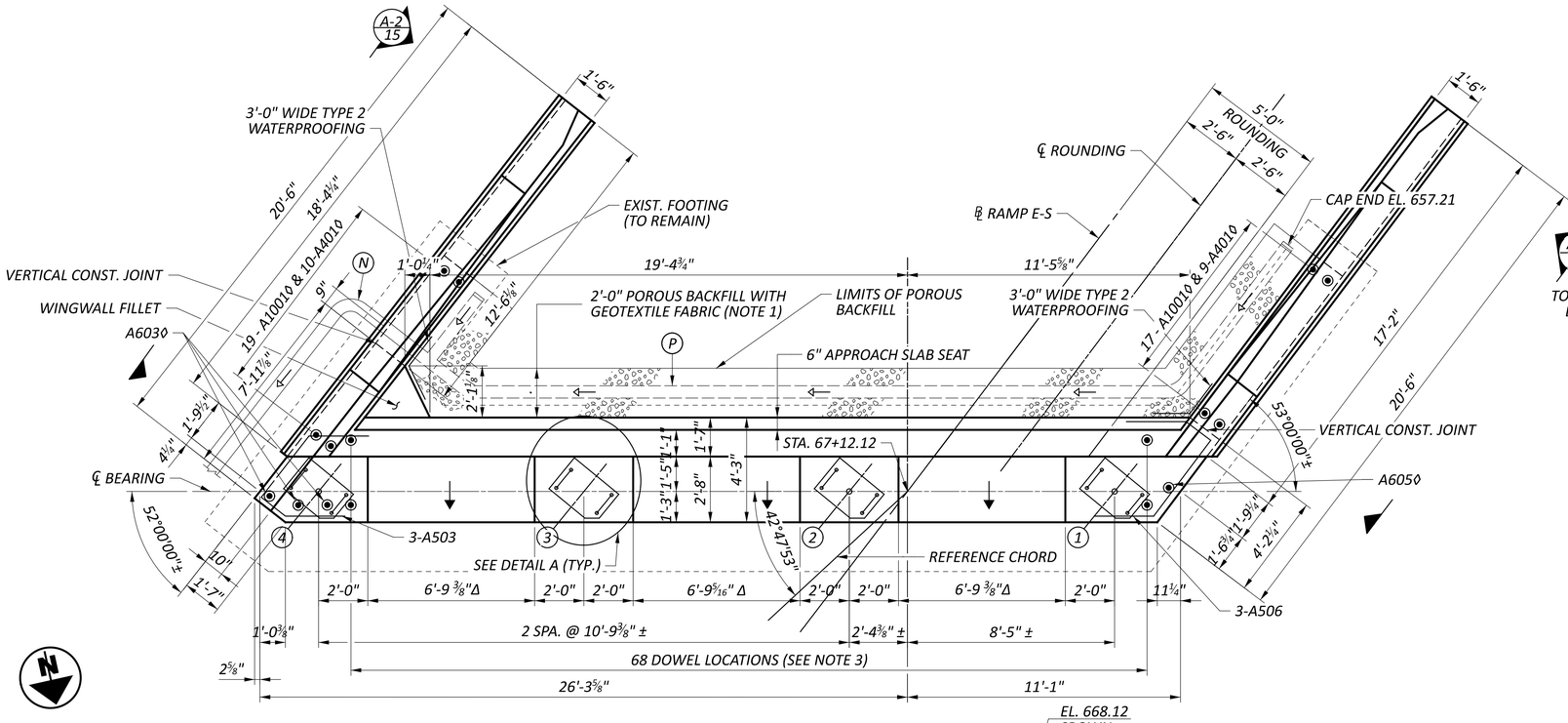
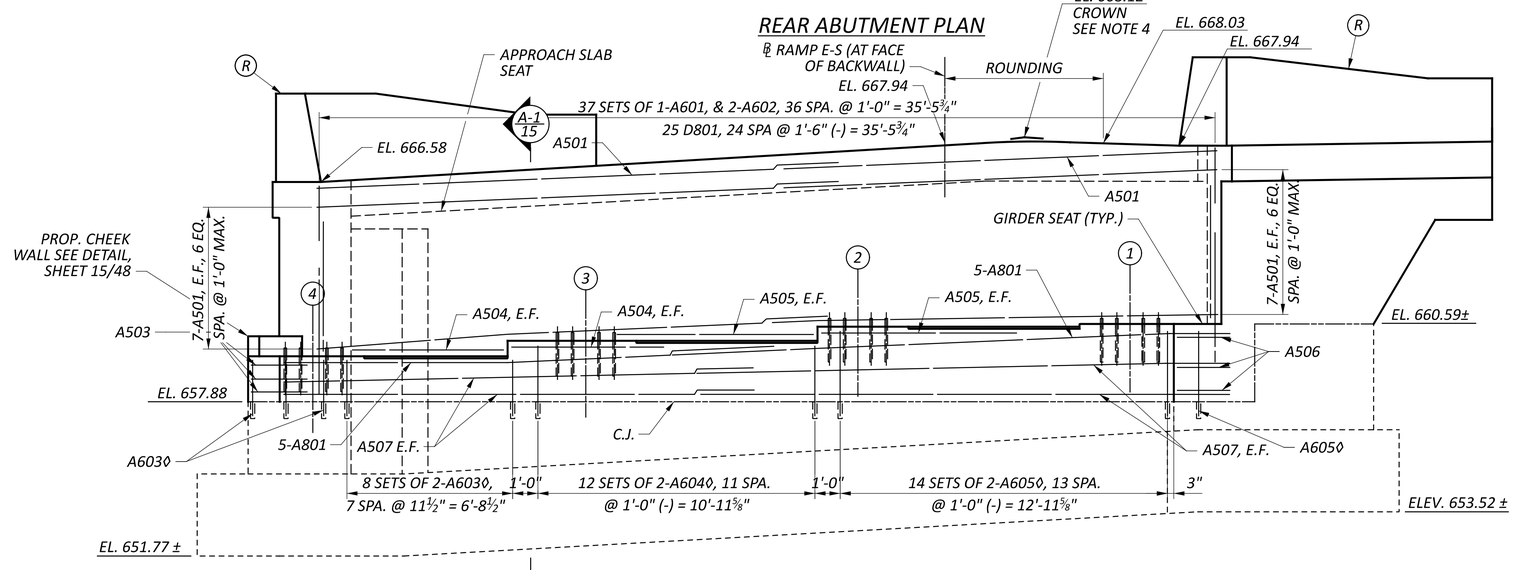


REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION

GIRDER SEAT ELEVATIONS				
GIRDER	1	2	3	4
ELEVATION	660.89	660.78	660.24	659.68

LEGEND

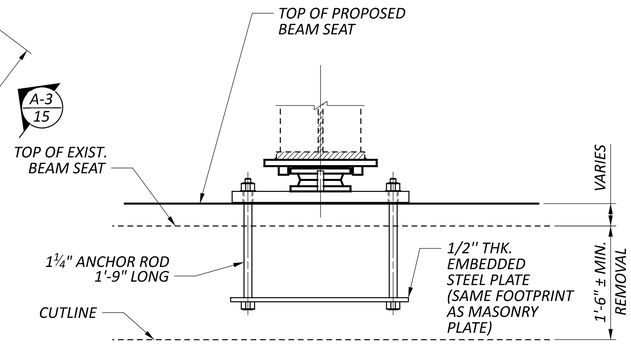
◊ - DOWEL BAR TO BE DRILLED AND GROUTED 9" INTO EXISTING CONCRETE GIRDER SEAT IN ACCORDANCE WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN. ALL DOWEL BARS SHALL BE GALVANIZED STEEL REINFORCEMENT.

(R) - SINGLE SLOPE CONCRETE BRIDGE RAILING ON BACKWALL PER STD. DWG. SBR-1-20. FOR REINFORCING STEEL DETAILS, SEE SHEET 15/48.

(P) - 6" PERFORATED CORRUGATED PLASTIC PIPE SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)

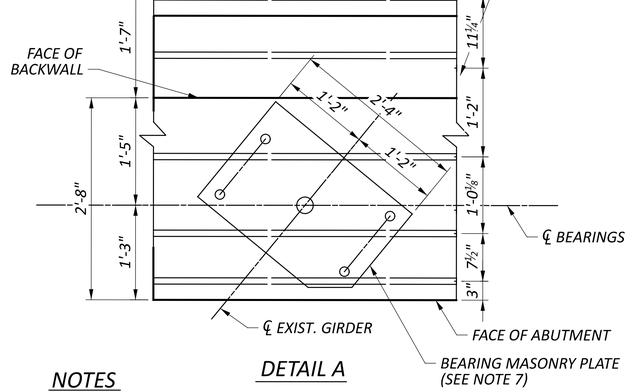
(N) - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, TIED TO 6" PERFORATED CORRUGATED PLASTIC PIPE AND SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)

△ - ¾" SLOPE BETWEEN BEAM SEATS AWAY FROM BACKWALL



BEARING ANCHOR DETAIL

EMBEDDED PLATE SHALL BE INCLUDED WITH ITEM 869 FOR PAYMENT



DETAIL A

NOTES

1. POROUS BACKFILL WITH GEOTEXTILE FABRIC, 2'-0" THICK, SHALL EXTEND UP THE PLANE OF SUBGRADE TO 1'-0" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO LIMITS SHOWN
2. 6" N.P.C.P.P. SHALL EXTEND TO THE SURFACE OF THE EMBANKMENT AND SHALL DRAIN INTO A PRECAST CONCRETE OUTLET WITH TYPE 1 TIED CONCRETE BLOCK MAT AS SHOWN IN STD. DWG. DM-1.1 PER STD. DWG. A-1-20, SHEET 1/5. PAYMENT FOR PRECAST CONCRETE OUTLET SHALL BE INCLUDED WITH ITEM 518 - 6" NON- PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.
3. SHIFT DOWELS UP TO 3'' AS NEEDED TO AVOID BEARING MASONRY PLATE
4. THE FINAL TOP OF DECK ELEVATIONS AT THE CROWN DO NOT INCLUDE THE CORRECTION FOR ROUNDING. DEDUCT 0.07' FOR FINAL ELEVATION.
5. MINIMUM LAP LENGTH SHALL BE 2'-5" FOR #5 BARS AND 4'-11" FOR #8 BARS
6. FOR SECTIONS A-1, A-2, AND A-3 SEE SHEET 15/48
7. FOR REMOVAL DETAILS, SEE SHEET 5/48 AND 6/48
8. FOR BEARING DETAILS, SEE SHEET 32/48
9. PILING NOT SHOWN FOR CLARITY

REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. CUY-00480-17.900
RAMP E-S UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806343

DESIGN AGENCY DLZ

DESIGNER	CHECKER
JPK	AJK

REVIEWER MDP 06/14/24

PROJECT ID 110810

SUBSET	TOTAL
14	48

SHEET	TOTAL
P.124	158

CUY IR 480 17.87WN/17.90ES DECKS

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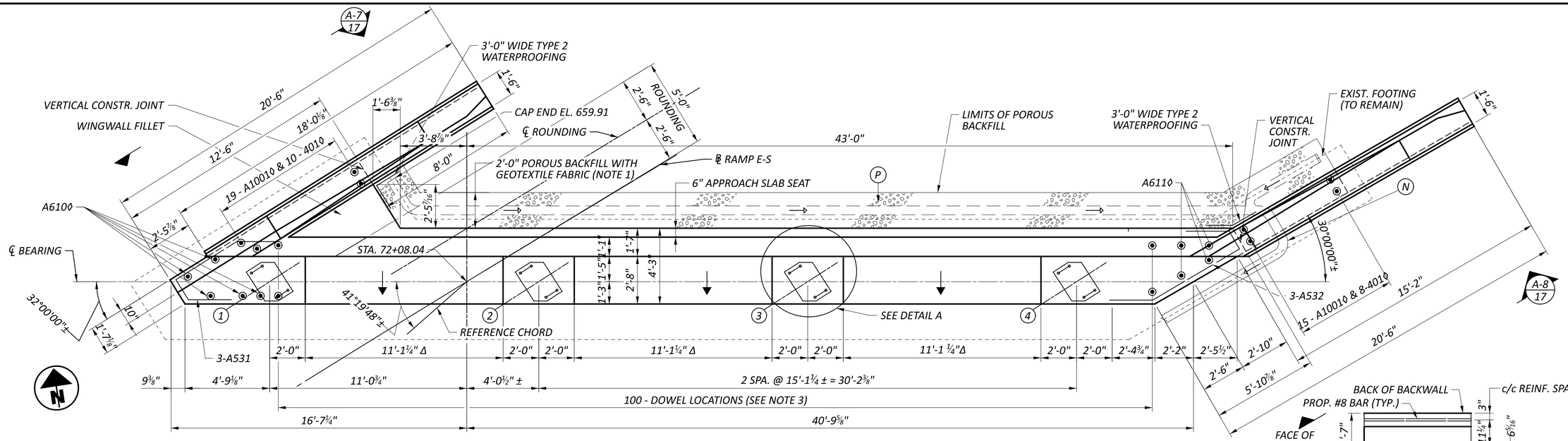
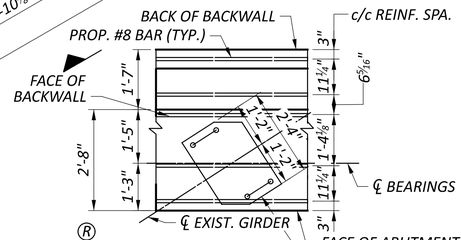
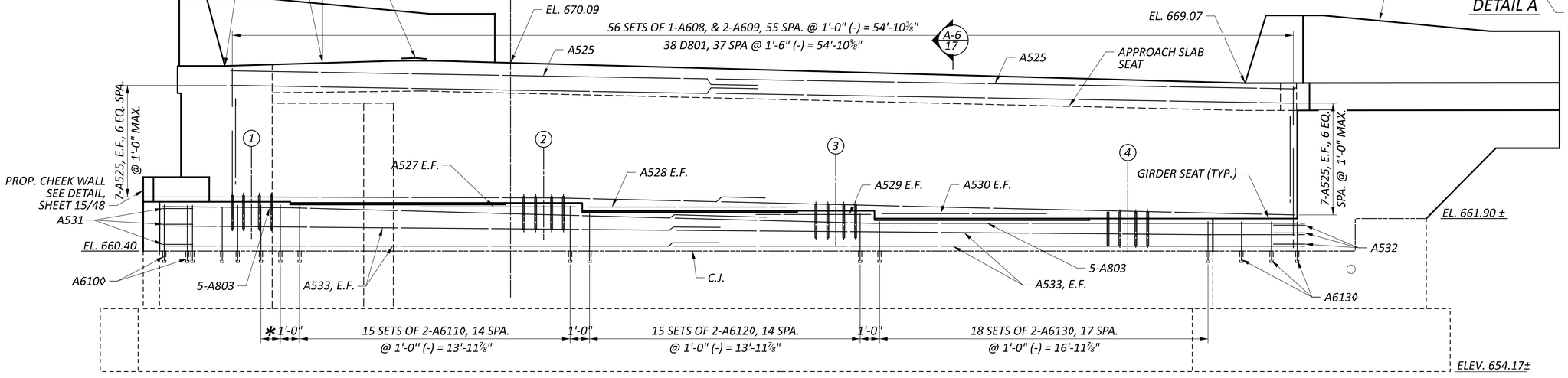


FORWARD ABUTMENT PLAN



DETAIL A



✱ 2 SETS OF 2-A6100, 1 SPA. @ 1'-0"

FORWARD ABUTMENT ELEVATION

GIRDER SEAT ELEVATIONS				
GIRDER	1	2	3	4
ELEVATION	662.95	662.89	662.48	662.08

LEGEND

◊ - DOWEL BAR TO BE DRILLED AND GROUTED 9" INTO EXISTING CONCRETE GIRDER SEAT IN ACCORDANCE WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN. ALL DOWEL BARS SHALL BE GALVANIZED STEEL REINFORCEMENT.

Ⓡ - SINGLE SLOPE CONCRETE BRIDGE RAILING ON BACKWALL PER STD. DWG. SBR-1-20. FOR REINFORCING STEEL DETAILS, SEE SHEET 40/48.

Ⓟ - 6" PERFORATED CORRUGATED PLASTIC PIPE SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)

Ⓝ - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, TIED TO 6" PERFORATED CORRUGATED PLASTIC PIPE AND SLOPED AT A MINIMUM OF ⅛"/FT. (TYP.)

△ - ¾" SLOPE BETWEEN BEAM SEATS AWAY FROM BACKWALL

NOTES:

1. POROUS BACKFILL WITH GEOTEXTILE FABRIC, 2'-0" THICK, SHALL EXTEND UP THE PLANE OF SUBGRADE TO 1'-0"BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO LIMITS SHOWN
2. 6" N.P.C.P.P. SHALL EXTEND TO THE SURFACE OF THE EMBANKMENT AND SHALL DRAIN INTO A PRECAST CONCRETE OUTLET WITH TYPE 1 TIED CONCRETE BLOCK MAT AS SHOWN IN STD. DWG. DM-1.1 PER STD. DWG. A-1-20, SHEET 1/5. PAYMENT FOR PRECAST CONCRETE OUTLET SHALL BE INCLUDED WITH ITEM 518 - 6" NON- PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.
3. SHIFT DOWELS UP TO 3" AS NEEDED TO AVOID BEARING MASONRY PLATE
4. THE FINAL TOP OF DECK ELEVATIONS AT THE CROWN DO NOT INCLUDE THE CORRECTION FOR ROUNDING. DEDUCT 0.07' FOR FINAL ELEVATION.
5. MINIMUM LAP LENGTH SHALL BE 2'-5" FOR #5 BARS AND 4'-11" FOR #8 BARS
6. FOR SECTION A-7, A-8, & A-9, SEE SHEET 17/48
7. FOR REMOVAL DETAILS, SEE SHEET 7/48 & 8/48
8. FOR BEARING DETAILS, SEE SHEET 33/48
9. PILING NOT SHOWN FOR CLARITY

FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. CUY-00480-17.900
RAMP E-S UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806343
DESIGN AGENCY DLZ
DESIGNER JPK | CHECKER ARA
REVIEWER MDP 06/14/24
PROJECT ID 110810
SUBSET 16 | TOTAL 48
SHEET P.126 | TOTAL 158

CUY IR 480 17.87WN/17.90ES DECKS

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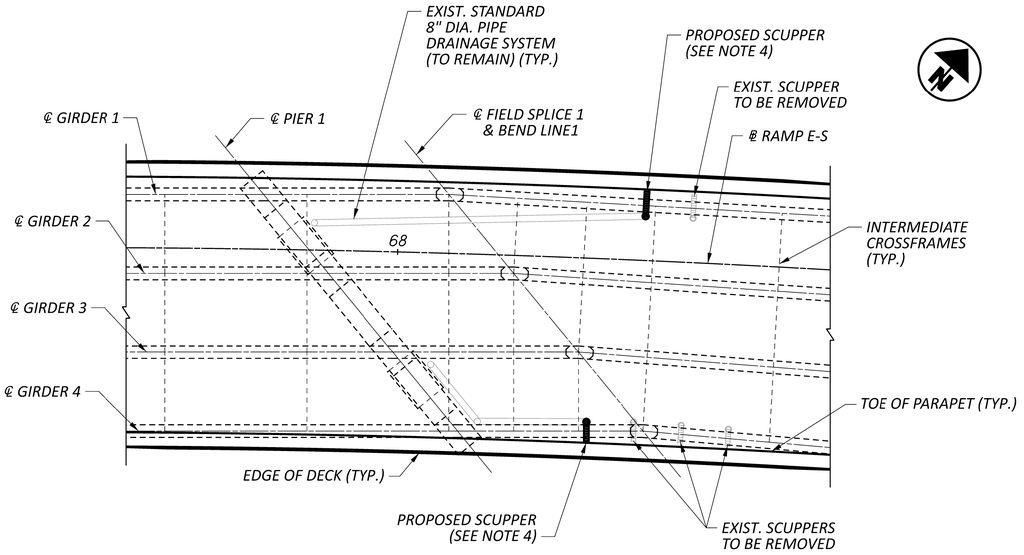
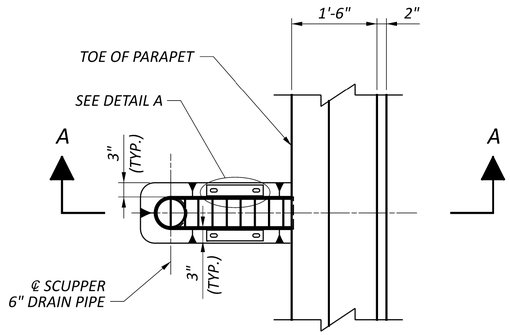
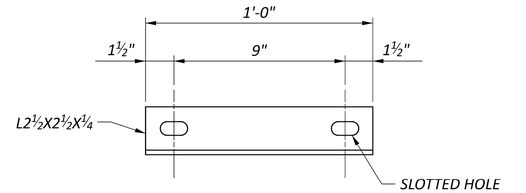


PARTIAL PLAN

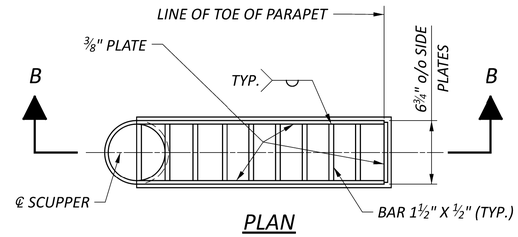
2 SCUPPERS REQUIRED:
STA. 68+20.67, RIGHT
STA. 68+26.01, LEFT



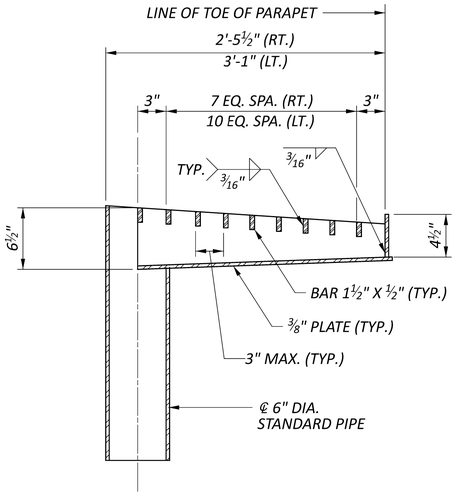
PLAN



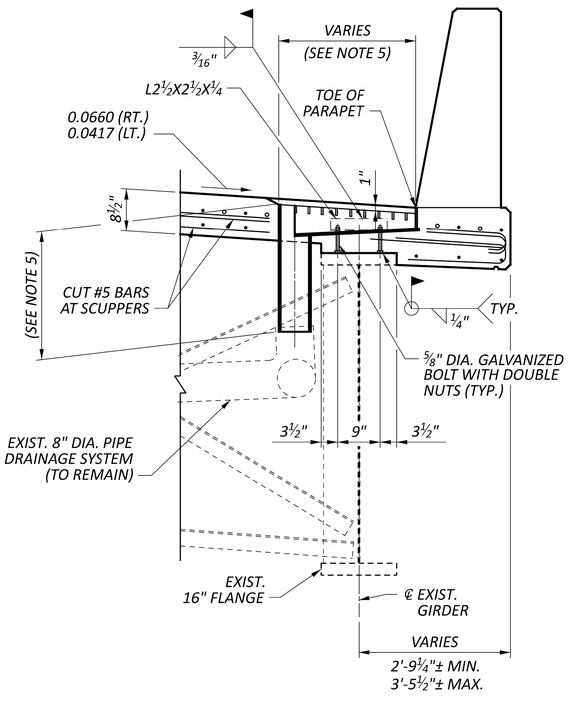
DETAIL A



PLAN



SECTION B-B

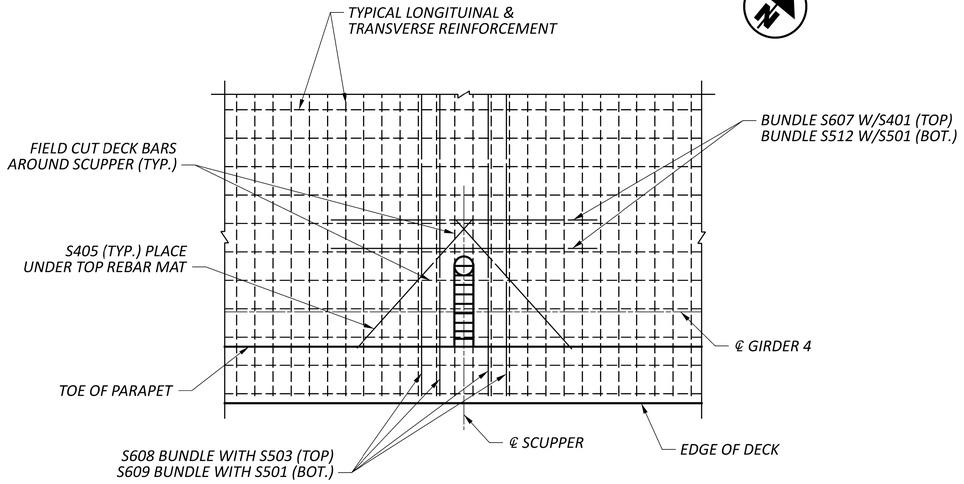


SECTION A-A

(RIGHT SIDE SHOWN
LEFT SIDE SIMILAR)

ENLARGED SCUPPER DETAIL

(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)
(FOR ADDITIONAL DETAIL, SEE ARCHIVED SCD SD-1-65)



SCUPPER REINFORCEMENT DETAIL

SEE DECK PLAN FOR TYPICAL LONGITUDINAL &
TRANSVERSE DECK REINFORCEMENT DETAILS
(RIGHT SIDE SHOWN
LEFT SIDE SIMILAR)

NOTES:

1. FOR ADDITIONAL DETAILS AND NOTES, SEE SCD GSD-1-19 AND ARCHIVED SCD SD-1-65.
2. FOR TRANSVERSE SECTION, SEE SHEET 34/48.
3. FOR DECK REINFORCING PLAN, SEE SHEET 35/48 AND 36/48.
4. THE PROPOSED SCUPPER LOCATIONS SHALL BE LOCATED IN THE SAME LOCATIONS AS THE EXISTING SCUPPERS.
5. THE CONTRACTOR SHALL FIELD VERIFY THESE DIMENSIONS PRIOR TO FABRICATION OF THE SCUPPERS.
6. FOR DRAINAGE COLLECTION SYSTEM AND NOTE, SEE SHEET 9/48.
7. SCUPPERS, INCLUDING SUPPORT ANGLES, SHALL BE GALVANIZED PER 711.02.

SCUPPER DETAILS

BRIDGE NO. CUY-00480-17.900
RAMP E-S UNDER I.R. - 77 & OVER I.R. - 480

SFN 1806343
DESIGN AGENCY
ms consultants. inc.
DESIGNER SJR | CHECKER WER
REVIEWER JDH 06/14/24
PROJECT ID 110810
SUBSET 43 | TOTAL 48
SHEET P.153 | TOTAL 158

CUY IR 480 17.87WN/17.90ES DECKS

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