

LOCATION MAP
LATITUDE: 41°24'54" N LONGITUDE: 81°36'54" W
(NOTE: FOR COORDINATES PER LOCATION, SEE SHEET 3)

UNDERGROUND UTILITIES

**Contact Two Working Days
Before You Dig**



OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:



CONFORMED SET

STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
ENGINEER'S SEAL:	BP-2.1	7-17-15	TC-65.11	7-21-17	MT-97.10	4-19-19	AS-1-15	7-17-15	800	7-16-21
	BP-2.5	7-19-13	TC-72.20	7-20-18	MT-98.21	1-17-20	BR-1-13	1-17-14	821	4-20-12
	BP-3.1	1-17-20			MT-98.22	1-17-20	BR-2-15	7-17-15	832	10-19-18
	BP-5.1	1-18-19	HL-20.14	4-17-20	MT-99.30	1-17-20	EXJ-4-87	1-19-18	902	7-19-19
	BP-9.1	1-18-19	HL-30.33	4-17-20	MT-101.70	1-17-20	EXJ-5-93	1-19-18	921	4-20-12
			HL-60.11	7-21-17	MT-102.10	1-17-20	PCB-91	7-17-20	987	1-16-09
	F-1.1	7-19-13	HL-60.21	7-20-18	MT-105.10	1-17-20	VPF-1-90	7-20-18		
					MT-110.10	7-19-13				
	MGS-2.1	1-19-18	MT-95.30	7-19-19						
	MGS-3.1	1-19-18	MT-95.31	7-19-19						
	MGS-3.2	1-18-13	MT-95.40	1-17-20						
	MGS-4.3	1-18-13	MT-95.50	7-21-17						
	RM-4.2	4-17-20								

STATE OF OHIO

PATRICK SCHWAN

61571

REGISTERED PROFESSIONAL ENGINEER

SIGNED: Patrick Schwan

DATE: 6-23-2021

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-071-16.40/ VAR REPAIR

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	CITY	TOWNSHIP	VILLAGE
1	CUY-008-0127	1801201	WALTON HILLS/OAKWOOD		
2	CUY-042-1457	1803271	CLEVELAND		
3**	CUY-071-0467 / SFN 1803875 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
4	CUY-071-1640	1805223	CLEVELAND		
5**	CUY-077-0223 / SFN 1805762 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
6**	CUY-077-0881 / SFN 1806297 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
7**	CUY-077-0909 / SFN 1806327 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
8**	CUY-090-0683 / SFN 1808508 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
9**	CUY-090-0758 / SFN 1808567 / PROJECT BID UNDER CUY-90-07.58 REPAIR / PID NO. 109531				
10**	CUY-422-1122 / SFN 1811258 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
11**	CUY-422-1827 L / SFN 1814958 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
12**	CUY-422-1827 R / SFN 1814966 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
13**	CUY-480-1955 / SFN 1812556 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
14**	CUY-480-2019 / SFN 1812564 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
15**	CUY-06A-0042 / SFN 1801074 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				
16**	CUY-490-0100 / SFN 1811991 / PROJECT BID UNDER CUY-BH-FY2021(B) MISC / PID NO. 109131				

**** NOT IN THIS CONTRACT**

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING JOINT REPAIRS, APPROACH SLAB REPAIRS, DRAINAGE REPAIRS, CONCRETE REPAIRS AND FLOORBEAM WEB REPAIRS.

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PROJECT EARTH DISTURBED AREA: 0.23 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI
NOT REQUIRED)*
* ROUTINE MAINTENANCE PROJECT
SEE SHEET 2-3 FOR ROADWAY BRIDGE LOCATION

2019 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 NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE 6/22/21 DISTRICT DEPUTY DIRECTOR

APPROVED: Jack Maruszewski OCS
DATE 8/9/2021 DIRECTOR, DEPARTMENT OF
TRANSPORTATION

FEDERAL PROJECT NO.

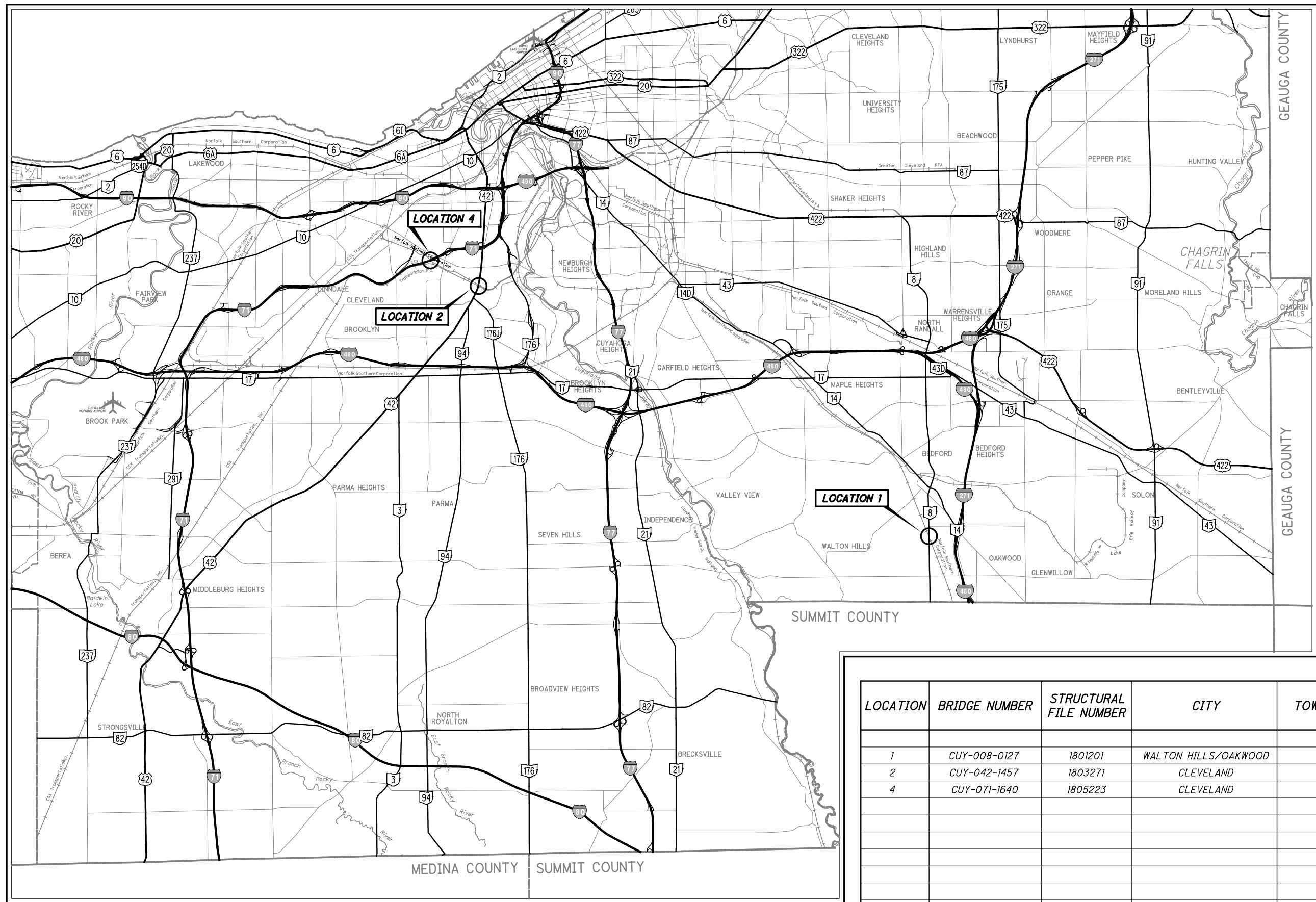
PID NO.

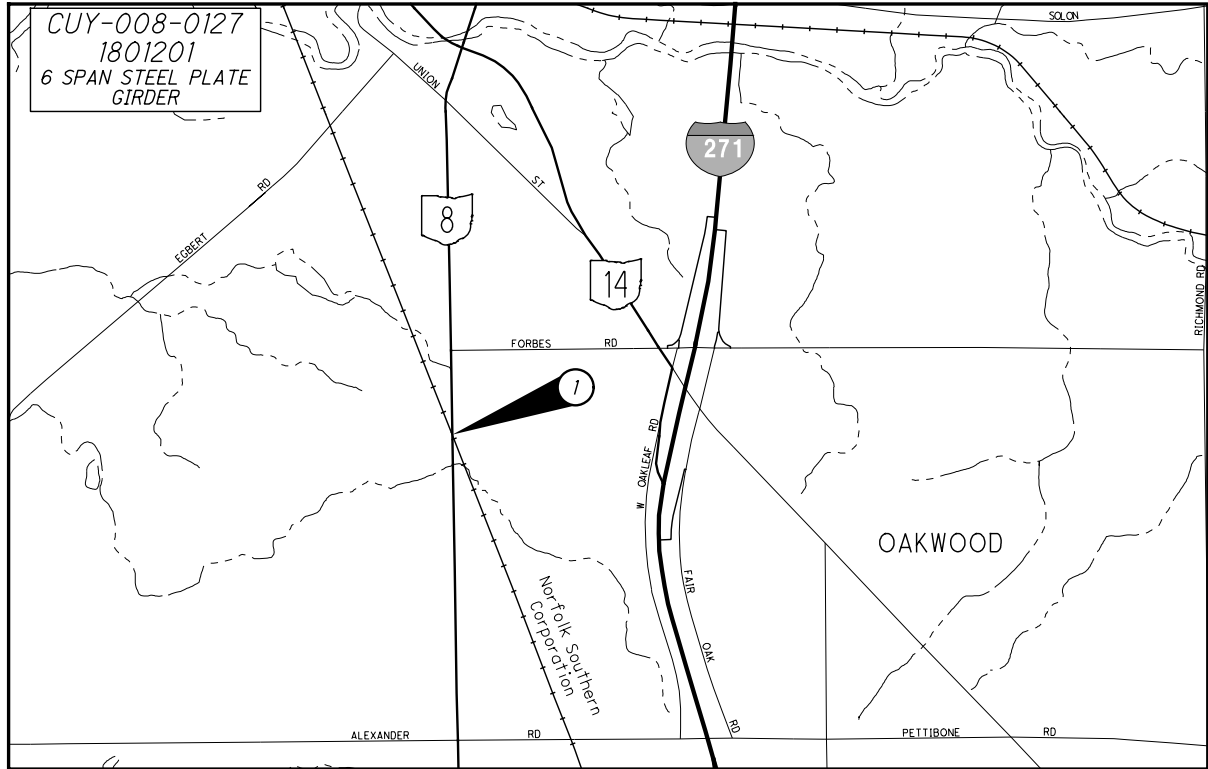
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NORFOLK SOUTHERN CORPORATION
CSX TRANSPORTATION, INC.

CUY-071-16.40/VAR REPAIR
PID NO. 111603

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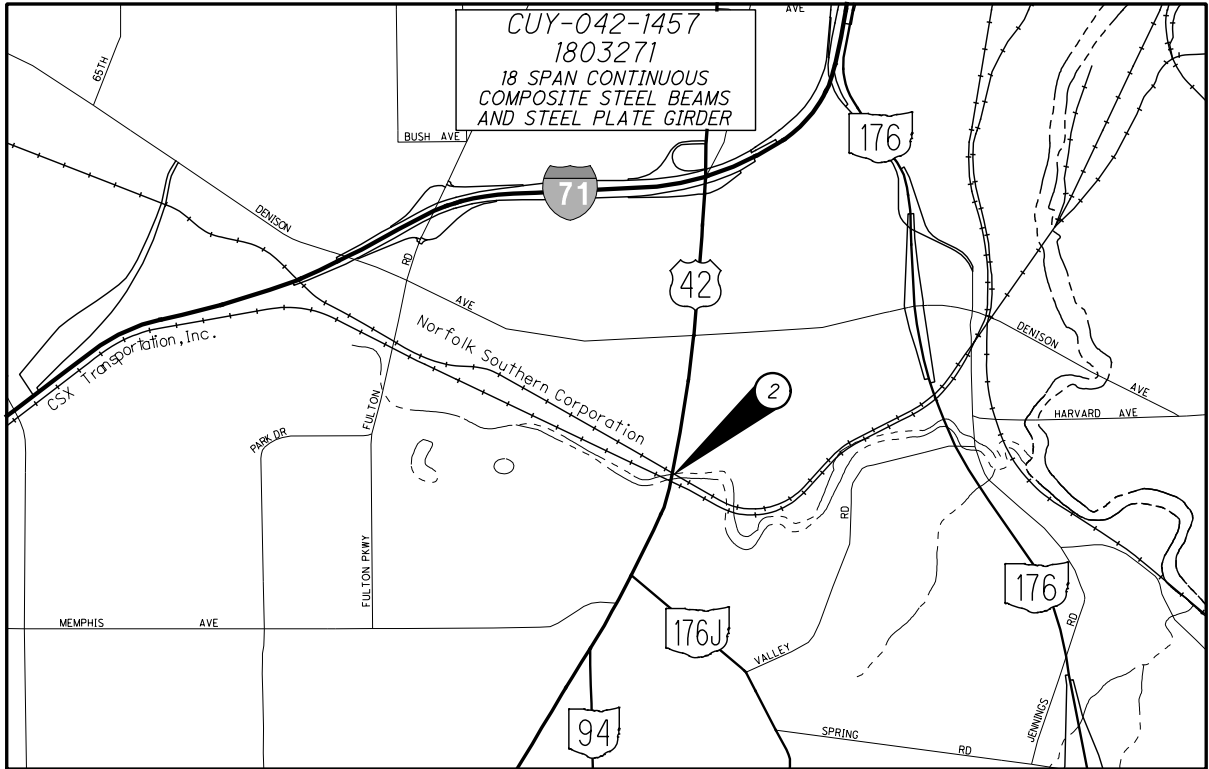
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MAP FOR LOCATION 1

LATITUDE: 41°22'11" N
LONGITUDE: 81°31'36" W

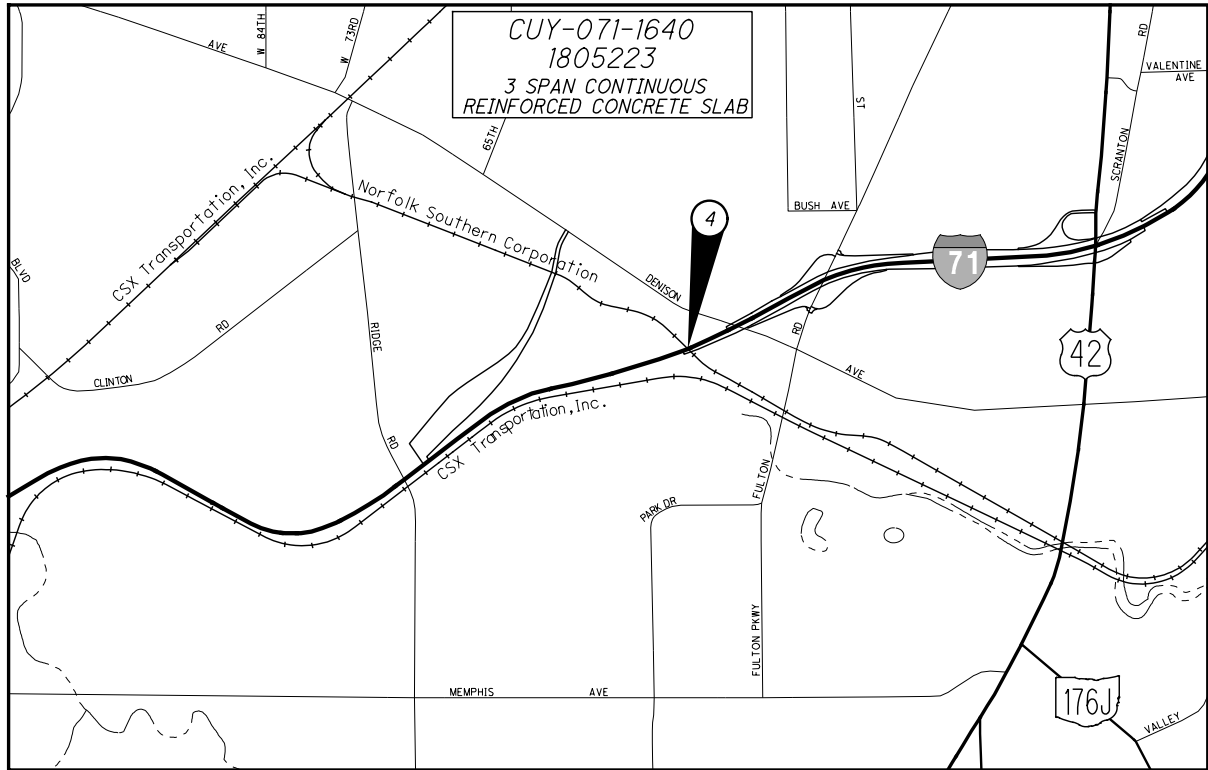
PROPOSED WORK ①
FIBER WRAP PIERS
REPAIR FLOORBEAM CONNECTIONS
PAINT FLOORBEAM CONNECTIONS



MAP FOR LOCATION 2

LATITUDE: 41°26'43" N
LONGITUDE: 81°42'10" W

PROPOSED WORK ①
REPLACE ABUTMENT EXPANSION JOINTS
REPAIR PIER JOINTS AND SEALS
INSTALL TIMBER SUBDECK



MAP FOR LOCATION 4

LATITUDE: 41°27'10" N
LONGITUDE: 81°43'17" W

PROPOSED WORK ①
REPLACE APPROACH SLABS
REPLACE ABUTMENT EXPANSION JOINTS
REPLACE PORTIONS OF THE BACKWALL AND ABUTMENT WINGWALL

LEGEND

① WORK SHOWN IS REPRESENTATIVE AND DOES NOT INCLUDE ALL WORK REQUIRED.

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UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CABLE

CHARTER COMMUNICATIONS
8179 DOW CIRCLE
STRONGSVILLE, OHIO 44136
PHONE: (216) 575-8016 EX. 5033
ATTN: GARY NAUMANN
Gary.naumann@charter.com

COX COMMUNICATIONS
1221 PLAZA DRIVE
PARMA, OHIO 44130
PHONE: (216) 535-3356
ATTN: CRAIG J. SMITH
Craig.smith@cox.com

COMMUNICATIONS

AT&T
13630 LORAIN AVENUE - 2ND FLOOR
CLEVELAND, OHIO 44111
PHONE: (216) 476-6142
ATTN: JAMES JANIS
Pj8191@att.com

EVERSTREAM SOLUTIONS
1228 EUCLID AVENUE, SUITE 250
CLEVELAND, OHIO 44115
PHONE: (216) 923-2206
ATTN: STACEY DASHER
sdasher@ecerstream.net

MASTEC UTILITY SERVICES
7300 NORTHFIELD ROAD
WALTON HILLS, OHIO 44146
PHONE: (216) 212-2490
ATTN: MICHAEL SHANEE

VERIZON (MCI)
12300 RIDGE ROAD
NORTH ROYALTON, OHIO 44133
PHONE: (440) 457-4832
ATTN: DAN ARZ
Daniel.arz@verizon.com

WIDE OPEN WEST (WOW)
105 BLAZE INDUSTRIAL PARKWAY
BEREA, OHIO 44017
PHONE: (440) 625-0349
ATTN: BOB HAMMOND
DIRECTOR, PLANT MAINTENANCE
PHONE: (440) 606-6262
bob.hammond@wowinc.com
LARRY BURRUEL
PROJECT CONSTRUCTION COORDINATOR
PHONE: (440) 915-9256
Larry.burruel@wowinc.com

WINDSTREAM
560 TERNES AVENUE
ELYRIA, OHIO 44035
PHONE: (440) 329-4245
ATTN: GEOFFREY HAMM
Geoffrey.p.hamm@windstream.com

ELECTRIC

THE ILLUMINATING CO. (FIRST ENERGY)
FIRST ENERGY
6896 MILLER ROAD, SUITE 101
BRECKSVILLE, OHIO 44141
PHONE: (440) 546-8706
ATTN: JOHN M. ZASSICK
jnzassick@firstenergycorp.com

GAS

COLUMBIA GAS OF OHIO
7080 FRY ROAD
MIDDLEBURG HEIGHTS, OHIO 44130
PHONE: (440) 891-2428
ATTN: DAN SUREN
dsuren@nicource.com

DOMINION ENERGY OHIO
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OHIO 44333
PHONE: (330) 664-2481
ATTN: MICHAEL R. ANTONIUS
Michael.r.antonius@dominionenergy.com
PLANS TO:
DOMINION ENERGY OHIO
ATTN.: 2ND FLOOR RELOCATION DESIGN
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OHIO 44333
EMAIL:
relocation@dominionenergy.com
(20 PAGES OR LESS)
PHONE: (330) 664-2409
FAX: (888) 504-0126

LIGHTING

OHIO DEPARTMENT OF TRANSPORTATION
ROADWAY SERVICES & LIGHTING
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OHIO 44125
ATTN: ANTHONY TOTH

SEWER

VILLAGE OF WALTON HILLS
7595 WALTON ROAD
WALTON HILLS, OHIO 44146
PHONE: (440) 439-1999
ATTN: DON SHEEHY, ENGINEER

VILLAGE OF OAKWOOD SERVICE DEPARTMENT
24800 BROADWAY AVENUE
OAKWOOD VILLAGE, OHIO 44146
PHONE: (440) 232-6957
ATTN: TOM HABA

WATER

CITY OF CLEVELAND DIVISION OF WATER
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: FRED ROBERTS
PHONE: (216) 664-2444, EX. 75590
Fred.rpber@clelandwater.com

TRANSPORTATION

GREATER CLEVELAND REGIONAL
TRANSIT AUTHORITY (GCRTA)
1240 WEST 6TH STREET
CLEVELAND, OHIO 44113-1331
ATTN: BRIAN TEMMING
bTemming@gcrtta.org

COPY TO:
ATTN: MICHAEL SCHIPPER
PHONE: (216) 356-3112
mschipper@gcrtta.org

NORFOLK SOUTHERN CORPORATION
ENGINEER PUBLIC PROJECTS
1200 PEACHTREE STREET NE
ATLANTA, GEORGIA 30309
ATTN: E.W. CHAMBERS
PHONE: (404) 536-1436
Eldridge.Chambers@nscorp.com

CSX TRANSPORTATION
PUBLIC PROJECTS (MI, OH, KY, IN, IL)
500 MEIJER DRIVE, SUITE 305
FLORENCE, KY 41042
ATTN: AMANDA J. DeCESARE
PHONE: (859) 372-6124
Amanda_DeCesare@csx.com

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING LIMITATIONS:

1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO MAINTENANCE OF TRAFFIC NOTES SHEETS WITHIN THIS PLAN).

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO CMS 614.035. IN ADDITION, NO STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT-OF-WAY WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER AND OBTAINING AN ODOT R/W PERMIT FROM THE D12 ROADWAY SERVICES. ALL RESTORATION WILL BE AT NO COST TO THE STATE.

PROJECT CONTROL TABLE								
RIGHT OF WAY		PROJECT GROUND COORDINATES P.A.F.=		STATE PLANE COORDINATES P.A.F.=		ELEVATION NAVD88 DATUM	POINT	DESCRIPTION
STATION	OFFSET	NORTH (Y) U.S. FT.	EAST (X) U.S. FT	NORTH (Y) U.S. FT.	EAST (X) U.S. FT			
CL SR 8								
65+00.00	CL	621436.867151	2235613.404674				CL0081	P.O.T.
75+00.00	CL	622436.682677	2235594.197537				CL0082	P.O.T.
CL SR 42								
7+00.00	CL	648324.978627	2186767.676581				4201	P.O.T.
9+51.02	CL	648552.214426	2186874.329909				4202	P.C.
12+70.39	CL	648855.315352	2186972.228030				CURV4201	P.T.
15+14.72	CL	649095.431181	2187017.407651				4208	P.I.
29+32.78	CL	650489.033811	2187279.640132				4204	P.C.
30+37.59	CL	650592.655521	2187295.238225				CURV4202	P.T.
33+95.39	CL	650948.178021	2187335.519695				4206	P.O.T.
CL IR 71 EASTBOUND								
895+66.30	CL	649867.336376	2177811.912046				CL07103	P.O.T.
909+19.41	CL	650678.826401	2178894.681925				SP0710B	T.S.
913+69.41	CL	650936.665437	2179263.254314				SP0710	P.C.
918+70.12	CL	651147.586579	2179716.275537				SP0710A	C.S.
931+57.35	CL	651453.185933	2180966.343837				CL07106	P.O.T.
CL IR 71								
931+08.00	CL	651465.820248	2180963.282126				CURV071	P.C.
958+13.74	CL	652515.486281	2183446.887841				SP0711B	T.S.
960+63.74	CL	652629.552765	2183669.324936				SP0711	P.C.
971+05.41	CL	652898.817902	2184669.656542				SP0711A	C.S.
982+16.03	CL	652944.093414	2185779.311632				CL071010	P.O.T.
CL RAMP E								
936+12.77	CL	651542.610289	2181467.819644				CURVEE1	P.C.
956+65.72	CL	652272.286144	2183385.574947				RAMPE03	P.O.T./P.C.
958+00.93	CL	652292.385213	2183517.952919				CURVEE2	P.T.
958+86.47	CL	652284.632035	2183603.145984				RAMPE05	P.O.T.

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CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL SUBSIDIARY AGREEMENT GOVERNING COMPLETION OF THIS PROJECT.

ENVIRONMENTAL

NO WORK TO BE WITHIN STREAMS OR WETLANDS WITHOUT PRIOR APPROVAL FROM ODOT.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROFILE AND ALIGNMENT

THE INTENT OF THE PROPOSED PAVEMENT IS TO UTILIZE THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT UNLESS OTHERWISE DETAILED IN THE PLANS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

SEEDING AND MULCHING

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 - TOPSOIL	<u>8</u> CY
ITEM 659 - SEEDING AND MULCHING	<u>67</u> SY
ITEM 659 - REPAIR SEEDING AND MULCHING	<u>4</u> SY
ITEM 659 - COMMERCIAL FERTILIZER	<u>0.01</u> TON
ITEM 659 - WATER	<u>1</u> MGAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

STAGING AREA ON/WITHIN STATE RIGHT-OF-WAY

THERE ARE NO SPECIFIC AREAS GIVEN IN THE PLANS FOR THE CONTRACTOR TO USE AS STAGING AREA(S). IF THE CONTRACTOR WANTS TO USE AN AREA(S) FOR STAGING, REGARDLESS IF IT FALLS WITHIN THE PROJECT LIMITS OR NOT, THE CONTRACTOR IS TO CONTACT MELVIN SAFFORD (PHONE: 216-584-2137) AT DISTRICT 12 IN ORDER TO APPLY FOR A PERMIT PER SECTION 107.02 OF THE CMS. IF A PERMIT IS GRANTED, ALL CONDITIONS OF THE PERMIT SHALL BE MET IN ADDITION TO THE REQUIREMENTS OF 104.04 OF THE CMS, AT NO COST TO THE STATE. IF THE PROJECT ENGINEER DEEMS THAT ALL THE CONDITIONS OF THE PERMIT WERE NOT MET, THEN 10% OF THE CONTRACT BID AMOUNT FOR MOBILIZATION SHALL BE WITHHELD UNTIL ALL CONDITIONS OF THE PERMIT ARE SATISFIED.

EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE AFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND. PAYMENT FOR THE NEW PAVEMENT MARKINGS IS AS LISTED IN THE PLANS.

EARTHWORK FOR PROJECT TRANSITION

A CONTINGENCY OF ITEM 203 - EMBANKMENT AND ITEM 203 - EXCAVATION IS BEING PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO TRANSITION THE EARTHWORK INTO THE EXISTING AT THE BEGIN/END OF THE PROJECT.

ITEM 203 - EXCAVATION	<u>25</u> CY
ITEM 203 - EMBANKMENT	<u>25</u> CY

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 12 OFFICE IN GARFIELD HEIGHTS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, FOR EACH BRIDGE LOCATION IDENTIFIED TO BE USED AS DIRECTED BY THE ENGINEER. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

ITEM 202 - WALK REMOVED, AS PER PLAN

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/ CSX RAILWAY/BIG CREEK)

PORTIONS OF THE EXISTING CONCRETE WALK ALONG US 42 (PEARL RD.) SHALL BE REMOVED AT THE REAR AND FORWARD CORNERS OFF THE APPROACH SLABS.

IN ADDITION TO CMS 202, THIS ITEM SHALL SAW CUT ALONG THE EXISTING SIDEWALK JOINTS (REMOVE SIDEWALK TO THE FIRST SIDEWALK JOINT ON THE BRIDGE APPROACH) AND CAREFULLY REMOVE THE WALK WITHOUT DAMAGING THE RAILING OR THE CURB. THE CONTRACTOR SHALL REPLACE IN KIND ANY DAMAGES THAT OCCUR TO THE CONCRETE RAILING OR THE CONCRETE CURB DURING THE REMOVAL OF THE WALK TO THE SATISFACTION OF THE ENGINEER.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS WORK TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH ITEM 202 - WALK REMOVED, AS PER PLAN.

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ITEM 204 - PROOF ROLLING

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE CALCULATIONS AND CARRIED TO THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE CALCULATION SHEETS FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 1 HOUR

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 2: CUY-42-1457 (US 42 (PEARL ROAD) OVER NS RAILWAY/ CSX RAILWAY/BIG CREEK)

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL - MAINTAIN EXISTING LIGHTING SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

ITEM 608 - 6" CONCRETE WALK, AS PER PLAN

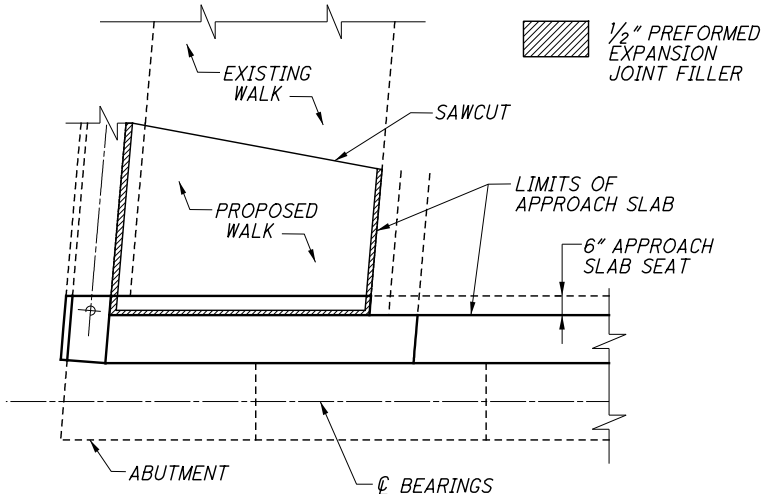
THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 2: CUY-42-1457 (US 42 (PEARL ROAD) OVER NS RAILWAY/ CSX RAILWAY/BIG CREEK)

PORTIONS OF THE EXISTING CONCRETE WALK ALONG US 42 (PEARL RD.) SHALL BE REPLACED AT THE REAR AND FORWARD CORNERS OF THE APPROACH SLABS.

IN ADDITION TO CMS 608, THE CONCRETE WALK SHALL BE REINFORCED WITH WWF 6x6-W6xW6 WELDED WIRE FABRIC. THE WELDED WIRE FABRIC SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT. THIS ITEM SHALL INCLUDE ITEM 304 AGGREGATE BASE TO FILL IN ANY VOIDS IN THE SUBBASE AFTER THE REMOVAL OF THE EXISTING SIDEWALK IN ORDER TO CREATE A LEVEL SUBBASE BEFORE PLACING THE PROPOSED WALK. THIS ITEM SHALL ALSO INCLUDE 1/2" PREFORMED EXPANSION JOINT FILLER AND SHALL BE PLACED ALONG THE CURB, ALONG THE FACE OF THE RAILING, AND AGAINST THE BRIDGE BACKWALL (SEE DETAIL BELOW).

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH ITEM 608 - 6" CONCRETE WALK, AS PER PLAN.



ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE B FIELD OFFICE, AS SPECIFIED IN CMS TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

THE COPIER SUPPLIED MUST MEET THE REQUIREMENTS OF THE COPIER SUPPLIED WITH THE TYPE C FIELD OFFICE.

THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.

THE CONTRACTOR SHALL FURNISH, SET-UP AND MAINTAIN A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11ac FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN 9 MNTH

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING BRIDGES WITHIN THE PROJECT LIMITS AFTER COMPLETION OF ALL THE WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG THE CENTERLINE OF EACH FASCIA BEAM AT THE EDGE OF THE SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE MEASUREMENTS SHALL BE DOCUMENTED IN THE ODOT VERTICAL CLEARANCE SURVEY FORM. THE FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THE OHIO PROFESSIONAL SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO THE PROJECT ENGINEER AND THE DISTRICT BRIDGE MAINTENANCE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

IN ADDITION TO VERTICAL CLEARANCE DETERMINATION, THE CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AS NECESSARY PRIOR TO AND AT COMPLETION OF THE WORK, AT WORK INTERFACES SUCH AS ENDS OF DECK, EXPANSION JOINTS, AND END OF APPROACH SLABS. THESE MEASUREMENTS ARE INTENDED TO ENSURE PROPOSED WORK MEETS EXISTING GRADES AND PROVIDES A SMOOTH RIDING SURFACE FOR THE TRAVELING PUBLIC.

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ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/
CSX RAILWAY/BIG CREEK)

IN ADDITION TO CMS 625, THIS ITEM SHALL BE CLEANED, AND REPAIRS SHALL BE MADE TO THE POLE IN SUCH A MANNER THAT THE POLE IS IN GOOD SERVICEABLE CONDITION WHEN REERECTED. THE EXISTING POLE NUMBER DECAL SHALL BE REMOVED IF IT IS IN POOR CONDITION. A POLE NUMBER DECAL SHALL BE SUPPLIED AND APPLIED IF THE EXISTING DECAL IS REMOVED OR MISSING.

THE EXISTING ANCHOR BOLTS SHALL REMAIN TO BE REUSED. IF THE EXISTING ANCHOR BOLTS ARE DAMAGED OR IN POOR CONDITION, NEW ANCHOR BOLTS SHALL BE FURNISHED AS PART OF THIS ITEM.

ANY SIGNS ON THE EXISTING LIGHT POLE SHALL REMAIN ON THE LIGHT POLE DURING REMOVAL AND REERECTION. ANY DAMAGE TO THE EXISTING BRACKETS OR SIGNS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE PROJECT.

THIS ITEM SHALL ALSO INCLUDE DISCONNECTING AND RECONNECTING THE EXISTING WIRES IN THE PULL BOX AND IN THE LUMINAIRE DURING THE REMOVAL AND REERECTION.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN.

ITEM 625 - STRUCTURE JUNCTION BOX, AS PER PLAN

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/
CSX RAILWAY/BIG CREEK)

IN ADDITION TO CMS 625, THIS ITEM SHALL INCLUDE THE INSTALLATION OF THE 1 1/2" DIAMETER CONDUIT RUNNING FROM THE JUNCTION BOX INTO THE BASE OF THE LIGHT POLE. THIS ITEM SHALL ALSO INCLUDE THE DISCONNECTION AND RECONNECTION OF ANY EXISTING CONDUITS INTO THE JUNCTION BOX.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH ITEM 625 - STRUCTURE JUNCTION BOX, AS PER PLAN FOR PAYMENT.

ITEM 625 - TRANSITION JUNCTION BOX, AS PER PLAN

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

IN ADDITION TO CMS 625, THIS ITEM SHALL INCLUDE THE DISCONNECTION AND RECONNECTION OF ANY EXISTING CONDUITS INTO THE JUNCTION BOX.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED WITH ITEM 625 - TRANSITION JUNCTION BOX, AS PER PLAN FOR PAYMENT.

ITEM 832 - EROSION CONTROL

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK SPECIFIED IN SUPPLEMENTAL SPECIFICATION 832:

ITEM 832 - EROSION CONTROL 25000 EACH

PAVING UNDER GUARDRAIL

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209 - LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.

ITEM 209 - LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN CMS 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO CMS 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209 - LINEAR GRADING, AS PER PLAN. PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:

- 1. SET GUARDRAIL POSTS
- 2. PLACE ITEM 441

METHOD B:

- 1. PLACE ITEM 441
- 2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
- 3. SET GUARDRAIL POSTS
- 4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.

FENCE LENGTH

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH CMS 607.

FENCE REMOVED AND REPLACED

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

PORTIONS OF THE CHAIN LINK FENCE AT LOCATION 4: CUY-071-1640 (IR 071 OVER NORFOLK SOUTHERN RAILWAY) SHALL BE REMOVED AT AN EXISTING POST.

THE FENCE SHALL BE REPLACED WITH A NEW CHAIN LINK FENCE AND SHALL TIE INTO THE EXISTING FENCE. ANY DAMAGE TO THE EXISTING FENCE THAT IS TO REMAIN SHALL BE REPLACED IN KIND AT THE EXPENSE OF THE CONTRACTOR. SEE CALCULATION SHEETS FOR LOCATIONS.

THE COST OF ALL WORK DESCRIBED ABOVE INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THESE ITEMS, TO THE SATISFACTION OF THE ENGINEER, SHALL BE PAID FOR AT THE UNIT PRICE PER FOOT FOR ITEM 202 - FENCE REMOVED AND ITEM 607 - FENCE, TYPE CL.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), [(SPEED (25 MPH), HAZARD WIDTH (24')]]

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/
CSX RAILWAY/BIG CREEK)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), [(SPEED (25 MPH), HAZARD WIDTH (24')]], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM SPECIAL - SITE ACCESS

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROVIDE ACCESS TO EACH LOCATION FOR THE WORK PROVIDED IN THESE PLANS.

THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO, EARTHWORK, CLEARING AND GRUBBING, FENCE REMOVAL AND REERECTION, GUARDRAIL REMOVAL AND REERECTION, SIGN REMOVAL AND REERECTION, ROCK CHANNEL PROTECTION, ETC. TEMPORARY EROSION CONTROL ITEMS SHALL BE PAID FOR PER SUPPLEMENTAL SPECIFICATIONS 832. THIS ITEM SHALL INCLUDE ALL RESTORATION WORK NECESSARY TO RESTORE ANY DISTURBED AREAS TO A CONDITION EQUAL TO THAT EXISTING PRIOR TO THE PROJECT PER CMS 104.04. WHEN ACCESSING THE SPECIFIC LOCATIONS, AND SLOPES 3:1 OR STEEPER ARE ENCOUNTERED, THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO PREVENT FUTURE EROSION PROBLEMS.

ALL DISTURBED SLOPES 3:1 OR STEEPER SHALL HAVE ITEM 670-SLOPE PROTECTION INSTALLED. ALL DISTURBED VEGETATED DITCHES SHALL HAVE ITEM 670-DITCH EROSION PROTECTION INSTALLED. ALL DISTURBED ROCK CHANNEL PROTECTION AND PAVED GUTTERS SHALL BE REPLACED PER THE CURRENT SPECIFICATIONS UNDER THIS ITEM, AT NO ADDITIONAL COST TO THE STATE.

THIS ITEM SHALL ALSO INCLUDE SEEDING, FERTILIZING, AND WATERING PER CMS 659 FOR ALL DISTURBED AREAS. IT SHALL ALSO INCLUDE THE ADDITION OF 3 INCHES OF TOPSOIL FOR ALL DISTURBED AREAS. THE CONTRACTOR SHALL ENSURE A GOOD STAND OF GRASS AS DESCRIBED PER CMS 659.23. THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS AS APPROVED BY THE ENGINEER FOR THE SLOPE EROSION REPAIR AND DRAINAGE REPAIR LOCATIONS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL - SITE ACCESS.

ENVIRONMENTAL COMMITMENTS

TO MINIMIZE IMPACTS TO THE KIRTLAND'S WARBLER DURING MIGRATION, TREES AND BRUSH LOCATED WITHIN 3-MILES OF LAKE ERIE SHORELINE WILL NOT BE REMOVED BETWEEN APRIL 22ND AND JUNE 1ST OR BETWEEN AUGUST 15TH AND OCTOBER 15TH. IF THIS SPECIES IS ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS DURING CONSTRUCTION OPERATIONS, ALL CONSTRUCTION OPERATIONS WILL CEASE AND THE USFWS COLUMBUS FIELD OFFICE BE NOTIFIED IMMEDIATELY (614-416-8993). ACTIVITY WILL NOT RESUME UNTIL COORDINATION WITH USFWS HAS BEEN CONCLUDED.

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ITEM 614 – MAINTAINING TRAFFIC

GENERALLY, THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AS TO MAKE THE PROPOSED CONSTRUCTION WITH A MINIMUM HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY. MAINTENANCE OF TRAFFIC INCLUDES ALL LOCATIONS FOR THIS PROJECT. THIS ITEM SHALL CONSIST OF THE MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS, RAMPS AND SIDEWALKS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND THE FOLLOWING:

I. NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED OF FUTURE LANE CLOSURES AND TRAFFIC CONSTRICTIONS. THEREFORE, THE CONTRACTOR MUST SUBMIT A WRITTEN SCHEDULE TO THE ODOT PUBLIC INFORMATION OFFICE (216-584-2007 OR D12.PUBLICINFORMATION@DOT.OHIO.GOV) INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST 14 DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. ALSO, NOTIFY THE ENGINEER, RESPONSIBLE LAW ENFORCEMENT AGENCIES AND EMERGENCY SERVICES, AND LOCAL MUNICIPALITIES OF LANE CLOSURES OR OTHER RESTRICTIONS AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. USE PORTABLE CHANGEABLE MESSAGE SIGNS TO ALERT MOTORISTS 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY CHANGES SUCH AS LANE CLOSURES OR OTHER RESTRICTIONS.

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (EMAIL: Hauling.Permits@dot.ohio.gov) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	≥ 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	≤ 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	≥ 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

THE CONTRACTOR SHALL NOTIFY THE LOCAL MUNICIPALITIES OF SIDEWALK CLOSURES, PEDESTRIAN SIGNAL MODIFICATION OR OTHER PEDESTRIAN RESTRICTIONS AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. USE ADVANCED WARNING SIGNS TO ALERT PEDESTRIANS 3 DAYS PRIOR TO THE IMPLEMENTATION OF SIDEWALK CLOSURES, PEDESTRIAN SIGNAL MODIFICATION OR OTHER PEDESTRIAN RESTRICTIONS. FOR LOCATION 1, THE WALTON HILLS CITY ENGINEER AND THE OAKWOOD CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 2, THE CLEVELAND CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 4, THE CLEVELAND CITY ENGINEER SHALL BE NOTIFIED.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLANGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

II. LANE CLOSURE RESTRICTIONS

- LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, UNLESS OTHERWISE DETAILED IN THESE PLANS, LOCATED ON THE ODOT WEB SITE: [HTTP://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAYMANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX](http://www.dot.state.oh.us/districts/d12/highwaymanagement/pages/permitteditanelosures.aspx) THE LATEST REVISION 14 DAYS PRIOR TO THE BID DATE SHALL BE IN EFFECT FOR THIS PROJECT. ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THIS PROJECT.
- UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.
- MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE ODOTCD.
- PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT ALL TIMES AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.
- ALL DRIVES AND SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES.

LOCATION 1: CUY-008-0127 (SR 8 [NORTHFIELD ROAD] OVER NORFOLK SOUTHERN RAILWAY)

ALL WORK FOR THIS STRUCTURE IS BENEATH THE SR 8 (NORTHFIELD ROAD) BRIDGE AND WILL NOT REQUIRE THE MAINTENANCE OF TRAFFIC ON SR 8 (NORTHFIELD ROAD). THE WORK INCLUDES REPAIRING THE DESIGNATED PIER COLUMNS, REPAIRING THE DESIGNATED FLOORBEAM WEB CONNECTIONS, AND PAINTING THE DESIGNATED FLOORBEAM WEB CONNECTIONS. THE CONTRACTOR SHALL DETERMINE THE PHASING OF THE WORK TO BE PERFORMED BENEATH THE SR 8 (NORTHFIELD ROAD) BRIDGE. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD AS REQUIRED TO MAKE THE REPAIRS.

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/ CSX RAILWAY/BIG CREEK

THE CONTRACTOR SHALL PERFORM THE WORK IN TWO PHASES OF CONSTRUCTION ON US 42 (PEARL ROAD). THE CONTRACTOR SHALL REPLACE PORTIONS OF THE WALK ON THE APPROACHES, REPLACE THE ABUTMENT JOINTS, REPAIR THE PIER JOINTS, REPLACE THE PIER JOINT SEALS, REPLACE SECTIONS OF THE RAILING, REMOVE AND REERECT THE LIGHT POLE AND LUMINAIRE NEAR PIER 10, REPLACE SECTIONS OF THE SIDEWALK WEARING SURFACE, AND IMPROVE THE DRAINAGE DURING PHASE ONE ON US 42 (PEARL ROAD). THE CONTRACTOR SHALL REPLACE PORTIONS OF THE WALK ON THE APPROACHES, REPLACE THE ABUTMENT JOINTS, REPAIR THE PIER JOINTS, REPLACE THE PIER JOINT SEALS, REPLACE SECTIONS OF THE RAILING, REPLACE SECTIONS OF THE SIDEWALK WEARING SURFACE, REPAIR THE ASPHALT ON THE FORWARD APPROACH, AND IMPROVE THE DRAINAGE DURING PHASE TWO ON US 42 (PEARL ROAD). THE FIRST PHASE SHALL CLOSE THE NORTHBOUND PORTION OF THE BRIDGE AND MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION ON THE TWO EXISTING SOUTHBOUND LANES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-95.31 (CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS). THE EAST SIDEWALK ALONG PEARL ROAD SHALL BE CLOSED DURING PHASE ONE. PEDESTRIAN TRAFFIC SHALL BE DETOURED TO THE WEST SIDEWALK IN ACCORDANCE WITH MT-110.10 (PEDESTRIAN DETOUR METHODS). TEMPORARY "SHARE THE ROAD" (W16-1P-18) SIGNS SHALL BE INSTALLED, PRIOR TO PHASE ONE CONSTRUCTION, ON THE APPROACHES TO THE BRIDGE AT THE BEGINNING OF THE MAINTENANCE OF TRAFFIC LIMITS AND ACROSS THE BRIDGE AS SHOWN IN THE MAINTENANCE OF TRAFFIC PLANS. THE BUS STOP SIGN AND BUS STOP LOCATED AT THE SOUTH END OF THE STRUCTURE (NORTHBOUND) SHALL BE TEMPORARILY RELOCATED, PRIOR TO PHASE ONE CONSTRUCTION, TO THE SOUTH. THE CONTRACTOR SHALL COORDINATE WITH GCRTA FOR THE TEMPORARY RELOCATION OF THE BUS STOP. SEE THE MAINTENANCE OF TRAFFIC NOTES FOR COORDINATION WITH GCRTA. THE SECOND PHASE SHALL CLOSE THE SOUTHBOUND PORTION OF THE BRIDGE AND MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION ON THE TWO EXISTING NORTHBOUND LANES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-95.31 (CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS). THE WEST SIDEWALK ALONG PEARL ROAD SHALL BE CLOSED DURING PHASE TWO. PEDESTRIAN TRAFFIC SHALL BE DETOURED TO THE EAST SIDEWALK IN ACCORDANCE WITH MT-110.10 (PEDESTRIAN DETOUR METHODS). TEMPORARY "SHARE THE ROAD" (W16-1P-18) SIGNS INSTALLED PRIOR TO PHASE ONE CONSTRUCTION SHALL REMAIN DURING PHASE 2 CONSTRUCTION AND SHALL BE REMOVED AFTER PHASE TWO CONSTRUCTION. THE BUS STOP SIGN AND BUS STOP LOCATED AT THE SOUTH END OF THE STRUCTURE (NORTHBOUND) SHALL REMAIN DURING PHASE 2 CONSTRUCTION AND SHALL BE MOVED TO THE ORIGINAL LOCATION AFTER PHASE TWO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH GCRTA FOR THE TEMPORARY RELOCATION OF THE BUS STOP. SEE THE MAINTENANCE OF TRAFFIC NOTES FOR COORDINATION WITH GCRTA.

THE CONTRACTOR SHALL PERFORM THE WORK IN MULTIPLE PHASES OF CONSTRUCTION BENEATH THE US 42 (PEARL ROAD) BRIDGE. THE CONTRACTOR SHALL PROVIDE LANE CLOSURES AND PARKING LOT CLOSURES IN ORDER TO PERFORM THE REPAIRS BENEATH THE BRIDGE. THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK BENEATH THE US 42 (PEARL ROAD) BRIDGE:

- REAR ABUTMENT – REPLACE THE EXPANSION JOINT
- PIER 2 – CLEAN OUT THE DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- PIER 4 – CLEAN OUT THE DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS); PATCH AND SEAL UPPER PIER CAP AND COLUMNS; REPLACE RAILING ON PEARL ROAD FOR JOINT REPAIRS DURING PHASES 1 AND 2 ON PEARL ROAD
- PIER 5 – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- PIER 6 – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- PIER 7 – CLEAN OUT THE DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS); SEAL UPPER PIER CAP AND COLUMNS; REPLACE RAILING FOR JOINT REPAIRS DURING PHASES 1 AND 2 ON PEARL ROAD
- SPAN 8 – REPLACE DETERIORATED RAILING DURING PHASE 2 ON PEARL ROAD
- PIER 8 CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- SPAN 9 – REPLACE DETERIORATED RAILING DURING PHASE 1 AND PHASE 2 ON PEARL ROAD
- PIER 9 CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- SPAN 10 – REPLACE DETERIORATED RAILING DURING PHASE 1 ON PEARL ROAD; INSTALL TIMBER SUBDECK
- PIER 10 – CLEAN OUT THE DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS); PATCH AND SEAL UPPER PIER CAP AND COLUMNS; REPLACE RAILING FOR JOINT REPAIRS DURING PHASES 1 AND 2 ON PEARL ROAD
- SPAN 11 – REPLACE DETERIORATED RAILING DURING PHASE 1 ON PEARL ROAD; INSTALL TIMBER SUBDECK
- PIER 11 – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- PIER 12 – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- PIER 13 – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- PIER 14 – CLEAN OUT THE DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUT); PATCH AND SEAL UPPER PIER CAP AND COLUMNS; REPLACE RAILING FOR JOINT REPAIRS DURING PHASES 1 AND 2 ON PEARL ROAD
- PIER 15 – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS)
- FORWARD ABUTMENT – CLEAN OUT DRAINAGE SYSTEM (SCUPPERS AND DOWNSPOUTS); REPLACE THE EXPANSION JOINT

THE CONTRACTOR SHALL CLOSE ONE LANE OF OLD PEARL ROAD WITH FLAGGERS IN ACCORDANCE WITH MT-97.10 (FLAGGER CLOSING 1 LANE OF A 2-LANE HIGHWAY – STATIONARY OPERATION) AS REQUIRED TO MAKE THE REPAIRS. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE PROPERTY OWNERS THAT OCCUPY SPACE UNDER THE BRIDGE. THE CONTRACTOR SHALL COORDINATE WITH THE RAILROADS AS REQUIRED TO MAKE THE REPAIRS. THE CONTRACTOR SHALL CLOSE OFF PORTIONS OF THE PARKING LOTS BENEATH THE BRIDGE AS REQUIRED TO MAKE THE REPAIRS.

ALL WORK REQUIRING RAILROAD COORDINATION SHALL BE COMPLETED WITHIN 90 CONSECUTIVE CALENDAR DAYS. FOR EACH CALENDAR DAY BEYOND THE 90 CONSECUTIVE CALENDAR DAYS THE WORK IN THIS AREA IS NOT COMPLETED, LIQUIDATED DAMAGES WILL BE ACCESSED IN ACCORDANCE WITH CMS 108.07 (TABLE 108.07-1 SCHEDULE OF LIQUIDATED DAMAGES).

WHERE INTERSECTING ROADS OR DRIVES FALL WITHIN THE LANE CLOSURES, ADDITIONAL FLAGGERS, SIGNING, DRUMS, OTHER TRAFFIC CONTROL DEVICES AND TEMPORARY DRIVES SHALL BE USED TO SUPPLEMENT THE CLOSURE, AS DIRECTED BY THE ENGINEER TO ALLOW VEHICULAR INGRESS AND EGRESS AT ALL TIMES. DRUMS AT A MAXIMUM 5 FT SPACING SHALL BE USED TO DELINEATE DRIVE OPENINGS WITHIN THE LANE CLOSURES THROUGH THIS SECTION.

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LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THE CONTRACTOR SHALL PERFORM THE WORK IN THREE PHASES OF CONSTRUCTION ON THE IR 71 SOUTHBOUND BRIDGE. THE CONTRACTOR SHALL PERFORM THE ABUTMENT EXPANSION JOINT REPLACEMENT, APPROACH SLAB REPLACEMENT, MEDIAN BARRIER REPLACEMENT, MEDIAN BARRIER SEALING, APPROACH PAVEMENT REPAIRS, AND UNDERDRAIN REPLACEMENT DURING PHASE ONE FOR THE IR 71 SOUTHBOUND STRUCTURE. THE CONTRACTOR SHALL PERFORM THE ABUTMENT EXPANSION JOINT REPLACEMENT, APPROACH SLAB REPLACEMENT, AND APPROACH PAVEMENT REPAIRS DURING PHASE TWO FOR THE IR 71 SOUTHBOUND STRUCTURE. THE CONTRACTOR SHALL PERFORM THE ABUTMENT EXPANSION JOINT REPLACEMENT, APPROACH SLAB REPLACEMENT, WINGWALL REPLACEMENT, PARAPET REPLACEMENT, WINGWALL SEALING, PARAPET SEALING, APPROACH PAVEMENT REPAIRS, THE FENCE REPLACEMENT, UNDERDRAIN REPLACEMENT, AND GUARDRAIL REPLACEMENT DURING PHASE THREE FOR THE IR 71 SOUTHBOUND STRUCTURE. THE FIRST PHASE SHALL CLOSE THE INSIDE PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE OUTSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS), MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO MAINLINE LANES OF TRAFFIC AND THE ENTRANCE RAMP LANE. THE SECOND PHASE SHALL CLOSE THE MIDDLE PORTION OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS), MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), AND MT-98.21 (LANE CLOSURE AT EXIT RAMP USING PORTABLE BARRIER), AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO MAINLINE LANES OF TRAFFIC AND THE ENTRANCE RAMP LANE. THE THIRD PHASE SHALL CLOSE THE OUTSIDE PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE INSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO MAINLINE LANES OF TRAFFIC AND THE ENTRANCE RAMP LANE.

THE CONTRACTOR SHALL PERFORM THE WORK IN THREE PHASES OF CONSTRUCTION ON THE IR 71 NORTHBOUND BRIDGE. THE CONTRACTOR SHALL PERFORM THE ABUTMENT EXPANSION JOINT REPLACEMENT, APPROACH SLAB REPLACEMENT, MEDIAN BARRIER REPLACEMENT, MEDIAN BARRIER SEALING, APPROACH PAVEMENT REPAIRS, AND UNDERDRAIN REPLACEMENT DURING PHASE ONE FOR THE IR 71 NORTHBOUND STRUCTURE. THE CONTRACTOR SHALL PERFORM THE ABUTMENT EXPANSION JOINT REPLACEMENT, APPROACH SLAB REPLACEMENT, AND APPROACH PAVEMENT REPAIRS DURING PHASE TWO FOR THE IR 71 NORTHBOUND STRUCTURE. THE CONTRACTOR SHALL PERFORM THE ABUTMENT EXPANSION JOINT REPLACEMENT, APPROACH SLAB REPLACEMENT, PARAPET REPLACEMENT, PARAPET SEALING, APPROACH PAVEMENT REPAIRS, UNDERDRAIN REPLACEMENT, AND GUARDRAIL REPLACEMENT DURING PHASE THREE FOR THE IR 71 NORTHBOUND STRUCTURE. THE FIRST PHASE SHALL CLOSE THE INSIDE PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE OUTSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO MAINLINE LANES OF TRAFFIC AND THE EXIT RAMP LANE. THE SECOND PHASE SHALL CLOSE THE MIDDLE PORTION OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS), MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), MT-98.21 (LANE CLOSURE AT EXIT RAMP USING PORTABLE BARRIER), AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO MAINLINE LANES OF TRAFFIC AND THE EXIT RAMP LANE. THE THIRD PHASE SHALL CLOSE THE OUTSIDE PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE INSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-98.22 (LANE CLOSURE IN DECELERATION LANE), MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO MAINLINE LANES OF TRAFFIC AND THE EXIT RAMP LANE.

THE DUMPED ROCK FILL INSTALLATION AT PIER ONE RIGHT, THE DUMPED ROCK FILL INSTALLATION AT THE LEFT FORWARD ABUTMENT, AND THE ABUTMENT SEALING WILL NOT REQUIRE THE MAINTENANCE OF TRAFFIC ON IR 71. HOWEVER, THE CONTRACTOR SHALL COORDINATE WITH THE NORFOLK SOUTHERN RAILROAD AS REQUIRED FOR ACCESS BENEATH THE STRUCTURE AND TO MAKE THE REPAIRS.

III. MAINTENANCE OF TRAFFIC SYSTEMS

1. WHEN REQUIRED
WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY, ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITION EXISTS, THE ENGINEER MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.
2. CONDITIONS
DURING ALL PARTS OF THIS PROJECT, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE "MANUAL" OR AS SHOWN IN THE STANDARD DRAWINGS.
3. ADVANCE WARNING SIGNS
ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.
4. FLAGGERS
AT LEAST TWO FLAGGERS ARE REQUIRED FOR EACH LANE CLOSURE REQUIRING FLAGGERS. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.
5. PROTECTION OF PUBLIC
PERSONAL CARS SHALL NOT BE PARKED WITHIN THE RIGHT OF WAY.
6. FAILURE TO COMPLY
IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

IV. MAINTENANCE OF TRAFFIC MATERIALS

1. SIGNS
SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES ARE TO BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.
2. SIGN SUPPORT
SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.
3. FLASHING ARROW REQUIREMENT
WHENEVER ANY PART OF THE TRAVELED SURFACE OF THE INTERSTATES IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO SUPPLEMENTAL SPECIFICATIONS 821 AND 921, AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS. PAYMENT FOR THE ABOVE MENTIONED ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.
4. DRUMS
DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEQUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.
5. CONES
CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

6. BARRIER
PORTABLE CONCRETE BARRIER, IF NECESSARY, IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.
7. FLASHERS
FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWINGS.
8. FLOODLIGHTING
FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT, INCIDENTALS AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.
9. WORK VEHICLES
ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

V. ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLANS SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ODOT DISTRICT CONSTRUCTION ENGINEER.

VI. NORFOLK SOUTHERN RAILWAY

THE NORFOLK SOUTHERN RAILWAY SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR SHORT TERM CLOSURES DURING NON-PEAK HOURS, AS APPROVED BY NORFOLK SOUTHERN RAILWAY AND THE ENGINEER FOR THE BRIDGE REPAIRS.

FLAGGERS, INSURANCE, SAFETY MEASURES, COORDINATION, AND ALL OTHER NORFOLK SOUTHERN RAILWAY REQUIREMENTS SHALL BE IMPLEMENTED. ALL COORDINATION AND APPROVALS SHALL BE OBTAINED PRIOR TO SCHEDULING THE WORK FOR CONSTRUCTION. COPIES OF THE APPROVALS SHALL BE PROVIDED TO THE ENGINEER.

NO STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT OR MATERIALS SHALL OCCUR WITHIN THE NORFOLK SOUTHERN RAILWAY RIGHT OF WAY.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO NS AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVAL OF NORFOLK SOUTHERN RAILWAY MAINTENANCE OF TRAFFIC DEVICES REQUIRED THROUGH RAILROAD COORDINATION/APPROVAL PROCESS. ALL MAINTENANCE OF RAILROAD TRAFFIC AND COORDINATION TO PERFORM THE REPAIR WORK SHALL BE INCLUDED IN ITEM 614.

SEE SPECIAL CLAUSES IN THE PROPOSAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR NORFOLK SOUTHERN RAILWAY.

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VII. CSX TRANSPORTATION

THE CSX TRANSPORTATION SHALL BE MAINTAINED AT ALL TIMES UNDER THE DIRECTION OF THE CSX FLAGGER, AS APPROVED BY CSX TRANSPORTATION AND THE ENGINEER FOR THE BRIDGE REPAIRS.

FLAGGERS, INSURANCE, SAFETY MEASURES, COORDINATION, AND ALL OTHER CSX TRANSPORTATION REQUIREMENTS SHALL BE IMPLEMENTED. ALL COORDINATION AND APPROVALS SHALL BE OBTAINED PRIOR TO SCHEDULING THE WORK FOR CONSTRUCTION. COPIES OF THE APPROVALS SHALL BE PROVIDED TO THE ENGINEER.

NO STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT OR MATERIALS SHALL OCCUR WITHIN THE CSX TRANSPORTATION RIGHT OF WAY.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

THE CONTRACTOR SHALL DESIGN/UTILIZE SURFACE PREPARATION AND SURFACE PROTECTION METHODS THAT FOLLOW ALL ENVIRONMENTAL GUIDELINES AND BE APPROVED IN ADVANCE OF CONSTRUCTION BY CSX. THE DESIGN SHALL BE SEALED BY AN ENGINEER. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW. ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING WASHING WITH WATER, CLEANING SOLVENTS, BLASTING, SCRAPING, BRUSHING, AND PAINTING OPERATIONS, SHALL BE CONTAINED, COLLECTED, AND PROPERLY DISPOSED OF BY CONTRACTOR. THE MATERIALS REMOVED DURING THE SURFACE PREPARATION MUST NOT IMPACT THE SURROUNDING AREA INCLUDING GROUND, WATER, OR AIR. MATERIALS MUST NOT BE STORED ON CSX PROPERTY. CONTRACTOR MUST CONTROL ANY OVERSPRAY AND VAPORS DURING APPLICATION. THE WORK MUST BE DONE COMPLYING WITH APPROPRIATE REGULATIONS AND OVER SPRAY CONTROLLED TO PREVENT DAMAGE TO ADJACENT PROPERTY AND VEHICLES IN THE AREA.

IT IS THE POLICY OF CSX THAT ALL MATERIALS DISCARDED BY OR ON BEHALF OF CSX WILL BE MANAGED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS CSX’S BEST MANAGEMENT PRACTICES AND SUSTAINABILITY GOALS.

TO ENSURE THAT THESE GOALS ARE ACHIEVED, CSX HAS MECHANISMS IN PLACE TO MONITOR WASTE MANAGEMENT ACTIVITIES, CAPTURE THE INFORMATION NECESSARY TO ENSURE 100% COMPLIANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS 100% OF THE TIME, AND TRACK PROGRESS IN THE CSX SUSTAINABILITY PROGRAM.

THESE MECHANISMS ALSO ALLOW CSX TO COMPLETE REPORTING REQUIREMENTS TO FEDERAL AND STATE REGULATORY AGENCIES AND DOCUMENT CSX’S PROGRESS TOWARD ITS SUSTAINABILITY GOALS.

WASTE MATERIAL REMOVAL SHALL BE IN ACCORDANCE WITH CSX SOIL AND WATER MANAGEMENT POLICY

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CSX TRANSPORTATION MAINTENANCE OF TRAFFIC THROUGH RAILROAD COORDINATION/APPROVAL PROCESS. ALL MAINTENANCE OF RAILROAD TRAFFIC AND COORDINATION TO PERFORM THE REPAIR WORK SHALL BE INCLUDED IN ITEM 614.

SEE SPECIAL CLAUSES IN THE PROPOSAL INCLUDING CSX PUBLIC PROJECT MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR CSX TRANSPORTATION.

NOTE:
ALL PLAN REFERENCES TO “CHESSIE SYSTEM”, “B&O”, “CSX RAILWAY” OR “CSX TRANSPORTATION” SHALL BE CONSIDERED AS “CSX TRANSPORTATION, INC.”

VIII. SHARED LANES

SHARE THE ROAD (W16-1P-18) SIGNS HAVE BEEN INCORPORATED INTO THE LOCATION 2 MAINTENANCE OF TRAFFIC PLANS. THE WORK ZONE TEMPORARY SIGN SUPPORTS, SHARE THE ROAD SIGNS AND REMOVAL SHALL BE INCLUDED WITH ITEM 614 – MAINTAINING TRAFFIC FOR PAYMENT.

IX. PAYMENT

REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES INCLUDING DETOURS, INTERSTATE LANE CLOSURES/SHIFTS AND SHARE TO ROAD SIGNS SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 – MAINTAINING TRAFFIC.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTINUOUS ACCESS

IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT, INCIDENTALS AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 – MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES, HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

OVERNIGHT JOINT TRENCH CLOSING

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SAFE WORK SITE BY REDUCING THE RISK OF VEHICLES OR PEDESTRIANS FALLING INTO THE OPEN JOINT TRENCH DURING CONSTRUCTION. THE CONTRACTOR SHALL COVER UNFILLED JOINT REPAIR AREAS AT THE END OF EACH WORKDAY WITH A STEEL PLATE.

ITEM 614 – LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS DETERMINED AND PRE-APPROVED BY THE ENGINEER. ANY LEO HOURS WHICH ARE NOT PRE-APPROVED FOR THE FOLLOWING PURPOSES SHALL NOT BE COMPENSABLE:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE AND SHOULD MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC, IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST’S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS’ DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH CMS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/ CSX RAILWAY/BIG CREEK)	
ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	<u>16</u> HOUR
LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)	
ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	<u>48</u> HOUR

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 – MAINTAINING TRAFFIC. MISC.: GCRTA COORDINATION

THE CONTRACTOR SHALL NOTIFY IN WRITING THE GCRTA AT LEAST FOURTEEN (14) CALENDAR DAYS PRIOR TO THE START OF CONSTRUCTION, AND AT LEAST SEVEN (7) CALENDAR DAYS BEFORE IMPLEMENTING ANY SUBSTANTIAL CHANGE IN TRAFFIC PATTERN OR CLOSING ANY STREET OR PORTION THEREOF TO TRAFFIC. THIS WILL ALLOW GCRTA SUFFICIENT TIME TO PLAN DETOURS AND NOTIFY THE GENERAL PUBLIC.

THE CONTRACTOR SHALL WORK WITH GCRTA TO ESTABLISH AN APPROVED TEMPORARY BUS STOP LOCATION. GCRTA WILL PROVIDE AND POST THE APPROPRIATE TEMPORARY BUS SIGN SIGNAGE. A MINIMUM OF SEVEN (7) DAYS NOTICE IS REQUIRED FOR THE TEMPORARY RELOCATION OF BUS STOPS.

THE CONTRACTOR SHALL NOTIFY GCRTA AT LEAST FIVE (5) BUSINESS DAYS IN ADVANCE OF CONSTRUCTION COMPLETION SO THAT PERMANENT BUS STOP SIGNS CAN BE RE-INSTALLED BY GCRTA.

THE CONTRACTOR MAY NOT REMOVE ANY BUS STOP SIGNS WITHOUT PRIOR AUTHORIZATION FROM GCRTA.

THE FOLLOWING IS A LIST OF CONTACT INFORMATION FOR GCRTA NOTIFICATIONS.

CENTRAL COMMUNICATIONS: 216-566-5135, MONITORED 24/7
TONY RICHARDSON, SERVICE QUALITY, ARICHARDSON@gcrta.org
HOWARD WESLEY, SERVICE QUALITY, HWESLEY@gcrta.org
WANDA WARE, SERVICE QUALITY, WWARE@gcrta.org
ROBERT FLEIG, SERVICE QUALITY COMMUNICATION SPECIALIST, ROBERT.FLEIG@gcrta.org
MARK RODRIGUEZ, SERVICE QUALITY OFFICE MANAGER, MARK.RODRIGUEZ@gcrta.org
JOEL FREILICH, SERVICE MANAGEMENT, JFREILICH@gcrta.org
JEFFREY MACKO, SERVICE MANAGEMENT, JMACKO@gcrta.org

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND INCIDENTALS REQUIRED TO PERFORM THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 – MAINTAINING TRAFFIC, MISC.: GCRTA COORDINATION.

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DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED". PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO CMS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES AND CARRIED TO THE GENERAL SUMMARY:

LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)		
ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>209</u>	EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>136</u>	EACH
ITEM 614 - OBJECT MARKER, TWO WAY	<u>30</u>	EACH
ITEM 614 - INCREASED BARRIER DELINEATION	<u>904</u>	FT

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO CMS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO CMS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES AND CARRIED TO THE GENERAL SUMMARY:

LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)		
ITEM 614 - BARRIER REFLECTOR, TYPE 2, ONE WAY	<u>82</u>	EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>70</u>	EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEMS.

ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)		
ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	<u>825</u>	FT

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKERS

RAISED PAVEMENT MARKERS IN WORK ZONES, SHALL BE ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER. WZRPMS ARE INTENDED FOR USE ONLY DURING THE NON-SNOW-PLOWING SEASON. WZRPMS SHALL NOT BE PROVIDED DURING THE SNOW-PLOWING SEASON.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES AND CARRIED TO THE GENERAL SUMMARY.

LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)		
ITEM 614 - WORK ZONE RAISED PAVEMENT MARKERS	<u>3536</u>	EACH

ITEM 614 - MAINTAINING TRAFFIC, MISC.: RUMBLE STRIPS REMOVAL

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THIS ITEM IS FOR REMOVAL OF EXISTING RUMBLE STRIPS FOR MAINTENANCE OF TRAFFIC PURPOSES ONLY.

THE CONTRACTOR SHALL MILL 2 INCHES DEEP BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS ALONG IR 71 IN THE AREA WHERE TRAFFIC IS SHIFTED. THE CONTRACTOR SHALL THEN COAT ALL MILLED SURFACES, HORIZONTAL AND VERTICAL, WITH APPROVED AC LIQUID. NEXT THE CONTRACTOR SHALL PLACE 2 INCHES OF ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22. THE COST OF THE REMOVAL OF THE EXISTING PAVEMENT AND PLACEMENT OF THE SURFACE COURSE SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ITEM 614 - MAINTAINING TRAFFIC, MISC.: RUMBLE STRIPS REMOVAL. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR PAYMENT:

PHASE	LOCATION	FROM STATION	TO STATION	LOCATION	LENGTH (FT)
1	NB LANES	923+15	929+85	OUTSIDE	670
1	NB LANES	936+10	940+00	OUTSIDE	390
1	NB LANES	941+95	942+85	OUTSIDE	90
1	NB LANES	946+65	949+90	OUTSIDE	325
1	SB LANES	932+60	939+35	OUTSIDE	675
1	SB LANES	941+35	952+00	OUTSIDE	1065
1	SB LANES	955+00	960+60	OUTSIDE	560
2	NB LANES	921+45	939+75	INSIDE	1880
2	NB LANES	941+65	946+25	INSIDE	460
2	NB LANES	936+10	940+00	OUTSIDE	PHASE 1 REMOVAL TO REMAIN
2	NB LANES	941+95	942+85	OUTSIDE	PHASE 1 REMOVAL TO REMAIN
2	NB LANES	942+85	946+20	OUTSIDE	335
2	SB LANES	931+10	932+60	OUTSIDE	150
2	SB LANES	932+60	939+35	OUTSIDE	PHASE 1 REMOVAL TO REMAIN
2	SB LANES	943+90	949+00	OUTSIDE	PHASE 1 REMOVAL TO REMAIN
2	SB LANES	936+55	939+65	INSIDE	310
2	SB LANES	941+55	954+35	INSIDE	1280
3	NB LANES	926+00	939+70	INSIDE	PHASE 2 REMOVAL TO REMAIN
3	NB LANES	941+65	946+25	INSIDE	PHASE 2 REMOVAL TO REMAIN
3	SB LANES	936+15	936+55	INSIDE	40
3	SB LANES	936+55	939+65	INSIDE	PHASE 2 REMOVAL TO REMAIN
3	SB LANES	941+55	952+10	INSIDE	PHASE 2 REMOVAL TO REMAIN
				CONTINGENCY	825
				TOTAL	9055

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DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616 - WATER 1 MGAL

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME FOR EACH LOCATION, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE SAFETY ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE WORK IN A SAFE AND EFFICIENT MANNER SHALL BE SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN ACCEPTED.

IF DURING THE PROJECT, THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE CONTRACTOR TO ADJUST THE MAINTENANCE OF TRAFFIC SCHEME TO THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT OW-124 (ROAD CONSTRUCTION AHEAD) SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SET-UP TIME. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

EXTRA ADVANCE WARNING SIGNS

AN EXTRA ADVANCE WARNING SIGN GROUP CONSISTS OF TWO W20-1 (ROAD WORK AHEAD) SIGNS, TWO W20-5 (RIGHT/LEFT LANE CLOSED AHEAD) SIGNS WITH W16-3aP DISTANCE PLATES, AND TWO W3-H4b (WATCH FOR STOPPED TRAFFIC) SIGNS AND REQUIRED WARNING LIGHTS.

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE EXTRA ADVANCE WARNING SIGN GROUPS AS SHOWN ON TRAFFIC SCD MT-95.50 AT THE FOLLOWING DISTANCES IN ADVANCE OF THE LANE TAPERS WITH THE APPROPRIATE W16-3aP DISTANCE PLATES:

- 1) LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY) LANE TAPER STATION 922+50± , PHASE 1 (IR 71 NORTHBOUND) ; PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.
- 2) LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY) LANE TAPER STATION 958+47± , PHASE 1 (IR 71 SOUTHBOUND) ; PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.
- 3) LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY) LANE TAPER STATION 912+14.35± , PHASE 2 (IR 71 NORTHBOUND) ; PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.
- 4) LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY) LANE TAPER STATION 955+30± , PHASE 2 (IR 71 SOUTHBOUND) ; PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.
- 5) LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY) LANE TAPER STATION 942+89.35± , PHASE 3 (IR 71 NORTHBOUND) ; PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.
- 6) LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY) LANE TAPER STATION 952+50± , PHASE 3 (IR 71 SOUTHBOUND) ; PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.

THE CONTRACTOR SHALL HAVE AN ADDITIONAL EXTRA ADVANCE WARNING SIGN GROUP (6 SIGNS AND 2 DISTANCE PLATES) AVAILABLE FOR USE WHEN DIRECTED BY THE ENGINEER. THE DISTANCE PLATES FOR THIS GROUP SHALL BE ABLE TO BE MODIFIED IN THE FIELD TO SHOW APPROPRIATE WHOLE MILES TO THE LANE TAPER.)

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING EXTRA ADVANCE WARNING SIGN GROUPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE PREFORMED BLACKOUT TAPE

THIS ITEM SHALL CONFORM TO CMS 614.11 WORK ZONE PAVEMENT MARKING REQUIREMENTS WITH THE EXCEPTION THAT THE MARKING MATERIAL SHALL BE BLACKOUT TAPE CONFORMING TO SUPPLEMENTAL SPECIFICATION 987. THE BLACKOUT TAPE SHALL BE MANUFACTURED BY A SUPPLIER ON ODOT’S QUALIFIED PRODUCTS LIST FOR THIS ITEM. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 614 - WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE PREFORMED BLACKOUT TAPE AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, MAINTAIN, AND REMOVE THIS ITEM.

THE CONTRACTOR SHALL INSTALL A SINGLE CONTINUOUS PIECE OF BLACKOUT TAPE TO COVER THE EXISTING LONGITUDINAL AND TRANSVERSE PAVEMENT MARKING AS INDICATED IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED TO BE USED AS DIRECTED BY THE ENGINEER TO COVER UP PORTIONS OF THE EXISTING SHARED LANE MARKING WHERE THE EXISTING SHARED LANE MARKING IS IN CONFLICT WITH THE MOT MARKING.

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/CSX RAILWAY/BIG CREEK)
ITEM 614 - WORK ZONE PAVEMENT MARKING MISC: REMOVABLE, NON-REFLECTIVE PREFORMED BLACKOUT TAPE 200 FT

ITEM 621 - RAISED PAVEMENT MARKERS REMOVED, AS PER PLAN

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 4: CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING RAISED PAVEMENT MARKER REFLECTORS FROM THE EXISTING RAISED PAVEMENT MARKERS PRIOR TO MAINTENANCE OF TRAFFIC PHASE 1.

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO REMOVE THE EXISTING RAISED PAVEMENT MARKER REFLECTORS SHALL BE INCLUDED WITH ITEM 621 - RAISED PAVEMENT MARKER REMOVED, AS PER PLAN.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH CMS 614.03.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR’S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

LOCATION 2: CUY-42-1457 (US 42 [PEARL ROAD] OVER NS RAILWAY/CSX RAILWAY/BIG CREEK)
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 4 PCMS SIGNS FOR 1 MONTH) 4 SNMT

LOCATION 4: CUY-71-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 4 PCMS SIGNS FOR 1 MONTH) 6 SNMT

ITEM 614 - WORK SITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PRE-QUALIFIED WORK SITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PRE-QUALIFIED WTS ROSTER. PRE-QUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PRE-QUALIFIED.

THE NAME OF THE PRE-QUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PRE-QUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.
2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.
3. ATTEND PRE-CONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.
4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.
5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.
6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.
7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.
8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIME FRAME DETERMINED BY THE ENGINEER.

11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
 - A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
 - B. DAILY TTC SETUP AND REMOVAL.
 - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
 - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
 - E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
 - F. ALL OTHER EMERGENCY TTC NEEDS.
12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

- A. THE PRORATED DAILY AMOUNT OF ITEM 614 - MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 - MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.
- B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 - MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIME FRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.
- C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 - MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCURS, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH CMS 108.05. UPON REMOVAL, THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PRE-QUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PRE-QUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.



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STATION		SIDE	614										615	618	621		622		642						CALCULATED TJF CHECKED ALP		
			INCREASED BARRIER DELINEATION	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	BARRIER REFLECTOR, TYPE 2, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I		WORK ZONE CHANNELIZING LINE, CLASS I, 12", 740.06, TYPE I	WORK ZONE DOTTED LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 740.06, TYPE I	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	RPM REFLECTOR	RAISED PAVEMENT MARKER REMOVED, AS PER PLAN	PORTABLE BARRIER, 4" CONNECTOR	PORTABLE BARRIER, UNANCHORED	EDGE LINE, 6", TYPE I		LANE LINE, 6", TYPE I	CHANNELIZING LINE, 12", TYPE I		TRANSVERSE/DIAGONAL LINE, TYPE I	DOTTED LINE, 6", TYPE I
										YELLOW	WHITE										YELLOW	WHITE					
FROM	TO		FT	EACH	EACH	EACH	EACH	EACH	EACH	MILE		FT	FT	FT	SY	FT	EACH	EACH	EACH	FT	MILE		MILE	FT	FT	FT	
RAISED PAVEMENT MARKERS																											
IR 71 NB																											
897+89.35	909+14.35	RT			18																						
909+14.35	929+24.35	RT			404																						
929+24.35	931+57.35	RT			4																						
931+08.00	939+10.00	RT			7																						
939+10.00	949+65.00	RT			159																						
RAMP E																											
932+80.00	948+25.00	RT			154																						
IR 71 SB																											
930+99.35	931+57.35	LT			9																						
931+08.00	942+20.00	LT			168																						
942+20.00	946+60.00	LT			4																						
946+60.00	958+30.00	LT			177																						
958+30.00	966+10.00	LT			7																						
RAMP TO IR 71 SB																											
930+99.35	931+57.35	LT			6																						
931+57.35	952+00.00	LT			204																						
BARRIER																											
PORTABLE BARRIER (IR 71 NB)																											
936+46.29	936+78.44	RT		1																							
936+78.44	936+88.44	RT																		10.00							
936+88.44	937+00.00	RT																	1								
937+00.00	939+19.00	RT				5		4												438.00							
939+19.00	942+10.00	RT				14		12												582.00							
OUTSIDE BARRIER (IR 71 NB)																											
937+00.00	940+02.29	RT					7	6																			
940+02.29	941+84.23	RT				5		4																			
941+84.23	943+50.00	RT					4	3																			
943+50.00	944+00.00	RT				3		2																			
944+00.00	948+25.00	RT					10	9																			
946+86.66	948+25.00	RT				4		3																			
MEDIAN BARRIER																											
931+08.00	937+95.26	CL				15		14																			
937+95.26	939+19.97	CL	124.71			6			2																		
939+19.97	942+10.35	CL				12			6																		
942+10.35	943+02.58	CL	92.23			6			2																		
943+02.58	949+60.00	CL				13		13																			
949+60.00	951+73.83	CL	213.83			4		4																			
PORTABLE BARRIER (IR 71 SB)																											
939+20.00	942+12.00	LT				14		12												584.00							
942+12.00	942+43.00	LT				2		1												62.00							
942+43.00	943+90.00	LT																		294.00							
943+90.00	944+01.60	LT																	1								
944+01.60	944+11.60	LT																		10.00							
944+11.60	944+43.75	LT		1																							
OUTSIDE BARRIER (IR 71 SB)																											
938+72.78	939+31.43	LT					2	1																			
939+31.43	941+20.33	LT				5		4																			
941+20.33	943+90.00	LT					6	5																			
PAVEMENT																											
IR 71 NB																											
922+00.00	929+40.00	LT													411.11												
TOTALS CARRIED TO SHEET 20			430.77	2	1321	108	29	97	10						411.11				2	1980.00							

MAINTENANCE OF TRAFFIC SUBSUMMARY

LOCATION 4: CUY-071-1640

CUY-071-16.40/ VAR REPAIR
PID NO. 111603

18
123

MAINTENANCE OF TRAFFIC SUBSUMMARY
LOCATION 4: CUY-071-1640

CUY-071-16.40/ VAR REPAIR
PID NO. 111603

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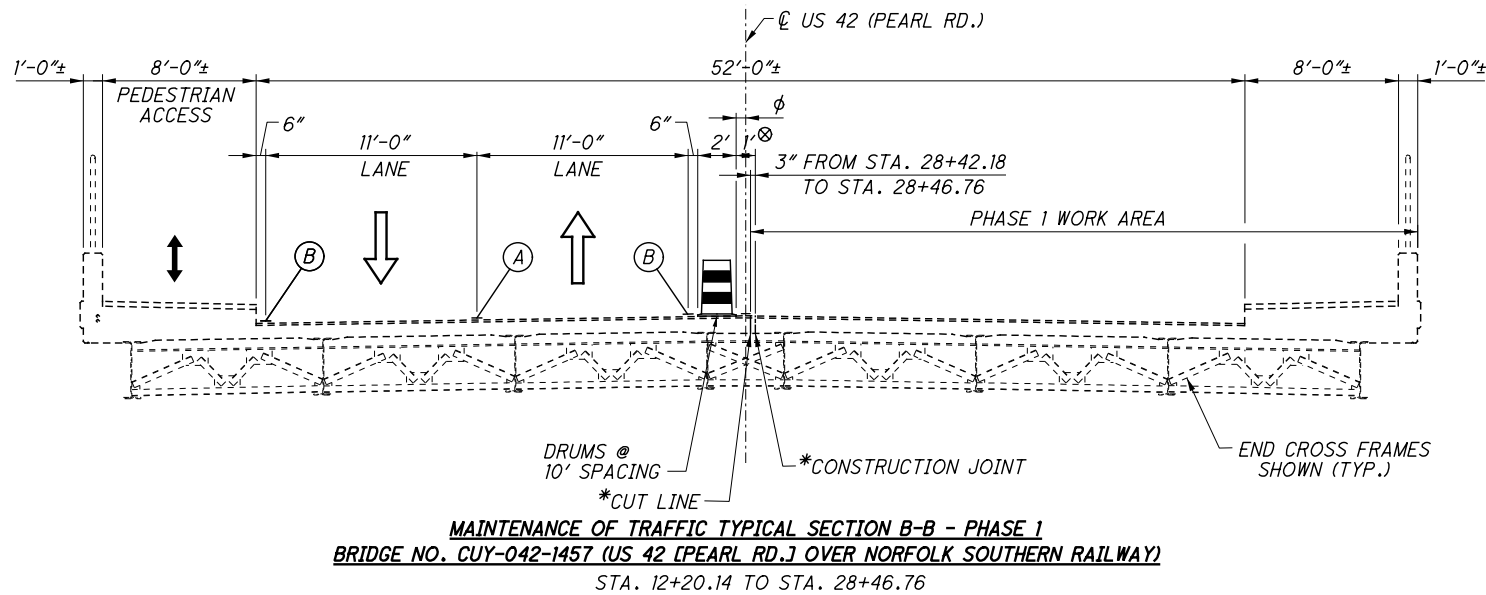
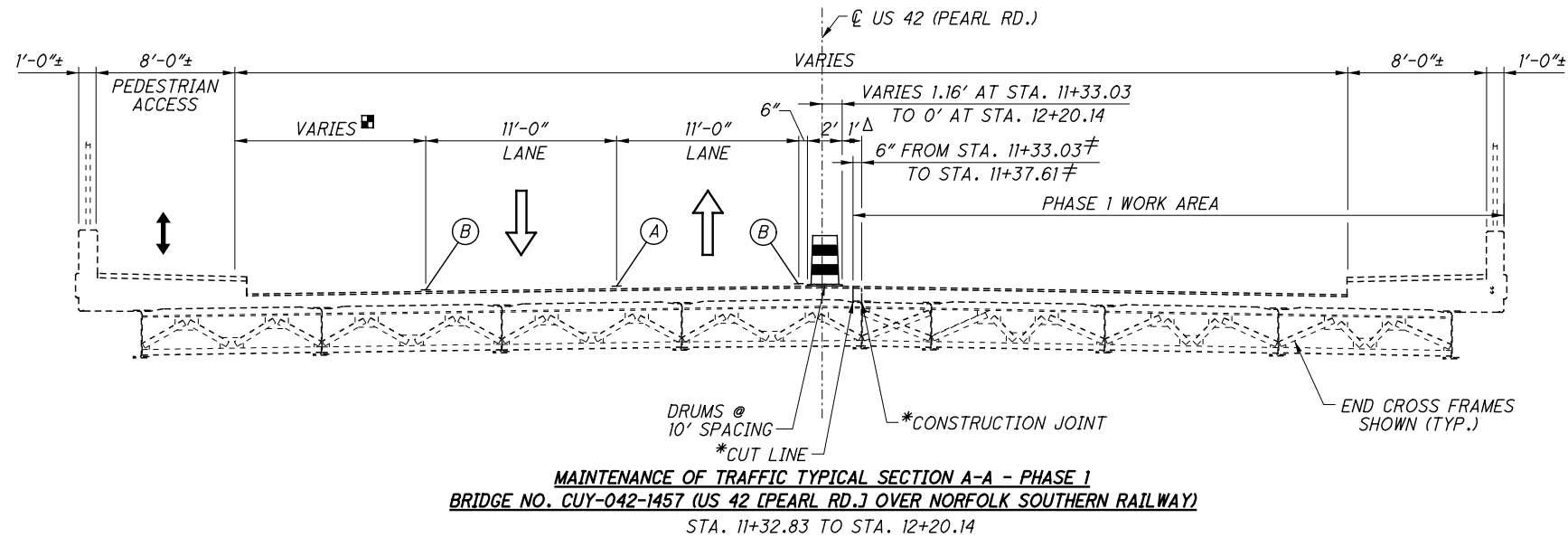
STATION		SIDE	614										615	618	621		622		642						CALCULATED TJF	CHECKED ALP		
			INCREASED BARRIER DELINEATION	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	BARRIER REFLECTOR, TYPE 2, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1		WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 740.06, TYPE 1	WORK ZONE DOTTED LINE, CLASS 1, 6", 740.06, TYPE 1	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS 1, 740.06, TYPE 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	RPM REFLECTOR	RAISED PAVEMENT MARKER REMOVED, AS PER PLAN	PORTABLE BARRIER, 4" CONNECTOR	PORTABLE BARRIER, UNANCHORED	EDGE LINE, 6", TYPE 1		LANE LINE, 6", TYPE 1	CHANNELIZING LINE, 12", TYPE 1			TRANSVERSE/DIAGONAL LINE, TYPE 1	DOTTED LINE, 6", TYPE 1
										YELLOW	WHITE										YELLOW	WHITE						
FROM	TO		FT	EACH	EACH	EACH	EACH	EACH	EACH	MILE		FT	FT	FT	SY	FT	EACH	EACH	EACH	FT	MILE		MILE	FT	FT	FT		
LOCATION 4: PHASE 3																												
WORK ZONE PAVEMENT MARKING																												
IR 71 NB																												
914+09.35	921+29.35	RT								720.00	720.00	1440.00	720.00															
921+29.35	931+57.35	RT								1028.00	1028.00	2056.00																
931+08.00	942+25.00	RT								1117.00	1117.00	2234.00																
942+25.00	945+85.00	RT								360.00		720.00	360.00															
945+85.00	946+80.00	RT								95.00		285.00																
946+80.00	949+80.00	RT								300.00	300.00	600.00																
RAMP E																												
942+25.00	945+85.00	RT										360.00																
945+85.00	946+80.00	RT										211.00		94.00														
946+80.00	948+85.00	RT								205.00	205.00		205.00															
IR 71 SB																												
930+34.35	931+57.35	LT								123.00	123.00	246.00																
931+08.00	947+10.00	LT								1602.00	1602.00	3204.00																
947+10.00	956+10.00	LT								900.00	900.00	900.00																
956+10.00	963+30.00	LT								720.00	720.00	720.00	720.00															
RAMP TO IR 71 SB																												
947+10.00	952+50.00	LT								540.00	540.00																	
952+50.00	955+00.00	LT								250.00	250.00		250.00															
955+00.00	956+10.00	LT								110.00	110.00	110.00																
RAISED PAVEMENT MARKERS																												
IR 71 NB																												
914+09.35	921+89.35	RT			14																							
921+89.35	931+57.35	RT			192																							
931+08.00	934+30.00	RT			64																							
934+30.00	939+25.00	RT			8																							
939+25.00	949+80.00	RT			212																							
RAMP E																												
942+25.00	945+85.00	RT			18																							
945+85.00	948+85.00	RT			30																							
IR 71 SB																												
930+34.35	931+57.35	LT			24																							
931+08.00	942+15.00	LT			220																							
942+15.00	944+10.00	LT			4																							
944+10.00	955+50.00	LT			171																							
955+50.00	963+30.00	LT			7																							
RAMP TO IR 71 SB																												
944+10.00	947+10.00	LT			15																							
947+10.00	955+00.00	LT			80																							
955+00.00	956+10.00	LT			18																							
BARRIER																												
PORTABLE BARRIER (IR 71 NB)																												
937+00.00	937+32.00	RT		1																								
937+32.00	939+32.00	RT																		200.00								
939+32.00	942+25.00	RT				7		6												293.00								
MEDIAN BARRIER																												
931+31.30	931+57.35	CL	26.05			1		1																				
931+08.00	931+30.00	CL	22.00																									
931+30.00	937+93.05	CL				14		13																				
937+93.05	939+15.00	CL	121.95			6			4																			
939+15.00	942+25.00	CL				14			12																			
942+25.00	943+17.63	CL	92.63			6			4																			
943+17.63	947+10.00	CL				9		8																				
946+80.00	948+89.95	CL	209.95			5		4																				
TOTALS CARRIED TO SHEET 20			472.58	1	1077	62		32	20	8070.00	7615.00	13086.00	2255.00	94.00						493.00								

MAINTENANCE OF TRAFFIC SUBSUMMARY
LOCATION 4: CUY-071-1640

CUY-071-16.40/ VAR REPAIR
PID NO. 111603

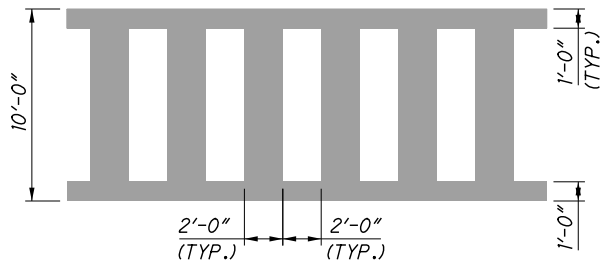


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- LEGEND**
- ➔ DIRECTION OF TRAVEL
- * AT WORK AREAS ONLY
- ≠ STATIONING AT CUT LINE
- △ VARIES 1.18' AT STA. 11+32.83 TO 1.05' AT STA. 11+37.44
- ▣ VARIES 10.31' AT STA. 11+32.83 TO 0.5' AT STA. 12+20.14
- φ VARIES 0' AT STA. 12+20.14 TO 1' AT STA. 12+70.39
1' FROM STA. 12+70.39 TO STA. 28+46.76
- ⊗ 1' FROM STA. 28+42.18 TO STA. 28+46.76

- MOT PAVEMENT MARKING LEGEND**
- Ⓐ ITEM 614 - WORK ZONE CENTER LINE (DOUBLE, SOLID)
- Ⓑ ITEM 614 - WORK ZONE EDGE LINE (WHITE)



WORK ZONE CROSSWALK MARKING DETAIL
(LONGITUDINAL AND TRANSVERSE LINES)

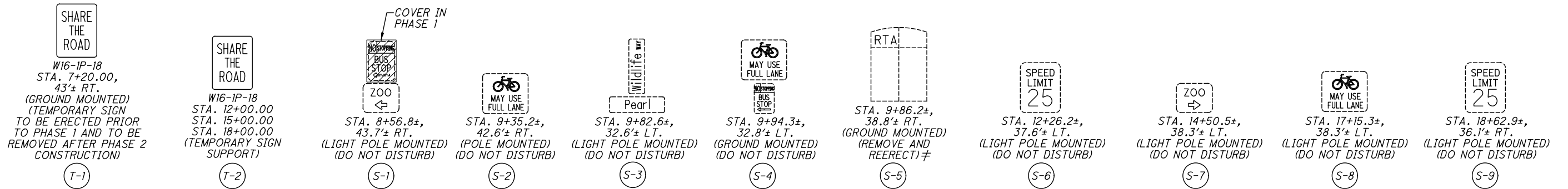


FINAL CROSSWALK MARKING DETAIL
(LONGITUDINAL LINES ONLY)

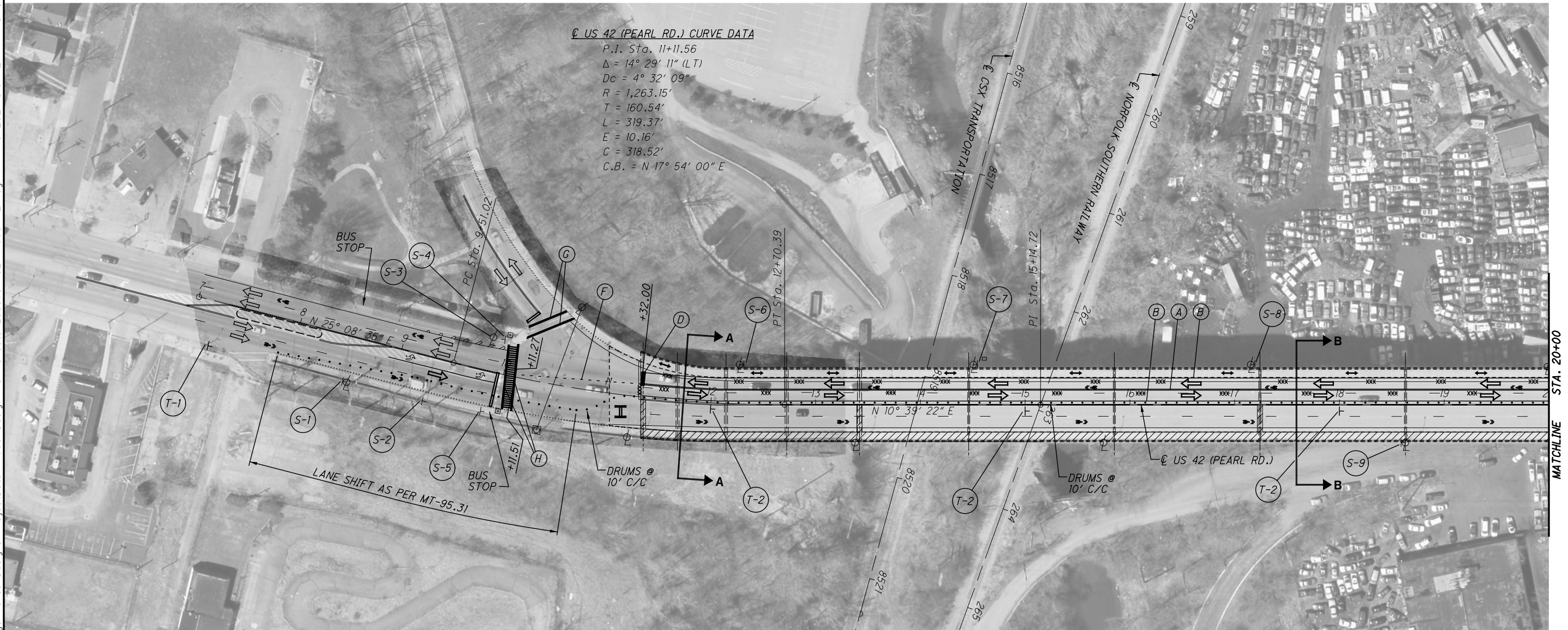
NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

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SIGNING LEGEND



MOT PAVEMENT MARKING LEGEND

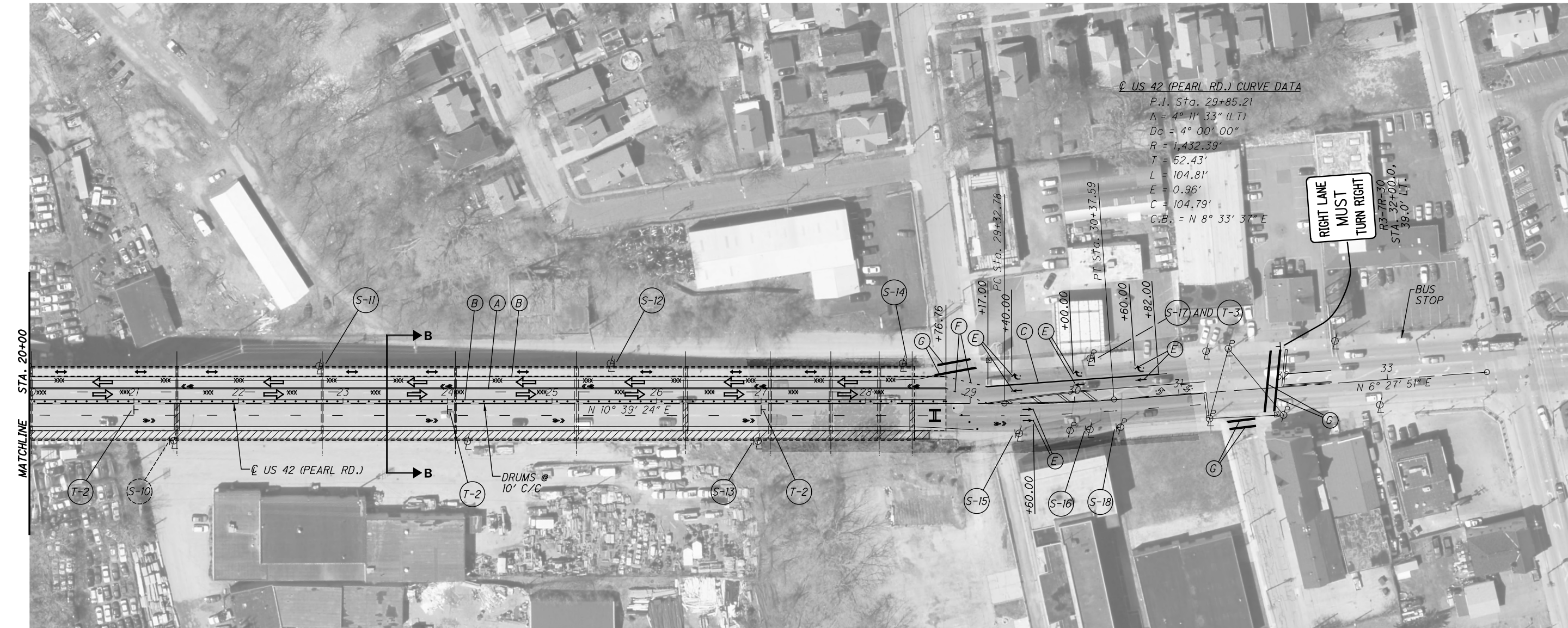
- (A) ITEM 614 - WORK ZONE CENTER LINE (DOUBLE, SOLID)
(B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
(C) ITEM 614 - WORK ZONE CHANNELIZING LINE
(D) ITEM 614 - WORK ZONE STOP LINE
(E) ITEM 614 - WORK ZONE ARROW
(F) ITEM 614 - WORK ZONE DOTTED LINES
(G) ITEM 642 - CROSSWALK (FINAL MARKING TO BE PERFORMED PRIOR TO PHASE 1 CONSTRUCTION)
(H) ITEM 614 - WORK ZONE CROSSWALK LINE (FINAL MARKING LAYOUT TO MATCH EXISTING CROSSWALK WITH LONGITUDINAL LINES ONLY)

LEGEND

- WORK AREA
DRUMS
TYPE III BARRICADE
REMOVABLE BLACKOUT TAPE
TRAFFIC DIRECTION OF TRAVEL
PEDESTRIAN DIRECTION OF TRAVEL
≠ THE RTA SIGN AND BUS STOP SHALL BE TEMPORARILY MOVED DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH GCRTA PER THE MAINTENANCE OF TRAFFIC NOTES.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.31 AND MT-110.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
4. FOR SECTION A-A AND SECTION B-B SEE SHEET 21.
5. FOR CROSSWALK MARKING DETAILS SEE SHEET 21.
6. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE SHARE THE ROAD SIGNS (W16-1P-18). THIS WORK SHALL BE INCLUDED WITH ITEM 614 - MAINTAINING TRAFFIC FOR PAYMENT.



<div>SHARE THE ROAD</div> <div>W16-IP-18 STA. 21+00.00 STA. 24+00.00 STA. 27+00.00 (TEMPORARY SIGN SUPPORT)</div> <div>T-2</div>	<div>SHARE THE ROAD</div> <div>W16-IP-18 STA. 7+20.00, 43'± RT. (GROUND MOUNTED) TO BE ERECTED PRIOR TO PHASE 1 AND TO BE REMOVED AFTER PHASE 2 CONSTRUCTION</div> <div>T-3</div>	<div>MAY USE FULL LANE</div> <div>STA. 21+38.2±, 35.6'± RT. (LIGHT POLE MOUNTED) (REMOVE AND REERECT)</div> <div>S-10</div>	<div>SPEED LIMIT 25</div> <div>STA. 22+77.1±, 35.9'± LT. (LIGHT POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-11</div>	<div>MAY USE FULL LANE</div> <div>STA. 25+55.9±, 38.3'± LT. (LIGHT POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-12</div>	<div>MAY USE FULL LANE</div> <div>STA. 26+97.0±, 36.0'± RT. (LIGHT POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-13</div>	<div>SPEED LIMIT 25</div> <div>STA. 28+35.3±, 38.3'± LT. (LIGHT POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-14</div>	<div>SPEED LIMIT 25</div> <div>STA. 29+46.7±, 28.7'± RT. (LIGHT POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-15</div>	<div>EMERGENCY SNOW STREET NO PARKING WHEN SNOW EXCEEDS 2 IN</div> <div>STA. 30+13.1±, 27.2'± RT. (LIGHT POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-16</div>	<div>MAY USE FULL LANE</div> <div>STA. 30+17.2±, 40.8'± LT. (POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-17</div>	<div>MAY USE FULL LANE</div> <div>STA. 30+42.0±, 26.9'± RT. (POLE MOUNTED) (DO NOT DISTURB)</div> <div>S-18</div>
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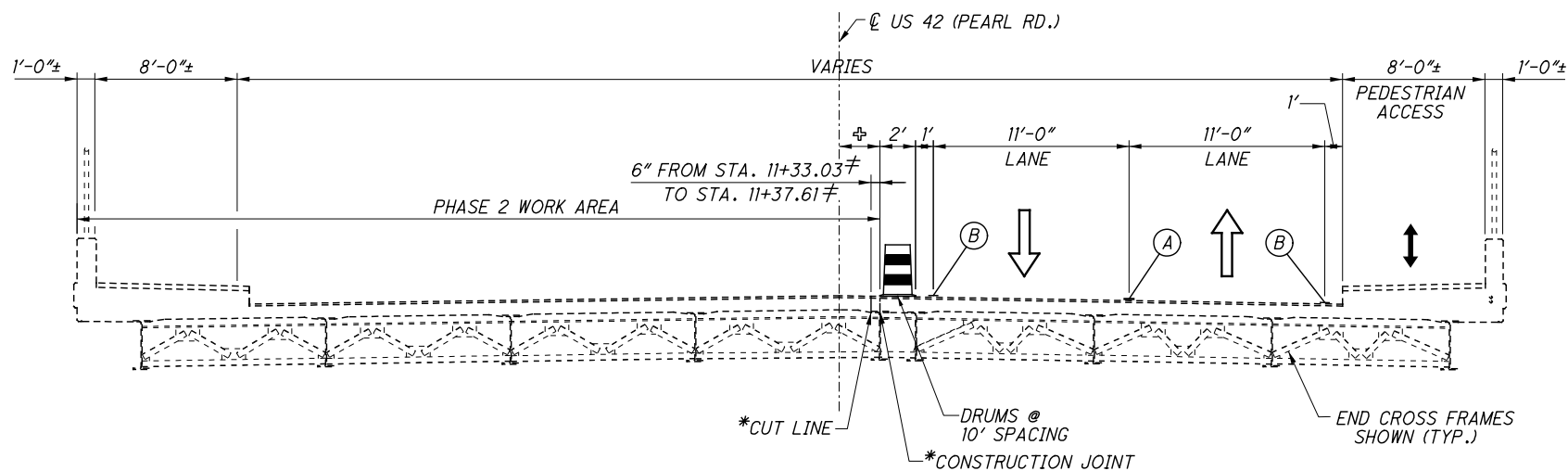
SIGNING LEGEND

- NOT PAVEMENT MARKING LEGEND**
- (A) ITEM 614 - WORK ZONE CENTER LINE (DOUBLE, SOLID)
 - (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
 - (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
 - (D) ITEM 614 - WORK ZONE STOP LINE
 - (E) ITEM 614 - WORK ZONE ARROW
 - (F) ITEM 614 - WORK ZONE DOTTED LINES
 - (G) ITEM 642 - CROSSWALK (FINAL MARKING TO BE PERFORMED PRIOR TO PHASE 1 CONSTRUCTION)

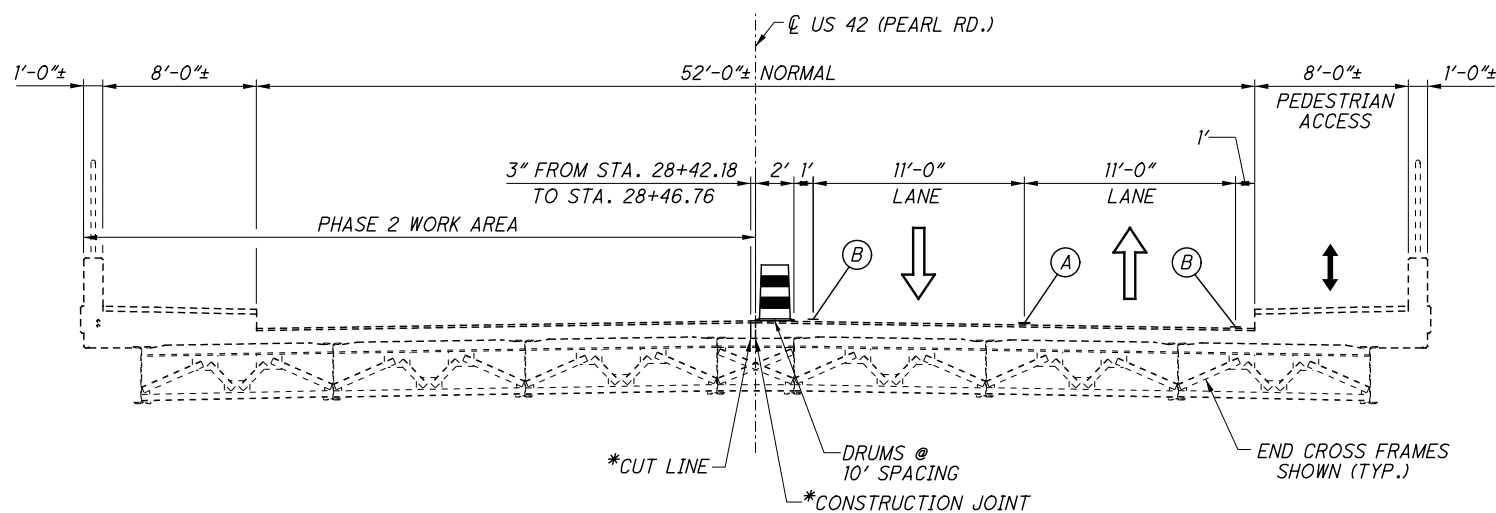
- LEGEND**
- WORK AREA
 - DRUMS
 - TYPE III BARRICADE
 - REMOVABLE BLACKOUT TAPE
 - TRAFFIC DIRECTION OF TRAVEL
 - PEDESTRIAN DIRECTION OF TRAVEL
 - THE REMOVAL AND REERECTION OF THE EXISTING LIGHT POLE AND SIGN SHALL BE INCLUDED WITH ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN FOR PAYMENT.

- NOTES:**
- DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 - SEE MT-95.31 AND MT-110.10 FOR ADDITIONAL DETAILS.
 - THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
 - FOR SECTION B-B SEE SHEET 21.
 - FOR CROSSWALK MARKING DETAILS SEE SHEET 21.
 - THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE SHARE THE ROAD SIGNS (W16-IP-18). THIS WORK SHALL BE INCLUDED WITH ITEM 614 - MAINTAINING TRAFFIC FOR PAYMENT.

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MAINTENANCE OF TRAFFIC TYPICAL SECTION A-A - PHASE 2
BRIDGE NO. CUY-042-1457 (US 42 [PEARL RD.] OVER NORFOLK SOUTHERN RAILWAY))
STA. 11+32.83 TO STA. 12+70.39



MAINTENANCE OF TRAFFIC TYPICAL SECTION B-B - PHASE 2
BRIDGE NO. CUY-042-1457 (US 42 [PEARL RD.] OVER NORFOLK SOUTHERN RAILWAY))
STA. 12+70.39 TO STA. 28+46.76





- LEGEND**
- ➡ DIRECTION OF TRAVEL
- * AT WORK AREAS ONLY
- ± STATIONING AT CUT LINE
- ± VARIES 4.17' AT STA. 11+32.83 TO 0' AT STA. 12+70.39

- MOT PAVEMENT MARKING LEGEND**
- (A) ITEM 614 - WORK ZONE CENTER LINE (DOUBLE, SOLID)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)

NOTES:

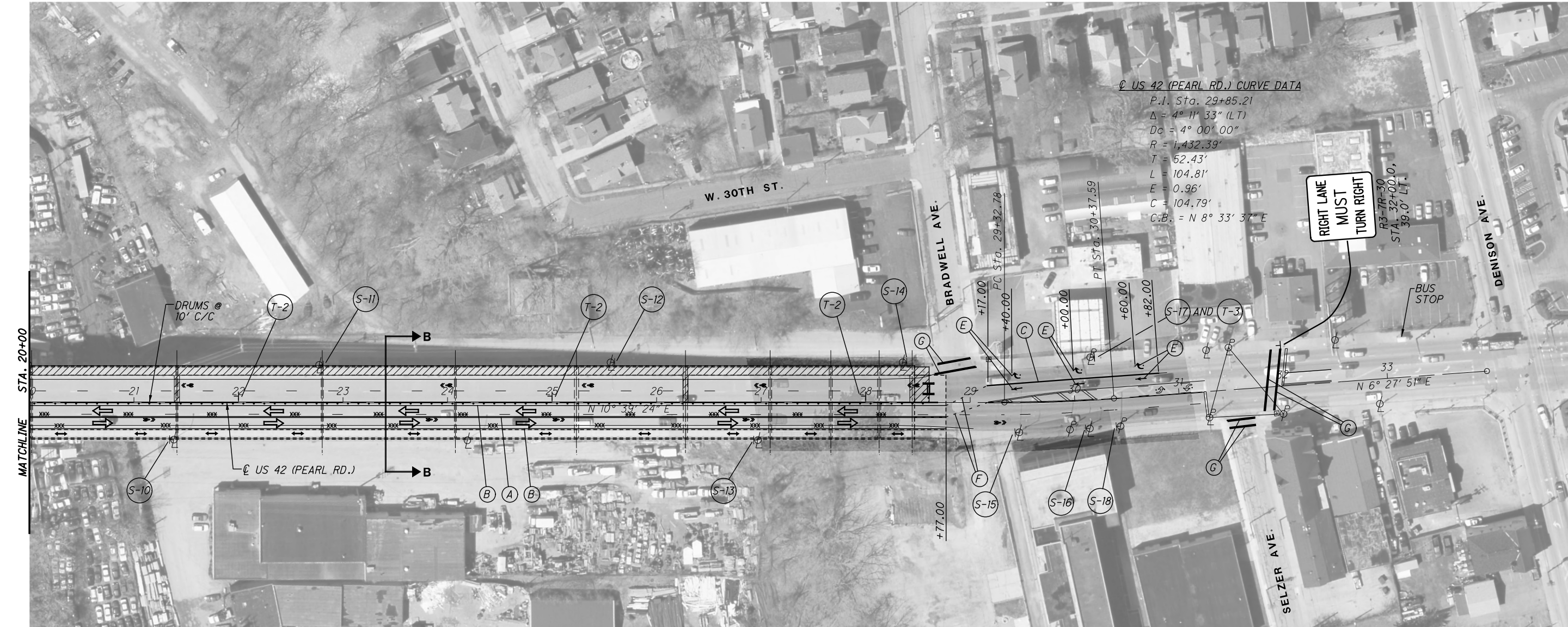
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.



- LEGEND**
-  WORK AREA
- • • DRUMS
-  TYPE III BARRICADE
- *** REMOVABLE BLACKOUT TAPE
-  TRAFFIC DIRECTION OF TRAVEL
-  PEDESTRIAN DIRECTION OF TRAVEL
- ≠ THE RTA SIGN AND BUS STOP SHALL BE TEMPORARILY MOVED DURING CONSTRUCTION. THE CONTRACTOR SHALL MOVE THE SIGN TO THE ORIGINAL LOCATION UPON COMPLETION OF THE PROJECT. THIS WORK SHALL BE INCLUDED WITH ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN FOR PAYMENT.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.31 AND MT-110.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
4. FOR SECTION A-A AND SECTION B-B SEE SHEET 24 .
5. FOR CROSSWALK MARKING DETAILS SEE SHEET 21 .
6. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE SHARE THE ROAD SIGNS (W16-1P-18). THIS WORK SHALL BE INCLUDED WITH ITEM 614 - MAINTAINING TRAFFIC FOR PAYMENT.



W16-1P-18 STA. 22+00.00 STA. 25+00.00 STA. 28+00.00 (TEMPORARY SIGN SUPPORT)	W16-1P-18 STA. 30+17.2, 40.8'± LT. (POLE MOUNTED) TO BE ERECTED PRIOR TO PHASE 1 AND TO BE REMOVED AFTER PHASE 2 CONSTRUCTION	MAY USE FULL LANE	SPEED LIMIT 25 (LIGHT POLE MOUNTED) (DO NOT DISTURB)	MAY USE FULL LANE	MAY USE FULL LANE (LIGHT POLE MOUNTED) (DO NOT DISTURB)	MAY USE FULL LANE (LIGHT POLE MOUNTED) (DO NOT DISTURB)	SPEED LIMIT 25 (LIGHT POLE MOUNTED) (DO NOT DISTURB)	SPEED LIMIT 25 (LIGHT POLE MOUNTED) (DO NOT DISTURB)	EMERGENCY SNOW STREET NO PARKING WHEN SNOW EXCEEDS 2 IN (LIGHT POLE MOUNTED) (DO NOT DISTURB)	MAY USE FULL LANE (POLE MOUNTED) (DO NOT DISTURB)	MAY USE FULL LANE (POLE MOUNTED) (DO NOT DISTURB)
T-2	T-3	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19

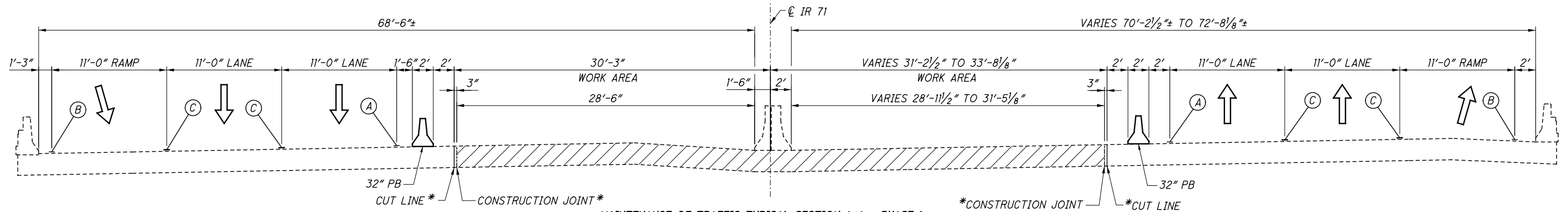
SIGNING LEGEND

- MOT PAVEMENT MARKING LEGEND**
- (A) ITEM 614 - WORK ZONE CENTER LINE (DOUBLE, SOLID)
 - (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
 - (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
 - (D) ITEM 614 - WORK ZONE STOP LINE
 - (E) ITEM 614 - WORK ZONE ARROW
 - (F) ITEM 614 - WORK ZONE DOTTED LINES
 - (G) ITEM 642 - CROSSWALK (FINAL MARKING TO BE PERFORMED PRIOR TO PHASE 1 CONSTRUCTION)

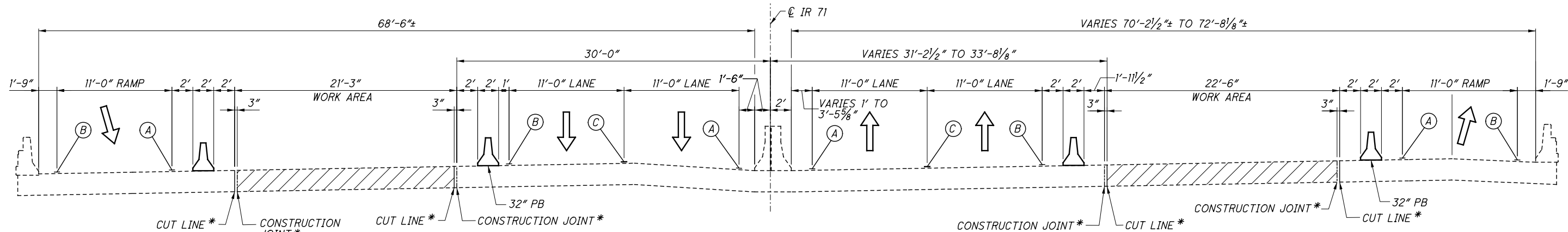
- LEGEND**
- WORK AREA
 - DRUMS
 - TYPE III BARRICADE
 - REMOVABLE BLACKOUT TAPE
 - TRAFFIC DIRECTION OF TRAVEL
 - PEDESTRIAN DIRECTION OF TRAVEL

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. SEE MT-95.31 AND MT-110.10 FOR ADDITIONAL DETAILS.
 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
 4. FOR SECTION B-B SEE SHEET 24.
 5. FOR CROSSWALK MARKING DETAILS SEE SHEET 21.
 6. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE SHARE THE ROAD SIGNS (W16-1P-18). THIS WORK SHALL BE INCLUDED WITH ITEM 614 - MAINTAINING TRAFFIC FOR PAYMENT.

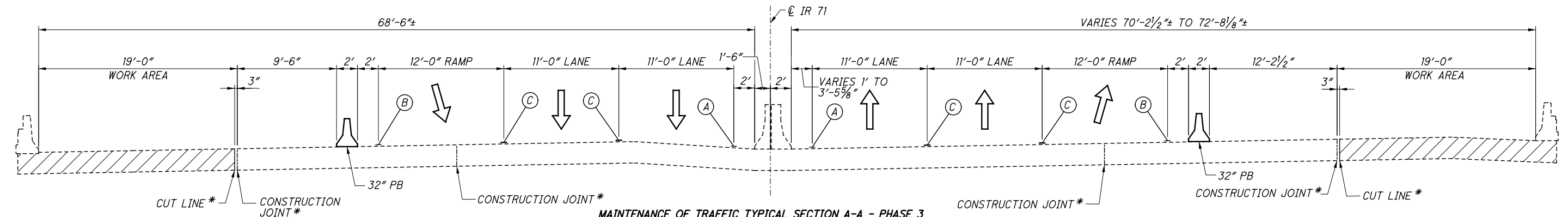
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MAINTENANCE OF TRAFFIC TYPICAL SECTION A-A - PHASE 1
BRIDGE NO. CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)



MAINTENANCE OF TRAFFIC TYPICAL SECTION A-A - PHASE 2
BRIDGE NO. CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)



MAINTENANCE OF TRAFFIC TYPICAL SECTION A-A - PHASE 3
BRIDGE NO. CUY-071-1640 (IR 71 OVER NORFOLK SOUTHERN RAILWAY)

LEGEND
➡ DIRECTION OF TRAVEL
* AT WORK AREAS ONLY

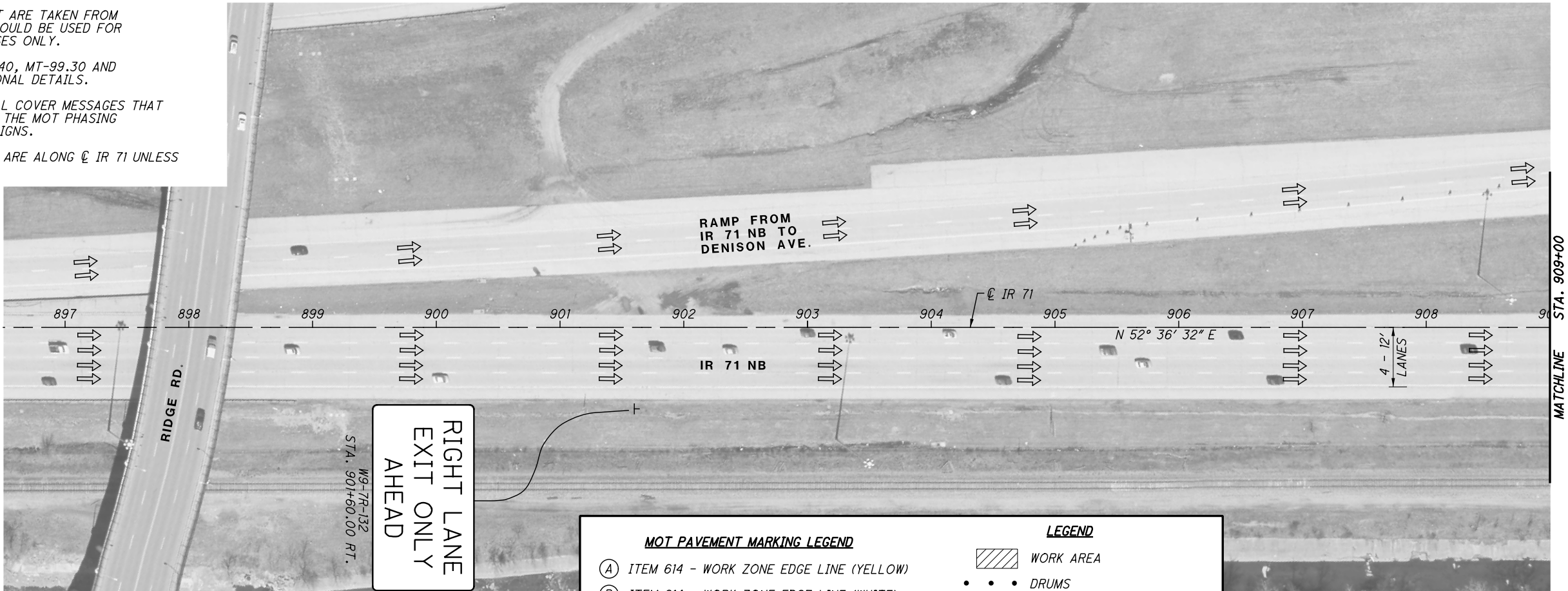
MOT PAVEMENT MARKING LEGEND
(A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
(B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
(C) ITEM 614 - WORK ZONE CHANNELIZING LINE

NOTES:
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

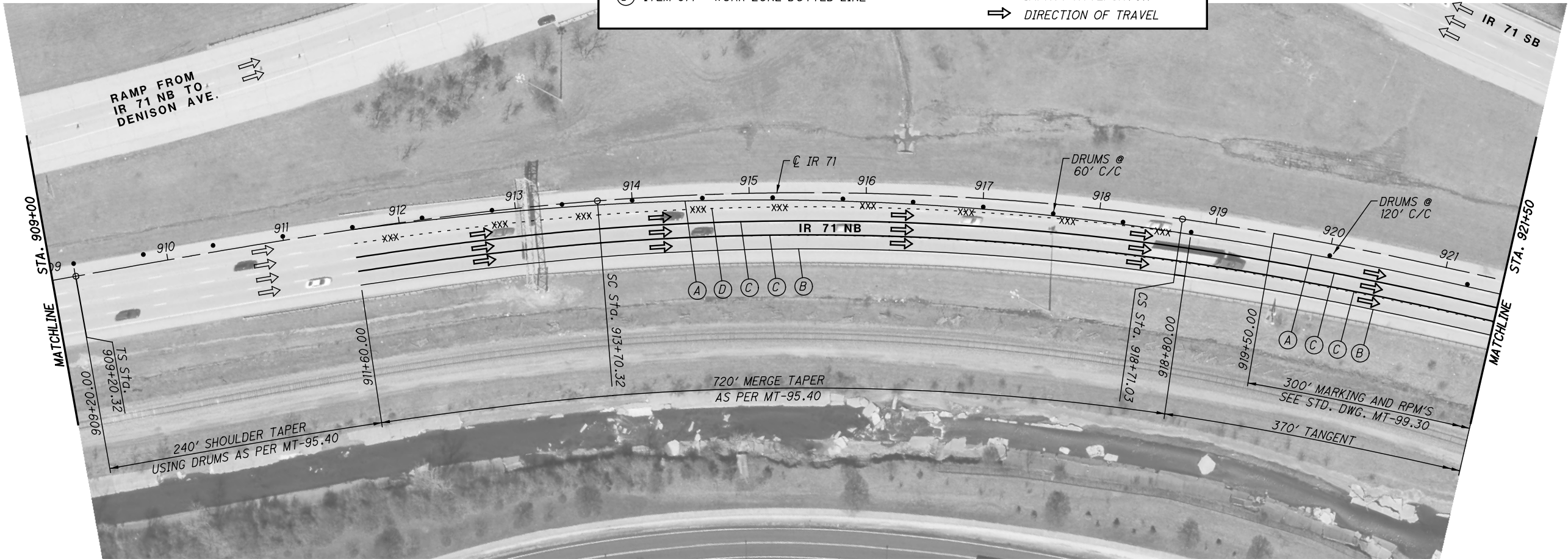
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NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.30, MT-95.40, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG \varnothing IR 71 UNLESS OTHERWISE NOTED.



MOT PAVEMENT MARKING LEGEND		LEGEND	
(A)	ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA
(B)	ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS
(C)	ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER
(D)	ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS
			IMPACT ATTENUATOR
			DIRECTION OF TRAVEL



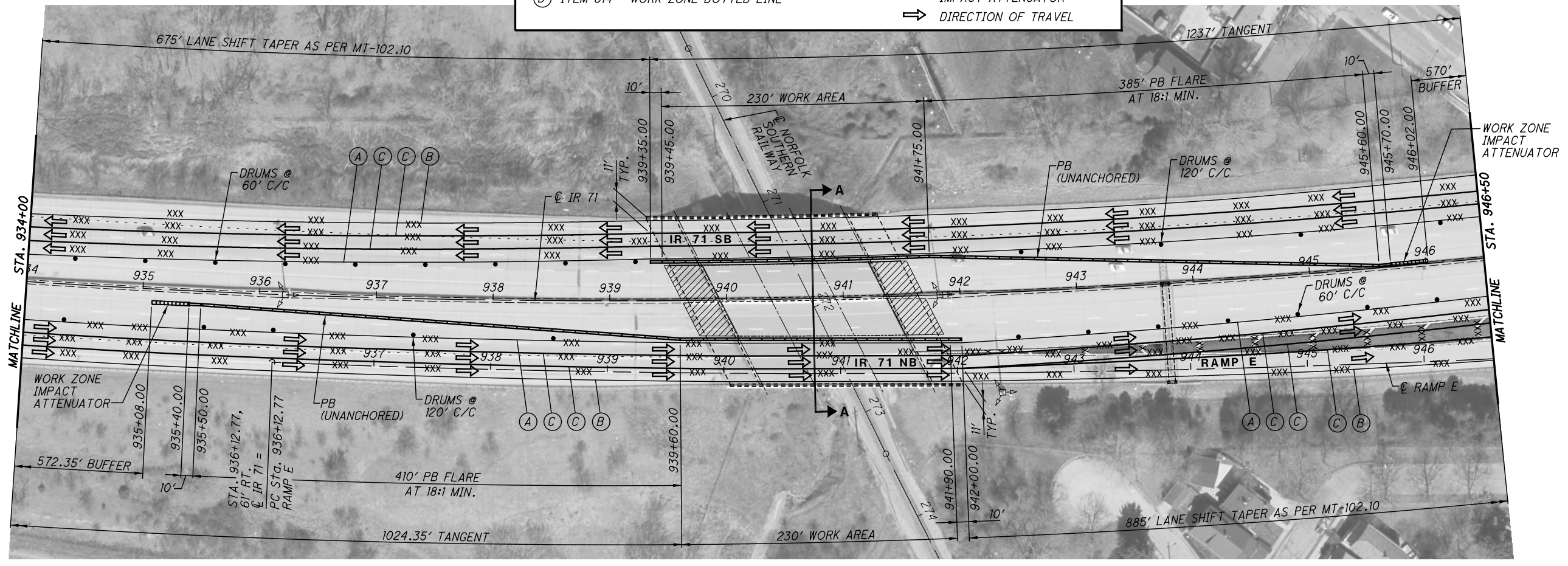
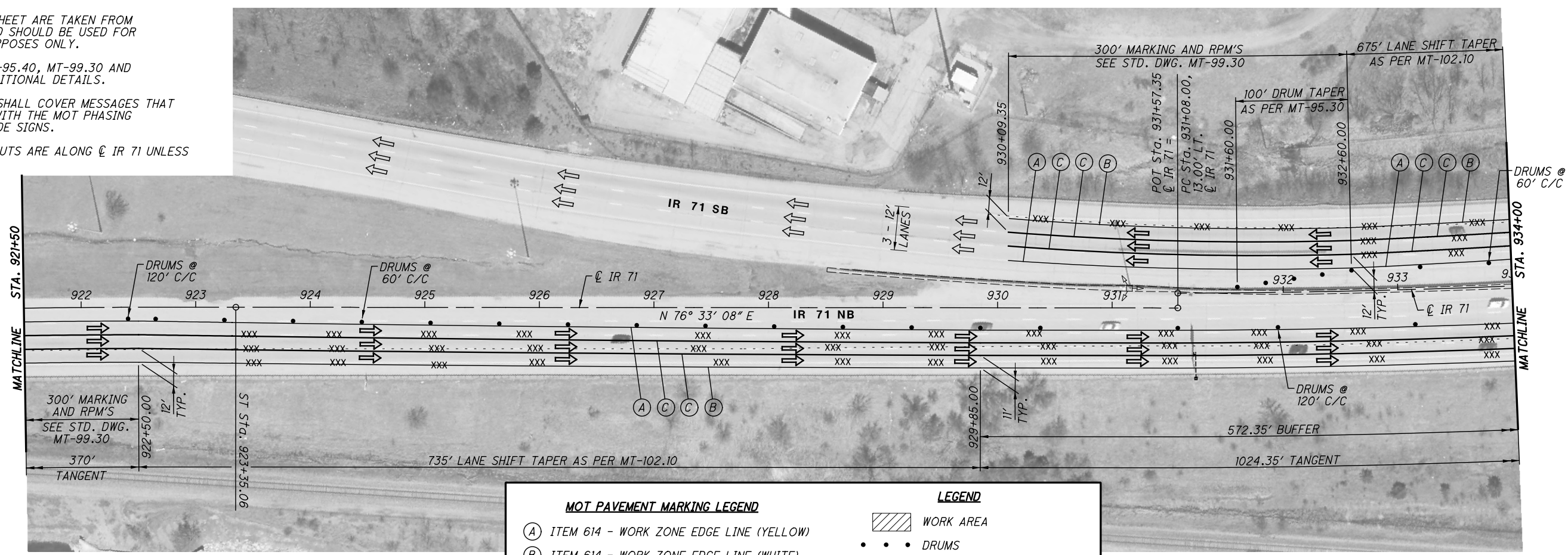
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MAINTENANCE OF TRAFFIC PLAN
LOCATION 4: CUY-071-1640 - PHASE 1

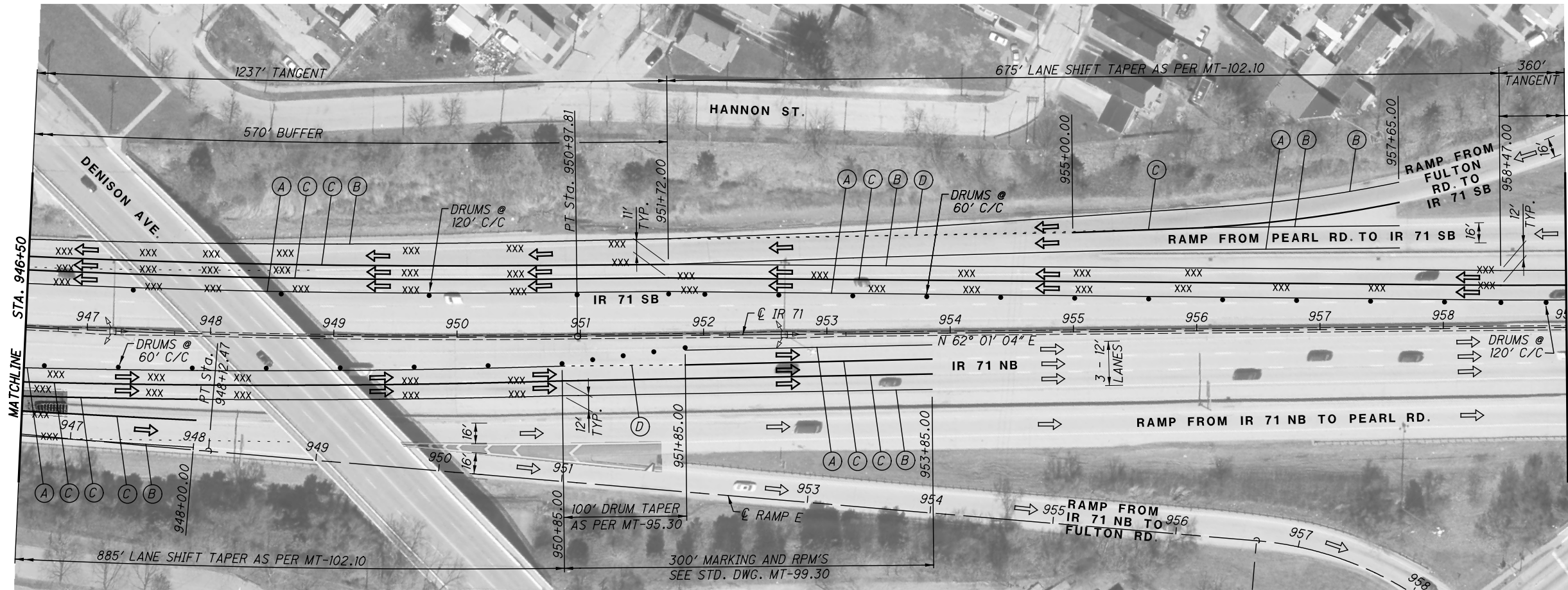
CUY-071-16.40/ VAR REPAIR
PID NO. 111603

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- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. SEE MT-95.30, MT-95.40, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
 4. STATIONING CALLOUTS ARE ALONG \varnothing IR 71 UNLESS OTHERWISE NOTED.



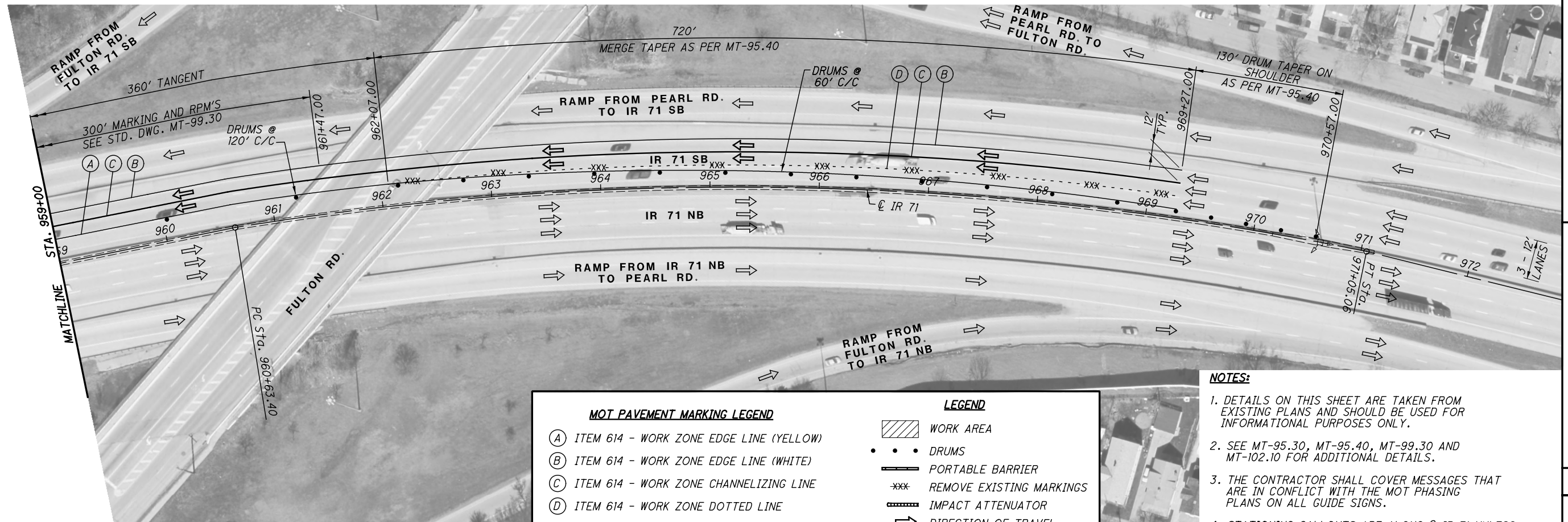
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300' MARKING AND RPM'S
SEE STD. DWG.
MT-99.30



MAINTENANCE OF TRAFFIC PLAN
LOCATION 4: CUY-071-1640 - PHASE 1



MOT PAVEMENT MARKING LEGEND		LEGEND	
(A)	ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA
(B)	ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS
(C)	ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER
(D)	ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS
			IMPACT ATTENUATOR
			DIRECTION OF TRAVEL

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.30, MT-95.40, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG \mathcal{C} IR 71 UNLESS OTHERWISE NOTED.

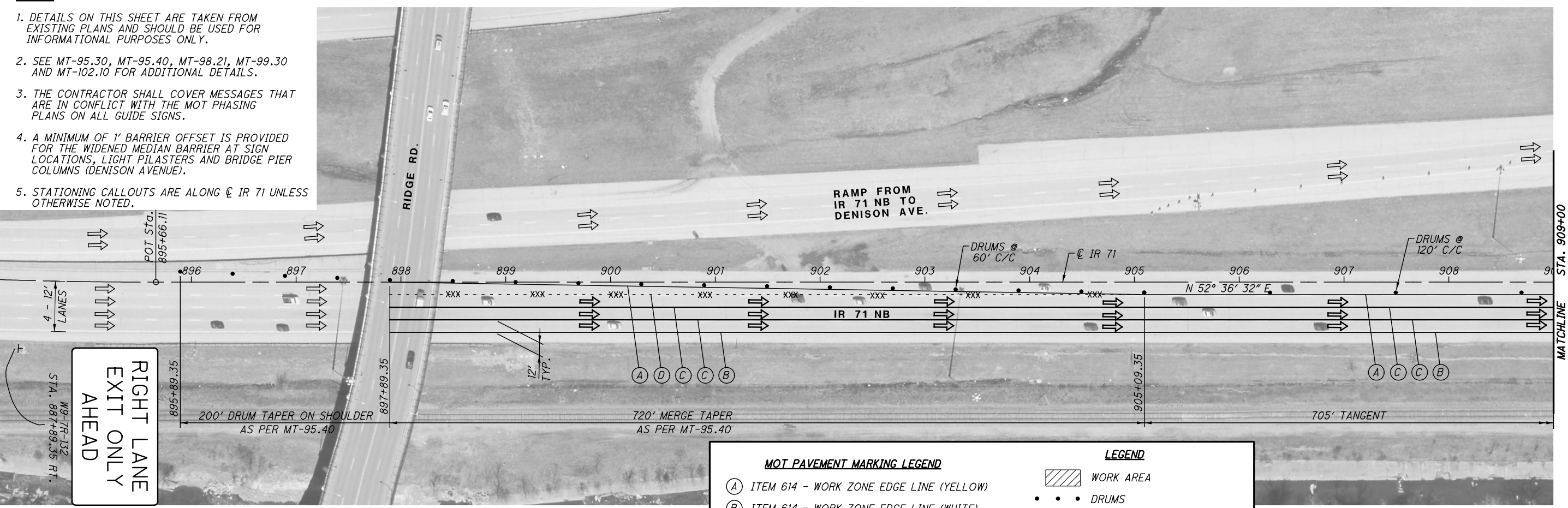
CUY-071-16.40/ VAR REPAIR
PID NO. 111603

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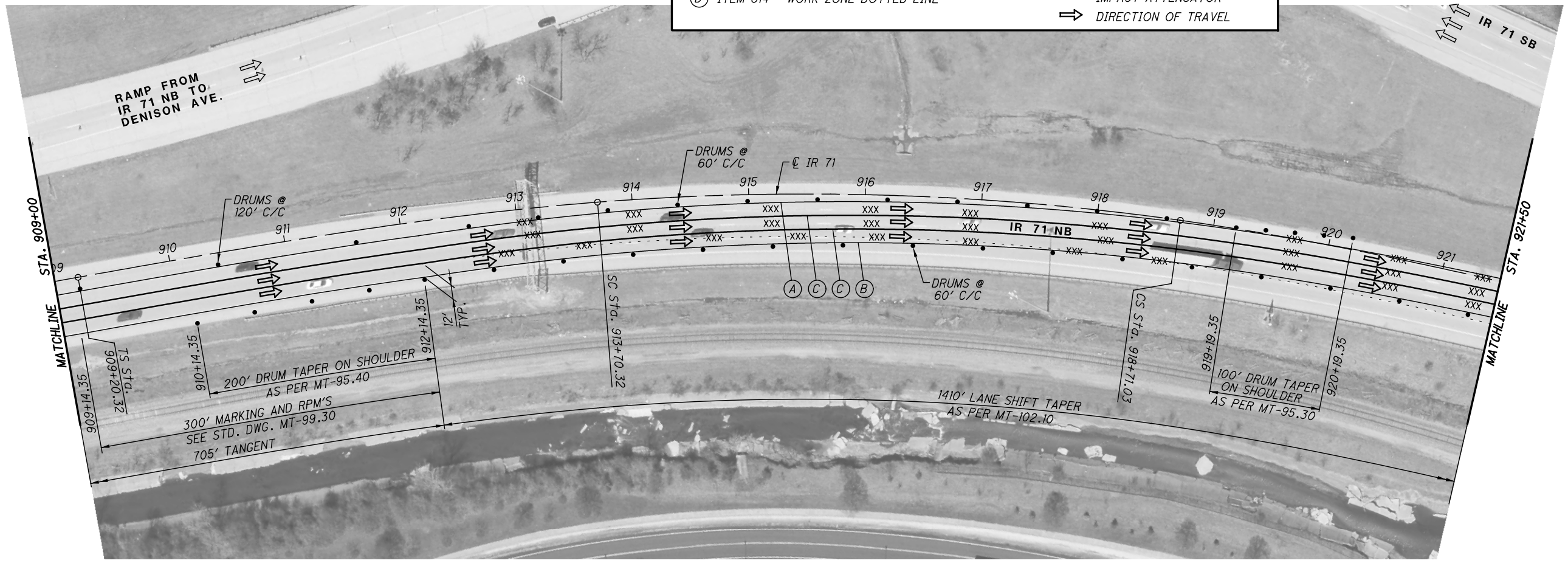
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- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. SEE MT-95.30, MT-95.40, MT-98.21, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
 4. A MINIMUM OF 1' BARRIER OFFSET IS PROVIDED FOR THE WIDENED MEDIAN BARRIER AT SIGN LOCATIONS, LIGHT PILASTERS AND BRIDGE PIER COLUMNS (DENISON AVENUE).
 5. STATIONING CALLOUTS ARE ALONG \varnothing IR 71 UNLESS OTHERWISE NOTED.



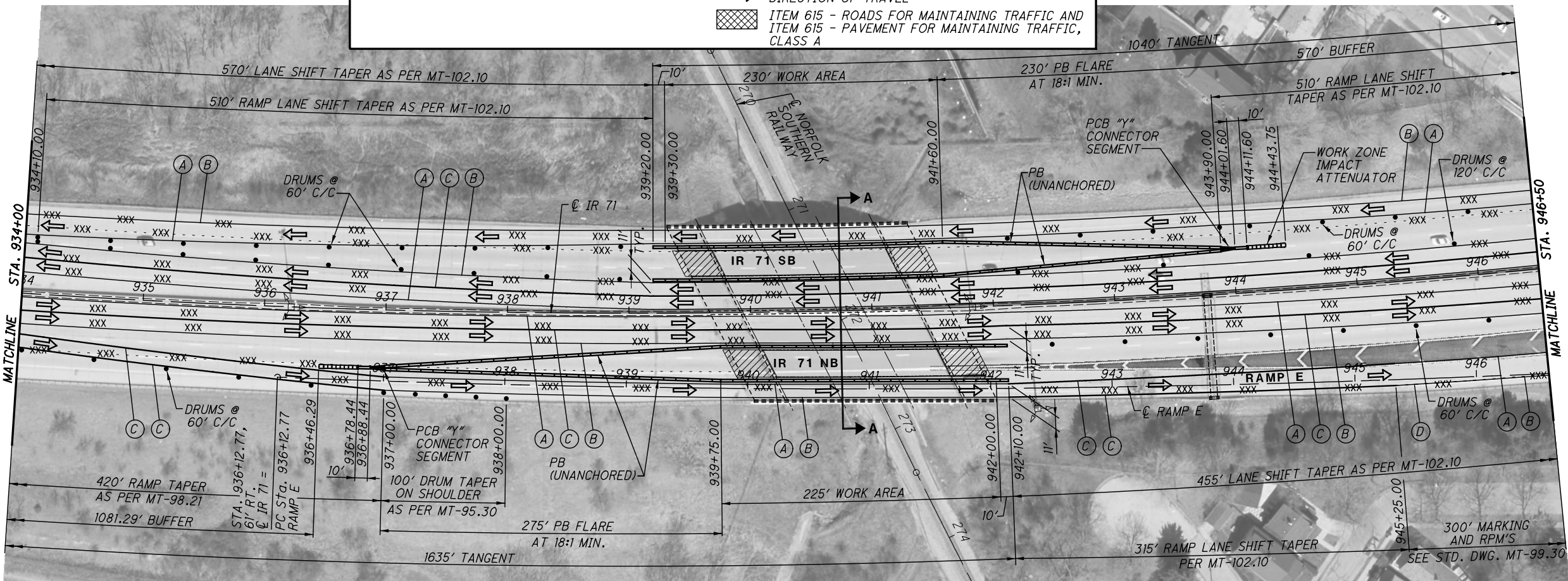
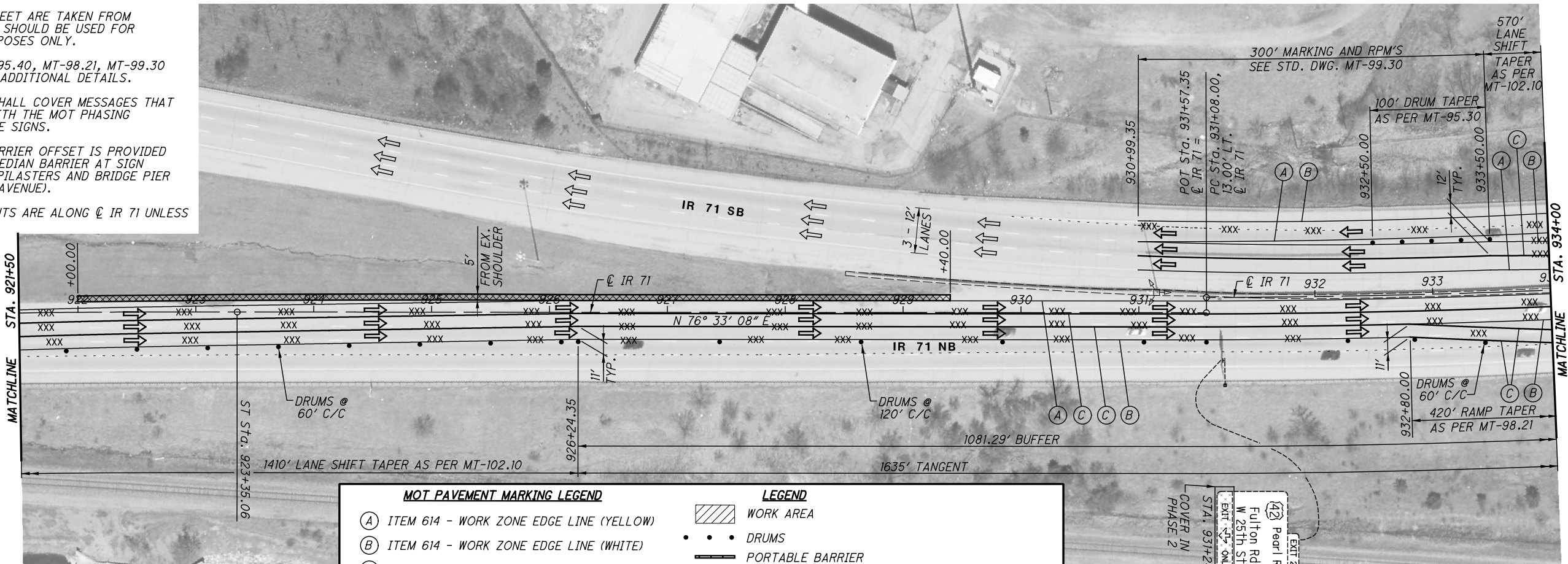
MOT PAVEMENT MARKING LEGEND		LEGEND	
(A)	ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA
(B)	ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS
(C)	ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER
(D)	ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS
			IMPACT ATTENUATOR
			DIRECTION OF TRAVEL



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NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.30, MT-95.40, MT-98.21, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. A MINIMUM OF 1' BARRIER OFFSET IS PROVIDED FOR THE WIDENED MEDIAN BARRIER AT SIGN LOCATIONS, LIGHT PILASTERS AND BRIDGE PIER COLUMNS (DENISON AVENUE).
5. STATIONING CALLOUTS ARE ALONG \varnothing IR 71 UNLESS OTHERWISE NOTED.



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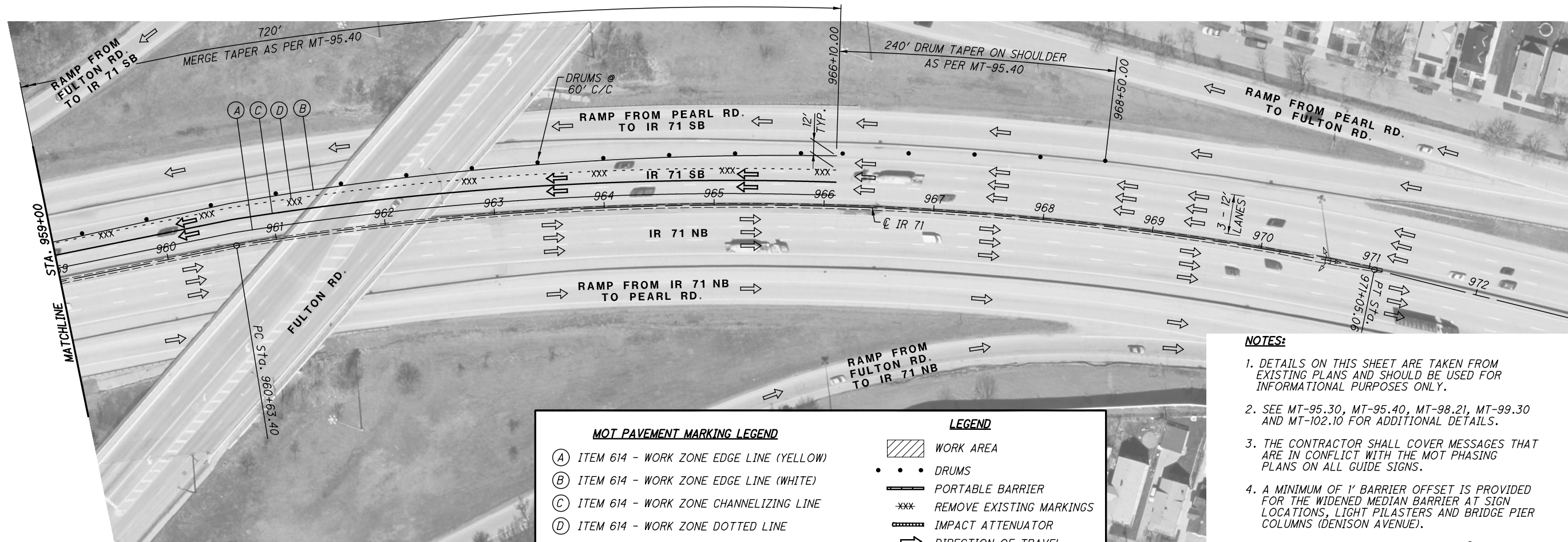
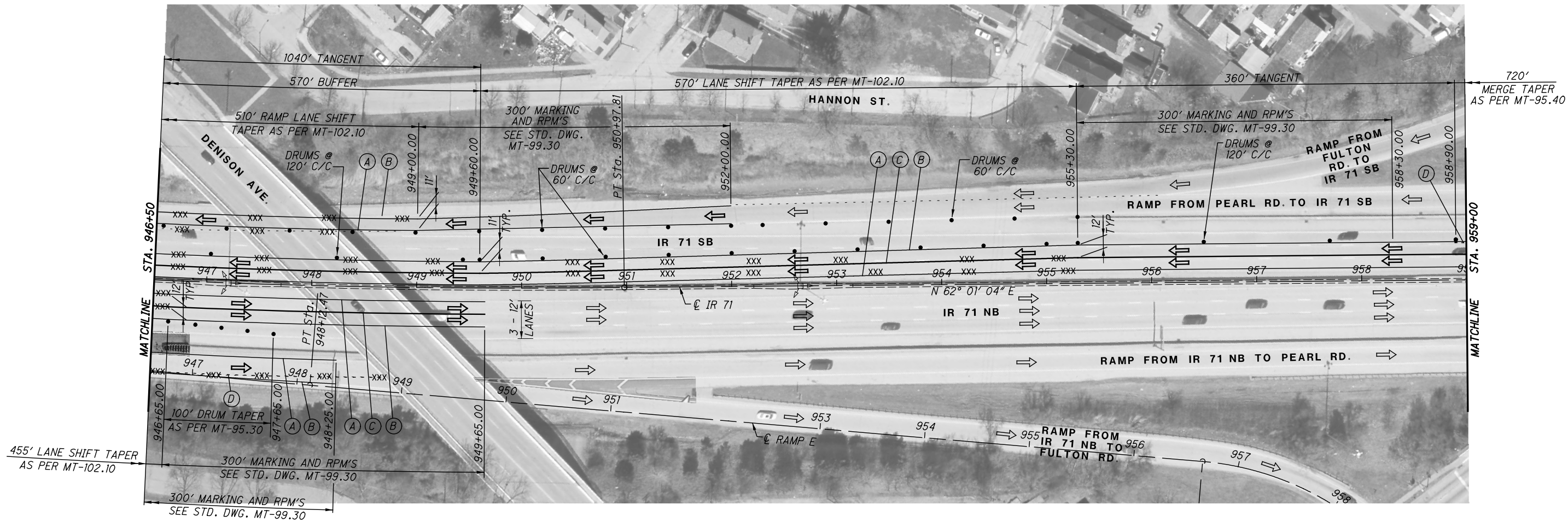
MAINTENANCE OF TRAFFIC PLAN
LOCATION 4: CUY-071-1640 - PHASE 2

CUY-071-16.40/ VAR REPAIR
PID NO. 111603

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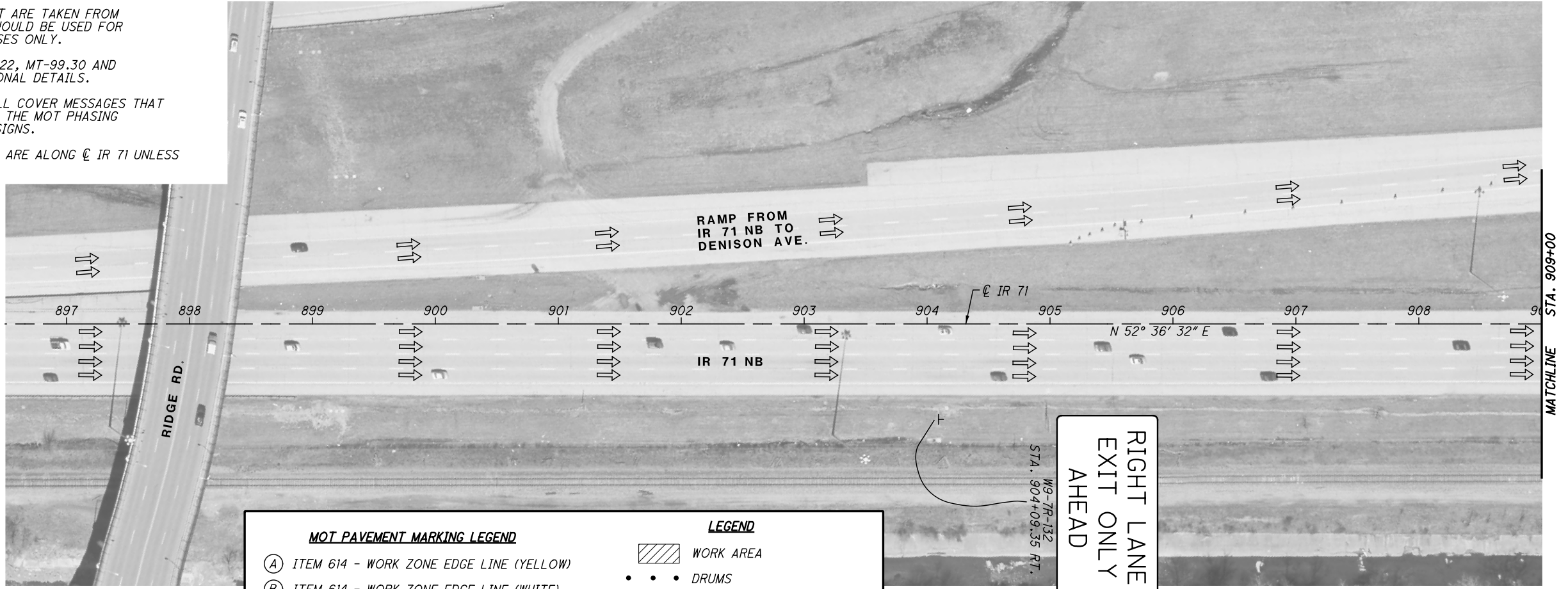


MOT PAVEMENT MARKING LEGEND		LEGEND	
(A)	ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA
(B)	ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS
(C)	ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER
(D)	ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS
			IMPACT ATTENUATOR
			DIRECTION OF TRAVEL

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. SEE MT-95.30, MT-95.40, MT-98.21, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
 4. A MINIMUM OF 1' BARRIER OFFSET IS PROVIDED FOR THE WIDENED MEDIAN BARRIER AT SIGN LOCATIONS, LIGHT PILASTERS AND BRIDGE PIER COLUMNS (DENISON AVENUE).
 5. STATIONING CALLOUTS ARE ALONG \mathcal{C} IR 71 UNLESS OTHERWISE NOTED.

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- NOTES:**
- 1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 - 2. SEE MT-95.40, MT-98.22, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
 - 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
 - 4. STATIONING CALLOUTS ARE ALONG \varnothing IR 71 UNLESS OTHERWISE NOTED.

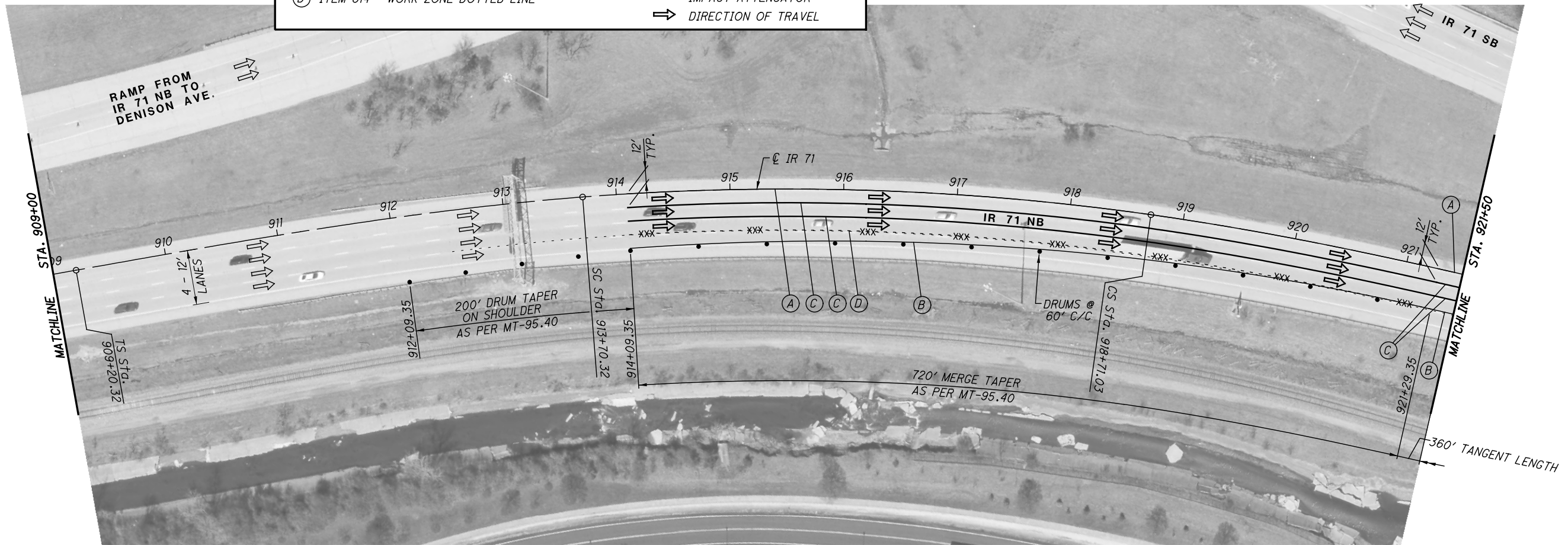


MOT PAVEMENT MARKING LEGEND

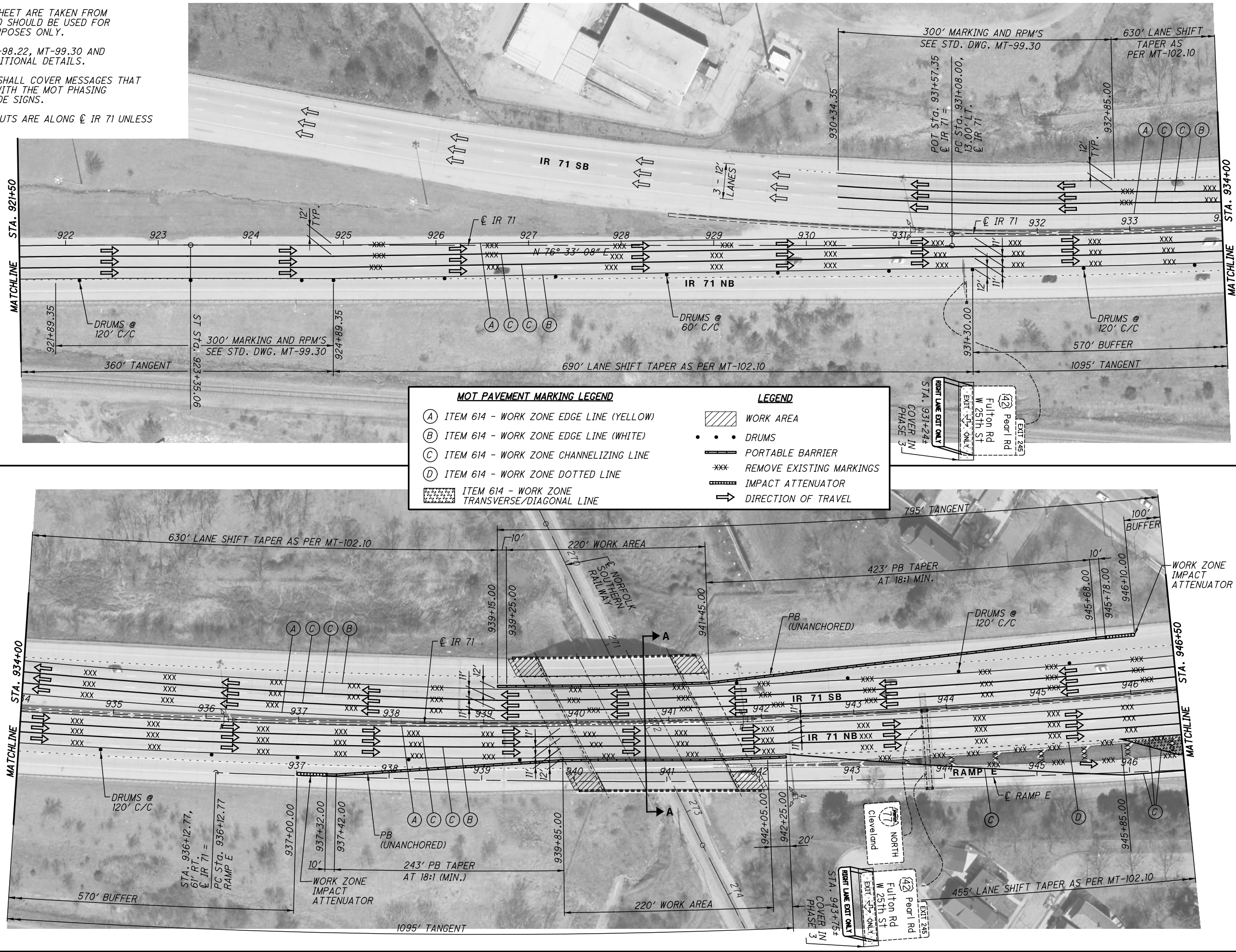
- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

LEGEND

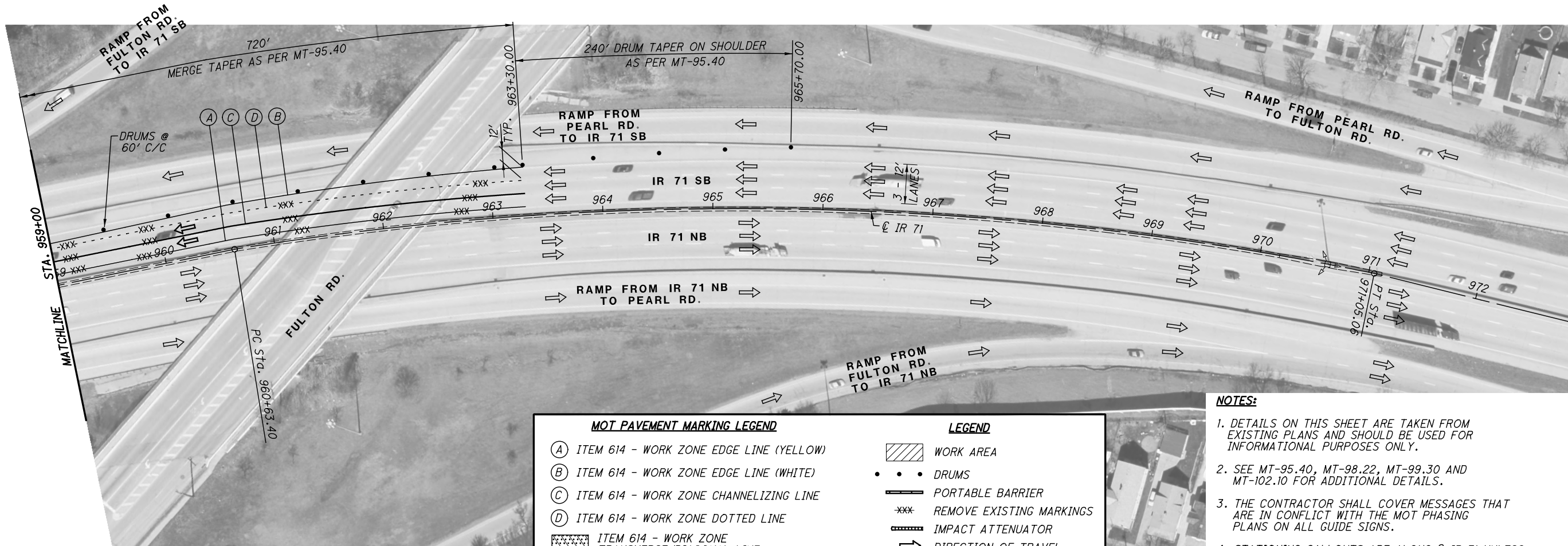
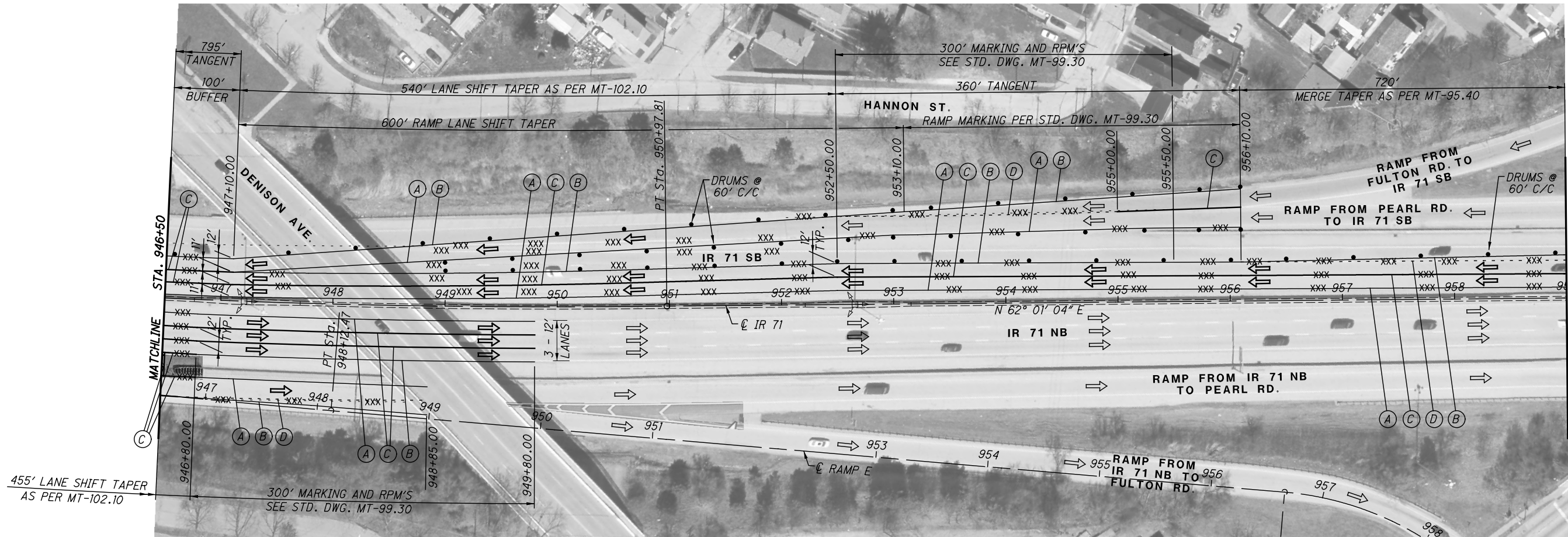
- WORK AREA
- DRUMS
- PORTABLE BARRIER
- *** REMOVE EXISTING MARKINGS
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL



- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. SEE MT-95.40, MT-98.22, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
 4. STATIONING CALLOUTS ARE ALONG \varnothing IR 71 UNLESS OTHERWISE NOTED.



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MOT PAVEMENT MARKING LEGEND		LEGEND	
(A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA	
(B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS	
(C) ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER	
(D) ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS	
ITEM 614 - WORK ZONE TRANSVERSE/DIAGONAL LINE		IMPACT ATTENUATOR	
		DIRECTION OF TRAVEL	

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. SEE MT-95.40, MT-98.22, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
 3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
 4. STATIONING CALLOUTS ARE ALONG \mathcal{C} IR 71 UNLESS OTHERWISE NOTED.

CALCULATED
ALP
CHECKED
TJF

MAINTENANCE OF TRAFFIC PLAN
LOCATION 4: CUY-071-1640 - PHASE 3

CUY-071-16.40/ VAR REPAIR
PID NO. 111603

10 / 10

36
123



LOCATION 2 (CUY-042-1457)

LINE	DESCRIPTION					CALCULATION										QUANTITY			
	ROADWAY CALCULATIONS - LOCATION 2 (CUY-042-1457)																		
	ITEM 202 - WALK REMOVED, AS PER PLAN																		
1	STA	11+23.00	TO STA.	11+26.00	LT	=	(3.00	FT	+	2.00	FT)	/	2	X	7.5	FT	=	18.75	SF
2	STA	11+32.00	TO STA.	11+35.00	RT	=	(3.00	FT	+	3.00	FT)	/	2	X	7.5	FT	=	22.50	SF
3	STA	28+48.00	TO STA.	28+53.00	LT	=	(5.00	FT	+	5.00	FT)	/	2	X	7.5	FT	=	37.50	SF
4	STA	28+48.00	TO STA.	28+53.00	RT	=	(5.00	FT	+	5.00	FT)	/	2	X	7.5	FT	=	37.50	SF
5	SUM LINES		1	TO	4												=	116.25	SF
	TOTAL CARRIED TO GENERAL SUMMARY =																	117	SF
	ITEM 202 - GUARDRAIL REMOVED																		
6	STA.	28+50.00	TO STA.	28+62.50	LT												=	12.50	FT
	TOTAL CARRIED TO GENERAL SUMMARY =																	13	FT
	ITEM 608 - 6" CONCRETE WALK, AS PER PLAN																		
7	STA	11+23.00	TO STA.	11+26.00	LT	=	(3.00	FT	+	2.00	FT)	/	2	X	7.5	FT	=	18.75	SF
8	STA	11+32.00	TO STA.	11+35.00	RT	=	(3.00	FT	+	3.00	FT)	/	2	X	7.5	FT	=	22.50	SF
9	STA	28+48.00	TO STA.	28+53.00	LT	=	(5.00	FT	+	5.00	FT)	/	2	X	7.5	FT	=	37.50	SF
10	STA	28+48.00	TO STA.	28+53.00	RT	=	(5.00	FT	+	5.00	FT)	/	2	X	7.5	FT	=	37.50	SF
11	SUM LINES		7	TO	10												=	116.25	SF
	TOTAL CARRIED TO GENERAL SUMMARY =																	117	SF
	ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), [(SPEED (25 MPH), HAZARD WIDTH (24'))]																		
12	STA	28+50.00	TO STA.	28+62.50	LT												=	1	EACH
	TOTAL CARRIED TO GENERAL SUMMARY =																	1	EACH
	ITEM 202 - JUNCTION BOX REMOVED																		
13	STA	21+35.00	RT														=	1	EACH
	TOTAL CARRIED TO GENERAL SUMMARY =																	1	EACH
	ITEM 625 - REMOVAL OF LUMINAIRE AND REERECTION																		
14	STA	21+35.00	RT														=	1	EACH
	TOTAL CARRIED TO GENERAL SUMMARY =																	1	EACH
	ITEM 625 - STRUCTURE JUNCTION BOX, AS PER PLAN																		
15	STA	21+35.00	RT														=	1	EACH
	TOTAL CARRIED TO GENERAL SUMMARY =																	1	EACH
	ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN																		
16	STA	21+35.00	RT														=	1	EACH
	TOTAL CARRIED TO GENERAL SUMMARY =																	1	EACH
	</																		

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LOCATION 4 (CUY-071-1640)

LINE	DESCRIPTION					CALCULATION															QUANTITY									
	ROADWAY CALCULATIONS - LOCATION 4 (CUY-071-1640)																													
	FULL DEPTH PAVEMENT AREA																													
1	STA	939+61.15	TO STA.	939+66.73	LT	=	5.00	FT	X	(75.80	FT	+	75.77	FT)	/	2	=	378.93	SF									
2	STA	939+61.15	TO STA.	939+66.73	RT	=	5.00	FT	X	(77.51	FT	+	77.49	FT)	/	2	=	387.50	SF									
3	STA	941+64.18	TO STA.	941+69.71	LT	=	5.00	FT	X	(74.83	FT	+	74.79	FT)	/	2	=	374.05	SF									
4	STA	941+64.18	TO STA.	941+69.71	RT	=	5.00	FT	X	(80.79	FT	+	80.80	FT)	/	2	=	403.98	SF									
5	SUM LINES	1	TO	4														=	1544.46	SF										
	APPROACH SLAB AREA																													
6	STA	939+66.73	TO STA.	939+91.73	LT	=	25.00	FT	X	68.50	FT							=	1712.50	SF										
7	STA	939+66.73	TO STA.	939+91.73	RT	=	25.00	FT	X	70.20	FT							=	1755.00	SF										
8	STA	941+39.18	TO STA.	941+64.18	LT	=	25.00	FT	X	68.39	FT							=	1709.75	SF										
9	STA	941+39.18	TO STA.	941+64.18	RT	=	25.00	FT	X	73.87	FT							=	1846.75	SF										
10	SUM LINES	6	TO	9														=	7024.00	SF										
	ITEM 202 - PAVEMENT REMOVED																													
11	LINE	5				=	1544.46	SF	/	9								=	171.61	SY										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	172	SY									
	ITEM 204 - SUBGRADE COMPACTION																													
12	LINE	11																=	171.61	SY										
	UNDER APPROACH SLAB																													
13	LINE	10				=	7024.00	SF	/	9								=	780.44	SY										
	EDGE COURSE STEP																													
14	LINES	1	TO	9		=	120.00	FT	X	(18	IN	/	12)	/	9	X	1	SIDE	=	20.00	SY							
15	SUM LINES	12	TO	14														=	972.05	SY										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	973	SY									
	ITEM 204 - PROOF ROLLING																													
16	LINE	15				=	972.05	SY	X	1	HOUR	/	2000	SY				=	0.49	HOUR										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	1	HOUR									
	ITEM 304 - AGGREGATE BASE																													
	6" AGGREGATE BASE																													
17	LINE	5				=	1544.46	SF	X	(6	IN	/	12)	/	27		=	28.60	CY									
	UNDER APPROACH SLAB																													
18	LINE	10				=	7024.00	SF	X	(6	IN	/	12)	/	27		=	130.07	CY									
	EDGE COURSE STEP																													
19	LINES	1	TO	9		=	120.00	FT	X	(10	IN	/	12)	X	(6	IN	/	12)	/	27	X	1	SIDE	=	1.85	CY
20	SUM LINES	17	TO	19														=	160.52	CY										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	161	CY									
	ITEM 305 - 10" CONCRETE BASE, CLASS QC 1P																													
21	LINE	11																=	171.61	SY										
	EDGE COURSE STEP																													
22	LINES	1	TO	9		=	120.00	FT	X	(4	IN	/	12)	/	9	X	1	SIDE	=	4.44	SY							
23	SUM LINES	21	AND	22														=	176.05	SY										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	177	SY									
	ITEM 407 - TACK COAT, 702.13																													
24	LINE	23				=	176.05	SY	X	0.08	GAL	/	SY					=	14.08	GAL										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	15	GAL									
	ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)																													
	2 1/2" INTERMEDIATE COURSE																													
25	LINE	5				=	1544.46	SF	X	(2 1/2	IN	/	12)	/	27		=	11.92	CY									
																		TOTAL CARRIED TO GENERAL SUMMARY	=	12	CY									
	ITEM 407 - TACK COAT																													
26	LINE	11				=	171.61	SY	X	0.06	GAL	/	SY					=	10.30	GAL										
																		TOTAL CARRIED TO GENERAL SUMMARY	=	11	GAL									

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LOCATION 4 (CUY-071-1640)

LINE	DESCRIPTION				CALCULATION				QUANTITY	
	ROADWAY CALCULATIONS - LOCATION 4 (CUY-071-1640)									
	ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22									
	1 1/2" SURFACE COURSE									
27	LINE	5			=	1544.46	SF X (1 1/2 IN / 12) / 27	=	7.15	CY
					TOTAL CARRIED TO GENERAL SUMMARY =				8	CY
	ITEM 202 - CURB REMOVED									
28	STA.	939+82.20	TO STA.	940+00.35	RT			=	18.15	FT
29	STA.	941+16.87	TO STA.	941+35.02	LT			=	18.15	FT
30	SUM OF LINES	28	AND	29				=	36.30	FT
					TOTAL CARRIED TO GENERAL SUMMARY =				37	FT
	ITEM 609 - CURB, TYPE 4-B									
31	STA.	941+32.87	TO STA.	941+35.02	LT			=	2.15	FT
32	LINE	31						=	2.15	FT
					TOTAL CARRIED TO GENERAL SUMMARY =				3	FT
	ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC									
33	STA	939+32.46	TO STA.	939+40.00	LT			=	7.54	FT
34	STA	941+37.39	TO STA.	941+42.87	LT			=	5.48	FT
35	STA	941+70.00	TO STA.	941+70.66	RT			=	0.66	FT
36	SUM LINES	33	TO	35				=	13.68	FT
					TOTAL CARRIED TO GENERAL SUMMARY =				14	FT
	ITEM 202 - GUARDRAIL REMOVED									
37	STA.	939+22.95	TO STA.	939+37.35	LT			=	14.40	FT
38	STA.	939+75.95	TO STA.	940+02.85	RT			=	26.90	FT
39	STA.	941+14.37	TO STA.	941+41.27	LT			=	26.90	FT
40	STA.	941+80.23	TO STA.	941+92.73	RT			=	12.50	FT
41	SUM OF LINES	37	TO	40				=	80.70	FT
					TOTAL CARRIED TO GENERAL SUMMARY =				81	FT
	ITEM 606 - GUARDRAIL, TYPE MGS									
42	STA.	939+22.95	TO STA.	939+50.54	LT			=	27.59	FT
43	STA.	939+75.95	TO STA.	939+97.64	RT			=	21.69	FT
44	STA.	941+80.23	TO STA.	941+92.73	RT			=	12.50	FT
45	SUM OF LINES	42	TO	44				=	61.78	FT
					TOTAL CARRIED TO GENERAL SUMMARY =				62	FT
	ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1									
46	STA.	939+97.64	TO STA.	940+17.68	RT			=	1	EACH
47	STA.	941+14.97	TO STA.	941+41.27	LT			=	1	EACH
48	SUM LINES	46	TO	47				=	2	EACH
					TOTAL CARRIED TO GENERAL SUMMARY =				2	EACH
	ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2									
49	STA.	939+50.54	TO STA.	939+52.44	LT			=	1	EACH
50	STA.	941+78.33	TO STA.	941+80.23	RT			=	1	EACH
51	SUM LINES	49	TO	50				=	2	EACH
					TOTAL CARRIED TO GENERAL SUMMARY =				2	EACH

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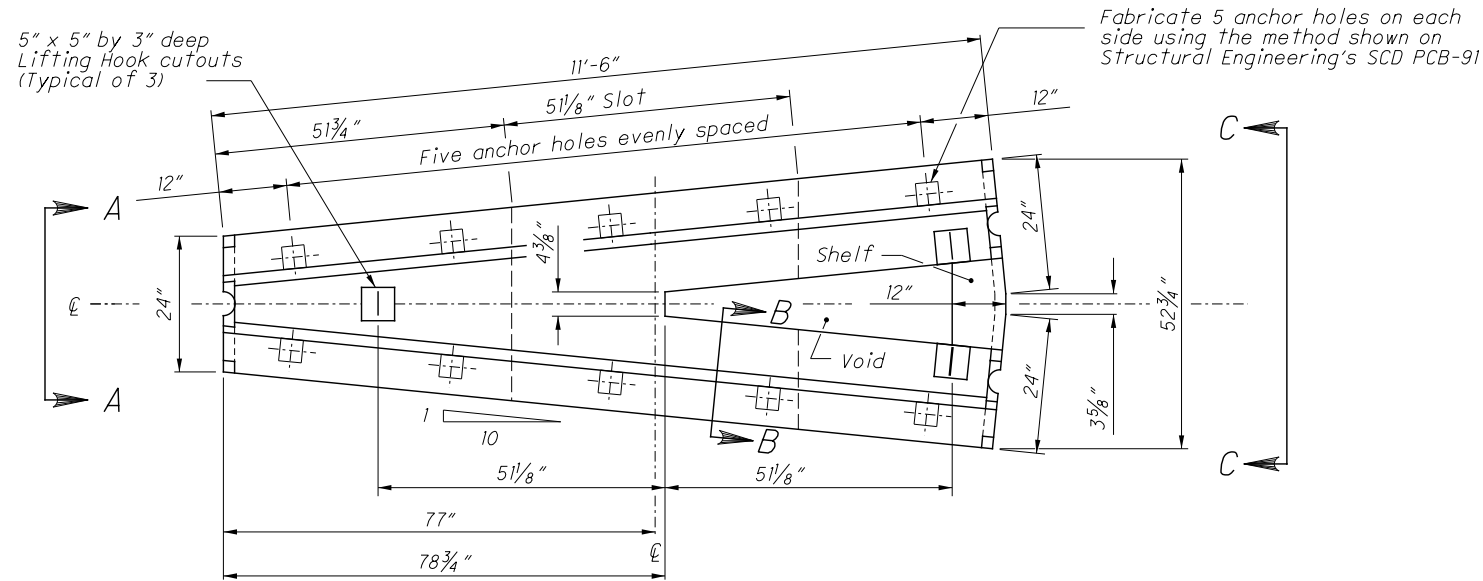
LOCATION 4 (CUY-071-1640)

LINE	DESCRIPTION					CALCULATION										QUANTITY	
	ROADWAY CALCULATIONS - LOCATION 4 (CUY-071-1640)																
	ITEM 209 - LINEAR GRADING, AS PER PLAN																
52	STA.	939+22.95	TO STA.	939+33.45	LT	=	10.50	FT	/	100		=	0.11	STA			
53	STA.	939+75.95	TO STA.	940+00.35	RT	=	24.40	FT	/	100		=	0.24	STA			
54	STA.	941+35.02	TO STA.	941+41.27	LT	=	6.25	FT	/	100		=	0.06	STA			
55	SUM OF LINES	52	TO	54								=	0.41	STA			
	TOTAL CARRIED TO GENERAL SUMMARY												=	0.41	STA		
	ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN																
56	STA.	939+22.95	TO STA.	939+33.45	LT	=	10.50	FT	X	4	FT X (3 IN / 12) / 27	=	0.39	CY			
57	STA.	939+75.95	TO STA.	940+00.35	RT	=	24.40	FT	X	4	FT X (3 IN / 12) / 27	=	0.9	CY			
58	STA.	941+35.02	TO STA.	941+41.27	LT	=	6.25	FT	X	4	FT X (3 IN / 12) / 27	=	0.23	CY			
59	SUM OF LINES	56	TO	58								=	1.52	CY			
	TOTAL CARRIED TO GENERAL SUMMARY												=	2	CY		
	ITEM 626 - BARRIER REFLECTOR, TYPE 1, ONE WAY																
60	STA.	939+52.44	TO STA.	939+63.25	LT	=	10.81	FT	/	100	FT SPACING + 1	=	1	EACH			
61	STA.	939+66.73	TO STA.	939+95.73	LT/RT	=	(29.00	FT	/	100	FT SPACING + 1) X 2 SIDES	=	2	EACH			
62	STA.	940+18.29	TO STA.	940+30.73	RT	=	12.44	FT	/	100	FT SPACING + 1	=	1	EACH			
63	STA.	941+01.93	TO STA.	941+14.37	LT	=	12.44	FT	/	100	FT SPACING + 1	=	1	EACH			
64	STA.	941+35.18	TO STA.	941+64.18	LT/RT	=	(29.00	FT	/	100	FT SPACING + 1) X 2 SIDES	=	2	EACH			
65	STA.	941+67.52	TO STA.	941+78.33	RT	=	10.81	FT	/	100	FT SPACING + 1	=	1	EACH			
66	SUM OF LINES	60	TO	65								=	8	EACH			
	TOTAL CARRIED TO GENERAL SUMMARY												=	8	EACH		
	ITEM 626 - BARRIER REFLECTOR, TYPE 2, ONE WAY																
67	STA.	939+22.95	TO STA.	939+52.44	LT	=	29.49	FT	/	100	FT SPACING + 1	=	1	EACH			
68	STA.	939+75.95	TO STA.	940+18.29	RT	=	42.34	FT	/	100	FT SPACING + 1	=	1	EACH			
69	STA.	941+14.37	TO STA.	941+41.27	LT	=	26.90	FT	/	100	FT SPACING + 1	=	1	EACH			
70	STA.	941+78.33	TO STA.	941+92.73	RT	=	14.40	FT	/	100	FT SPACING + 1	=	1	EACH			
71	SUM OF LINES	67	TO	70								=	4	EACH			
	TOTAL CARRIED TO GENERAL SUMMARY												=	4	EACH		
	ITEM 202 - FENCE REMOVED																
72	STA	939+50.00	LT									=	10.00	FT			
73	STA	940+20.00	RT									=	10.00	FT			
74	STA	941+15.00	LT									=	10.00	FT			
75	STA	941+70.00	RT									=	10.00	FT			
76	SUM OF LINES	72	TO	75								=	40.00	FT			
	TOTAL CARRIED TO GENERAL SUMMARY												=	40	FT		
	ITEM 607 - FENCE, TYPE CL																
77	STA	939+50.00	LT									=	10.00	FT			
78	STA	940+20.00	RT									=	10.00	FT			
79	STA	941+15.00	LT									=	10.00	FT			
80	STA	941+70.00	RT									=	10.00	FT			
81	SUM OF LINES	77	TO	80								=	40.00	FT			
	TOTAL CARRIED TO GENERAL SUMMARY												=	40	FT		
	ITEM 202 - PIPE REMOVED, 24" AND UNDER																
82	STA.	939+32.46	TO STA.	939+40.00	RT							=	7.54	FT			
83	STA.	941+37.39	TO STA.	941+42.87	LT							=	5.48	FT			
84	STA.	941+70.00	TO STA.	941+70.66	LT							=	0.66	FT			
85	SUM OF LINES	82	TO	84								=	13.02	FT			
	TOTAL CARRIED TO GENERAL SUMMARY												=	14	FT		
	ITEM 202 - JUNCTION BOX REMOVED																
86	STA	941+39.18	RT									=	1	EACH			
	TOTAL CARRIED TO GENERAL SUMMARY												=	1	EACH		
	ITEM 625 - TRANSITION JUNCTION BOX, AS PER PLAN																
87	STA	941+39.18	RT									=	1	EACH			
	TOTAL CARRIED TO GENERAL SUMMARY												=	1	EACH		
	ITEM 611 - 8" CONDUIT, TYPE F																
88	STA	939+40.00	LT									=	10	FT			
	TOTAL CARRIED TO GENERAL SUMMARY												=	10	FT		

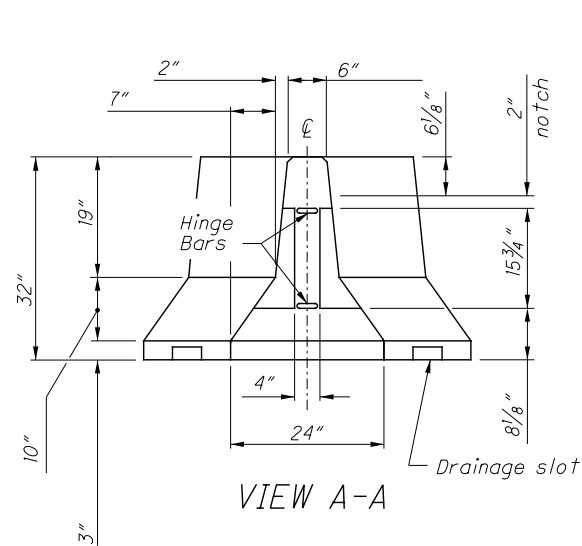
LOCATION 4 (CUY-071-1640)

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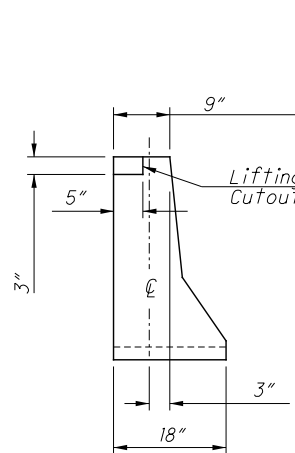
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			TJF
			CHECKED
			ALP



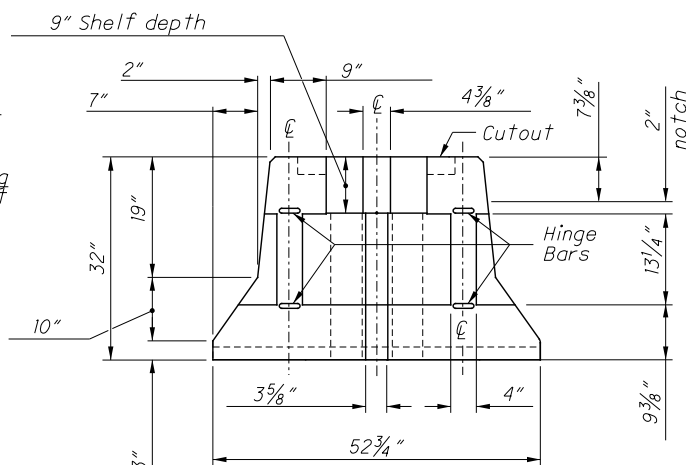
PLAN



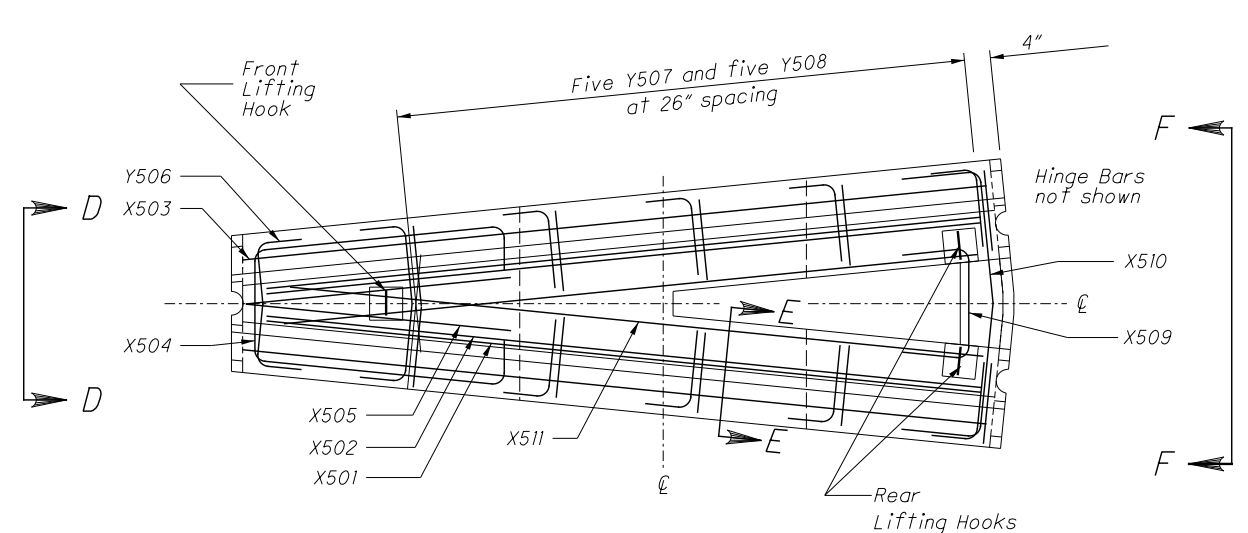
VIEW A-A



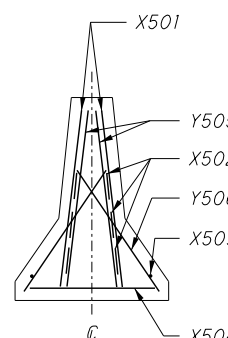
SECTION B-B



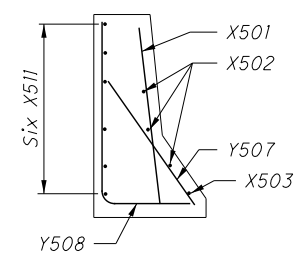
VIEW C-C



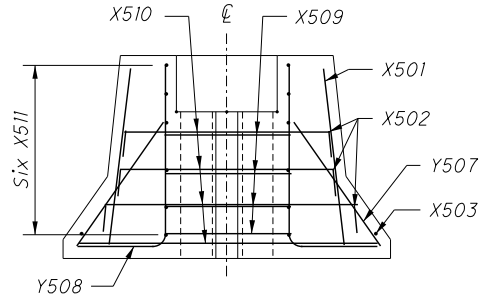
REINFORCING PLAN VIEW



VIEW D-D

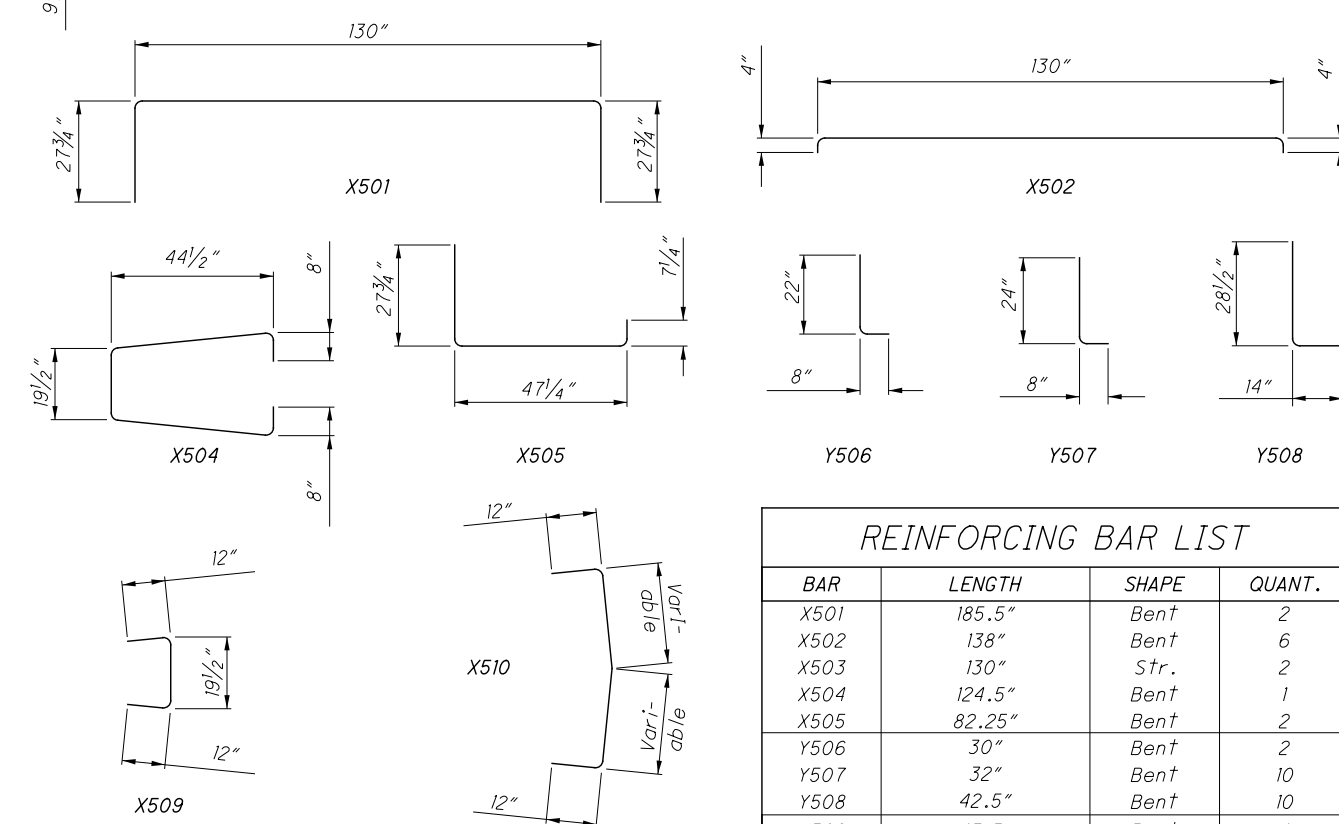


SECTION E-E



VIEW F-F

REINFORCING DETAILS



BENDING DIAGRAMS

REINFORCING BAR LIST			
BAR	LENGTH	SHAPE	QUANT.
X501	185.5"	Bent	2
X502	138"	Bent	6
X503	130"	Str.	2
X504	124.5"	Bent	1
X505	82.25"	Bent	2
Y506	30"	Bent	2
Y507	32"	Bent	10
Y508	42.5"	Bent	10
X509	43.5"	Bent	4
X510	Varies	Bent	4
X511	124"	Str.	12

GENERAL: This barrier segment is used to split one run of portable concrete barrier into dual runs. Attach directly to ODOT's 32" PCB; however, other approved barrier shapes may be connected to this segment by the use of an appropriate transition unit. Attach at least one standard PCB segment in between this "Y" and an Impact Attenuator. Its field application is shown in MOT plans and on MT standard drawings. Do not use this barrier in an unanchored configuration next to bridge deck edges or similar dropoffs, anchor according to method shown on PCBDD or other approved method.

BARRIER DETAILS: Use SCD RM-4.2 for details not shown here, including the geometry of this pin and loop segment matches in every way the design of the end connections shown on the HINGED CONNECTION and JOINT CONNECTION Details (the alternate J-J Hooks connection design is permitted). Additionally, barrier edges may be radiused or chamfered as per the LEGEND Note, barrier is to be permanently marked as mentioned in the MARKINGS Note, and delineate as per the REFLECTORIZATON Note.

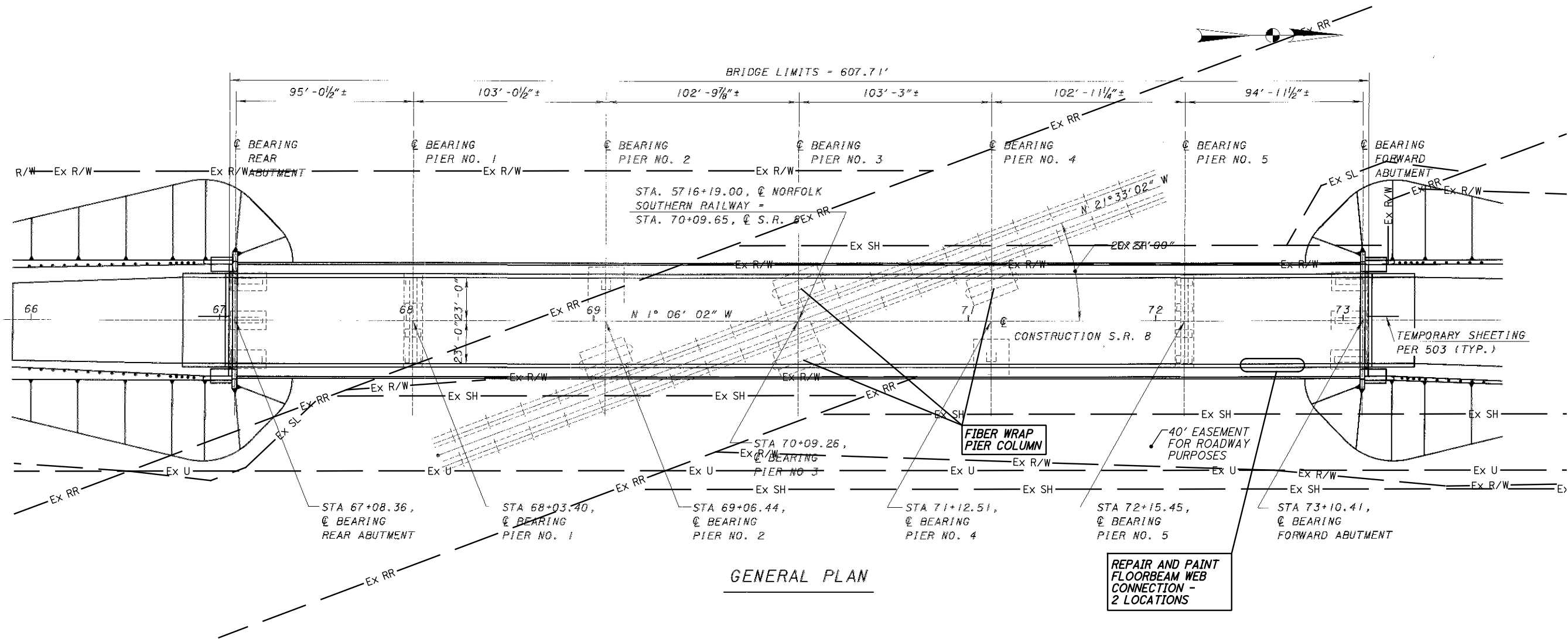
MATERIAL SPECIFICATIONS: The minimum design strength of the concrete is 4,000 psi and meets the requirements of CMS 499. For reinforcing steel, use ASTM A615 Grade 60 black steel and provide 2" min. rebar cover. Material specifications for the Hinge and Reinforcing Bars, as well as the Connecting Hardware may be found on SCD RM-4.2. For additional material specifications not shown here, see SCD RM-4.2 and CMS 622.

HANDLING: The fabricator is responsible for the design of a lifting system for handling segments. As a minimum, use three lifting points at the locations suggested in the Plan views, and design with a lifting factor of safety of 4. Any protrusions from the lifting hook design is not to affect the crash worthiness of the barrier. The calculations shall be signed, sealed and dated by a Registered Engineer and include these calculations with the Manufacturing Drawings required by Supplement 1073.12. Refer to Part 5 of the PCI Handbook. Approximate segment weight is 8,500 lbs [3850 kg].

PAYMENT: Payment will be made under Item 622 - Portable Barrier, "Y" Connector, Each, and will include all forms, materials and labor to cast this segment.

ALTERNATE METHOD: Contractors may choose to use a wide Impact Attenuator in lieu of the concrete "Y" alternate. The chosen unit will be a Type 2 or 3 Impact Attenuator matching the product previously called for on the project plans at the expected installation location.

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GENERAL PLAN

ESTIMATED QUANTITIES

CALCULATED JLS DATED 04/2021
CHECKED dht DATED 06/2021

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	GEN'L	REF. SHEET
202	11202	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN			LS	
513	21599	462	LB	STRUCTURAL STEEL FOR REHABILITATION	462			
514	00100	LS		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			LS	
514	00200	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			LS	
514	00300	LS		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			LS	
514	00401	LS		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			LS	2/5
SPECIAL	51900100	2622	SF	COMPOSITE FIBER WRAP SYSTEM		2622		2/5

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PROJECT DESCRIPTION

AS LISTED IN STRUCTURE DATA TABLE ON SHEET 4.

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS OR WITHIN STATE PROPERTY.

UTILITY OWNERSHIP

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:
[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

EXISTING DIMENSIONS

ALL DIMENSIONS ARE ±.

MATERIAL REQUIREMENTS

STRUCTURAL STEEL: ASTM A709 GRADE 50

DESCRIPTION OF WORK:

- 1. FIBER WRAP DESIGNATED PIER COLUMNS.
- 2. REPAIR DESIGNATED STEEL FLOORBEAM CONNECTIONS PER PLAN DETAILS.
- 3. PAINT STEEL FLOORBEAM CONNECTION REPAIR AREAS.

ITEM 514 – FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

THE FINAL PAINT COLOR SHALL CLOSELY MATCH THE EXISTING BRIDGE COLOR, AS APPROVED BY THE ENGINEER.

ITEM SPECIAL – COMPOSITE FIBER WRAP SYSTEM

DESCRIPTION: THIS WORK SHALL CONSIST OF PROVIDING AND INSTALLING A FIBER WRAP INCLUDING PREPARATION, WRAPPING THE PIER, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS WORK. THE INSTALLATION SHALL BE PER THE MANUFACTURER'S REQUIREMENTS.

MATERIALS: SUPPLIERS SHALL HAVE A MINIMUM OF 10 INSTALLATIONS AND FURNISH CERTIFIED TEST REPORTS INCLUDING 1000 HOUR TESTS FOR 140 °F WATER, SALT WATER, ALKALINE SOIL, OZONE AND EFFERVESCENCE IN ADDITION TO THE REQUIREMENTS LISTED BELOW.

THE FABRIC FOR THE COMPOSITE CASING SHALL BE CONTINUOUS FILAMENT WOVEN FABRIC. PRIMARY FIBERS FOR THE FABRIC SHALL BE (E) ELECTRICAL GLASS FIBERS. THE FIBER SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 0.05 INCHES.

PROPERTY	REQUIREMENTS	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI MIN. IN PRIMARY FIBER DIRECTION	60,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
ULTIMATE TENSILE STRENGTH, PSI MIN. IN ORTHOGONAL FIBER DIRECTION	3,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO 100% HUMIDITY	60,000 PSI	C581
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO OZONE	60,000 PSI	D1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO ALKALI	60,000 PSI	D3038 USING SOIL BURIAL – WATER CONTENT OF 73% ± 3%
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO SALT WATER	60,000 PSI	C581 AND D1141 OMITTING ADDITION OF HEAVY METAL REAGENTS
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE @ 140 DEGREES F	60,000 PSI	D3045
TENSILE STRENGTH (MIN. AFTER TEST) ULTRAVIOLET (UV) EXPOSURE	60,000 PSI	G154 USING FS40 UV-B BULBS FOR A MIN. 40 CYCLES. THE CYCLE SHALL BE 4 HOURS OF CONDENSATE EXPOSURE AT 40 DEGREES C.
ELONGATION: PERCENT, MIN. PERCENT, MAX.	1.7 % 5.0 %	
TENSILE MODULUS, PSI MIN. OF PRIMARY FIBERS	3,000,000	D3039
VISUAL EFFECTS	ACCEPTANCE LEVEL III	D2563
COEFFECIENT OF THERMAL EXPANSION IN THE PRIMARY DIRECTION	4,300,000 PPM/DEG. F (+15%)	D696

THE MINIMUM WEIGHT OF THE FABRIC SHALL BE 27.0 OUNCES PER SQUARE YARD.

THE EPOXY SHALL BE SUPPLIED BY THE MANUFACTURER TO MEET THE COMPOSITE STRENGTH GIVEN BELOW. POLYESTER RESIN SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR EPOXY RESIN.

THE COMPOSITE OF THE FIBER WRAPPED COLUMN CASING SYSTEM SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

SURFACE PREPARATION: THE SURFACE TO RECEIVE THE COMPOSITE WRAP SHALL BE FREE FROM FINS, SHARP EDGES, AND PROTRUSIONS THAT WILL CAUSE VOIDS BEHIND THE CASING OR THAT, IN THE OPINION OF THE ENGINEER, WILL DAMAGE THE FIBER. IF FIBERS ARE TO WRAP AROUND CORNERS OF RECTANGLE CROSS-SECTIONS, THE CORNERS SHALL BE ROUNDED TO A 1/2 INCH RADIUS. THIS WILL HELP PREVENT STRESS CONCENTRATIONS IN THE FIBER WRAP AND VOIDS BETWEEN THE FIBER WRAP AND THE CONCRETE. IN ADDITION, THE SURFACE SHALL BE SMOOTH AND FREE OF VOIDS OR UNDULATIONS THAT WOULD PREVENT FULL CONTACT BETWEEN THE CONCRETE AND THE FIBER WRAP. THE REMOVAL OF THE EXISTING COATING FROM THE CONCRETE SURFACES IS INCLUDED WITH THE SURFACE PREPARATION FOR THE COMPOSITE FIBER WRAP SYSTEM AND WILL NOT BE PAID SEPARATELY UNDER ITEM 512.

COMPOSITE APPLICATION: THE AMBIENT TEMPERATURE AND THE TEMPERATURE OF THE EPOXY RESIN COMPONENTS SHALL BE BETWEEN 55 DEG. F AND 95 DEG. F AT THE TIME OF MIXING. THE COMPOSITE SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SURFACE TEMPERATURE IS MORE THAN 5 DEG. F ABOVE THE DEW POINT. APPLICATION SHALL BEGIN WITHIN ONE HOUR AFTER THE BATCH HAS BEEN MIXED. A MANUFACTURER REPRESENTATIVE SHALL BE ON SITE FOR THE FIRST APPLICATION OF THE COMPOSITE FIBER WRAP SYSTEM TO APPROVE THE CONTRACTOR'S APPLICATION PROCESS. THIS REQUIREMENT MAY BE WAIVED WITH WRITTEN APPROVAL FROM THE ENGINEER.

THE COMPONENTS OF THE EPOXY RESIN SHALL BE MIXED WITH A MECHANICAL MIXER AND APPLIED UNIFORMLY TO THE FIBER AT A RATE THAT SHALL INSURE COMPLETE SATURATION OF THE FABRIC.

THE FABRIC/EPOXY COMPOSITE SHALL BE APPLIED TO THE SURFACE OF THE COLUMN BY WRAPPING METHODS THAT PRODUCE A UNIFORM FORCE THAT IS DISTRIBUTED ACROSS THE ENTIRE WIDTH OF THE FABRIC. THE PRIMARY FIBERS OF THE FABRIC SHALL NOT DEVIATE FROM A HORIZONTAL LINE MORE THAN 1/2 INCH PER FOOT. ENTRAPPED AIR SHALL BE RELEASED OR ROLLED OUT BEFORE THE EPOXY SETS.

SUCCESSIVE LAYERS OF COMPOSITE MATERIALS SHALL BE PLACED BEFORE POLYMERIZATION OF THE PREVIOUS LAYER OF EPOXY IS TOO DRY TO ACHIEVE ADEQUATE BOND BETWEEN LAYERS. IF POLYMERIZATION DOES OCCUR BETWEEN LAYERS THE SURFACE MUST BE ROUGHENED USING A LIGHT ABRASIVE THAT WILL NOT DAMAGE THE FIBER.

THE FINAL LAYER OF EPOXY SHALL BE APPLIED TO THE FINAL LAYER OF FABRIC, WITH CARE TAKEN TO ENSURE COATING OF ALL EDGES AND SEAMS. SPACES BETWEEN THE BANDS OF FABRIC SHALL BE FILLED WITH EPOXY THICKENED AS DIRECTED BY THE MANUFACTURER.

A FINAL INSPECTION SHALL BE PERFORMED ON ALL FIBER WRAPPED COLUMNS AFTER THE EPOXY SETS YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT. ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH.

- 1. SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.
- 2. BUBBLES LESS THAN 12" DIAMETER SHALL BE REPAIRED BY INJECTING WITH EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF ENTRAPPED AIR.
- 3. BUBBLES, DELAMINATIONS AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATING. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER.

COATING SYSTEM APPLICATION: A FINAL URETHANE COATING IS REQUIRED TO PROTECT THE FIBERS FROM THE ELEMENTS, SPECIFICALLY UV RADIATION, AND TO GIVE THE FINAL AESTHETIC EFFECT.

AFTER 96 HOURS FROM THE FINAL APPLICATION OF EPOXY, IF THE FINAL EPOXY COAT IS COMPLETELY POLYMERIZED, THE EXTERIOR SURFACES OF THE COMPOSITE WRAP SHALL BE CLEANED AND ROUGHENED BY A LIGHT ABRASIVE. CARE SHOULD BE TAKEN DURING THE ROUGHENING PROCESS SO THAT THE FIBERS ARE NOT DAMAGED. ALL CLEANED AND ROUGHENED SURFACES SHALL BE DRY BEFORE APPLYING THE URETHANE COATING.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL PAY FOR THIS ITEM PER SQUARE FOOT OF FIBER WRAP MATERIAL INSTALLED AND ACCEPTED TO COMPLETE THE PROPOSED WORK. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE AND INSTALL A FIBER WRAP COLUMN CASING SYSTEM USING HIGH STRENGTH, HYBRID FIBER/EPOXY COMPOSITES FIELD APPLIED TO THE COLUMN, INCLUDING ERECTION OF SCAFFOLDING, CLEANING, SURFACE PREPARATION, WRAPPING THE COLUMN, URETHANE SEALER, AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION PER THE MANUFACTURER'S REQUIREMENTS. PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL – COMPOSITE FIBER WRAP SYSTEM.

ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT 1300 LINEAR FEET OF ASBESTOS IS PRESENT ON THE CUY-8-1.27 BRIDGE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS FOR EACH BRIDGE, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM OR ASBESTOS PROGRAM
OHIO EPA, DAPC OHIO EPA, DAPC
P.O. BOX 1049 50 W. TOWN ST., SUITE 700
COLUMBUS, OH 43216-1049 COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT – THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN:

ITEM 202 – PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

GENERAL NOTES – LOCATION 1

BRIDGE NO. CUY-008-0127

SR 8 (NORTHFIELD ROAD) OVER NORFOLK SOUTHERN RAILWAY

CUY -071-16.40/ VAR REPAIR

PID No. 111603

2 / 5

47
123

RICHLAND ENGINEERING LIMITED

29 NORTH PARK STREET

MANSFIELD, OHIO 44902

DATE

06/2021

REVIEWED

DLR

STRUCTURE FILE NUMBER

1801201

DRAWN

JLS

REVISED

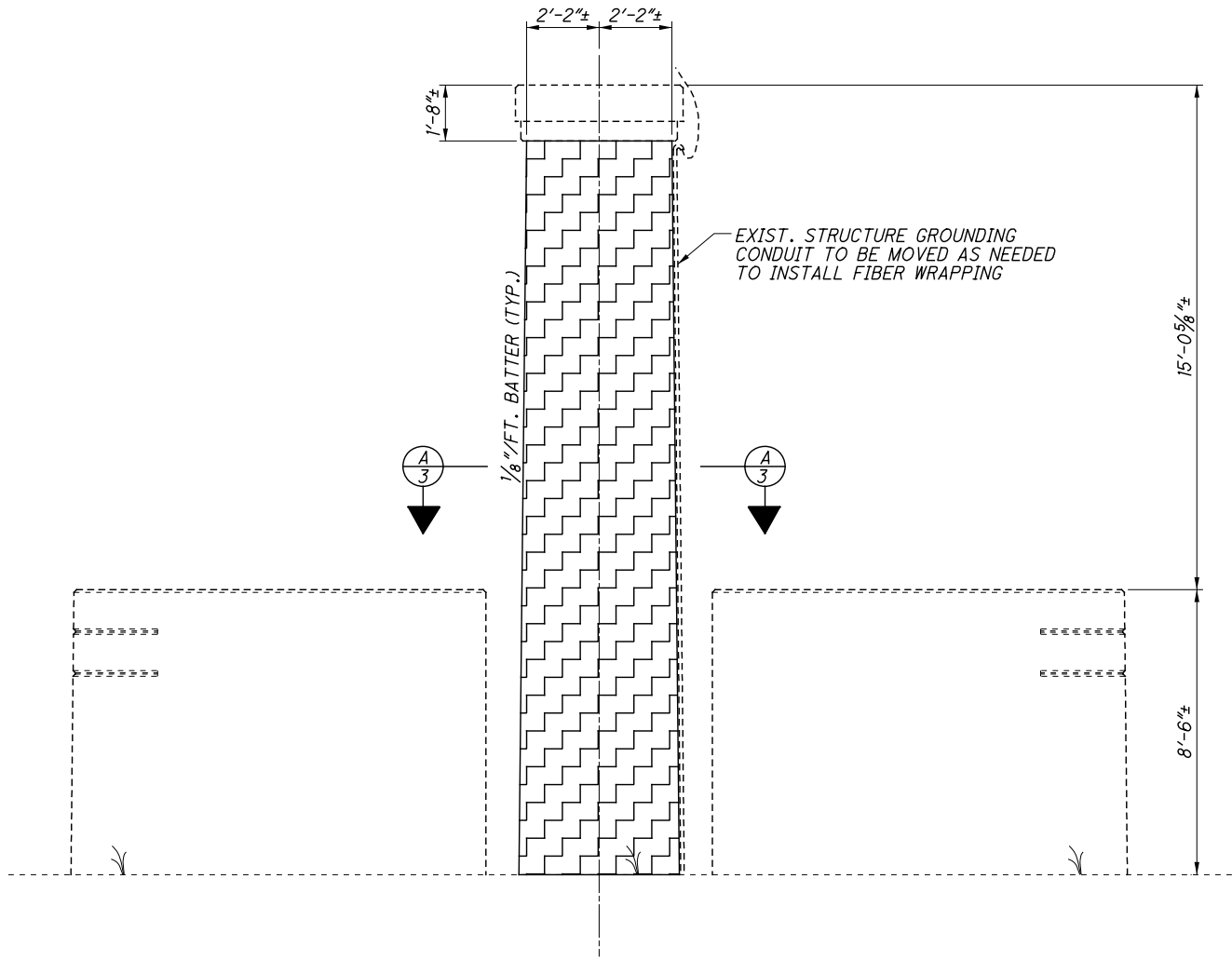
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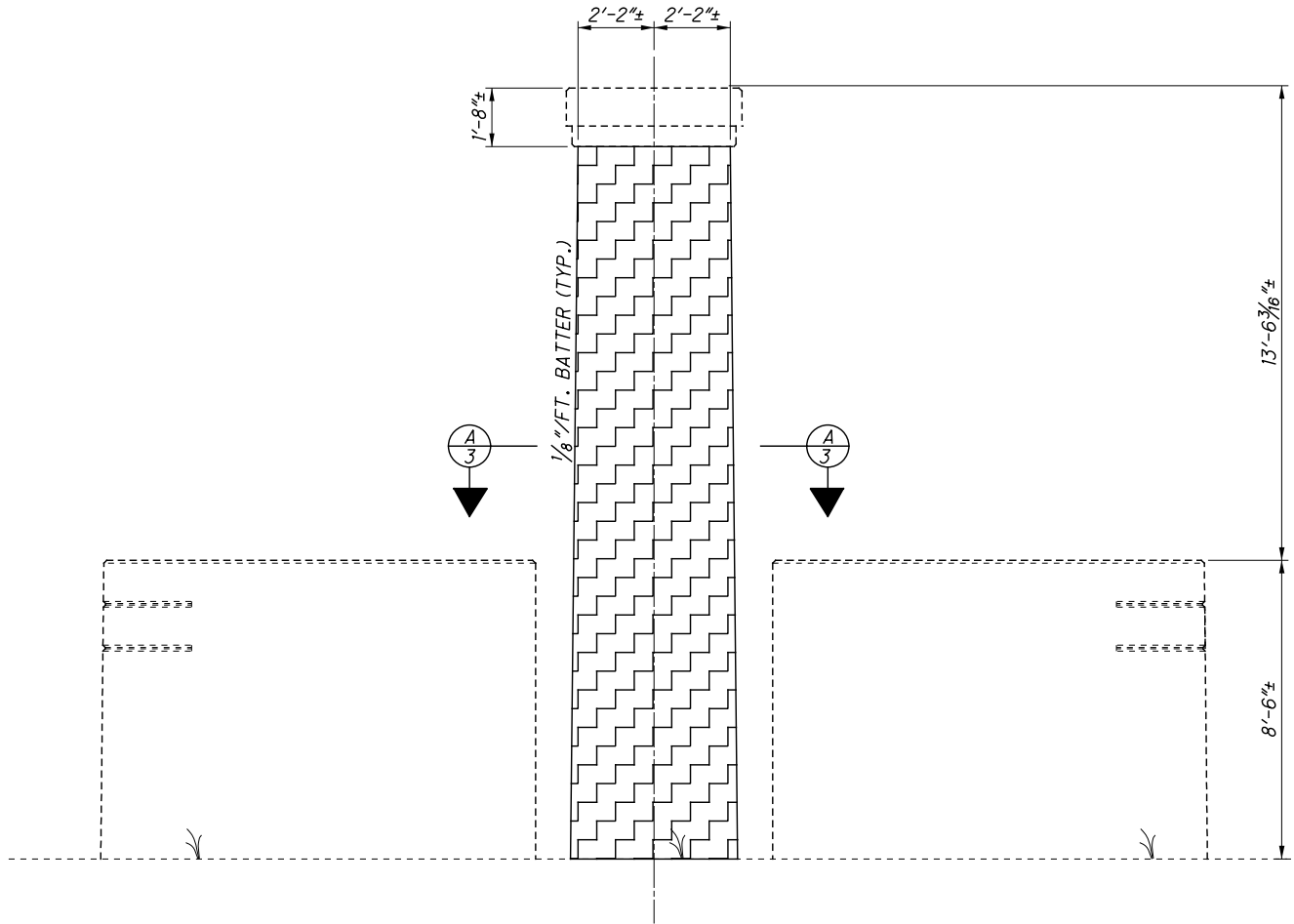
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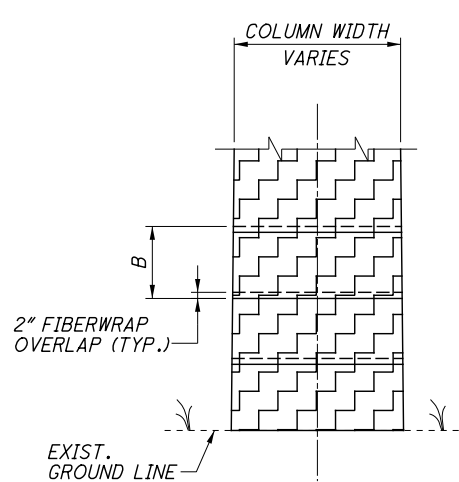
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PIER 3 EAST & WEST COLUMNS

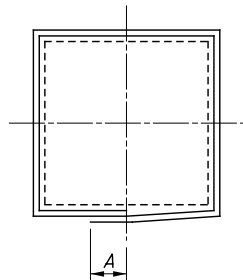


PIER 4 WEST COLUMN

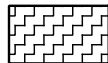


PIER COLUMN FIBER WRAP DETAIL

A = FIBER WRAP SHALL BE INSTALLED AS ONE CONTINUOUS WRAP, EXTENDING AROUND THE COLUMN TWICE WITH A MINIMUM 1'-0" LAP.
B = 2'-0" TYP. FABRIC WIDTH



SECTION A-A



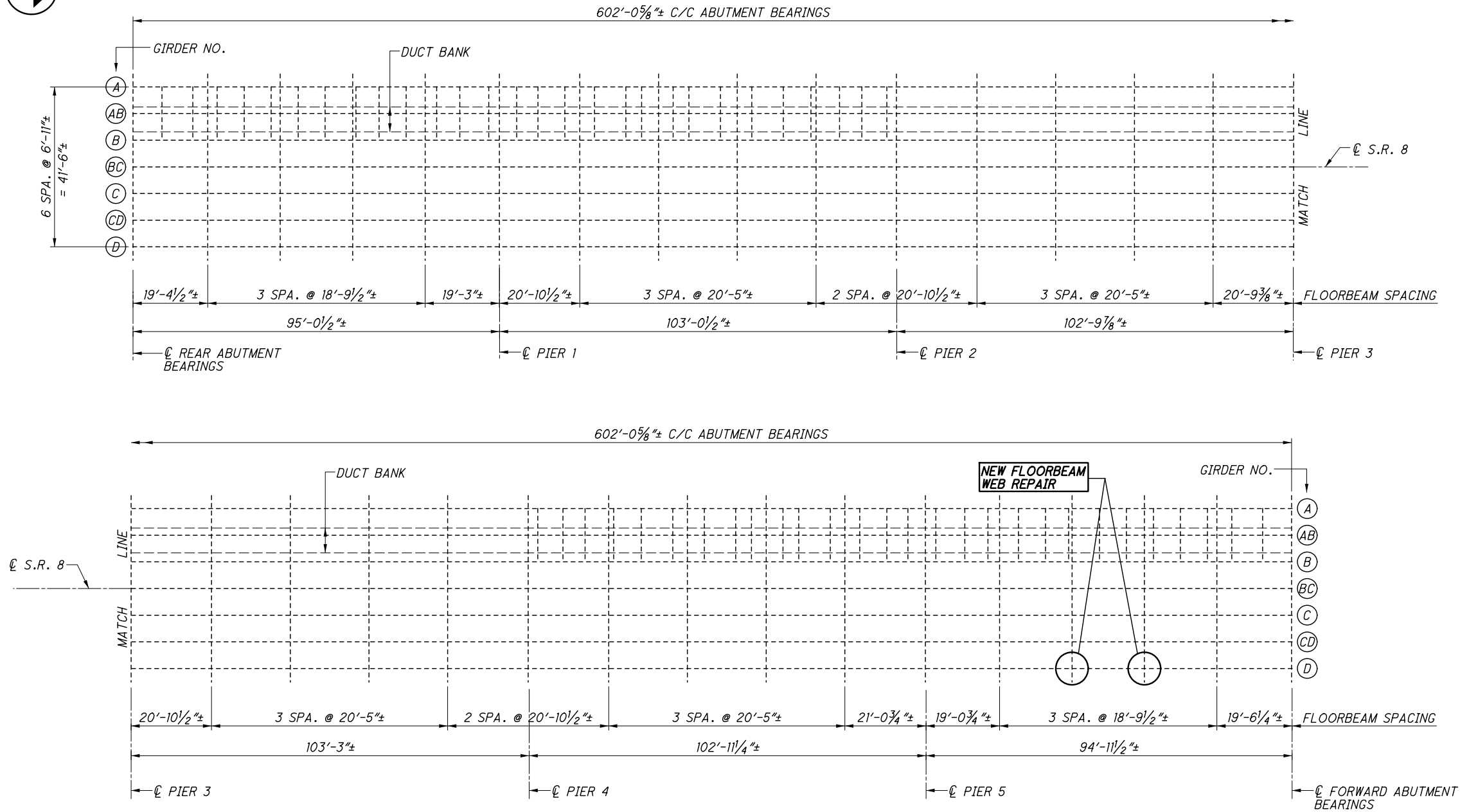
INDICATES CONCRETE PIER COLUMN REPAIR PER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM.

LEGEND

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED. DETAILS SHOWN ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

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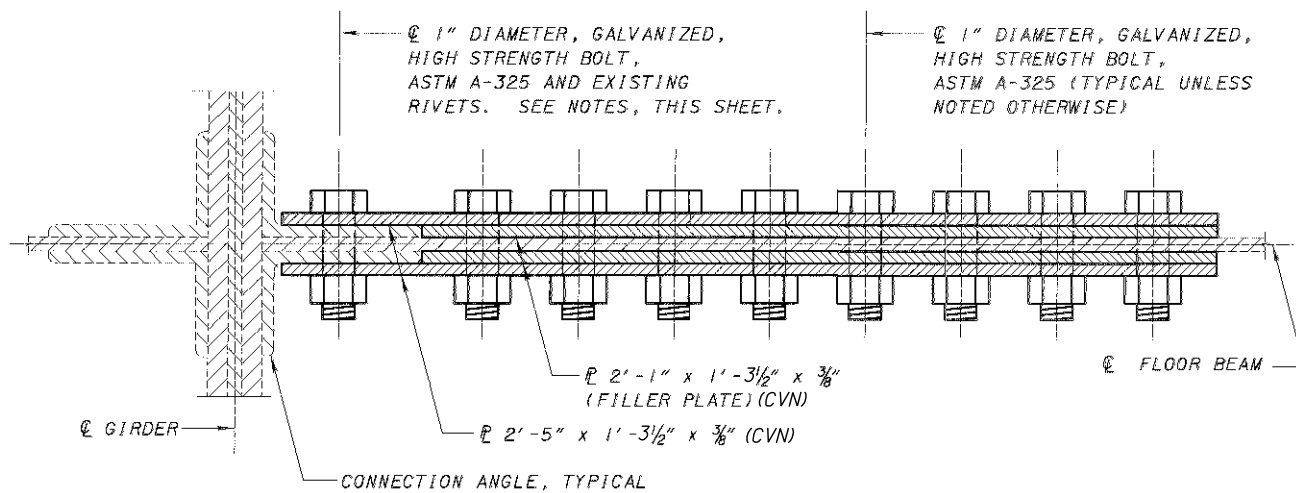
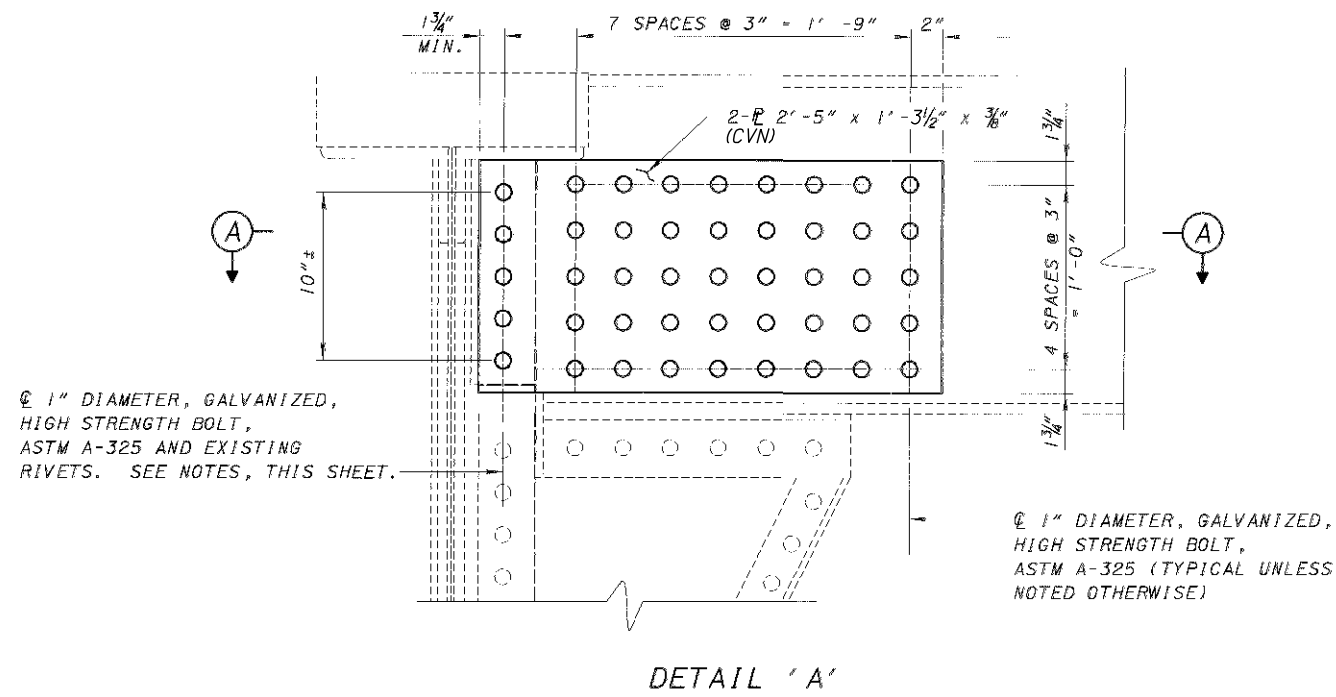
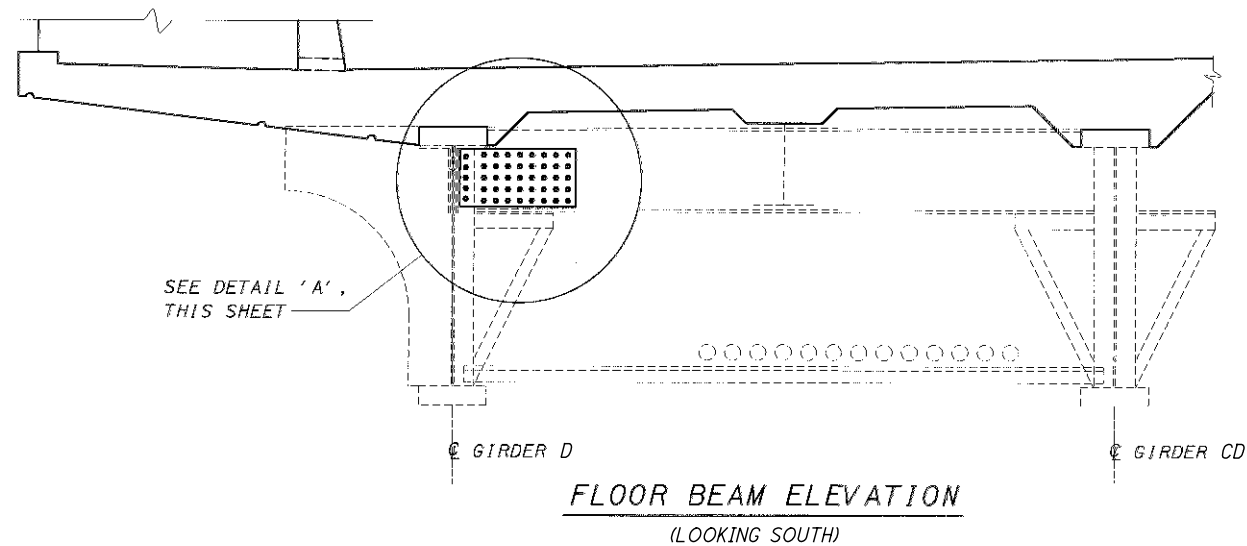
FRAMING PLAN

NOTES

FLOORBEAM WEB REPAIR DETAILS: SEE SHEET 5/5.

CUY-071-16.40/ VAR REPAIR PID No. 111603	FRAMING PLAN - LOCATION 1 BRIDGE NO. CUY-008-0127 SR 8 (NORTHFIELD ROAD) OVER NORFOLK SOUTHERN RAILWAY		DESIGNED BLN	DRAWN JLS	REVIEWED DLR	DATE 06/2021	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
			CHECKED DHT	REVISED	STRUCTURE FILE NUMBER 1801201		

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SECTION A-A

ENLARGED FOR CLARITY

NOTE: PROVIDE HARDENED WASHER UNDER THE TURNED ELEMENT OF EACH BOLT.

REPAIR NOTES

THE FIVE EXISTING 7/8" DIAMETER RIVETS WHICH CONNECT THE FLOORBEAM TO THE GIRDER SHALL BE REMOVED AND THE HOLES SHALL BE REAMED TO A DIAMETER OF 1 1/8" TO ACCOMMODATE THE PROPOSED BOLTS. THE EXISTING RIVETS SHALL BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE UNDERLYING CONNECTED MATERIAL. RIVETS SHALL BE REMOVED BY MECHANICAL OR PNEUMATIC METHODS. FLAME CUTTING OF THE HEADS SHALL NOT BE ALLOWED. ANY DAMAGE TO THE CONNECTED MATERIAL SHALL BE RECTIFIED TO THE SATISFACTION OF THE ENGINEER.

THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO THE FABRICATION AND DRILLING OF THE REPAIR PLATES.

ALL AREAS OF THE EXISTING FLOORBEAM WEB AND EXISTING CONNECTION ANGLES WHICH COME IN CONTACT WITH THE PROPOSED PLATES SHALL HAVE SURFACE PREPARATION AND PRIME COAT AS PER ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, SYSTEM OZEU.

ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO INSTALL THE PLATES, BOLTS, WASHERS, AND NUTS SHOWN ON THIS PLANS SHEET SHALL BE INCLUDED WITH PAYMENT UNDER ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION.

CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS OF C&MS 711.01.

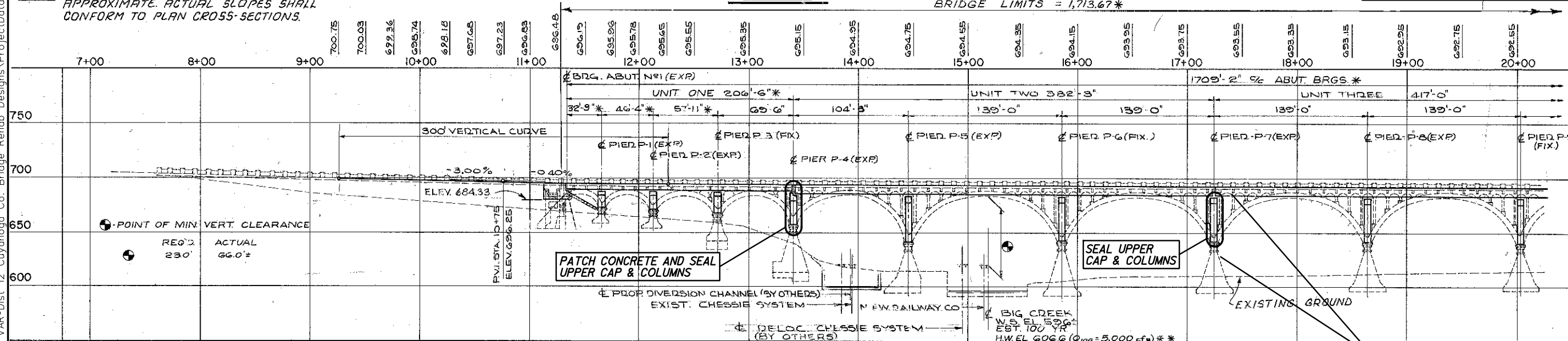
NOTES

REPAIR LOCATIONS: SEE FRAMING PLAN ON SHEET 4/5.

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HORIZONTAL CURVE DATA
WEST 25 TH. STREET
P.I. STA. = 11+11.55
 $\Delta = 14^{\circ}29'11''$
 $D_c = 4^{\circ}32'09''$
 $R = 1243.15'$
 $L_c = 319.37'$
 $C = 318.52'$
 $T = 160.54'$

NOTE: EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.



NOTE: ABUTMENT PILES SHALL BE HP10x42 STEEL H PILES. ESTIMATED AVERAGE PILE LENGTHS ARE: ABUTMENT A-1 = 22 FT. ABUTMENT A-2 = 32 FT. MAXIMUM DESIGN LOAD CAPACITY IS 55 TONS PER PILE.

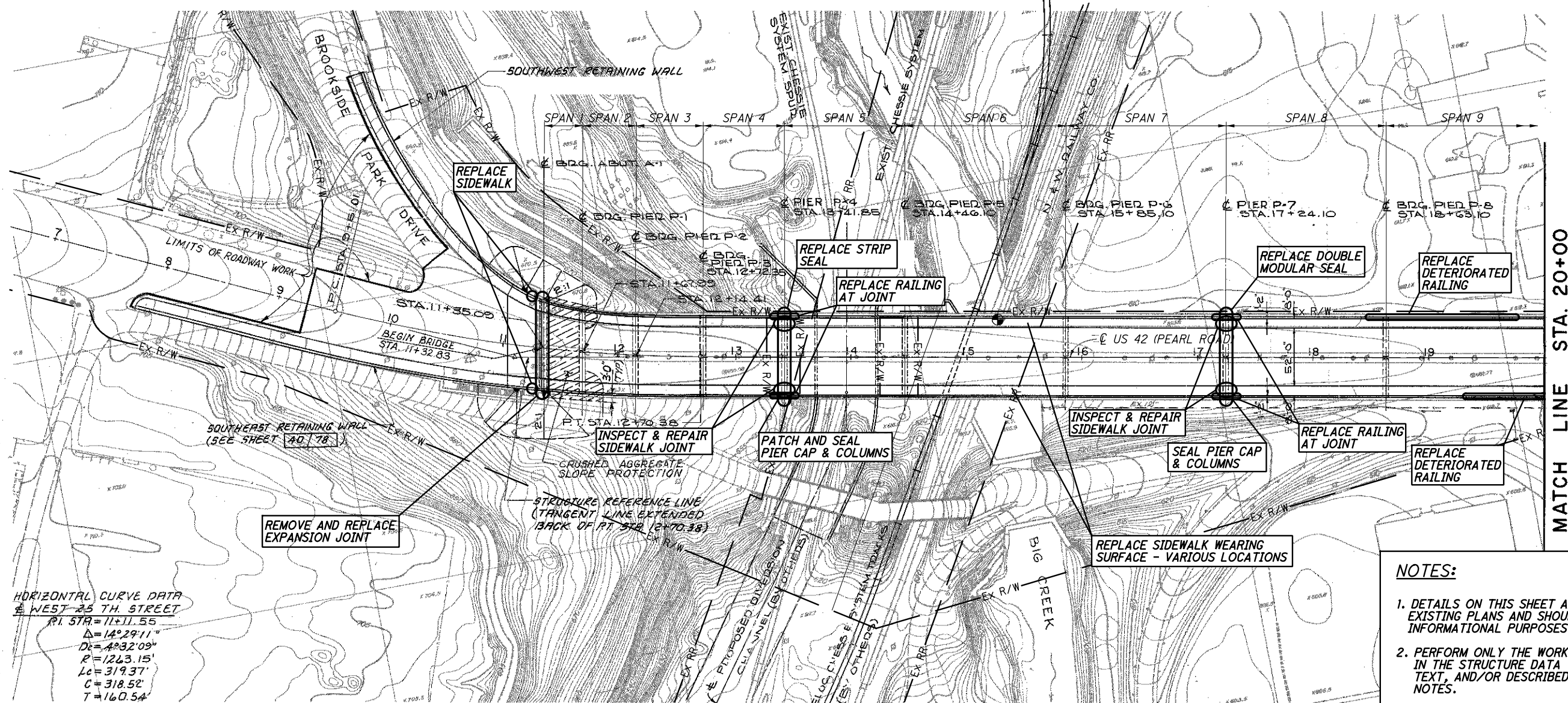
PROFILE ALONG C US 42 (PEARL ROAD)

* MEASURED ALONG EXTENDED TANGENT BACK OF P.T. STA. 12+70.38
** BASED ON PROP. IMPROVEMENTS BY OTHERS

CLEAN OUT ENTIRE STRUCTURE DRAINAGE SYSTEM

NOTES:

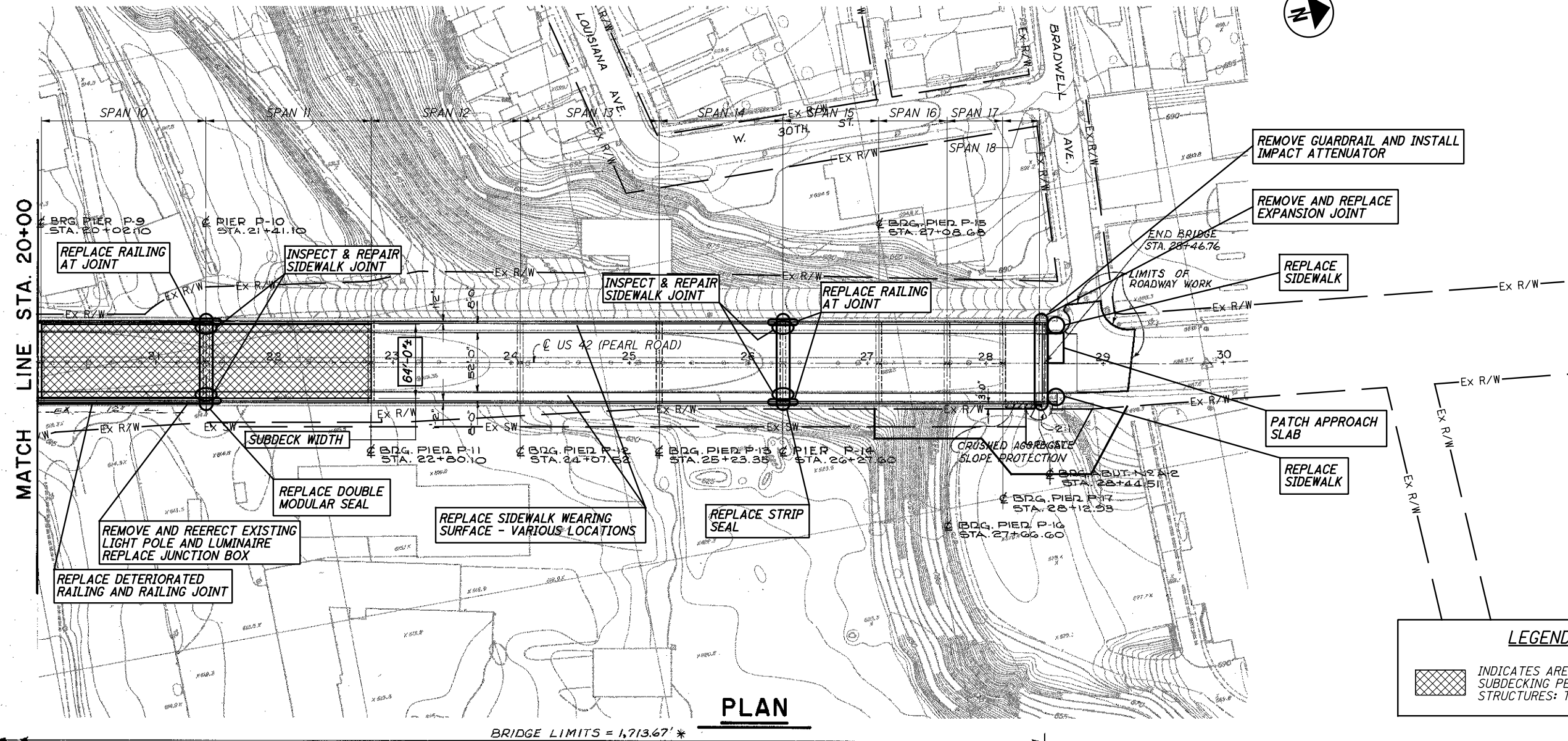
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.



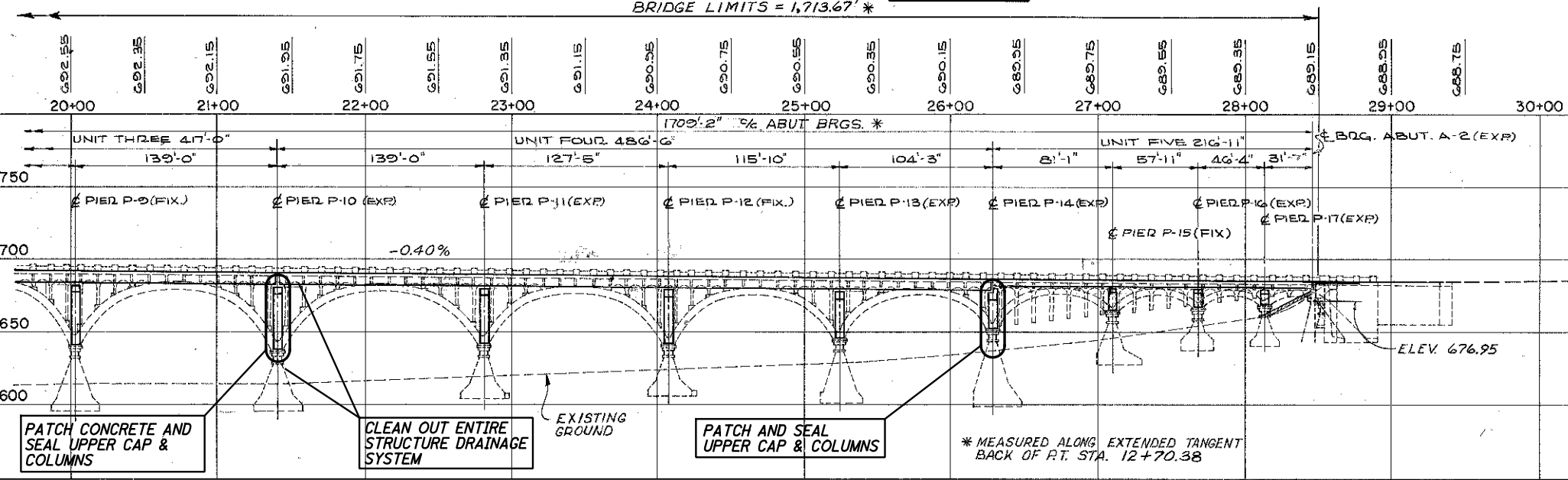
MATCH LINE STA. 20+00



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PLAN



PROFILE ALONG C US 42 (PEARL ROAD)

LEGEND

 INDICATES AREA OF NEW TIMBER SUBDECKING PER ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK.

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
 3. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

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REFER TO STANDARD BRIDGE DRAWINGS

BR-2-15 (DATED 7-17-2015)
EXJ-4-87 (REVISED 1-19-2018)
VPF-1-90 (REVISED 7-20-2018)

DESIGN DATA

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 YIELD STRENGTH 50 KSI

CONCRETE CLASS QC SCC - COMPRESSIVE STRENGTH 4.5 KSI (BACKWALL AND PORTIONS OF SUPERSTRUCTURE DECK & SIDEWALK)

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (PARAPETS)

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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

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THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE

[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

DESCRIPTION OF WORK:

- REMOVE THE ABUTMENT EXPANSION JOINTS, BACKWALLS, AND PORTIONS OF SUPERSTRUCTURE SLAB INCLUDING SIDEWALK CONCRETE, STEEL PLATES AND RAILING.
- CONSTRUCT NEW ABUTMENT STRIP SEAL EXPANSION JOINTS, AND PORTIONS OF SUPERSTRUCTURE AND BACKWALL INCLUDING DECK SLAB, SIDEWALK AND RAILING PER THE PLAN DETAILS.
- DISASSEMBLE THE REMOVABLE SIDEWALK AND RAILING PLATES AT THE PIER EXPANSION JOINTS, INSPECT FOR PLATE AND CONCRETE DAMAGE AROUND THE JOINT THAT ALLOWS WATER LEAKAGE.
- REMOVE THE STEEL PARAPET EXPANSION JOINT PLATES AT PIER JOINTS BY CUTTING THEM OFF SMOOTH AT THE SIDEWALK LEVEL AND REPLACE THE CONCRETE IN THIS AREA. ADDITIONALLY, REPAIR/MODIFY STEEL AND CONCRETE PER PLAN DETAILS AND DIRECTION OF ENGINEER IN THE SIDEWALK AREA. THEN REPLACE THE STRIP SEALS IN THE PIER 4 AND 14 JOINTS AND THE DOUBLE CELLULAR SEALS IN THE PIER 7 AND 10 MODULAR JOINTS.
- REINSTALL SIDEWALK JOINT PLATES AT PIERS USING NEW GALVANIZED BOLTED HARDWARE AFTER ANY REPAIRS ARE MADE AS DIRECTED BY THE ENGINEER.
- REPLACE PORTIONS OF THE SIDEWALK CONCRETE WEARING SURFACE PER PLAN DETAILS AND AS DIRECTED BY THE ENGINEER.
- REPLACE SECTIONS OF THE RAILING PER PLAN DETAILS OR DIRECTION OF THE ENGINEER, INCLUDING REMOVING AND RE-ERECTING THE VANDAL PROTECTION FENCE THAT IS REQUIRED FOR THE WORK.
- INSTALL TIMBER SUBDECK IN SPANS 10 AND 11 OVER THE ROAD AND PARKING AREA BELOW PER PLAN DETAILS.
- REPAIR THE PIERS 4, 10 AND 14 CAPS AND COLUMNS CONCRETE DETERIORATION FROM WATER LEAKAGE PER PLAN DETAILS AND AS DIRECTED BY THE ENGINEER.
- FLUSH AND CLEAN OUT THE DRAINAGE SYSTEM INCLUDING SCUPPERS AND PIER DOWNSPOUTS BY REMOVING THE CLEANOUTS AT PIERS 2, 4 THRU 15, AND 18.
- IF THE DOWNSPOUTS AT CERTAIN PIERS ARE TOO PLUGGED TO BE CLEANED IN PLACE AND THE SYSTEM CANNOT BE BROUGHT TO A FREE-FLOWING CONDITION, THEN THE PLUGGED PIPE SECTIONS SHALL BE DISASSEMBLED OR CUT OUT AND BROUGHT TO THE GROUND. ON THE GROUND THE SECTIONS SHALL BE EITHER CLEANED OUT OR THE PIPE SECTIONS REPLACED PER DIRECTION OF THE ENGINEER AND THE AGREEMENT OF THE CONTRACTOR.
- AFTER CLEANING THE DRAINAGE SYSTEM, THE PIPES AND CLEANOUTS SHALL BE REASSEMBLED WITH NEW BOLTED HARDWARE PER DIRECTION OF THE ENGINEER.

- IF IT IS DISCOVERED THAT THE IN-GROUND DOWNSPOUT DRAIN SYSTEM IS PLUGGED BELOW THE DOWNSPOUTS, THE CONTRACTOR SHALL ATTEMPT TO CLEAN THE PIPES BY FLUSHING AND A POWER AUGER. IF THE SYSTEM CAN NOT BE CLEARED WITH A REASONABLE EFFORT, THEN THE BOTTOM OF THE DOWNSPOUT PIPE SHALL BE MODIFIED TO OUTLET ONTO THE GROUND PER PLAN DETAILS AND AT THE DIRECTION OF THE ENGINEER.
- SEAL UPPER PIER CAPS AND COLUMNS FOR EXPANSION JOINTS AT PIERS 4, 7, 10, AND 14 PER PLAN DETAILS.

APPROACH WORK INCLUDING REPLACING PORTIONS OF SIDEWALK; REPLACING GUARDRAIL AT THE FORWARD LEFT APPROACH; PATCHING THE FORWARD APPROACH SLAB; INSTALLING A NEW JUNCTION BOX AT STA. 21+35± RIGHT; AND REMOVING AND REERECTING THE LIGHT POLE AND LUMINAIRE AT STA. 21+35± RT.

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION; AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

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 IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. 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.

ITEM 202 - VANDAL PROTECTION FENCE REMOVED AND RESET, AS PER PLAN

THIS ITEM CONSISTS OF REMOVING SECTIONS OF THE EXISTING FENCE ON THE CONCRETE RAILING PARAPET SO THAT JOINT REPAIR WORK CAN BE DONE, OR DETERIORATED SECTIONS OF THE CONCRETE RAILING CAN BE REPLACED. THE EXISTING FENCE POSTS ARE EMBEDDED IN THE CONCRETE RAILING AND WILL BECOME FREE AS THE CONCRETE IS REMOVED. THE EXISTING FENCE AND POST CAN BE SUPPORTED IN PLACE, REMOVED AND STORED, OR DISPOSED OF TO BE REPLACED WITH NEW PER STANDARD DRAWING VPF-1-90. THE REUSED POSTS SHALL BE SET AND BRACED IN THE NEW CONCRETE UNTIL THE CONCRETE HAS SET. AS AN ALTERNATIVE, THE POSTS CAN BE REPLACED BY POSTS WITH BASE PLATES AND ANCHOR BOLTS PER STANDARD DRAWING VPF-1-90.

ALSO INCLUDED IN THIS ITEM IS THE REPAIR OF DAMAGED FENCE FABRIC ON UNIT 3 WEST RAILING (NEAR PIER 9).

THIS WORK SHALL BE MEASURED AND PAID FOR BY FEET OF FENCE REMOVED AND REPLACED IN THE NEW CONCRETE RAILING.

ITEM SPECIAL - PIPE CLEANOUT, 24" AND UNDER

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SHOWN IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT, 24" AND UNDER. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

IT IS THE POLICY OF CSX THAT ALL MATERIALS DISCARDED BY OR ON BEHALF OF CSX WILL BE MANAGED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS CSX'S BEST MANAGEMENT PRACTICES AND SUSTAINABILITY GOALS.

TO ENSURE THAT THESE GOALS ARE ACHIEVED, CSX HAS MECHANISMS IN PLACE TO MONITOR WASTE MANAGEMENT ACTIVITIES, CAPTURE THE INFORMATION NECESSARY TO ENSURE 100% COMPLIANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS 100% OF THE TIME, AND TRACK PROGRESS IN THE CSX SUSTAINABILITY PROGRAM.

THESE MECHANISMS ALSO ALLOW CSX TO COMPLETE REPORTING REQUIREMENTS TO FEDERAL AND STATE REGULATORY AGENCIES AND DOCUMENT CSX'S PROGRESS TOWARD ITS SUSTAINABILITY GOALS.

WASTE MATERIAL REMOVAL SHALL BE IN ACCORDANCE WITH CSX SOIL AND WATER MANAGEMENT POLICY

THIS WORK CONSISTS OF CLEANING OUT THE 12" IN GROUND CONDUITS FROM THE INLET OF THE 8" STEEL DOWNSPOUTS TO THE NEAREST MANHOLE. THIS PIPE CLEANOUT SHALL ONLY BE PERFORMED AT PIER LOCATIONS WHERE THE CONDUIT IS PLUGGED, AND THE WORK IS AUTHORIZED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR THE ABOVE NOTED WORK:

ITEM SPECIAL - PIPE CLEANOUT, 24" AND UNDER - 500 FT.

ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS)

60 POUNDS OF STEEL FIBERS (ASTM C1116) SHALL BE ADDED PER CUBIC YARD. THE STEEL FIBERS WILL BE ASTM A 820 MATERIAL WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 120,000 PSI. THE LENGTH WILL BE 2 INCHES +/- 5 PERCENT. THE AVERAGE EQUIVALENT DIAMETER WILL BE 0.899 mm WITH AN ASPECT RATIO OF 57 +/- 15 PERCENT. THE MATERIAL WILL BE CONTINUOUSLY DEFORMED CIRCULAR SEGMENT, CLEAN AND FREE OF RUST, OIL AND DELETERIOUS MATERIALS AND CORRUGATED FULL LENGTH FOR INCREASED MECHANICAL ANCHORAGE.

MIX CONCRETE IN A CENTRAL MIXING PLANT OR BY A READY MIXED CONCRETE TRUCK CAPABLE OF DISCHARGING PLASTICIZED CONCRETE HAVING A MAXIMUM WATER-CEMENT RATIO OF 0.40. MIXING EQUIPMENT SHALL MEET THE REQUIREMENTS OF 499.05B. INTRODUCE ADMIXTURES AND FIBERS INTO THE CONCRETE SO THAT THEY SHALL BE DISBURSED THROUGHOUT THE ENTIRE LOAD. BATCH PLANTS SHALL MEET THE REQUIRMENTS OF 499.05A AND BE LOCATED SUCH THAT THE MAXIMUM TIME REQUIRED FROM START OF MIXING TO COMPLETION OF CONCRETE DISCHARGE AT THE WORK SITE SHALL NOT EXCEED 90 MINUTES.

ITEM 511 - CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN

THIS WORK CONSISTS OF REMOVING AND REPLACING THE EXISTING 3" CONCRETE SIDEWALK WEARING SURFACE AT LOCATIONS DESIGNATED IN THE PLANS AND PER THE DIRECTION OF THE ENGINEER. SIDEWALK REINFORCING (WELDED WIRE FABRIC) AND SEALING OF JOINTS SHALL BE PER PLAN DETAILS AND INCLUDED WITH THIS ITEM. THIS WORK SHALL BE PAID PER SQUARE FOOT OF SIDEWALK REMOVED AND REPLACED.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

SEAL PIER CAPS AND PIER LEGS OF THE FOUR EXPANSION JOINT PIERS PER PLAN DETAILS. THE EPOXY-URETHANE SHALL BE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 17778, OR AS CLOSELY MATCHES THE SEALER COLOR OF THE EXISTING CONCRETE (LIGHT GRAY TYPICAL COLOR). THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

THE CONTRACTOR SHALL DESIGN/UTILIZE SURFACE PREPARATION AND SURFACE PROTECTION METHODS THAT FOLLOW ALL ENVIRONMENTAL GUIDELINES AND BE APPROVED IN ADVANCE OF CONSTRUCTION BY CSX. THE DESIGN SHALL BE SEALED BY AN ENGINEER. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW. ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING WASHING WITH WATER, CLEANING SOLVENTS, BLASTING, SCRAPING, BRUSHING, AND PAINTING OPERATIONS, SHALL BE CONTAINED, COLLECTED, AND PROPERLY DISPOSED OF BY CONTRACTOR. THE MATERIALS REMOVED DURING THE SURFACE PREPARATION MUST NOT IMPACT THE SURROUNDING AREA INCLUDING GROUND, WATER, OR AIR. MATERIALS MUST NOT BE STORED ON CSX PROPERTY. CONTRACTOR MUST CONTROL ANY OVERSPRAY AND VAPORS DURING APPLICATION. THE WORK MUST BE DONE COMPLYING WITH APPROPRIATE REGULATIONS AND OVER SPRAY CONTROLLED TO PREVENT DAMAGE TO ADJACENT PROPERTY AND VEHICLES IN THE AREA.

<div>53 123</div>		3 / 40	CUY-071-16.40/ VAR REPAIR	GENERAL NOTES - 1 - LOCATION 2	BRIDGE NO. CUY-42-1457	US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902			
							REVIEWED DATE	DLR	06/2021	
			DRAWN JLS	STRUCTURE FILE NUMBER	1803271					
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ITEM 512 – REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN

THIS ITEM IS INCLUDED FOR THE REMOVAL OF EXISTING COATINGS FROM EXISTING CONCRETE SURFACES TO BE SEALED.

THE CONTRACTOR SHALL DESIGN/UTILIZE SURFACE PREPARATION AND SURFACE PROTECTION METHODS THAT FOLLOW ALL ENVIRONMENTAL GUIDELINES AND BE APPROVED IN ADVANCE OF CONSTRUCTION BY CSX. THE DESIGN SHALL BE SEALED BY AN ENGINEER. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW. ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING WASHING WITH WATER, CLEANING SOLVENTS, BLASTING, SCRAPING, BRUSHING, AND PAINTING OPERATIONS, SHALL BE CONTAINED, COLLECTED, AND PROPERLY DISPOSED OF BY CONTRACTOR. THE MATERIALS REMOVED DURING THE SURFACE PREPARATION MUST NOT IMPACT THE SURROUNDING AREA INCLUDING GROUND, WATER, OR AIR. MATERIALS MUST NOT BE STORED ON CSX PROPERTY. CONTRACTOR MUST CONTROL ANY OVERSPRAY AND VAPORS DURING APPLICATION. THE WORK MUST BE DONE COMPLYING WITH APPROPRIATE REGULATIONS AND OVER SPRAY CONTROLLED TO PREVENT DAMAGE TO ADJACENT PROPERTY AND VEHICLES IN THE AREA.

ITEM 516 – ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN (SEAL REPLACEMENT PIER 4 & 14 JOINTS)

THIS WORK CONSISTS OF REMOVING AND REPLACING THE EXISTING STRIP SEALS IN THE EXPANSION JOINTS. INCLUDED IN THIS ITEM IS THE DISASSEMBLY OF THE CURB, RAILING AND SIDEWALK PLATES AND REASSEMBLY WITH NEW BOLT HARDWARE. THE STEEL RAILING FACING PLATES SHALL BE CUT OFF AT THE SIDEWALK LEVEL AND A MINIMUM OF 2'-0" OF RAILING CONCRETE SHALL BE REMOVED AND REPLACED ON BOTH SIDES OF THE JOINT PER PLAN DETAILS. RESET THE FENCE POSTS IN THE NEW CONCRETE.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

ALSO INCLUDED IS THE INVESTIGATION AND REPAIR OF CONCRETE AND STEEL IN THE SIDEWALK AREA AND REPAIR TO ELIMINATE LEAKING. THE CONTRACTOR SHALL VERIFY THE TYPE, SIZE AND AVAILABILITY OF THE REPLACEMENT SEALS BEFORE EXISTING SEALS ARE REMOVED. IF NO SUITABLE SEALS CAN BE FOUND, THIS WORK SHALL BE NONPERFORMED.

ITEM SPECIAL – MODULAR EXPANSION JOINT (SEAL REPLACEMENT PIER 7 & 10 JOINTS)

THIS WORK CONSISTS OF REMOVING AND REPLACING THE EXISTING DOUBLE CELLULAR SEALS IN THE MODULAR EXPANSION JOINTS. INCLUDED IN THIS ITEM IS THE DISASSEMBLY OF THE CURB, RAILING AND SIDEWALK PLATES AND REASSEMBLY WITH NEW BOLT HARDWARE. THE STEEL RAILING FACING PLATES SHALL BE CUT OFF AT THE SIDEWALK LEVEL AND A MINIMUM OF 2'-0" OF RAILING CONCRETE SHALL BE REMOVED AND REPLACED ON BOTH SIDES OF THE JOINT PER PLAN DETAILS. RESET THE FENCE POSTS IN THE NEW CONCRETE.

ALSO INCLUDED IS THE INVESTIGATION AND REPAIR OF CONCRETE AND STEEL IN THE SIDEWALK AREA AND REPAIR TO ELIMINATE LEAKING. THE CONTRACTOR SHALL VERIFY THE TYPE, SIZE AND AVAILABILITY OF THE REPLACEMENT SEALS BEFORE EXISTING SEALS ARE REMOVED. IF NO SUITABLE SEALS CAN BE FOUND, THIS WORK SHALL BE NONPERFORMED.

ITEM 518 – 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN

THIS WORK CONSISTS OF CUTTING, DISASSEMBLING, REMOVING, AND REPLACING 8" DIAMETER STEEL PIER MOUNTED DOWNSPOUT PIPE THAT HAS BECOME PLUGGED AND CANNOT BE CLEARED. THIS WORK WILL ONLY BE AUTHORIZED BY THE ENGINEER AFTER CLEANOUT OF THE DRAINAGE SYSTEM IN PLACE PROVES TO BE IMPOSSIBLE. PER THE JUDGEMENT OF THE ENGINEER, IF THE PIPING CAN BE CLEANED ON THE GROUND AND THE CONDITION OF THE STEEL PIPING IS STILL IN GOOD CONDITION, THE CONTRACTOR CAN REUSE AND REASSEMBLE IT, OTHERWISE NEW STEEL PIPING SHALL BE USED. REUSE THE EXISTING PIER ATTACHMENT BRACKETS, IF THEY ARE STILL IN GOOD CONDITION, WITH NEW BOLT HARDWARE. IF THE BRACKETS ARE BADLY RUSTED AND DETERIORATED, REPLACE WITH A SIMILAR GALVANIZED STEEL BRACKET WITH ADHESIVE ANCHOR BOLTS. THE STEEL PIPE SHALL BE REASSEMBLED WITH INDUSTRIAL TYPE CLAMP COUPLINGS (VICTAULIC STYLE 99 OR EQUAL) AS APPROVED BY THE ENGINEER. THIS WORK SHALL BE PAID PER FOOT OF PIPE REMOVED AND INSTALLED AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 518 – 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN – 200 FT.

ITEM 518 – DOWNSPOUT MODIFICATION, 8"

THIS WORK CONSISTS OF CUTTING OFF THE BOTTOM OF THE DOWNSPOUT PIPE JUST ABOVE GROUND WHERE IT ENTERS INTO THE IN-GROUND DRAINAGE CONDUITS AND INSTALLING A SURFACE OUTLET. THIS WORK SHALL ONLY BE AUTHORIZED IF THE 12" UNDERGROUND CONDUIT CANNOT BE UNPLUGGED BY THE PIPE CLEANOUT ITEM. A GENERAL OUTLET DETAIL IS INCLUDED IN THE PLANS, BUT PER THE DIRECTION OF THE ENGINEER THE CONFIGURATION MAY NEED TO BE MODIFIED TO PROVIDE THE OPTIMAL DIRECTION OF THE WATER FLOW. THIS ITEM SHALL BE PER EACH LOCATION WHERE THE MODIFICATION IS REQUIRED AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

ITEM 518 – DOWNSPOUT MODIFICATION, 8" – 2 EACH

ITEM 518 – STRUCTURE DRAINAGE, MISC.: FLUSHING AND CLEANING OF THE DRAINAGE SYSTEM INCLUDING SCUPPERS AND DOWNSPOUTS

BY REMOVING THE CLEANOUTS ON THE PIER DOWNSPOUTS AND LOOKING AT THE HOPPERS, THE DEGREE OF PLUGGING CAN BE OBSERVED. IF THEY STILL APPEAR TO BE OPEN, FLUSH WITH WATER TO VERIFY THAT THEY ARE CLEAR. IF THERE IS STANDING WATER OR DEBRIS IN THE PIPE, THEN JETTING, AUGERING OR OTHER MEANS (WORKING FROM BOTH TOP AND BOTTOM) SHALL BE EMPLOYED TO BRING THE PIPES TO A FREE-FLOWING CONDITION. CLEANOUT OF THE SCUPPERS AND UPPER SECTION OF THE DOWNSPOUTS TO THE PIER HOPPERS SHALL SIMILARLY BE DONE. AFTER CLEANING THE SYSTEM, THE CLEANOUTS SHALL BE REASSEMBLED WITH NEW GALVANIZED BOLT HARDWARE PER DIRECTION OF THE ENGINEER. THIS WORK SHALL BE PAID PER FOOT OF DOWNSPOUT CLEANED OR ATTEMPTED TO BE CLEANED AFTER A REASONABLE EFFORT.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

IF THE DOWNSPOUTS AT CERTAIN PIERS ARE TOO PLUGGED TO BE CLEANED IN PLACE AND THE SYSTEM CANNOT BE BROUGHT TO A FREE-FLOWING CONDITION, THEN THE PLUGGED PIPE, PER THE DIRECTION OF THE ENGINEER, SHALL BE DISASSEMBLED AND REMOVED PER ITEM 518 – 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.

IT IS THE POLICY OF CSX THAT ALL MATERIALS DISCARDED BY OR ON BEHALF OF CSX WILL BE MANAGED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS CSX'S BEST MANAGEMENT PRACTICES AND SUSTAINABILITY GOALS.

TO ENSURE THAT THESE GOALS ARE ACHIEVED, CSX HAS MECHANISMS IN PLACE TO MONITOR WASTE MANAGEMENT ACTIVITIES, CAPTURE THE INFORMATION NECESSARY TO ENSURE 100% COMPLIANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS 100% OF THE TIME, AND TRACK PROGRESS IN THE CSX SUSTAINABILITY PROGRAM.

THESE MECHANISMS ALSO ALLOW CSX TO COMPLETE REPORTING REQUIREMENTS TO FEDERAL AND STATE REGULATORY AGENCIES AND DOCUMENT CSX'S PROGRESS TOWARD ITS SUSTAINABILITY GOALS.

WASTE MATERIAL REMOVAL SHALL BE IN ACCORDANCE WITH CSX SOIL AND WATER MANAGEMENT POLICY

ITEM 519 – PATCHING CONCRETE STRUCTURE, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED, INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. WHERE APPLICABLE, CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, BRIDGE RAIL OR ANY OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE PATCHING OPERATIONS.

THE CONTRACTOR SHALL DESIGN/UTILIZE A DEBRIS SHIELD AND DEBRIS COLLECTION SYSTEM FOR ALL WORK ADJACENT TO THE RAILROADS (LOCATIONS APPROVED BY CSX, NS, ODOT). THE DESIGN SHALL BE SEALED BY AN ENGINEER AND SUBMITTED TO CSX AND ODOT FOR REVIEW AND ACCEPTANCE. ALLOW 30 DAYS FOR EACH RAILROAD REVIEW.

SPECIFIC PATCHING LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH ITEM 519 UNLESS IDENTIFIED IN THE PLANS. IF EXISTING UTILITIES ARE LOCATED WITHIN THE SPECIFIED PATCHING AREAS, THE COST FOR REMOVAL AND REINSTALLING THE UTILITIES SHALL BE INCLUDED IN THIS ITEM. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO PERFORM THE ABOVE-DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT AT THE SQUARE FOOT CONTRACT PRICE FOR ITEM 519 – PATCHING CONCRETE STRUCTURE, AS PER PLAN.

ITEM 519 – PATCHING CONCRETE BRIDGE DECK – TYPE B

A. DESCRIPTION:

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR CONCRETE BRIDGE DECKS, INCLUDING THE REMOVAL OF ALL LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, SURFACE PREPARATION, BONDING COAT AND THE MIXING, PLACING, FINISHING AND CURING OF THE MORTAR OR CONCRETE PATCHES.

B. MATERIALS:

MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

FINE AGGREGATE (NATURAL SAND)703.02
COARSE AGGREGATE (NO. 8)703.02
PORTLAND CEMENT701.05
QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2705.21
AIR-ENTRAINING ADMIXTURE705.10
CURING MATERIALS – TYPE A OR B PATCHES705.07
CURING MATERIALS – TYPE C PATCHESMFGR'S RECOMMENDATIONS

C. REMOVAL OF UNSOUND CONCRETE:

THE ENGINEER SHALL SOUND AND OUTLINE THE AREAS TO BE REMOVED PER DIRECTION OF THE ENGINEER. SOUNDING MAY HAVE TO BE DELAYED UNTIL THE DECK IS SUFFICIENTLY DRY TO PERMIT DETECTION OF ALL AREAS OF DELAMINATION. THE PERIMETER OF ALL REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1 INCH TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. ADDITIONAL SAWCUTS MAY BE REQUIRED TO FACILITATE REMOVAL. ALL UNSOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35 POUND CLASS AND SHALL BE OPERATED AT AN ANGLE OF LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK. CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN CONCRETE AND A PRIMARY REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED

TO A DEPTH THAT WILL PROVIDE A MINIMUM ¾ INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICABLE. REINFORCEMENT WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATIONS, THE ENGINEER WILL RE-SOUND THE DECK TO ENSURE THAT ONLY SOUND CONCRETE REMAINS. MINIMIZE CONSTRUCTION JOINTS. CONSTRUCTION JOINTS SHALL ONLY BE PLACED ON THE PERIMETER OF THE REMOVAL AREAS.

D. SURFACE PREPARATION:

CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE BONDING GROUT AND/OR THE PATCHING MATERIAL. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. FOR TYPE A AND TYPE B PATCHES AND TYPE C PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE SURFACE DRY. FOR TYPE C PATCHES WHICH REQUIRE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE LEFT IN THE CONDITION AS RECOMMENDED BY THE MANUFACTURER. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED.

E. BONDING GROUT:

THE GROUT FOR BONDING TYPE A PATCHES SHALL CONSIST OF EQUAL PARTS BY VOLUME OF PORTLAND CEMENT AND SAND, MIXED WITH SUFFICIENT WATER TO FORM A STIFF SLURRY. THE CONSISTENCY OF THIS SLURRY SHALL BE SUCH THAT IT CAN BE APPLIED WITH A STIFF BRUSH OR BROOM TO THE EXISTING SURFACE IN A THIN, UNIFORM COATING. THE COATING OF GROUT SHALL BE SCRUBBED ONTO THE DRY SURFACE IMMEDIATELY BEFORE PLACING THE CONCRETE. CARE SHALL BE EXERCISED TO ENSURE THAT NO EXCESS GROUT IS PERMITTED TO COLLECT IN LOW SPOTS. IN NO CASE SHALL THE GROUT BE PERMITTED TO DRY BEFORE PLACING THE NEW CONCRETE. THINNED GROUT SHALL BE PAINTED OVER ALL JOINTS BETWEEN THE NEW AND EXISTING CONCRETE IMMEDIATELY AFTER THE FINISHING HAS BEEN COMPLETED. TYPE B AND TYPE C PATCHES SHALL BE BONDED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

<div>54</div> <div>123</div>		4 / 40	CUY-071-16.40/ VAR REPAIR	GENERAL NOTES – 2 – LOCATION 2	BRIDGE NO. CUY-42-1457				
					US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK				
		PID No. 111603	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902						
				DESIGNED	DRAWN	REVIEWED	DATE		
				BLN	JLS	DLR	06/2021		
				CHECKED	REVISED	STRUCTURE FILE NUMBER			
				dnt		1803271			

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY042_1457C\Sheets\042_1457E\0001.dgn 9/10/2021 11:33:15 AM rbrokaw

ESTIMATED QUANTITIES									
					CALCULATED		<u>JLS</u>	DATED	<u>04/2021</u>
					CHECKED		<u>dht</u>	DATED	<u>06/2021</u>
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	ABUTS.	GEN'L	REF. SHEET
									<div></div> <div>/</div>
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	<div>3</div> <div>/40</div>
SPECIAL	20270110	500	FT	PIPE CLEANOUT, 24" AND UNDER				500	<div>3</div> <div>/40</div>
202	75267	400	FT	VANDAL PROTECTION FENCE REMOVED AND RESET, AS PER PLAN				400	<div>3</div> <div>/40</div>
509	10000	9948	LB	EPOXY COATED REINFORCING STEEL	9047		901		
511	34410	37	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	36		1		
511	34417	36	CY	CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS)	14		22		<div>3</div> <div>/40</div>
511	34423	9838	SF	CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN	9838				<div>3</div> <div>/40</div>
512	10101	1441	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN		1441			<div>3</div> <div>/40</div>
512	74001	1398	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN		1398			<div>3</div> <div>/40</div>
516	01301	140	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN (SEAL REPLACEMENT PIER 4 & 14 JOINTS)	140				<div>3</div> <div>/40</div>
516	11210	149	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	149				
SPECIAL	51612400	140	FT	MODULAR EXPANSION JOINT (SEAL REPLACEMENT PIER 7 & 10 JOINTS)	140				<div>3</div> <div>/40</div>
518	51101	200	FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN				200	<div>4</div> <div>/40</div>
518	51300	2	EACH	DOWNSPOUT MODIFICATION, 8"				2	<div>4</div> <div>/40</div>
518	62100	1800	FT	STRUCTURE DRAINAGE, MISC.: FLUSHING AND CLEANING OF THE DRAINAGE SYSTEM INCLUDING SCUPPERS AND DOWNSPOUTS				1800	<div>4</div> <div>/40</div>
519	11101	413	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		413			<div>4</div> <div>/40</div>
519	12300	8	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	8				<div>4</div> <div>/40</div>
SPECIAL	53000600	17,792	SF	STRUCTURES: TIMBER SUBDECK	17,792				<div>4</div> <div>/40</div>

F. PATCHING:

THE MORTAR OR CONCRETE SHALL BE PLACED AS TYPE A, B, OR C.

1. TYPE A - THE MIXTURE SHALL CONSIST OF 1 PART HIGH-EARLY-STRENGTH PORTLAND CEMENT, 11#2 PARTS FINE AGGREGATE AND 11#2 PARTS COARSE AGGREGATE BY VOLUME. SUFFICIENT AIR-ENTRAINING AGENT SHALL BE ADDED TO MAINTAIN AN AIR CONTENT OF 8 PLUS OR MINUS 2 PERCENT. THE SLUMP SHALL BE THE MINIMUM PRACTICAL FOR PLACING AND IN NO CASE SHALL IT EXCEED 2 INCHES. THE MATERIALS SHALL BE MIXED AT THE SITE. READY-MIXED CONCRETE SHALL NOT BE PERMITTED. THE MIX SHALL BE PLACED IN THE AREA TO BE PATCHED WHILE THE BONDING GROUT IS STILL WET, SLIGHTLY OVERFILLED AND STRUCK OFF WITH A VIBRATING SCREED DRAWN SLOWLY ACROSS THE AREA. HAND FINISHING WITH A WOOD FLOAT MAY BE REQUIRED TO PRODUCE A TIGHT, UNIFORM SURFACE.
2. TYPE B - PATCHING MATERIAL SHALL BE MADE USING QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2, 705.21, AND SUITABLE FOR TRAFFIC AFTER OVERNIGHT CLOSURES WITH LIMITED CURING TIME. THE MORTAR SHALL BE MIXED AND PLACED AS PER MANUFACTURER'S RECOMMENDATIONS. COARSE AGGREGATE MAY BE ADDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WHEN THE DEPTH OF THE PATCH EXCEEDS 1 INCH.
3. TYPE C - PATCHING MATERIAL SHALL BE MADE USING A BLEND OF 705.21 TYPE 2 MATERIAL AND SELECTED AGGREGATES WITH AN ACTIVATOR. THESE MATERIALS SHALL BE MIXED AND PLACED AS PER MANUFACTURER'S RECOMMENDATIONS. COARSE AGGREGATE MAY BE ADDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WHEN THE DEPTH OF THE PATCH EXCEEDS 1 INCH.

G. CURING:

TYPE A PATCHES SHALL BE CURED IN ACCORDANCE WITH SECTION 511.14, METHOD (A), FOR NOT LESS THAN 24 HOURS IF MEMBRANE WATERPROOFING IS TO BE APPLIED IMMEDIATELY. IF NOT, METHOD (A) SHALL BE USED FOR 48 HOURS, AFTER WHICH THE MEMBRANE CURING MATERIAL SHALL BE APPLIED AT A RATE OF NOT LESS THAN ONE GALLON PER 200 SQUARE FEET. MEMBRANE CURING MATERIAL SHALL BE REMOVED PRIOR TO PLACING WATERPROOFING. TYPE B AND TYPE C PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

H. METHOD OF MEASUREMENT:

THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE YARDS OF THE EXPOSED SURFACE OF ALL PATCHES, IRRESPECTIVE OF THE DEPTH OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED.

I. BASIS OF PAYMENT:

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
519	SQUARE YARD	PATCHING CONCRETE BRIDGE DECKS, TYPE B

ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK

DESCRIPTION:

THIS ITEM SHALL CONSIST OF FURNISHING, CUTTING, FITTING, PLACING AND ERECTING OF TIMBER, AND THE FURNISHING AND INSTALLING OF ALL NECESSARY HARDWARE AS SPECIFIED.

SUBDECK AREAS ABOVE TRAVELED LANES, AS WELL AS PAVED SHOULDERS.

ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK

MATERIALS:

TIMBER BEAMS SHALL CONFORM TO CMS 711.26 AND SHALL BE DOUGLAS FIR LARCH WITH A COMMERCIAL GRADE OF NO. 2 OR BETTER OR SOUTHERN PINE WITH A COMMERCIAL GRADE OF NO. 2 OR BETTER. PRESERVATIVE TREATMENT FOR TIMBER BEAMS SHALL CONFORM TO CMS 712.06.

THE TIMBER SHEATHING SHALL BE 3⁄4" CDX PRESERVATIVE TREATED PLYWOOD MANUFACTURED FROM EITHER DOUGLAS FIR OR SOUTHERN PINE. ALL TRANSVERSE EDGES OF THE PLYWOOD SHALL BE SUPPORTED BY TIMBER BEAMS.

THE BOLTS SHALL BE ASTM A449 - TYPE 1 OR SAE J429 - GRADE 5, 3⁄8" DIAMETER GALVANIZED BOLTS WITH GALVANIZED FENDER WASHERS AND LOCK NUTS. SPACING OF THE BOLTS SHALL BE A MAXIMUM OF 2 FOOT SPACING.

WOOD SCREWS SHALL BE GALVANIZED 3" LONG #10 FASTENERS SPACED AT 2 FOOT MAXIMUM, UNLESS OTHERWISE NOTED.

GENERAL:

FIELD MEASUREMENTS SHALL BE TAKEN BEFORE ANY FABRICATION IS PERFORMED.

METHOD OF MEASUREMENT:

THE PAYMENT FOR THIS ITEM SHALL BE SQUARE FOOTAGE IN PLACE AND ACCEPTED. THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE TIMBER SUBDECKING. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK.

GENERAL NOTES & ESTIMATED QUANTITIES - LOCATION 2

BRIDGE NO. CUY-42-1457

US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK

CUY-071-16.40/ VAR REPAIR

PID No. 111603

5 / 40

55 / 123

DATE

06/2021

REVIEWED

DLR

STRUCTURE FILE NUMBER

1803271

DATE

06/2021

REVIEWED

DLR

STRUCTURE FILE NUMBER

1803271

DATE

06/2021

REVIEWED

DLR

STRUCTURE FILE NUMBER

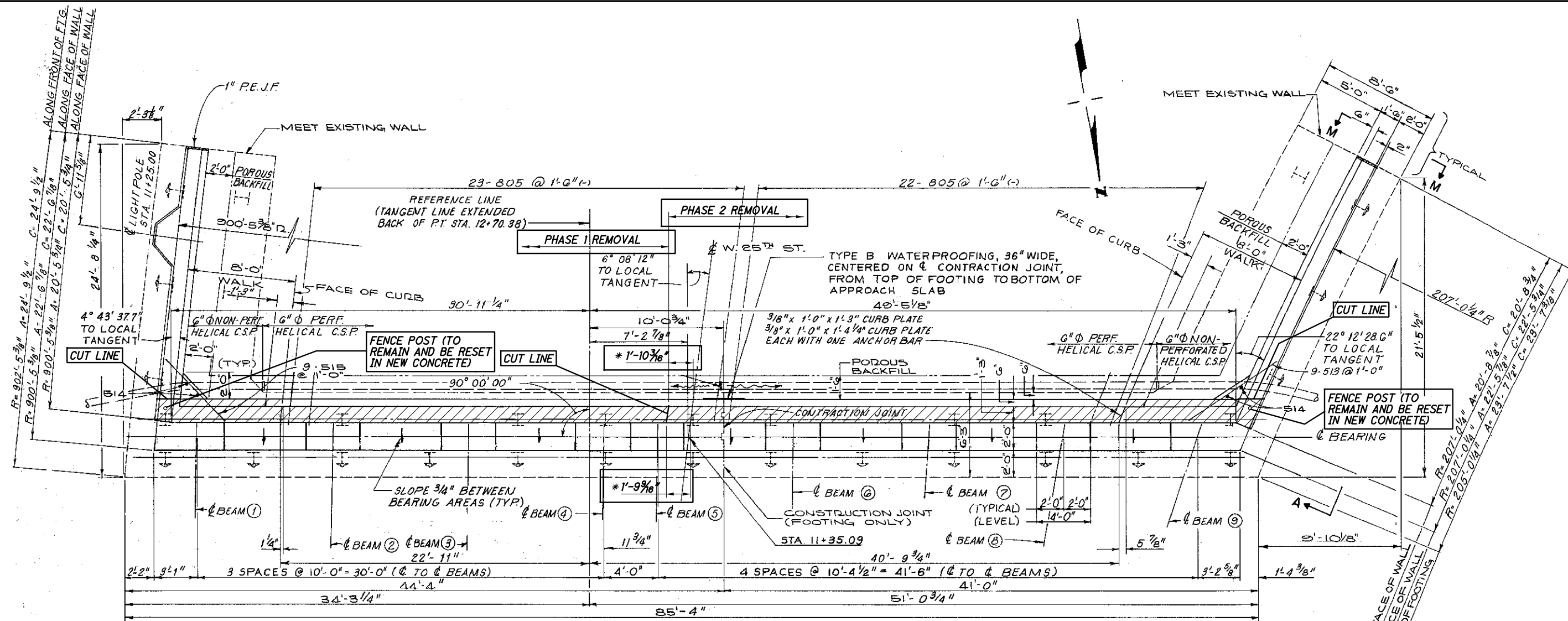
1803271

RICHLAND ENGINEERING LIMITED

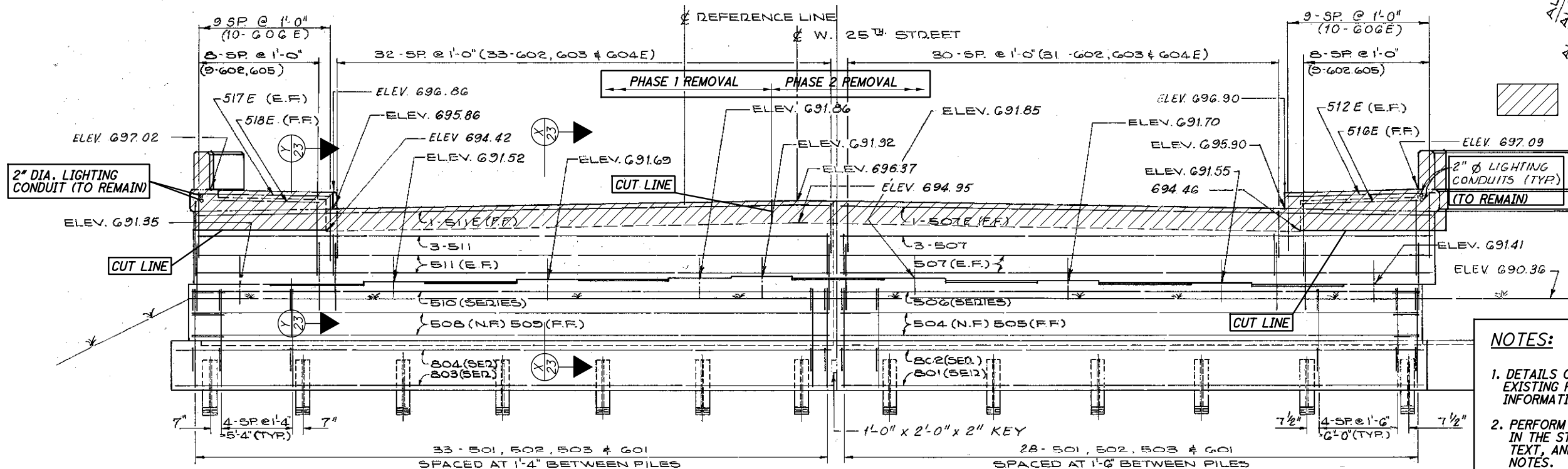
29 NORTH PARK STREET

MANSFIELD, OHIO 44902





PLAN



LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

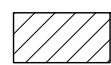
* DIMENSION IS FROM @ US 42 (PEARL ROAD) TO CUT LINE.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.



FLOWLINE —
ELEV. 673.50

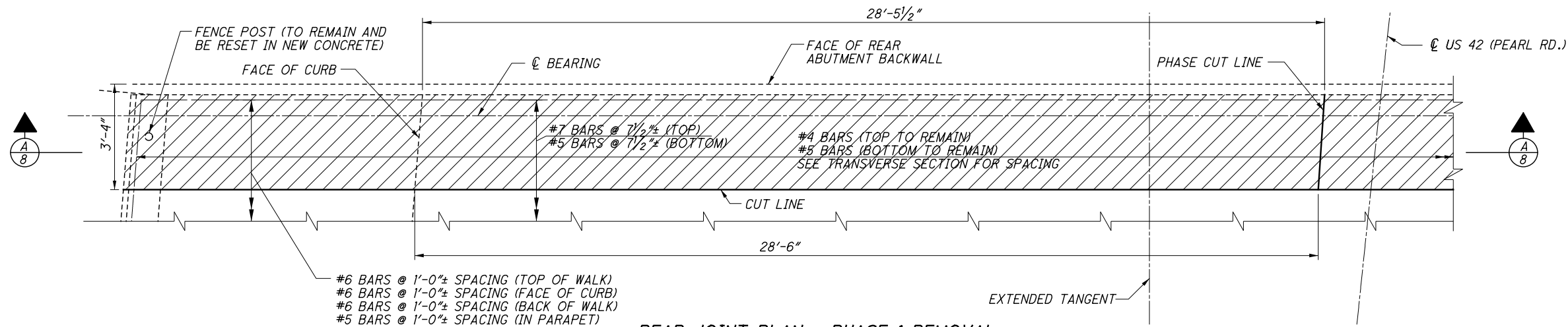


INDICATES REMOVAL PER ITEM 202 -
PORTIONS OF STRUCTURE REMOVED,
OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

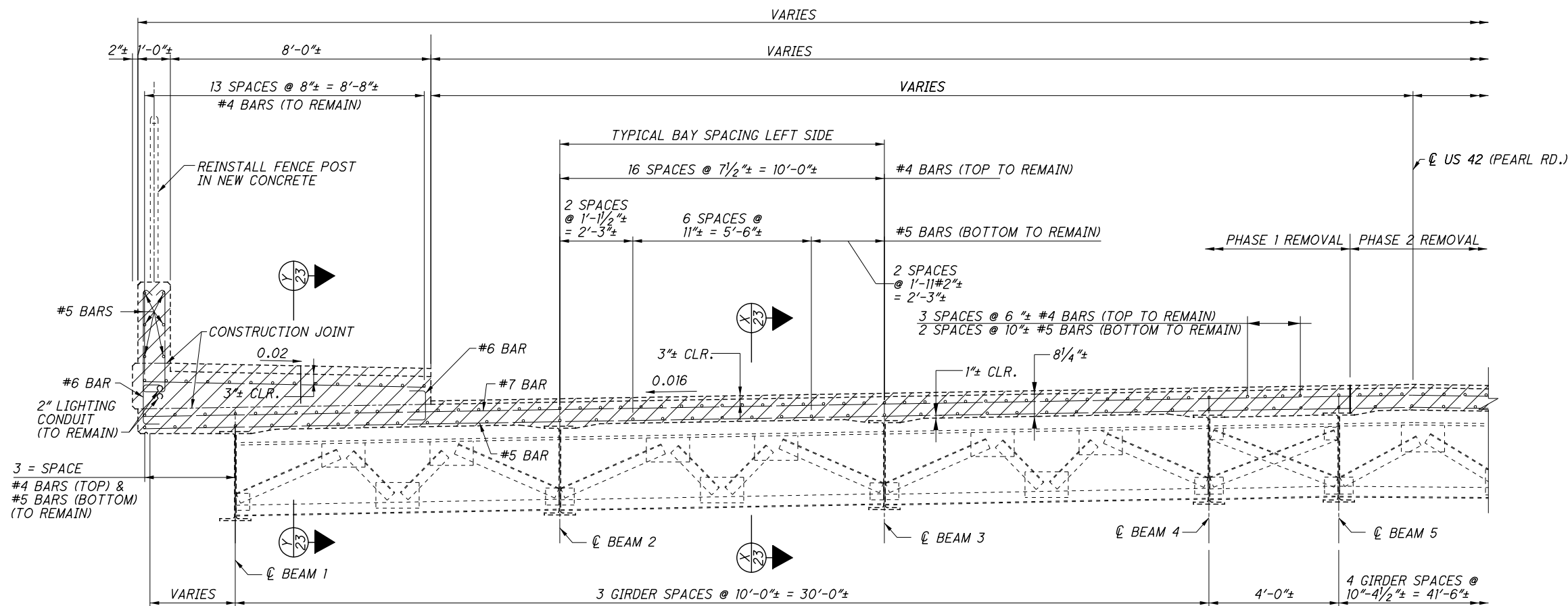
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REAR JOINT PLAN - PHASE 1 REMOVAL

EXISTING CURVE DATA
CL US 42 (PEARL RD.)

P.I. Sta. 11+11.56
 $\Delta = 14^\circ 29' 11''$ (LT)
 $D_c = 4^\circ 32' 09''$
 $R = 1,263.15'$
 $T = 160.54'$
 $L = 319.37'$
 $E = 10.16'$
 $C = 318.52'$
C.B. = N $17^\circ 54' 00''$ E



SECTION A-A

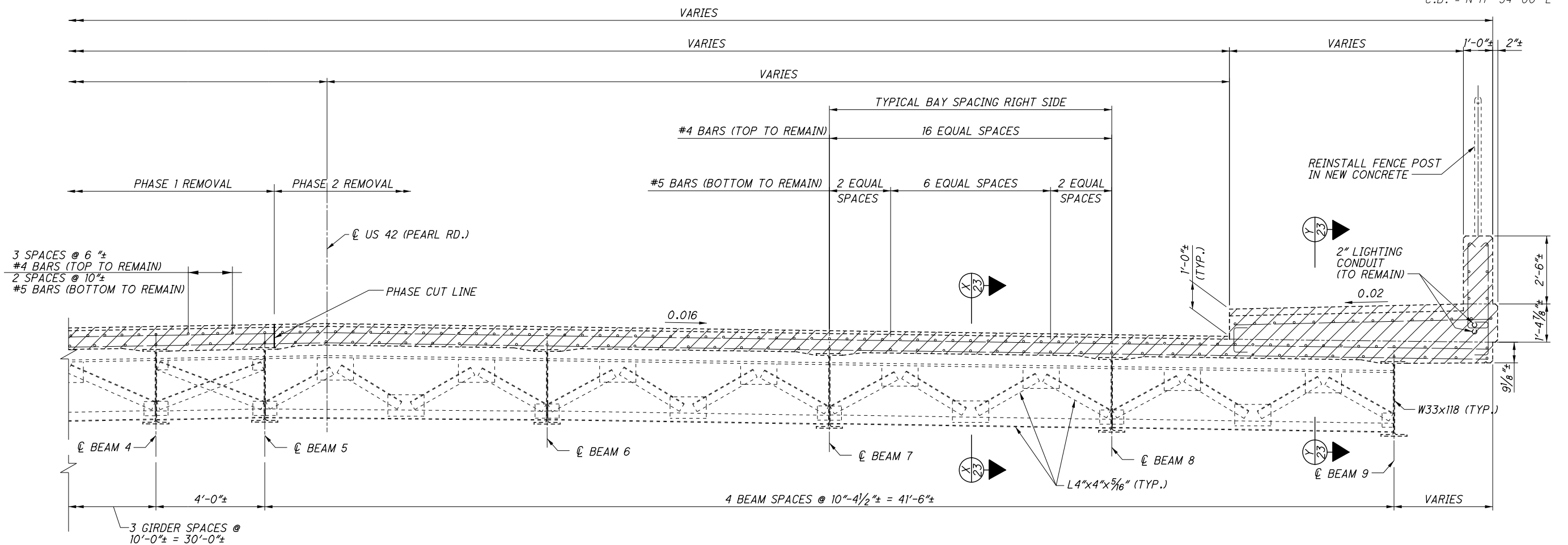
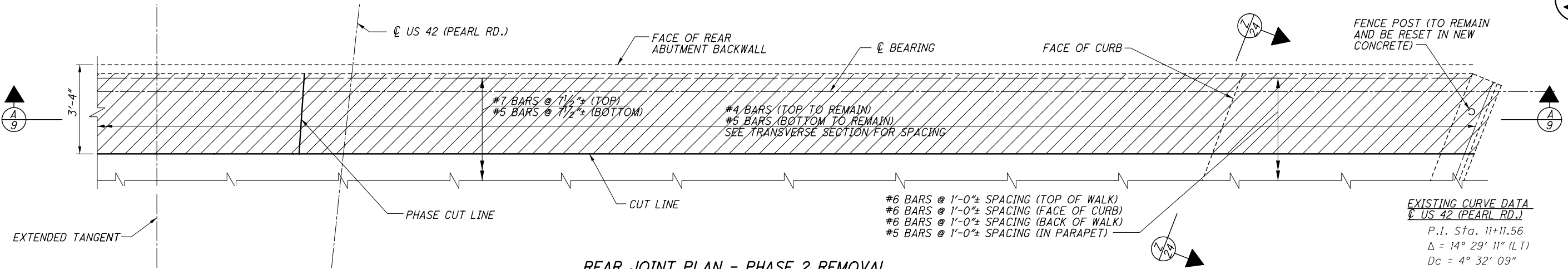
LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES

REMOVAL PHASE 2: SEE SHEET 9/40.

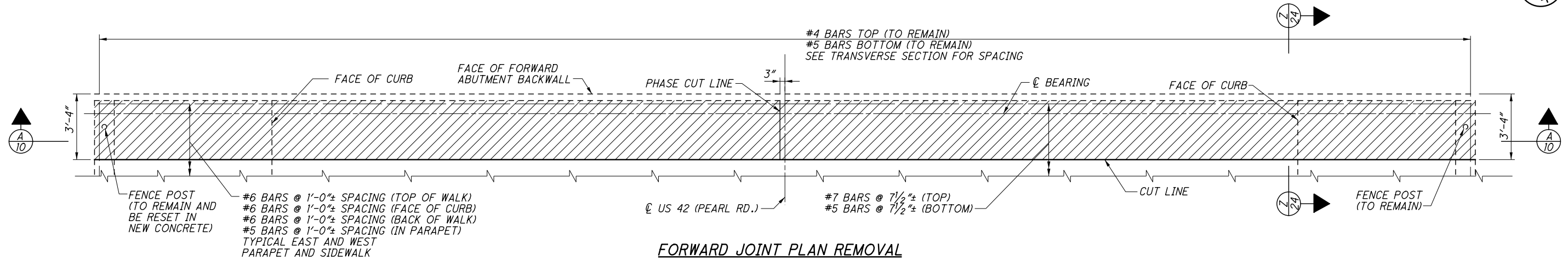
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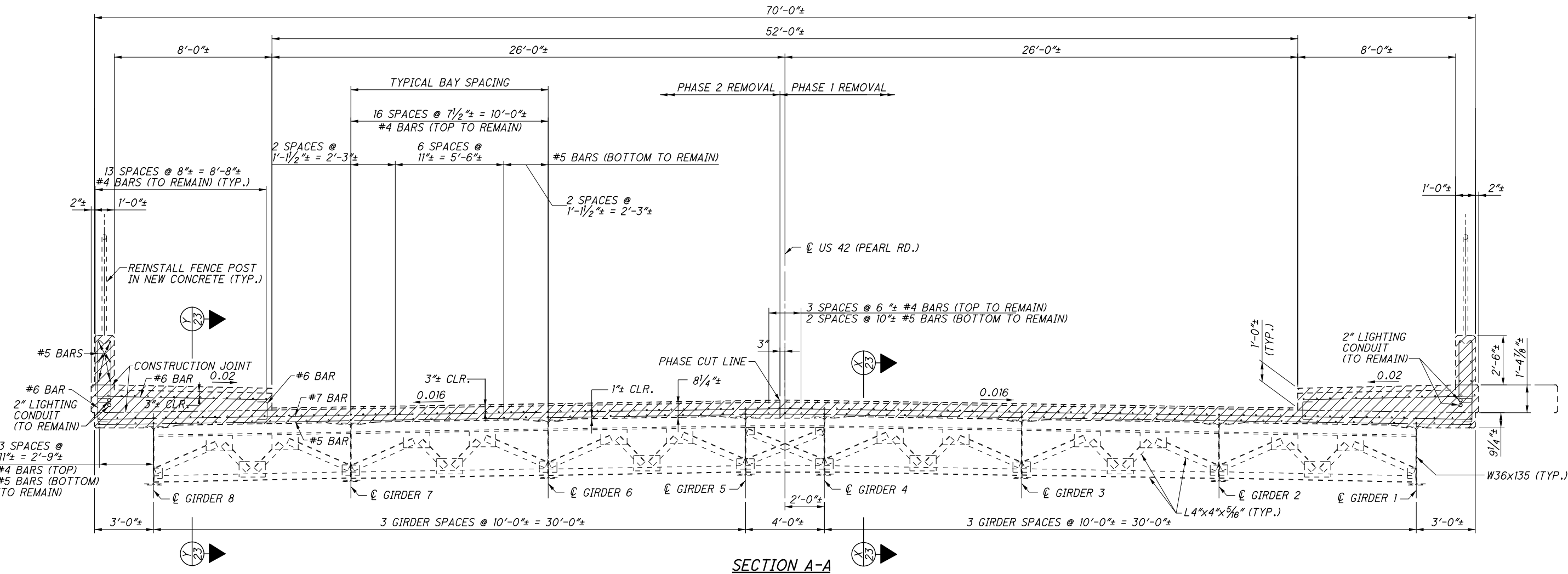
LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

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FORWARD JOINT PLAN REMOVAL

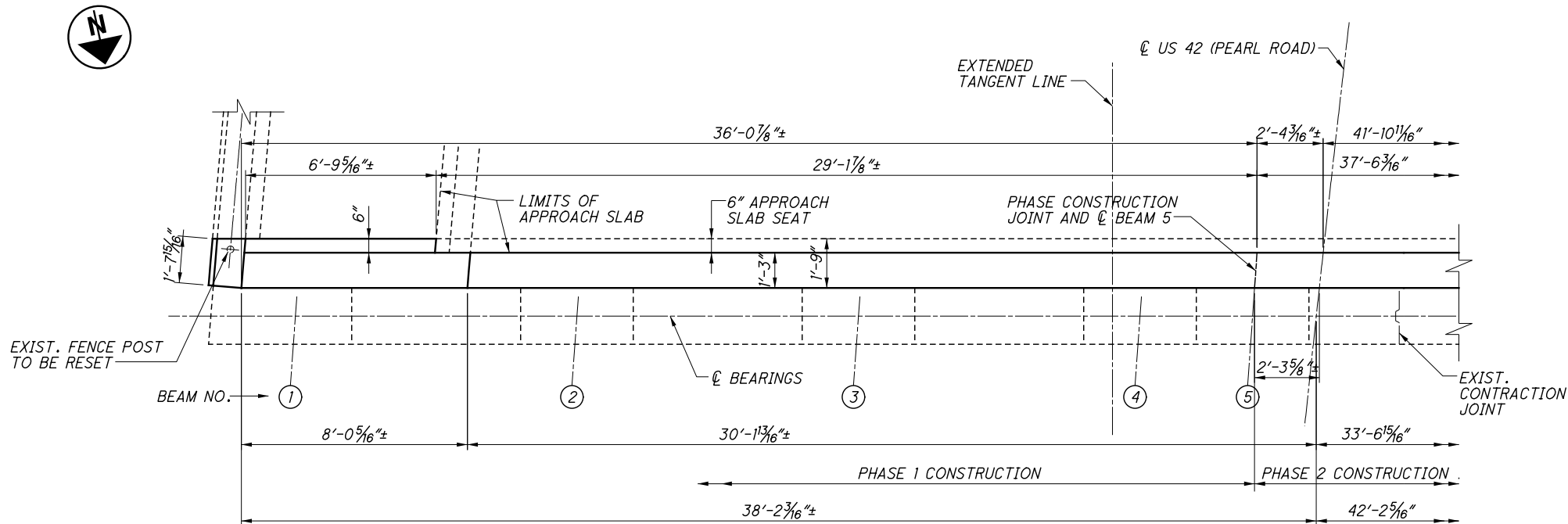


SECTION A-A

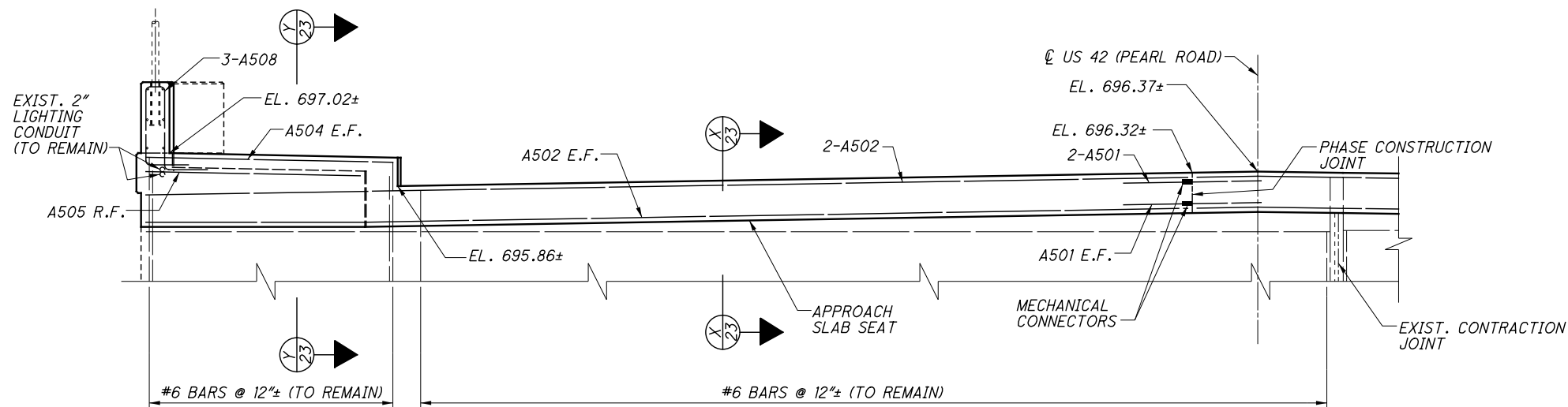
LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

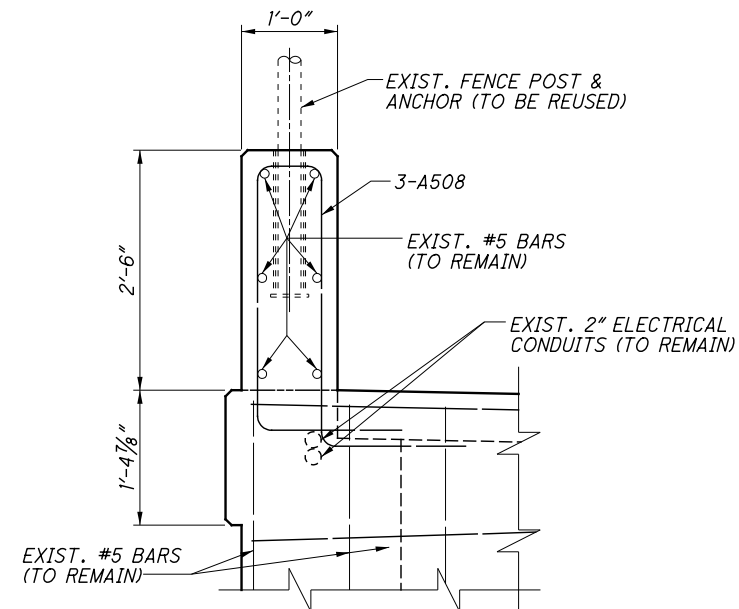
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REAR ABUTMENT PLAN - PHASE 1 CONSTRUCTION



ELEVATION



ABUTMENT RAILING DETAIL

NOTES

ELEVATIONS GIVEN ARE TAKEN FROM EXISTING PLANS AND ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MATCH EXISTING.

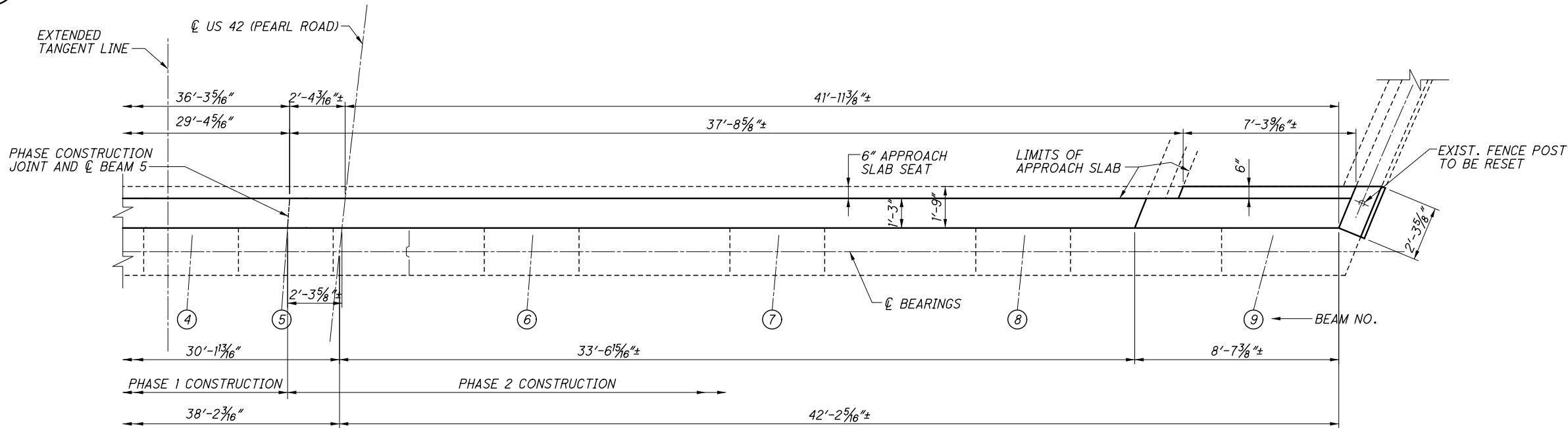
NOTATION: R.F. - REAR FACE
E.F. - EACH FACE

CONCRETE: ABUTMENT RAILING CONCRETE IS INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE FOR PAYMENT. ALL OTHER ABUTMENT CONCRETE IS INCLUDED WITH ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS) FOR PAYMENT.

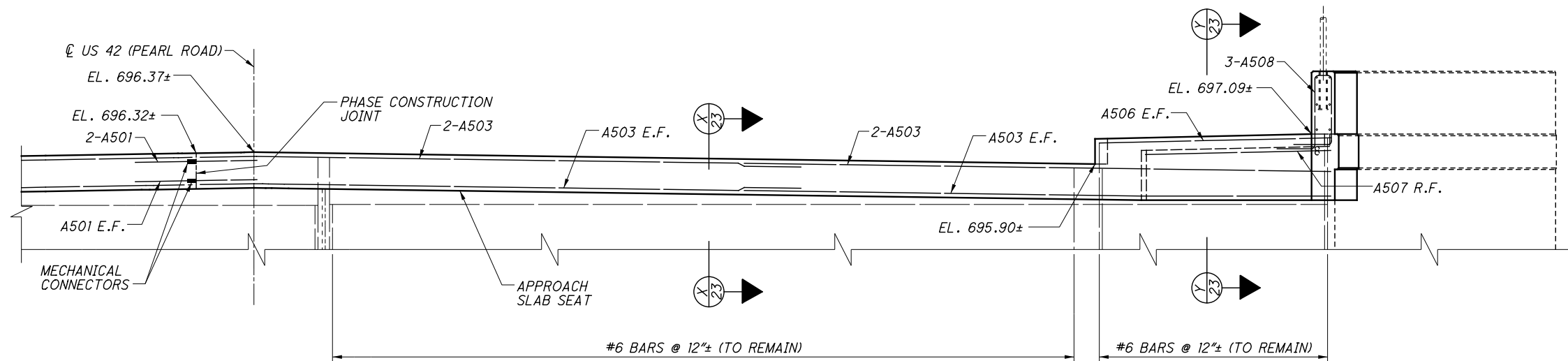
REINFORCING STEEL LAP LENGTH SHALL BE 2'-3" FOR #5 BARS.

REAR ABUTMENT PHASE 2: SEE SHEET 12/40.

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REAR ABUTMENT PLAN - PHASE 2 CONSTRUCTION



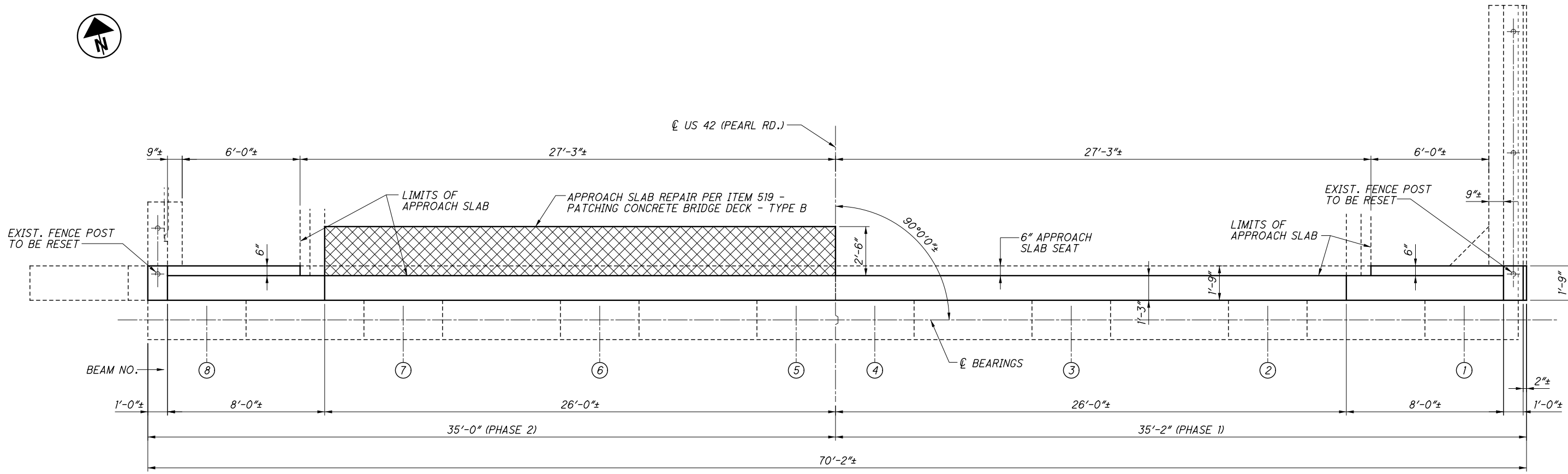
ELEVATION

NOTES

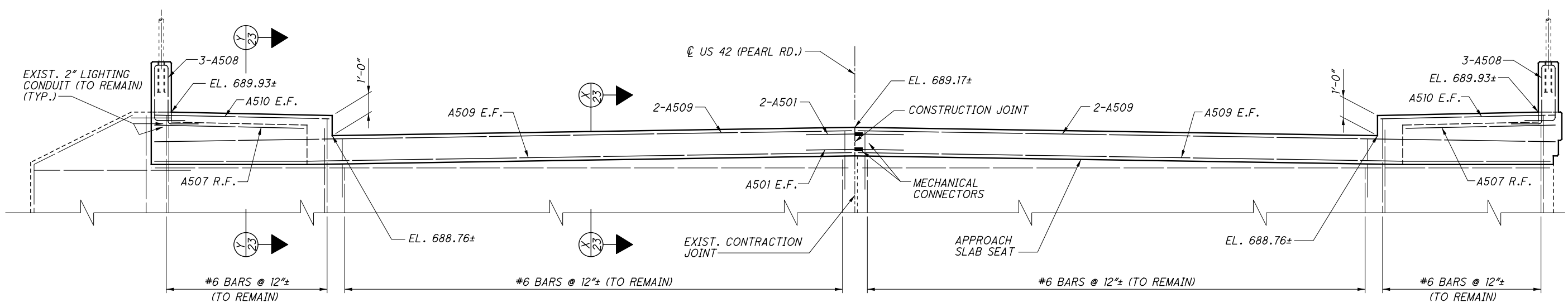
ABUTMENT RAILING DETAIL: SEE SHEET 11/40.

ADDITIONAL NOTES: SEE SHEET 11/40.

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FORWARD ABUTMENT PLAN



ELEVATION

LEGEND

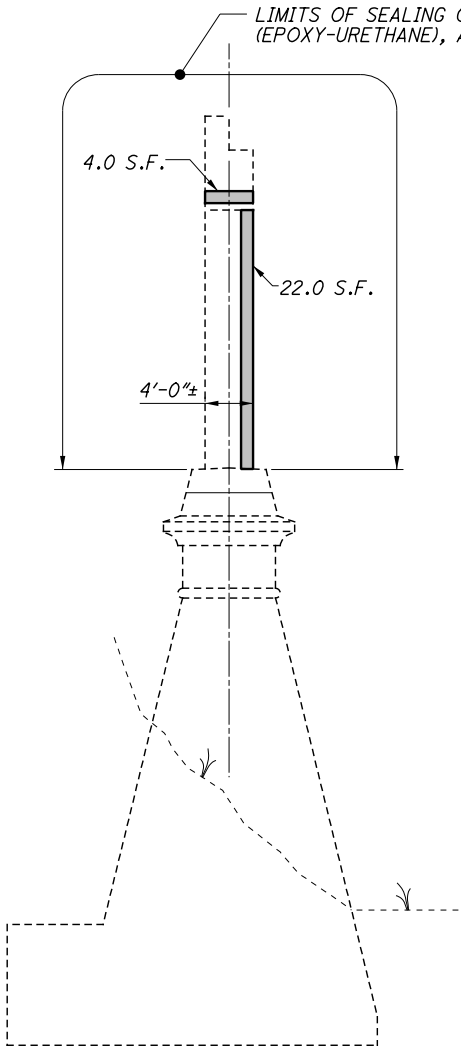
 APPROACH SLAB REPAIR PER
ITEM 519 - PATCHING CONCRETE
BRIDGE DECK - TYPE B.

NOTES

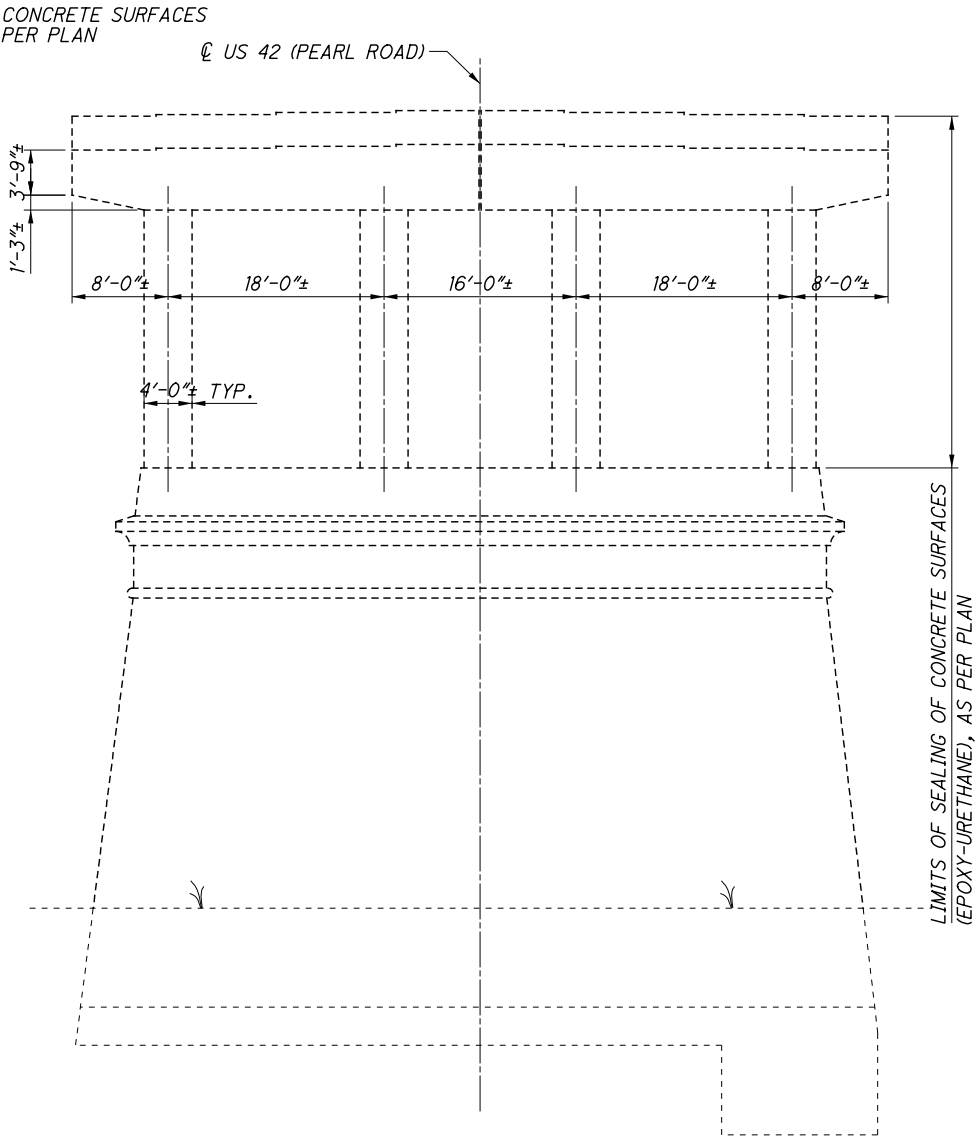
ABUTMENT RAILING DETAIL: SEE SHEET 11/40.
ADDITIONAL NOTES: SEE SHEET 11/40.

CUY-071-16.40/ VAR REPAIR PID No. 111603	FORWARD ABUTMENT - LOCATION 2 BRIDGE NO. CUY-42-1457 US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK			 RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
	DESIGNED BLN	CHECKED DHT	DRAWN JLS	
	REVIEWED DLR	DATE 06/2021	STRUCTURE FILE NUMBER 1803271	
13 / 40	63 / 123			

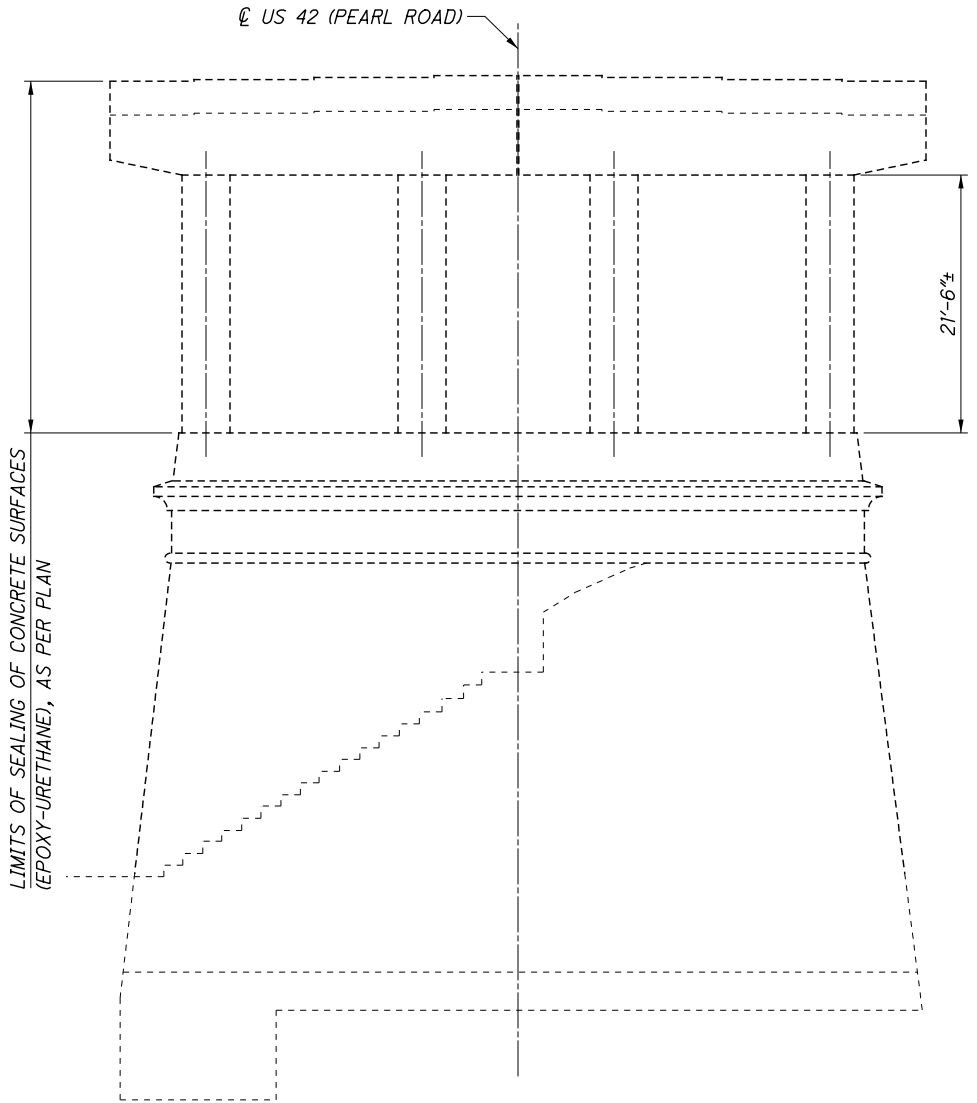
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EAST ELEVATION
(LOOKING WEST)



NORTH ELEVATION
(LOOKING SOUTH)



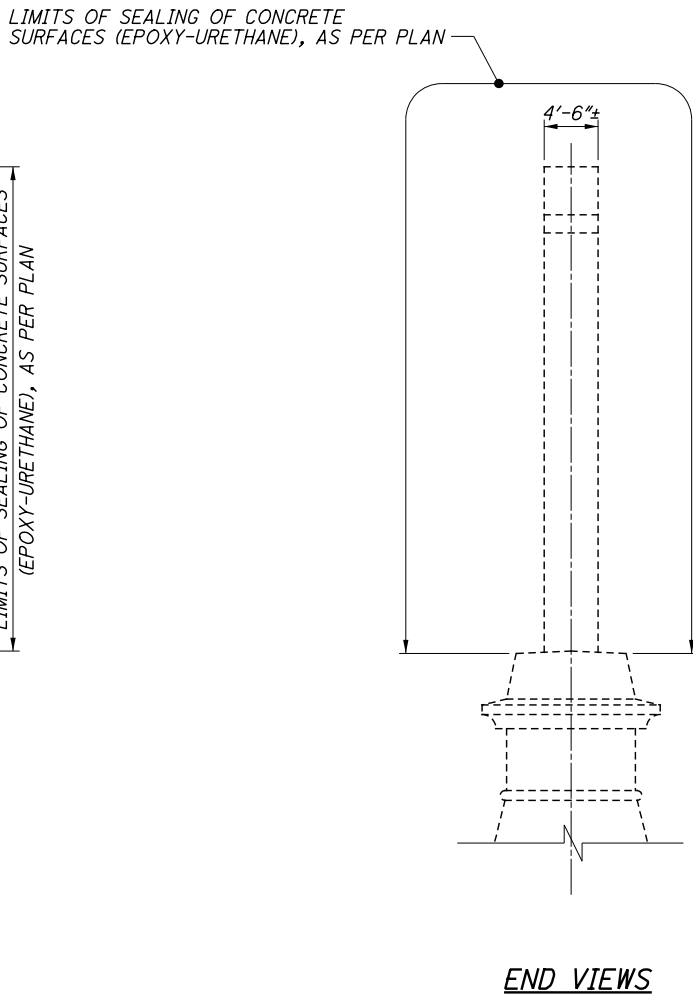
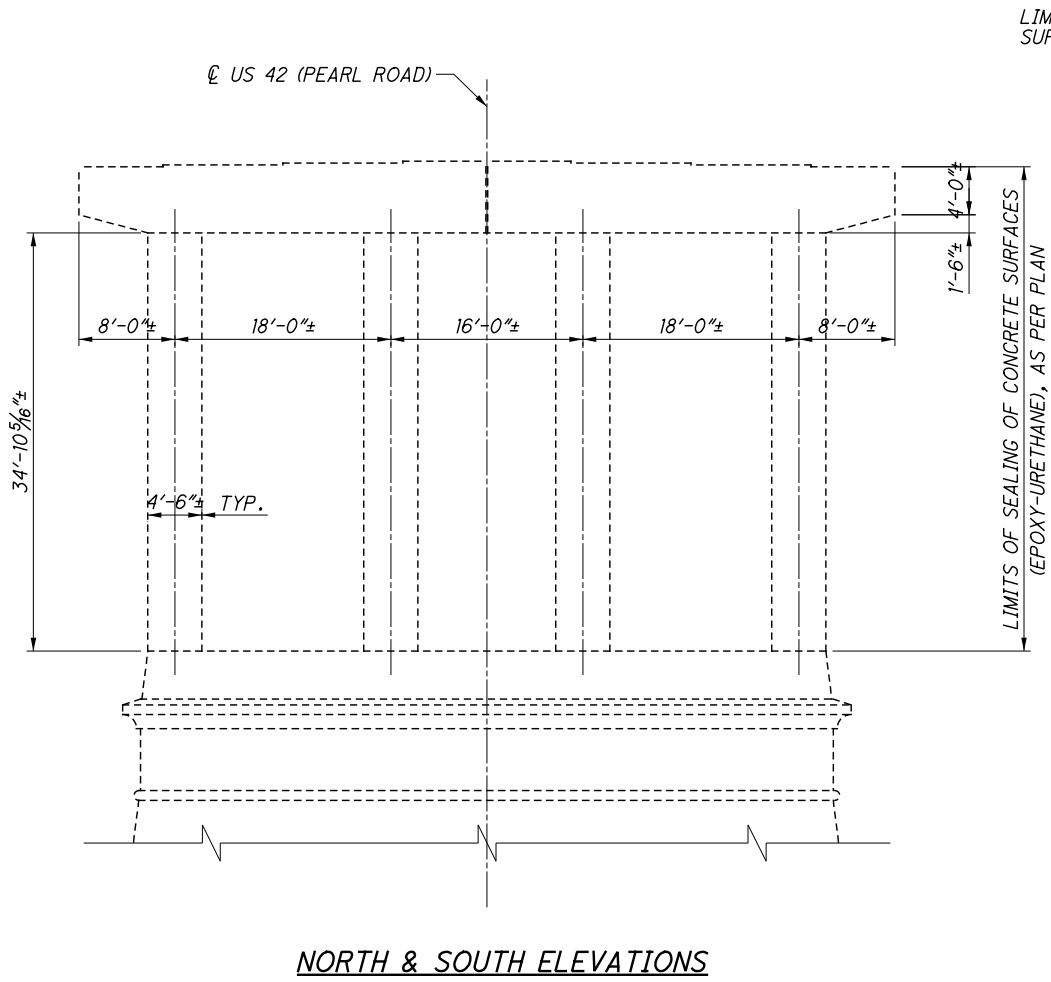
SOUTH ELEVATION
(LOOKING NORTH)

LEGEND

INDICATES PATCHING PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN. TOTAL QUANTITY THIS SHEET = 26.0 S.F.

NOTES

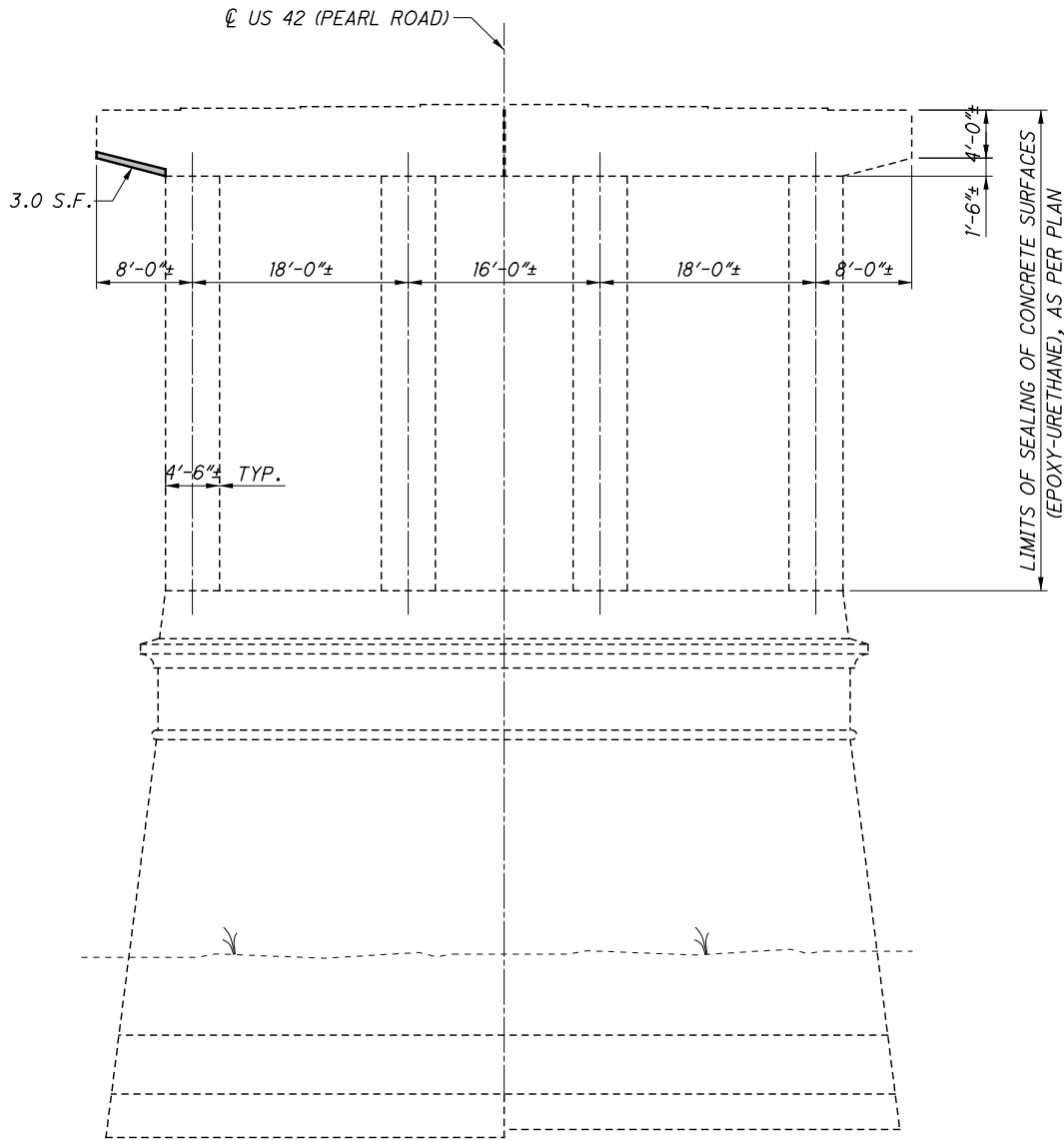
SEALING: SEAL THE PIER CAP AND COLUMNS AS SHOWN PER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN AND ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN.



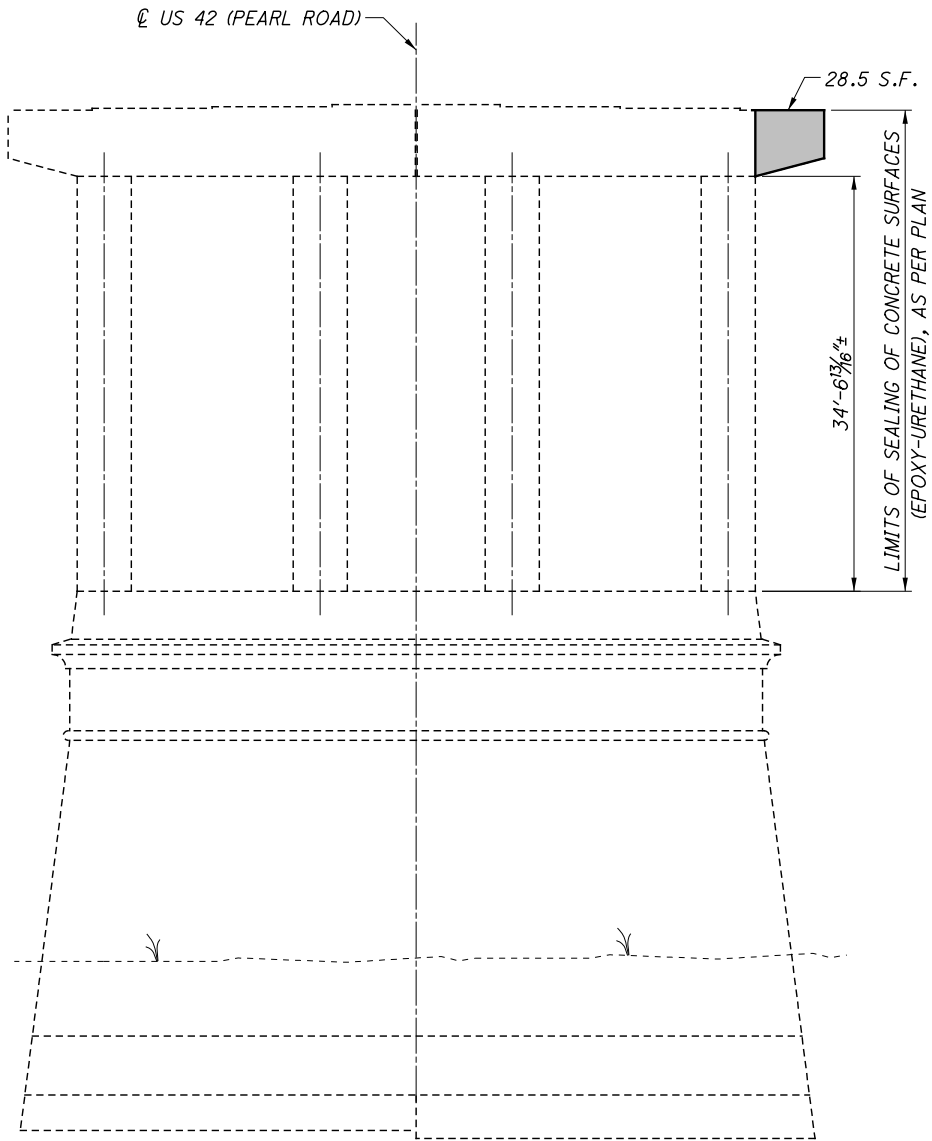
NOTES

SEALING: SEAL THE PIER CAP AND COLUMNS AS SHOWN PER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN AND ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN.

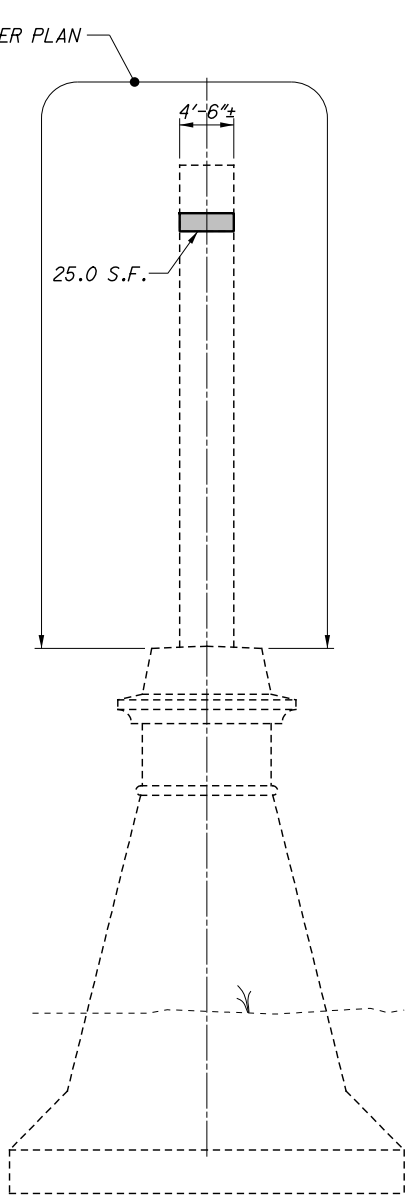
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NORTH ELEVATION
(LOOKING SOUTH)



SOUTH ELEVATION
(LOOKING NORTH)



EAST ELEVATION
(LOOKING WEST)

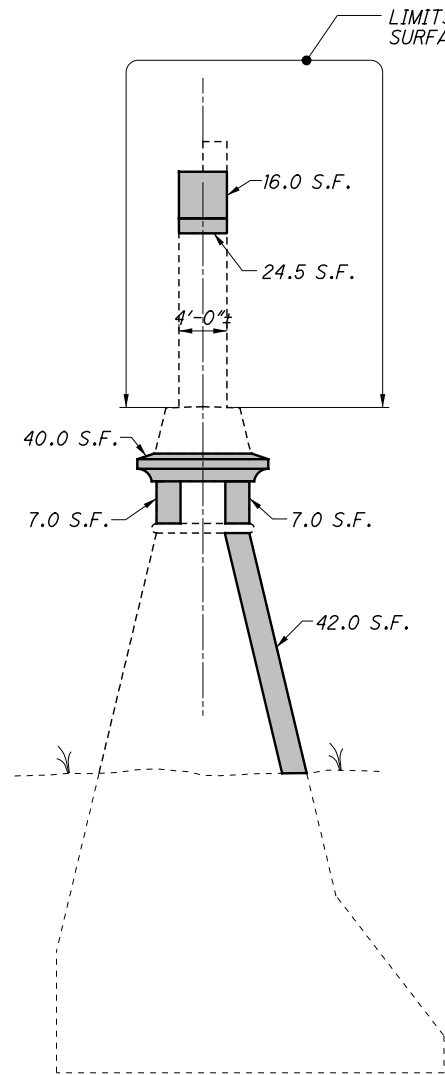
INDICATES PATCHING PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN. TOTAL QUANTITY THIS SHEET = 56.5 S.F.

NOTES

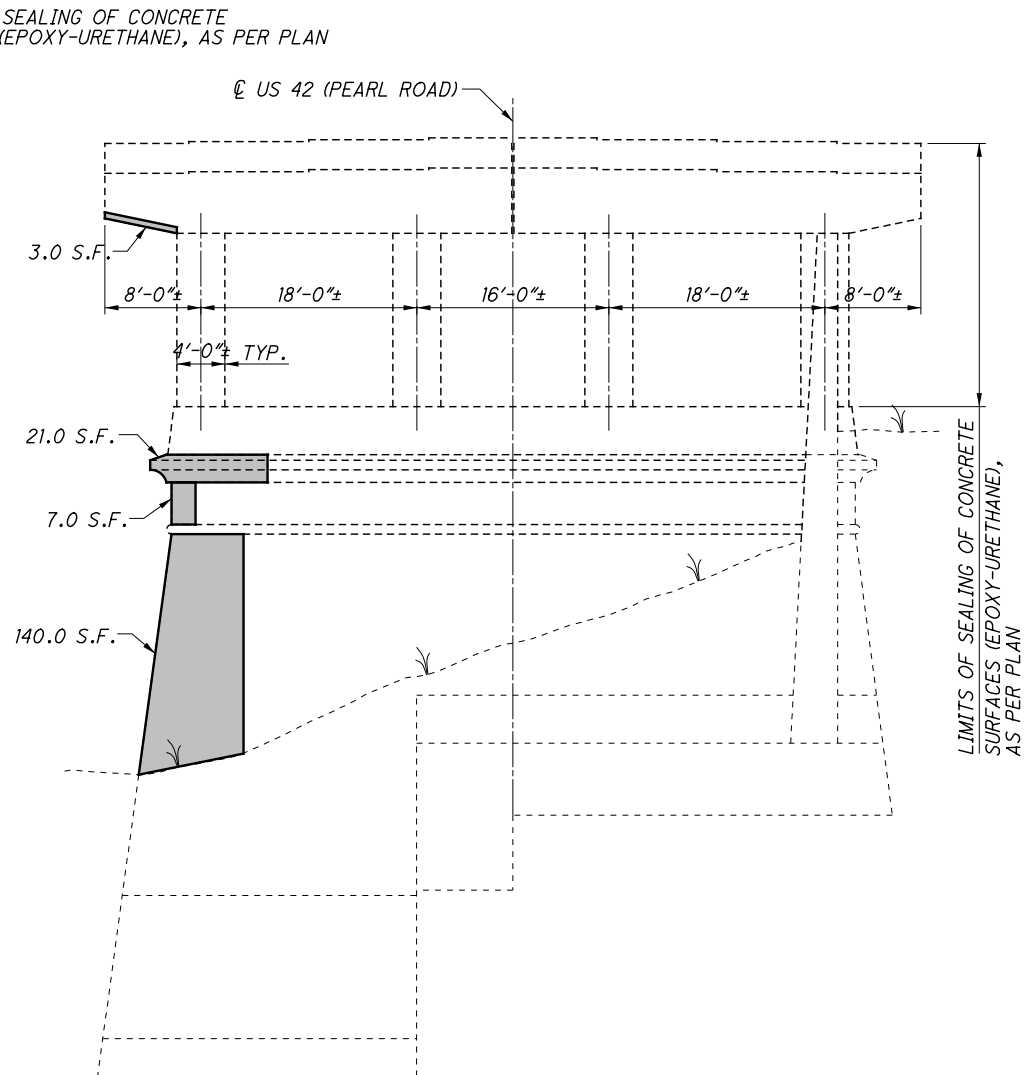
SEALING: SEAL THE PIER CAP AND COLUMNS AS SHOWN PER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN AND ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN.

LEGEND

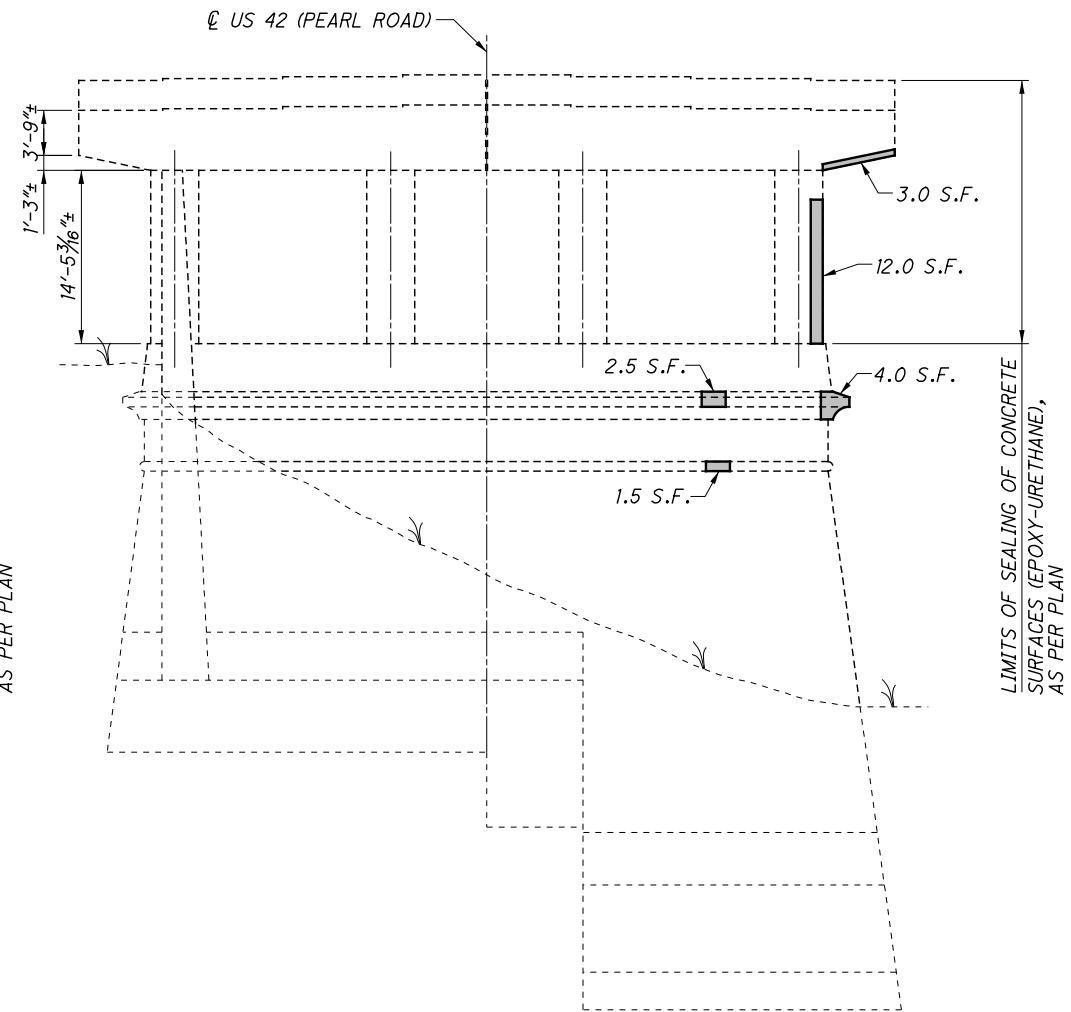
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EAST ELEVATION
(LOOKING WEST)



NORTH ELEVATION
(LOOKING SOUTH)



SOUTH ELEVATION
(LOOKING NORTH)

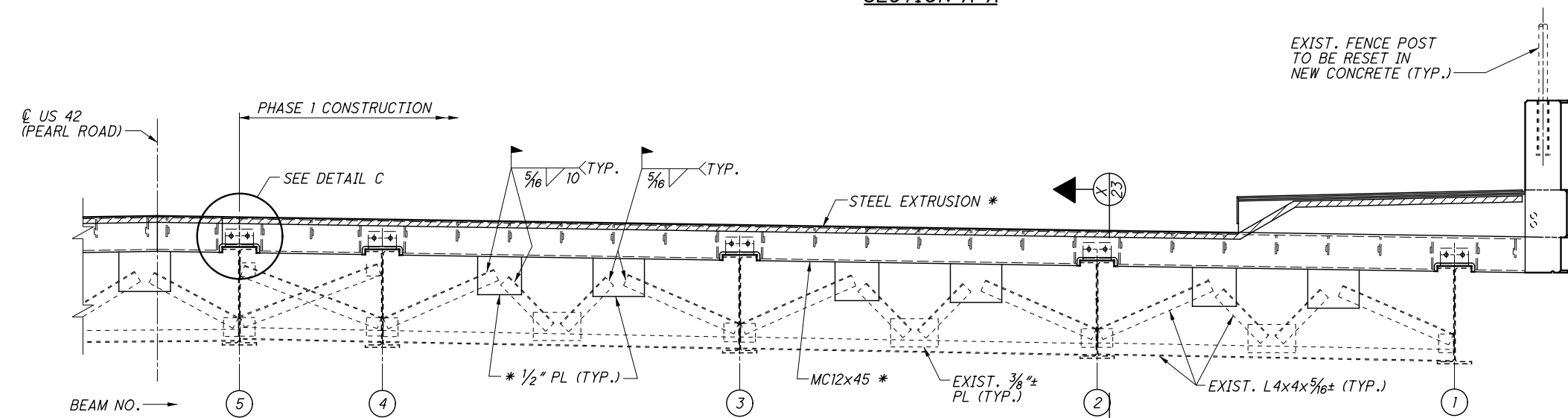
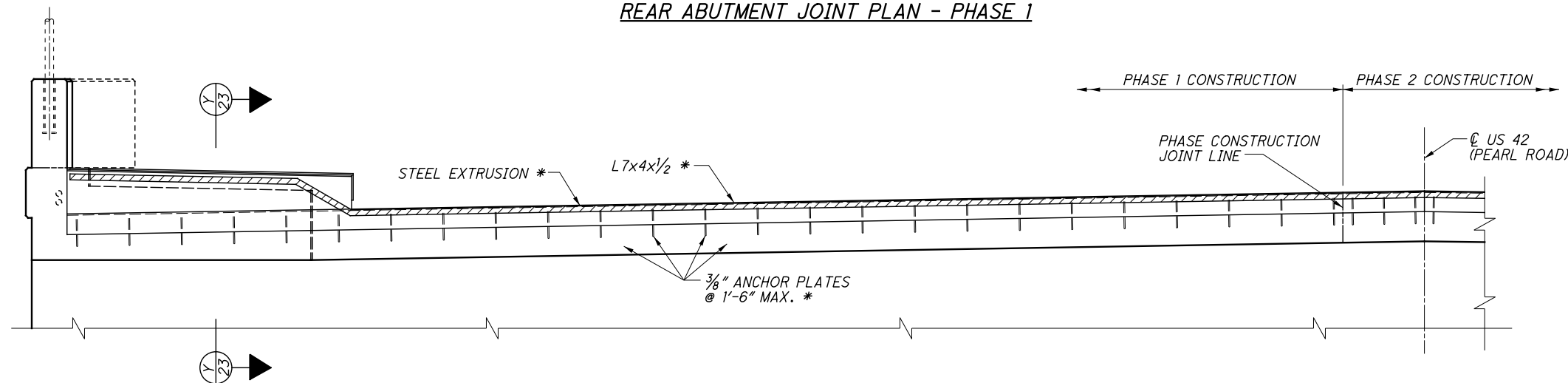
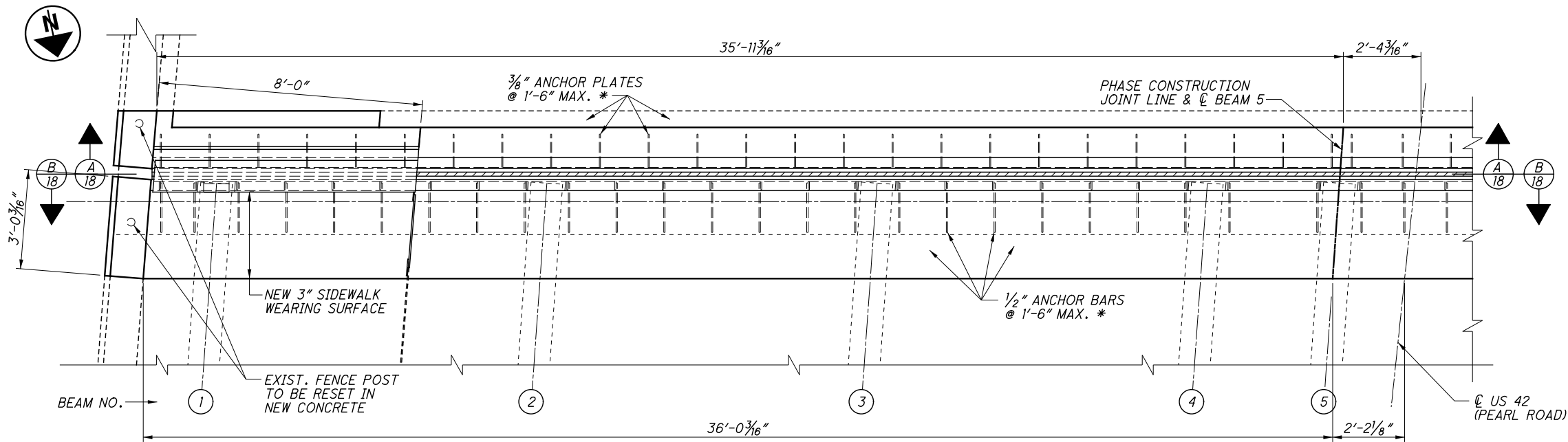
LEGEND

INDICATES PATCHING PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN. TOTAL QUANTITY THIS SHEET = 330.5 S.F.

NOTES

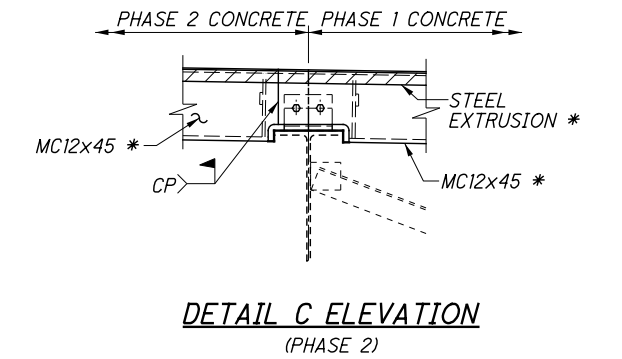
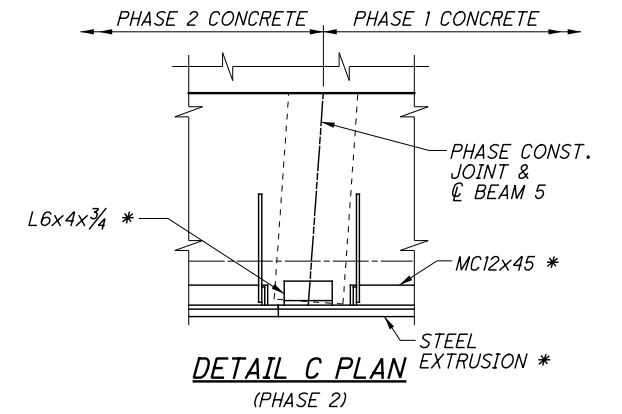
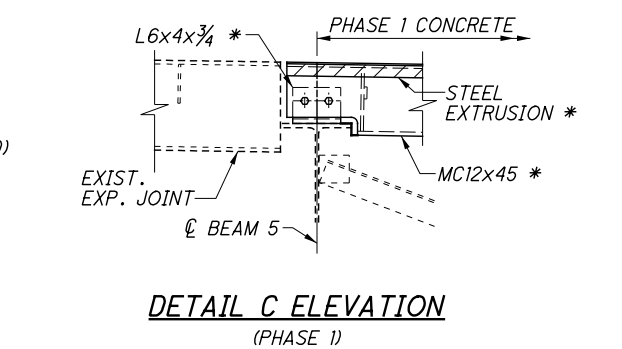
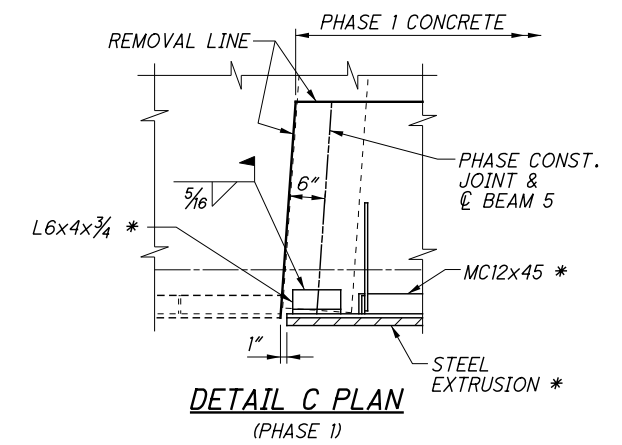
SEALING: SEAL THE PIER CAP AND COLUMNS AS SHOWN PER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN AND ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN.

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY042_1457\042_1457EX002.dgn 6/25/2021 8:31:17 AM jsmith



LEGEND

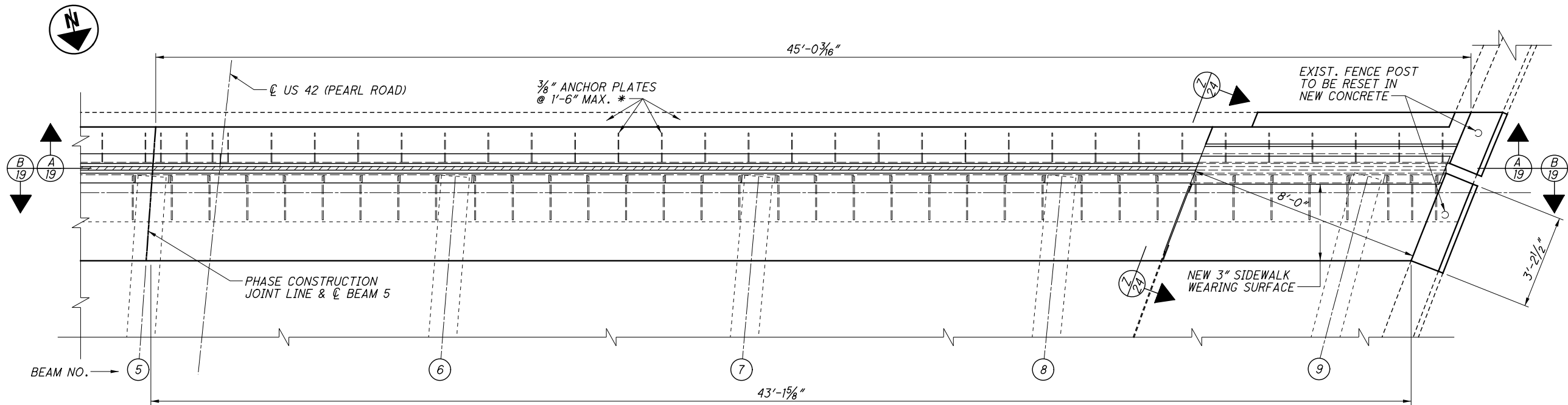
* INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL.



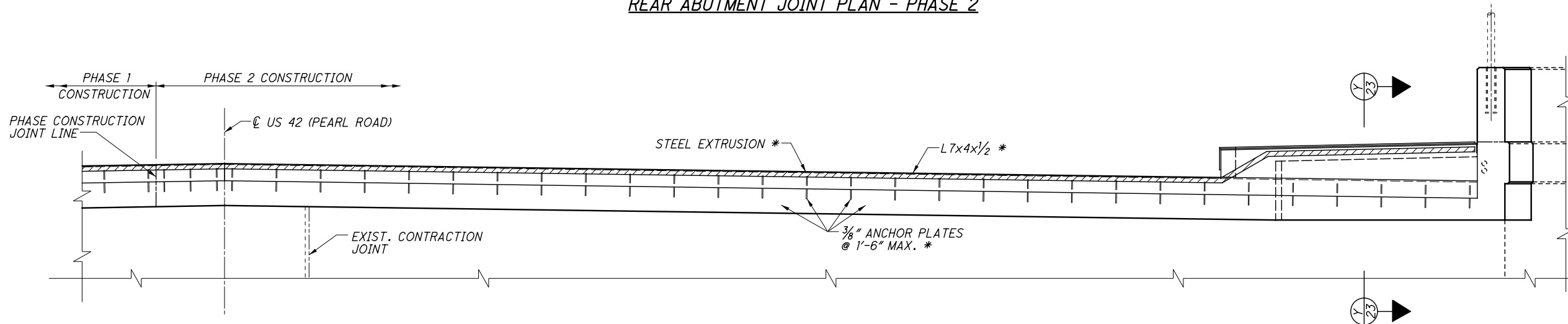
NOTES

- REAR EXPANSION JOINT REINFORCING: SEE SHEET [20/40].
- ABUTMENT REINFORCING: SEE SHEETS [11/40] THRU [12/40].
- RAILING REINFORCING: SEE SHEET [20/40].
- ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING EXJ-4-87.

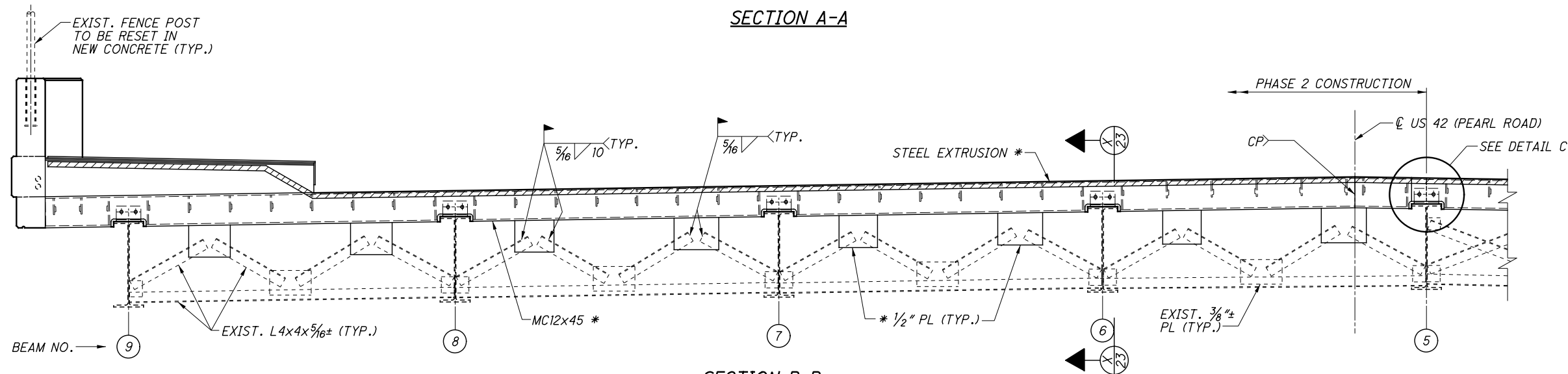
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY042_1457\042_1457EX003.dgn 6/25/2021 8:32:30 AM jsmith



REAR ABUTMENT JOINT PLAN - PHASE 2



SECTION A-A



SECTION B-B

LEGEND

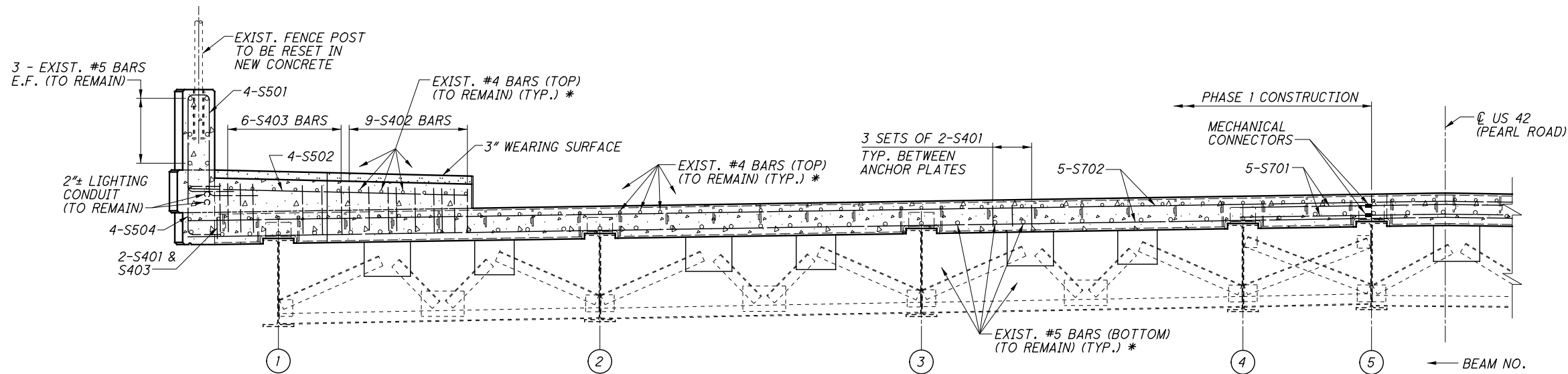
* INCLUDED WITH ITEM 516 -STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL.

NOTES

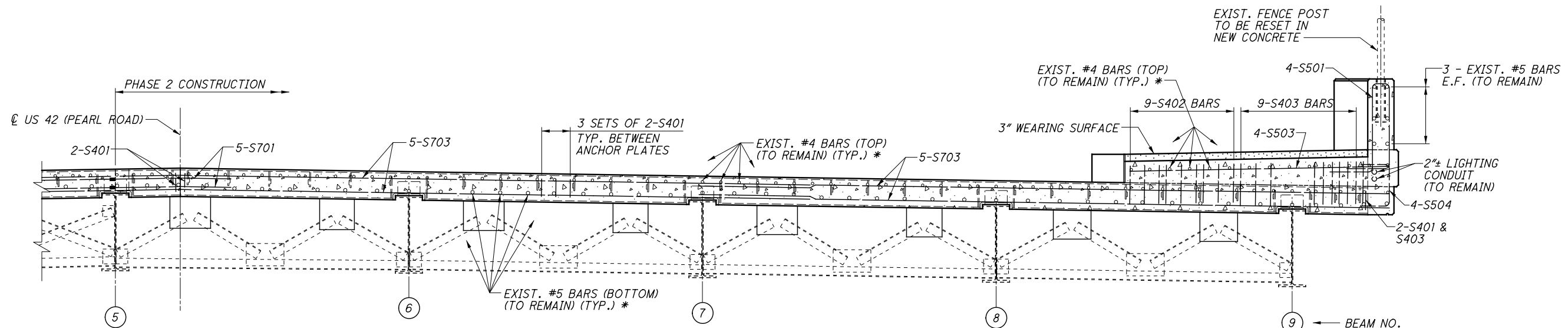
DETAIL C: SEE SHEET 18/40.

ADDITIONAL NOTES: SEE SHEET 18/40.

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SECTION B-B (PHASE 1 REINFORCING)
(EXPANSION JOINT ARMOR NOT SHOWN FOR CLARITY)



SECTION B-B (PHASE 2 REINFORCING)
(EXPANSION JOINT ARMOR NOT SHOWN FOR CLARITY)

LEGEND

* BEND EXISTING LONGITUDINAL REINFORCING STEEL AS NECESSARY TO MISS NEW EXPANSION JOINT ARMOR.

NOTES

REINFORCING STEEL SPLICE LENGTH SHALL BE 3'-11" FOR #7 BARS.

NOTATION: E.F. - EACH FACE

SECTION B-B: FOR LOCATION SEE SHEETS 18/40 & 19/40.



(EXPANSION JOINT ARMOR NOT SHOWN FOR CLARITY)



(EXPANSION JOINT ARMOR NOT SHOWN FOR CLARITY)

LEGEND

* BEND EXISTING LONGITUDINAL REINFORCING STEEL AS NECESSARY TO MISS NEW EXPANSION JOINT ARMOR.

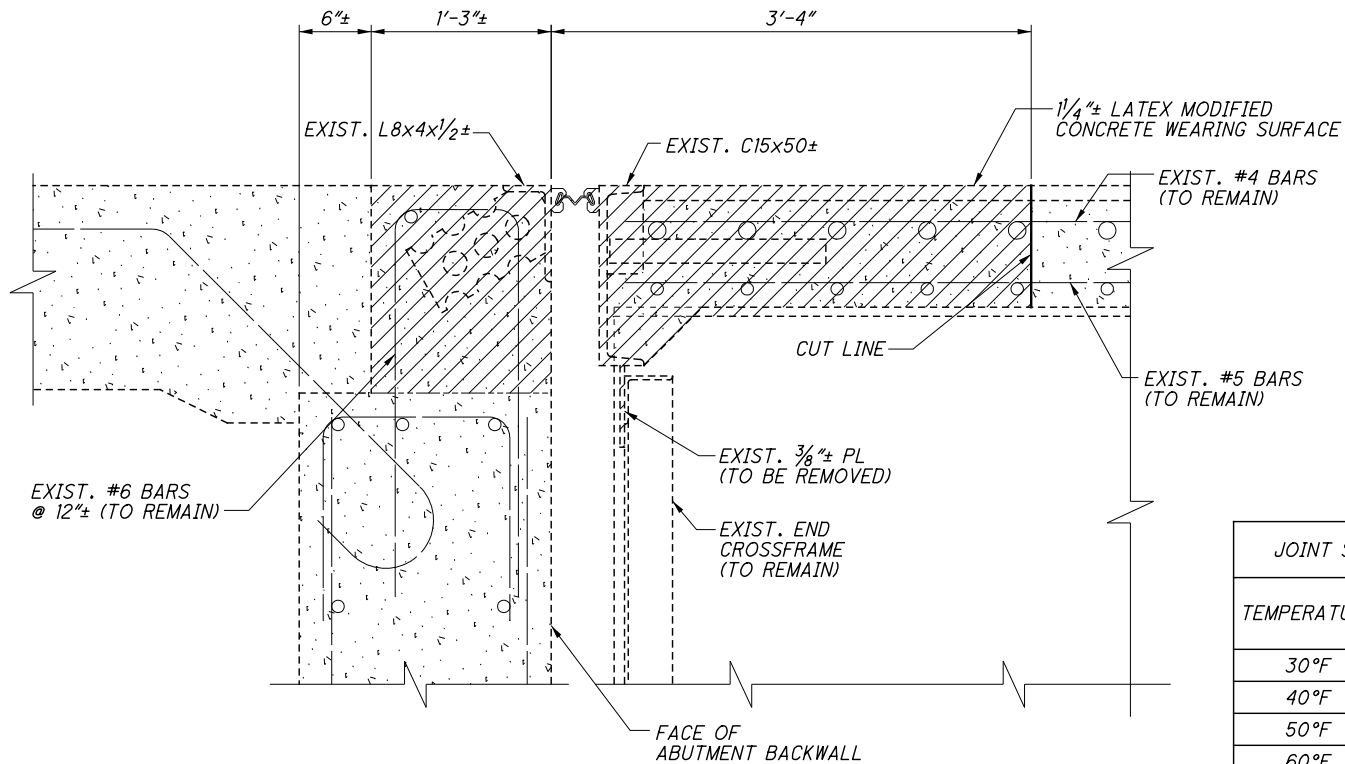
NOTES

REINFORCING STEEL SPLICE LENGTH SHALL BE 3'-11" FOR #7 BARS.

NOTATION: E.F. - EACH FACE

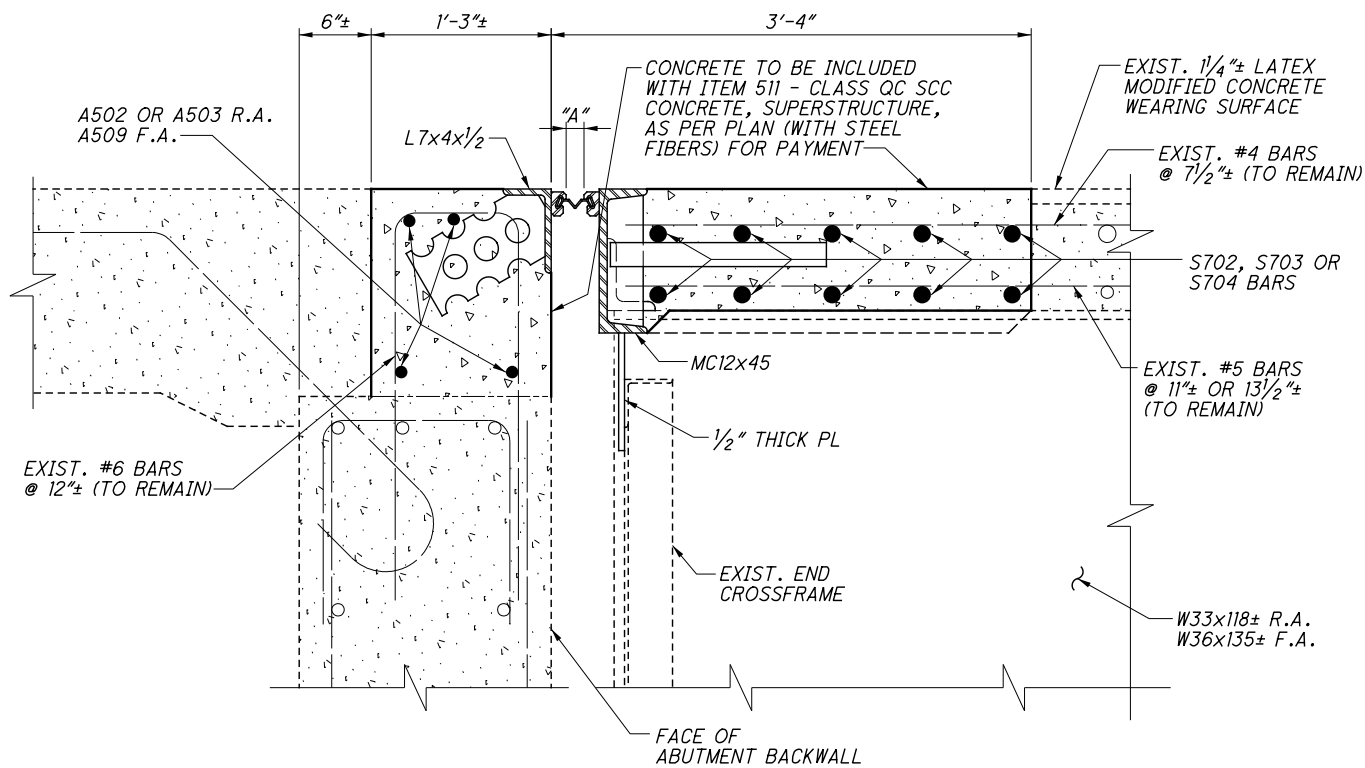
SECTION B-B: FOR LOCATION SEE SHEET 21/40.

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY042_1457C\Sheets\042_1457RE006.dgn 6/25/2021 8:49:14 AM jsmith

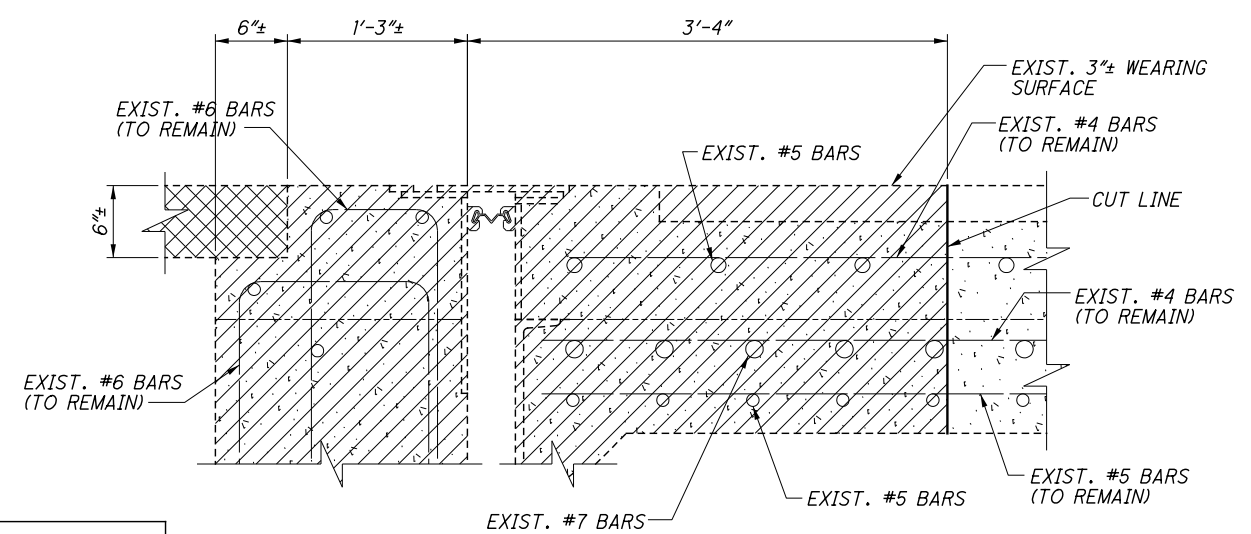


SECTION X-X
ABUTMENT JOINT REMOVAL SECTION

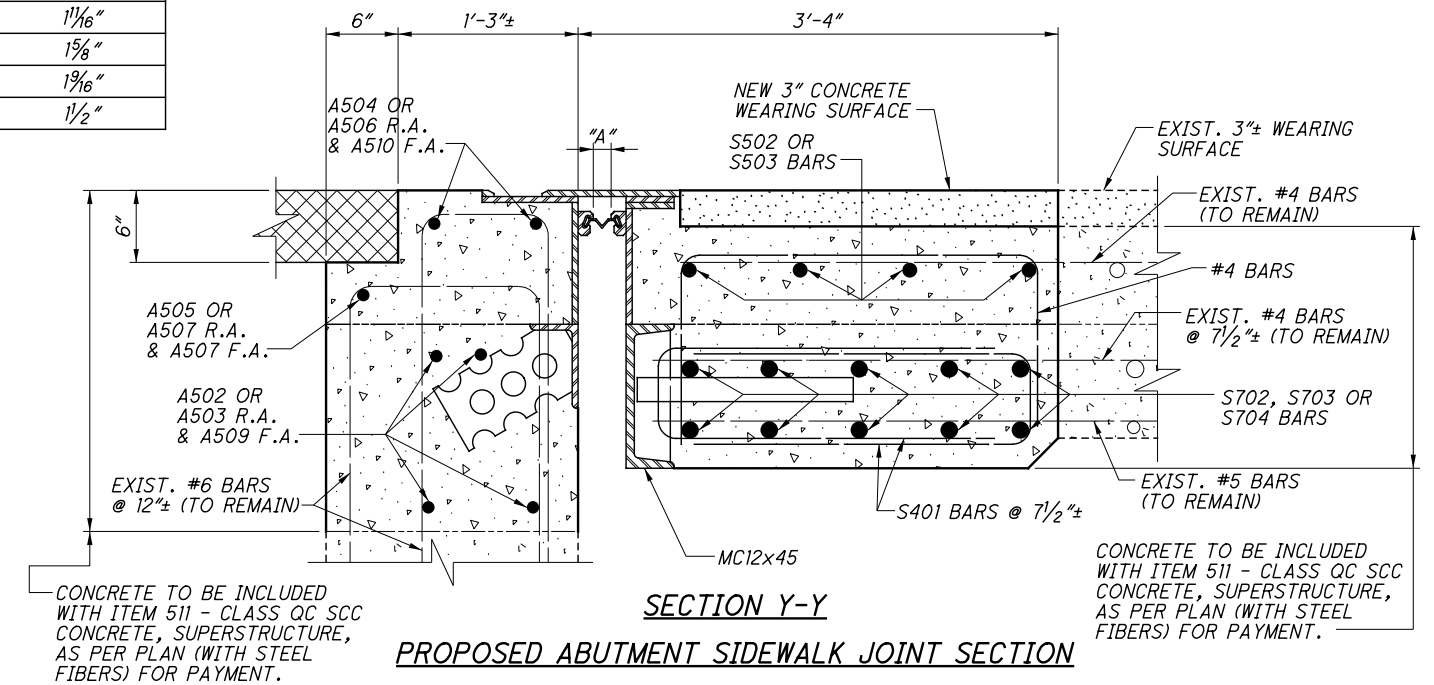
JOINT SETTING TABLE	
TEMPERATURE	DIMENSION "A"
30°F	1 7/8"
40°F	1 3/16"
50°F	1 3/4"
60°F	1 11/16"
70°F	1 5/8"
80°F	1 9/16"
90°F	1 1/2"



SECTION X-X
PROPOSED ABUTMENT JOINT SECTION
(AT BEAM LINE)



SECTION Y-Y
ABUTMENT SIDEWALK JOINT REMOVAL SECTION



SECTION Y-Y
PROPOSED ABUTMENT SIDEWALK JOINT SECTION

NOTES

NOTATION: R.A. - REAR ABUTMENT
F.A. - FORWARD ABUTMENT

SECTION X-X (REMOVAL): FOR LOCATIONS SEE SHEETS 6/40, 7/40, AND 8/40 THRU 10/40.

SECTION Y-Y (REMOVAL): FOR LOCATIONS SEE SHEETS 6/40, 7/40, AND 8/40 THRU 10/40.

SECTION X-X (PROPOSED): FOR LOCATIONS SEE SHEETS 11/40 THRU 13/40 AND SHEETS 18/40 THRU 21/40.

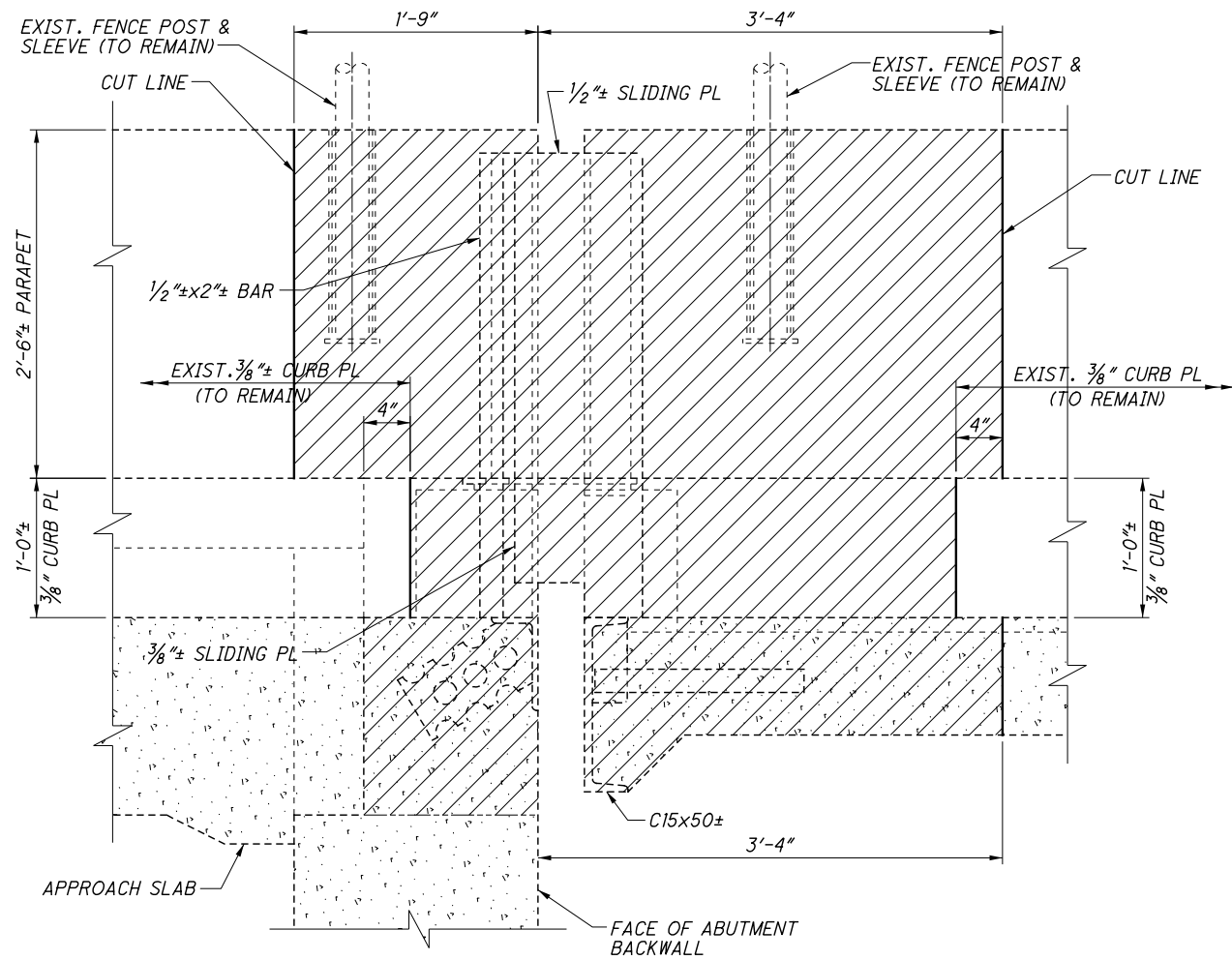
SECTION Y-Y (PROPOSED): FOR LOCATIONS SEE SHEETS 11/40 THRU 13/40 AND SHEETS 18/40 THRU 21/40.

ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING EXJ-4-87.

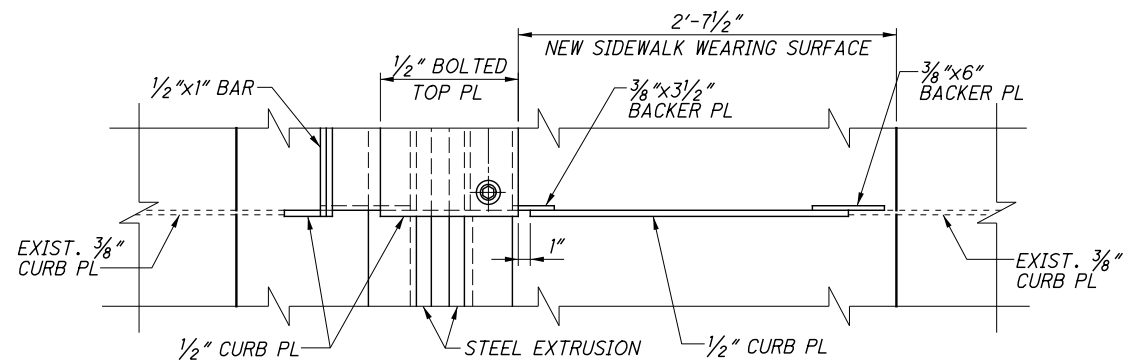
LEGEND

- INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES PORTIONS OF SIDEWALK REMOVED AND REPLACED AT APPROACHES. SEE ROADWAY CALCULATION SHEETS. SEE ITEM 608 - 6" CONCRETE WALK, AS PER PLAN IN ROADWAY GENERAL NOTES.

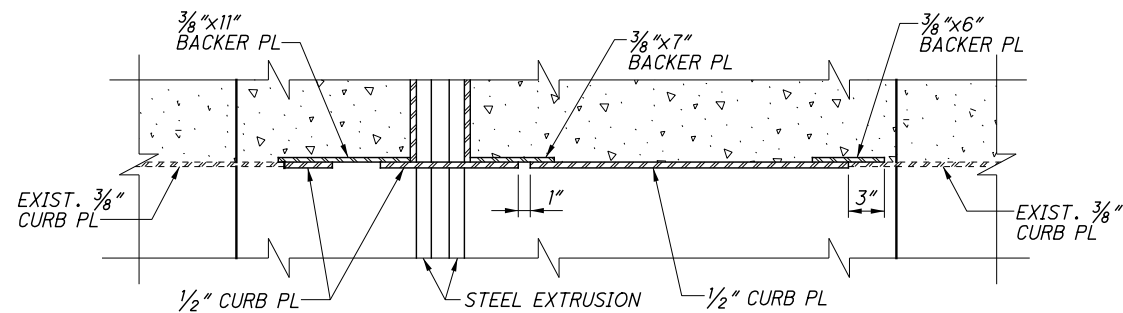
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY042_1457\042_1457E\004.dgn 6/25/2021 8:55:41 AM jsmith



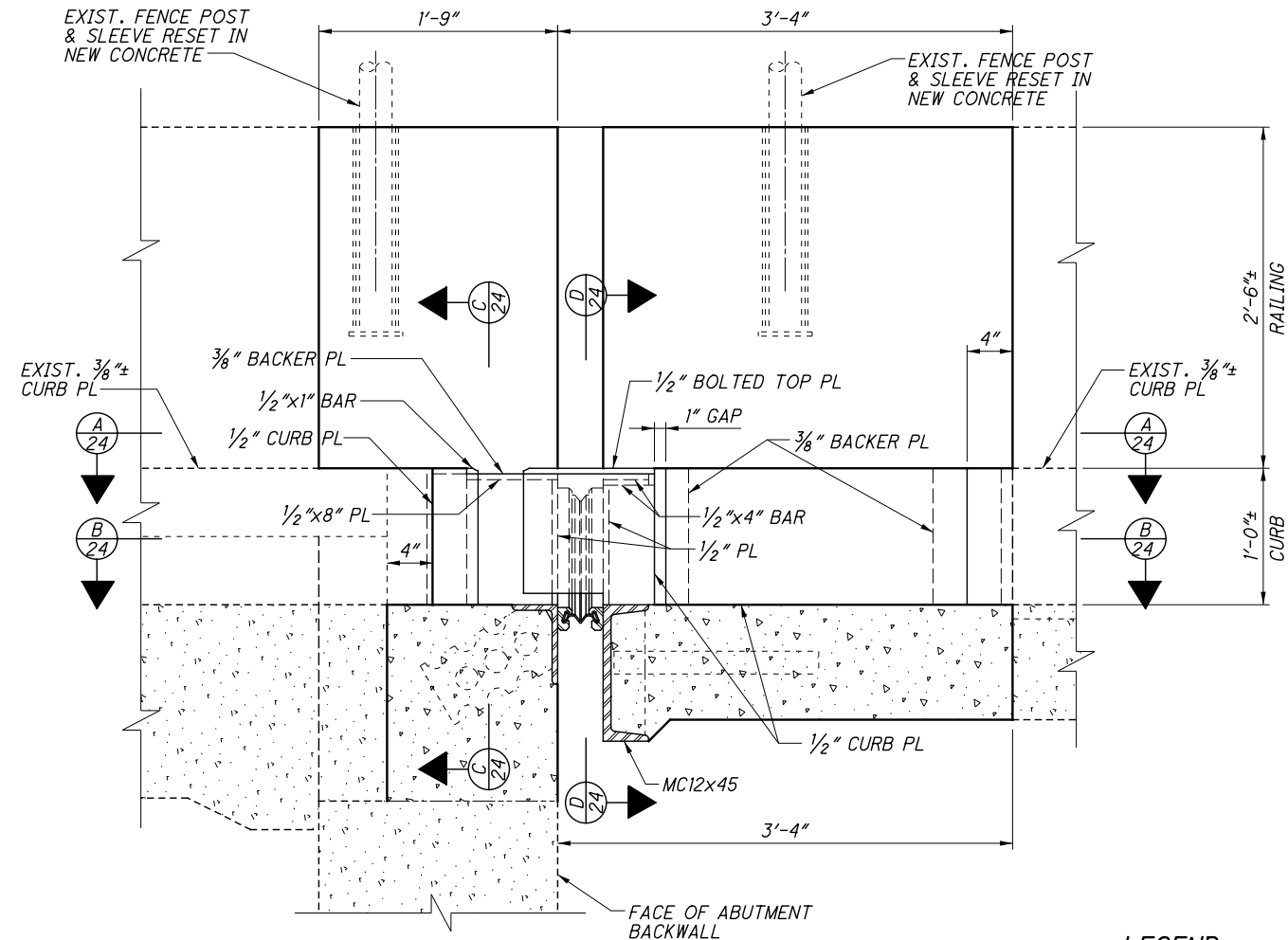
SECTION Z-Z (REMOVAL)



VIEW A-A



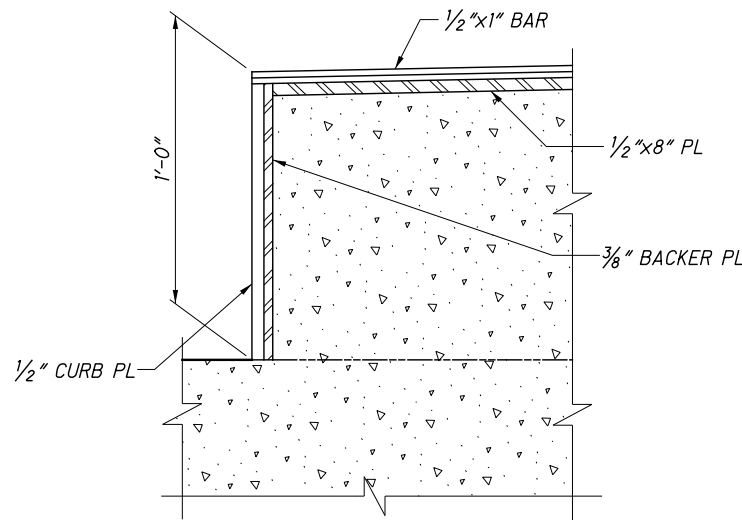
SECTION B-B



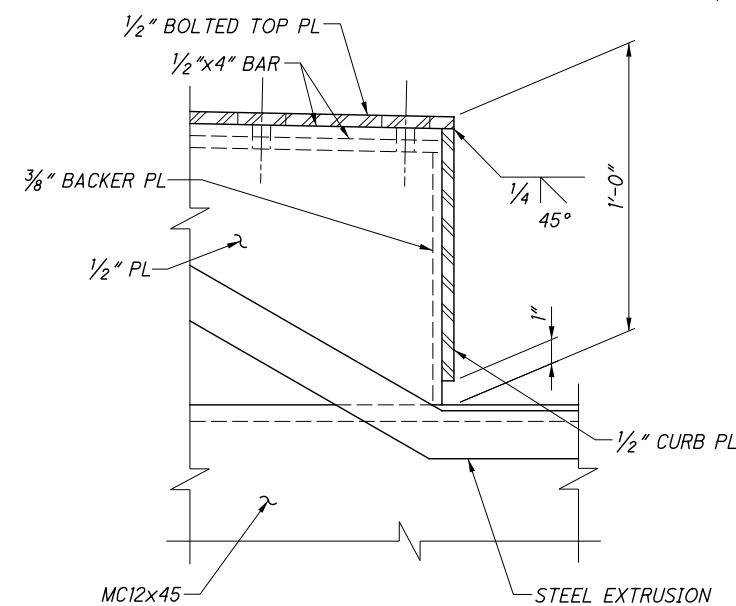
SECTION Z-Z (PROPOSED)

LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



SECTION C-C



SECTION D-D

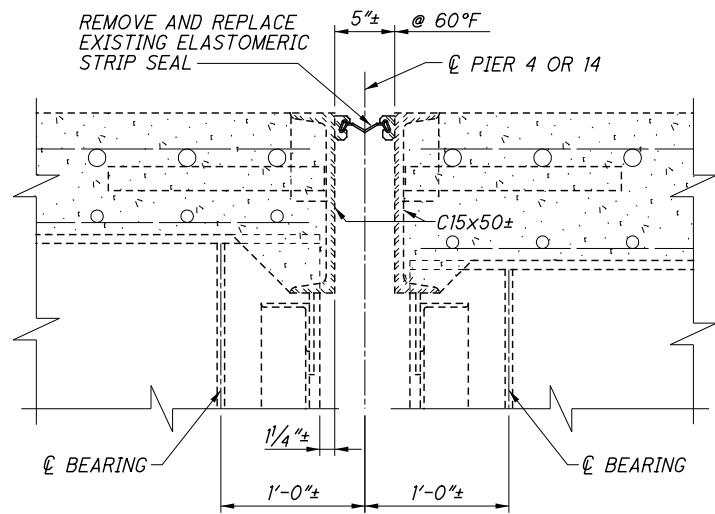
NOTES

ADDITIONAL NOTES AND DETAILS: SEE STANDARD DRAWING EXJ-4-87.

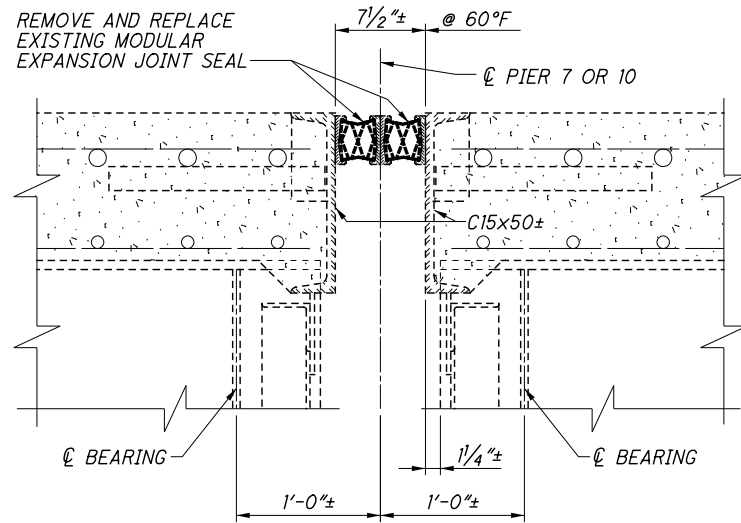
SECTION Z-Z (REMOVAL): FOR LOCATIONS SEE SHEETS 9/40 & 10/40.

SECTION Z-Z (PROPOSED): FOR LOCATIONS SEE SHEETS 19/40 & 21/40.

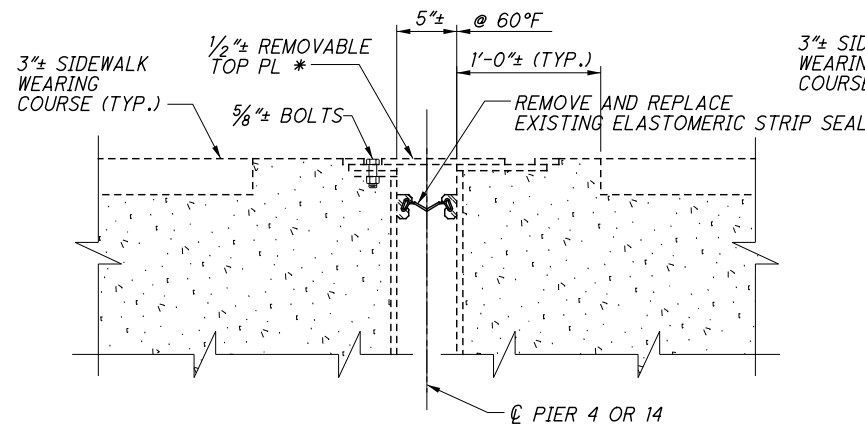
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY042_1457C\Sheets\042_1457RE007.dgn 6/25/2021 9:18:09 AM jsmith



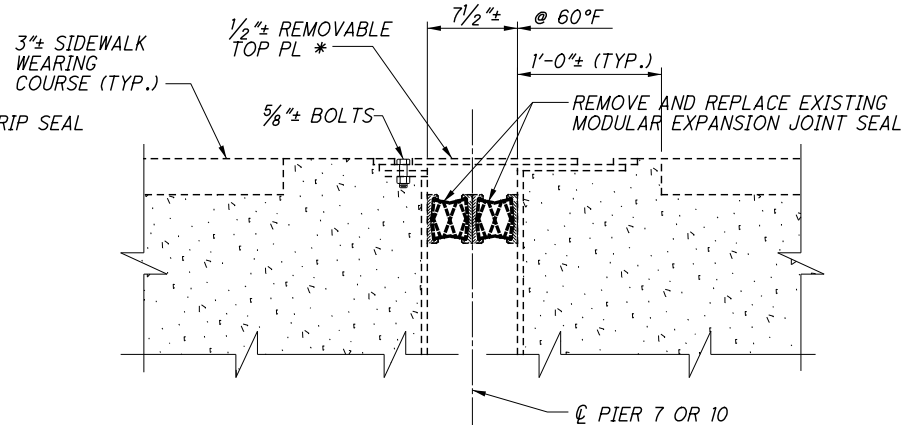
DECK EXPANSION JOINT SECTION
AT PIERS 4 & 14



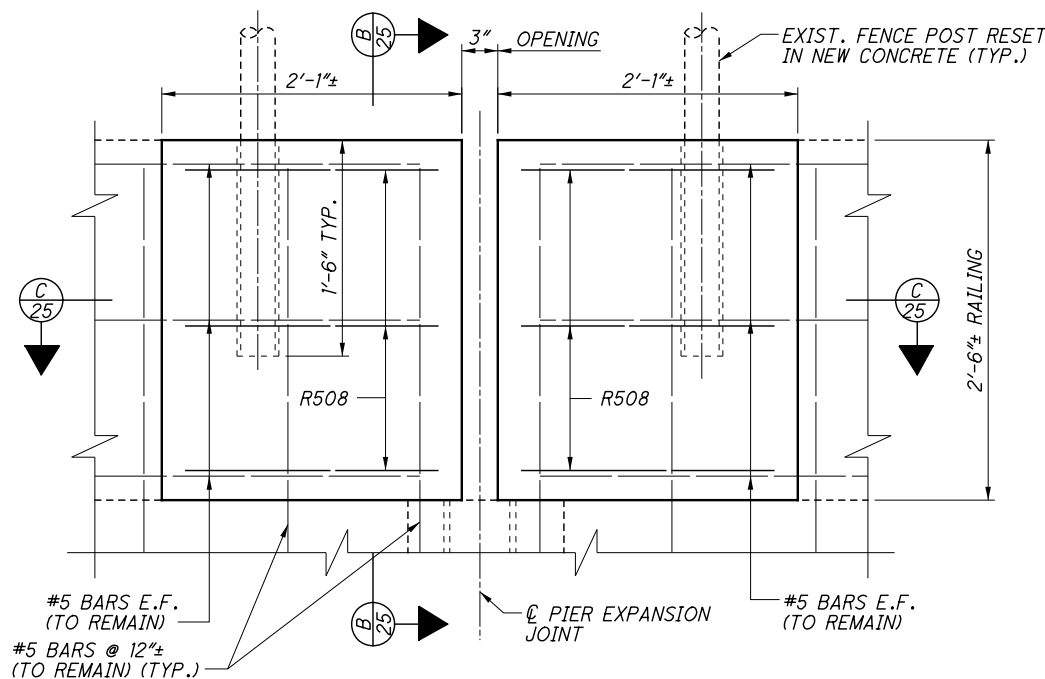
DECK EXPANSION JOINT SECTION
AT PIERS 7 & 10



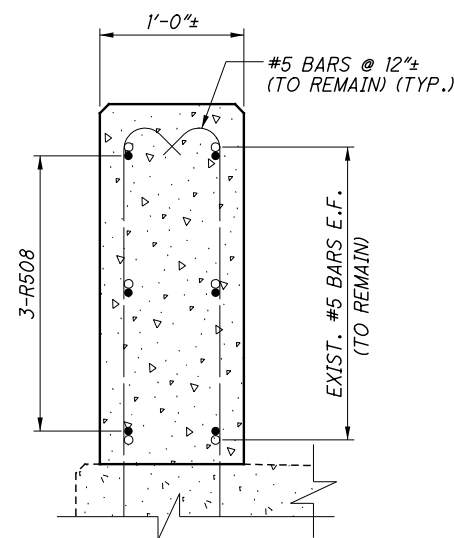
SIDEWALK EXPANSION JOINT SECTION
AT PIERS 4 & 14



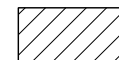
SIDEWALK EXPANSION JOINT SECTION
AT PIERS 7 & 10



PIER EXPANSION JOINT RAILING REPLACEMENT
AT PIERS 4, 7, 10 & 14 **

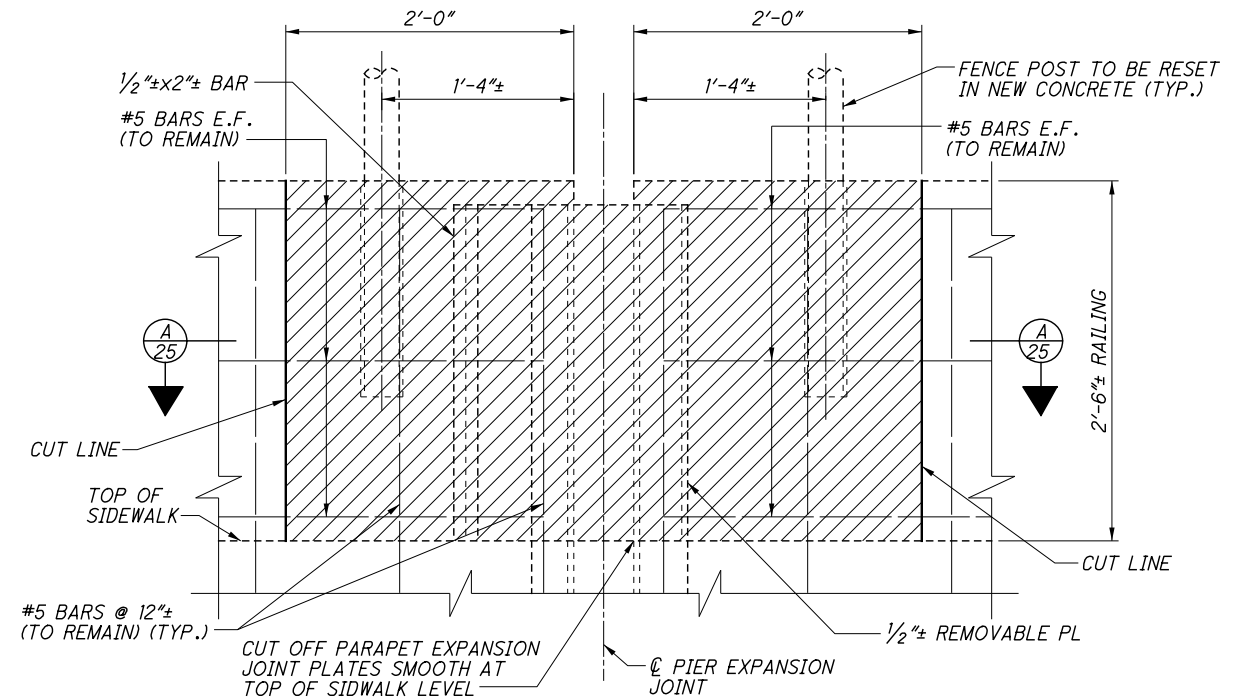


SECTION B-B

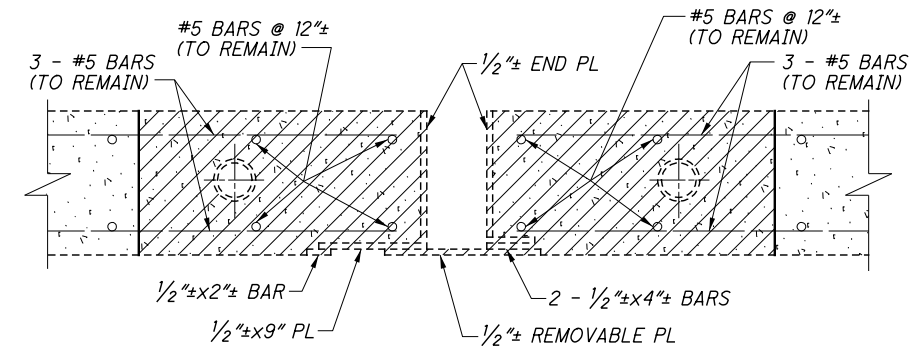


INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

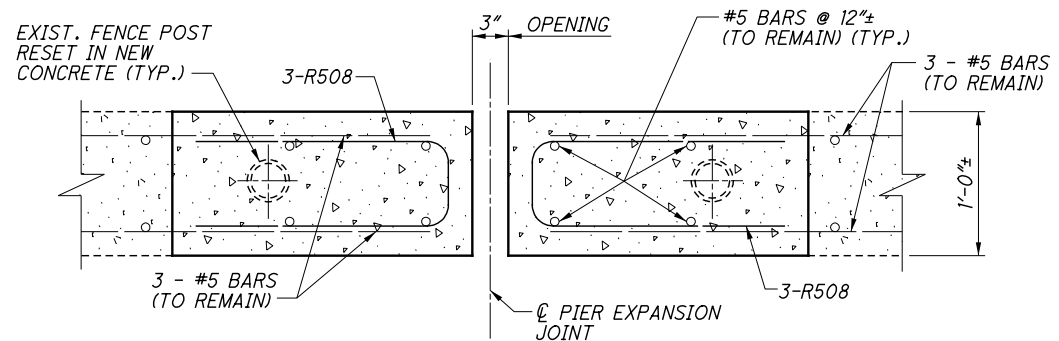
* REMOVE 1/2" SIDEWALK TOP PLATE AND INSPECT FOR ADDITIONAL REPAIRS.



PIER EXPANSION JOINT RAILING REMOVAL
AT PIERS 4, 7, 10 & 14 **



SECTION A-A



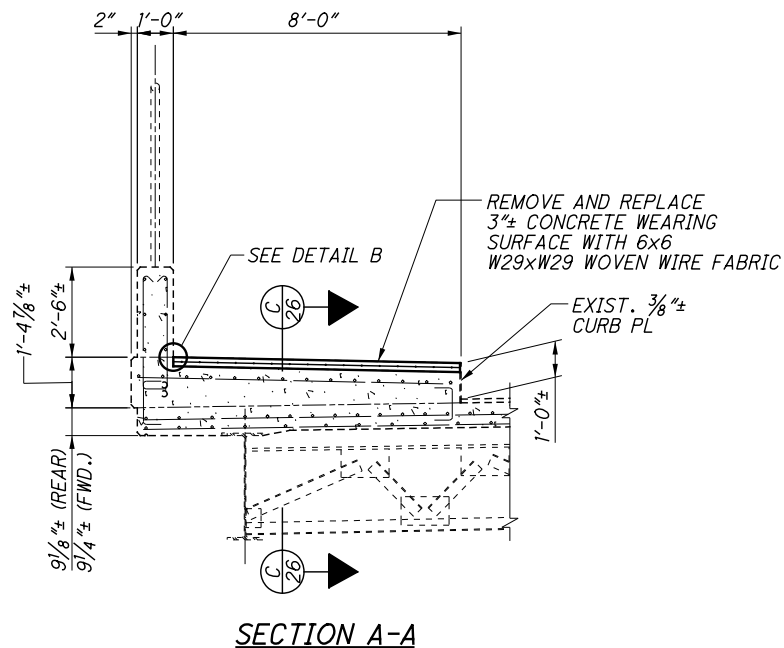
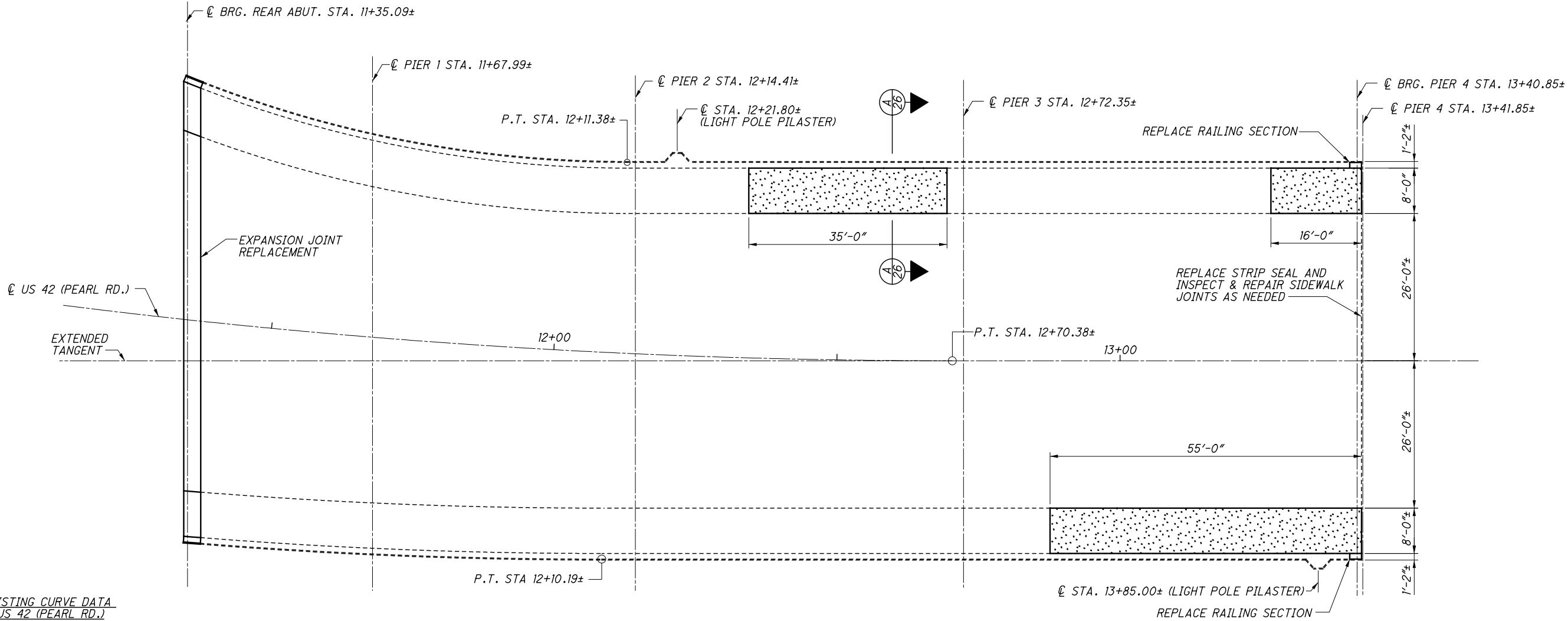
SECTION C-C

LEGEND

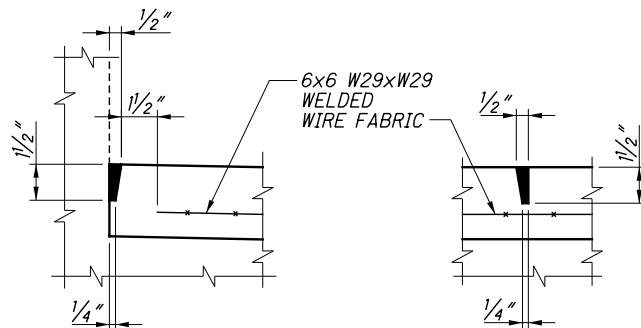
** AT PIER 10, REPLACE 2'-1" SECTION OF BOTH SIDES AT WEST RAILING JOINT. REPLACE NORTH 2'-1" SECTION AT EAST RAILING JOINT. SEE SHEET 31/40 FOR REPLACEMENT OF SOUTH SIDE OF EAST RAILING.

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EXISTING CURVE DATA
US 42 (PEARL RD.)
P.I. Sta. 11+11.56
 $\Delta = 14^\circ 29' 11''$ (L T)
 $Dc = 4^\circ 32' 09''$
 $R = 1,263.15'$
 $T = 160.54'$
 $L = 319.37'$
 $E = 10.16'$
 $C = 318.52'$
C.B. = N $17^\circ 54' 00''$ E



DECK REPAIR PLAN - UNIT 1



DETAIL B

LONGITUDINAL SIDEWALK JOINTS. USE THIS DETAIL OPPOSITE HAND AT CURB.

SECTION C-C

TRANSVERSE SIDEWALK JOINT. PLACE JOINTS AT 5'-0" MAXIMUM.

JOINTS SHALL BE SEALED PER CMS 705.04 (HOT APPLIED JOINT SEALER) TO BE INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN FOR PAYMENT. WIRE FABRIC SHALL BE INCLUDED WITH SIDEWALK WEARING SURFACE FOR PAYMENT.

LEGEND

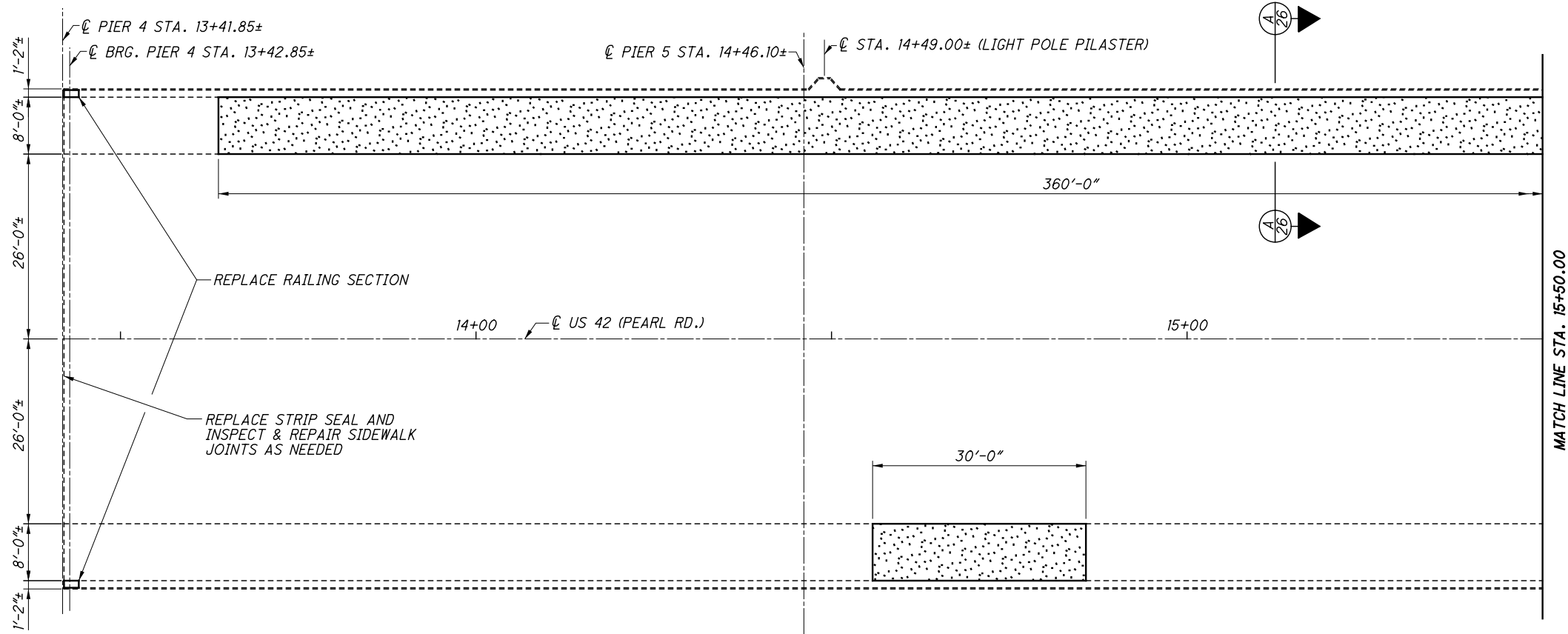
INDICATES WEARING SURFACE TO BE REPLACED PER ITEM 511 - CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN.

NOTES

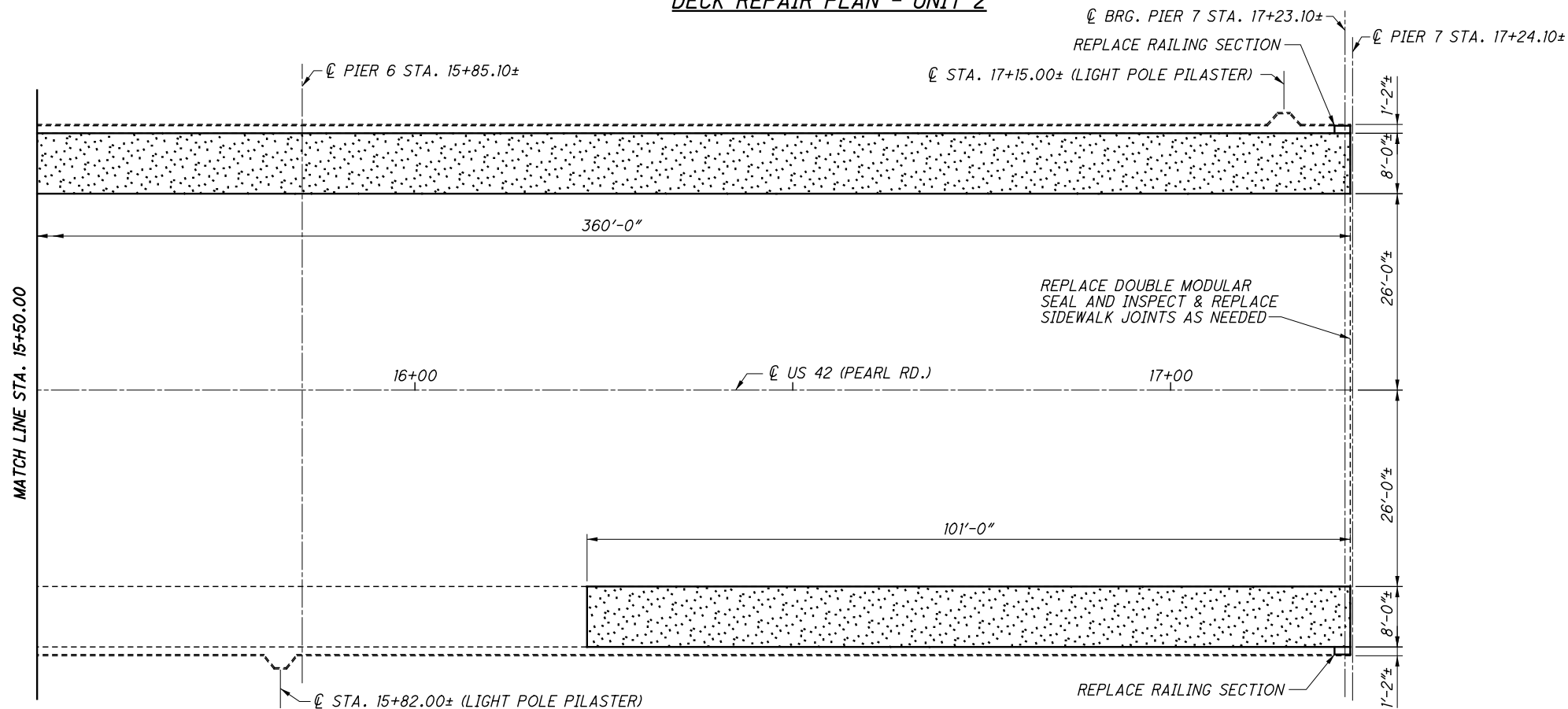
REAR EXPANSION JOINT REPLACEMENT: SEE SHEETS 18/40 THRU 20/40.

RAILING REPLACEMENT DETAILS AT PIER 4: SEE SHEET 25/40.

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DECK REPAIR PLAN - UNIT 2



DECK REPAIR PLAN - UNIT 2



LEGEND

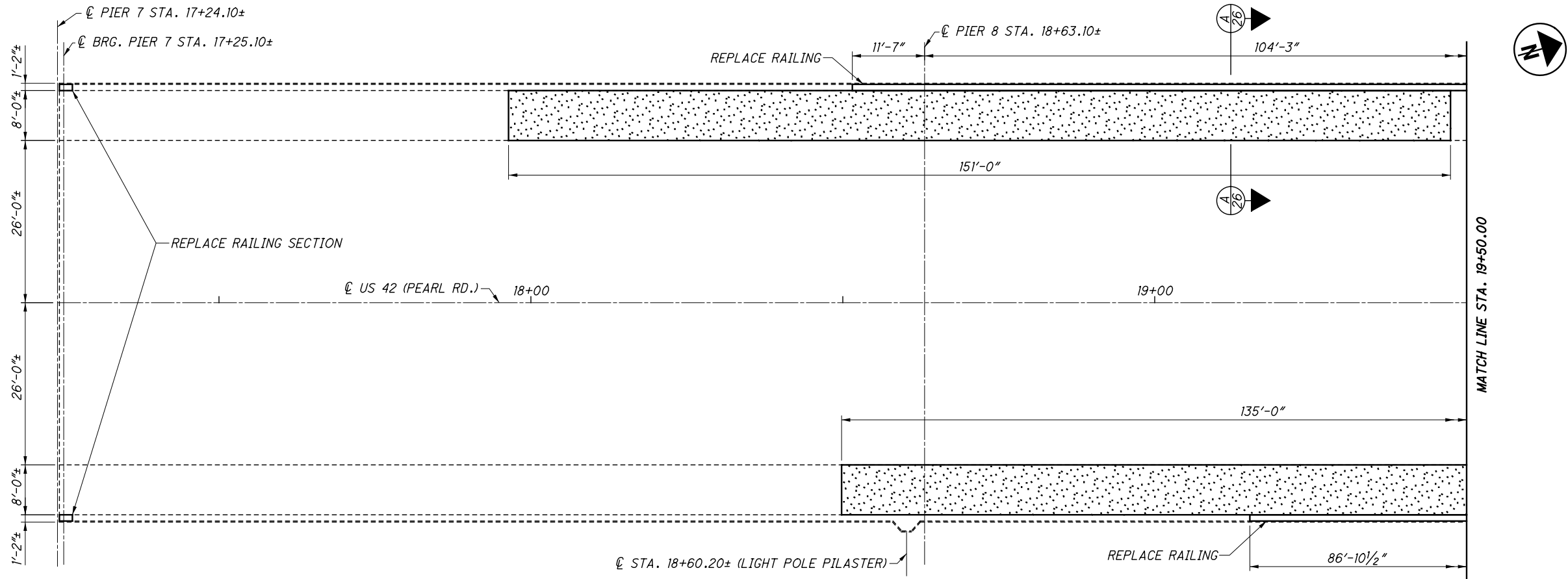
INDICATES WEARING SURFACE TO BE REPLACED PER ITEM 511 - CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN.

NOTES

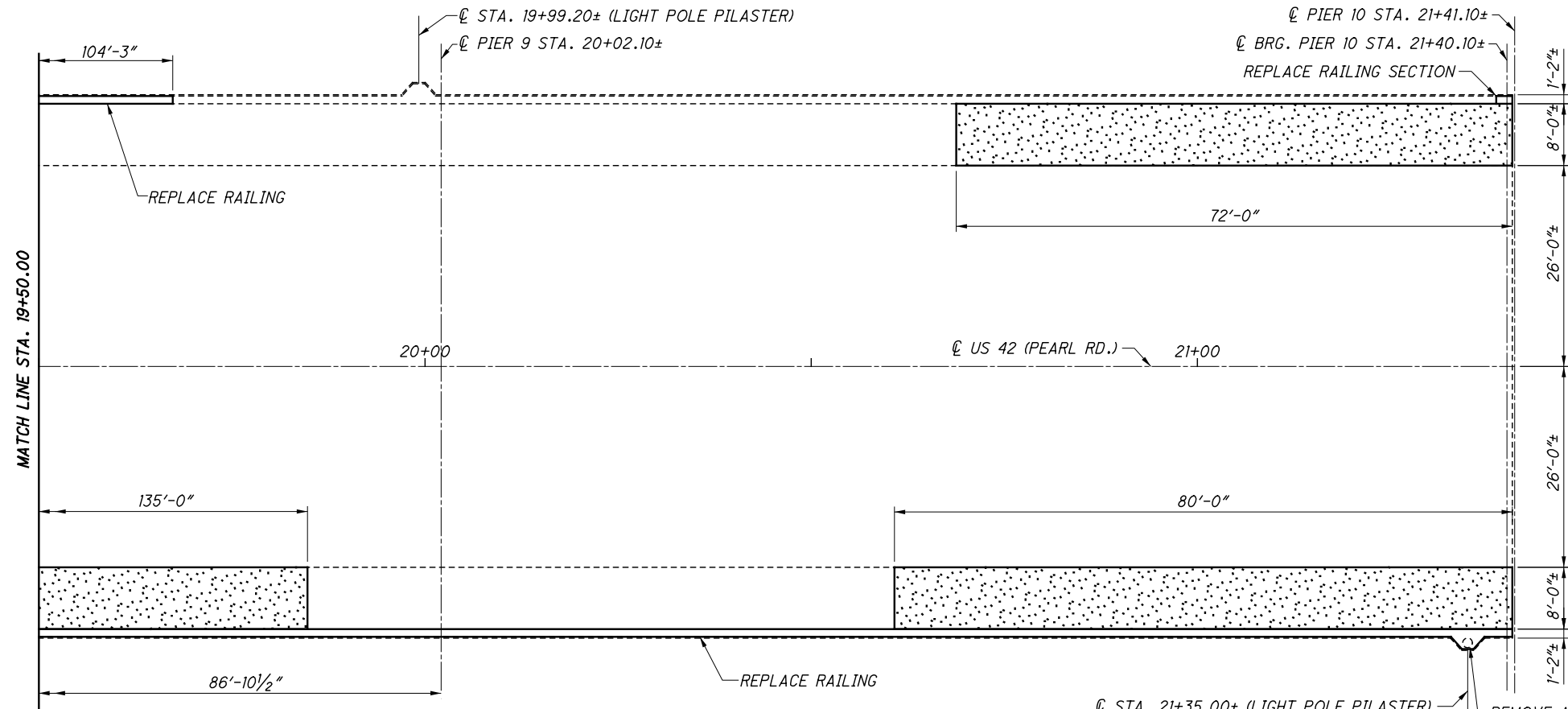
RAILING REPLACEMENT DETAILS: SEE SHEET 25/40.

CUY-071-16.40/ VAR REPAIR		UNIT 2 - DECK REPAIR PLAN - LOCATION 2		RICHLAND ENGINEERING LIMITED	
PID No. 111603		BRIDGE NO. CUY-42-1457		29 NORTH PARK STREET	
27/40		US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK		MANSFIELD, OHIO 44902	
77		DESIGNED		DATE	
123		BLN		06/2021	
		CHECKED		STRUCTURE FILE NUMBER	
		DNT		1803271	
		DRAWN		REVIEWED	
		DPH		DLR	
		REVISED			

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DECK REPAIR PLAN - UNIT 3



DECK REPAIR PLAN - UNIT 3

LEGEND

INDICATES WEARING SURFACE TO BE REPLACED PER ITEM 511 - CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN.

* SEE ROADWAY CALCULATION SHEETS.

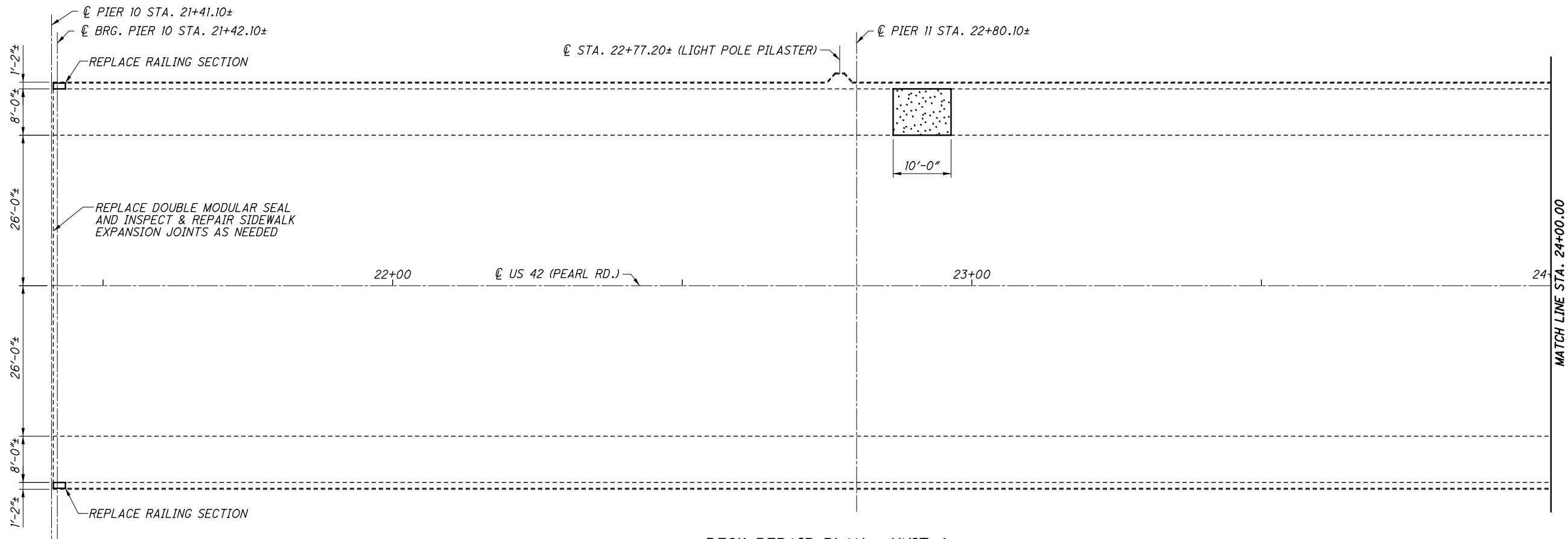
NOTES

RAILING REPLACEMENT DETAILS: SEE SHEETS 25/40 AND 31/40.

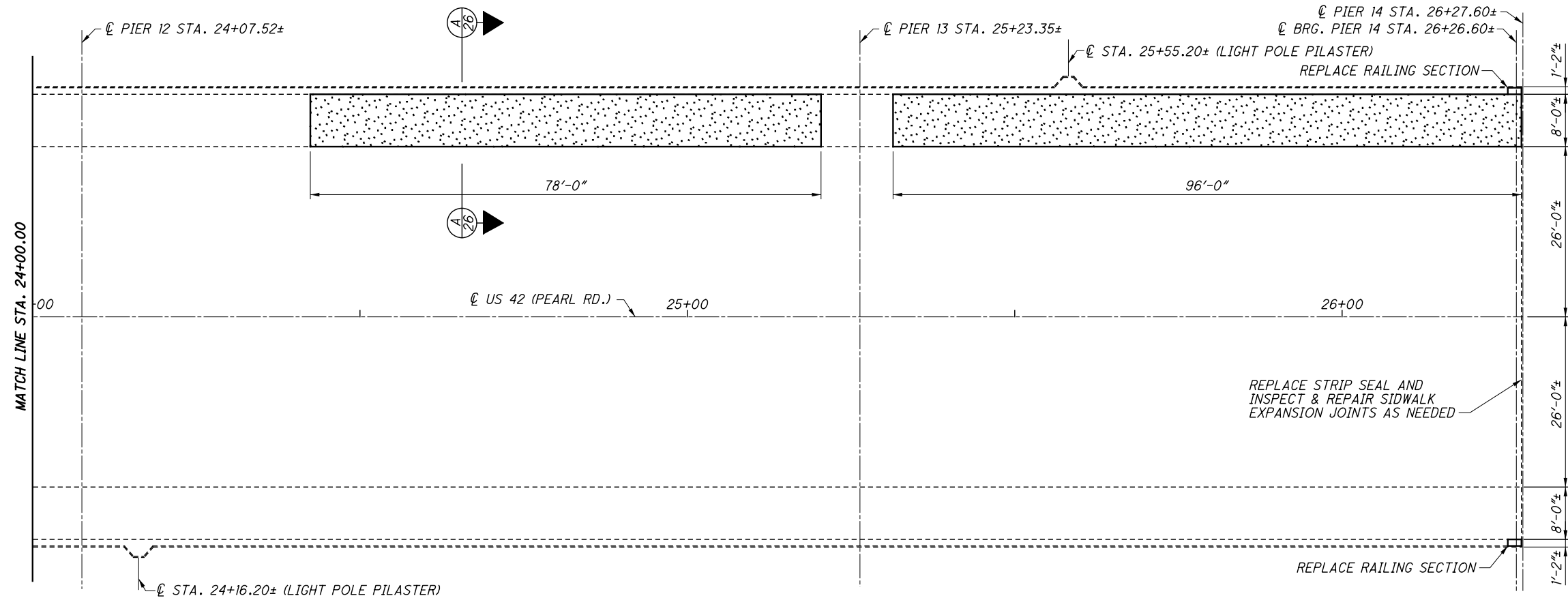
LIGHT POLE PILASTER REPLACEMENT: FOR DETAILS SEE SHEET 32/40.

REMOVE AND REERECT LIGHT POLE AND LUMINAIRE; REPLACE JUNCTION BOX *

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DECK REPAIR PLAN - UNIT 4



DECK REPAIR PLAN - UNIT 4

LEGEND



INDICATES WEARING SURFACE TO BE REPLACED PER ITEM 511 - CLASS QC2 CONCRETE, SIDEWALK WEARING SURFACE, AS PER PLAN.

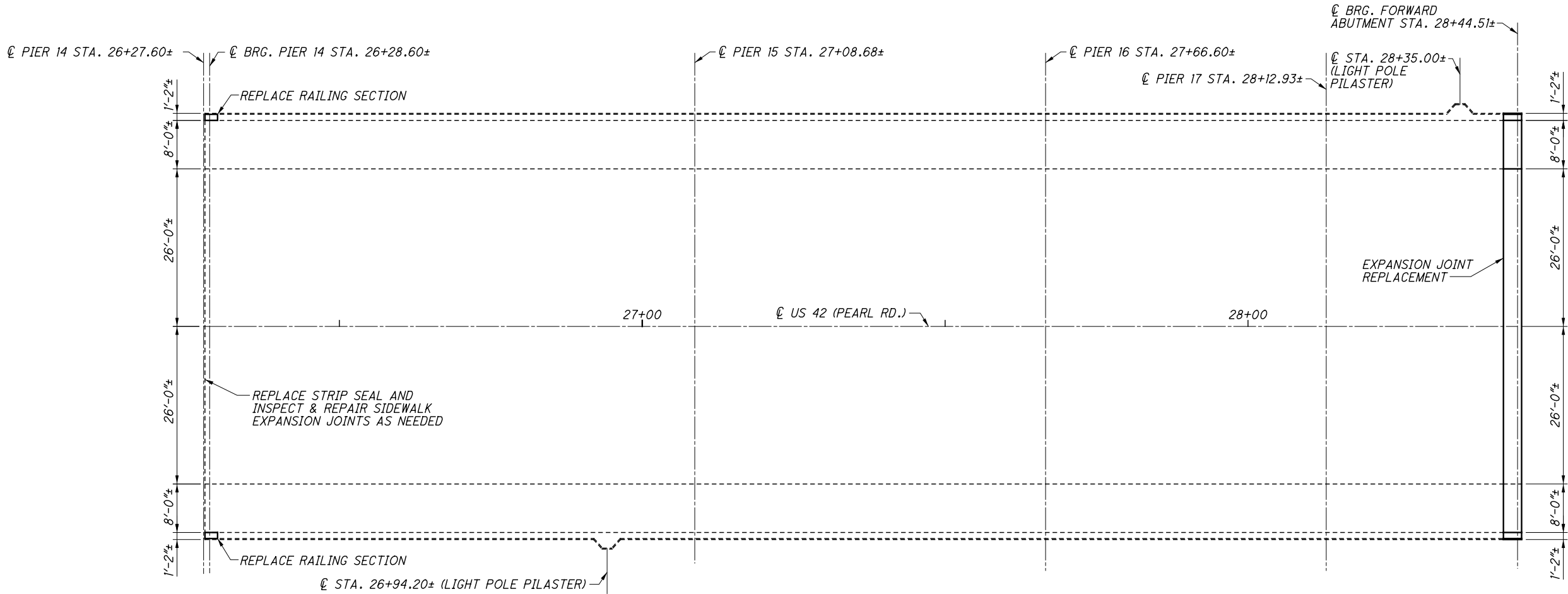
NOTES

RAILING REPLACEMENT DETAILS: SEE SHEET 25/40.



CUY-071-16.40/ VAR REPAIR		UNIT 4 - DECK REPAIR PLAN - LOCATION 2		RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
PID No. 111603		BRIDGE NO. CUY-42-1457 US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK		DATE 06/2021 REVIEWED DLR STRUCTURE FILE NUMBER 1803271
29/40		DESIGNED BLN CHECKED DHT		DRAWN DPH REVISED
79/123				

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DECK REPAIR PLAN - UNIT 5

NOTES

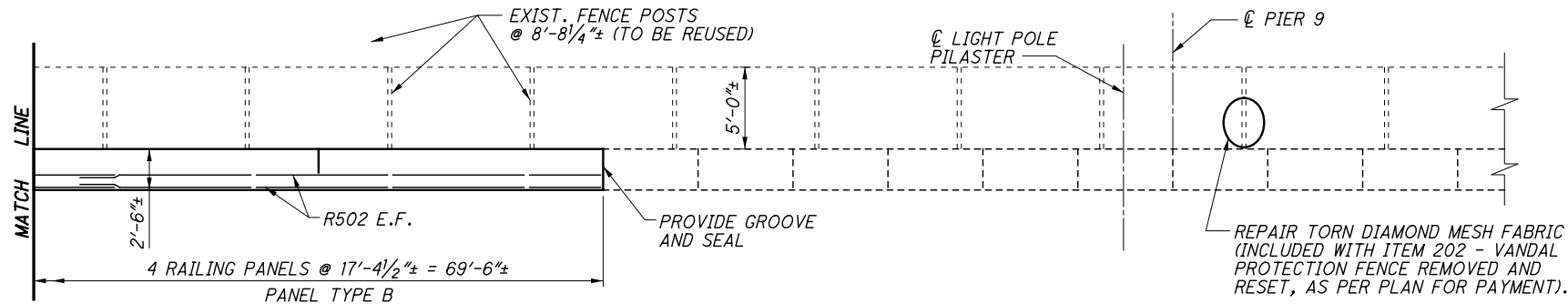
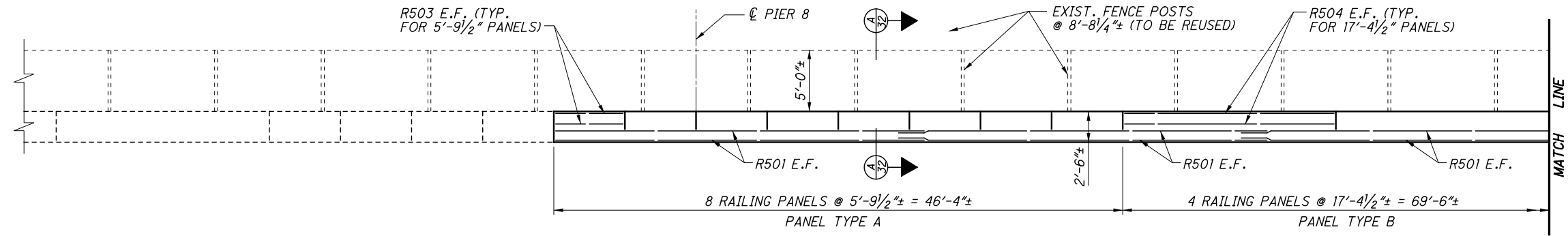
FORWARD EXPANSION JOINT REPLACEMENT: SEE SHEET 21/40.

RAILING REPLACEMENT DETAILS: SEE SHEET 25/40.

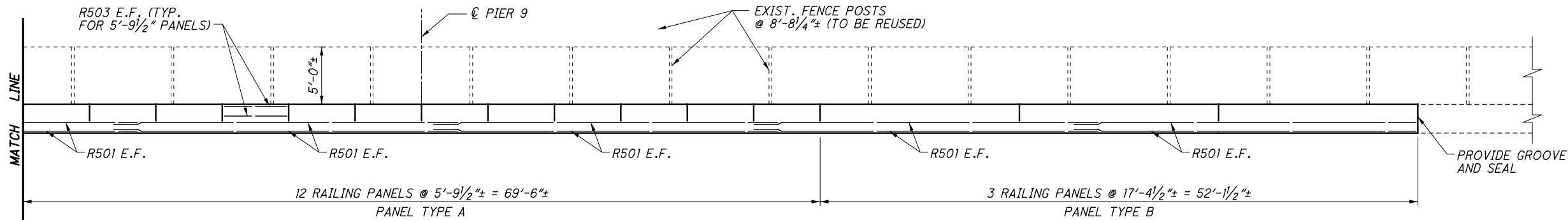
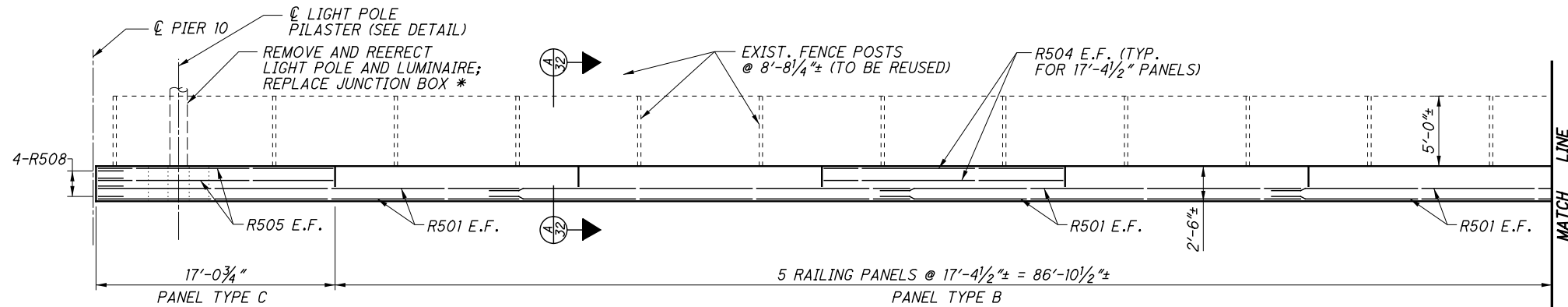


CUY-071-16.40/ VAR REPAIR PID No. 111603		UNIT 5 - DECK REPAIR PLAN - LOCATION 2 BRIDGE NO. CUY-42-1457 US 42 (PEARL ROAD) OVER NS RAILWAY/CSX RAILWAY/BIG CREEK		DESIGNED BLN	DRAWN DPH	REVIEWED DLR	DATE 06/2021	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	
				CHECKED DHT	REVISED	STRUCTURE FILE NUMBER 1803271			
30 / 40									
80 123									

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UNIT 3 - WEST RAILING ELEVATION
(LOOKING WEST)



UNIT 3 - EAST RAILING ELEVATION
(LOOKING EAST)

LEGEND

* SEE LIGHTING SUBSUMMARY.

NOTES

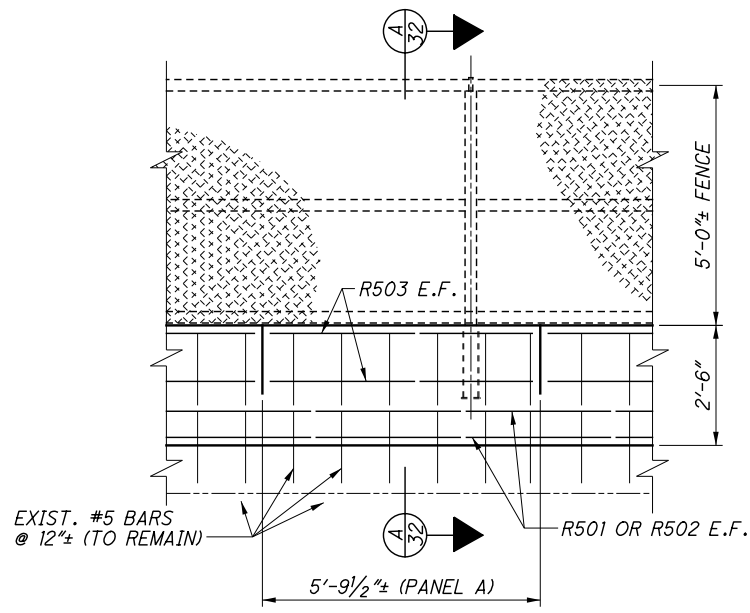
REINFORCING STEEL SPLICE LENGTH SHALL BE 2'-1" FOR #5 BARS.

PANEL DETAILS: SEE SHEET **[32/40]**.

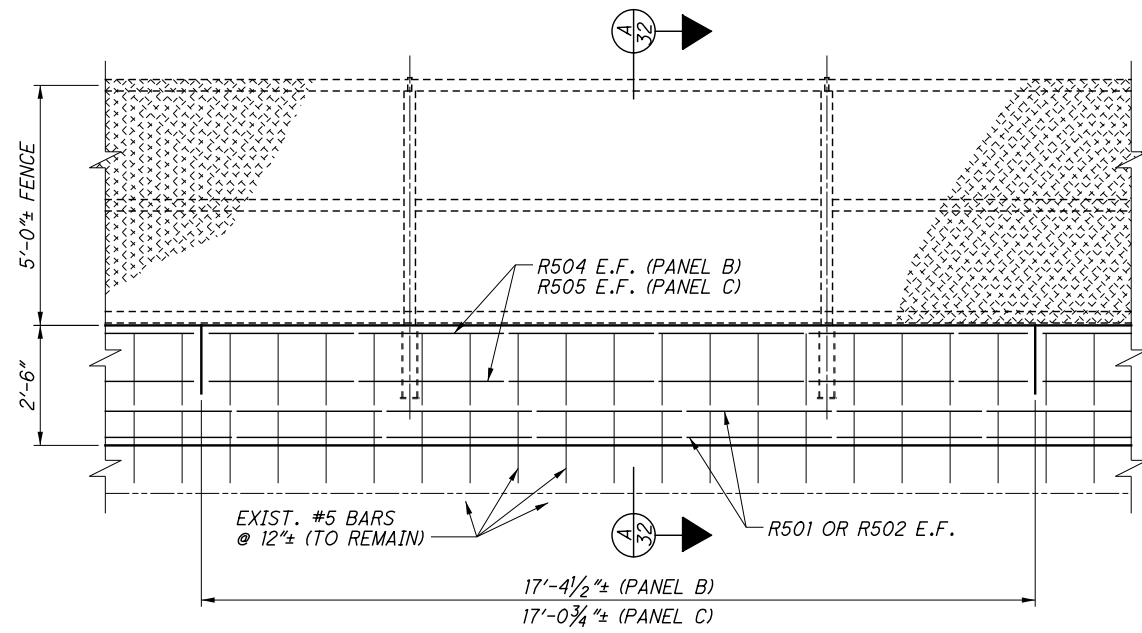
LIGHT POLE PILASTER DETAIL: SEE SHEET **[32/40]**.

ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING BR-2-15.

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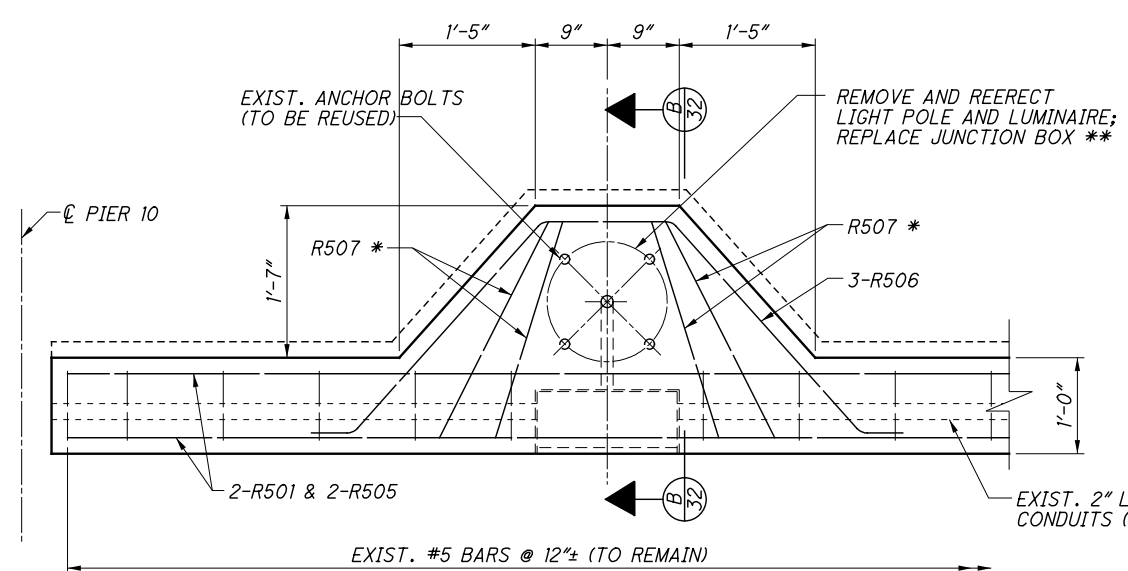


RAILING ELEVATION - PANEL A

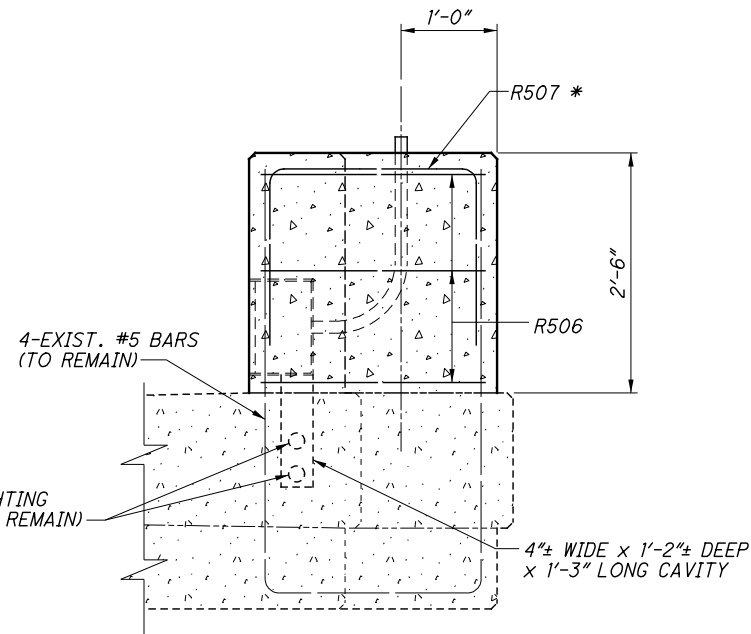


RAILING ELEVATION - PANELS B & C

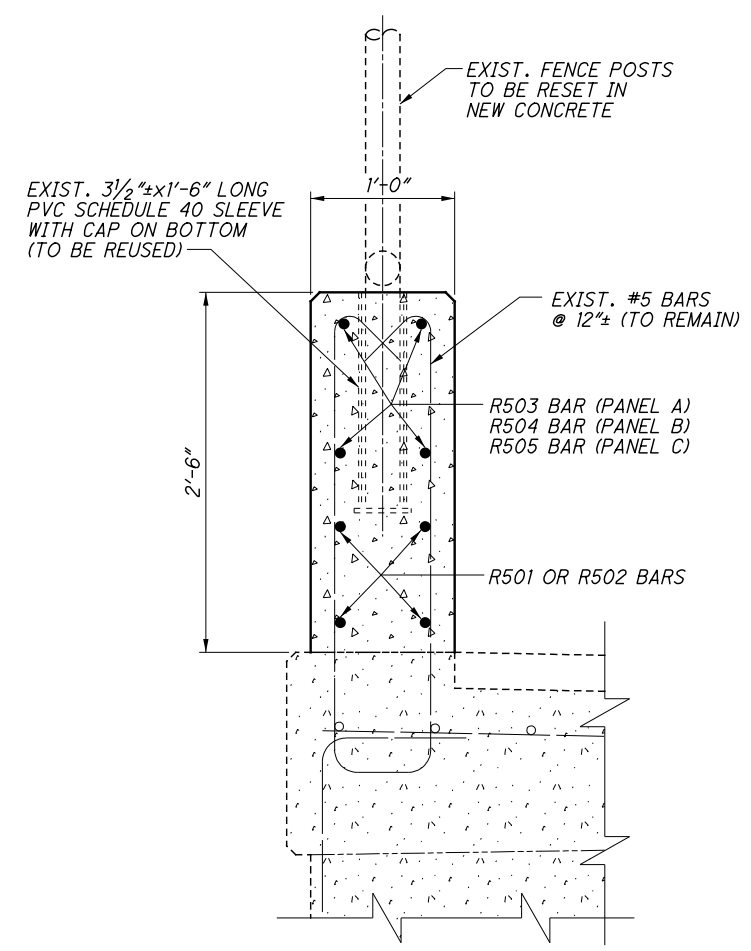
RAILING BAR QUANTITIES					
PANEL TYPE	NUMBER OF PANELS	PANEL LENGTH	NUMBER OF BARS PER PANEL		
			R503	R504	R505
A	20	5'-9 1/2"	4	-	-
B	12	17'-4 1/2"	-	4	-
C	1	17'-0 3/4"	-	-	4



LIGHT POLE PILASTER DETAIL



SECTION B-B



SECTION A-A

LEGEND

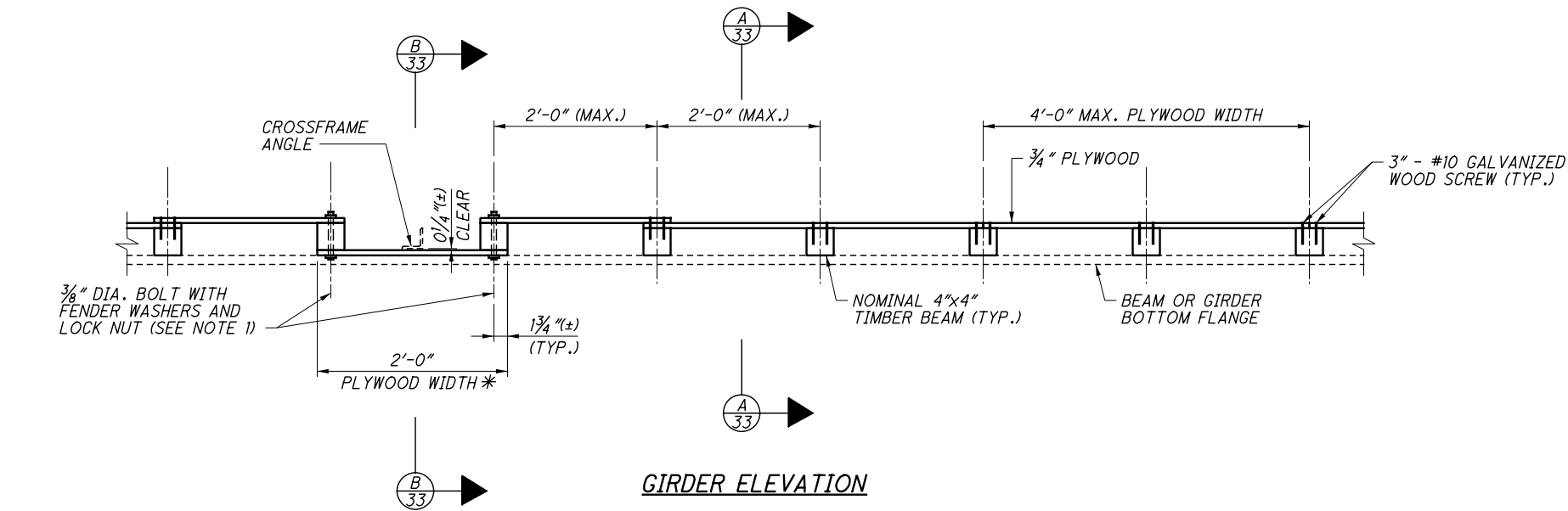
- * MATCH WITH 4-EXISTING #5 BARS TO REMAIN
- ** SEE LIGHTING SUBSUMMARY.

NOTES

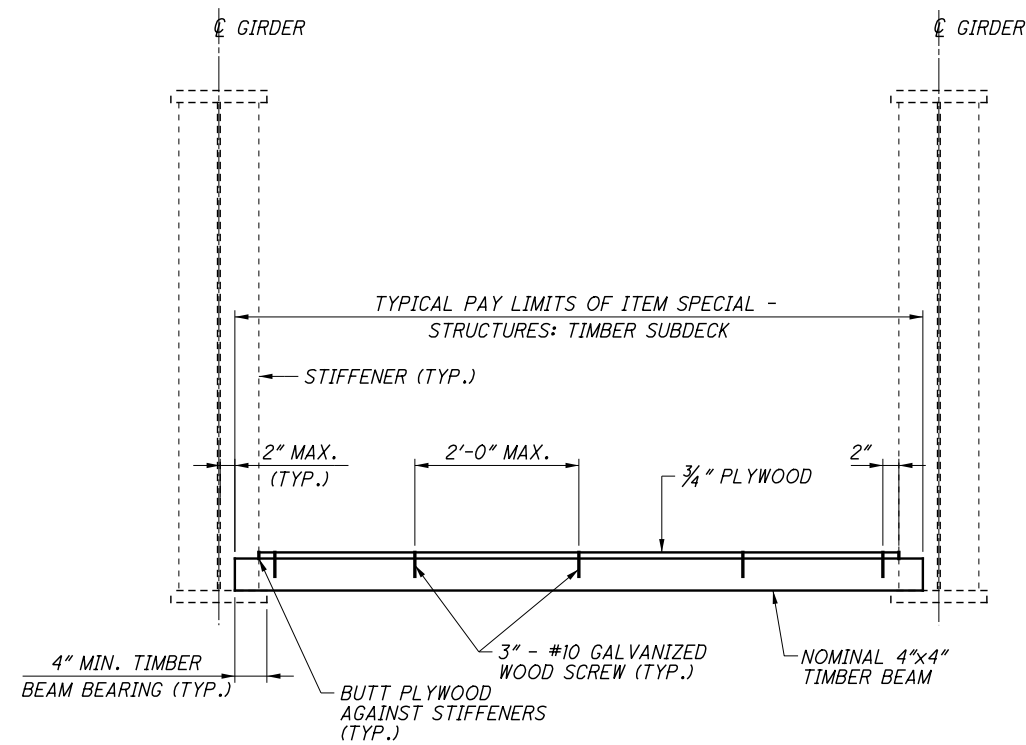
PANEL TYPE LOCATIONS: SEE SHEET 31/40.

RAILING IS INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE FOR PAYMENT.

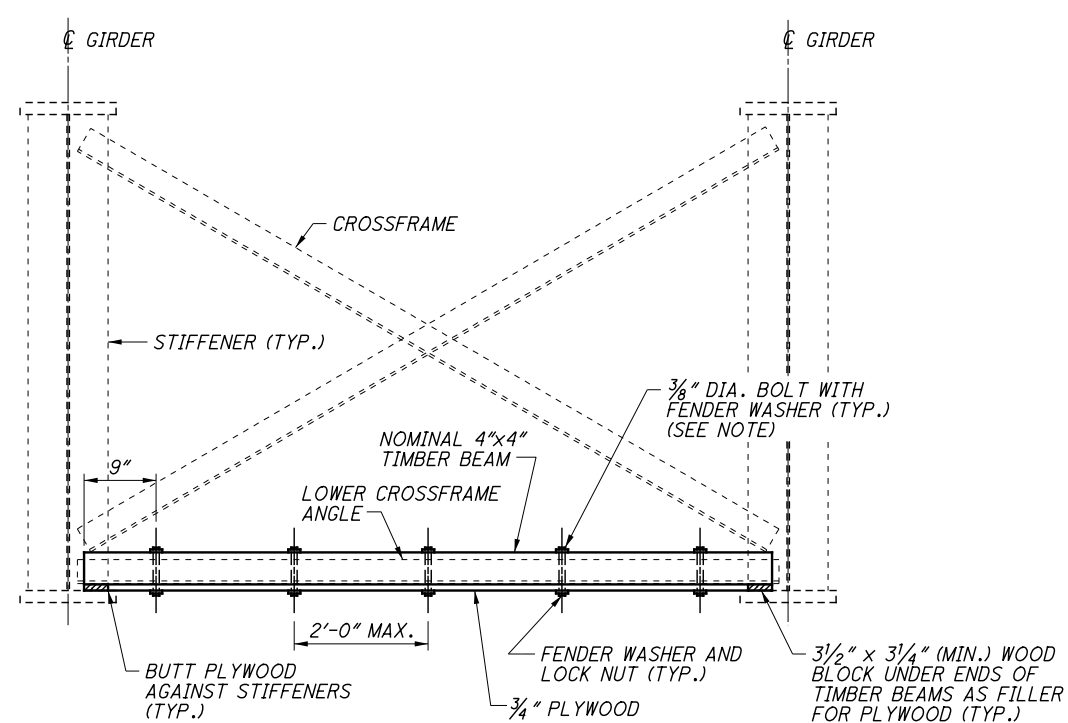
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GIRDER ELEVATION



SECTION A-A



SECTION B-B

(AT INTERMEDIATE CROSSFRAMES)

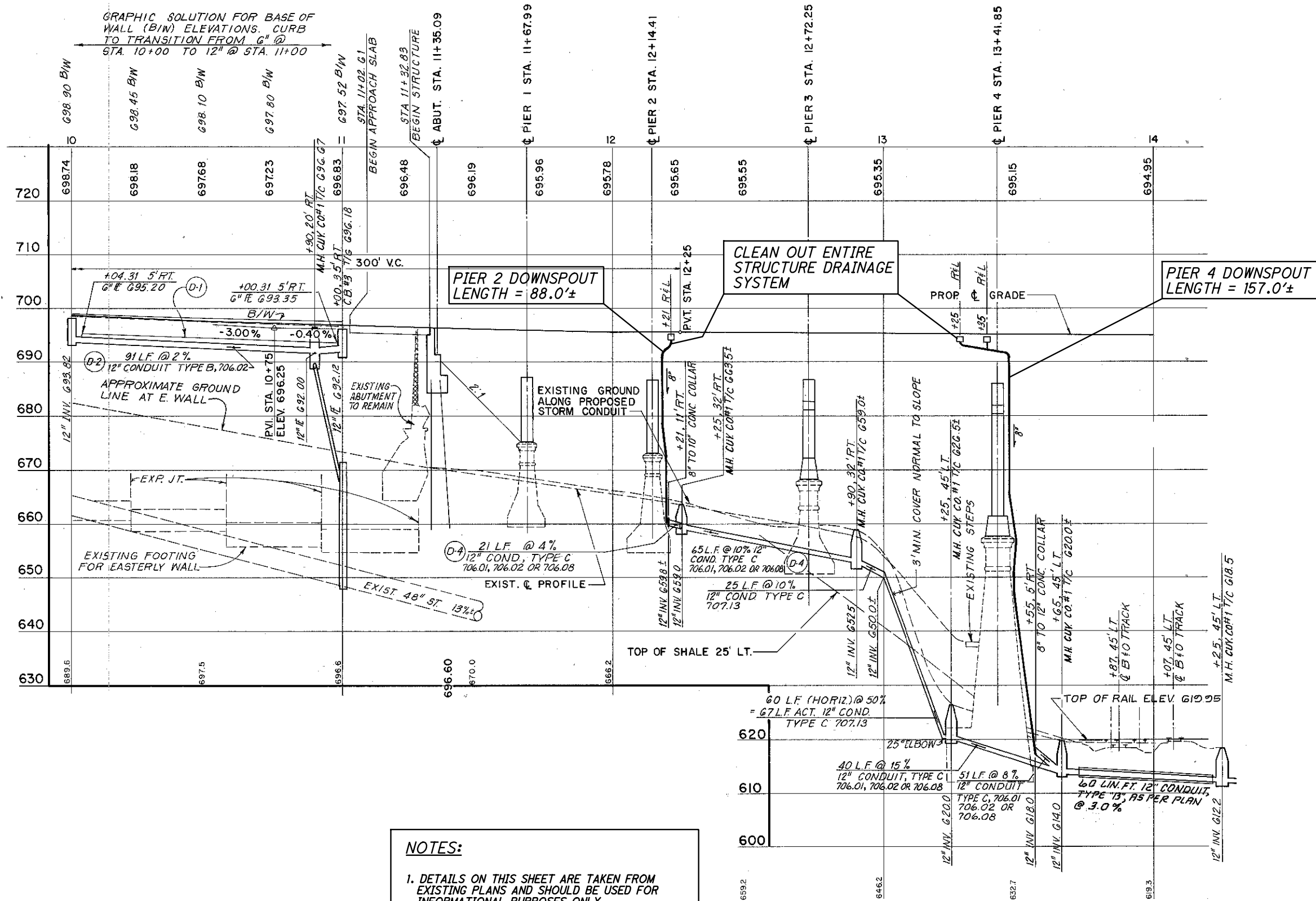
LEGEND

* LOWERED SECTION OF PLYWOOD SHALL BE PLACED UNDER CROSSFRAME.

NOTES

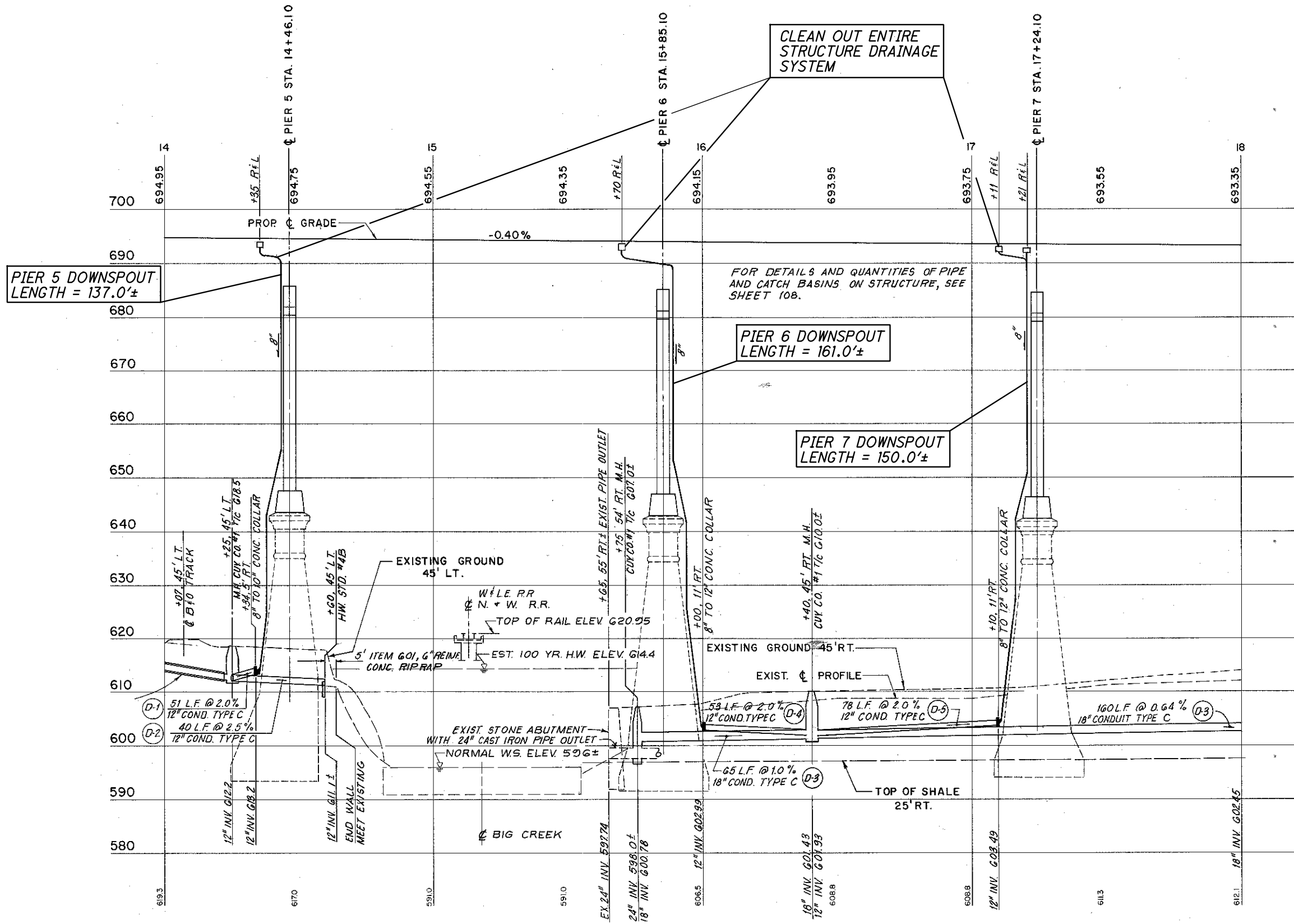
3/8" DIA. BOLTS SHALL BE INSTALLED FACE DOWN, WITH HEAD ON THE UPSIDE OF THE PLYWOOD. BOLT SHALL NOT EXTEND MORE THAN 1" BELOW PLYWOOD.

TIMBER SUBDECK LOCATIONS: SEE SHEET 2/40.



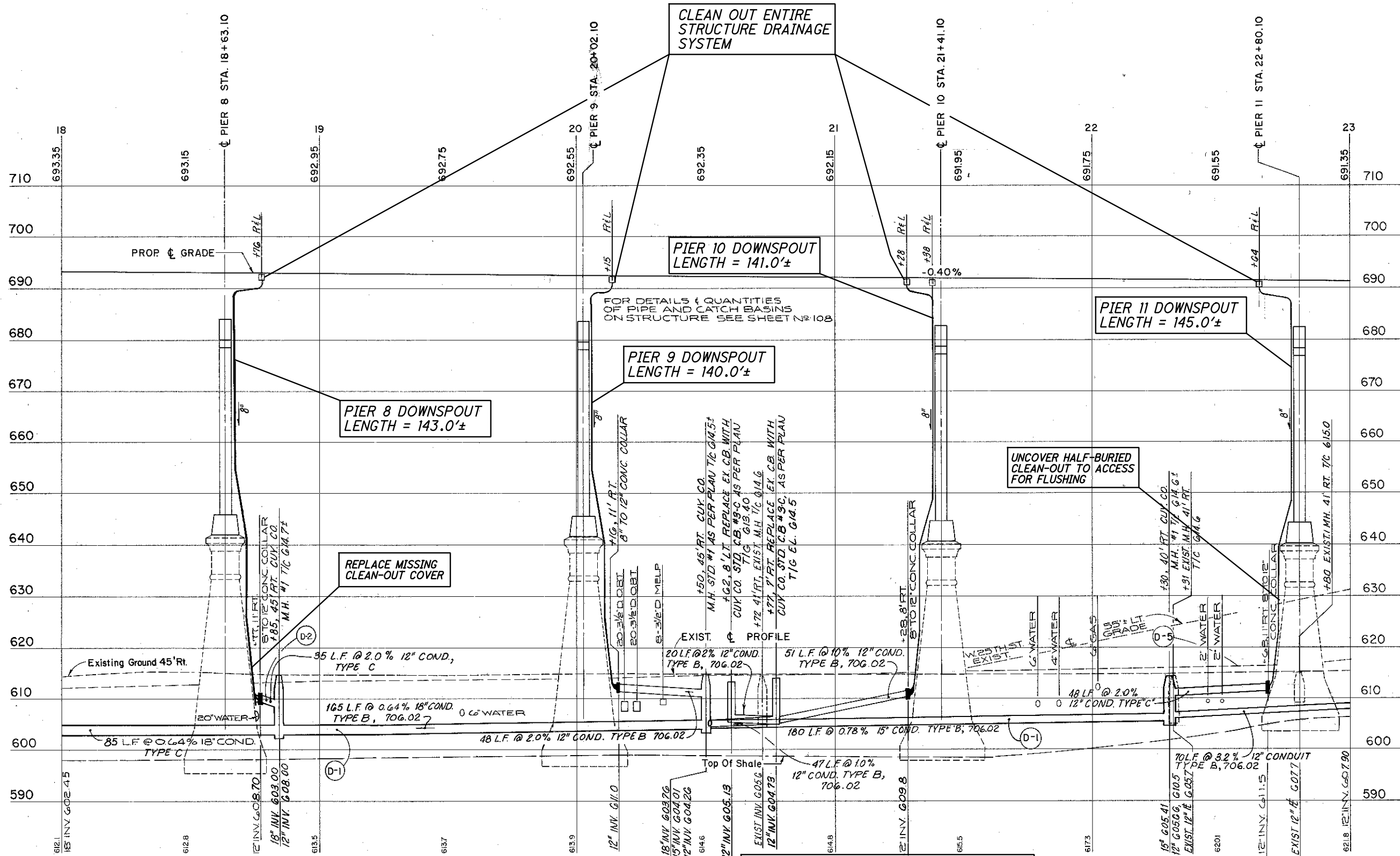
- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
 3. FOR TYPICAL STRUCTURE DRAINAGE DETAILS SEE SHEET 39/40.
 4. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

BRIDGE DRAINAGE REPAIRS: SEE GENERAL NOTES ON SHEET 4/40 FOR ADDITIONAL INFORMATION REGARDING THE BRIDGE DRAINAGE REPAIRS.



- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
 3. FOR TYPICAL STRUCTURE DRAINAGE DETAILS SEE SHEET 39/40.
 4. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

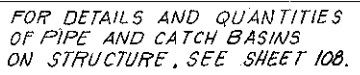
BRIDGE DRAINAGE REPAIRS: SEE GENERAL NOTES ON SHEET 4/40 FOR ADDITIONAL INFORMATION REGARDING THE BRIDGE DRAINAGE REPAIRS.



NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR TYPICAL STRUCTURE DRAINAGE DETAILS SEE SHEET 39/40.
4. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

BRIDGE DRAINAGE REPAIRS: SEE GENERAL NOTES ON SHEET 4/40 FOR ADDITIONAL INFORMATION REGARDING THE BRIDGE DRAINAGE REPAIRS.



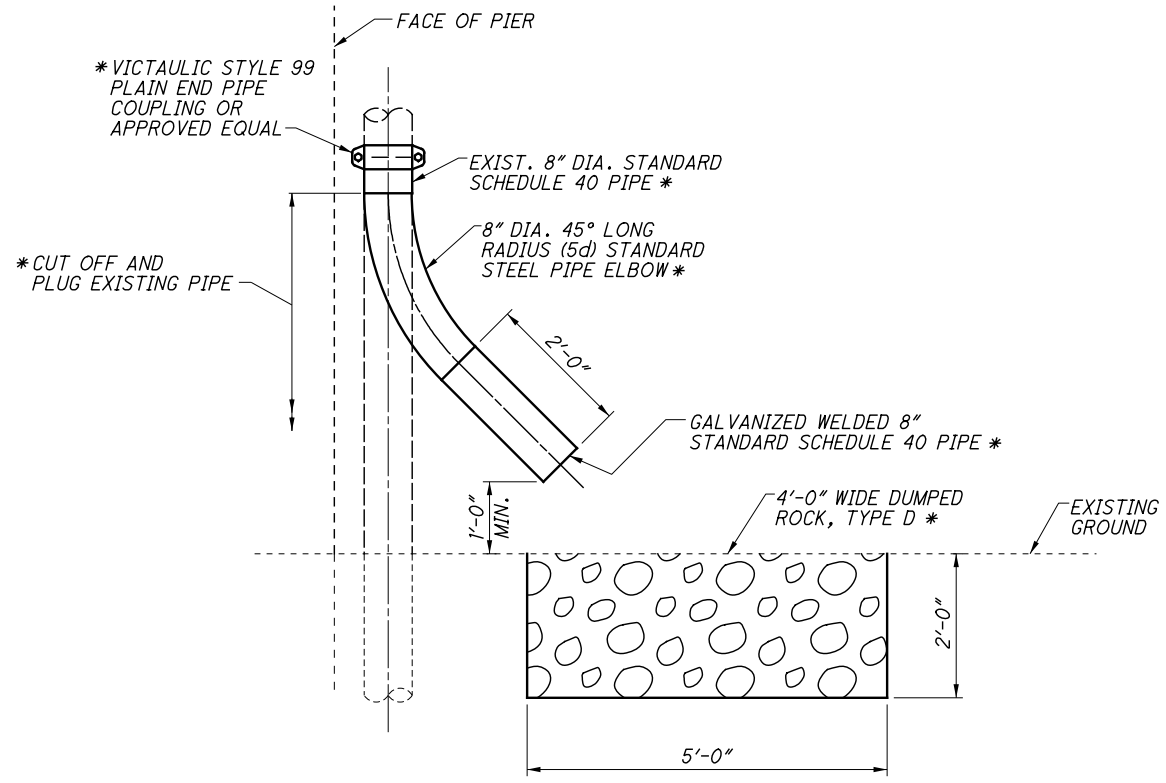
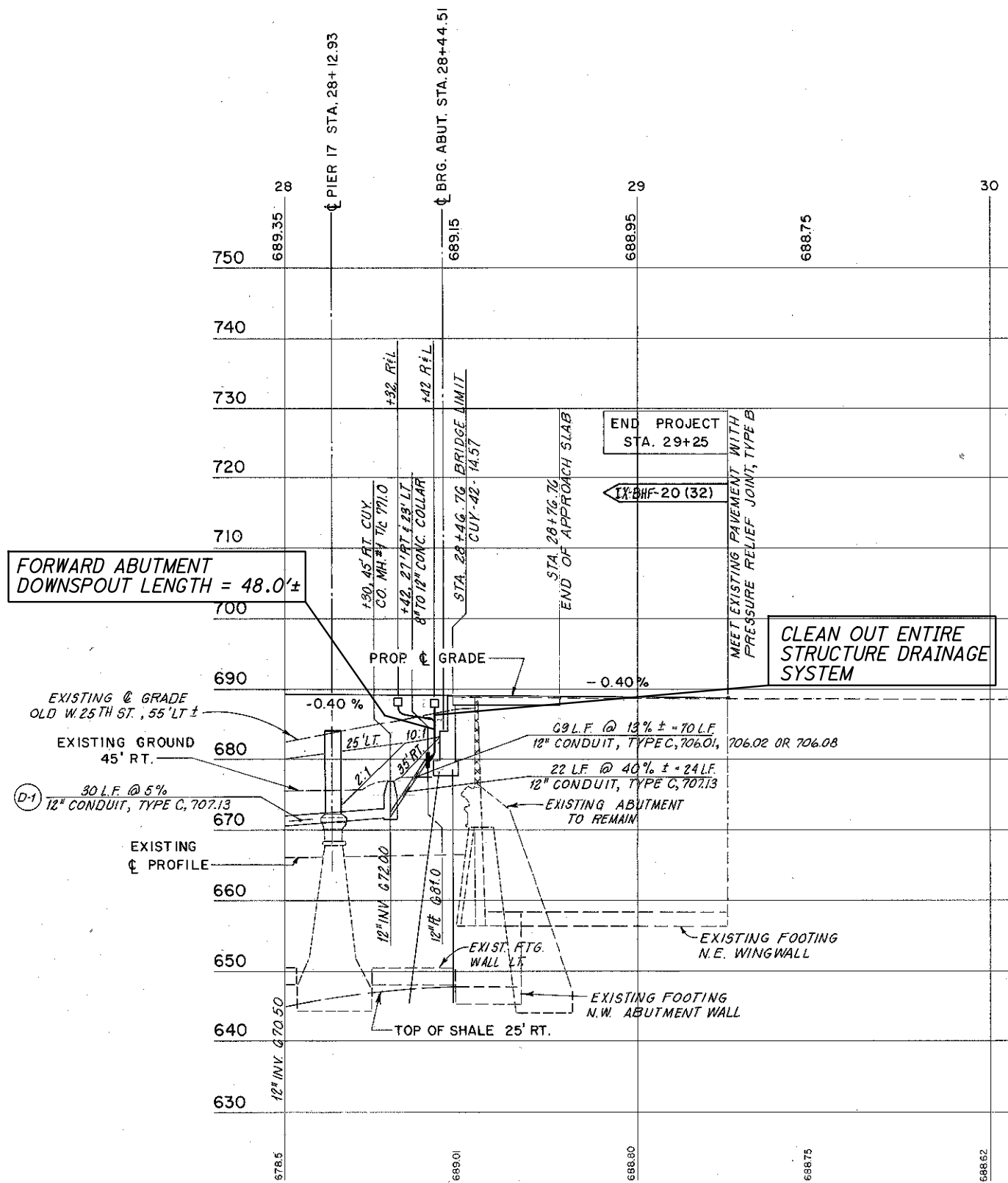
1. DETAILS ON THIS SHEET ARE TAKEN FROM
EXISTING PLANS AND SHOULD BE USED FOR
INFORMATIONAL PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED
IN THE STRUCTURE DATA TABLE, FRAMED
TEXT, AND/OR DESCRIBED IN THE GENERAL
NOTES.

3. FOR TYPICAL STRUCTURE DRAINAGE DETAILS
SEE SHEET 39/40.

4. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

BRIDGE DRAINAGE REPAIRS: SEE GENERAL NOTES ON SHEET 4/40 FOR ADDITIONAL INFORMATION REGARDING THE BRIDGE DRAINAGE REPAIRS.



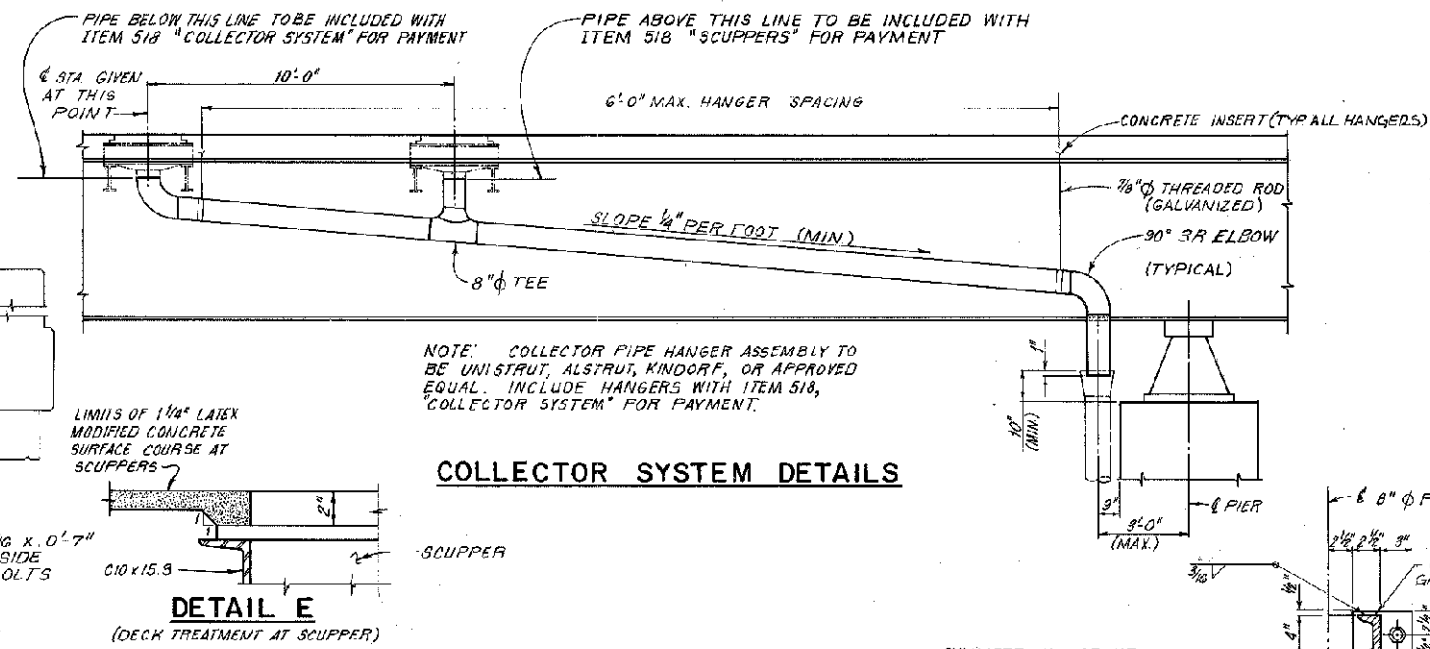
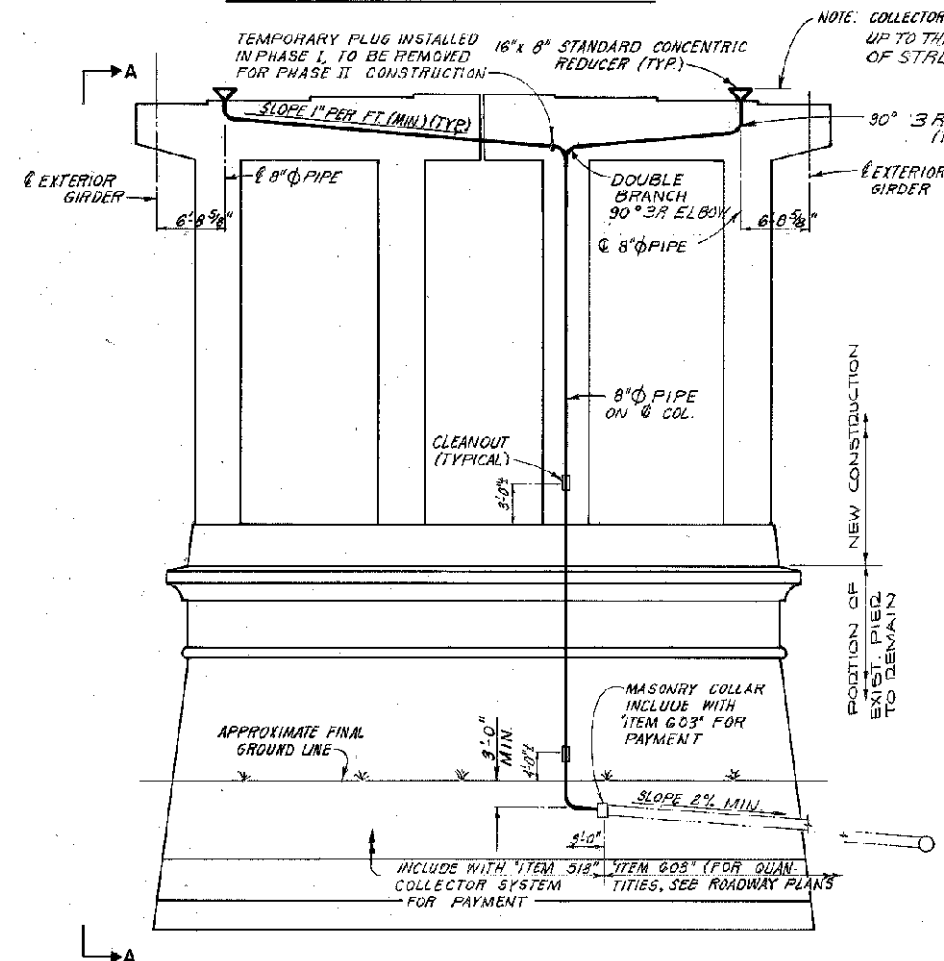
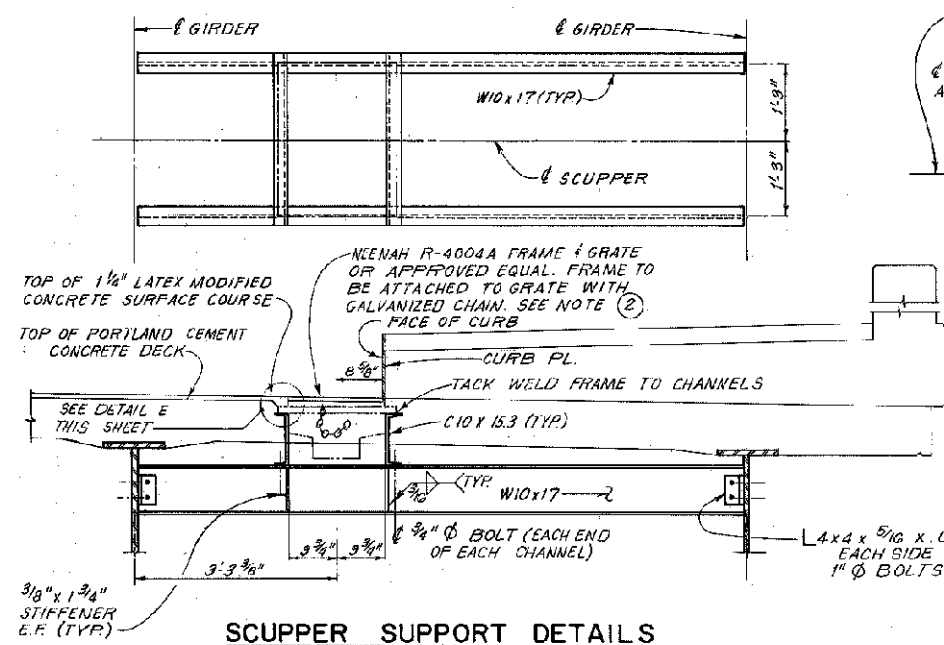
ITEM 518 - DOWNSPOUT MODIFICATION

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
 3. FOR TYPICAL STRUCTURE DRAINAGE DETAILS SEE SHEET 39/40.
 4. FOR ESTIMATED QUANTITIES SEE SHEET 5/40.

LEGEND

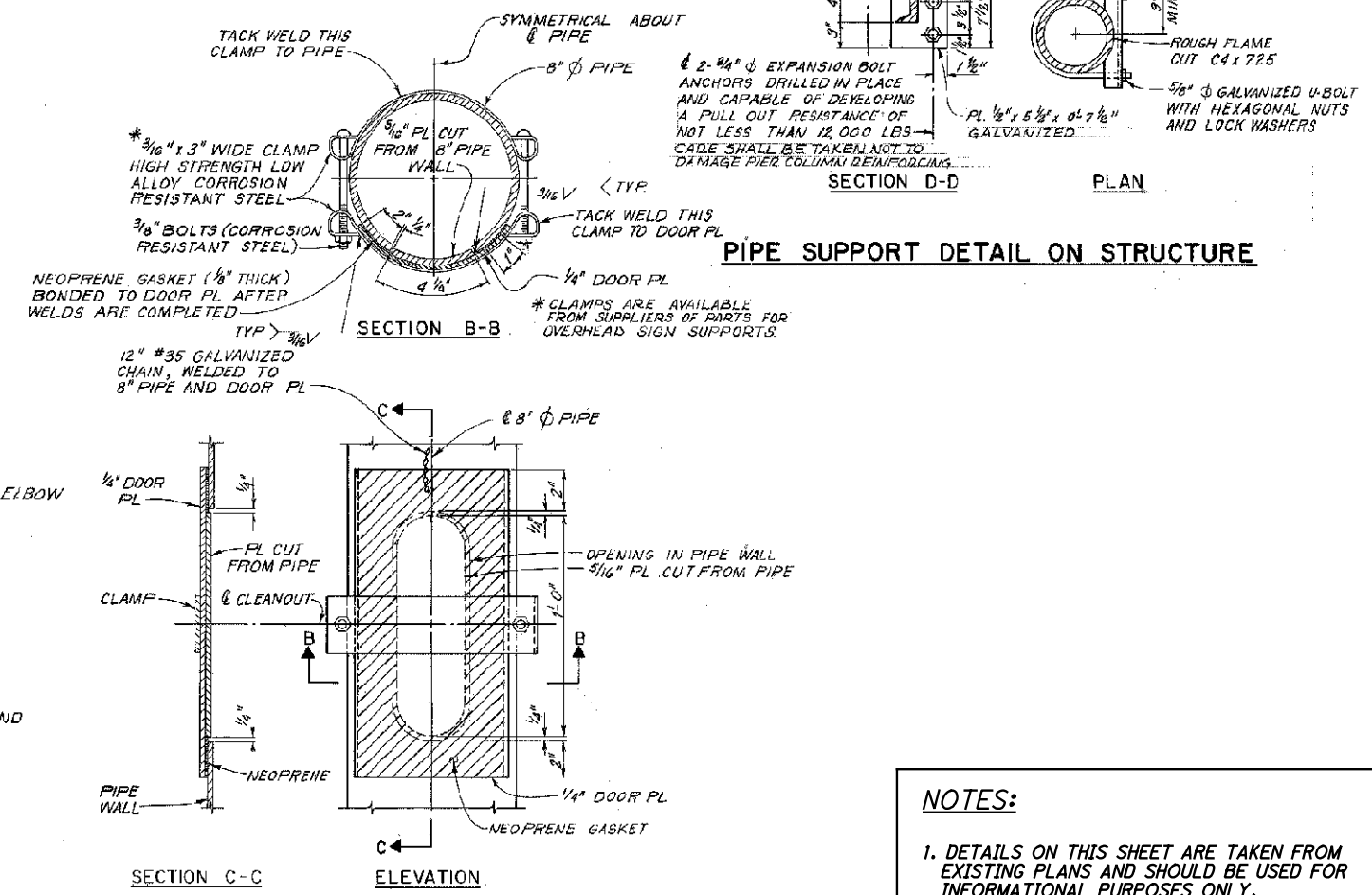
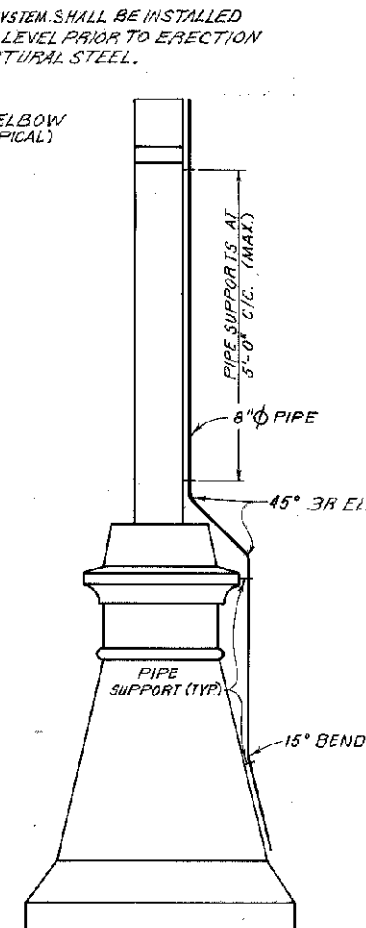
* TO BE INCLUDED WITH ITEM 518 - DOWNSPOUT MODIFICATION FOR PAYMENT.

BRIDGE DRAINAGE REPAIRS: SEE GENERAL NOTES ON SHEET 4/40 FOR ADDITIONAL INFORMATION REGARDING THE BRIDGE DRAINAGE REPAIRS.



STA. 12+21	STA. 21+58
STA. 13+25	STA. 22+64
STA. 13+35	STA. 23+82
STA. 14+35	STA. 23+92
STA. 15+72	STA. 25+34
STA. 17+11	STA. 26+14
STA. 17+21	STA. 26+24
STA. 18+76	STA. 27+20
STA. 19+89	STA. 28+32
STA. 21+28	STA. 28+42

A SCUPPER SHALL BE PLACED ON BOTH SIDES OF THE BRIDGE AT EACH OF THE ABOVE STATIONS.



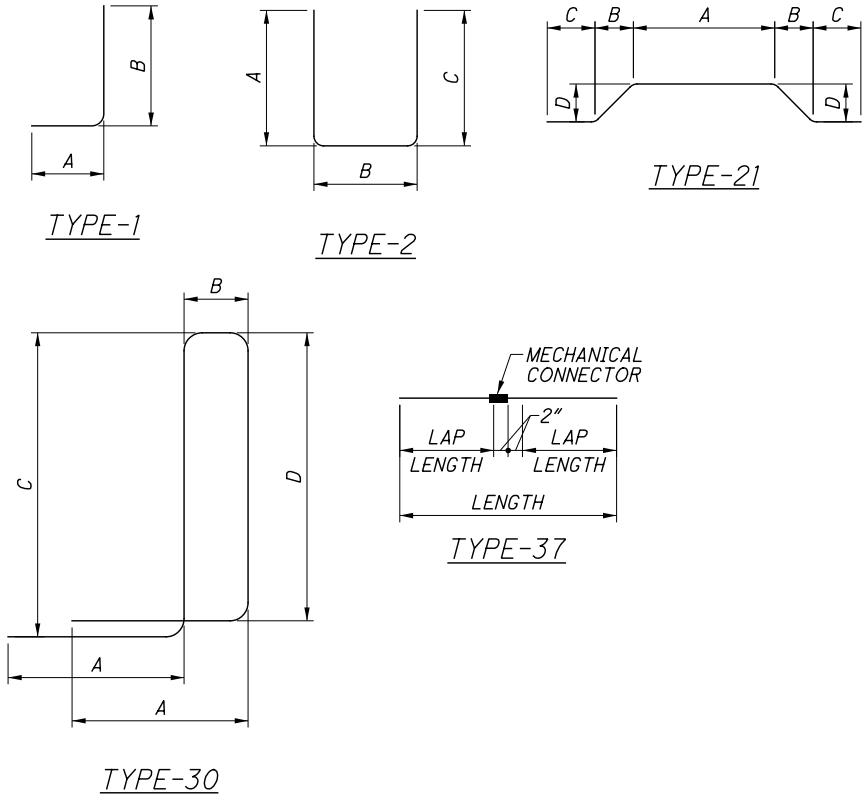
- NOTES:
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
 2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
 3. THE QUANTITY OF 8" GALVANIZED STEEL DOWNSPOUT FROM EXISTING PLANS IS APPROXIMATELY 1800 L.F. SEE SHEETS THRU [38/40] FOR LENGTH OF PIPE AT EACH SUBSTRUCTURE UNIT. [34/40]
 4. FOR ESTIMATED QUANTITIES SEE SHEET [5/40].

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS									
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC			
ABUTMENTS														CALCULATED JLS		DATE 03/21
														CHECKED dhf		DATE 06/21
A501	4	4	8	4'-10"	40	37										
A502	4		4	36'-10"	154	STR										
A503	8		8	24'-0"	200	STR										
A504	2		2	8'-10"	18	STR										
A505	2	1	3	7'-7"	24	STR										
A506	2		2	9'-6"	20	STR										
A507	1		1	8'-2"	9	STR										
A508	6	6	12	8'-10"	111	30	1'-6"	0'-8"	2'-11"	2'-9"						
A509		8	8	34'-8"	289	STR										
A510		4	4	8'-8"	36	STR										
TOTAL					901											

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE JOINTS											CALCULATED CHECKED	JLS dhf	DATE 03/21 DATE 06/21
S401	304	244	548	5'-1"	1861	2	2'-4"	0'-8"	2'-4"				
S402	15		15	4'-9"	48	2	1'-4"	2'-4"	1'-4"				
S403	20	8	28	3'-9"	70	1	1'-6"	2'-4"	1'-6"				
S404		16	16	4'-7"	49	2	1'-3"	2'-4"	1'-3"				
S405		6	6	5'-0"	20	2	1'-5"	2'-4"	1'-5"				
S501	8	8	16	9'-4"	156	30	1'-6"	0'-8"	3'-2"	3'-0"			
S502	4	8	12	8'-7"	107	STR							
S503	4		4	9'-3"	39	STR							
S504	8	8	16	3'-5"	57	2	1'-0"	1'-8"	1'-0"				
S701	10	10	20	8'-2"	334	37							
S702	10		10	36'-10"	753	STR							
S703	20		20	24'-7"	1005	STR							
S704		20	20	34'-8"	1417	STR							
TOTAL					5916								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS												
	TOTAL				A	B	C	D	E	R	INC						
RAILING														CALCULATED CHECKED		JLS dhf	DATE 03/21 DATE 06/21
R501	44	30'-0"	1377	STR													
R502	4	31'-9"	132	STR													
R503	80	5'-5"	452	STR													
R504	48	17'-0"	851	STR													
R505	4	16'-8"	70	STR													
R506	3	8'-1"	25	21	1'-4"	2'-1"	0'-6"	2'-1"									
R507	4	5'-9"	24	2	1'-10"	2'-4"	1'-10"										
R508	49	3'-11"	200	2	1'-9"	0'-8"	1'-9"										
TOTAL			3131														



NOTES

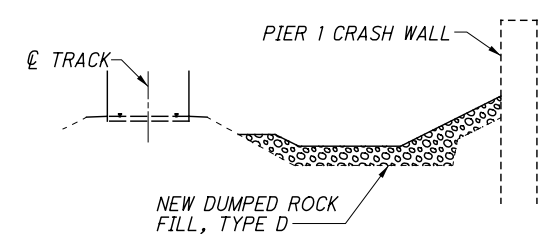
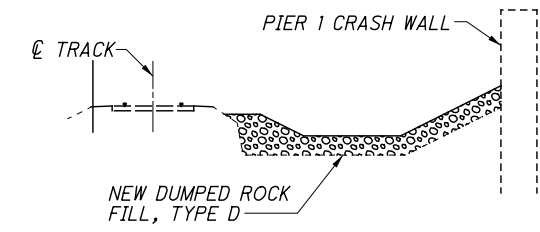
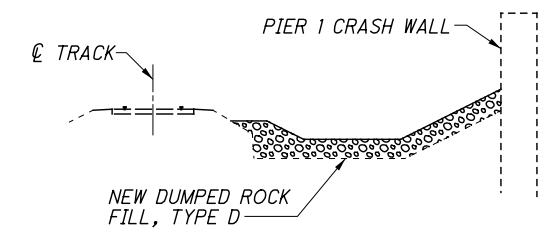
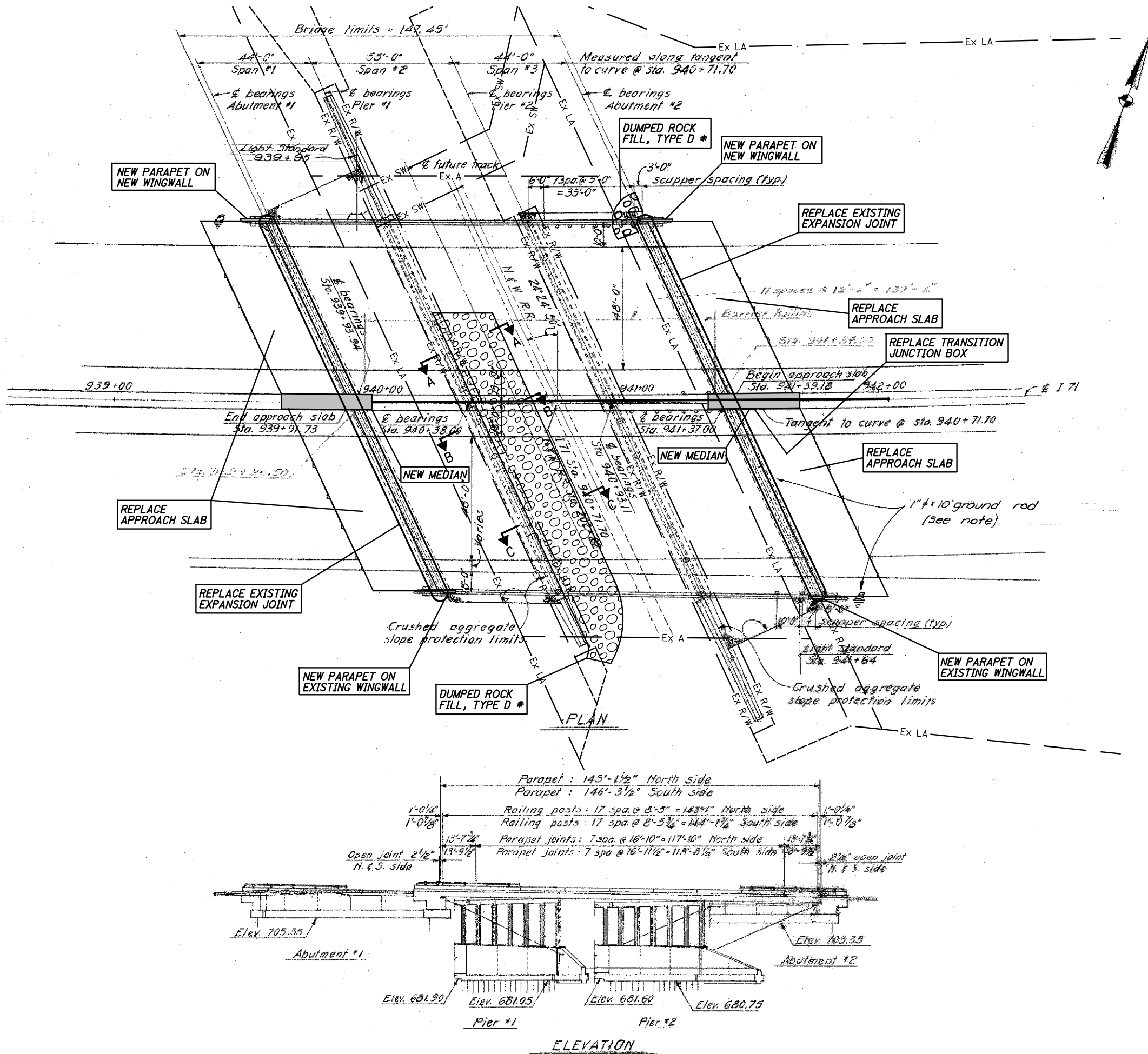
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE DESIGNATION, THE REMAINING DIGITS STATE THE SEQUENCE NUMBER.

EXAMPLE: A501
A = LOCATION OF THE BAR IN ABUTMENT
5 = BAR SIZE DESIGNATION
01 = SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL TO BE EPOXY COATED.

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LEGEND

* A QUANTITY OF 280 C.Y. OF DUMPED ROCK FILL HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR ITEM 601 - DUMPED ROCK FILL, TYPE D, TO BE PLACED AT THE DIRECTION OF THE ENGINEER.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/33.

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REFER TO STANDARD BRIDGE DRAWINGS

AS-1-15 (REVISED 7-17-2015)
BR-1-13 (REVISED 1-17-2014)
EXJ-5-93 (REVISED 1-19-2018)
PCB-91 (REVISED 7-17-2020)

REFER TO SUPPLEMENTAL SPECIFICATION

SS 800 (REVISED 7-16-2021)

DESIGN DATA

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 YIELD STRENGTH 50 KSI

CONCRETE CLASS QC SCC - COMPRESSIVE STRENGTH 4.5 KSI (BACKWALL AND SUPERSTRUCTURE DECK)

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (PARAPETS AND MEDIANS)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (ABUTMENTS AND WINGWALLS)

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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:

OHIO DEPARTMENT OF TRANSPORTATION

DISTRICT 12 OFFICE

5500 TRANSPORTATION BOULEVARD

GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE

[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

DESCRIPTION OF WORK:

REMOVE EXPANSION JOINTS, BACKWALLS, APPROACH SLABS, AND PORTIONS OF SUPERSTRUCTURE SLAB, MEDIAN AND PARAPET RAILING AT THE JOINTS.

REMOVE PORTIONS OF ABUTMENT WINGWALLS.

RECONSTRUCT PORTIONS OF THE ABUTMENT WINGWALLS AND PARAPET RAILINGS.

CONSTRUCT NEW EXPANSION JOINTS, BACKWALLS, APPROACH SLABS (WITH MEDIAN PARAPETS), AND PORTION OF SUPERSTRUCTURE SLAB, AND PARAPET RAILING AT THE JOINTS.

SEAL NEW AND EXISTING PORTIONS OF PARAPETS AND MEDIANS, AND ALL REBUILT ABUTMENT AND WINGWALL CONCRETE SURFACE AREAS AT EACH CORNER.

REPLACE 5’ OF APPROACH PAVEMENT BEYOND THE APPROACH SLABS.

REPAIR EROSION ALONG THE NORTHBOUND PORTION OF PIER 1 AND AT THE LEFT CORNER OF FORWARD ABUTMENT WITH DUMPED ROCK FILL.

REPLACE APPROACH GUARDRAIL.

REPLACE UNDERDRAINS ON APPROACHES.

REPLACE FENCE AT BRIDGE CORNERS.

REPLACE TRANSITION JUNCTION BOX IN FORWARD APPROACH SLAB MEDIAN BARRIER.

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

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 IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. 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.

ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS)

60 POUNDS OF STEEL FIBERS (ASTM C1116) SHALL BE ADDED PER CUBIC YARD. THE STEEL FIBERS WILL BE ASTM A 820 MATERIAL WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 120,000 PSI. THE LENGTH WILL BE 2 INCHES +/- 5 PERCENT. THE AVERAGE EQUIVALENT DIAMETER WILL BE 0.899 mm WITH AN ASPECT RATIO OF 57 +/- 15 PERCENT. THE MATERIAL WILL BE CONTINUOUSLY DEFORMED CIRCULAR SEGMENT, CLEAN AND FREE OF RUST, OIL AND DELETERIOUS MATERIALS AND CORRUGATED FULL LENGTH FOR INCREASED MECHANICAL ANCHORAGE.

MIX CONCRETE IN A CENTRAL MIXING PLANT OR BY A READY MIXED CONCRETE TRUCK CAPABLE OF DISCHARGING PLASTICIZED CONCRETE HAVING A MAXIMUM WATER-CEMENT RATIO OF 0.40. MIXING EQUIPMENT SHALL MEET THE REQUIREMENTS OF 499.05B. INTRODUCE ADMIXTURES AND FIBERS INTO THE CONCRETE SO THAT THEY SHALL BE DISBURSED THROUGHOUT THE ENTIRE LOAD. BATCH PLANTS SHALL MEET THE REQUIRMENTS OF 499.05A AND BE LOCATED SUCH THAT THE MAXIMUM TIME REQUIRED FROM START OF MIXING TO COMPLETION OF CONCRETE DISCHARGE AT THE WORK SITE SHALL NOT EXCEED 90 MINUTES.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

SEAL THE REBUILT AND EXISTING PARAPETS AND MEDIAN BARRIER, AND ALL REBUILT ABUTMENT AND WINGWALL CONCRETE SURFACE AREAS AT EACH CORNER. THE EPOXY-URETHANE SHALL BE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 17778, OR AS CLOSELY MATCHES THE SEALER COLOR OF THE EXISTING CONCRETE (LIGHT GRAY TYPICAL COLOR).

ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN

THIS ITEM IS INCLUDED FOR THE REMOVAL OF EXISTING COATINGS FROM EXISTING CONCRETE SURFACES TO BE SEALED.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15”), AS PER PLAN

THE CONTRACTOR SHALL SURVEY THE LOCATION AND ELEVATIONS OF THE EXISTING APPROACH SLABS AND MEDIAN BARRIERS AND CONSTRUCT THE NEW APPROACH SLABS AT A SIMILAR CONFIGURATION TO PROVIDE A SMOOTH TRANSITION WITH THE APPROACH PAVEMENT TO THE EXISTING DECK SURFACE AND MEDIAN BARRIERS TO THE APPROACH BARRIERS. SUBMIT THIS EXISTING DATA AND PROPOSED APPROACH SLAB LAYOUT TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.

92
123

2 / 33

CUY-071-16.40/ VAR REPAIR
PID No. 111603

GENERAL NOTES - LOCATION 4
BRIDGE NO. CUY-71-1640
IR 71 OVER NORFOLK SOUTHERN RAILWAY

DESIGNED
BLN

CHECKED
dht

DRAWN
JLS

REVIEWED
DLR

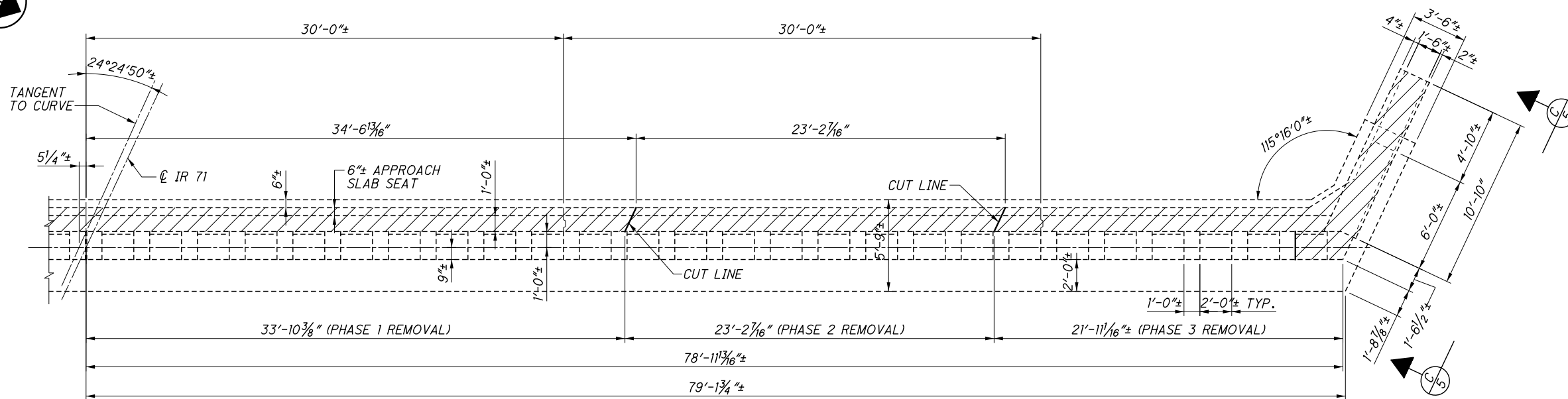
DATE
06/2021

STRUCTURE FILE NUMBER
1805223

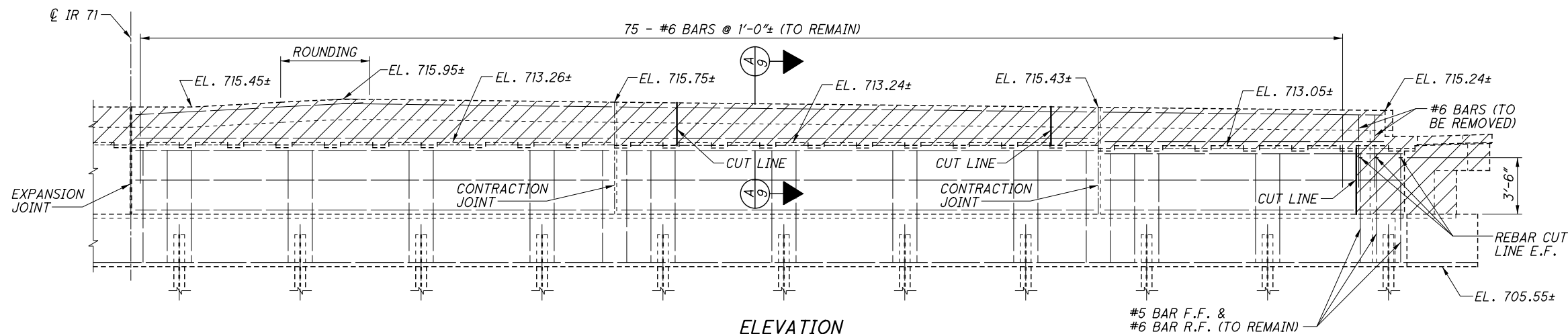
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

ESTIMATED QUANTITIES							
				CALCULATED <u>DLR</u> DATED <u>07/21</u>			
				CHECKED <u>dht</u> DATED <u>07/21</u>			
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	GEN'L REF. SHEET /
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			2/33
202	22900	806	SY	APPROACH SLAB REMOVED			806
202	23500	392	SY	WEARING COURSE REMOVED			392
503	21300	LS		UNCLASSIFIED EXCAVATION			LS
509	10000	21,137	LB	EPOXY COATED REINFORCING STEEL	8831	12,306	
510	10000	1152	EACH	DOWEL HOLES WITH NON-SHRINK, NON-METALLIC GROUT	836	316	
511	34410	9	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	3	6	
511	34417	67	CY	CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS)	25	42	2/33
511	45710	15	CY	CLASS QC1 CONCRETE, ABUTMENT		15	
512	10101	577	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	459	60	58 2/33
512	74001	436	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	433	3	2/33
516	11210	319	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	319		
516	13200	21	SF	1/2" PREFORMED EXPANSION JOINT FILLER	21		
516	13600	348	SF	1" PREFORMED EXPANSION JOINT FILLER	348		
516	13900	19	SF	2" PREFORMED EXPANSION JOINT FILLER	19		
516	31010	41	FT	2" DEEP JOINT SEALER	41		
518	21200	40	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		40	
518	40000	345	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		345	
518	40010	39	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		39	
526	25011	800	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN			800 2/33
601	28000	280	CY	DUMPED ROCK FILL, TYPE D			280

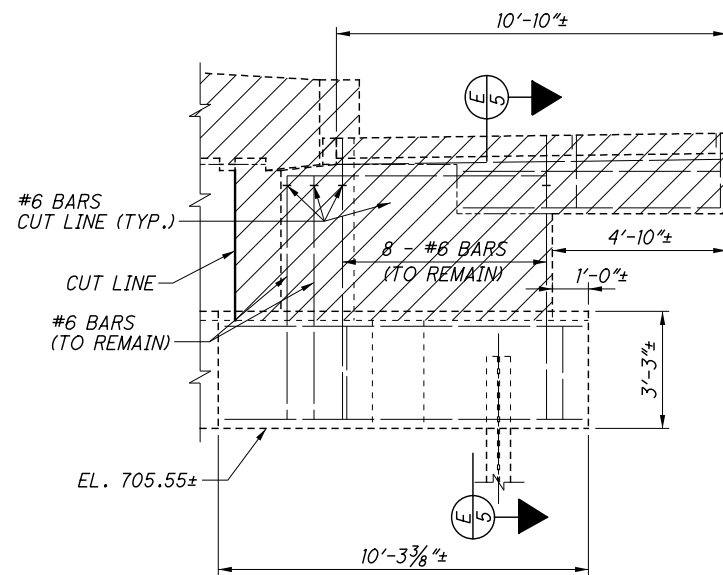
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640RE002.dgn 6/24/2021 7:16:42 AM jsmith



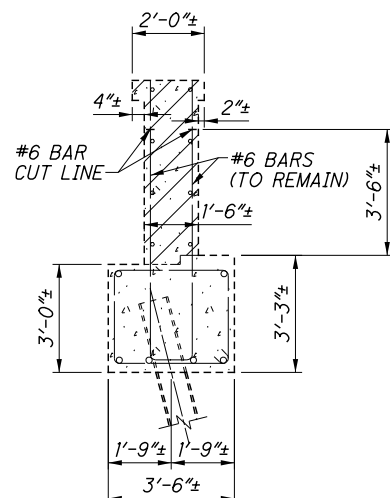
PLAN - REAR ABUTMENT



ELEVATION



VIEW C-C



SECTION E-E

LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

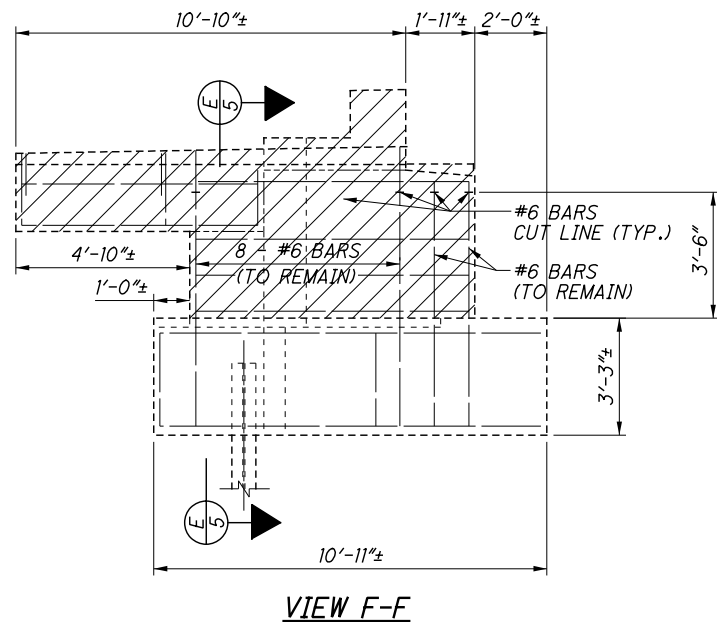
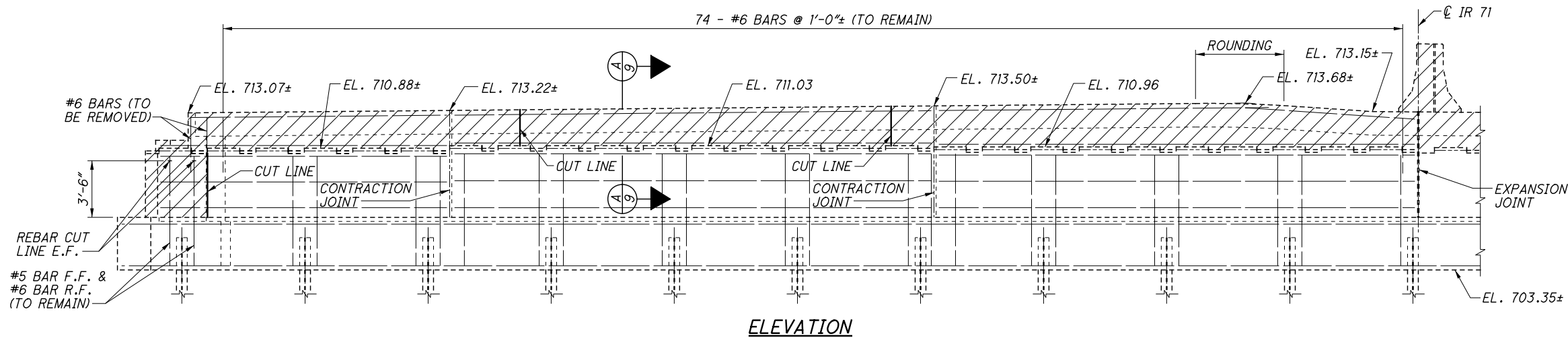
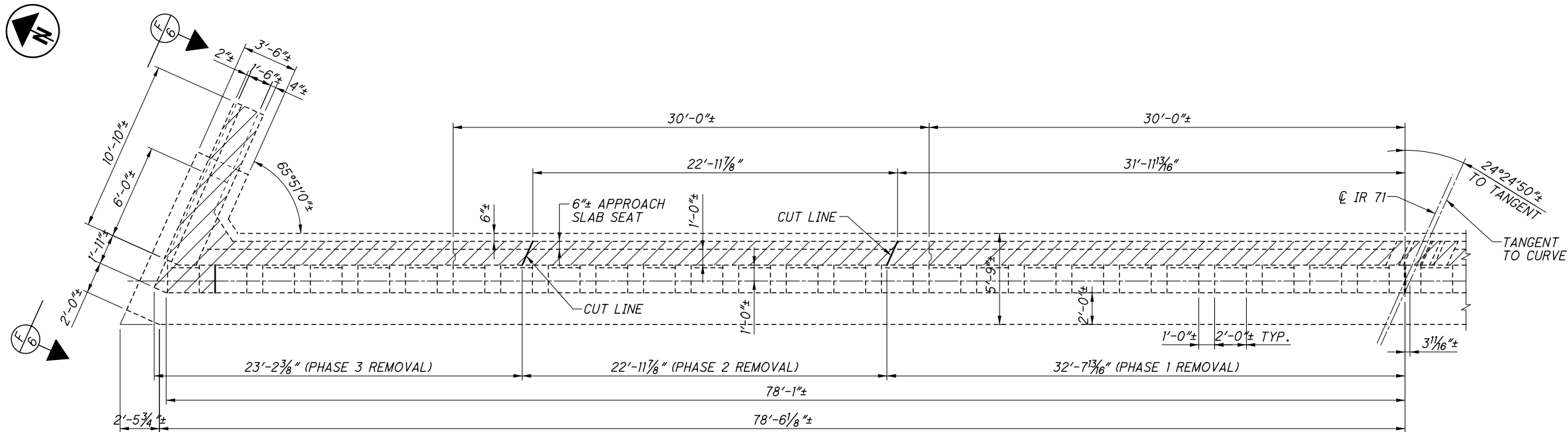
NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

NOTATION: R.F. - REAR FACE
F.F. - FRONT FACE
E.F. - EACH FACE

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640RE003.dgn 6/23/2021 10:03:29 AM jsmith



LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

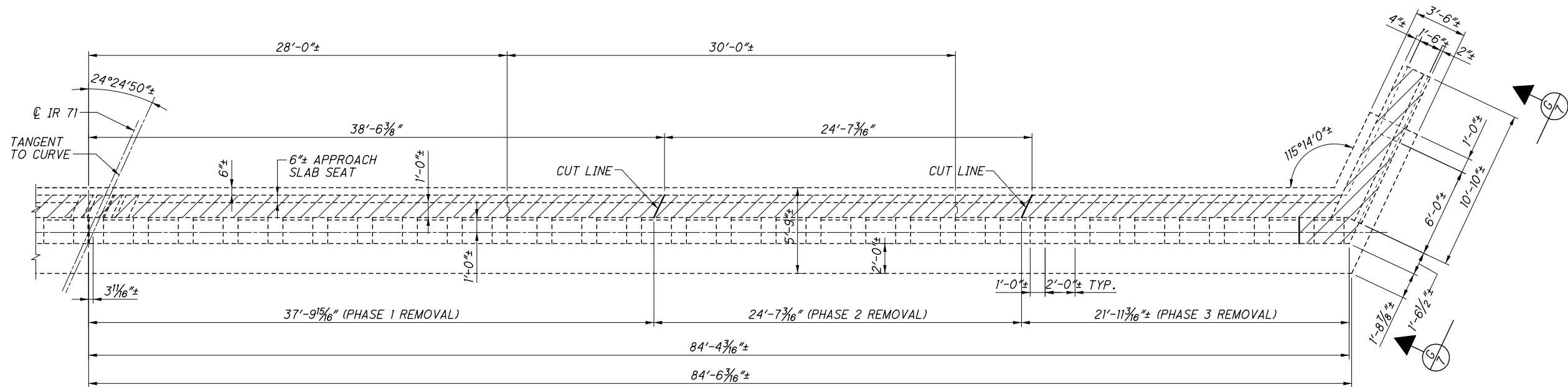
NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

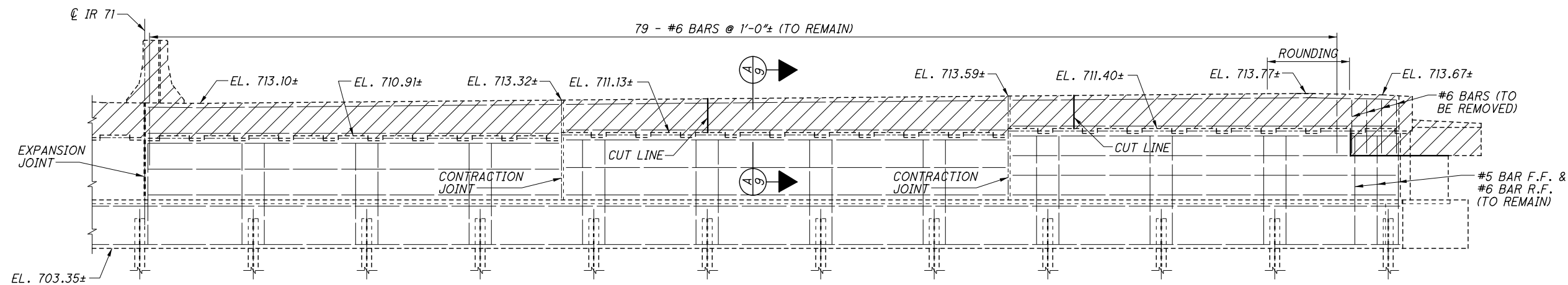
ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

NOTATION: F.F. - FRONT FACE
R.F. - REAR FACE
E.F. - REAR FACE

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PLAN - FORWARD ABUTMENT



ELEVATION

LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

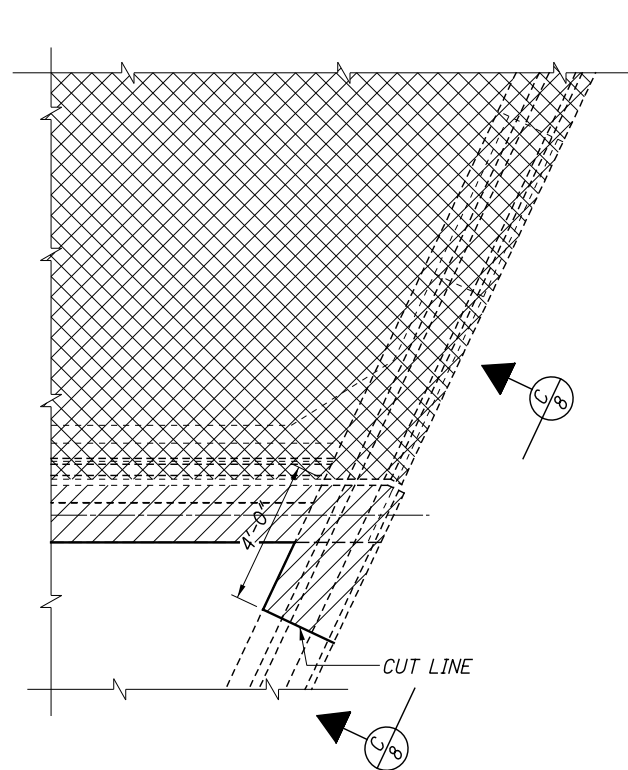
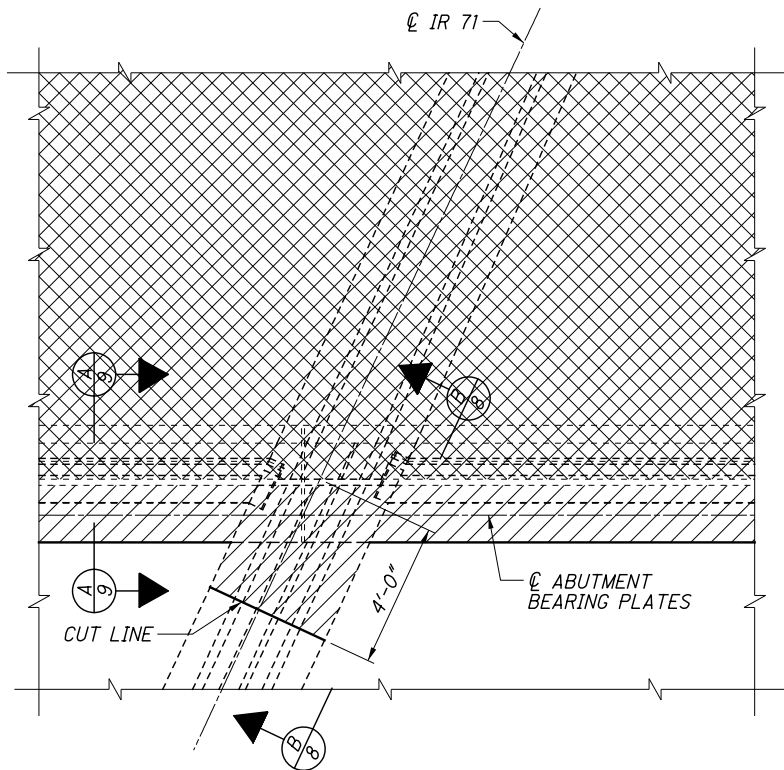
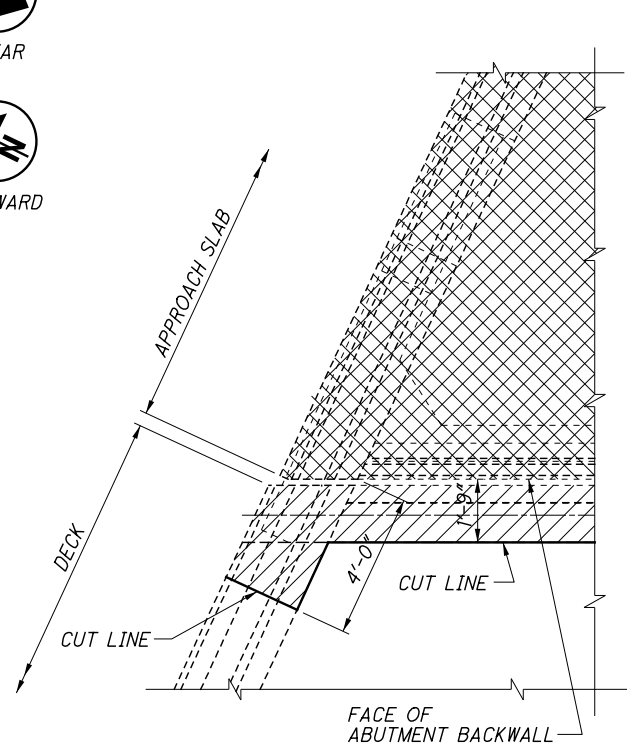
NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

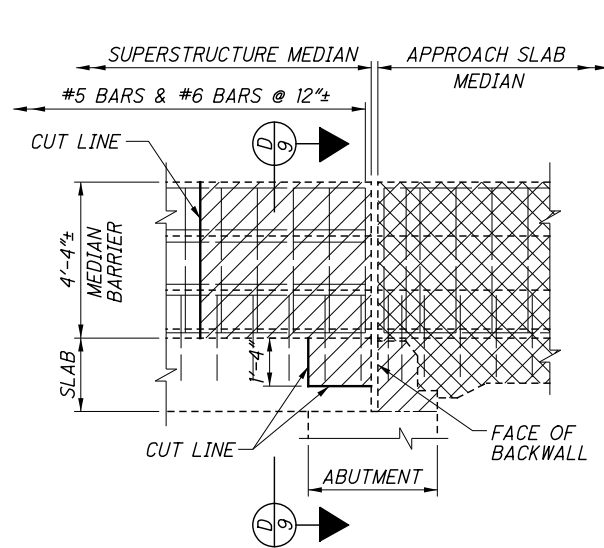
ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

NOTATION: F.F. - FRONT FACE
R.F. - REAR FACE

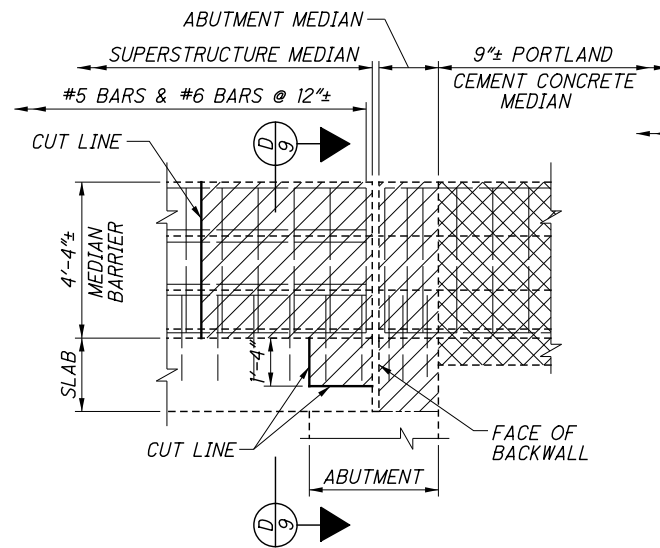
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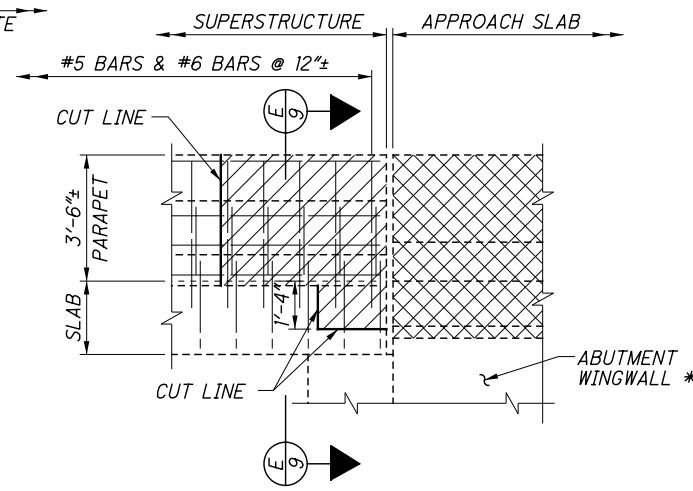
TYPICAL REMOVAL PLAN AT ABUTMENT JOINTS



SECTION B-B
(REAR ABUTMENT)



SECTION B-B
(FORWARD ABUTMENT)



VIEW C-C

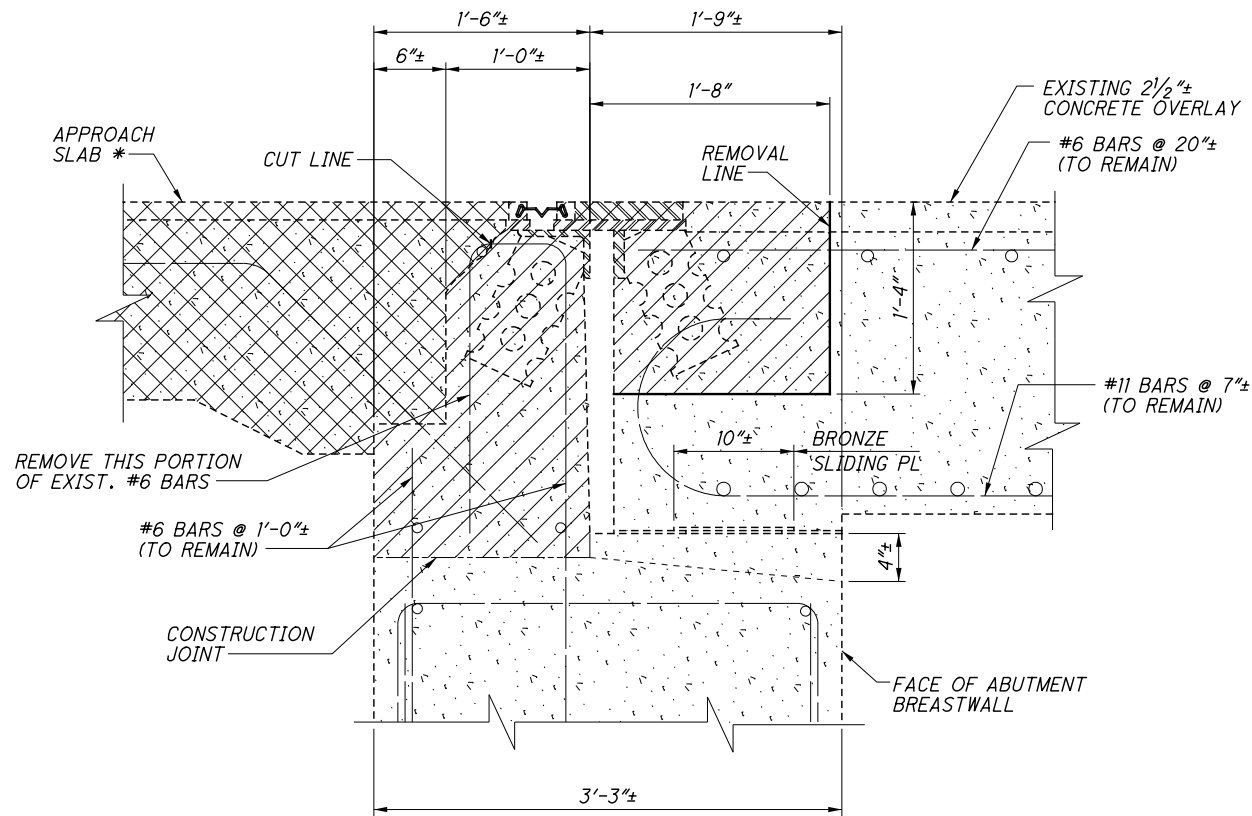
LEGEND

- INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED, AND ITEM 202 - WEARING COURSE REMOVED.
- * SOME PORTIONS OF ABUTMENT WINGWALLS ARE BEING REMOVED. SEE ABUTMENT REMOVAL DETAILS FOR MORE INFORMATION.

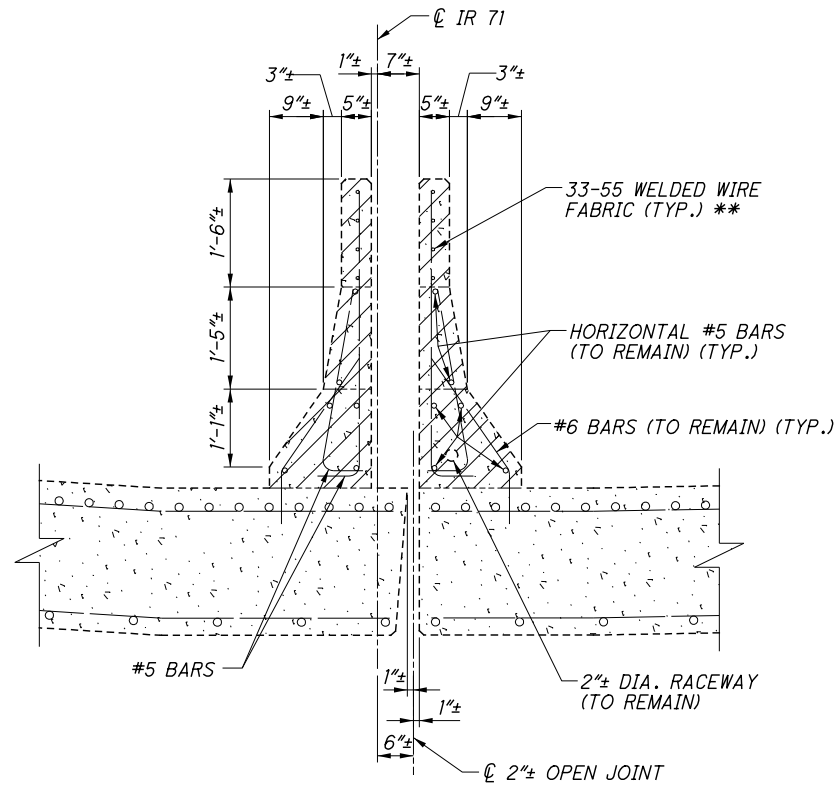
NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
ABUTMENT REMOVAL DETAILS: SEE SHEETS [4/33] THRU [7/33].
ABUTMENT JOINT REMOVAL SECTION: SEE SHEET [9/33].

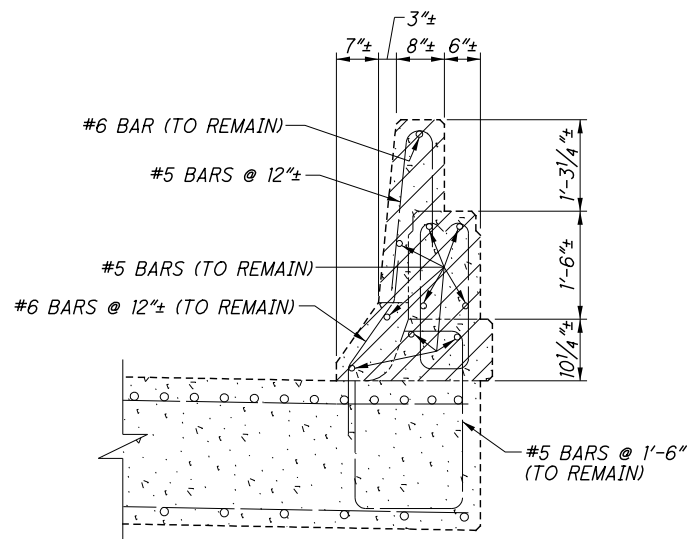
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SECTION A-A



SECTION D-D



SECTION E-E

LEGEND

INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

INDICATES REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED, AND ITEM 202 - WEARING COURSE REMOVED.

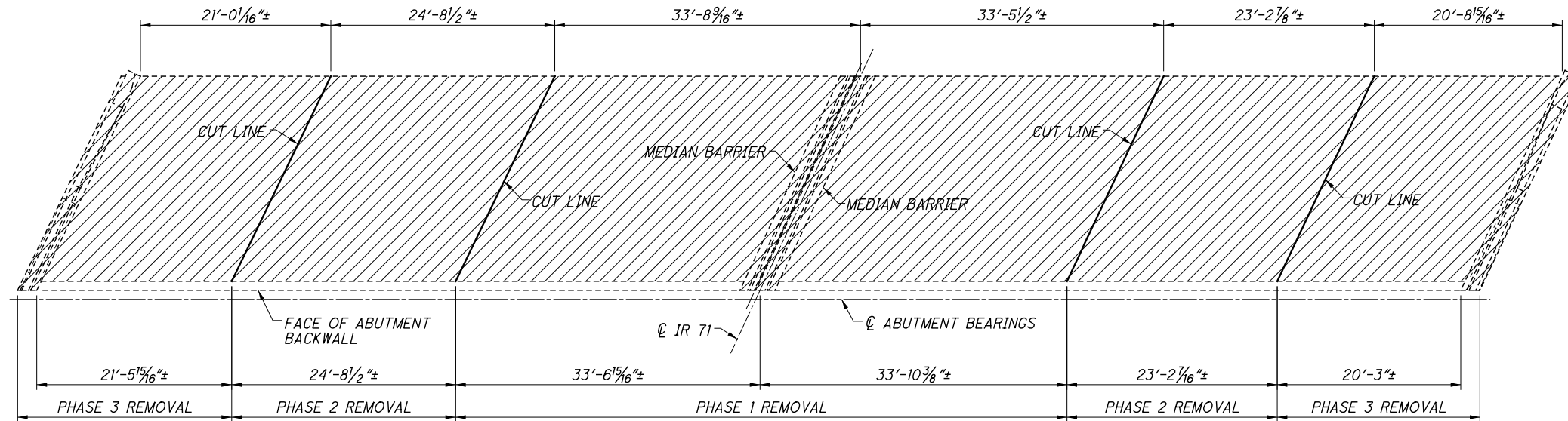
* THE REAR APPROACH SLAB HAS A CONCRETE WEARING SURFACE AND THE FORWARD APPROACH SLAB HAS AN ASPHALT WEARING SURFACE.

** LEAVE 1'-0" OF WELDED WIRE FABRIC FOR ATTACHMENT TO NEW REINFORCING STEEL (TYP.).

NOTES

SECTION A-A: FOR LOCATION SEE SHEETS 4/33 THRU 7/33.

SECTIONS D-D & E-E: FOR LOCATIONS SEE SHEET 8/33.



REAR APPROACH SLAB REMOVAL PLAN


LEGEND

 INDICATES REMOVAL PER ITEM 202 -
APPROACH SLAB REMOVED.

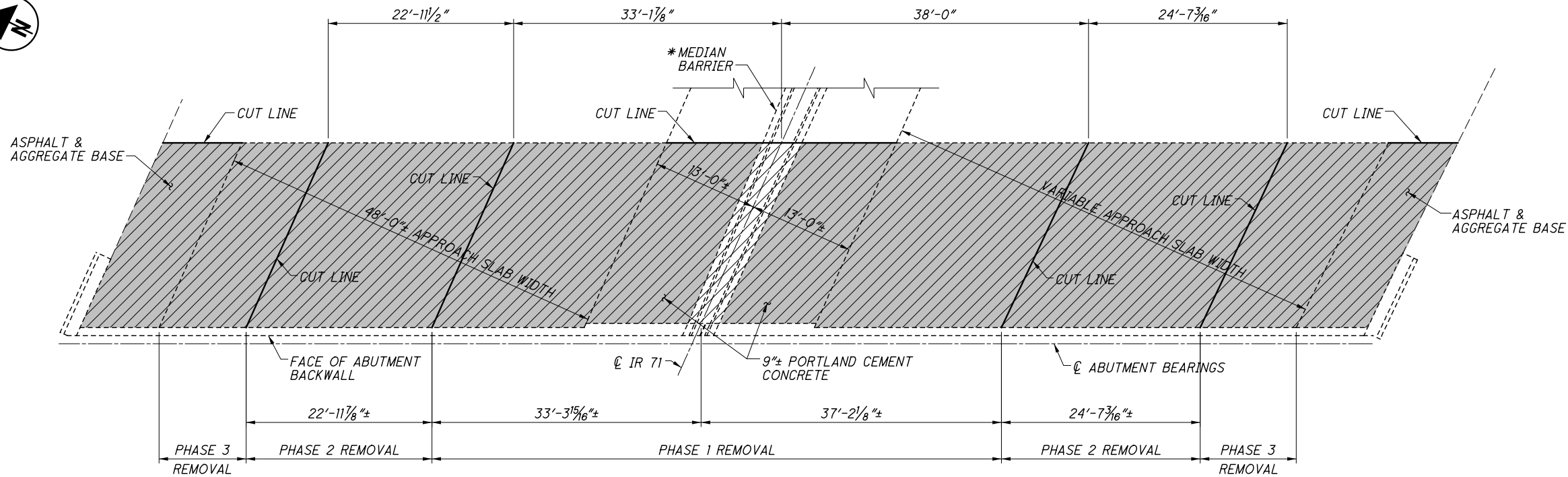
NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

ABUTMENT BACKWALL REMOVAL: SEE DETAILS ON SHEETS 4/33 & 5/33.



<div><div>100 123</div><div>10 / 33</div></div>		<div>CUY-071-16.40/ VAR REPAIR</div> <div>PID No. 111603</div>	<div>REAR APPROACH SLAB REMOVAL - LOCATION 4</div> <div>BRIDGE NO. CUY-71-1640</div> <div>IR 71 OVER NORFOLK AND SOUTHERN RAILWAY</div>	<table><tr><td>DESIGNED</td><td>DRAWN</td><td>REVIEWED</td><td>DATE</td></tr><tr><td>BLN</td><td>JLS</td><td>DLR</td><td>06/2021</td></tr><tr><td>CHECKED</td><td>REVISED</td><td>STRUCTURE FILE NUMBER</td><td></td></tr><tr><td>dht</td><td></td><td>1805223</td><td></td></tr></table>	DESIGNED	DRAWN	REVIEWED	DATE	BLN	JLS	DLR	06/2021	CHECKED	REVISED	STRUCTURE FILE NUMBER		dht		1805223		<div><div><div>RICHLAND ENGINEERING LIMITED</div><div>29 NORTH PARK STREET</div><div>MANSFIELD, OHIO 44902</div></div><div></div></div>
DESIGNED	DRAWN	REVIEWED	DATE																		
BLN	JLS	DLR	06/2021																		
CHECKED	REVISED	STRUCTURE FILE NUMBER																			
dht		1805223																			

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FORWARD APPROACH SLAB REMOVAL PLAN

LEGEND

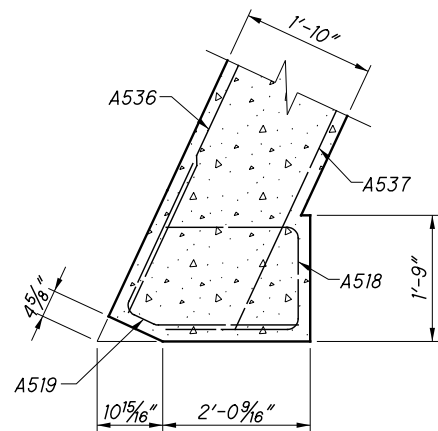
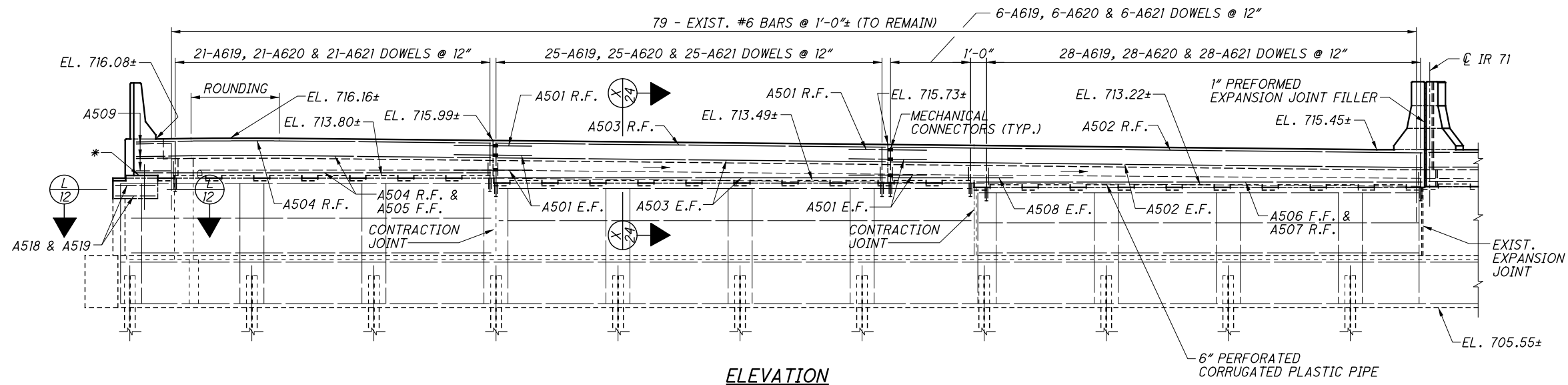
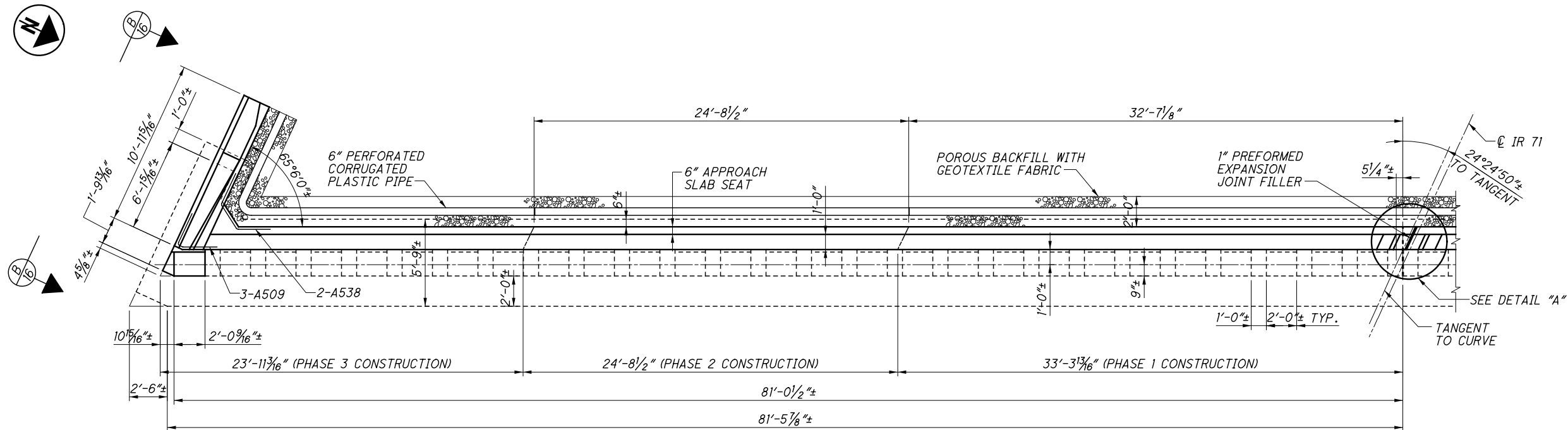
-  INDICATES REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED.
-  INDICATES REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED AND ITEM 202 - WEARING COURSE REMOVED.
- * THERE IS A POSSIBLE MEDIAN BARRIER TRANSITION ACROSS THE LENGTH OF THE APPROACH SLAB TO AN EXISTING LIGHT POLE BASE.

NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. THEY ARE ALSO BASED ON FIELD OBSERVATIONS AND THE ASSUMPTION THAT A PREVIOUS APPROACH SLAB REPLACEMENT FOR THE FORWARD APPROACH WAS NON-PERFORMED. CONTRACTOR SHALL ADJUST REMOVALS ACCORDINGLY IN ORDER TO PLACE THE NEW FORWARD APPROACH SLAB AS DETAILED IN THESE PLANS.

ABUTMENT BACKWALL REMOVAL: SEE DETAILS ON SHEETS 6/33 & 7/33.

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PLAN - REAR ABUTMENT

ELEVATION

SECTION L-L

LEGEND

* BOND BREAKER BUILDING PAPER BETWEEN THE NEW SEAT AND THE NEW SUPERSTRUCTURE JOINT CONCRETE. INCLUDE WITH ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS) FOR PAYMENT.

NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING ORIGINAL AND REHAB PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MATCH EXISTING.

REINFORCING STEEL SPLICE LENGTH SHALL BE 2'-3" FOR HORIZONTAL #5 BARS AND 3'-0" FOR VERTICAL #6 BARS.

SEALING OF CONCRETE SURFACES: SEAL THE NEW PORTIONS OF THE BREASTWALL WITH A 6" OVERLAP ONTO THE EXISTING SECTIONS. SEAL THE ENTIRE EXPOSED WINGWALLS TO THE GROUND LINE, AND SEAL THE ENTIRE LENGTH OF PARAPETS AND MEDIAN BARRIER PER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

NOTATION: F.F. - FRONT FACE
R.F. - REAR FACE
E.F. - EACH FACE

DETAIL "A": SEE SHEET 13/33.



PLAN - REAR ABUTMENT

ELEVATION

DETAIL A



SECTION K-K



SECTION M-M

LEGEND

* BOND BREAKER BUILDING PAPER BETWEEN THE NEW SEAT AND THE NEW SUPERSTRUCTURE JOINT CONCRETE. INCLUDE WITH ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS) FOR PAYMENT.

NOTES

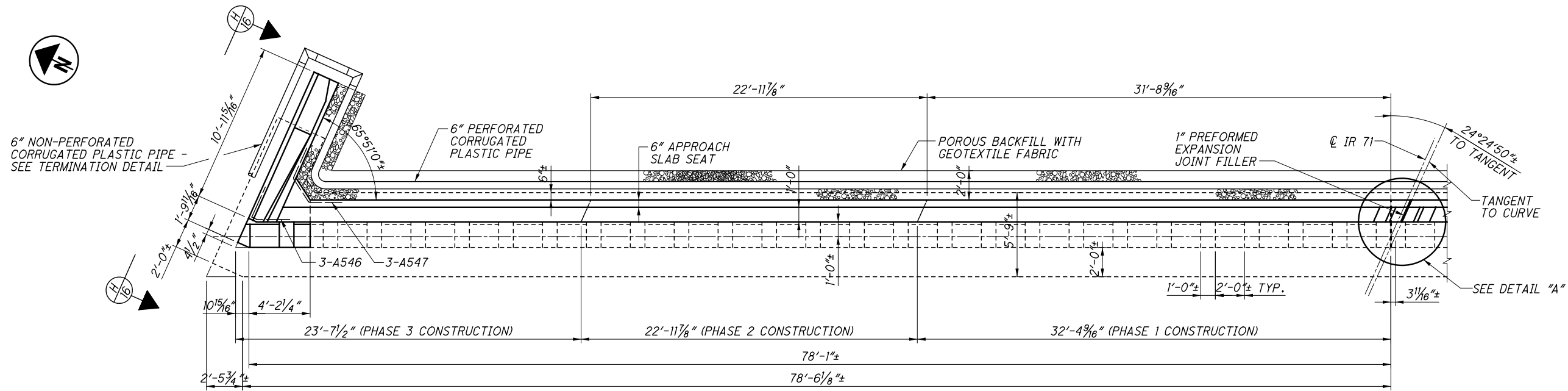
DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS
AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
CONTRACTOR SHALL MATCH EXISTING.

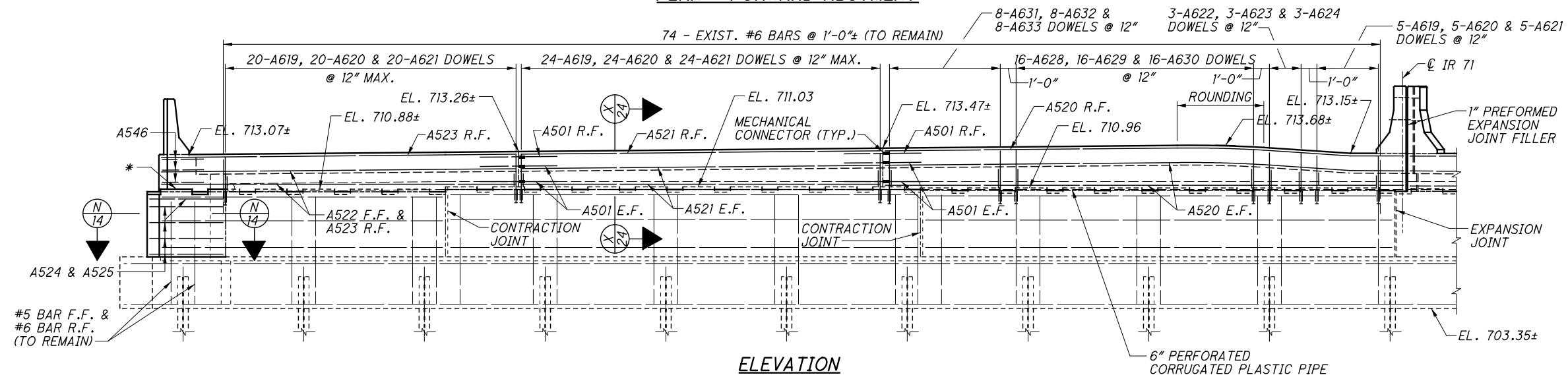
PIPE TERMINATION DETAILS: SEE SHEET 19/33.

ADDITIONAL NOTES: SEE SHEET 12/33.

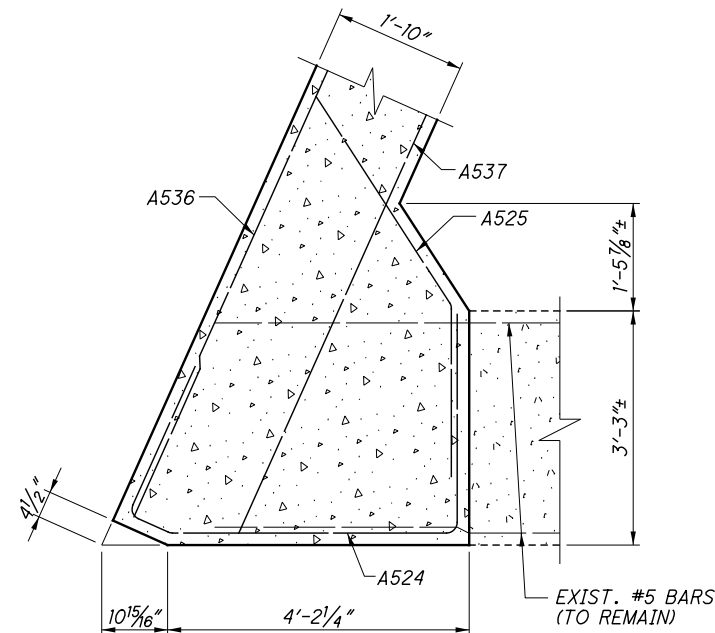
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PLAN - FORWARD ABUTMENT



ELEVATION



SECTION N-N

LEGEND

* BOND BREAKER BUILDING PAPER BETWEEN THE NEW SEAT AND THE NEW SUPERSTRUCTURE JOINT CONCRETE. INCLUDE WITH ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS) FOR PAYMENT.

NOTES

DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

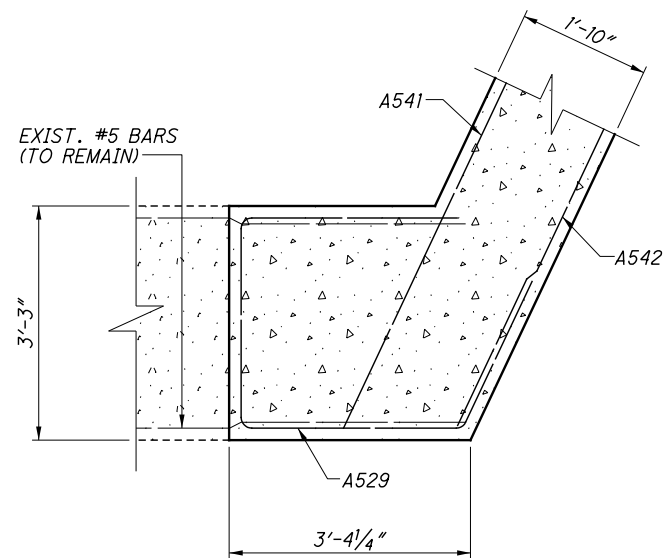
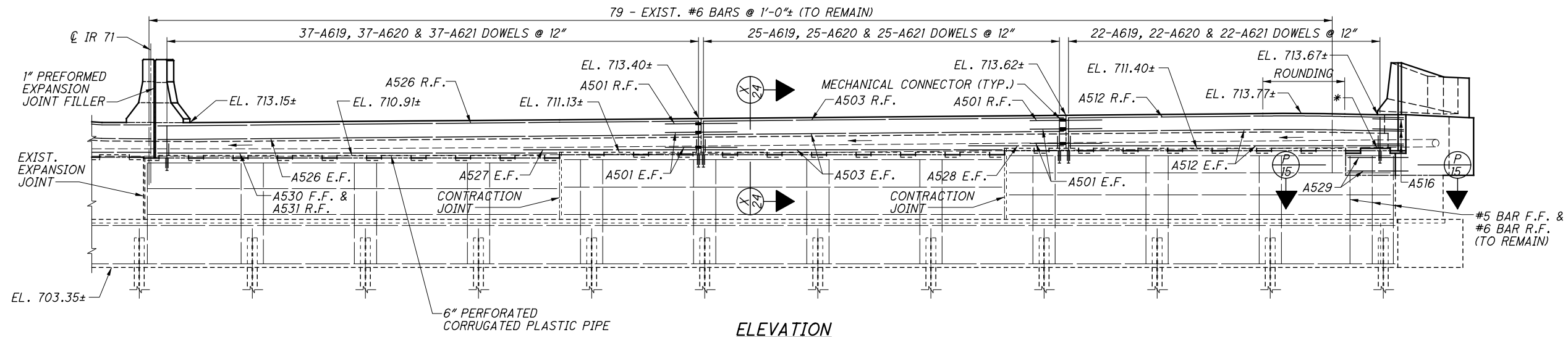
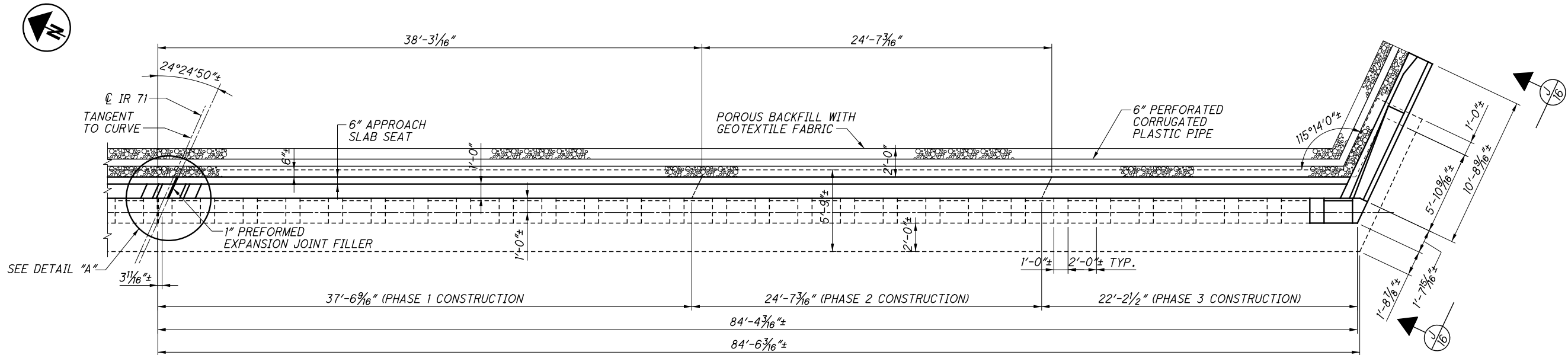
ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MATCH EXISTING.

PIPE TERMINATION DETAILS: SEE SHEET 19/33.

DETAIL "A": SEE SHEET 13/33.

ADDITIONAL NOTES: SEE SHEET 12/33.

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640AF002.dgn 6/24/2021 7:38:49 AM jsmith



LEGEND

* BOND BREAKER BUILDING PAPER BETWEEN THE NEW SEAT AND THE NEW SUPERSTRUCTURE JOINT CONCRETE. INCLUDE WITH ITEM 511 - CLASS QC SCC CONCRETE, SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS) FOR PAYMENT.

NOTES

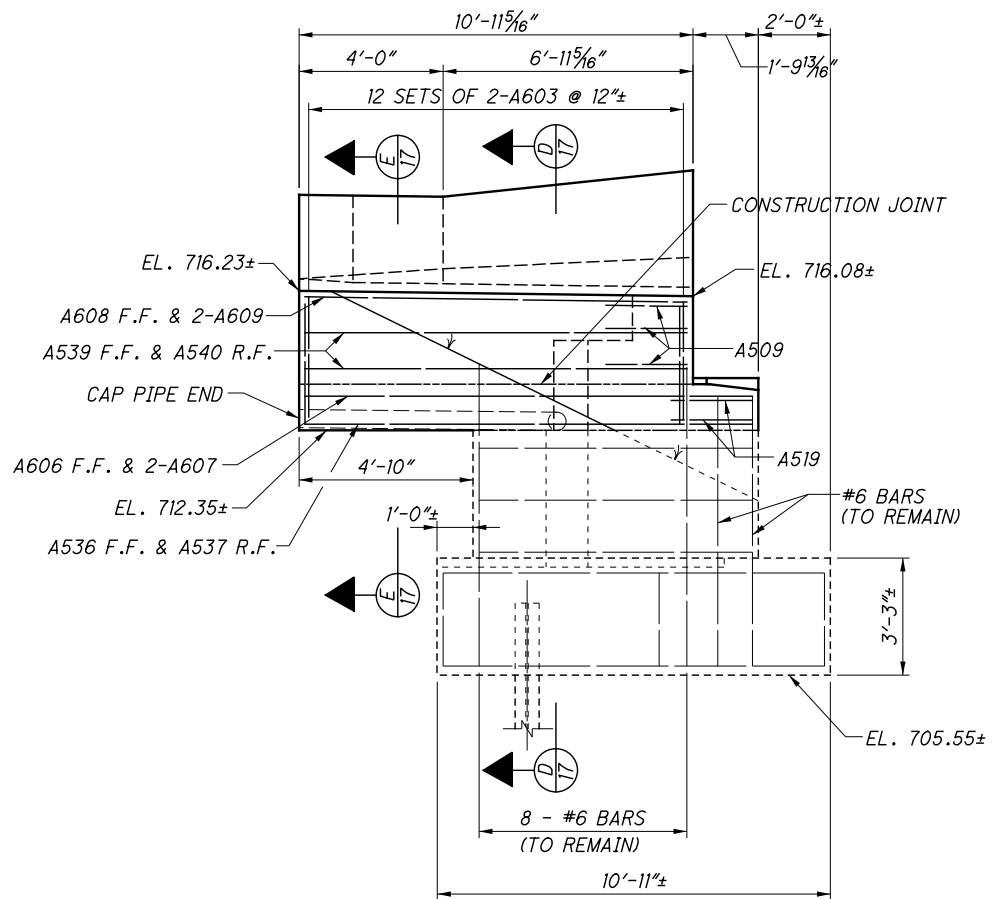
DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.

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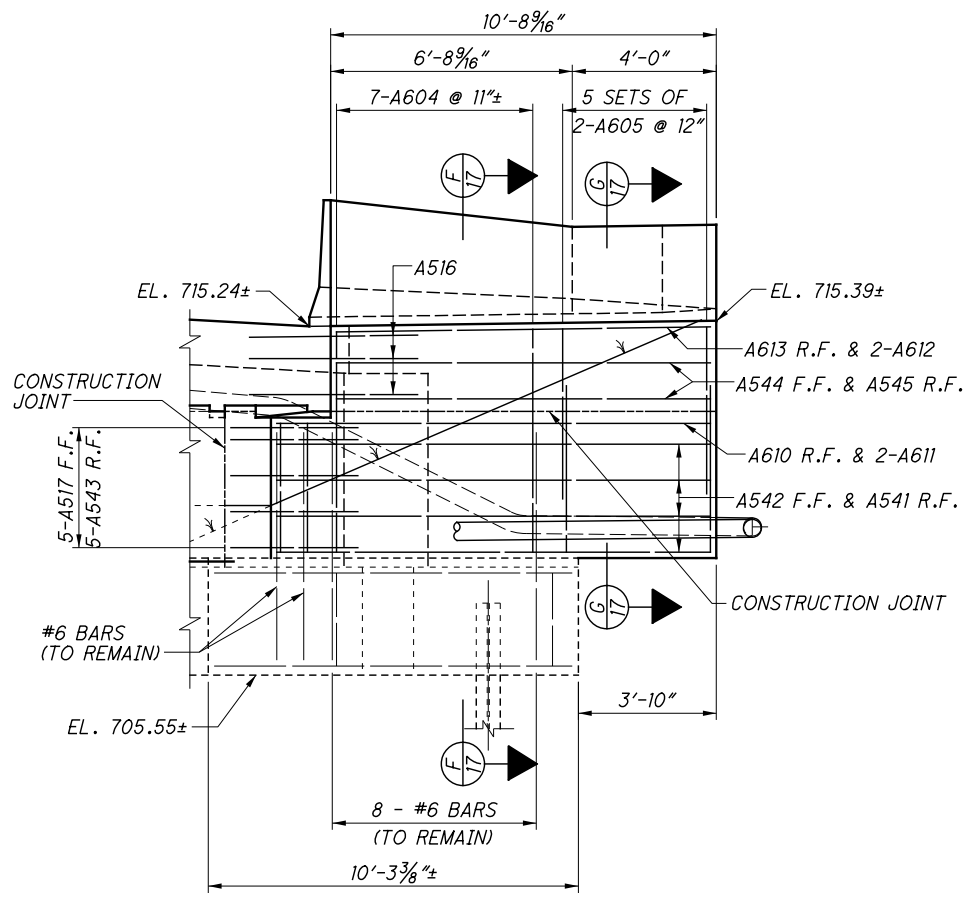
DETAIL "A": SEE SHEET 13/33.

ADDITIONAL NOTES: SEE SHEET 12/33.

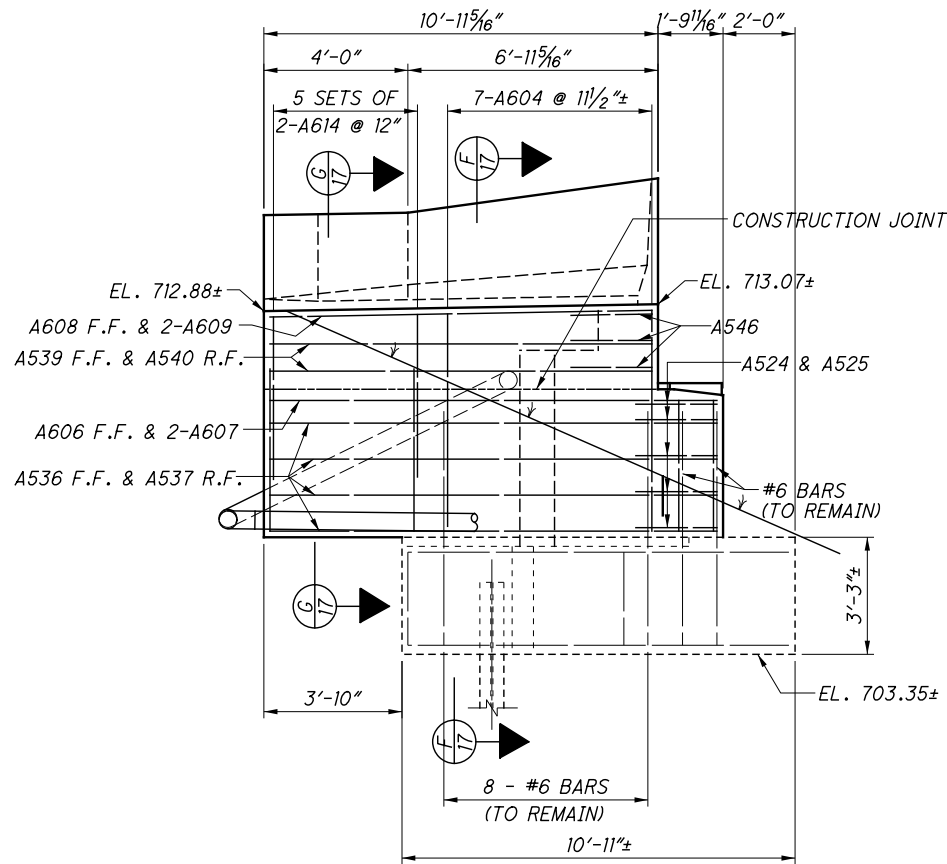
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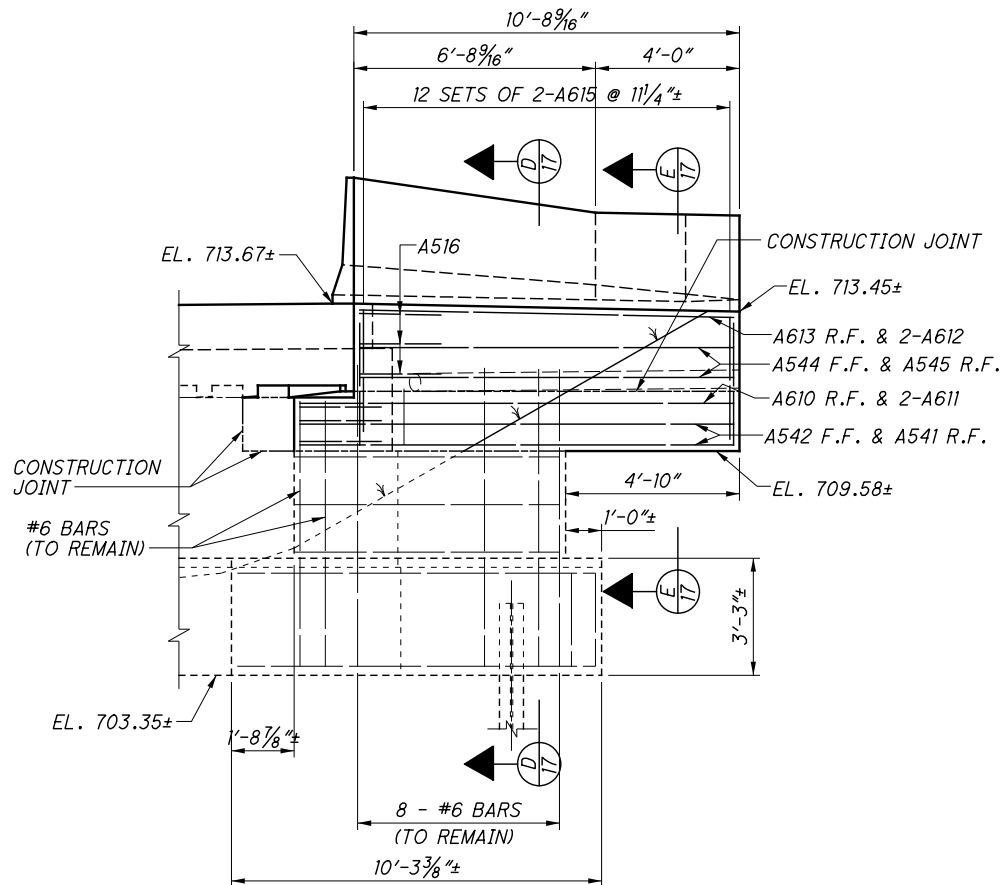
VIEW B-B
REAR ABUTMENT - RIGHT WINGWALL



VIEW C-C
REAR ABUTMENT - LEFT WINGWALL



VIEW H-H
FORWARD ABUTMENT - LEFT WINGWALL



VIEW J-J
FORWARD ABUTMENT - RIGHT WINGWALL

NOTES

VIEW B-B: FOR LOCATION SEE SHEET [12/33](#).

VIEW C-C: FOR LOCATION SEE SHEET [13/33](#).

VIEW H-H: FOR LOCATION SEE SHEET [14/33](#).

VIEW J-J: FOR LOCATION SEE SHEET [15/33](#).

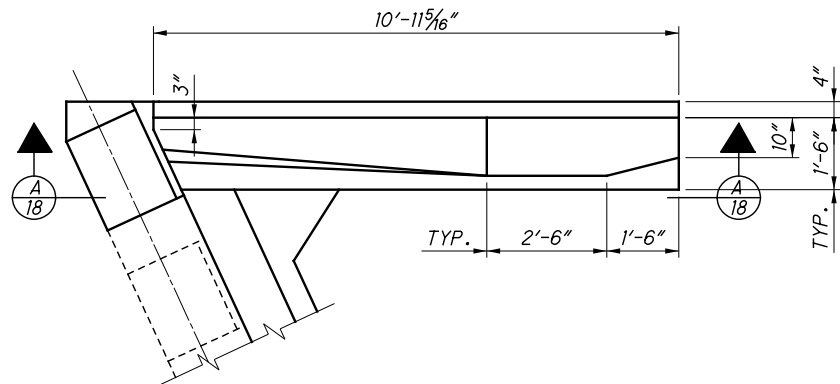
ABUTMENT PARAPET DETAILS: SEE SHEET [18/33](#).

PIPE TERMINATION DETAILS: SEE SHEET [19/33](#).

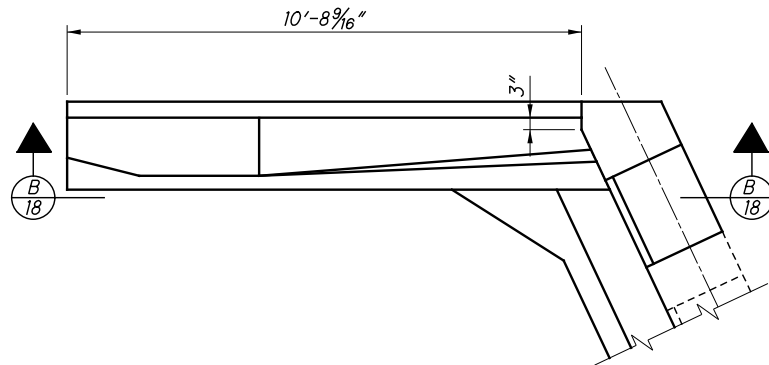
ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MATCH EXISTING.

ADDITIONAL NOTES: SEE SHEET [12/33](#).

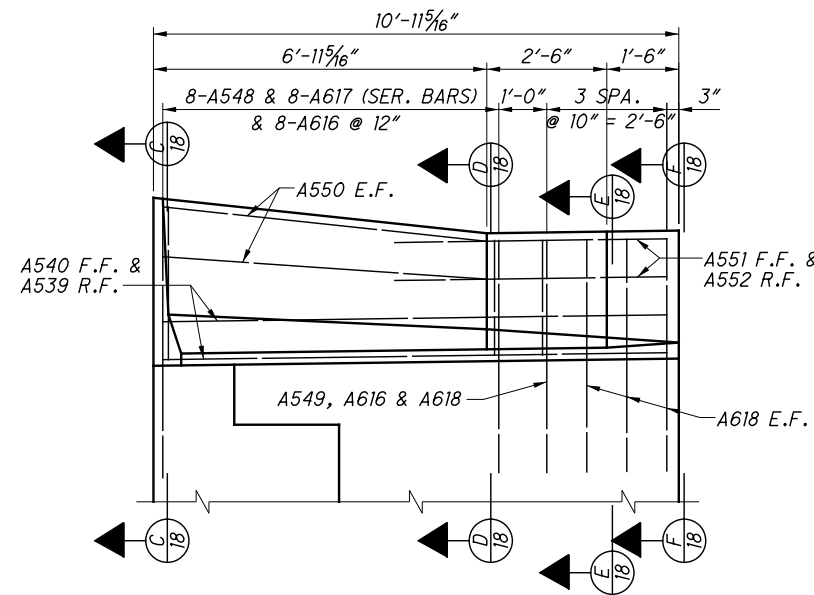
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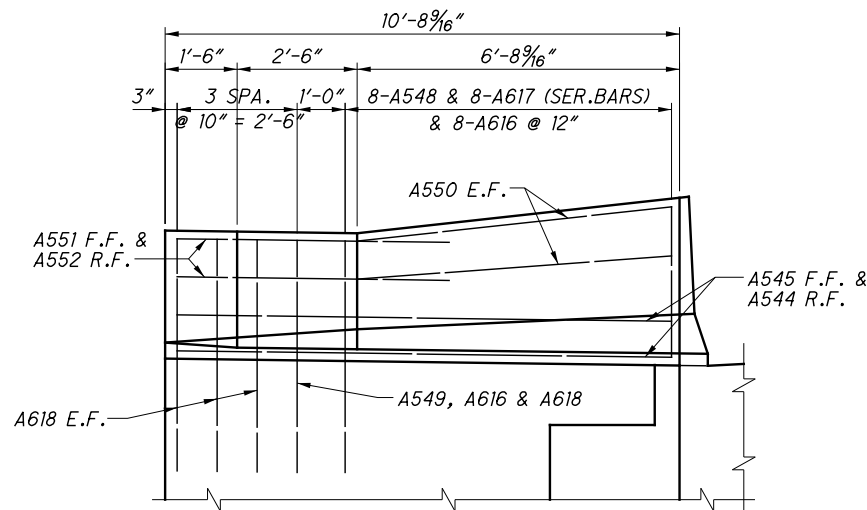
PLAN - REAR ABUTMENT RIGHT PARAPET
PLAN - FORWARD ABUTMENT LEFT PARAPET



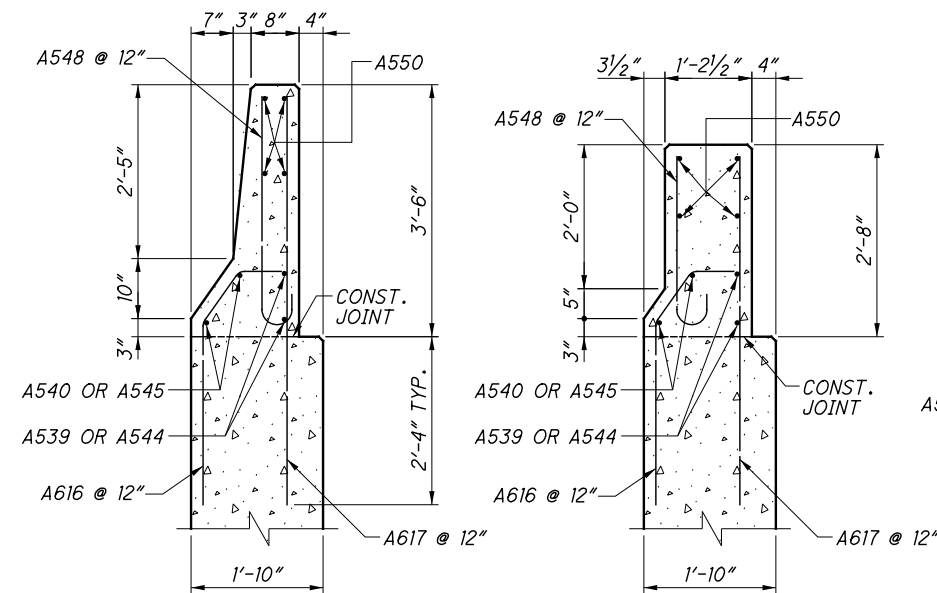
PLAN - REAR ABUTMENT LEFT PARAPET
PLAN - FORWARD ABUTMENT RIGHT PARAPET



SECTION A-A

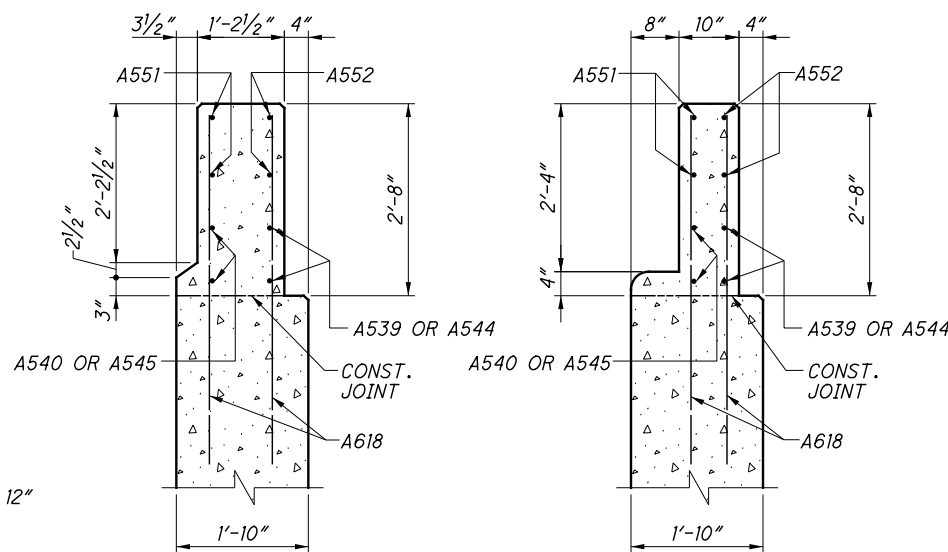


SECTION B-B



SECTION C-C

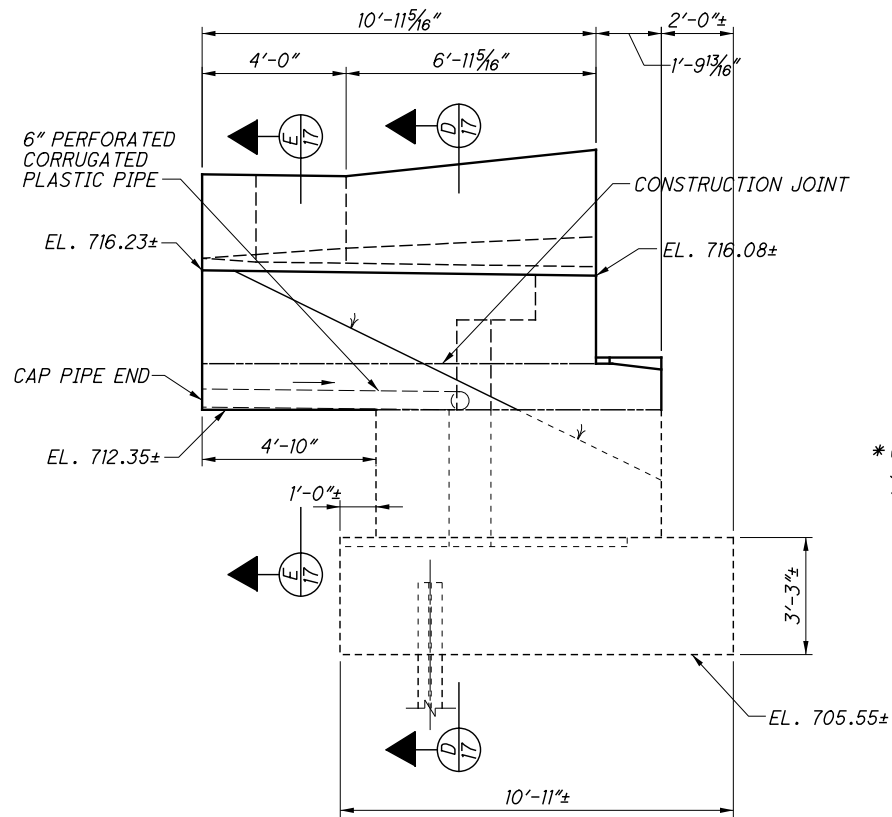
SECTION D-D



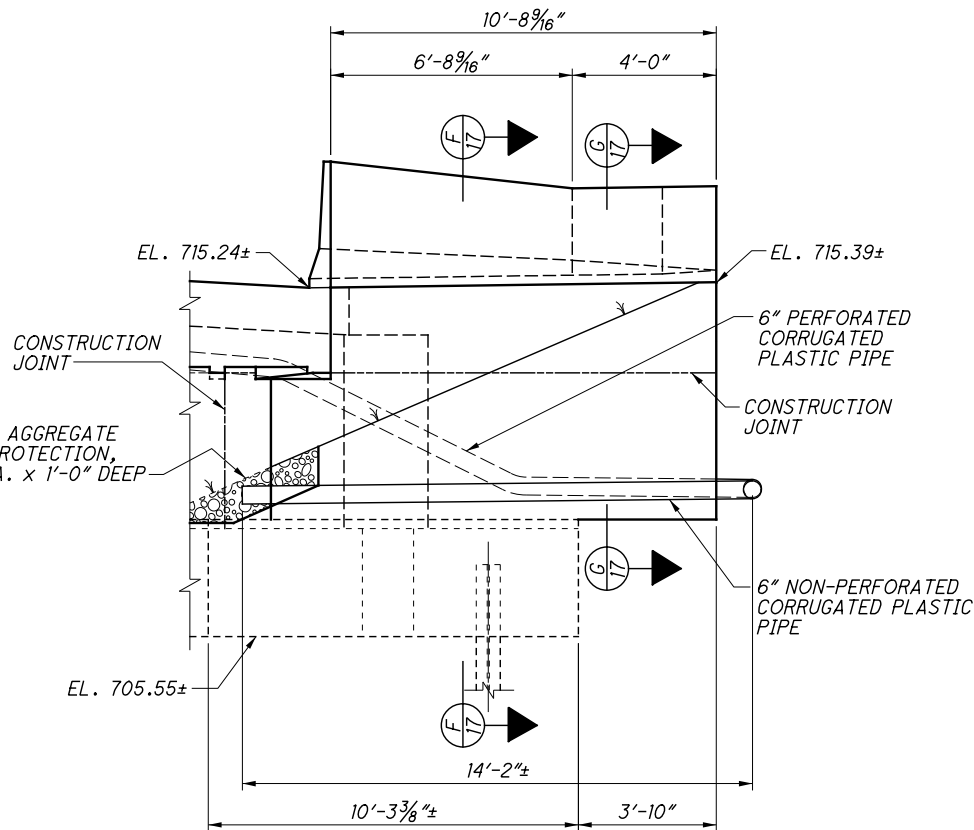
SECTION E-E

SECTION F-F

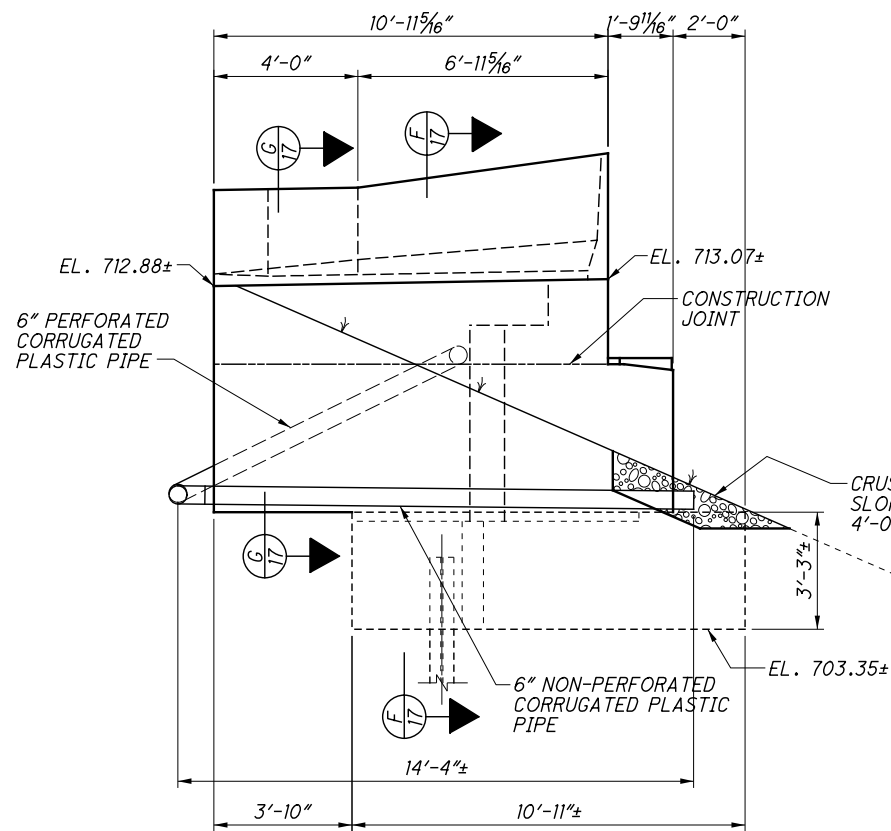
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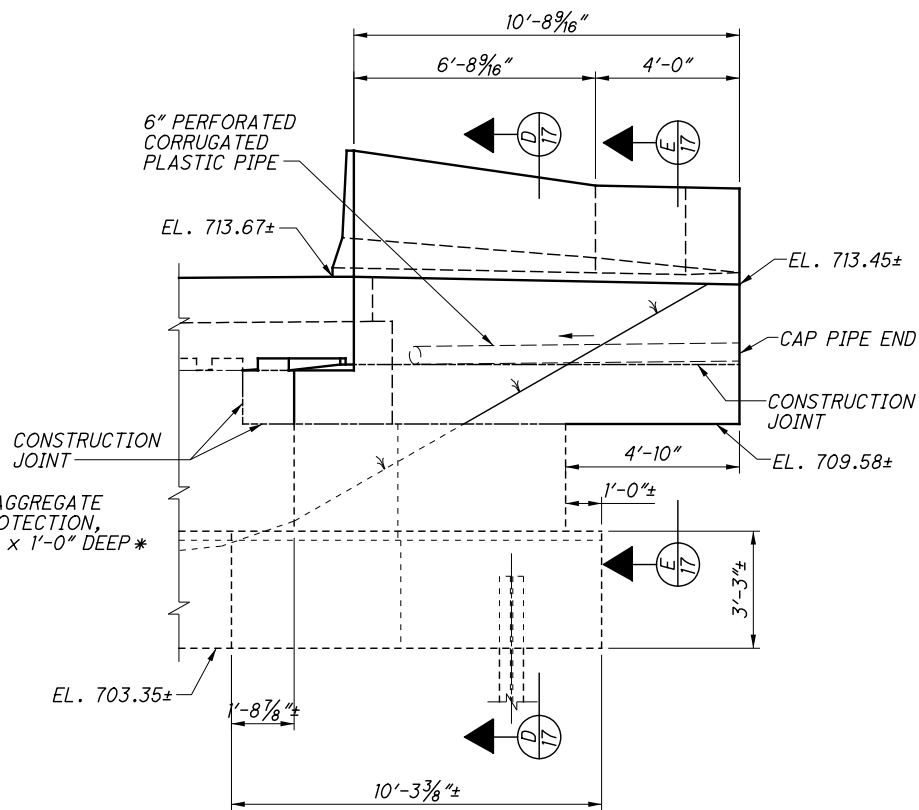
REAR ABUTMENT - RIGHT WINGWALL



REAR ABUTMENT - LEFT WINGWALL



FORWARD ABUTMENT - LEFT WINGWALL



FORWARD ABUTMENT - RIGHT WINGWALL

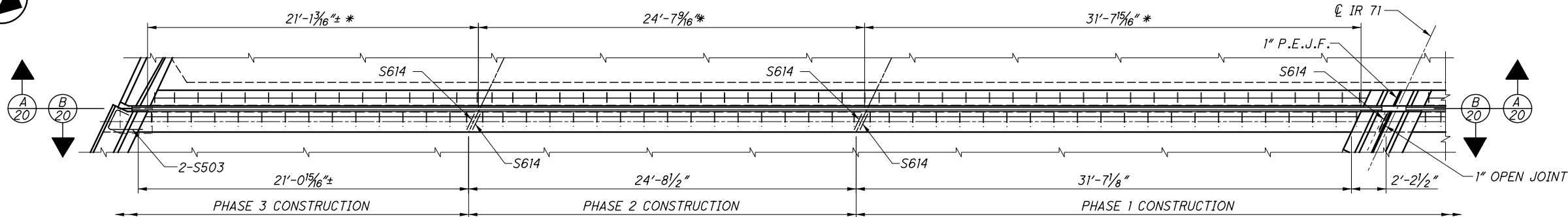
LEGEND

* INCLUDED WITH ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS FOR PAYMENT.

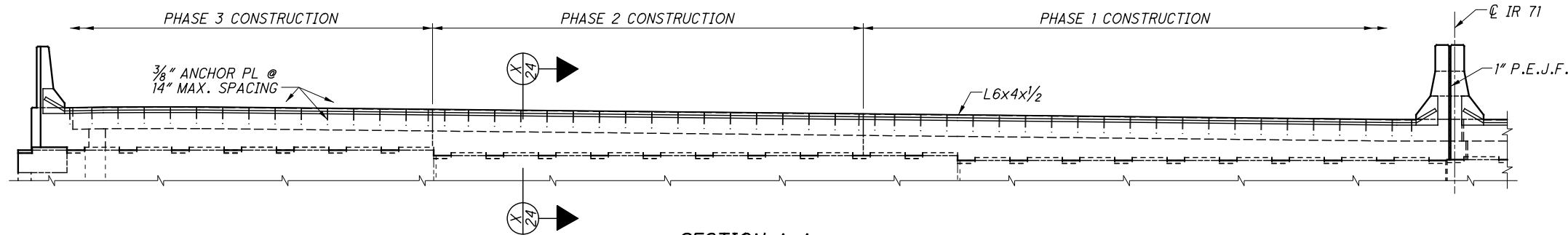
NOTES

ELEVATIONS SHOWN ARE BASED ON ORIGINAL AND REHAB PLANS AND ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MATCH EXISTING.

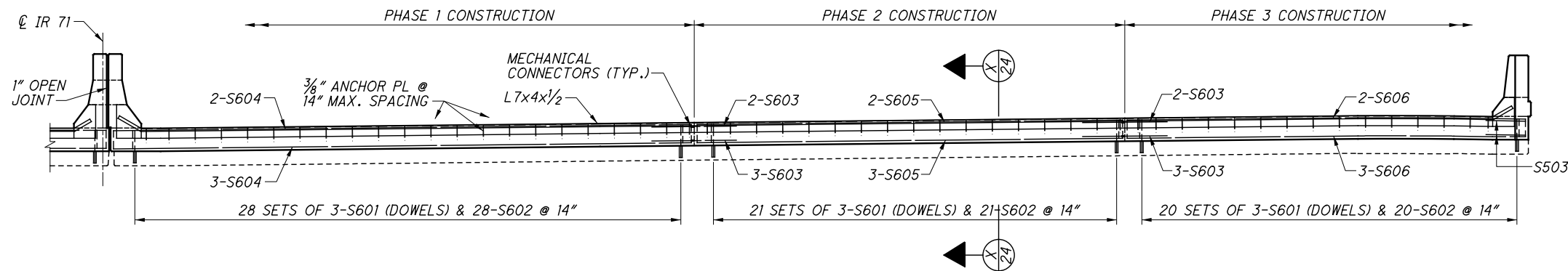
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REAR ABUTMENT JOINT PLAN - RIGHT BRIDGE



SECTION A-A



SECTION B-B

LEGEND

* MEASURED ALONG EDGE OF DECK JOINT

NOTES

NOTATION: P.E.J.F. - PREFORMED EXPANSION JOINT FILLER.

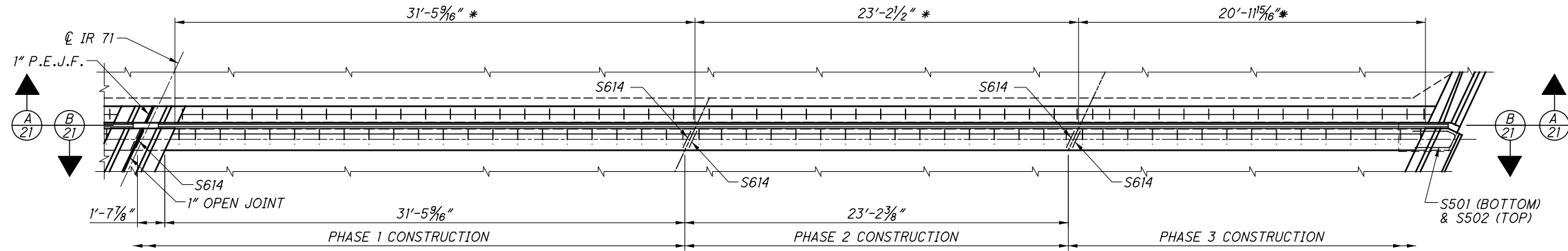
REINFORCING STEEL SPLICE LENGTH SHALL BE 3'-4" FOR HORIZONTAL #6 BARS.

ABUTMENT REINFORCING: SEE SHEET 12/33.

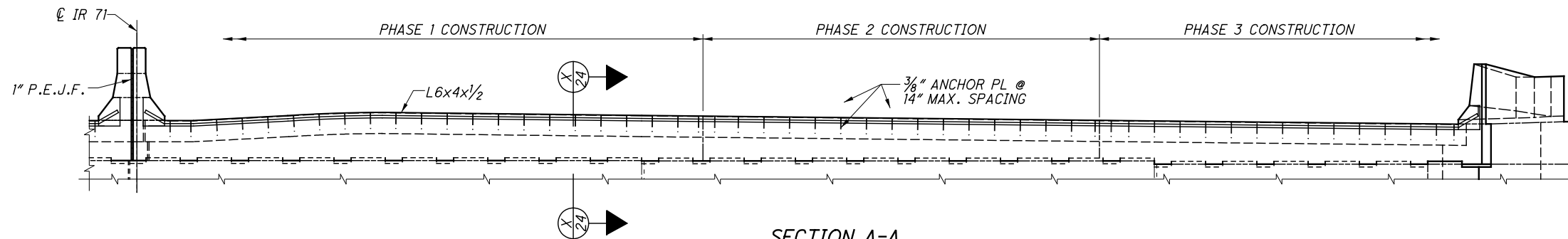
PARAPET & MEDIAN BARRIER DETAILS & REINFORCING: SEE SHEETS 25/33 & 26/33.

ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING EXJ-5-93.

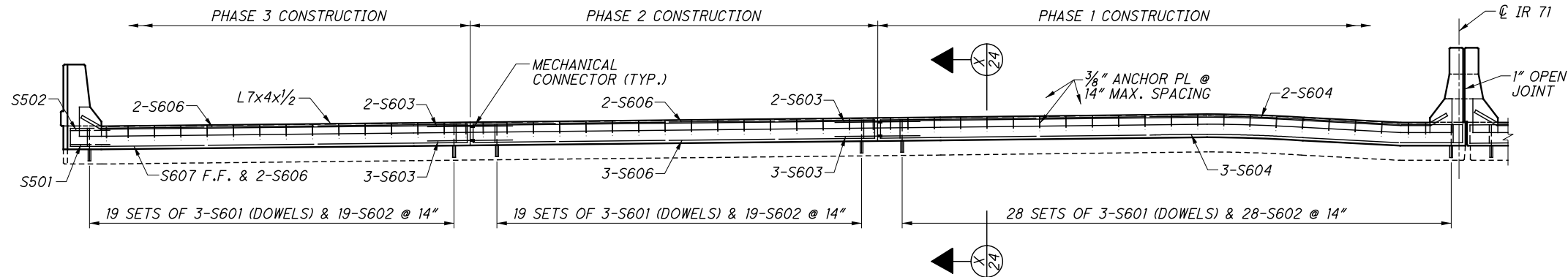
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640EX002.dgn 7/6/2021 8:24:36 AM jsmith



REAR ABUTMENT JOINT PLAN - LEFT BRIDGE



SECTION A-A



SECTION B-B

LEGEND

* MEASURED ALONG EDGE OF DECK JOINT

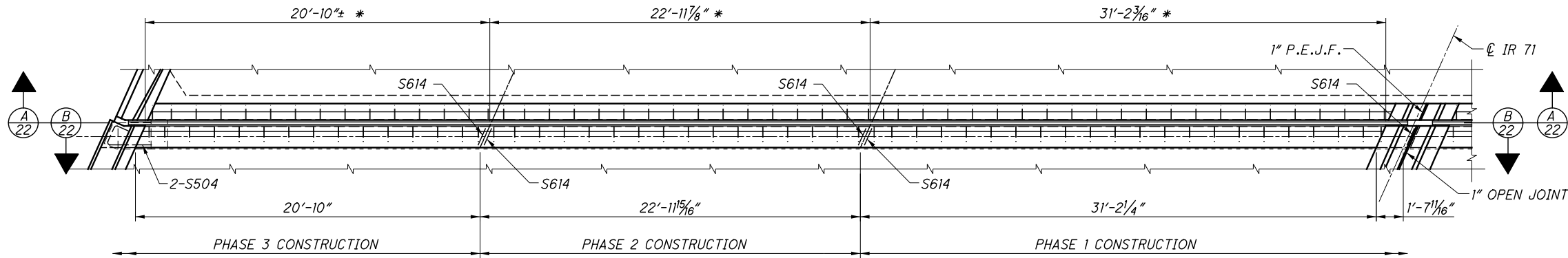
NOTES

ABUTMENT REINFORCING: SEE SHEET 13/33.

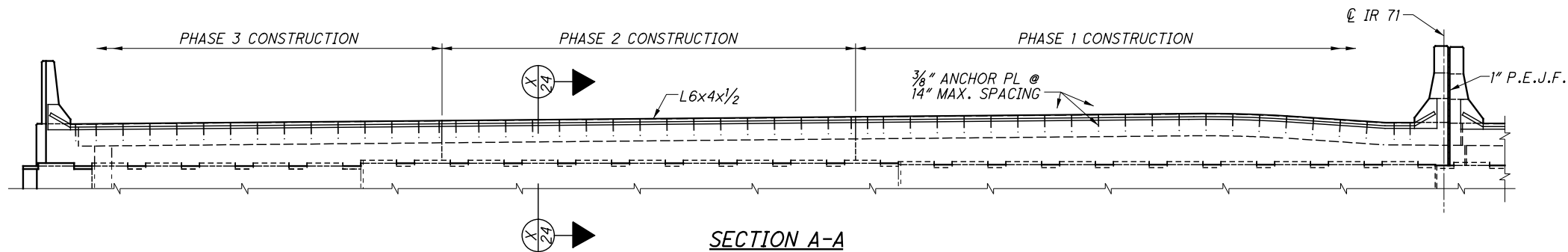
PARAPET & MEDIAN BARRIER DETAILS & REINFORCING:
SEE SHEETS 25/33 & 26/33.

ADDITIONAL NOTES: SEE SHEET 20/33.

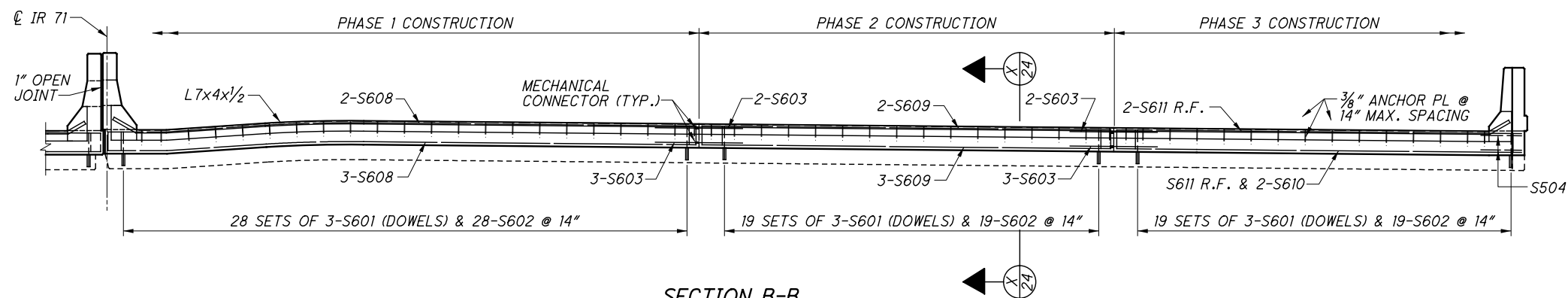
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640EX004.dgn 7/6/2021 8:23:43 AM jsmith



FORWARD ABUTMENT JOINT PLAN - LEFT BRIDGE



SECTION A-A



SECTION B-B

LEGEND

* MEASURED ALONG EDGE OF DECK JOINT

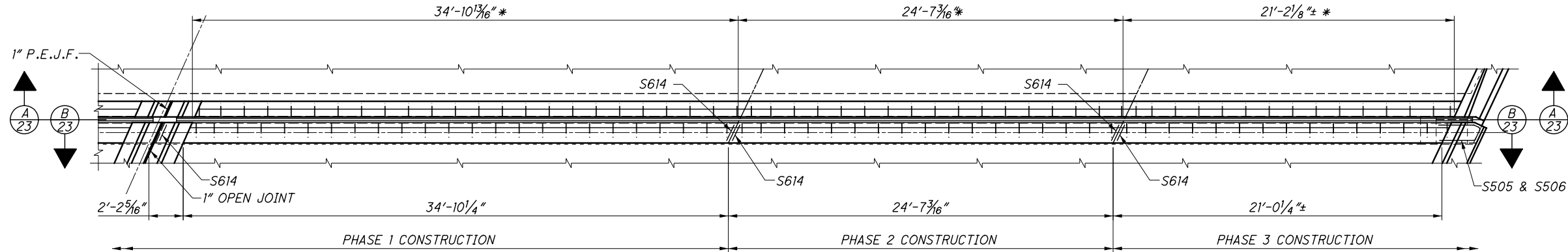
NOTES

ABUTMENT REINFORCING: SEE SHEET 14/33.

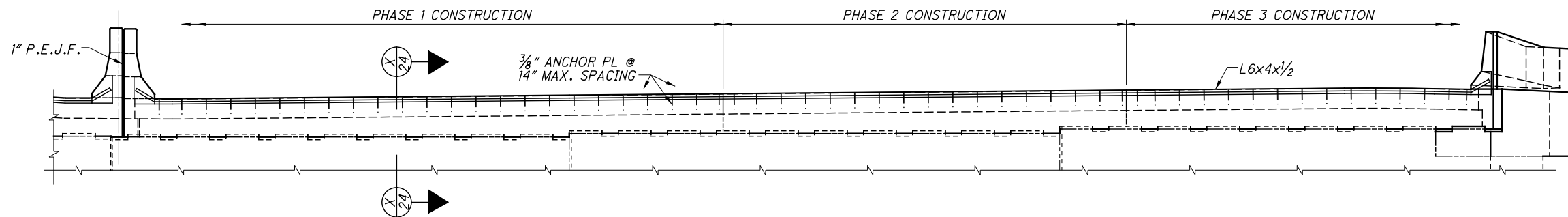
PARAPET & MEDIAN BARRIER DETAILS & REINFORCING: SEE SHEET 25/33 & 26/33.

ADDITIONAL NOTES: SEE SHEET 20/33.

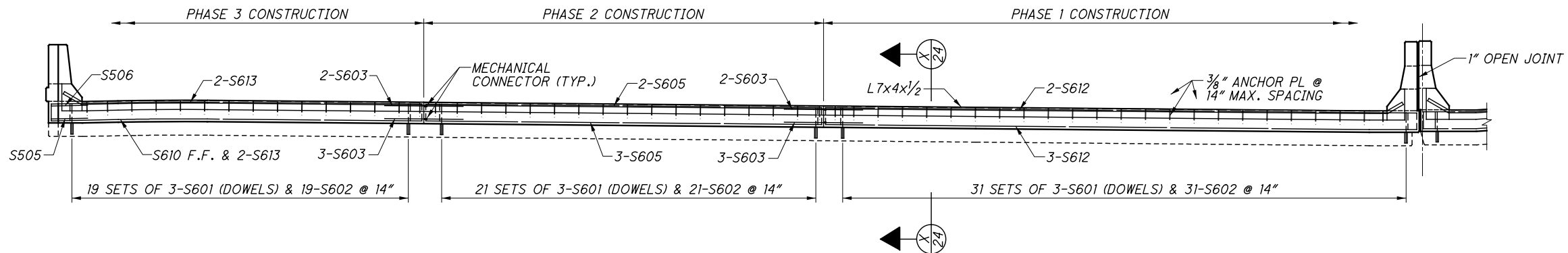
F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640EX005.dgn 7/6/2021 8:22:21 AM jsmith



FORWARD ABUTMENT JOINT PLAN - RIGHT BRIDGE



SECTION A-A



SECTION B-B

LEGEND

* MEASURED ALONG EDGE OF DECK JOINT

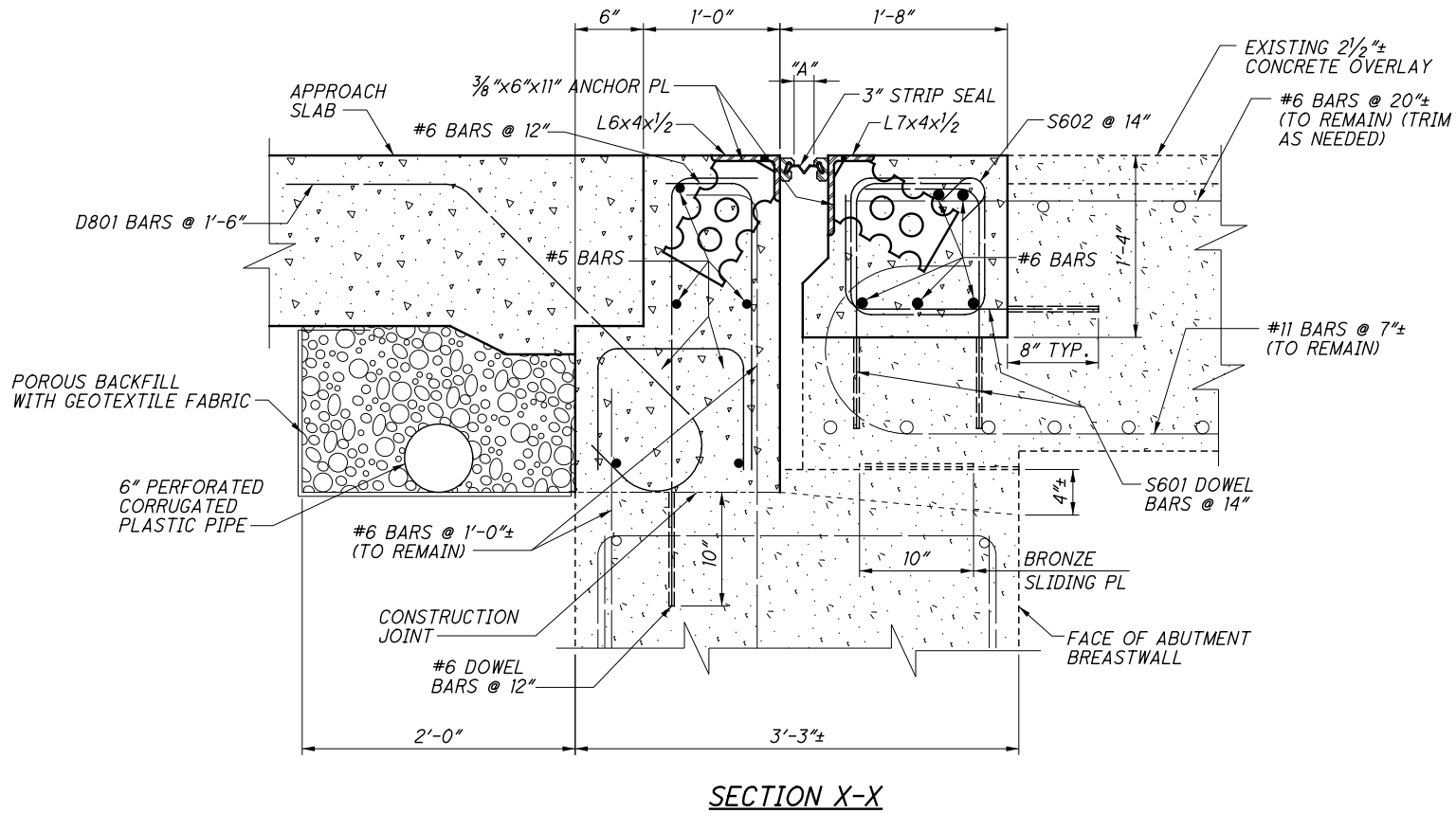
NOTES

ABUTMENT REINFORCING: SEE SHEET [15/33].

PARAPET & MEDIAN BARRIER DETAILS & REINFORCING: SEE SHEET [25/33] & [26/33].

ADDITIONAL NOTES: SEE SHEET [20/33].

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640SD001.dgn 6/24/2021 7:45:04 AM jsmith

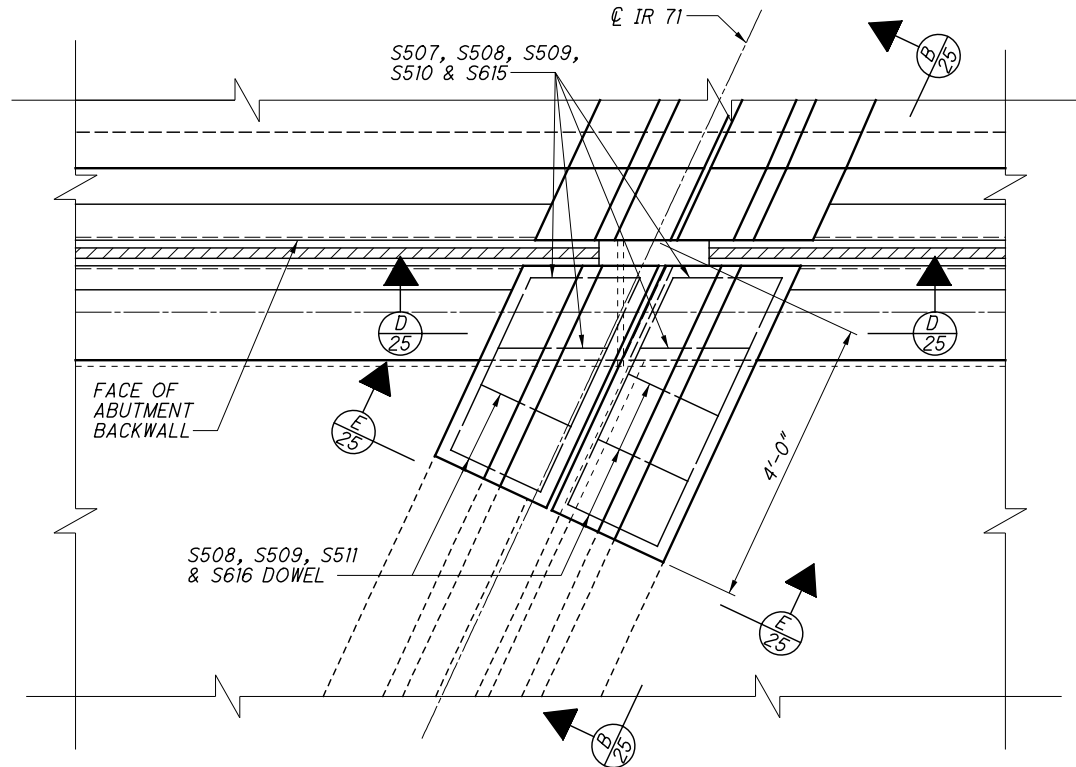


JOINT SETTING TABLE	
TEMPERATURE (°F)	DIMENSION "A"
30°	1 7/8"
40°	1 3/16"
50°	1 3/4"
60°	1 1/16"
70°	1 5/8"
80°	1 7/16"
90°	1 1/2"

NOTES

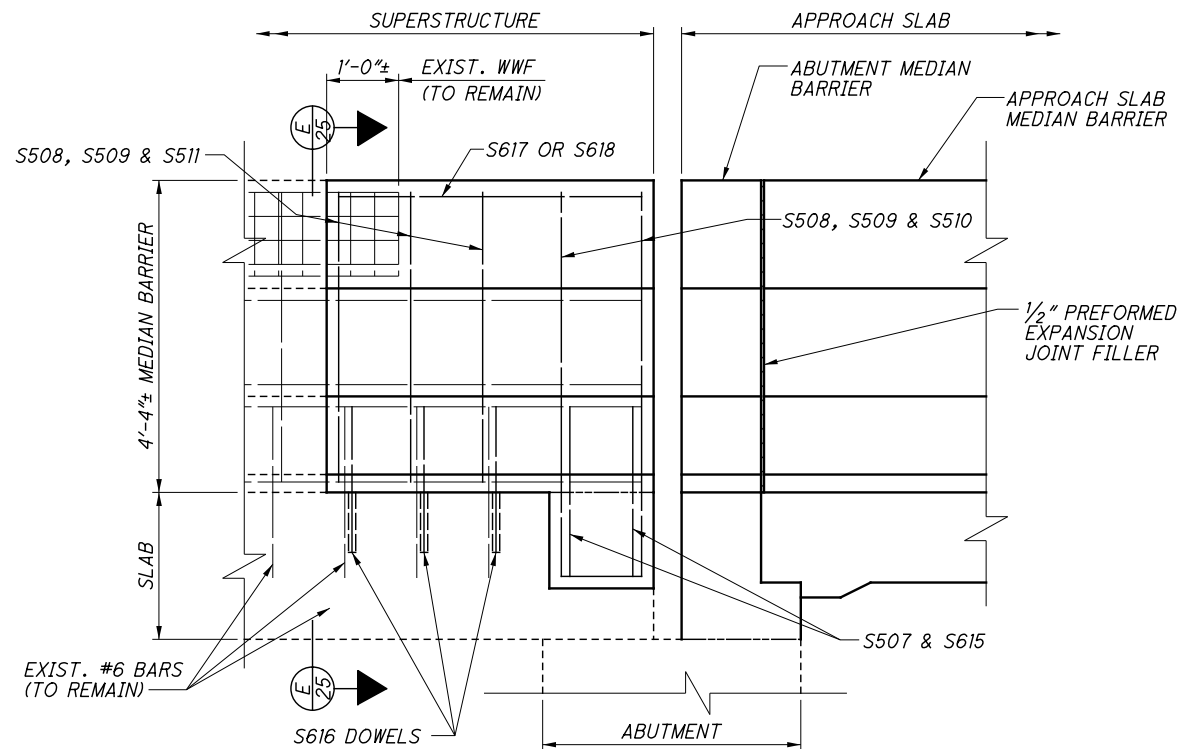
SECTION X-X: FOR LOCATION SEE SHEETS 12/33 THRU 15/33 AND SHEETS 20/33 THRU 23/33.

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640RA002.dgn 7/8/2021 7:35:59 AM jsmith

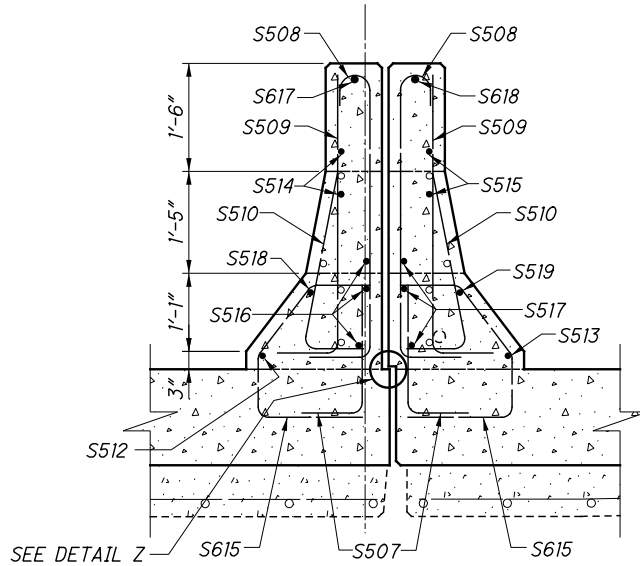


MEDIAN BARRIER PLAN AT ABUTMENT JOINTS

FORWARD ABUTMENT JOINT - SHOWN
REAR ABUTMENT JOINT - SIMILAR

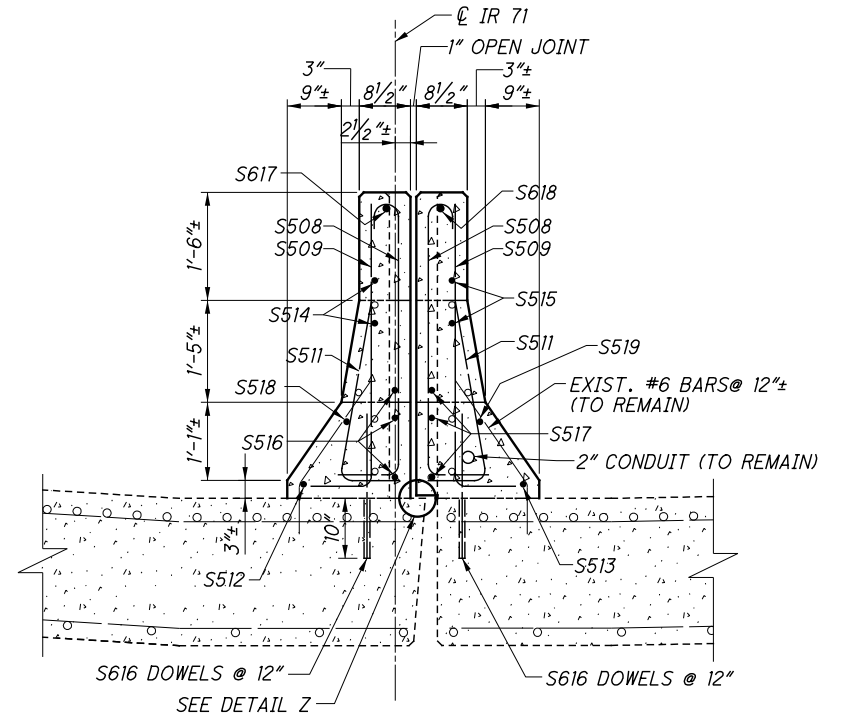


SECTION B-B



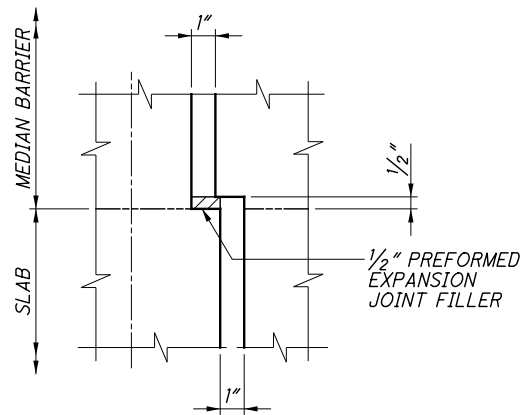
SECTION D-D

EXISTING HORIZONTAL RAILING BARS
ARE #5 BARS TO REMAIN. ROTATE
S508 BARS AS NECESSARY TO FIT.



SECTION E-E

EXISTING HORIZONTAL RAILING BARS
ARE #5 BARS TO REMAIN. ROTATE
S508 BARS AS NECESSARY TO FIT.

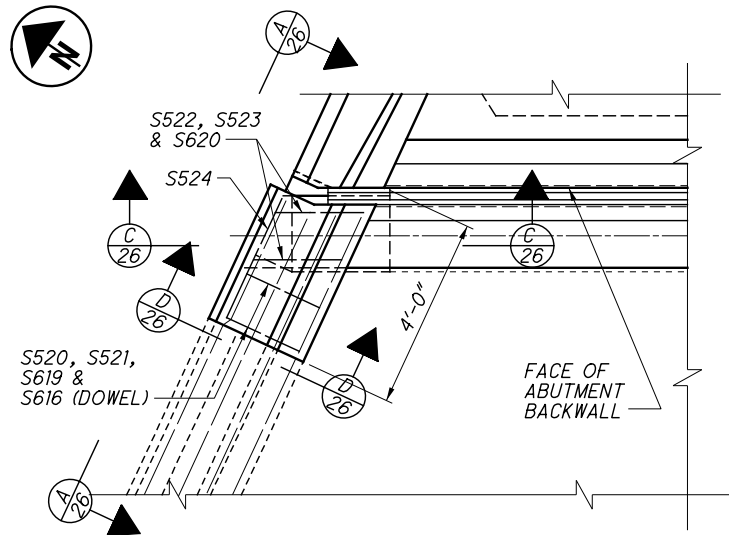


DETAIL Z

NOTES

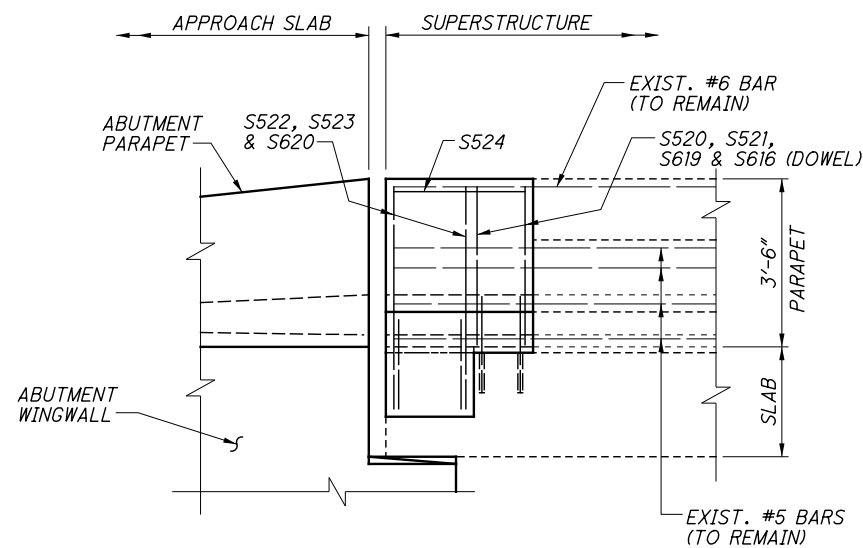
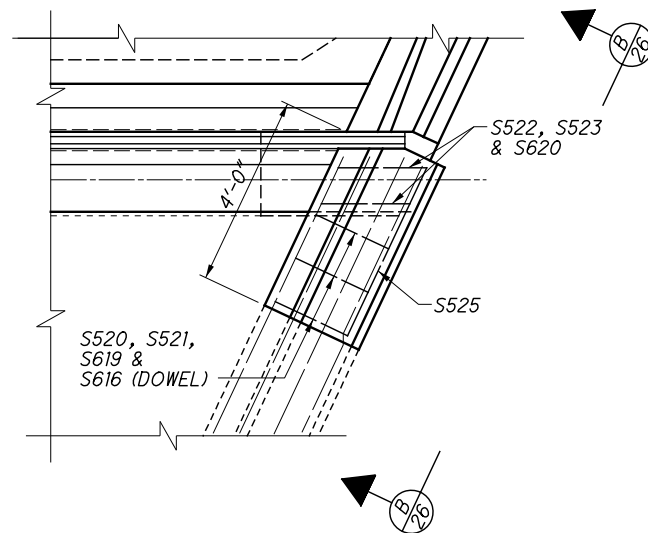
MEDIAN BARRIER CONCRETE ON THE SUPERSTRUCTURE
SHALL BE ITEM 511 - CLASS QC SCC CONCRETE,
SUPERSTRUCTURE, AS PER PLAN (WITH STEEL FIBERS).

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640RA003.dgn 9/10/2021 10:08:50 AM rbrokaw

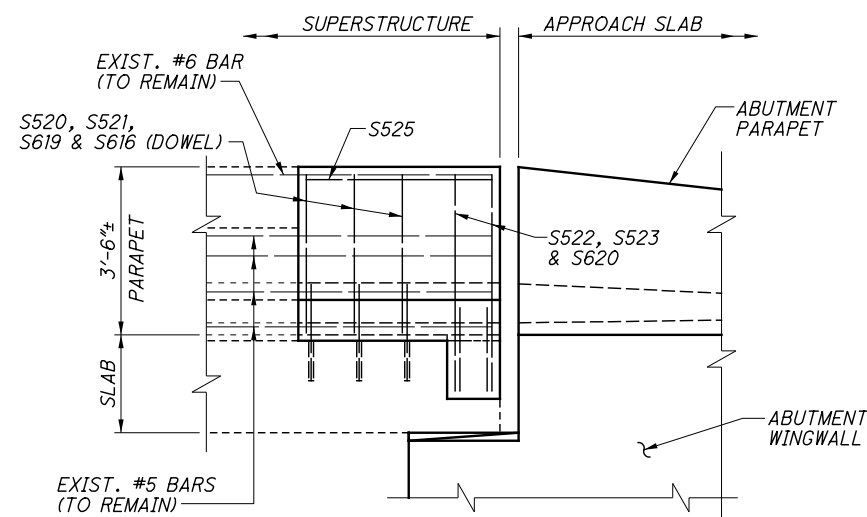


TYPICAL PARAPET AT ABUTMENT JOINTS

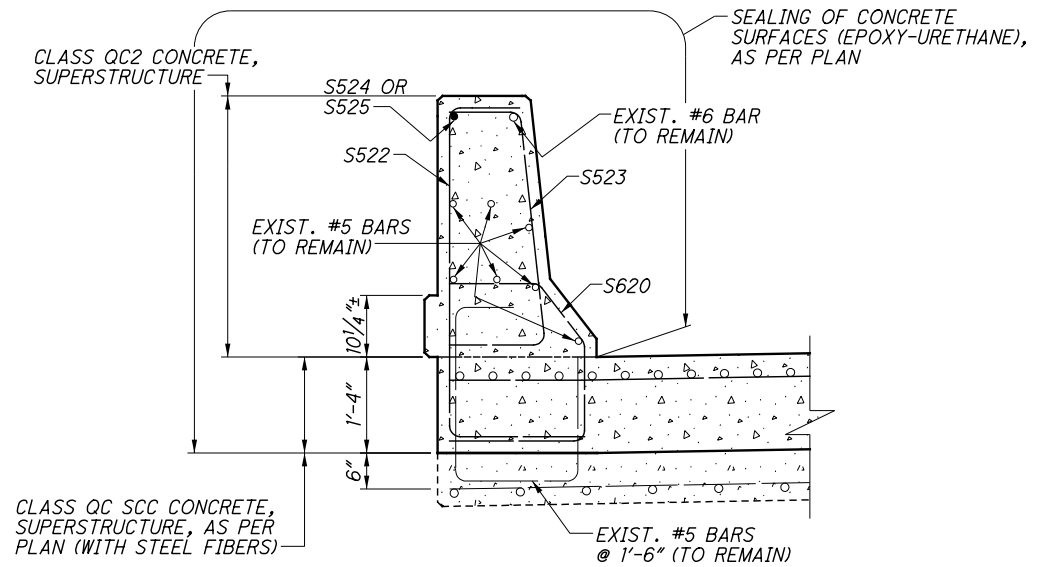
FORWARD ABUTMENT JOINT - SHOWN
REAR ABUTMENT JOINT - SIMILAR



VIEW A-A

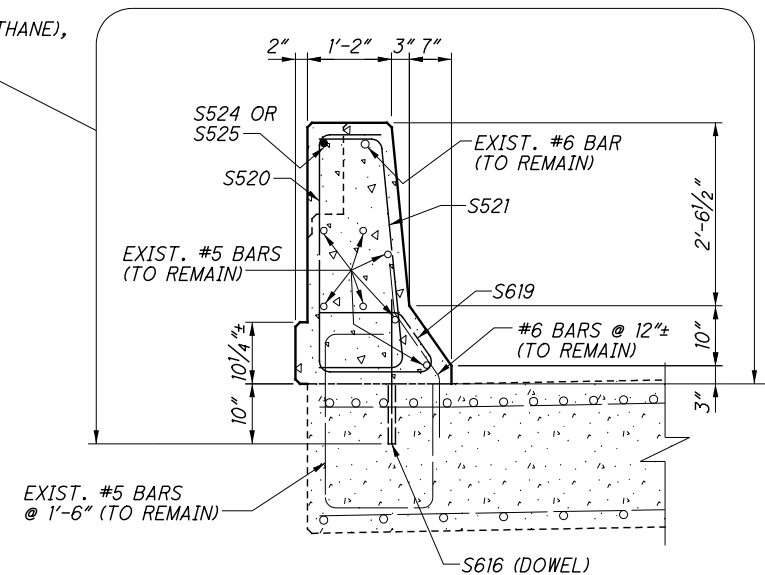


VIEW B-B



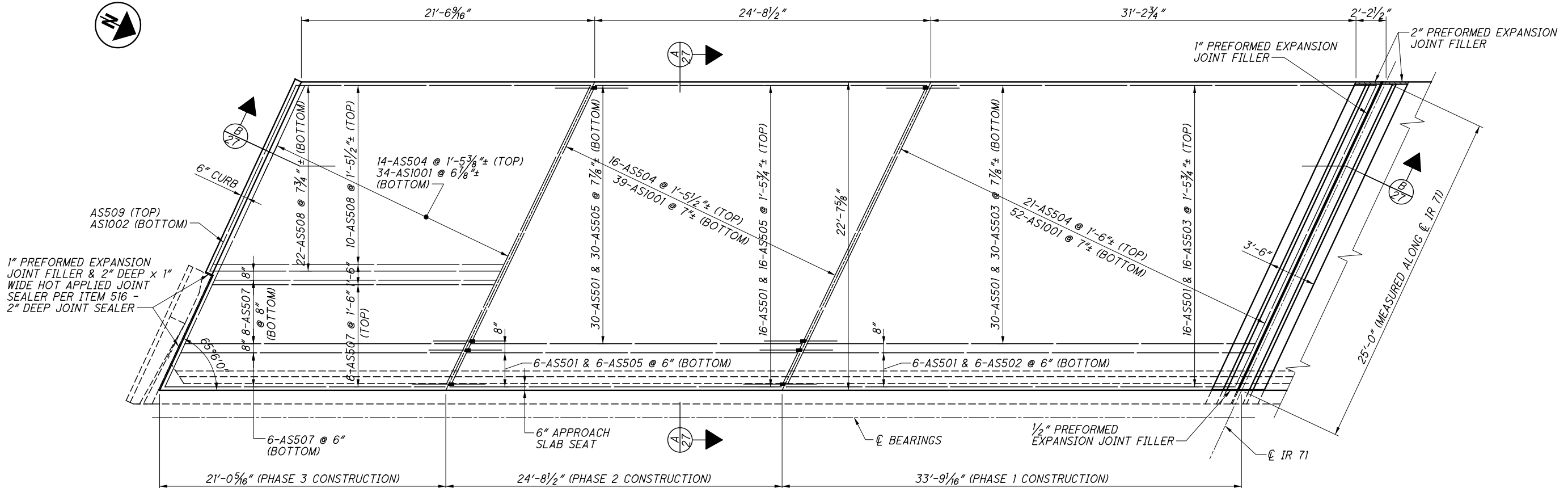
SECTION C-C

SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

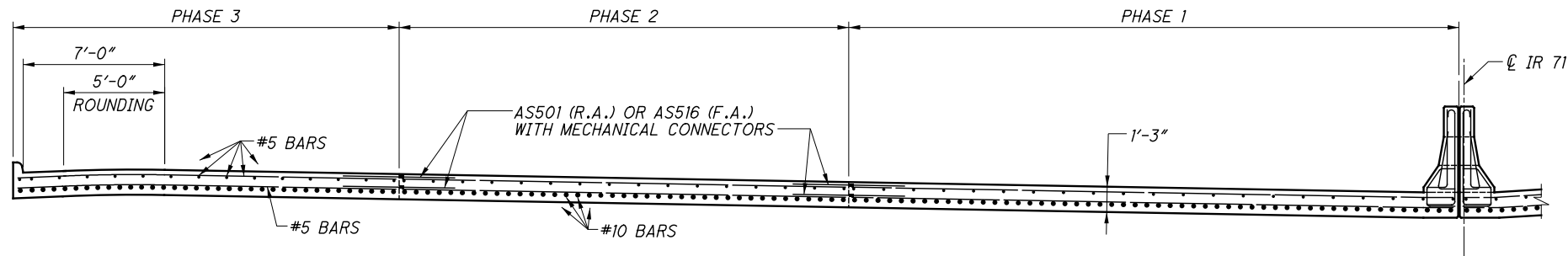


SECTION D-D

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640C\001.dgn 6/24/2021 7:56:59 AM jsmith

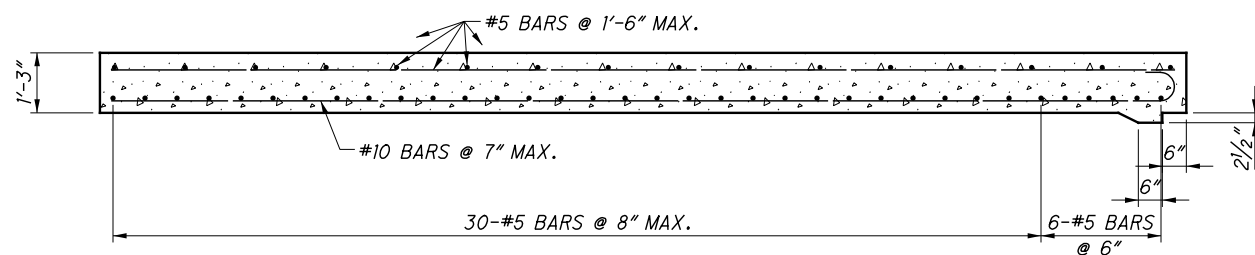


REAR APPROACH SLAB - RIGHT BRIDGE



SECTION B-B

R.A. RIGHT - SHOWN
F.A. RIGHT - OPPOSITE HAND



SECTION A-A

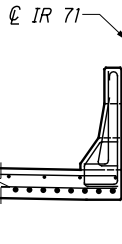
NOTES

REINFORCING STEEL SPLICE LENGTHS SHALL BE 2'-6" FOR #5 BARS.

NOTATION: R.A. - REAR APPROACH
F.A. - FORWARD APPROACH

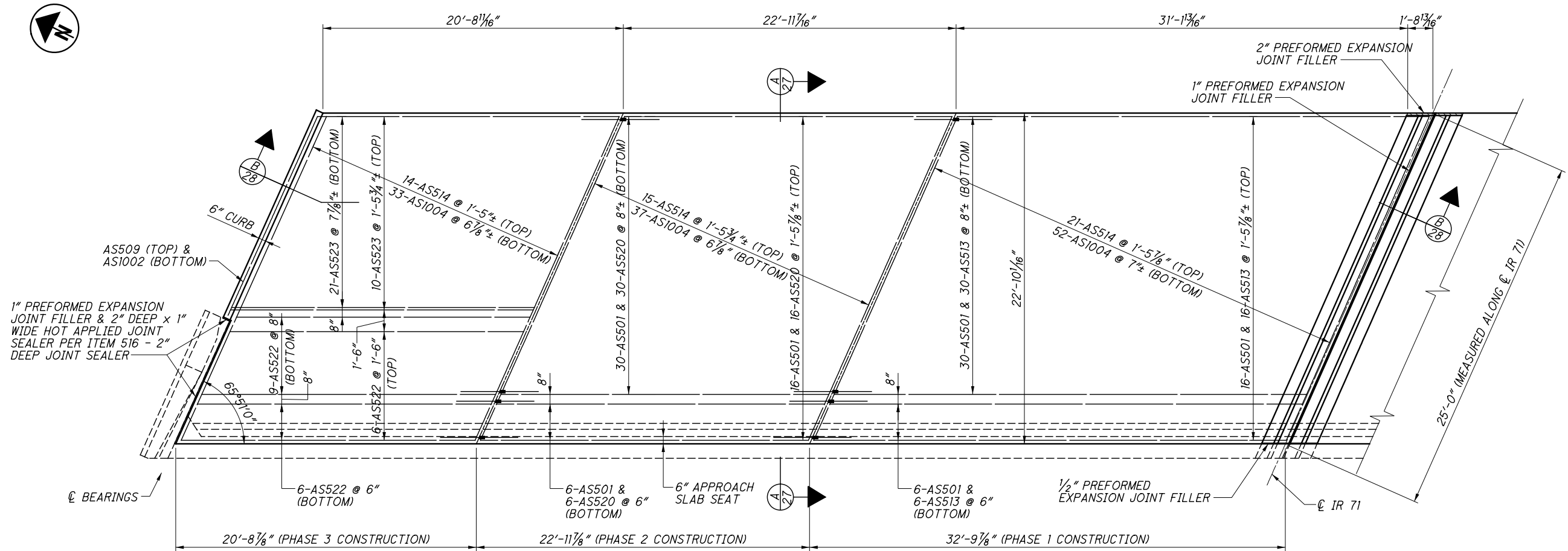
MEDIAN BARRIER DETAILS: SEE SHEET 31/33.

ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING AS-1-15.



118
123

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640MD003.dgn 6/24/2021 8:01:24 AM jsmith



FORWARD APPROACH SLAB - LEFT BRIDGE

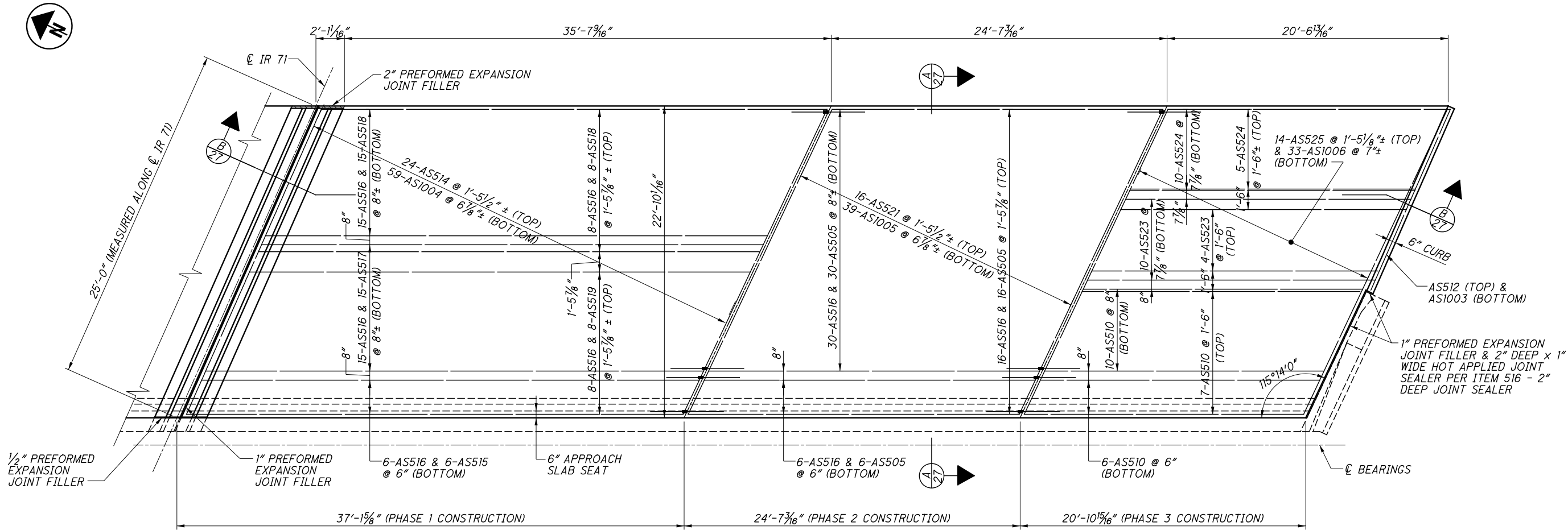
NOTES

MEDIAN BARRIER: ADJUST FORWARD APPROACH SLAB MEDIAN BARRIER AS NECESSARY TO MATCH POSSIBLE ROADWAY MEDIAN BARRIER TRANSITION TO EXISTING LIGHT POLE BASE.

MEDIAN BARRIER DETAILS: SEE SHEET 31/33.

ADDITIONAL NOTES: SEE SHEET 27/33.

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640MD004.dgn 6/24/2021 8:02:43 AM jsmith



FORWARD APPROACH SLAB - RIGHT BRIDGE

NOTES

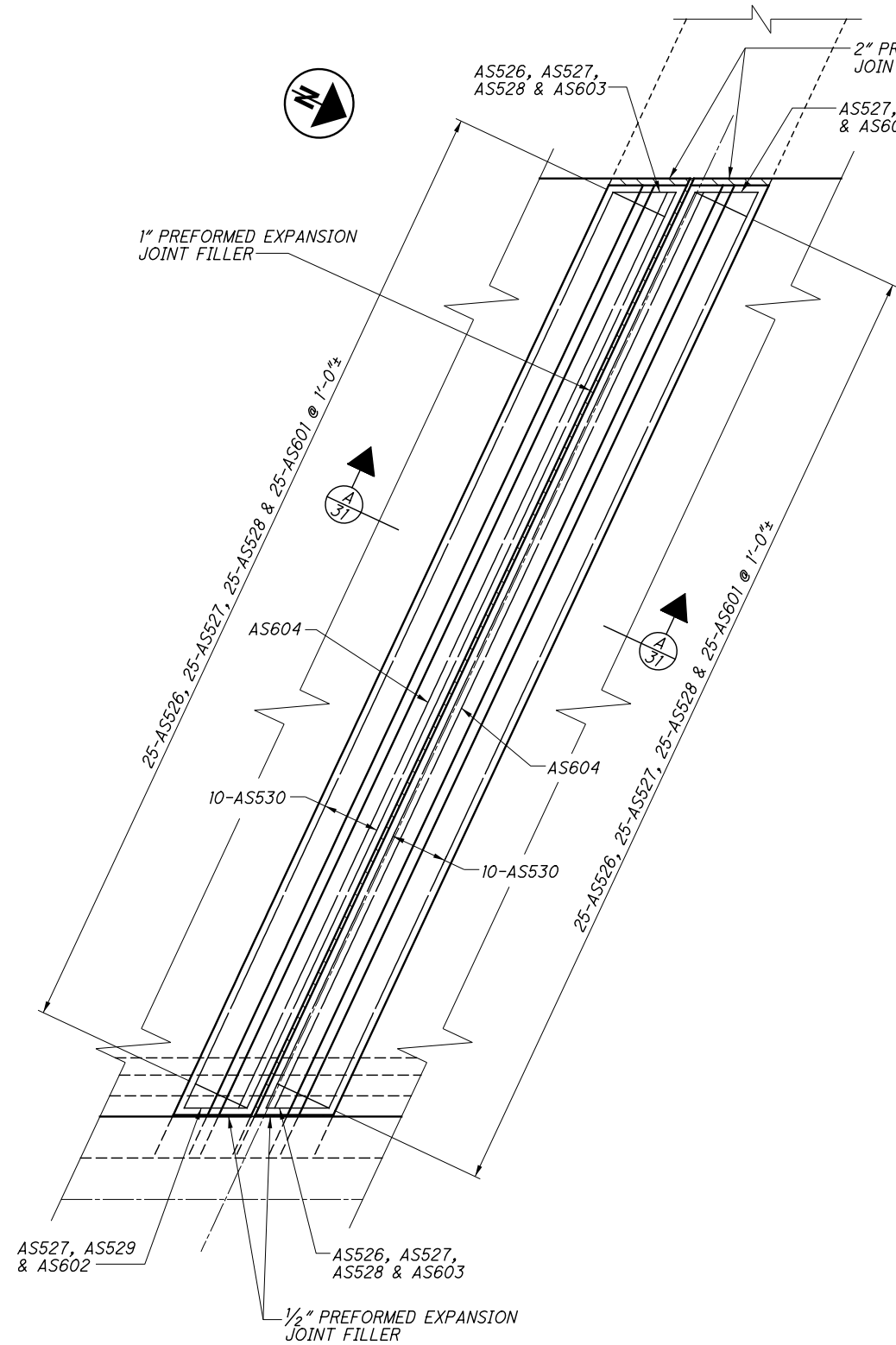
MEDIAN BARRIER: ADJUST FORWARD APPROACH SLAB MEDIAN BARRIER AS NECESSARY TO MATCH POSSIBLE ROADWAY MEDIAN BARRIER TRANSITION TO EXISTING LIGHT POLE BASE.

MEDIAN BARRIER DETAILS: SEE SHEET 31/33.

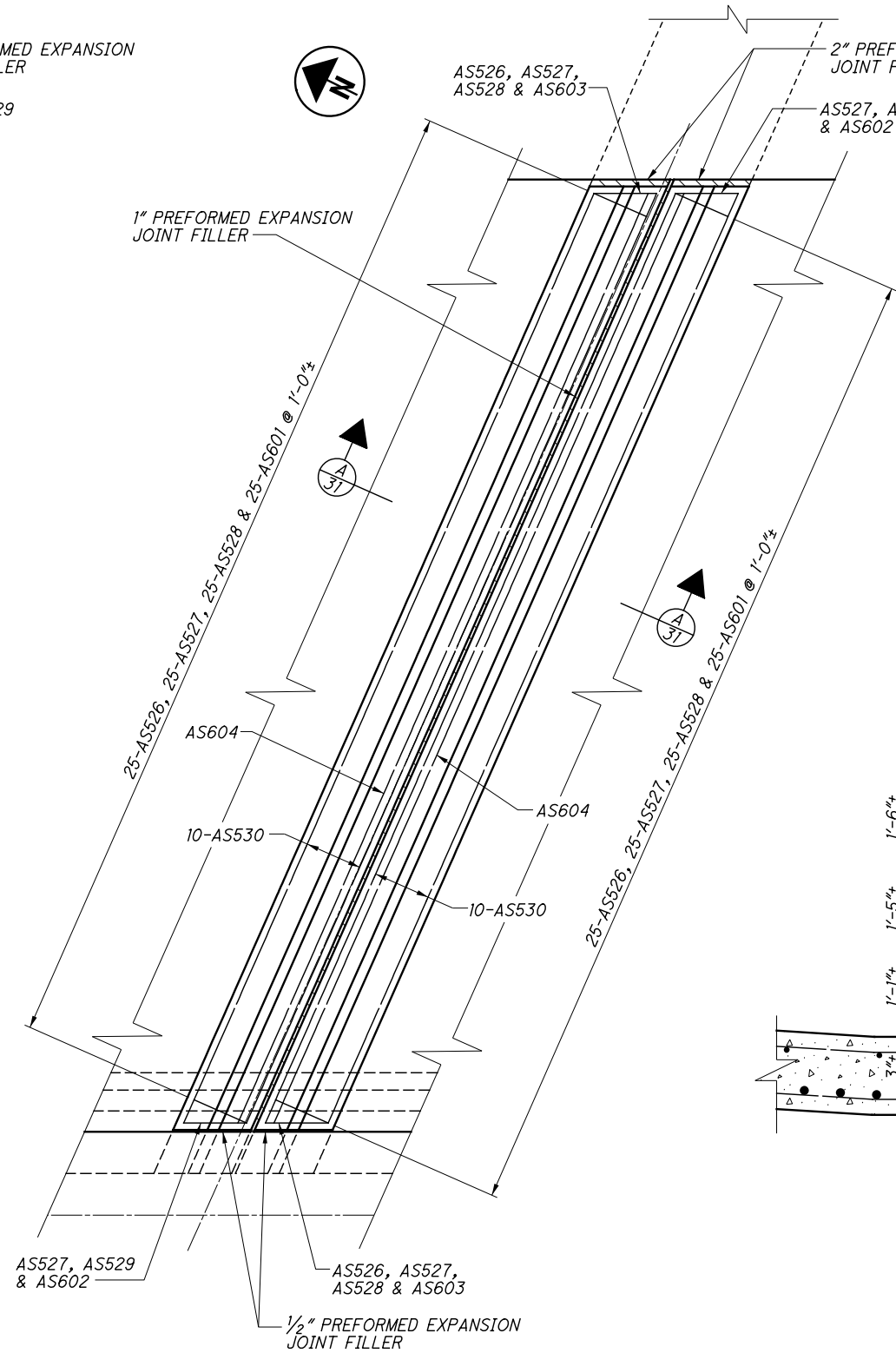
ADDITIONAL NOTES: SEE SHEET 27/33.

CUY-071-16.40/ VAR REPAIR PID No. 111603	FORWARD APPROACH SLAB - RIGHT BRIDGE - LOCATION 4				RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902
	BRIDGE NO. CUY-71-1640	DESIGNED BLN	DRAWN JLS	REVIEWED DLR	DATE 06/2021
IR 71 OVER NORFOLK SOUTHERN RAILWAY					STRUCTURE FILE NUMBER 1805223
30/33					120 123

F:\2019\119034 VAR-Dist 12 Cuyahoga Co. Bridge Rehab Designs\ProjectData\111603\Design\Structures\CUY071_1640C\Sheets\071_1640MD005.dgn 6/28/2021 11:36:38 AM jsmith

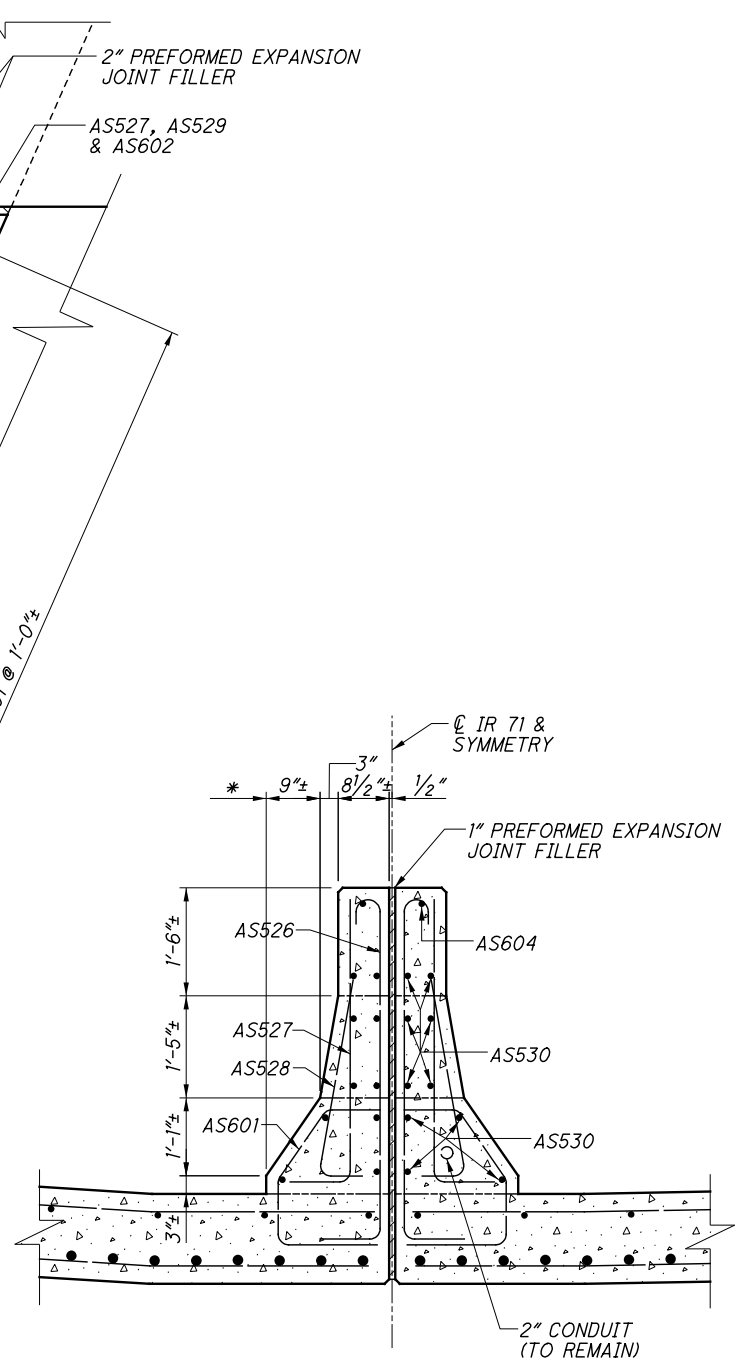


REAR APPROACH SLAB MEDIAN BARRIER



FORWARD APPROACH SLAB MEDIAN BARRIER

(SEE NOTE)



SECTION A-A

* DIMENSIONS MAY VARY FOR FORWARD APPROACH MEDIAN BARRIER. SEE NOTE BELOW.

NOTES

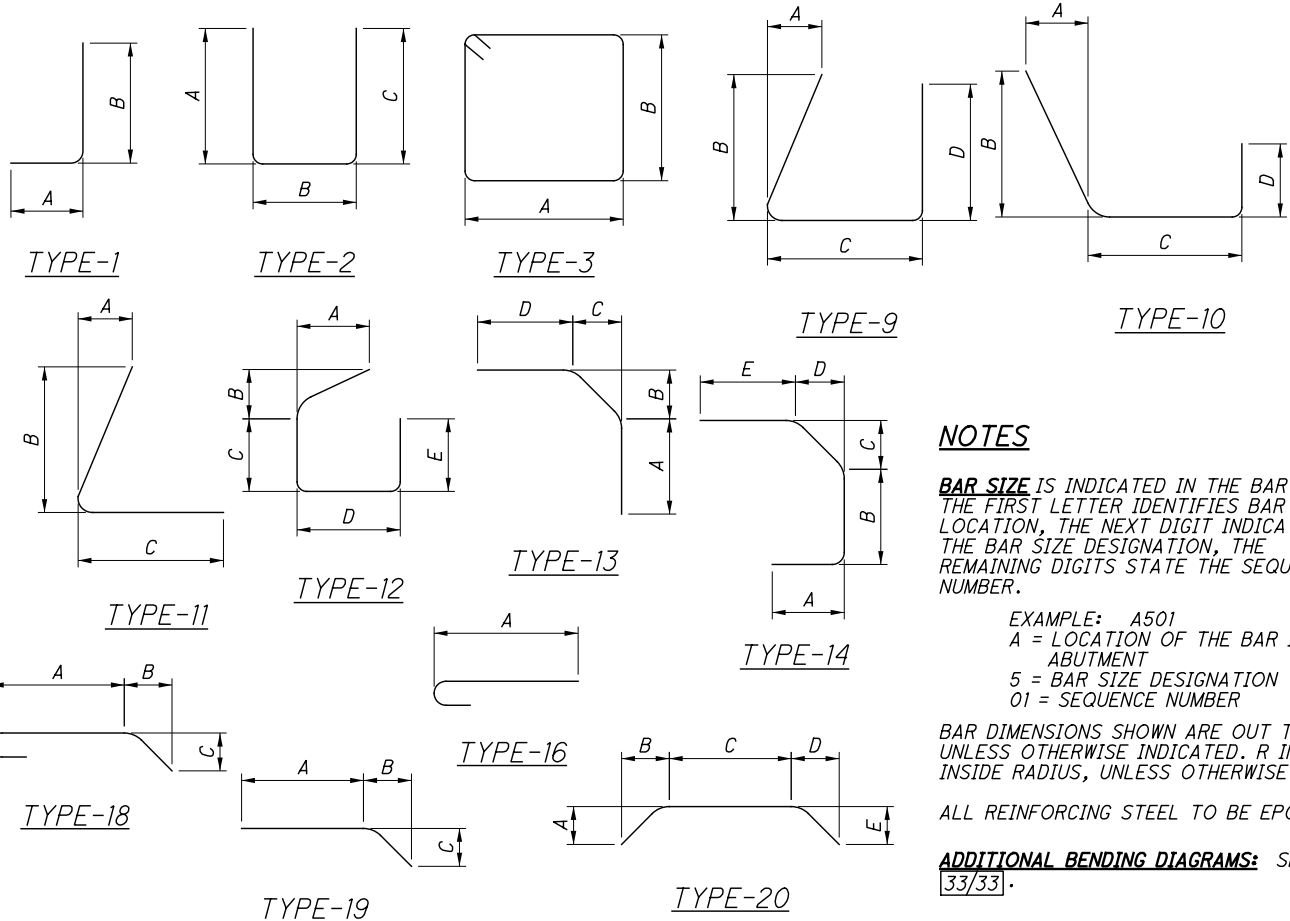
FORWARD APPROACH MEDIAN BARRIER SHALL BE ADJUSTED AS NECESSARY TO MATCH POSSIBLE ROADWAY MEDIAN BARRIER TRANSITION TO EXISTING LIGHT POLE BASE.

FORWARD APPROACH MEDIAN BARRIER JUNCTION BOX: REPLACE AN EXISTING JUNCTION BOX IN THE FORWARD APPROACH SLAB MEDIAN BARRIER IN THE SAME LOCATION AS THE EXISTING JUNCTION BOX. ADJUST REINFORCING STEEL AS NECESSARY TO MISS NEW JUNCTION BOX. SEE ROADWAY GENERAL NOTES FOR MORE INFORMATION.

APPROACH SLAB MEDIAN BARRIERS ARE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN FOR PAYMENT.

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS										CALCULATED CHECKED	JLS dht	DATE 6/21 DATE 6/21	
A501	20	20	40	4'-10"	202	37	2'-3"						
A502	3		3	33'-2"	104	STR							
A503	5	5	10	24'-2"	252	STR							
A504	3		3	22'-9"	71	STR							
A505	2		2	22'-3"	46	STR							
A506	1		1	27'-10"	29	STR							
A507	1		1	28'-5"	30	STR							
A508	2		2	7'-9"	16	STR							
A509	3		3	4'-9"	15	10	2'-0 1/2"	0'-11 1/4"	0'-4 1/2"	2'-3"			
A510	5		5	33'-0"	172	STR							
A511	5		5	22'-10"	119	STR							
A512	3	5	8	22'-8"	189	STR							
A513	1		1	19'-6"	20	STR							
A514	1		1	20'-1"	21	STR							
A515	2		2	5'-7"	12	STR							
A516	3	3	6	4'-5"	28	19	2'-3"	0'-11 1/2"	2'-0 1/2"				
A517	5		5	10'-3"	53	12	2'-0 1/2"	0'-11 1/2"	2'-8 1/2"	2'-11"	2'-8"		
A518	2		2	4'-10"	10	2	1'-10"	1'-5"	1'-10"				
A519	2		2	4'-6"	9	10	0'-9 1/4"	1'-8"	0'-7 1/2"	2'-3"			
A520		5	5	32'-8"	170	STR							
A521		5	5	22'-7"	118	STR							
A522		2	2	22'-0"	46	STR							
A523		3	3	22'-5"	70	STR							
A524		5	5	9'-6"	50	39	2'-3"	0'-3"	0'-7"	3'-11 3/4"	3'-0"		
A525		5	5	5'-9"	30	19	2'-3"	2'-11 1/4"	1'-10 3/4"				
A526		3	3	36'-5"	114	STR							
A527		2	2	12'-2"	25	STR							
A528		2	2	7'-0"	15	STR							
A529		2	2	10'-11"	23	12	2'-0 1/2"	0'-11 1/2"	3'-1"	2'-11"	3'-0"		
A530		1	1	26'-9"	28	STR							
A531		1	1	26'-3"	27	STR							
A532	4	4	8	6'-5"	54	38	5'-1"	0'-10"					
A533	4	4	8	3'-3"	27	11	0'-6"	2'-6 3/4"	0'-10"				
A534	4	4	8	4'-7"	38	1	0'-10"	3'-11"					
A535	20	20	40	0'-9"	31	STR							
A536	1	4	5	12'-5"	65	STR							
A537	1	4	5	12'-0"	63	STR							
A538	2		2	6'-3"	13	20	1'-10"	1'-2"	1'-11 1/4"	1'-2 1/2"	1'-10 3/4"		
A539	4	4	8	10'-7"	88	STR							
A540	4	4	8	10'-1"	84	STR							
A541	4	2	6	12'-9"	80	STR							
A542	4	2	6	12'-1"	76	STR							
A543	5		5	5'-11"	31	19	3'-8 3/4"	1'-10 3/4"	1'-2 1/2"				
A544	4	4	8	10'-4"	86	STR							
A545	4	4	8	10'-10"	90	STR							
A546		3	3	4'-9"	15	10	2'-0 3/4"	0'-11"	0'-4 1/2"	2'-3"			
A547		3	3	6'-5"	20	20	1'-10 3/4"	1'-2 3/4"	1'-11 1/2"	1'-2 3/4"	1'-10 3/4"		
A548	2 SR OF 8	2 SR OF 8	4 SR OF 8	2'-11" TO 3'-9"	111	16	2'-4" TO 3'-2"						0'-1 1/2"
A549	2	2	4	3'-0"	13	16	2'-4 1/2"						
A550	8	8	16	6'-8"	111	STR							
A551	4	4	8	5'-8"	47	25	1'-10"	2'-5 1/2"	1'-3 3/4"	0'-2 1/4"	0'-5 1/4"		
A552	4	4	8	5'-8"	47	STR							
A601	4	4	8	4'-7"	55	14	1'-7"	1'-1 3/4"	1'-0 1/4"	0'-9 1/4"	0'-9 3/4"		
A602	2	2	4	0'-9"	5	STR							
A603	24		24	7'-10"	282	2	3'-4"	1'-6"	3'-4"				
A604	7	7	14	13'-4"	280	2	6'-1"	1'-6"	6'-1"				
A605	10		10	10'-5"	156	2	4'-7 1/2"	1'-6"	4'-7 1/2"				
A606	1	1	2	12'-5"	37	STR							
A607	2	2	4	12'-0"	72	STR							
A608	1		1	10'-7"	16	STR							
A609	2		2	10'-1"	30	STR							
SUB-TOTAL					4237								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS (CONTINUED)													
A610	1	1	2	12'-9"	38	STR							
A611	2	2	4	12'-1"	73	STR							
A612	2	2	4	10'-4"	62	STR							
A613	1	1	2	10'-10"	33	STR							
A614		10	10	10'-2"	153	2	4'-6"	1'-6"	4'-6"				
A615		24	24	8'-0"	288	2	3'-5"	1'-6"	3'-5"				
A616	18	18	36	3'-11"	212	13	2'-6 1/2"	0'-8 1/2"	0'-6"	0'-7"			
A617	2 SR	2 SR	4 SR	4'-10"	252	STR							0'-1 1/2"
	OF	OF	OF	TO									
	8	8	8	5'-8"									
A618	14	14	28	4'-10"	203	STR							
A619	128	133	261	2'-4"	915	2	0'-9"	1'-2"	0'-9"				
A620	128	133	261	2'-6"	980	1	0'-8"	2'-0"					
A621	128	133	261	3'-6"	1372	1	0'-8"	3'-0"					
A622	3	3	6	2'-8"	24	2	0'-11"	1'-2"	0'-11"				
A623	3	3	6	2'-8"	24	1	0'-8"	2'-2"					
A624	3	3	6	3'-8"	33	1	0'-8"	3'-2"	6'-0"				
A625	25		25	2'-10"	106	2	1'-0"	1'-2"	1'-0"				
A626	25		25	2'-9"	103	1	0'-8"	2'-3"					
A627	25		25	3'-9"	141	1	0'-8"	3'-3"					
A628		16	16	3'-2"	76	2	1'-2"	1'-2"	1'-2"				
A629		16	16	2'-11"	70	1	0'-8"	2'-5"					
A630		16	16	3'-11"	94	1	0'-8"	3'-5"					
A631		8	8	3'-0"	36	2	1'-1"	1'-2"	1'-1"				
A632		8	8	2'-10"	34	1	0'-8"	2'-4"					
A633		8	8	3'-10"	46	1	0'-8"	3'-4"					
D801			199	5'-1"	2701	18	2'-10 1/4"	1'-0"	1'-0"				
SUB-TOTAL					8069								
TOTAL					12,306								



NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE DESIGNATION, THE REMAINING DIGITS STATE THE SEQUENCE NUMBER.

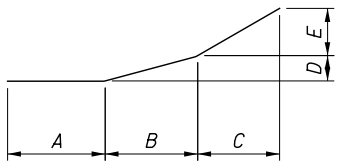
EXAMPLE: A501
A = LOCATION OF THE BAR IN ABUTMENT
5 = BAR SIZE DESIGNATION
01 = SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

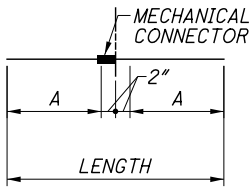
ALL REINFORCING STEEL TO BE EPOXY COATED.

ADDITIONAL BENDING DIAGRAMS: SEE SHEET 33/33.

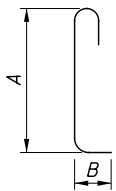
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS								
	TOTAL				A	B	C	D	E	R	INC		
SUPERSTRUCTURE											CALCULATED CHECKED	JLS dht	DATE 5/21 DATE 6/21
S501	1	5'-8"	6	40	2'-3"	0'-6"	0'-4 1/4"	0'-2 3/4"	0'-9"				
S502	1	3'-5"	4	10	0'-11 1/2"	2'-0 1/2"	0'-9 3/4"	0'-6 1/2"					
S503	2	4'-1"	9	9	0'-11 3/4"	2'-0 1/2"	1'-5"	0'-10"					
S504	2	4'-5"	9	9	1'-1 1/2"	2'-5 3/4"	1'-3 3/4"	0'-10"					
S505	1	5'-7"	6	40	2'-3"	0'-5"	0'-4 1/2"	0'-2 1/4"	0'-9 1/2"				
S506	1	3'-4"	3	10	0'-11 1/2"	2'-0 1/2"	0'-10 1/4"	0'-5 1/2"					
S507	8	2'-6"	21	1	0'-10"	1'-10"							
S508	18	5'-3"	99	38	3'-11"	0'-10"							
S509	18	4'-7"	86	1	0'-10"	3'-11"							
S510	8	3'-7"	30	11	0'-6 3/4"	2'-10 1/2"	0'-10"						
S511	10	3'-9"	39	11	0'-6 1/2"	3'-0 1/2"	0'-10"						
S512	2	2'-7"	5	STR									
S513	2	4'-1"	9	STR									
S514	4	3'-1"	13	STR									
S515	4	3'-7"	15	STR									
S516	6	3'-2"	20	STR									
S517	6	3'-6"	22	STR									
S518	2	2'-11"	6	STR									
S519	2	3'-9"	8	STR									
S520	10	5'-10"	61	2	1'-10 3/4"	3'-3 1/2"	0'-11 1/2"						
S521	10	5'-1"	53	41	1'-2"	3'-3 1/2"	0'-4"	0'-10 1/4"					
S522	8	7'-2"	60	2	1'-10 1/4"	4'-7 1/2"	0'-11 1/2"						
S523	8	5'-4"	45	41	1'-4"	3'-3 1/2"	0'-4 1/4"	0'-11 1/2"					
S524	2	2'-9"	6	STR									
S525	2	3'-10"	8	STR									
S601	816	2'-6"	3064	1	0'-10"	1'-10"							
S602	272	4'-9"	1941	3	0'-11 1/2"	1'-0"							
S603	40	7'-0"	421	37	3'-4"								
S604	10	33'-0"	496	STR									
S605	10	24'-3"	364	STR									
S606	14	22'-10"	480	STR									
S607	1	22'-3"	33	STR									
S608	5	32'-9"	246	STR									
S609	5	22'-7"	170	STR									
S610	3	22'-4"	101	STR									
S611	3	22'-0"	99	STR									
S612	5	36'-3"	272	STR									
S613	4	22'-10"	137	STR									
S614	20	5'-0"	150	3	1'-1"	1'-0"							
S615	8	4'-1"	49	14	1'-5 1/4"	0'-10 1/4"	0'-11 3/4"	0'-9"	0'-9 3/4"				
S616	10	2'-0"	30	STR									
S617	2	3'-2"	10	STR									
S618	2	3'-6"	11	STR									
S619	10	3'-5"	51	41	1'-6 1/2"	0'-9 3/4"	0'-6 3/4"	1'-1 1/4"					
S620	8	5'-3"	63	14	1'-10 1/2"	1'-4 1/4"	0'-9 3/4"	0'-7 1/2"	1'-2 3/4"				
TOTAL			8831										



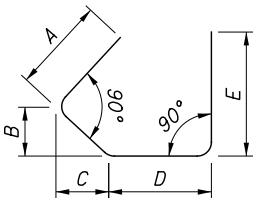
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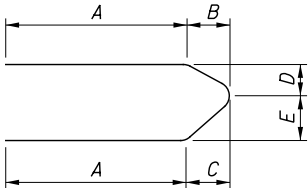
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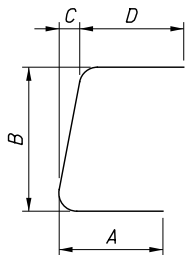
TYPE-38



TYPE-39



TYPE-40



TYPE-41

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS								
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC		
APPROACH SLABS													CALCULATED CHECKED	JLS dht	DATE 6/21 DATE 6/21
AS501	208	104	312	5'-10"	1898	37	2'-9"								
AS502	6		6	32'-11"	206	STR									
AS503	98		98	32'-8"	3339	STR									
AS504	101		101	24'-6"	2581	STR									
AS505	52	52	104	24'-3"	2630	STR									
AS506	52		52	22'-10"	1238	STR									
AS507	20		20	20'-6"	428	STR									
AS508	32		32	21'-3"	709	STR									
AS509	1	1	2	15'-0"	31	STR									
AS510	23	23	46	20'-5"	980	STR									
AS511	29		29	21'-1"	638	STR									
AS512	1	1	2	14'-5"	30	STR									
AS513		52	52	32'-6"	1763	STR									
AS514		74	74	24'-5"	1885	STR									
AS515		6	6	36'-3"	227	STR									
AS516		104	104	6'-0"	651	37	2'-10"								
AS517		15	15	36'-5"	570	STR									
AS518		23	23	36'-8"	880	STR									
AS519		8	8	36'-4"	303	STR									
AS520		52	52	22'-7"	1225	STR									
AS521		16	16	24'-9"	413	STR									
AS522		21	21	20'-3"	444	STR									
AS523		45	45	20'-10"	978	STR									
AS524		15	15	20'-8"	323	STR									
AS525		14	14	24'-8"	360	STR									
AS526	52	52	104	6'-9"	732	38	4'-11"	1'-4 1/2"							
AS527	54	54	108	5'-9"	648	1	1'-0"	4'-11"							
AS528	52	52	104	3'-6"	380	11	0'-6"	2'-9 3/4"	0'-10"						
AS529	2	2	4	3'-6"	15	11	0'-6 1/2"	2'-9 3/4"	0'-10"						
AS530	20	20	40	24'-4"	1015	STR									
AS601	50	50	100	4'-1"	613	14	1'-4 1/2"	1'-0 1/4"	0'-11 3/4"	0'-8"	0'-8 1/2"				
AS602	2	2	4	4'-4"	26	14	1'-6 1/2"	1'-0 1/4"	0'-11 1/2"	0'-9"	0'-9 1/2"				
AS603	2	2	4	2'-11"	18	13	1'-0 1/4"	0'-11 1/2"	0'-9"	0'-9 1/2"					
AS604	2	2	4	24'-4"	146	STR									
ASI001	247		247	25'-11"	27,545	16	24'-6"								
ASI002	1	1	2	15'-0"	129	STR									
ASI003	1	1	2	14'-5"	124	STR									
ASI004		181	181	25'-10"	20,120	16	24'-5"								
ASI005		39	39	26'-2"	4391	16	24'-9"								
ASI006		33	33	26'-1"	3704	16	24'-8"								
TOTAL					84,336	*									

* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15" OR T=17"), AS PER PLAN FOR PAYMENT.

NOTES

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE DESIGNATION, THE REMAINING DIGITS STATE THE SEQUENCE NUMBER.

EXAMPLE: A501
A = LOCATION OF THE BAR IN ABUTMENT
5 = BAR SIZE DESIGNATION
01 = SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL TO BE EPOXY COATED.

ADDITIONAL BENDING DIAGRAMS: SEE SHEET 32/33.