

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

FRA-70-22.61

RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH THE NORFOLK SOUTHERN RAILROAD
CITY OF COLUMBUS
FRANKLIN COUNTY

PROJECT DESCRIPTION

THIS IS THE FIRST CONSTRUCTION PROJECT FROM THE FAR EAST FREEWAY STUDY (PID# 76997). PHASE 1 INCLUDES PARTIALLY RECONFIGURING THE SYSTEM TO SYSTEM INTERCHANGE OF IR 70 AND IR 270 AND THE SYSTEM TO SERVICE INTERCHANGE OF IR 70 AND BRICE ROAD BY REMOVING MAJOR WEAVING MOVEMENTS. THE RECONFIGURATION WILL SEPARATE THE THROUGH AND LOCAL TRAFFIC FROM IR 270 AND IR 70 HEADED EASTBOUND AND TO BRICE ROAD. THROUGH TRAFFIC TO IR 70 EASTBOUND FROM IR 270 SOUTHBOUND WILL UTILIZE A NEW DIRECTIONAL FLY OVER RAMP WHILE NORTH BOUND TRAFFIC WILL CONTINUE TO USE THE EXISTING RAMP. EXITS FOR BRICE ROAD WILL OCCUR ON IR 270 NORTH AND SOUTH BOUND AND ON IR 70 BEFORE IR 270; FUNNELING LOCAL TRAFFIC ONTO A COLLECTOR-DISTRIBUTOR EXIT RAMP. THIS PROJECT INCLUDES ALL THE ASSOCIATED DRAINAGE, LIGHTING, TRAFFIC CONTROL, UTILITY RELOCATION, AND NOISE ABATEMENT TO RECONFIGURE THE INTERCHANGES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 76.2 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 3.0 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: 79.2 ACRES

LIMITED ACCESS

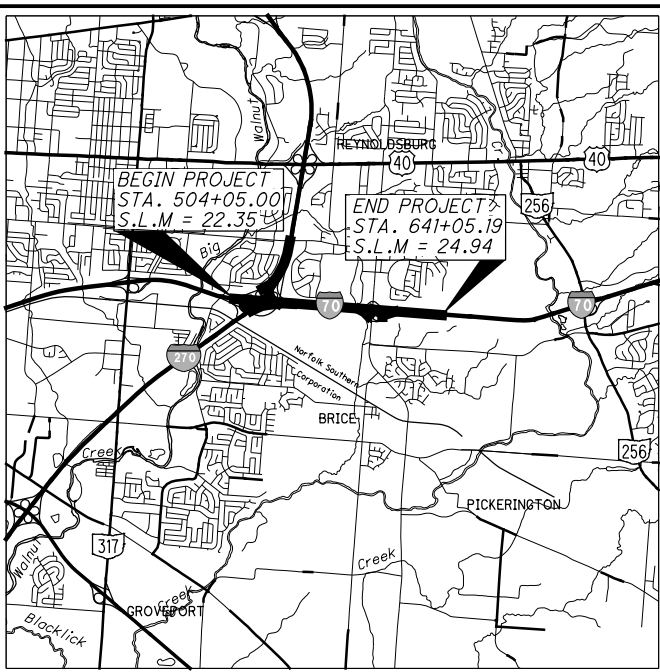
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

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

POST CONSTRUCTION BMPs

ALL POST CONSTRUCTION BMPs WILL BE OWNED, OPERATED AND MAINTAINED BY ODOT PERSONAL. PORTIONS OF THIS PROJECT LIE WITHIN THE CORPORATION LIMITS OF THE CITY OF COLUMBUS AND THE CITY IS ABSOLVED IN THE FUTURE OF ANY RESPONSIBILITIES FOR THE SWPPP, POST CONSTRUCTION BMP MAINTENANCE, AND DOCUMENTATION TO THE OEPA.



LOCATION MAP

LATITUDE: 39°55'59" LONGITUDE: 82°50'27"



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

FOR DESIGN DESIGNATIONS SEE SHEET 2.
 FOR DESIGN EXCEPTIONS SEE SHEET 2.
 FOR ENGINEERS SEAL SEE SHEET 2.

ASSOCIATED PLANS

FEMA FLOOD ZONE AE
 BIG WALNUT CREEK
 FIRM: 39049C0361K 06/17/2008
 BASE FLOOD ELEVATION: 750.2
 WORK PERMITTED: REPLACEMENT OF EXISTING GUARDRAIL AND STORM SEWER UNDER NOE BIXBY ROAD. NO FILL TO BE PLACED IN FLOODWAY AND FLOOD ZONE AE.

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STANDARD CONSTRUCTION DRAWINGS

SUPPLEMENTAL SPECIFICATIONS

AS-1-15	7/17/15	HL-10.13	4/17/20	ICD-1-82	7/19/02	MH-4	7/16/21	MT-101.80	1/17/20	TC-42.10	10/18/13	800	10/15/21	869	10/17/14
AS-2-15	1/18/19	HL-10.31	4/17/20	I-3C, 3C1	7/16/21	MT-95.30	7/19/19	MT-101.90	7/17/20	TC-42.20	10/18/13	804	7/16/21	875	1/18/19
BP-2.1	7/17/15	HL-20.11	1/15/21	I-3D	7/16/21	MT-95.40	1/17/20	MT-102.10	1/17/20	TC-51.11	1/15/16	808	1/18/19	878	4/16/21
BP-2.2	1/15/21	HL-20.21	1/15/21	ITS-14.10	1/15/21	MT-95.45	1/17/20	MT-102.30	10/16/15	TC-52.10	10/18/13	809	7/16/21	894	4/16/21
BP-5.1	7/16/21	HL-30.11	1/15/21	ITS-14.11	1/15/21	MT-95.70	1/17/20	MT-103.10	1/19/18	TC-52.20	1/15/21	813	10/19/18	904	1/15/21
BP-6.1	7/19/13	HL-30.21	4/17/20	RM-1.1	1/15/21	MT-96.11	4/16/21	MT-104.10	10/16/15	TC-61.10	1/17/20	821	4/20/12	908	10/20/17
BP-9.1	1/18/19	HL-30.22	1/15/21	RM-4.3	7/18/14	MT-96.20	7/15/16	MT-105.10	1/17/20	TC-61.30	7/19/19	825	1/17/20	909	7/16/21
CB-3	7/16/21	HL-30.31	4/17/20	RM-4.4	7/19/19	MT-96.26	1/18/19	SBR-1-13	7/20/18	TC-65.10	1/17/14	832	10/19/18	913	4/16/21
CB-3A	7/16/21	HL-30.32	4/17/20	RM-4.5	7/21/17	MT-97.10	4/19/19	SICD-1-96	7/18/14	TC-65.11	7/21/17	836	1/19/18	921	4/20/12
CB-4A, 5A, 8A	7/16/21	HL-30.33	4/17/20	RM-4.6	7/19/13	MT-97.12	1/20/17	TC-12.31	7/16/21	TC-71.10	7/16/21	840	4/16/21	961	4/17/20
CB-8	7/16/21	HL-40.20	7/17/20	MGS-1.1	7/16/21	MT-98.10	1/17/20	TC-15.116	7/16/21	TC-72.20	7/20/18	846	4/17/15	COC 1620	9/10/18
DM-1.1	7/17/20	HL-50.11	1/16/15	MGS-2.1	1/19/18	MT-98.11	1/17/20	TC-21.11	7/16/21	TC-73.20	1/17/20	863	7/16/21		
DM-1.2	7/16/21	HL-50.21	1/15/21	MGS-3.1	1/19/18	MT-98.21	1/17/20	TC-21.21	7/16/21	TC-81.11	7/16/21				
DM-4.1	7/17/20	HL-60.11	7/21/17	MGS-3.2	1/18/13	MT-98.28	1/17/20	TC-21.50	4/17/20	TC-84.20	10/18/13				
F-1.1	7/19/13	HL-60.12	7/16/21	MGS-4.2	7/19/13	MT-99.20	4/19/19	TC-22.20	1/17/14	TC-84.21	10/18/13				
F-3.1	7/19/13	HL-60.21	7/20/18	MGS-4.3	1/18/13	MT-99.30	1/17/20	TC-41.10	7/19/13	TC-85.21	7/16/21				
F-3.4	7/19/13	HL-60.31	1/17/20	MGS-5.2	7/15/16	MT-99.60	7/15/16	TC-41.20	10/18/13	TC-85.22	1/19/18				
GSD-1-19	1/15/21	HW-1.1	7/20/18	MGS-5.3	7/15/16	MT-101.60	1/17/20	TC-41.30	10/18/13	VPPF-1-90	7/20/18				
HL-10.11	1/15/21	HW-2.1	7/20/18	MH-1	7/16/21	MT-101.70	1/17/20	TC-41.40	10/18/13	WQ-1.1	1/18/13				
HL-10.12	1/20/17	HW-2.2	7/20/18	MH-3	7/16/21	MT-101.75	1/17/20	TC-41.50	10/18/13	WQ-1.2	1/15/16				

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:
 HDR ENGINEERING, INC.
 2800 CORPORATE EXCHANGE DR.,
 SUITE 100
 COLUMBUS, OHIO 43231
 614-839-5770

APPROVED DATE 12/16/2021 DISTRICT DEPUTY DIRECTOR

APPROVED _____ DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

3347-E

FEDERAL PROJECT NO. E131 (180)
 CONSTRUCTION PROJECT NO. 95639
 RAILROAD INVOLVEMENT NORFOLK SOUTHERN RAILROAD
 FRA-70-22.61
 1/199

c:\pwworking\pitt.d\607352\95639_G1001.dgn 4/18/2022 9:58:00 AM T.SCHOEN

TREE PRESERVATION

ALL PUBLIC TREES, WHETHER SHOWN OR NOT SHOWN ON THE PLANS, ARE TO BE PRESERVED, UNLESS APPROVAL TO REMOVE OR PRUNE IS GIVEN IN WRITING BY CRPD/CITY FORESTER AND THEIR REMOVAL HAS BEEN DESIGNATED ON THE PLAN. TREES APPROVED FOR REMOVAL BY EITHER OF THE TWO PRECEDING AUTHORITIES SHALL BE PAID FOR UNDER ITEM 201. CLEARING AND GRUBBING, UNLESS OTHERWISE PROVIDED FOR BY UNIT PRICE, SHALL BE BID UNDER ITEM 201. THE CONTRACTOR SHALL USE SPECIAL PRECAUTIONS TO AVOID DAMAGE TO ALL OTHER TREES. ALL TREES REMOVED SHALL INCLUDE STUMP REMOVAL TO EIGHTEEN (18) INCHES BELOW GRADE. ALL CLEARING AND GRUBBING DONE ON CRPD PROPERTY, RIGHTS-OF-WAY, OR ANY CITY OF COLUMBUS PROPERTY SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. HEAVY EQUIPMENT WILL NOT BE ALLOWED TO COMPACT THE SOIL OVER THE ROOT ZONE OF EXISTING PUBLIC TREES. RESTRICTED EQUIPMENT ACCESS ROUTES WILL BE ESTABLISHED BEFORE WORK IS BEGUN. TEMPORARY PAVING MATERIALS SUCH AS PLYWOOD, LUMBER OR RUBBER MATTING SPREAD OVER THE ROOT ZONE MAY BE REQUIRED TO PREVENT COMPACTION. CONTRACTOR SHALL REFER TO THE ANSI A300 AND/OR CITY OF COLUMBUS EXECUTIVE ORDER 2015-01 FOR TREE PROTECTION AND REPLACEMENT.

TREE PROTECTION

CONTRACTORS MUST SUBMIT A TREE PROTECTION PLAN TO THE CITY DIVISION OF FORESTRY WITH A DRAWING OF ANY WORK LOCATED WITHIN THE DRIP LINE OF A PUBLIC TREE. REFER TO CRPD STANDARD DRAWING, TREE PROTECTION FOR GUIDANCE. CONSTRUCTION MATERIALS, EXCAVATION DEBRIS, FUEL, EQUIPMENT OR VEHICLES ARE NOT TO BE STOCKPILED, STORED, DUMPED OR PARKED WITHIN THE DRIP LINE OF PUBLIC TREES. PUBLIC TREES MUST BE PROTECTED AGAINST INJURY OR DAMAGE TO BRANCHES, TRUNKS OR ROOTS FROM CONSTRUCTION AND EXCAVATION, AS DESCRIBED IN "BEST MANAGEMENT PRACTICES - MANAGING TREES DURING CONSTRUCTION," A COMPANION PUBLICATION TO ANSI A300 PART 5. FAILURE TO CONTACT THE CITY FORESTRY REPRESENTATIVE, (614) 645-2864, IN ADVANCE OF CONSTRUCTION WILL RESULT IN THE APPLICANT REIMBURSING CITY FORESTRY FOR THE COST OF ANY AND ALL DAMAGE AS DETERMINED BY THE CURRENT ANSI A300/CITY OF COLUMBUS EXECUTIVE ORDER 2015-01 FOR TREE PROTECTION AND REPLACEMENT.

FOR THE DIVISION OF POWER

THE DIVISION OF POWER (DOP) MAY HAVE UNDERGROUND AND OVERHEAD PRIMARY, SECONDARY, AND STREET LIGHTING AT THIS WORK LOCATION. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OUPS AT 811 OR 1-800-362-2764 FORTY-EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S ELECTRICAL FACILITIES IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS" (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1001.18 OF THE CMSC MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING STREET LIGHTING LOCKOUT/TAGOUT (LOTO) PROCEDURE MIS-01, COPIES OF WHICH ARE AVAILABLE FROM DOP.

IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, THE DOP DISPATCH OFFICE SHOULD BE CONTACTED IMMEDIATELY AT (614) 645-7627. DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

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

IN ADDITION TO THE REQUIREMENTS OF THE C&MS, PROVIDE AN ADDITIONAL UNOBSTRUCTED 25 FOOT X 25 FOOT (MINIMUM) AREA OF FLOOR SPACE TO BE USED AS A CONFERENCE ROOM, INCLUDING SIX 30" X 72" WORK TABLES AND 36 PADDED, FOLDABLE OR STACKABLE CHAIRS. INCREASE THE NUMBER OF ALL-WEATHER PARKING SPACES TO 25 SPACES TOTAL. THE PARKING AREA SHALL BE HARD-SURFACED (PAVED), WELL LIT, SECURED, AND MAINTAINED, WITH SLOPES NOT EXCEEDING 1 PERCENT IN ANY DIRECTION. A SEPARATE, FENCED, LOCKABLE AREA SHALL BE PROVIDED FOR 10 VEHICLES WITHIN THE PROVIDED PARKING AREA.

ITEM 606 - SPECIAL - CABLE BARRIER, ANCHOR ASSEMBLY

THIS ITEM SHALL CONSIST OF REPLACING EXISTING CABLE BARRIER, ANCHOR ASSEMBLY IN KIND. SEE THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE FOR DETAILS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606 CABLE BARRIER, ANCHOR ASSEMBLY AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL HIGH TENSION CABLE GUARDRAIL SYSTEM 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.

SYSTEMS SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 15 FEET.

DELINEATE THE CABLE BARRIER USING TYPE 6 BARRIER REFLECTORS PER ITEM 626 OR USING FLEXIBLE POSTS PER ITEM 620 AS CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.

ANCHOR TERMINAL STRUTS SHALL BE COVERED COMPLETELY ON BOTH SIDES WITH YELLOW TYPE J, ASTM D 4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

TRANSITIONS TO W-BEAM GUARDRAIL ARE NOT ALLOWED.

REFER TO MANUFACTURER FOR MAXIMUM OFFSET FROM BREAK POINT.

TORPEDO OR BULLET SPLICES ARE NOT ALLOWED. ALL CABLE PLICES SHALL BE A SWAGED OR OPEN BODY DESIGN THAT ALLOWS FOR ANNUAL INSPECTION BETWEEN THE WEDGE AND STRANDS OF CABLE.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POSTS DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

CALCULATED
SJB
CHECKED
TJS

GENERAL NOTES

FRA -70-22.61

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 C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 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 MT101.70.

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 C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY OR BI-DIRECTIONAL) 2425 EACH
 ITEM 614, OBJECT MARKER, ONE-WAY 832 EACH
 ITEM 614, INCREASED BARRIER DELINEATION 41560 FEET

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 C&MS 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 C&MS 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 PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 2, ONE-WAY 497 EACH
 ITEM 614, OBJECT MARKER, ONE-WAY 497 EACH

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

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

- RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.
 - RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

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

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 1609 EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

SEE PAVEMENT SUBSUMMARY FOR THE BID ITEMS: PAVEMENT PLANING, ASPHALT SURFACE COURSE, AND NON TACKING TACK COAT.

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: DOTTED LINE, CLASS I, 12", 807 PAINT

IN ADDITION TO THE REQUIREMENT OF ITEM 614 THE PAVEMENT MARKINGS SHALL BE PER ODOT ITEM 807 PAINT.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER FT, INSTALLED AND MAINTAINED.

LANE VALUE CONTRACT TABLE

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME A LANE/SHOULDER/RAMP IS CLOSED BY THE CONTRACTOR'S ACTION WHILE NOT OTHERWISE PERMITTED BY THE LANE VALUE CONTRACT TABLE.

LANE VALUE CONTRACT TABLE						
Section (SLM)	Existing Number of Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
FRA-70						
College Avenue (18.67) to Hamilton Road (21.33)	3	3 to 2	5AM-7PM	No Restriction	No Restriction	\$305
		3 to 1	5AM-10PM	8AM-11PM	8AM-11PM	\$305
Hamilton Road (21.33) to I-270 (East) (22.34)	3	3 to 2	5AM-7PM	3PM-6PM	3PM-6PM	\$335
		3 to 1	5AM-10PM	6AM-9PM	6AM-9PM	\$335
I-270 (East side) (22.34 to 23.17)	2	2 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$380
I-270 (East) (23.17) to Brice Road (24.27)	3	3 to 2	5AM-8PM	10AM-7PM	10AM-7PM	\$460
		3 to 1	5AM-12M	7AM-11PM	7AM-11PM	\$460
Brice Road (24.27) to Fairfield County line (24.94)	3	3 to 2	5AM-7PM	7AM-7PM	7AM-7PM	\$370
		3 to 1	5AM-10PM	6AM-11PM	6AM-11PM	\$370
FAI-70						
Franklin County line (0.00) to SR-256 (1.19)	3	3 to 2	5AM-7PM	7AM-7PM	7AM-7PM	\$370
		3 to 1	5AM-10PM	6AM-11PM	6AM-11PM	\$370
Short term shoulder closures are permitted any time except 5AM-9AM and 3PM-6PM Monday-Friday.						

LANE VALUE CONTRACT TABLE						
Section (SLM)	Existing Number of Lanes per Direction	Lane closures are NOT permitted:				Disincentive Amounts per minute per lane
		Lane Reduction	Mon to Fri	Sat	Sun	
FRA-270						
SR 317 (37.36) to US 40 (40.90)	4	4 to 3	5AM-9AM & 3PM-7PM	No Restriction	No Restriction	\$290
		4 to 2	5AM-8PM	7AM-9AM & 2PM-7PM	7AM-9AM & 2PM-7PM	\$290
		4 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$290
US 40 (40.90) to Livingston Avenue (42.13) Main line	2	2 to 1	5AM-8PM	6AM-7PM	6AM-7PM	\$220
US 40 (40.90) to Livingston Avenue (42.13) Collector Distributor	4	4 to 3	5AM-9AM & 3PM-7PM	No Restriction	No Restriction	\$185
		4 to 2	5AM-8PM	7AM-9AM & 2PM-7PM	7AM-9AM & 2PM-7PM	\$185
		4 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$185
Livingston Avenue (42.13) to Noe Bixby Road (43.65) Main line	2	2 to 1	5AM-8PM	6AM-7PM	6AM-7PM	\$250
Livingston Avenue (42.13) to Noe Bixby Road (43.65) Collector Distributor	2	2 to 1	5AM-11PM	6AM-10PM	6AM-10PM	\$250
Noe Bixby Road (43.65) to north of Winchester Pike (45.49)	3	3 to 2	3PM-6PM	No Restriction	No Restriction	\$190
		3 to 1	5AM-8PM	6AM-7PM	6AM-7PM	\$190
Short term shoulder closures are not permitted 5AM-9AM and 3PM-7PM Monday-Friday.						

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: LANE LINE, CLASS I, 5", 642 PAINT

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: EDGE LINE, CLASS I, 5", 642 PAINT, WHITE

IN ADDITION TO THE REQUIREMENT OF ITEM 614 AND 642 THE PAVEMENT MARKINGS SHALL BE 5" PER CITY OF COLUMBUS ITEM 614 AND 642.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER MILE, INSTALLED AND MAINTAINED.

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: CHANNELIZING LINE, CLASS I, 10", 642 PAINT

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: STOP LINE, CLASS I, 20", 642 PAINT

IN ADDITION TO THE REQUIREMENT OF ITEM 614 AND 642 THE PAVEMENT MARKINGS SHALL BE PER MARKING WIDTH SPECIFIED PER CITY OF COLUMBUS ITEM 614 AND 642.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER FT, INSTALLED AND MAINTAINED.

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: DOTTED LINE, CLASS I, 5", 740.06, TYPE I

IN ADDITION TO THE REQUIREMENT OF ITEM 614 AND 740 THE PAVEMENT MARKINGS SHALL BE PER MARKING WIDTH SPECIFIED PER CITY OF COLUMBUS ITEM 614 AND 642.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER FT, INSTALLED AND MAINTAINED.

ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW

IN ADDITION TO THE REQUIREMENT OF ITEM 614 AND 740 THE PAVEMENT MARKINGS SHALL BE PER MARKING WIDTH SPECIFIED PER CITY OF COLUMBUS ITEM 614 AND 642.

PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER MILE, INSTALLED AND MAINTAINED.

SHORT DURATION RAMP CLOSURES

FOR THE PURPOSE OF PERFORMING THE REQUIRED WORK OR WHEN REQUIRED BY THE INTERSTATE ENTRANCE RAMP CLOSURE NOTE, RAMP CLOSURES MAY BE CLOSED FOR SHORT DURATIONS AND DETOURED IN ACCORDANCE WITH THE RAMP CLOSURE TABLE IF APPROVED BY THE ENGINEER. RAMP CLOSURES ARE SUBJECT TO DISINCENTIVES.

FOR ALL SERVICE RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 60 HOURS AND/OR, FOR ALL SYSTEM RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 24 HOURS

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

POSITIVE GUIDANCE ALONG THE DETOUR ROUTE WITH DETOUR SIGNS (M4-9 SERIES) IN ACCORDANCE WITH THE DETOUR SIGNS NOTE.

FOR ALL RAMP CLOSURES LASTING LESS THAN 12 HOURS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

WHEN CLOSING ENTRANCE RAMPS, CORRESPONDING LEAD-IN LANES AND TURN LANES SHALL ALSO BE CLOSED.

IF A DESIGNATED DETOUR ROUTE IS NOT PROVIDED IN THE PLANS, TRAFFIC SHALL BE DIRECTED TO THE NEXT INTERCHANGE, IF AVAILABLE, TO TURN AROUND. IF THE USE OF THE NEXT INTERCHANGE IS NOT POSSIBLE, AN ALTERNATIVE DETOUR ROUTE SHALL BE PROVIDED BY THE ENGINEER.

SERVICE RAMP: INTERCHANGE RAMPS BETWEEN FREEWAYS (OR EXPRESSWAYS) AND NON-FREEWAYS (OR NONEXPRESSWAYS). THESE RAMPS PROVIDE ACCESS (CONNECTIONS) BETWEEN FREEWAYS/EXPRESSWAYS AND OTHER PRINCIPAL/MINOR ARTERIALS, COLLECTORS OR LOCAL ROADS.

SYSTEM RAMP: INTERCHANGE RAMPS (OR CONNECTORS) BETWEEN FREEWAYS (OR EXPRESSWAYS) AND FREEWAYS (OR EXPRESSWAYS).

**Ramp Closure Restrictions
Interstate Route 270 in Franklin County**

Secondary Route: US Route 40 SLM along 270: 41.32 (East Side)					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
J	US-40 WB to I-270 SB	5AM-8PM	8AM-7PM	US40 West to Hamilton Road South to I-70 East	
K	I-270 SB to US-40 WB	5AM-8PM	8AM-7PM	270 S to US-40 E (Ramp O) to 270 N (Ramp N) to US-40 W (Ramp L)	270 S to 70 E to Brice Rd. to 70 W to 270 N to US-40 W (Ramp L)
L	I-270 NB to US-40 WB	5AM-9AM & 3PM-7PM	No Restriction	270 N to OH-317 to 270 S to US-40 W (Ramp K)	270 N to US-16 W to OH-317 to US-40
M	US-40 WB to I-270 NB	5AM-8PM	8AM-7PM	US-40 W to 270 S (Ramp J) to US-40 E (Ramp O) to 270 N (Ramp N)	US-40 W to OH-317 to OH-16 E to 270 N
N	US-40 EB to I-270 NB	5AM-8PM	8AM-7PM	US-40 E to 270 S (Ramp R) to 70 W to SR 317 S to 70 E to 270 N	
O	I-270 SB to US-40 EB	5AM-9PM	8AM-7PM	270 S to 70 W to OH-317 N to US-40 E	270 S to 70 E to Brice Rd. to 70 W to 270 N to US-40 E (Ramp P)
P	I-270 NB to US-40 EB	5AM-9PM	8AM-7PM	270 N to US-40 W (Ramp L) to 270 S (Ramp J) to US-40 E (Ramp O)	270 N to OH-317 to 270 S to US-40 E (Ramp O)
R	US-40 EB to I-270 SB	5AM-9AM & 3PM-7PM	No Restriction	US-40 E to 270 N (Ramp N) to US-40 W (Ramp L) to 270 S (Ramp J)	US-40 E to OH-256 to 70 W to 270 S

**Ramp Closure Restrictions
Interstate Route 70 in Franklin County**

Secondary Route: State Route 317 SLM along 70: 21.33					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
A	OH-317 to I-70 WB	5AM-10PM	8AM-8PM	OH-317 N to E Livingston Ave.* W to S James Rd. S to 70 W	OH-317 S to Refugee Rd.* W to S James Rd. N to 70 W
B	I-70 EB to OH-317	5AM-7PM	8AM-7PM	70 E to Brice Rd. to 70 W to OH-317 (Ramp C)	70 E to OH-317 N (Ramp D)
C	I-70 WB to OH-317	5AM-10PM	8AM-8PM	70 W to S James Rd. to 70 E to OH-317 (Ramp B)	70 W to S James Rd. to 70 E to OH-317 N (Ramp D)
D	I-70 EB to OH-317 NB	5AM-7PM	8AM-7PM	70 E to Brice Rd. to 70 W to OH-317 (Ramp C)	70 E to OH-317 (Ramp B)
E	OH-317 to I-70 EB	5AM-10PM	8AM-8PM	OH-317 N to 70 W (Ramp A) to S James Rd. to 70 E	OH-317 S to Refugee Rd.* W to S James Rd. N to 70 E
Secondary Route: Interstate Route 270 SLM along 70: 22.77 (East Side)					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
A	I-70 EB to I-270 NB	5AM-7PM	8AM-8PM	70 E to Brice Rd. to 70 W to 270 N (Ramp F)	70 E to 270 S (Ramp C) to US-33 to 270 N
B	I-270 SB to I-70 WB	5AM-9PM	8AM-8PM	270 S to 70 E (Ramp D) to Brice Rd. to 70 W	270 S to US-33 to 270 N to 70 W (Ramp G)
C	I-70 EB to I-270 SB	5AM-9AM & 3PM-7PM	No Restriction	70 E to 270 N (Ramp A) to US-40 to 270 S	70 E to Brice Rd. to 70 W to 270 S (Ramp H)
D	I-270 SB to I-70 EB	5AM-11PM	8AM-9PM	270 S to US-33 to 270 N to 70 E (Ramp E)	270 S to 70 W (Ramp B) to OH-317 to 70 E
E	I-270 NB to I-70 EB	5AM-10PM	8AM-8PM	270 N to 70 W (Ramp G) to 270 S (Ramp H) to 70 E (Ramp D)	270 N to US-40 to 270 S to 70 E (Ramp D)
F	I-70 WB to I-270 NB	5AM-11PM	7AM-9PM	70 W to 270 S (Ramp H) to US-33 to 270 N	70 W to OH-317 to 70 E to 270 N (Ramp A)
G	I-270 NB to I-70 WB	5AM-9AM & 3PM-7PM	No Restriction	270 N to US-40 to 270 S to 70 W (Ramp B)	270 N to 70 E (Ramp E) to Brice Rd. to 70 W
H	I-70 WB to I-270 SB	5AM-9PM	8AM-8PM	70 W to OH-317 to 70 E to 270 S (Ramp C)	70 W to 270 N (Ramp F) to US-40 to 270 S
Secondary Route: Brice Rd SLM along 70: 23.91					
Ramp	Movement	No Closures Allowed		Detour Routes	
		Mon to Fri	Sat to Sun	Primary Route	Secondary Route
M	Brice Rd. to I-70 WB	5AM-11PM	5AM-11PM	Brice Rd. N to E Main St. W to 270 S to 70 W	Brice Rd. N to E Livingston Ave.* W to Noe Bixby Rd.* N to E Main St. E to 270 S to 70 W
N	I-70 WB to Brice Rd.	5AM-9AM	3PM-7PM	70 W to 270 S to 70 E to Brice Rd. N (Ramp R)	70 W to 270 S to 70 E to Brice Rd. S (Ramp T)
P	Brice Rd. to I-70 EB	5AM-7PM	8AM-7PM	Brice Rd. N to 70 W (Ramp M) to 270 S to 70 E	None
R	I-70 EB to Brice Rd. NB	5AM-7PM	8AM-7PM	70 E to 270 S to US-33 E to 270 N to E Main St. E to Brice Rd.	None
T	I-70 EB to Brice Rd. SB	5AM-12AM	8AM-8PM	70 E to Brice Rd. N (Ramp R) to E Livingston Ave.* E to Rosehill Rd.* N to E Main St. W to Brice Rd. S	None

ITEM 614 - WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS- PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE 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 PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION 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, REQUALIFICATION 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 PRECONSTRUCTION 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 TIMEFRAME 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.

WORKSITE TRAFFIC SUPERVISOR - CONTINUED

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 TIMEFRAME 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 OCCUR, 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 C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@ODOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

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

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:

- A. COLLABORATE WITH ODOT AND SAFETY FORCES;
- B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
- C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:

- A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
 - I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
 - II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
 - III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
 - IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
 - V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
 - VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
- B. FOLLOWING AN INCIDENT/CRASH:
 - I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 - II. RECOMMEND ROADWAY REPAIR NEEDS.
 - III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 - IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS 93 -95 AND TRAFFIC SCDS MT-96.11, 96.20 AND 96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

	PHASE		PHASE	
	1	2	3	4
	(ALL RED) DUMMY	MAINLINE (DIRECTION)	(ALL RED) DUMMY	MAINLINE (DIRECTION)
MIN.GREEN		10		10
EXTENSION		4		4
MAX.GREEN		30		30
YELLOW		3.5		3.5
ALL RED	24.0		24.0	
RECALL	ON	OFF	OFF	OFF

PROVIDE TIMING APPROPRIATE FOR THE SIGNAL LOCATION UNDER CONSIDERATION. TYPICAL FLOW RATES ARE DISPLAYED IN TABLE 697-2 IN THE ODOT TRAFFIC ENGINEERING MANUAL (TEM).

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S)

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE MOT EXCEPTION COMMITTEE (MOTEC) OR THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTION(S) INCLUDE:

90 CONSECUTIVE DAY CLOSURE OF I-270 NB TO I-70 WB RAMP FOR PIER 5 FOUNDATION INSTALLATION.

I-270/I-70 INTERCHANGE SYSTEM TO SYSTEM RAMP CLOSURES PER THE RAMP CLOSURE RESTRICTIONS TABLE AS SHOWN ON SHEET 48 .

THE FOLLOWING CLOSURES WILL BE ALLOWED FOR STRUCTURE FRA-270-4262 BEAM ERECTION:

4 NIGHTTIME CLOSURES OF I-70 (BOTH EASTBOUND & WESTBOUND)

4 NIGHTTIME CLOSURES OF I-70 EASTBOUND ONLY

3 NIGHTTIME CLOSURES OF I-270 NORTHBOUND ONLY

3 NIGHTTIME CLOSURES OF I-270 SOUTHBOUND ONLY

CLOSING OF I-70 AND I-270 AT THE SAME TIME WILL NOT BE PERMITTED

NIGHTTIME CLOSURE HOURS

MONDAY 11PM TO TUESDAY 5AM
 TUESDAY 11PM TO WEDNESDAY 5AM
 WEDNESDAY 11PM TO THURSDAY 5AM
 THURSDAY 11PM TO FRIDAY 5AM
 FRIDAY 11PM TO SATURDAY 7AM
 SATURDAY 11PM TO SUNDAY 7AM
 SUNDAY 10PM TO MONDAY 5AM

ANY CLOSURES OUTSIDE OF APPROVED TIMES WILL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT TABLE.

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF 30 CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER AND CITY OF COLUMBUS AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR (WTS) AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE EXCEPTION REQUEST APPROVAL DATED 4/15/2022 FOR PID 95639 IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTION(S) LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE MOT EXCEPTION COMMITTEE (MOTEC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO THE DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE MOTEC. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

NOTIFICATIONS DURING CLOSURE REQUIRED
 A DESIGNATED ON-SITE POINT OF CONTACT SHOULD COMMUNICATE WITH THE TMC AS THE STATUS OF THE CLOSURE CHANGES.

- CONTACT THE TMC:
- IF THE CLOSURE IS POSTPONED OR CANCELLED
 - AT THE TIME THE CLOSURE IS IMPLEMENTED
 - AT THE TIME THE CLOSURE IS REMOVED AND ALL LANES RESTORED
 - IF THE CLOSURE WILL NOT BE OPENING ON TIME

CONTACT CAN BE MADE WITH THE TMC IN THE FOLLOWING WAYS:

- PHONE: 1-614-387-2438 OR 1-800-884-4030
- EMAIL: STATEWIDETMC@DOT.OHIO.GOV
- RADIO: XDOT MAIN

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MAINTENANCE OF TRAFFIC NOTES

FRA -70-22.61

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ITEM	EXTENSION	TOTAL FROM SHEET					TOTAL	UNIT	DESCRIPTION	SEE SHEET
		55	56	57	58	59				
202	35100			68			68	FT	PIPE REMOVED, 24" AND UNDER	
411	10001						477	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	46
611	04400			68			68	FT	12" CONDUIT, TYPE B	
614	11000						LS		MAINTAINING TRAFFIC	46
614	11110						1000	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	50
614	11630						41560	FT	INCREASED BARRIER DELINEATION	47
614	12380						33	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	51
614	12420						LS		DETOUR SIGNING	
614	12484						42	EACH	WORK ZONE INCREASED PENALTIES SIGN	50
614	12500						50	EACH	REPLACEMENT SIGN	46
614	12600						300	EACH	REPLACEMENT DRUM	46
614	12801						1609	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	47
614	13310						2425	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	47
614	13312						497	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	47
614	13350						1329	EACH	OBJECT MARKER, ONE WAY	47
614	18601						2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	49
614	20056	0.43	1.93	2.82	4.77	4.77	14.72	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
614	21050	0.81					0.81	MILE	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	
614	22056	1.81	3.88	2.10	3.82	5.32	16.93	MILE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, WHITE	
614	22056	1.08	3.98	1.88	3.96	4.19	15.09	MILE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW	
614	23110	4898	16160	8727	9886	9169	48840	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
614	24102	907			2290	13817	17014	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
614	25200	397	294	399	126		1216	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
614	98000				0.05	3.10	3.15	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	48
614	98000	0.94			0.09		1.03	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 642 PAINT, WHITE	48
614	98000	0.02					0.02	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	48
614	98100				394		394	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	48
614	98100	69					69	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	48
614	98100	1659	1703	977	1308		5647	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	47
614	98100	12					12	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	48
615	10000						LS		ROADS FOR MAINTAINING TRAFFIC	
615	20000	2642	565	2977	91	163	6438	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
615	25000	36					36	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
616	10000						1007	MGAL	WATER	
622	41050						2	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
622	41100	4050	8900	8640	14490	5480	41560	FT	PORTABLE BARRIER, UNANCHORED	
808	18700						120	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	49
TOTALS CARRIED TO GENERAL SUMMARY, SHEET									210	

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MAINTENANCE OF TRAFFIC SUBSUMMARY

FRA - 70 - 22.61

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REF NO.	SHEET NO.	LOCATION	STATION TO STATION		614		614		614		614		614		614		614		615		615		622	
			TO	TO	MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	FT	SY	SY	FT		
PHASE 1																								
ELW-1	68	TO	81	RAMP	2055+25.00	TO	1083+09.00																	
PB-1	70	TO	70	RAMP	100+31.00	TO	103+31.00																	
ELW-2	70	TO	72	RAMP	1016+93.00	TO	104+31.00			0.18														320
PB-1	70	TO	70	IR-70	531+49.00	TO	534+89.00																	340
TP-1	70	TO	70	RAMP C2	100+83.04	TO	107+35.94													971				
CH-1	72	TO	73	IR-270	1028+17.00	TO	1039+89.00																	
ELY-1	73	TO	75	IR-270	1031+17.00	TO	1069+97.00																	
ELW-3	73	TO	73	IR-270	1031+17.00	TO	1035+92.00																	
CH-2	73	TO	74	IR-270	1035+92.00	TO	1046+00.00																	
CV-1	73	TO	73	IR-270	1035+92.00	TO	1043+09.00																	
CH-3	73	TO	73	IR-270	1035+94.00	TO	1043+09.00																	
ELY-2	73	TO	81	RAMP	1035+94.00	TO	2039+08.00																	
PB-3	73	TO	81	RAMP	2035+10.00	TO	1059+29.00																	3390
LL-1	73	TO	75	IR-270	1039+89.00	TO	1062+75.00	0.43																
DL-1	74	TO	75	IR-270	1046+00.00	TO	1062+75.00																	
CH-4	75	TO	76	IR-270	1062+75.00	TO	1073+98.00																	
CH-5	75	TO	76	IR-270	1062+75.00	TO	1073+98.00																	
DL6-1	76	TO	77	IR-270	1077+05.00	TO	1086+12.00																	
TP-2	80	TO	81	RAMP A1	2027+27.55	TO	2037+22.93																	
ELW-4	82	TO	83	SCARBOROUGH BLVD	30+29.07	TO	36+00.00																	
CL-1	82	TO	87	SCARBOROUGH BLVD	30+29.07	TO	55+67.00			0.49														
ELW-5	82	TO	87	SCARBOROUGH BLVD	30+29.07	TO	55+67.00																	
TP-3	82	TO	83	SCARBOROUGH BLVD	30+29.07	TO	36+00.00																	
DL6-1	87	TO	87	SCARBOROUGH BLVD	55+67.00	TO	56+33.00																	
ELY-3	87	TO	87	SCARBOROUGH BLVD	56+33.00	TO	57+12.00																	
TP-4	87	TO	87	SCARBOROUGH BLVD	56+33.00	TO	57+16.00																	
PHASE 1A																								
ELW-6	90	TO	91	SCARBOROUGH BLVD	29+68.00	TO	37+00.00																	
CL-2	90	TO	93	SCARBOROUGH BLVD	29+68.00	TO				0.32														
ELW-7	91	TO	93	SCARBOROUGH BLVD	39+36.00	TO	47+70.00																	
SL-1	93	TO	93	SCARBOROUGH BLVD	46+44.00	TO	46+44.00																	
ELW-8	93	TO	93	SCARBOROUGH BLVD	55+59.00	TO	56+66.00																	
TOTALS CARRIED TO SUMMARY SHEET					54			0.43	0.81	1.81	1.08	4898	907	1659	397		0.94	0.02		69	12	2642	36	4050

CALCULATED BPT CHECKED EMW	MAINTENANCE OF TRAFFIC PHASE 1 SUBSUMMARY	FRA - 70 - 22.61
55		1199

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REF NO.	SHEET NO.		LOCATION	STATION TO STATION		614	614	614	614	614	614	614	614	614	614	614	615	615	622			
						WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, WHITE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	PORTABLE BARRIER, UNANCHORED	
		TO			TO	MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	SY	SY	FT
PHASE 2																						
ELY-1	101	TO	103	IR-70	527+32.00	TO	551+66.00		0.47													
CH-1	101	TO	103	IR-70	524+32.00	TO	554+66.00															
ELW-1	101	TO	102	IR-70	527+32.00	TO	547+66.00															
PB-1	101	TO	101	IR-70	531+10.00	TO	536+00.00															490
PB-2	101	TO	102	IR-70	533+17.00	TO	539+06.00															590
ELY-2	101	TO	102	IR-70	528+03.00	TO	541+31.00						0.26									
CH-2	101	TO	102	IR-70	525+43.00	TO	544+30.00															
CH-3	101	TO	102	IR-70	527+43.00	TO	544+30.00															
ELW-2	101	TO	102	IR-70	528+03.00	TO	541+31.00						0.26									
PB-3	101	TO	102	IR-70	531+94.00	TO	537+00.00															520
CH-4	102	TO	103	IR-70	547+66.00	TO	551+66.00															
ELY-3	108	TO	111	IR-270	968+55.00	TO	999+57.00						0.59									
LL-1	108	TO	111	IR-270	968+55.00	TO	999+57.00	0.59														
LL-2	108	TO	111	IR-270	968+55.00	TO	999+57.00	0.59														
ELW-3	108	TO	111	IR-270	968+55.00	TO	999+57.00						0.59									
PB-4	109	TO	110	IR-270	977+71.00	TO	983+25.00															560
TP-1	109	TO	111	IT-270	979+91.20	TO	998+15.55															565
PB-5	110	TO	110	IR-270	983+15.00	TO	989+75.00															660
PB-6	110	TO	111	IR-270	990+95.00	TO	997+57.00															670
CH-5	112	TO	114	IR-270	1016+71.00	TO	1031+91.00															
ELY-4	112	TO	114	IR-270	1015+84.00	TO	1037+56.00						0.42									
ELW-4	113	TO	114	IR-270	1024+35.00	TO	1037+56.00						0.5									
CH-6	113	TO	114	IR-270	1021+27.00	TO	1041+51.00															
ELY-5	113	TO	114	IR-270	1024+35.00	TO	1072+98.00						0.92									480
PB-7	113	TO	114	IR-270	1028+94.00	TO	1033+72.00															650
PB-8	113	TO	114	IR-270	1029+67.00	TO	1036+16.00															
ELW-5	113	TO	115	IR-270	1020+57.00	TO	1051+76.00						0.59									
ELY-6	113	TO	115	IR-270	1020+57.00	TO	1051+76.00															
ELY-7	113	TO	114	IR-270	1023+57.00	TO	1036+28.00						0.25									
CH-7	113	TO	114	IR-270	1020+58.00	TO	1039+28.00															
ELW-6	113	TO	114	IR-270	1023+57.00	TO	1036+28.00						0.25									
PB-9	113	TO	114	IR-270	1026+44.00	TO	1031+10.00															460
PB-10	113	TO	114	IR-270	1025+57.00	TO	1031+14.00															550
ELW-7	113	TO	114	IR-270	1026+35.00	TO	1033+72.00						0.21									
PB-11	114	TO	114	IR-270	1031+52.00	TO	1042+37.00															1070
LL-3	114	TO	117	IR-270	1041+51.00	TO	1072+98.00	0.6														
LL-4	114	TO	114	IR-270	1031+91.00	TO	1039+54.00	0.15														
CH-8	114	TO	115	IR-270	1039+54.00	TO	1054+79.00															
ELW-8	114	TO	119	RAMP A2	1083+06.00	TO	2031+78.00						1.09									
ELY-8	114	TO	119	RAMP A2	1050+90.00	TO	2031+78.00						0.48									
PB-12	114	TO	119	RAMP A2	1048+03.00	TO	2031+78.00															2200
CH-9	115	TO	116	IR-270	1050+90.00	TO	1065+00.00															
CV-1	115	TO	116	IR-270	1050+90.00	TO	1059+58.00															
CH-10	115	TO	116	IR-270	1050+90.00	TO	1059+58.00															
DL-1	116	TO	117	IR-270	1065+00.00	TO	1072+98.00															797
DL6-1	117	TO	118	IR-270	1077+06.00	TO	1086+12.00															906
TOTALS CARRIED TO SUMMARY SHEET						54		1.93	3.88	3.98	16160			1703	294					565		8900

<p>MAINTENANCE OF TRAFFIC PHASE 2 SUBSUMMARY</p>	<p>FRA - 70 - 22.61</p>
<p>CALCULATED BPT CHECKED EMW</p>	<p>56 1199</p>

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REF NO.	SHEET NO.		LOCATION	STATION TO STATION	202	611	614	614	614	614	614	614	614	614	614	614	614	614	615	622	
					PIPE REMOVED, 24" AND UNDER FT	12" CONDUIT, TYPE B FT	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT MILE	WORK ZONE CENTER LINE, CLASS I, 1, 807 PAINT, DOUBLE SOLID MILE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, WHITE MILE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW MILE	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT FT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 642 PAINT, WHITE MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5",740.06, TYPE I, YELLOW MILE	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT FT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY
PHASE 3																					
ELW-1	121	TO 121	RAMP	506+60.00 TO 510+11.00					0.08												
CH-1	121	TO 146	RAMP	505+90.00 TO 996+21.00							621										
CV-1	121	TO 121	RAMP	508+41.00 TO 996+00.00									134								
CH-2	121	TO 121	RAMP	508+41.00 TO 510+21.00							215										
ELY-1	123	TO 134	IR-70	526+81.00 TO 596+69.00						1.33											
CH-3	123	TO 122	IR-70	523+81.00 TO 535+84.00							1204										
CH-4	123	TO 122	IR-70	526+81.00 TO 535+84.00							905										
ELW-2	123	TO 122	IR-70	526+81.00 TO 532+86.00					0.12												
CH-5	123	TO 122	IR-70	532+86.00 TO 107+68.51							233										
LL-1	123	TO 134	IR-70	535+84.00 TO 588+69.00			1.01														
LL-2	123	TO 134	IR-70	535+84.00 TO 588+69.00			1.01														
LL-3	123	TO 133	IR-70	535+19.00 TO 577+35.00			0.8														
ELY-2	123	TO 122	RAMP	100+00.00 TO 105+41.00						0.11											
ELW-3	123	TO 133	IR-70	100+00.00 TO 578+25.00					0.97												
CH-6	123	TO 122	RAMP	105+41.00 TO 107+68.51							226										
PB-1	123	TO 122	RAMP	106+95.00 TO 107+35.00															40		
PB-2	123	TO 131	IR-70	535+49.00 TO 552+13.00															1670		
DT101	123	TO 123	RAMP						68	68											
PB-3	131	TO 131	IR-70	552+03.00 TO 558+63.00															660		
PB-4	131	TO 149	IR-70	559+83.00 TO 9+88.00															3430		
DL-1	132	TO 133	IR-70	572+26.00 TO 576+47.00									420								
CH-7	133	TO 133	IR-70	576+47.00 TO 580+23.00							375										
CH-8	133	TO 133	RAMP C1	576+47.00 TO 578+25.00							179										
DL-2	133	TO 133	RAMP G2	577+35.00 TO 582+92.00									557								
ELW-4	133	TO 133	RAMP G2	580+23.00 TO 587+61.00					0.14												
CH-9	133	TO 134	IR-70	582+92.00 TO 589+02.00							610										
CH-10	133	TO 134	RAMP G2	582+92.00 TO 589+12.00							621										
CH-11	134	TO 134	IR-70	588+69.00 TO 599+69.00							1100										
CH-12	134	TO 134	RAMP G1	588+69.00 TO 599+69.00							1100										
ELW-5	134	TO 134	IR-70	591+69.00 TO 596+69.00					0.15												
PB-5	134	TO 134	IR-70	589+02.00 TO 591+69.00															260		
PB-6	134	TO 155	RAMP G1	589+02.00 TO 8599+07.00															720		
ELY-3	134	TO 155	RAMP G1	589+12.00 TO 8600+01.00						0.15											
PB-7	134	TO 134	IR-70	596+69.00 TO 598+93.00															230		
PB-8	134	TO 155	RAMP G2	1107+73.00 TO 1115+46.00															790		
ELY-4	134	TO 155	RAMP G2	1106+89.00 TO 1115+46.00						0.17											
CH-13	134	TO 134	RAMP G2	1115+46.00 TO 1116+42.00							110										
TP-1	134	TO 155	RAMP G1	8593+67.00 TO 8599+38.02															1183		
TP-2	134	TO 155	RAMP G2	1108+27.96 TO 1114+59.00															743		
ELW-6	140	TO 141	RAMP A2	2006+61.00 TO 2986+80.71					0.16												
ELY-5	140	TO 140	RAMP A2	2006+61.00 TO 2012+47.00						0.12											
CH-14	140	TO 141	RAMP A2	2006+61.00 TO 2986+80.71							825										
CV-2	140	TO 141	RAMP A2	2006+61.00 TO 2986+80.71									265								
CH-15	140	TO 141	RAMP A2	2006+61.00 TO 2986+80.71							403										
ELW-7	146	TO 147	RAMP D2	996+21.00 TO 1021+09.00					0.48												
PB-9	147	TO 147	RAMP D2	1013+90.00 TO 1022+44.00															840		
TP-3	148	TO 149	RAMP C1	6077+08.08 TO 9+79.69															1051		
TOTALS CARRIED TO SUMMARY SHEET					54						68	68	2.82		2.10	1.88	8727	977	399	2977	8640

MAINTENANCE OF TRAFFIC PHASE 3 SUBSUMMARY

FRA-70-22.61

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REF NO.	SHEET NO.			LOCATION	STATION TO STATION		614	614	614	614	614	614	614	614	614	614	614	615	615	622						
							WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, WHITE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	PORTABLE BARRIER, UNANCHORED				
PHASE 4							MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	SY	SY	FT			
ELY-1	159	TO	171	IR-70	494+20.00	TO	644+05.00				2.87															
CH-1	159	TO	160	IR-70	491+24.00	TO	505+97.00					1381														
CH-2	159	TO	160	IR-70	497+20.00	TO	501+99.00					480														
CH-3	159	TO	160	IR-70	497+20.00	TO	499+89.00					269														
CV-1	159	TO	160	IR-70	497+20.00	TO	500+99.00							126												
LL-1	160	TO	170	IR-70	505+97.00	TO	638+15.00	2.53																		
ELW-1	160	TO	163	IR-70	501+99.00	TO	539+37.00			0.71																
PB-1	160	TO	161	IR-70	501+90.00	TO	522+29.00																	2040		
PB-2	160	TO	160	IR-70	501+90.00	TO	505+58.00																	390		
TP-1	160	TO	162	IR-70	501+00.00	TO	523+37.10											91								
PB-3	162	TO	162	IR-70	531+59.00	TO	534+88.00																	320		
ELY-2	162	TO	174	RAMP	1016+93.00	TO	532+00.00			0.18																
PB-4	162	TO	162	RAMP	527+93.00	TO	531+02.00																	320		
LL-2	162	TO	176	RAMP A2	3011+50.00	TO	3033+20.00	0.4																		
CH-4	163	TO	164	IR-70	539+37.00	TO	549+36.00					1000														
CH-5	163	TO	164	RAMP	539+37.00	TO	549+36.00					1001														
ELW-2	163	TO	164	RAMP	539+37.00	TO	557+52.00			0.19																
LL-3	163	TO	176	RAMP C1	3011+50.00	TO	6033+97.00	0.15																		
DL6-1	163	TO	164	RAMP C1	6033+97.00	TO	6039+98.00					815														
ELW-3	163	TO	180	RAMP C1	6033+97.00	TO	8+31.00			0.93																
LL-4	164	TO	170	IR-70	549+36.00	TO	638+15.00	1.69																		
CH-6	164	TO	165	IR-70	557+52.00	TO	569+34.00					1182														
CH-7	164	TO	165	RAMP A2	557+52.00	TO	569+34.00					1182														
DL6-2	164	TO	165	RAMP A2	557+52.00	TO	564+77.00					815														
ELW-4	164	TO	180	RAMP A2	3041+72.00	TO	8599+00.00			0.83																
ELY-3	164	TO	180	RAMP C2	3048+17.00	TO	8+58.00			0.66																
DL-1	165	TO	166	IR-70	569+34.00	TO	582+92.00							1308												
PB-5	165	TO	180	IR-70	570+92.00	TO	8598+19.00																	2410		
PB-6	165	TO	180	RAMP C1	6059+55.00	TO	11+96.00																	3360		
CH-8	166	TO	167	RAMP G1	582+92.00	TO	590+51.00					760														
CH-9	166	TO	167	RAMP G1	582+92.00	TO	590+51.00					760														
ELW-5	167	TO	167	IR-70	590+51.00	TO	597+89.00			0.14																
ELY-4	167	TO	180	RAMP G1	590+51.00	TO	8599+65.00				0.13															
CH-10	167	TO	167	IR-70	597+89.00	TO	600+14.00					225														
CH-11	167	TO	167	RAMP G2	597+89.00	TO	600+14.00					226														
DL6-3	167	TO	168	IR-70	600+14.00	TO	506+74.00					660														
ELY-5	167	TO	180	RAMP G2	1107+76.00	TO	1113+84.00			0.12																
ELW-6	167	TO	180	RAMP G2	1107+76.00	TO	648+05.00			1.02																
PB-7	167	TO	180	RAMP G2	1106+16.00	TO	612+84.00																	2070		
PB-8	168	TO	169	IR-70	612+74.00	TO	619+34.00																	660		
PB-9	169	TO	171	IR-70	620+74.00	TO	641+05.00																	2060		
CH-12	170	TO	171	IR-70	638+15.00	TO	648+05.00					710														
CH-13	170	TO	171	IR-70	638+15.00	TO	648+05.00					710														
PB-11	174	TO	174	IR-270 SB	1013+74.00	TO	1017+56.00																	390		
PB-10	179	TO	180	BRICE RD	10+04.00	TO	14+63.00																	470		
ELW-7	179	TO	180	BRICE RD	9+28.00	TO	13+85.00																			
LL-5	179	TO	180	BRICE RD	13+13.00	TO	10+53.00								0.05		0.09									
CH-14	180	TO	180	BRICE RD	6+96.00	TO	9+28.00																	232		
CH-15	180	TO	180	BRICE RD	6+96.00	TO	8+58.00																	162		
TOTALS CARRIED TO SUMMARY SHEET							54	4.77		3.82	3.96	9886	2290	1308	126	0.05	0.09		394		91				14490	

MAINTENANCE OF TRAFFIC PHASE 4 SUBSUMMARY

FRA-70-22.61

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REF NO.	SHEET NO.		LOCATION	STATION TO STATION		614	614	614	614	614	614	614	614	614	614	614	615	615	622			
						WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, WHITE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	PORTABLE BARRIER, UNANCHORED	
		TO			TO	MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	SY	SY	FT
PHASE 5																						
ELY-1	186	TO	194	IR-70	505+50.00	TO	607+21.00		1.93													
LL-1	186	TO	193	IR-70	505+50.00	TO	599+12.00							1.78								
ELW-1	186	TO	189	IR-70	505+50.00	TO	542+04.00					0.7										
CH-1	189	TO	190	IR-70	542+04.00	TO	549+84.00						780									
CH-2	189	TO	190	IR-70	542+02.00	TO	549+84.00						780									
ELW-2	189	TO	190	IR-70	542+93.00	TO	557+51.00				0.28											
DL6-1	189	TO	190	RAMP C1	6033+98.00	TO	6039+98.00						600									
ELW-3	189	TO	203	RAMP C1	6033+98.00	TO	10+42.00				0.86											
LL-2	190	TO	193	IR-70	549+84.00	TO	599+12.00							0.94								
CH-3	190	TO	191	IR-70	557+51.00	TO	562+23.00						471									
CH-4	190	TO	191	IR-70	557+51.00	TO	562+23.00						471									
ELW-4	190	TO	194	RAMP A2	3046+91.00	TO	607+21.00				0.95											
ELY-2	190	TO	205	RAMP G1	6048+17.00	TO	8599+90.00				0.72											
LL-3	190	TO	192	RAMP C1	6046+03.00	TO	6065+81.00							0.38								
DL6-2	191	TO	191	IR-70	562+23.00	TO	567+92.00						569									
PB-1	192	TO	192	IR-70	579+71.00	TO	587+76.00															810
PB-2	192	TO	193	IR-70	587+66.00	TO	594+27.00															660
CH-5	192	TO	192	RAMP G1	8580+00.09	TO	8582+64.00						264									
CH-6	192	TO	192	RAMP C1	6065+81.00	TO	6068+45.00						266									
ELY-3	192	TO	194	RAMP C1	6068+45.00	TO	6079+20.00				0.21											
ELW-5	192	TO	205	RAMP G1	8582+64.00	TO	8599+90.00															
PB-3	192	TO	203	RAMP C1	6072+42.00	TO	8+12.00															1060
CH-7	193	TO	194	IR-70	599+12.00	TO	607+21.00						1110									
CH-8	193	TO	194	IR-70	599+12.00	TO	607+21.00						1110									
PB-4	193	TO	194	IR-70	595+47.00	TO	607+11.00															860
PB-5	193	TO	205	RAMP G1	588+00.00	TO	8599+22.00															790
ELY-4	193	TO	194	RAMP G2	1105+85.00	TO	1123+37.00				0.33											
ELW-6	193	TO	205	RAMP G2	1105+85.00	TO	641+05.00				0.97											
PB-6	193	TO	205	RAMP G2	1107+02.00	TO	1119+97															1300
CH-9	194	TO	195	IR-70	607+21.00	TO	614+45.00						724									
CH-10	194	TO	195	IR-70	607+37.00	TO	614+45.00						708									
DL6-3	195	TO	196	IR-70	614+45.00	TO	641+05.00						10941									
CH-11	203	TO	203	RAMP C1	6079+20.00	TO	10+42.00						162									
ELW-7	65K			RAMP C1	5991+45.00	TO	6043+90.00															
ELY-5	65K			RAMP C1	5984+00.00	TO	6059+57.00															
CH-12	65K			IR-70	554+49.00	TO	561+27.00				1.56		678									
CH-13	65K			IR-70	554+49.00	TO	561+27.00						680									
CH-14	65K			IR-270	990+46.00	TO	995+27.00						965									
DL6-4	65K			IR-70	561+27.00	TO	570+18.00															900
DL6-5	65K			IR-270	982+39.00	TO	990+46.00															807
TP-1	65K			RAMP C1																		163
TOTALS CARRIED TO SUMMARY SHEET						54		4.77		5.32	4.19	9169	13817		3.10					163		5480

MAINTENANCE OF TRAFFIC PHASE 5 SUBSUMMARY

FRA -70-22.61

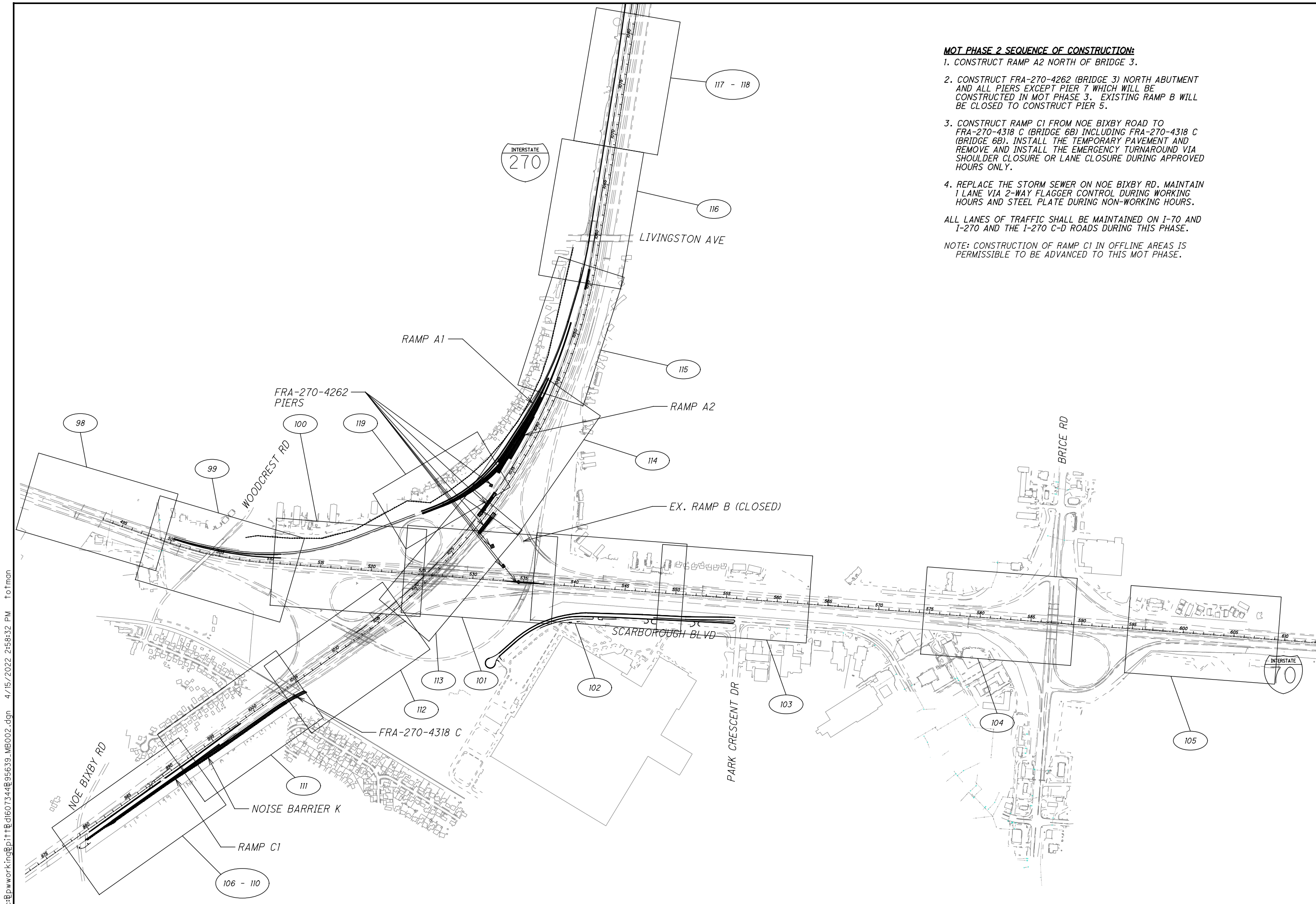
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MOT PHASE 2 SEQUENCE OF CONSTRUCTION:

1. CONSTRUCT RAMP A2 NORTH OF BRIDGE 3.
2. CONSTRUCT FRA-270-4262 (BRIDGE 3) NORTH ABUTMENT AND ALL PIERS EXCEPT PIER 7 WHICH WILL BE CONSTRUCTED IN MOT PHASE 3. EXISTING RAMP B WILL BE CLOSED TO CONSTRUCT PIER 5.
3. CONSTRUCT RAMP C1 FROM NOE BIXBY ROAD TO FRA-270-4318 C (BRIDGE 6B) INCLUDING FRA-270-4318 C (BRIDGE 6B). INSTALL THE TEMPORARY PAVEMENT AND REMOVE AND INSTALL THE EMERGENCY TURNAROUND VIA SHOULDER CLOSURE OR LANE CLOSURE DURING APPROVED HOURS ONLY.
4. REPLACE THE STORM SEWER ON NOE BIXBY RD. MAINTAIN 1 LANE VIA 2-WAY FLAGGER CONTROL DURING WORKING HOURS AND STEEL PLATE DURING NON-WORKING HOURS.

ALL LANES OF TRAFFIC SHALL BE MAINTAINED ON I-70 AND I-270 AND THE I-270 C-D ROADS DURING THIS PHASE.

NOTE: CONSTRUCTION OF RAMP C1 IN OFFLINE AREAS IS PERMISSIBLE TO BE ADVANCED TO THIS MOT PHASE.



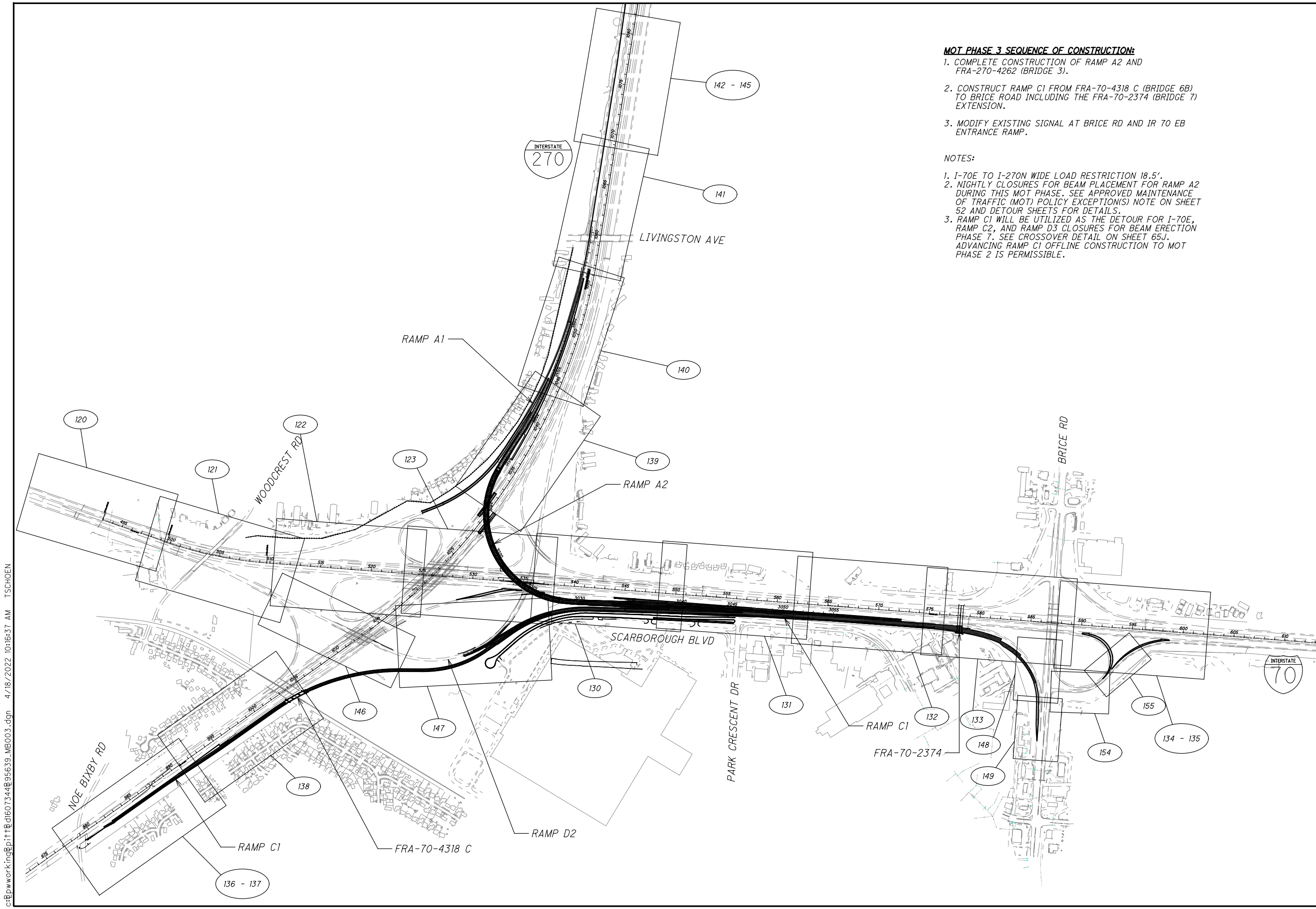
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MOT PHASE 3 SEQUENCE OF CONSTRUCTION:

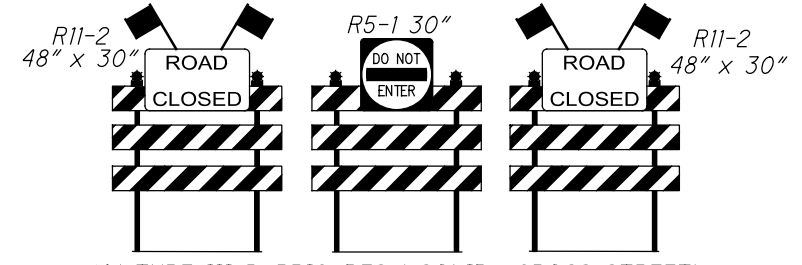
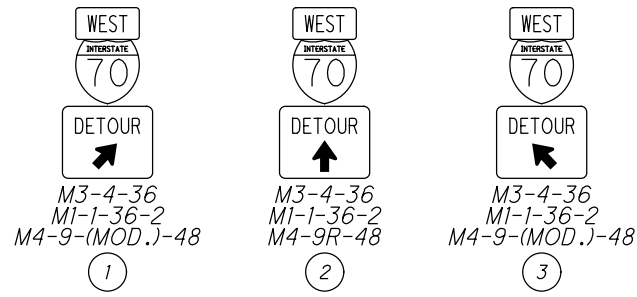
1. COMPLETE CONSTRUCTION OF RAMP A2 AND FRA-270-4262 (BRIDGE 3).
2. CONSTRUCT RAMP C1 FROM FRA-70-4318 C (BRIDGE 6B) TO BRICE ROAD INCLUDING THE FRA-70-2374 (BRIDGE 7) EXTENSION.
3. MODIFY EXISTING SIGNAL AT BRICE RD AND IR 70 EB ENTRANCE RAMP.

NOTES:

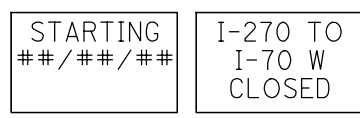
1. I-70E TO I-270N WIDE LOAD RESTRICTION 18.5'.
2. NIGHTLY CLOSURES FOR BEAM PLACEMENT FOR RAMP A2 DURING THIS MOT PHASE. SEE APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION(S) NOTE ON SHEET 52 AND DETOUR SHEETS FOR DETAILS.
3. RAMP C1 WILL BE UTILIZED AS THE DETOUR FOR I-70E, RAMP C2, AND RAMP D3 CLOSURES FOR BEAM ERECTION PHASE 7. SEE CROSSOVER DETAIL ON SHEET 65J. ADVANCING RAMP C1 OFFLINE CONSTRUCTION TO MOT PHASE 2 IS PERMISSIBLE.



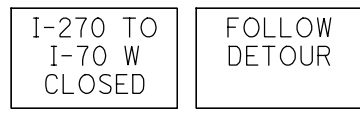
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10' TYPE III BARRICADES (SOLID ACROSS STREET)
PER MT-101.60



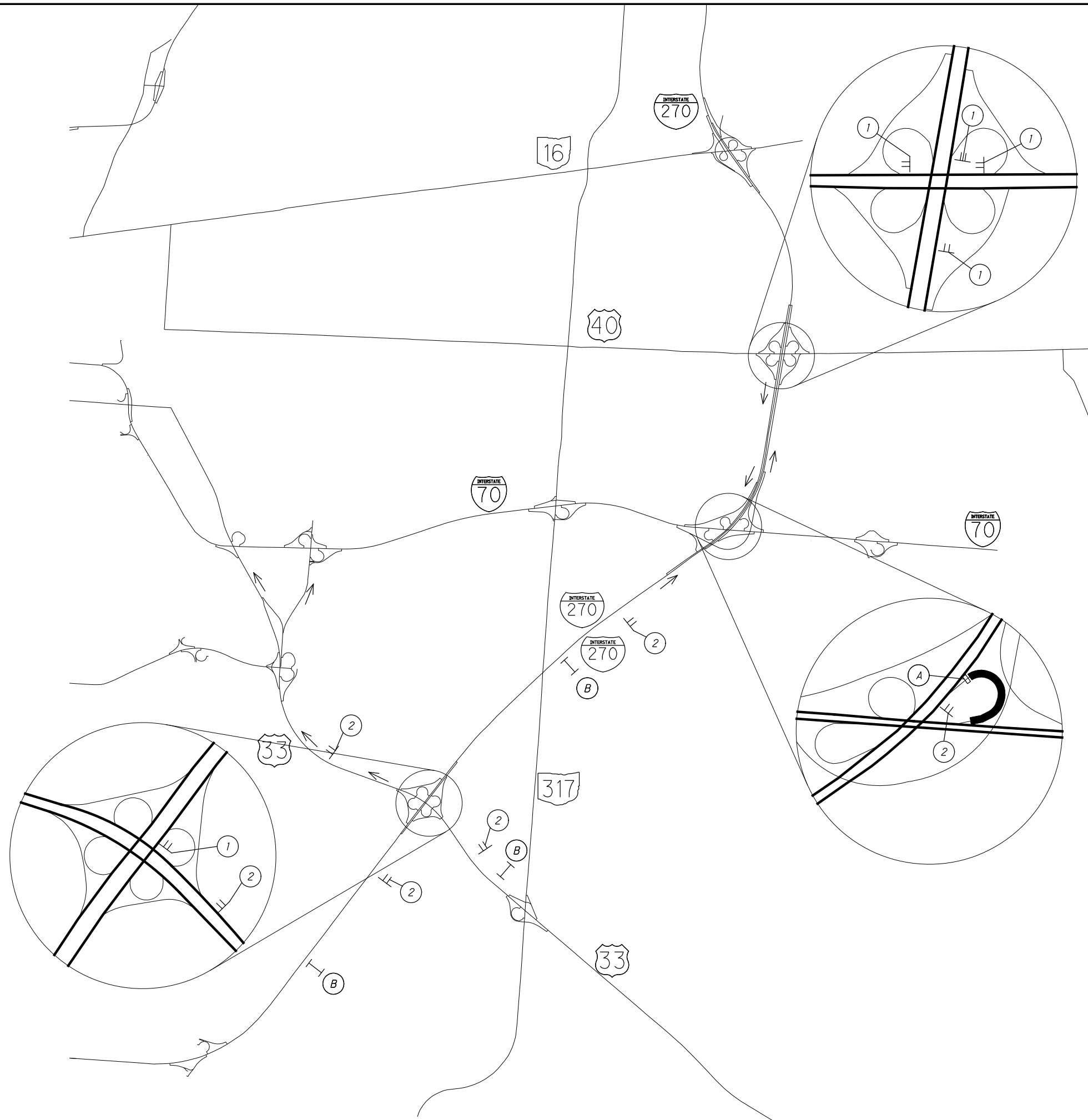
PCMS BEFORE



PCMS DURING

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)



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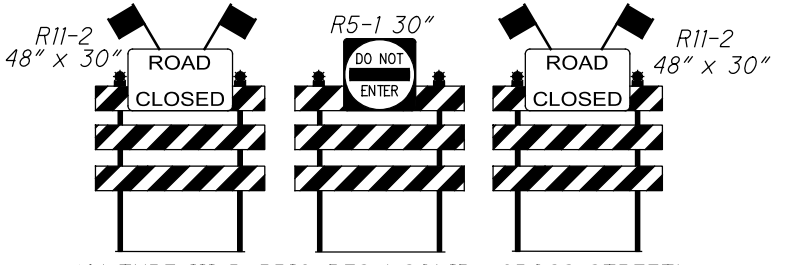
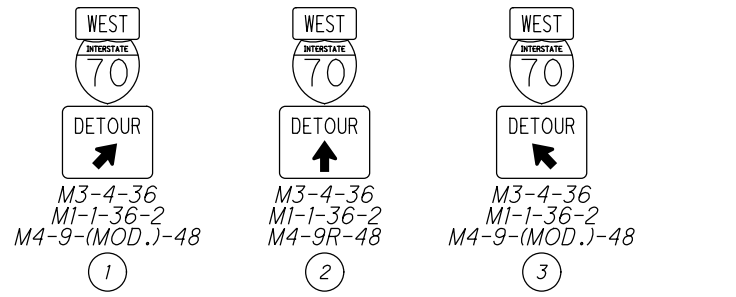


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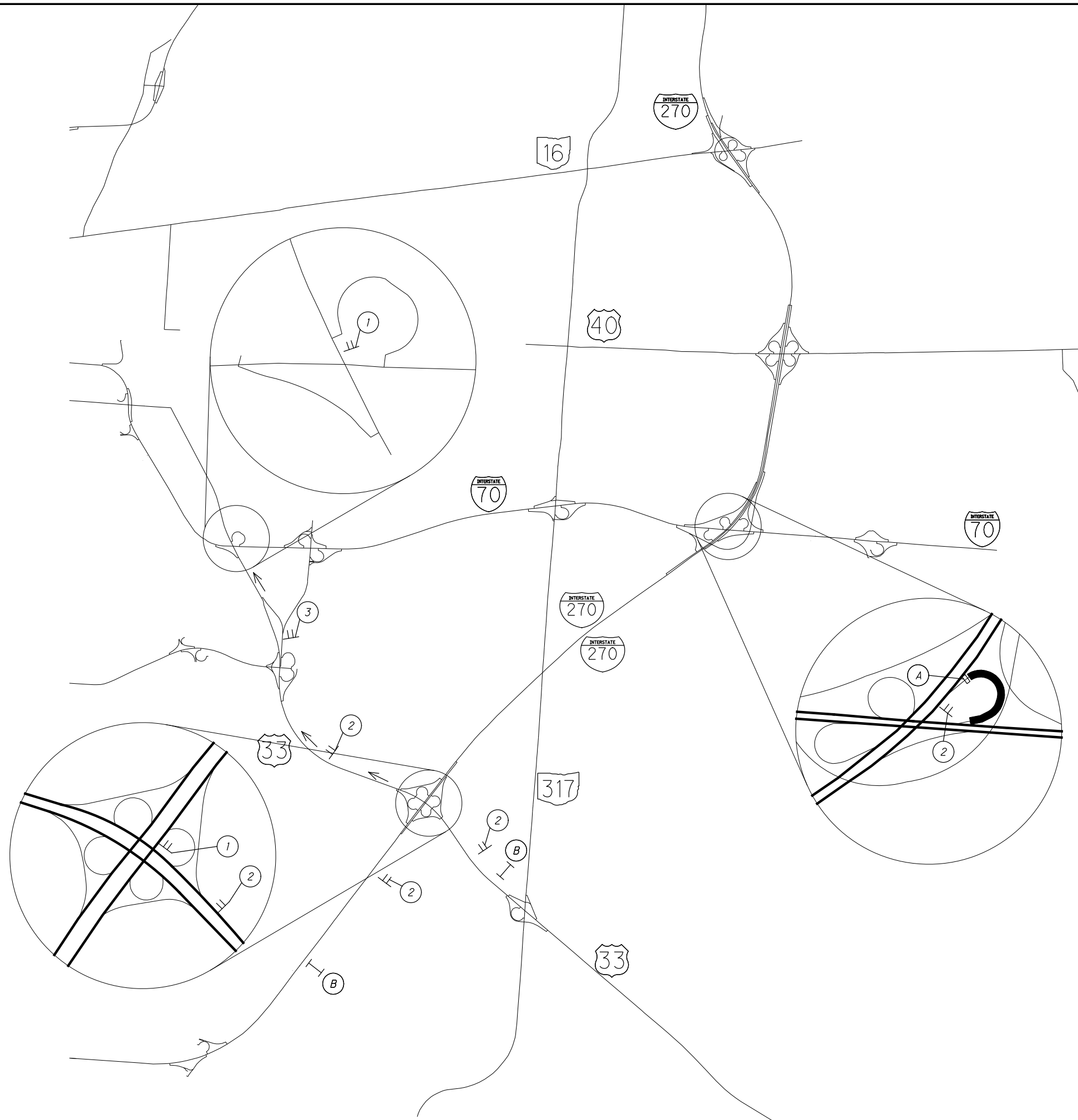
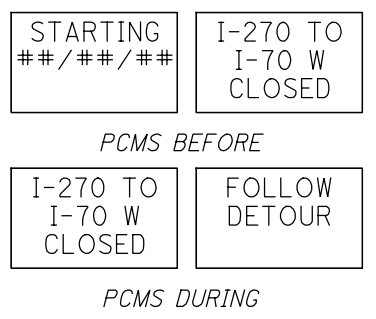
**MAINTENANCE OF TRAFFIC DETOUR PLAN
RAMP B CLOSURE PHASE 3**

FRA-70-22.61

65A
1199



10' TYPE III BARRICADES (SOLID ACROSS STREET)
PER MT-101.60



LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

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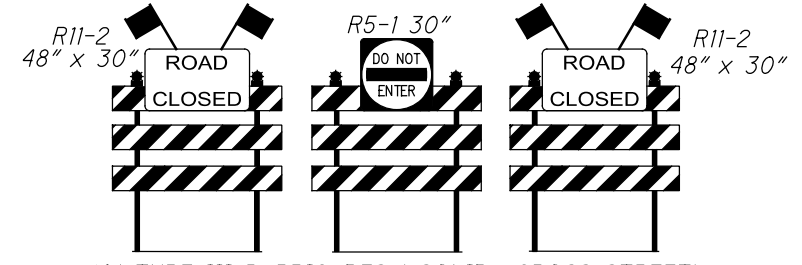
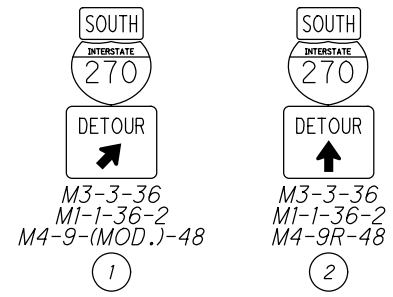
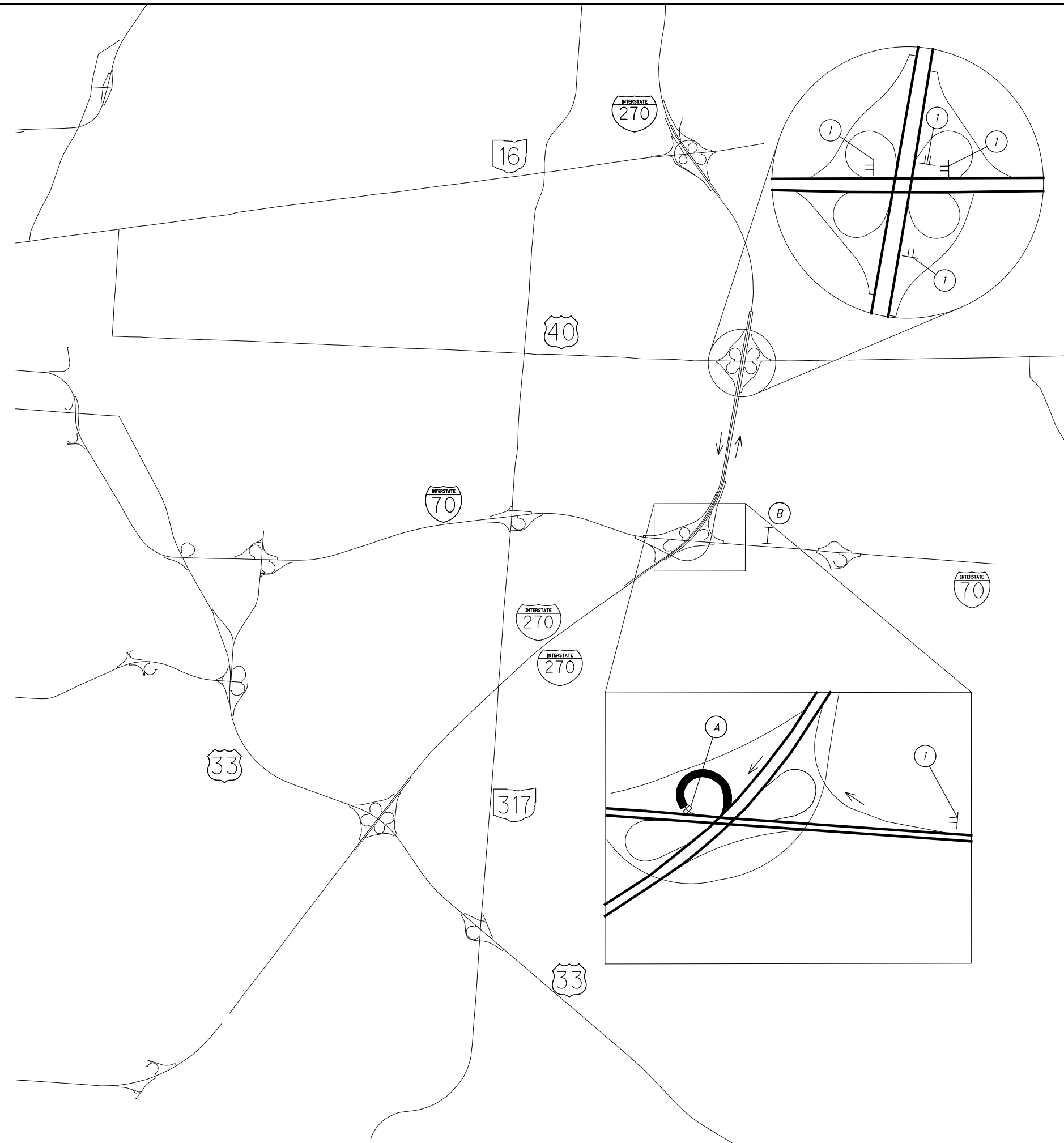


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**MAINTENANCE OF TRAFFIC DETOUR PLAN
RAMP H CLOSURE PHASE 3**

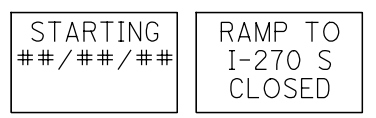
FRA-70-22.61

65B
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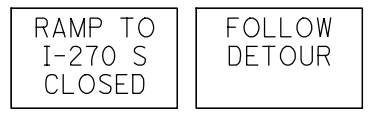


10' TYPE III BARRICADES (SOLID ACROSS STREET)
PER MT-101.60

(A)



PCMS BEFORE



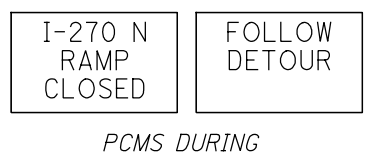
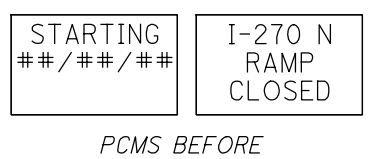
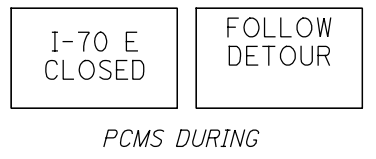
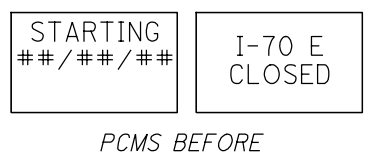
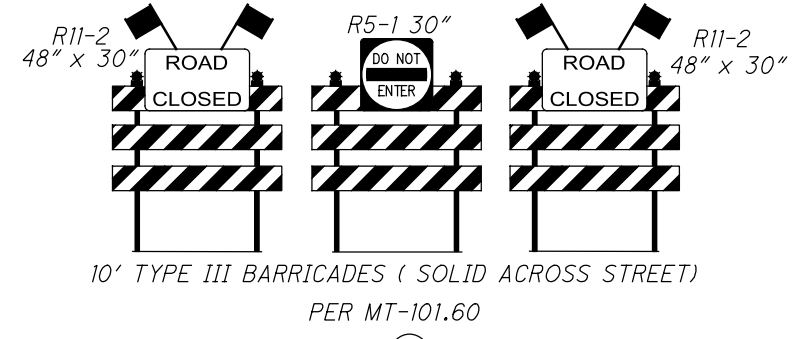
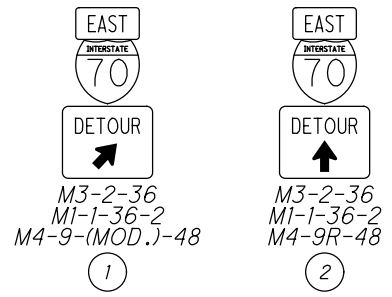
PCMS DURING

(B)

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

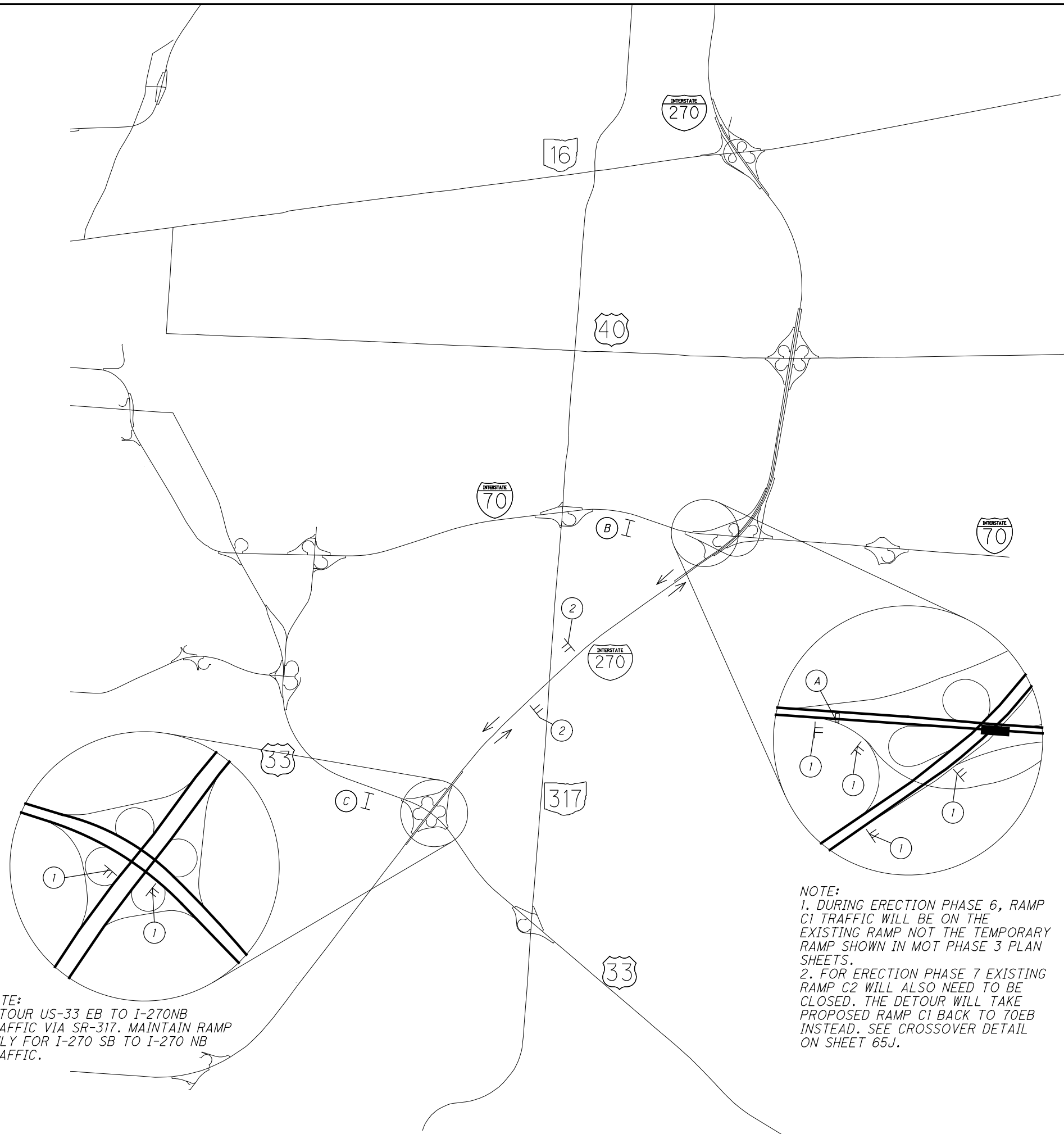
c:\pwworking\pitt\df607344\95639_MD1002.dgn 4/18/2022 9:18:38 AM TSCHOEN



- LEGEND**
- TEMPORARY SIGN
 - TYPE III BARRICADE WITH SIGNS
 - WORK ZONE AREA
 - DETOUR ROUTE
 - PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

NOTE:
DETOUR US-33 EB TO I-270NB
TRAFFIC VIA SR-317. MAINTAIN RAMP
ONLY FOR I-270 SB TO I-270 NB
TRAFFIC.

NOTE:
1. DURING ERECTION PHASE 6, RAMP
C1 TRAFFIC WILL BE ON THE
EXISTING RAMP NOT THE TEMPORARY
RAMP SHOWN IN MOT PHASE 3 PLAN
SHEETS.
2. FOR ERECTION PHASE 7 EXISTING
RAMP C2 WILL ALSO NEED TO BE
CLOSED. THE DETOUR WILL TAKE
PROPOSED RAMP C1 BACK TO 70EB
INSTEAD. SEE CROSSOVER DETAIL
ON SHEET 65J.



c:\pwworking\pitt\df607344\95639_MD1003.dgn 4/18/2022 10:43:07 AM totman

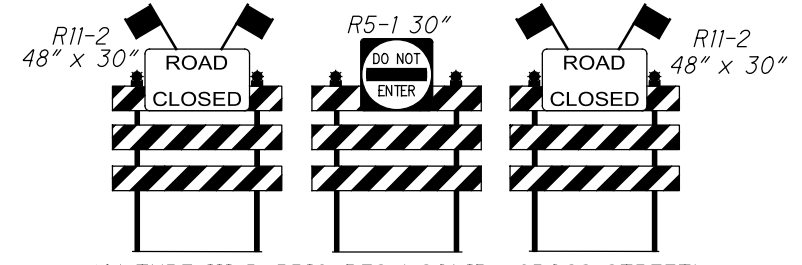
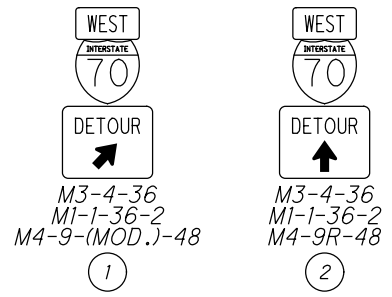
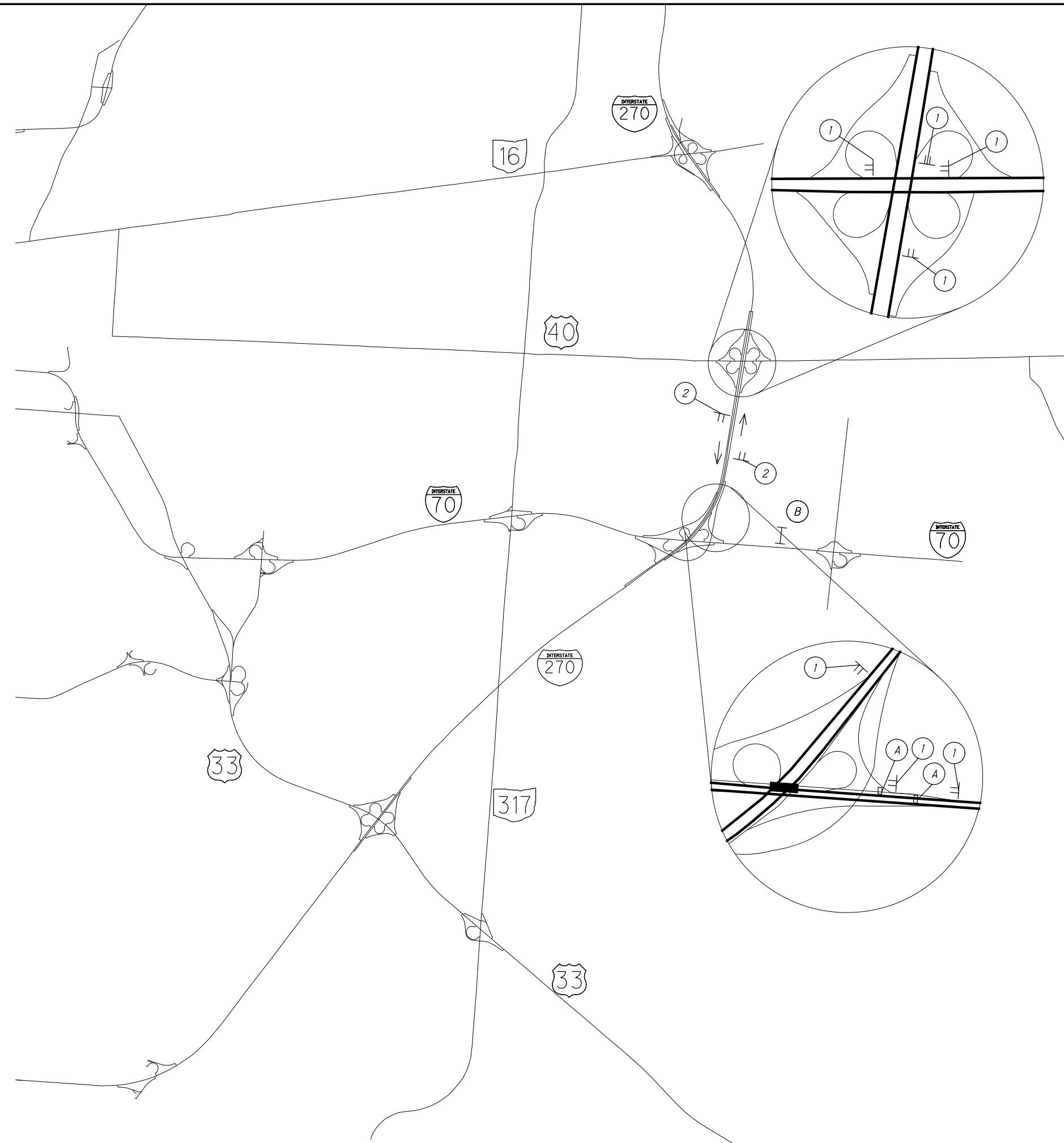


CALCULATED	BPT	CHECKED	EMW
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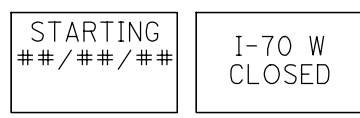
**MAINTENANCE OF TRAFFIC DETOUR PLAN
70WB & 70WB CD ROAD CLOSURE PHASE 3**

FRA-70-22.61

65D
1199



10' TYPE III BARRICADES (SOLID ACROSS STREET)
PER MT-101.60



PCMS BEFORE



PCMS DURING

(B)

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

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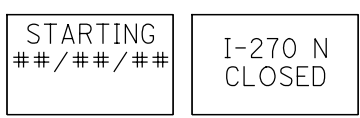
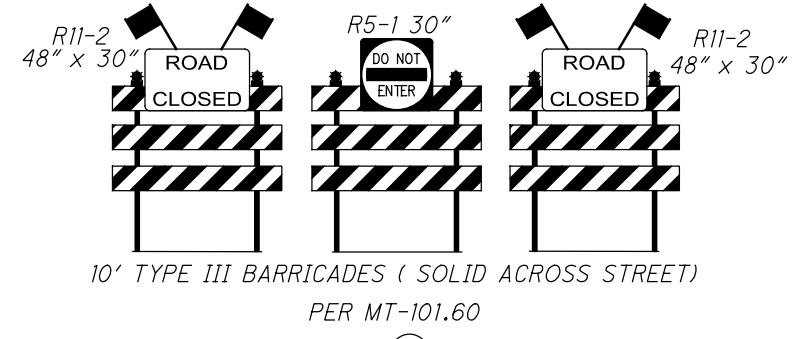
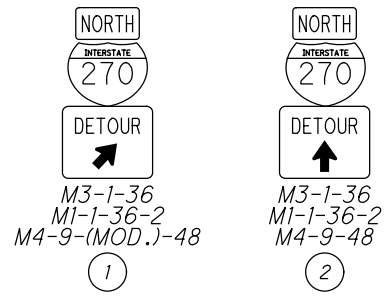


CALCULATED	BPT	CHECKED	EMW
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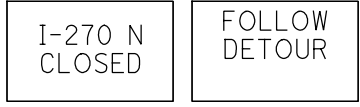
**MAINTENANCE OF TRAFFIC DETOUR PLAN
270NB & 270NB CD ROAD CLOSURE PHASE 3**

FRA-70-22.61

65E
1199

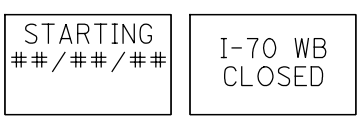


PCMS BEFORE

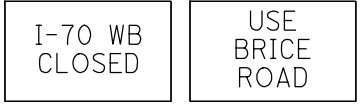


PCMS DURING

(B)

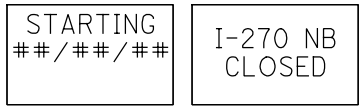


PCMS BEFORE

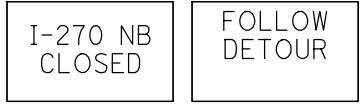


PCMS DURING

(C)



PCMS BEFORE



PCMS DURING

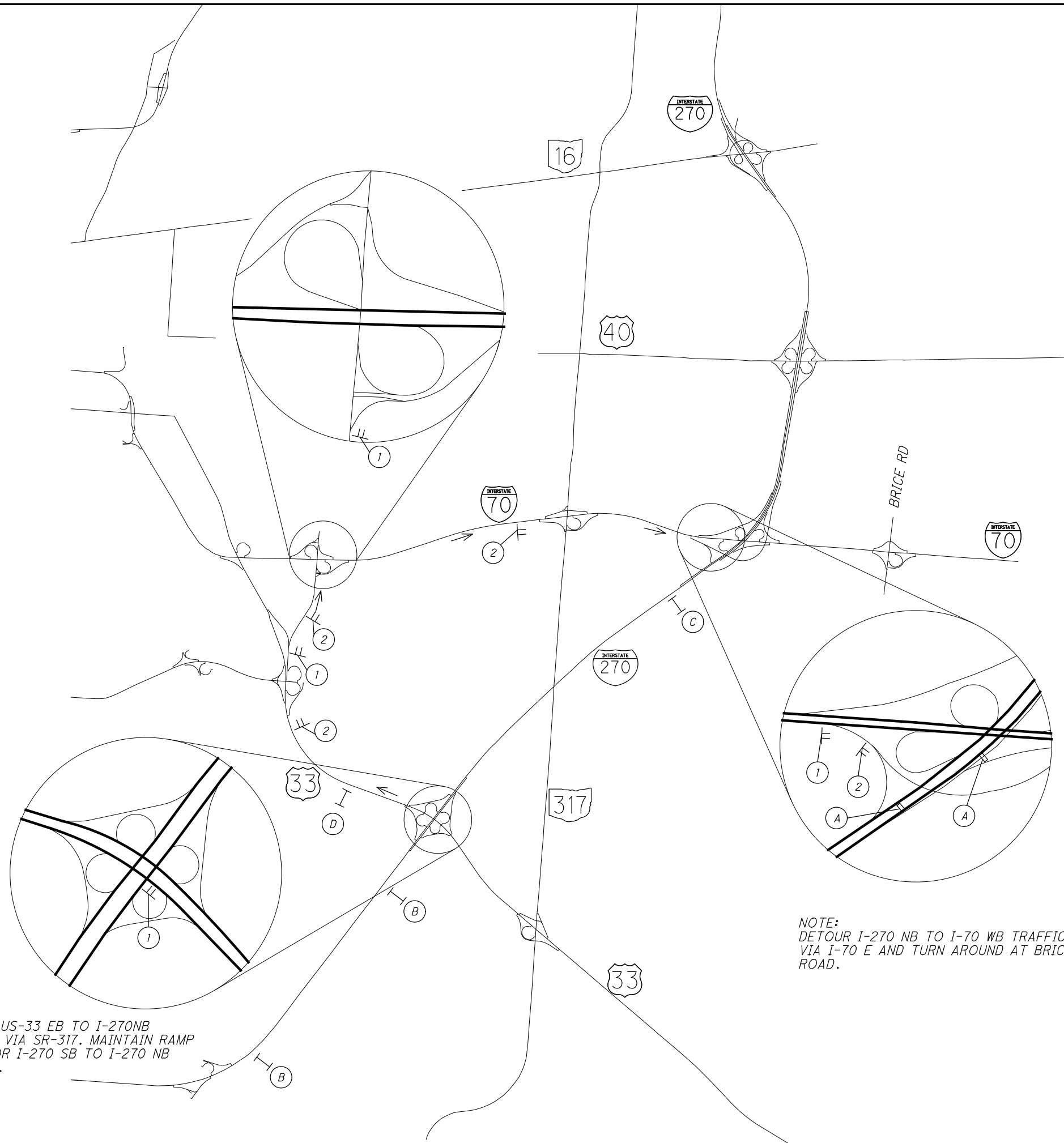
(D)

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

NOTE:
DETOUR US-33 EB TO I-270NB
TRAFFIC VIA SR-317. MAINTAIN RAMP
ONLY FOR I-270 SB TO I-270 NB
TRAFFIC.

NOTE:
DETOUR I-270 NB TO I-70 WB TRAFFIC
VIA I-70 E AND TURN AROUND AT BRICE
ROAD.



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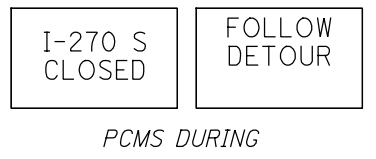
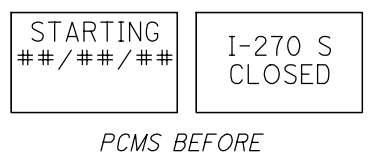
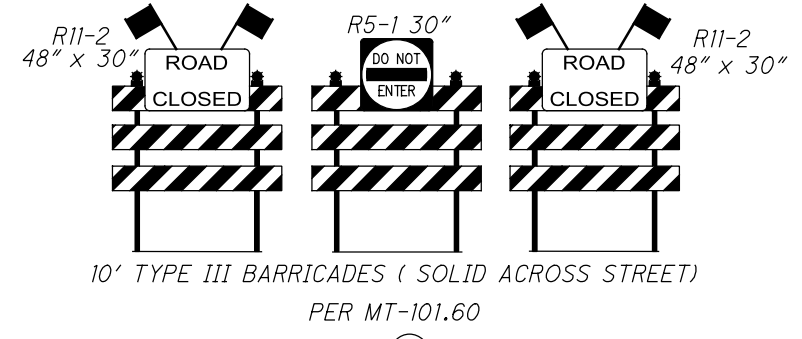
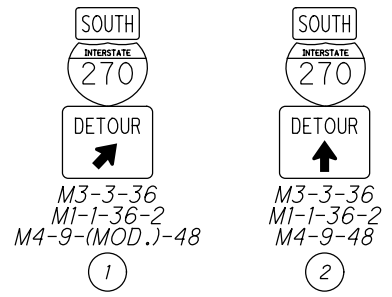


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**MAINTENANCE OF TRAFFIC DETOUR PLAN
270SB & 270SB CD ROAD CLOSURE PHASE 3**

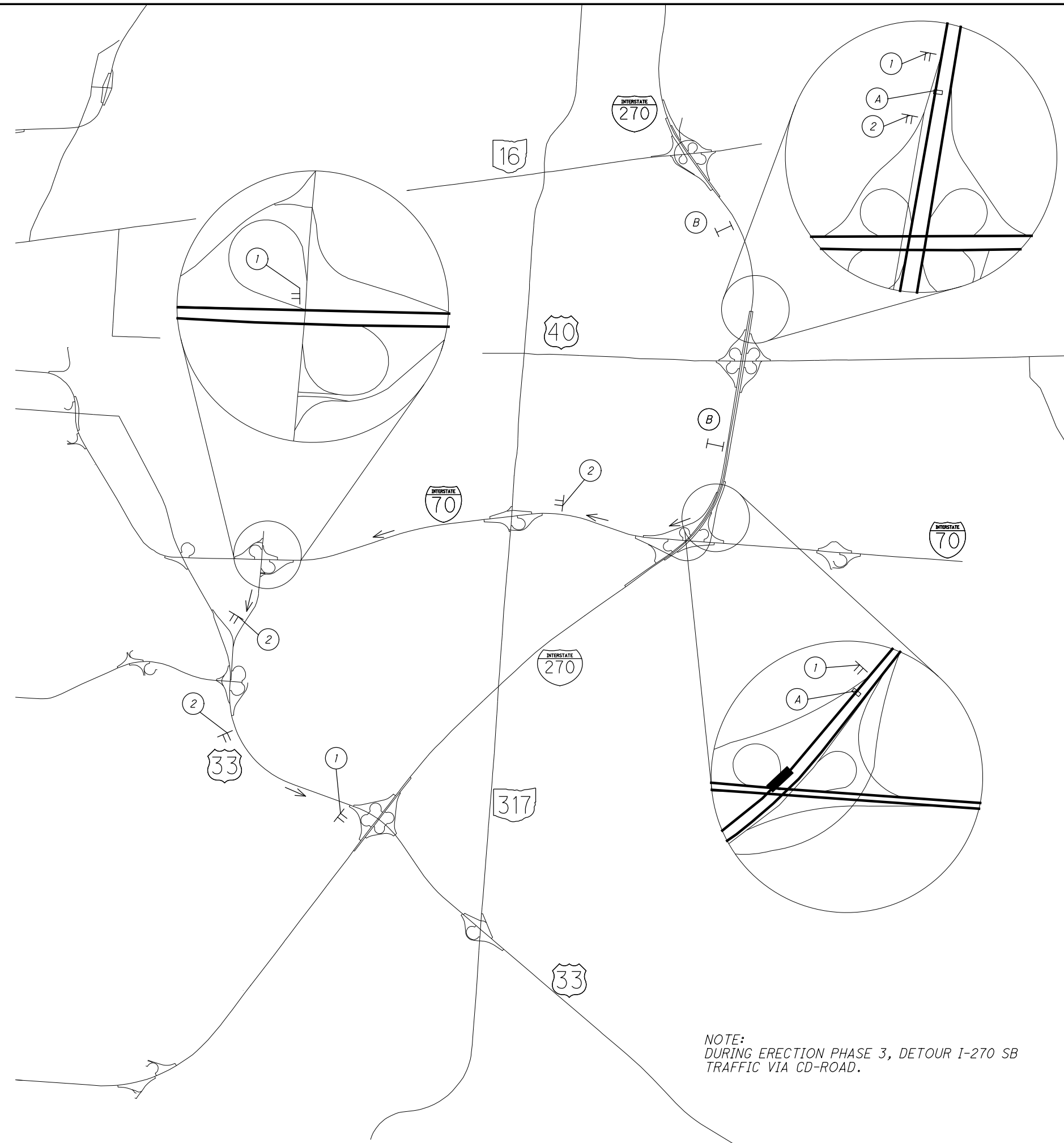
FRA-70-22.61

65F
1199



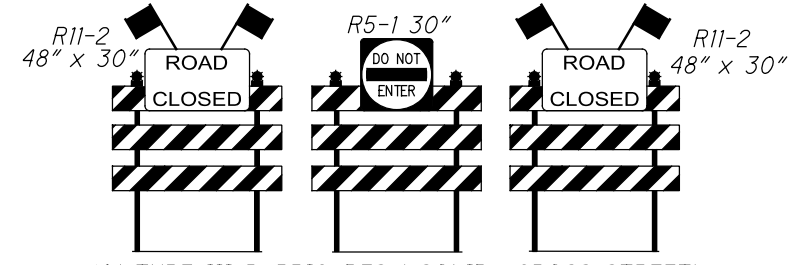
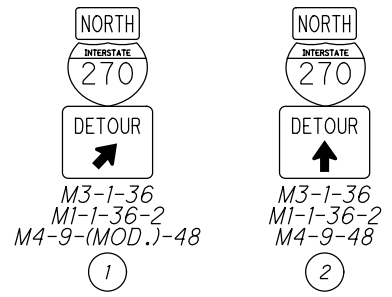
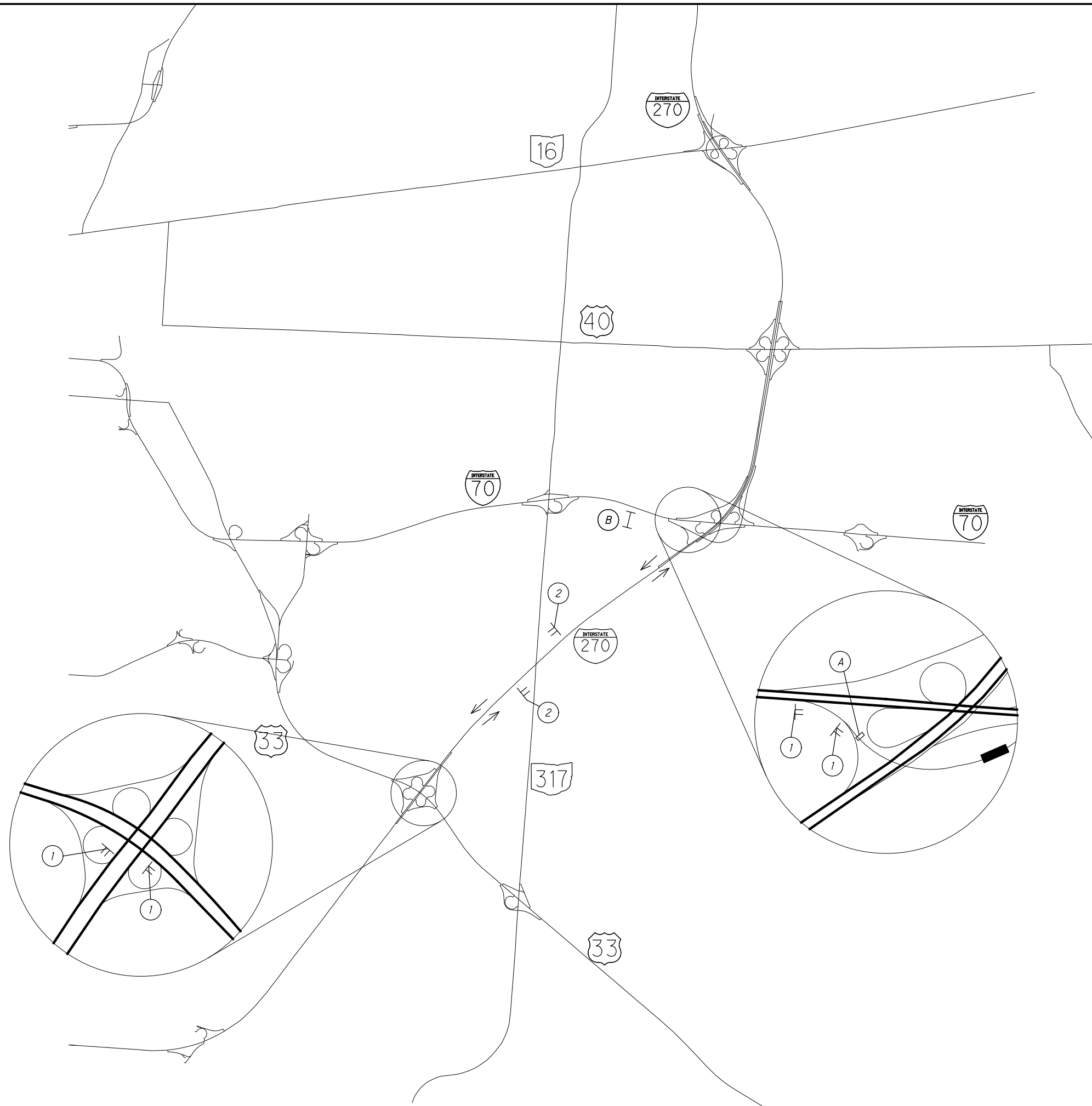
LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)



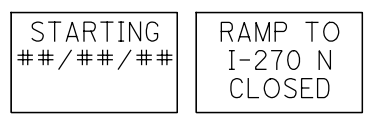
NOTE:
DURING ERECTION PHASE 3, DETOUR I-270 SB
TRAFFIC VIA CD-ROAD.

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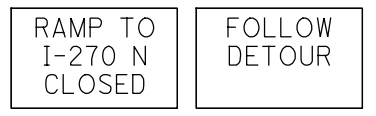


10' TYPE III BARRICADES (SOLID ACROSS STREET)
PER MT-101.60

(A)



PCMS BEFORE



PCMS DURING

(B)

LEGEND

- ⊥ TEMPORARY SIGN
- ▬ TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- ↖ DETOUR ROUTE
- I PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

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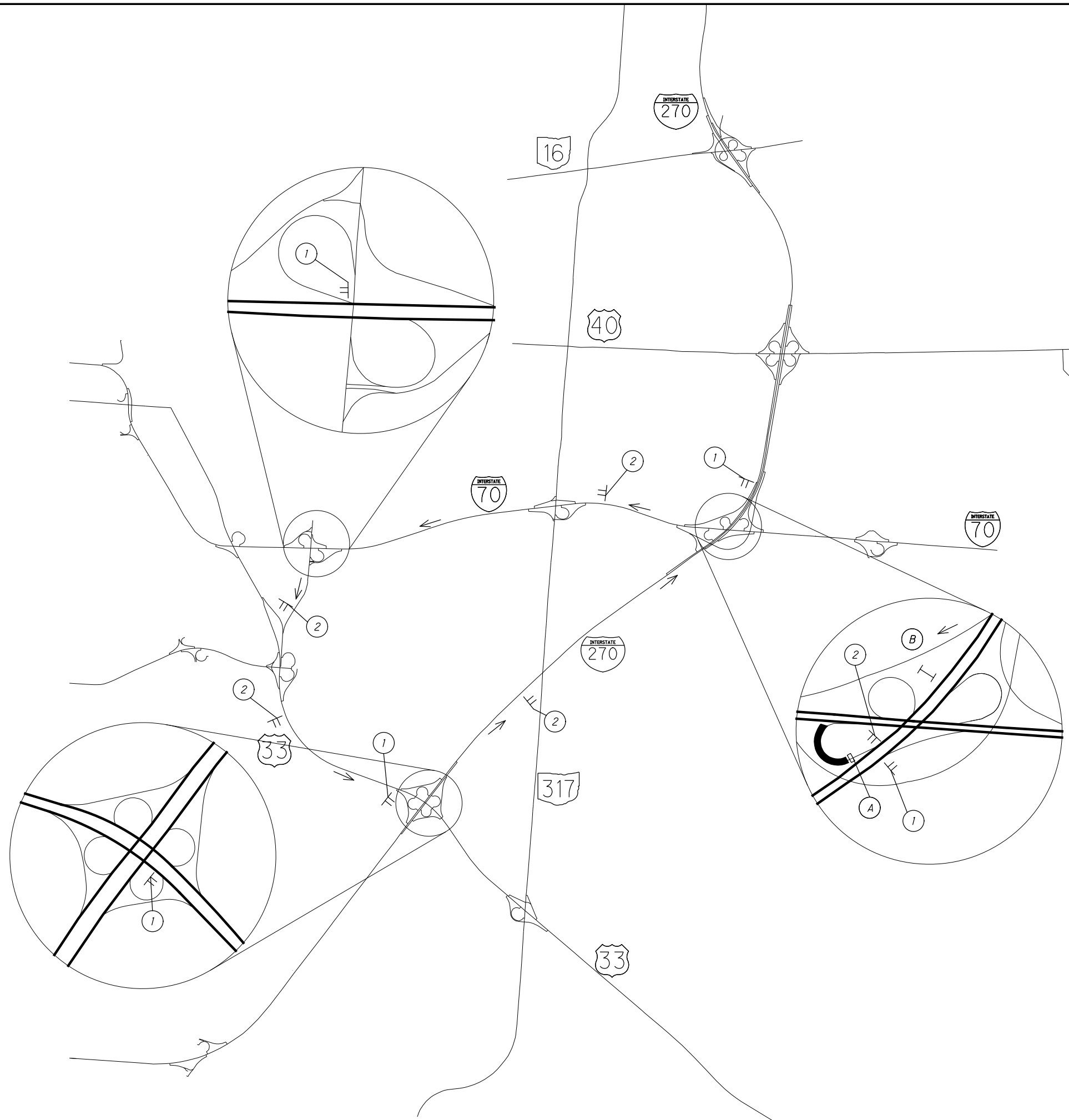
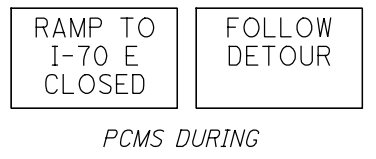
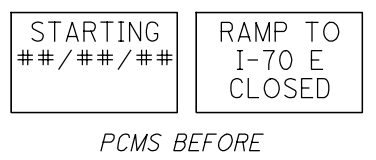
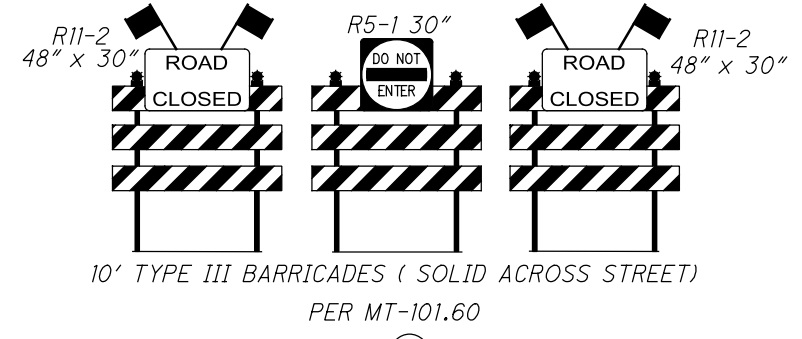
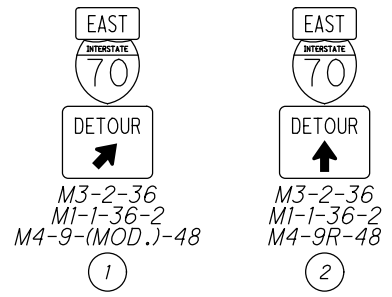


CALCULATED	BPT	CHECKED	EMW
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**MAINTENANCE OF TRAFFIC DETOUR PLAN
RAMP D3 CLOSURE PHASE 3**

FRA-70-22.61

65H
1199



LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

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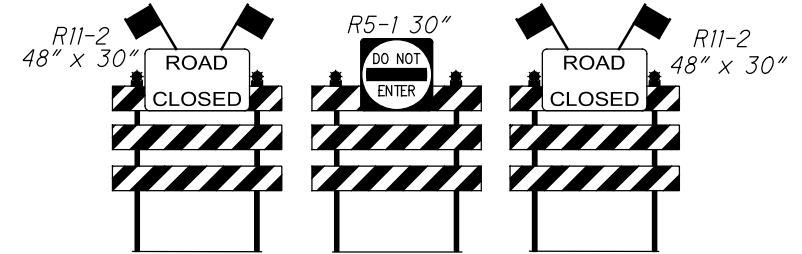
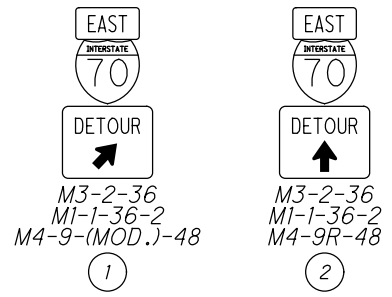


CALCULATED	BPT	CHECKED	EMW
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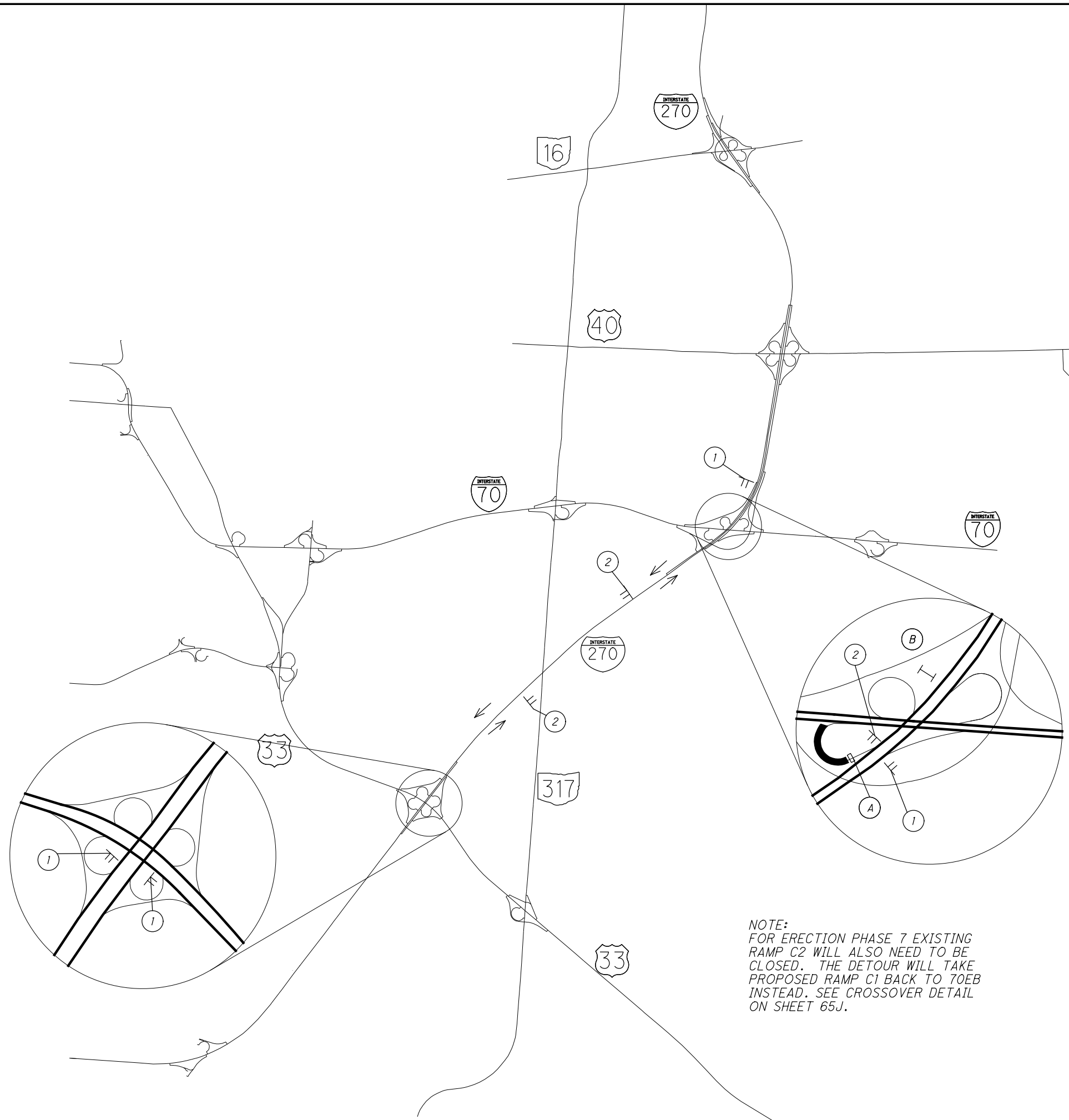
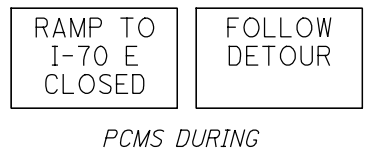
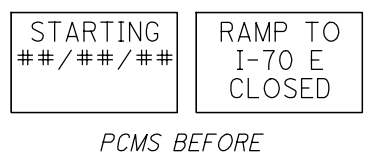
**MAINTENANCE OF TRAFFIC DETOUR PLAN
RAMP D3 CLOSURE PHASE 3**

FRA-70-22.61

651
1199



10' TYPE III BARRICADES (SOLID ACROSS STREET)
PER MT-101.60



NOTE:
FOR ERECTION PHASE 7 EXISTING
RAMP C2 WILL ALSO NEED TO BE
CLOSED. THE DETOUR WILL TAKE
PROPOSED RAMP C1 BACK TO 70EB
INSTEAD. SEE CROSSOVER DETAIL
ON SHEET 65J.

LEGEND

- TEMPORARY SIGN
- TYPE III BARRICADE WITH SIGNS
- WORK ZONE AREA
- DETOUR ROUTE
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

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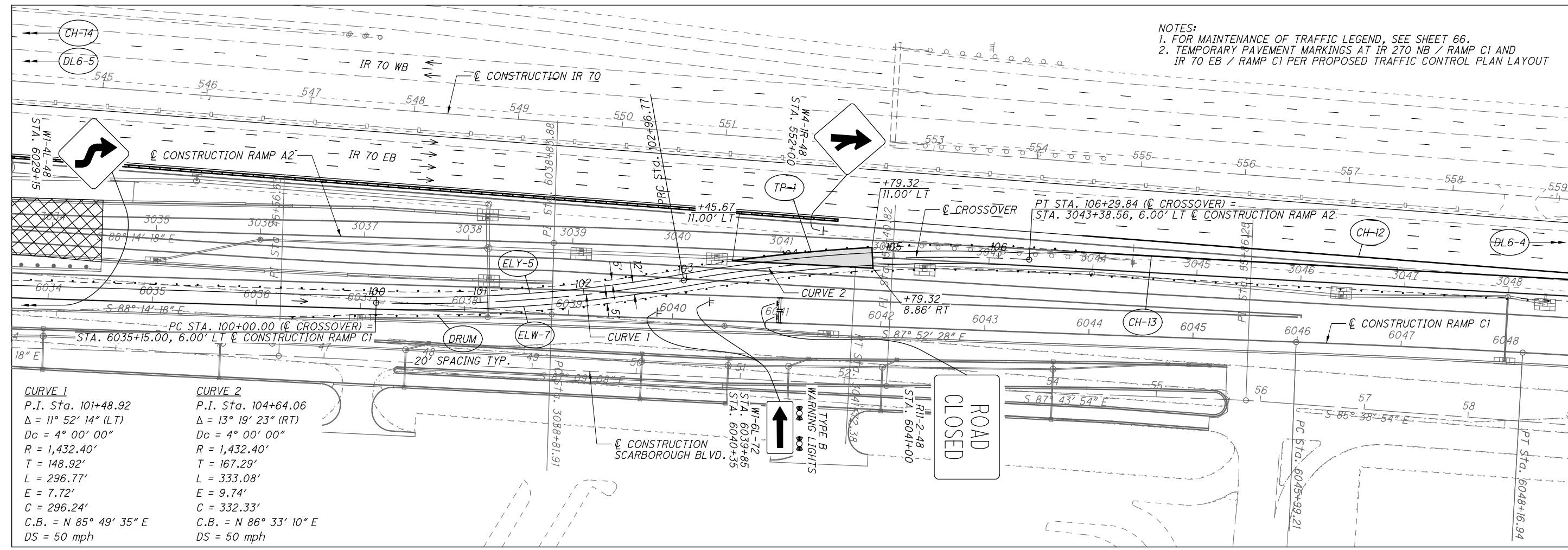
CALCULATED TJS CHECKED KF

**MAINTENANCE OF TRAFFIC - PHASE 3
DETOUR CROSSOVER DETAIL**

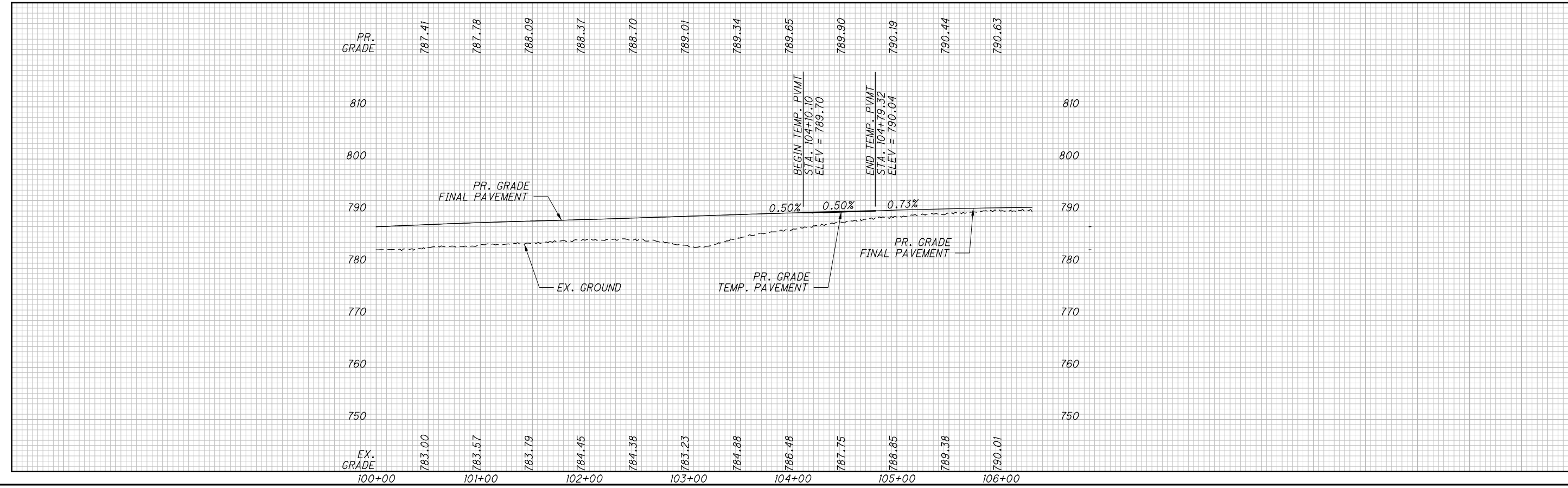
FRA-70-22.61

65J
1199

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 66.
2. TEMPORARY PAVEMENT MARKINGS AT IR 270 NB / RAMP C1 AND IR 70 EB / RAMP C1 PER PROPOSED TRAFFIC CONTROL PLAN LAYOUT



CURVE 1	CURVE 2
P.I. Sta. 101+48.92	P.I. Sta. 104+64.06
$\Delta = 11^\circ 52' 14''$ (LT)	$\Delta = 13^\circ 19' 23''$ (RT)
$D_c = 4^\circ 00' 00''$	$D_c = 4^\circ 00' 00''$
$R = 1,432.40'$	$R = 1,432.40'$
$T = 148.92'$	$T = 167.29'$
$L = 296.77'$	$L = 333.08'$
$E = 7.72'$	$E = 9.74'$
$C = 296.24'$	$C = 332.33'$
C.B. = N 85° 49' 35" E	C.B. = N 86° 33' 10" E
DS = 50 mph	DS = 50 mph

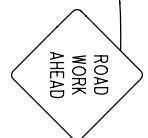


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MATCH LINE STA. 18+00
SEE SHEET 133

W20-1-48
STA. 17+04



BRICE ROAD

EXISTING SIGNAL POLE TO BE REMOVED
STA. 14+32.3, 54.2' RT

TP-3

PB-4

RAMP C1

CONSTRUCTION RAMP C1

MATCH LINE STA. 6074+00
SEE SHEET 133

RAMP G1

CONSTRUCTION RAMP G1

MATCH LINE STA. 1101+50
SEE SHEET 154

MATCH LINE STA. 13+00
SEE SHEET 149

EXISTING SIGNAL POLE TO BE REMOVED
STA.. 14+93.6, 93.5' RT

TEMPORARY PAVEMENT LIMITS
STA. 6077+08.08, 9.0' RT

TEMPORARY PAVEMENT LIMITS
STA. 6077+08.08, 28.0' RT

- NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .
 2. FOR TEMPORARY SIGNAL DETAILS SEE SHEET 928
 3. FOR TEMPORARY PAVEMENT CROSS SECTIONS SEE SHEET 150-153 .



CALCULATED
BPT
CHECKED
EMW

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
STA. 18+00 TO STA. 13+00

FRA-70-22.61

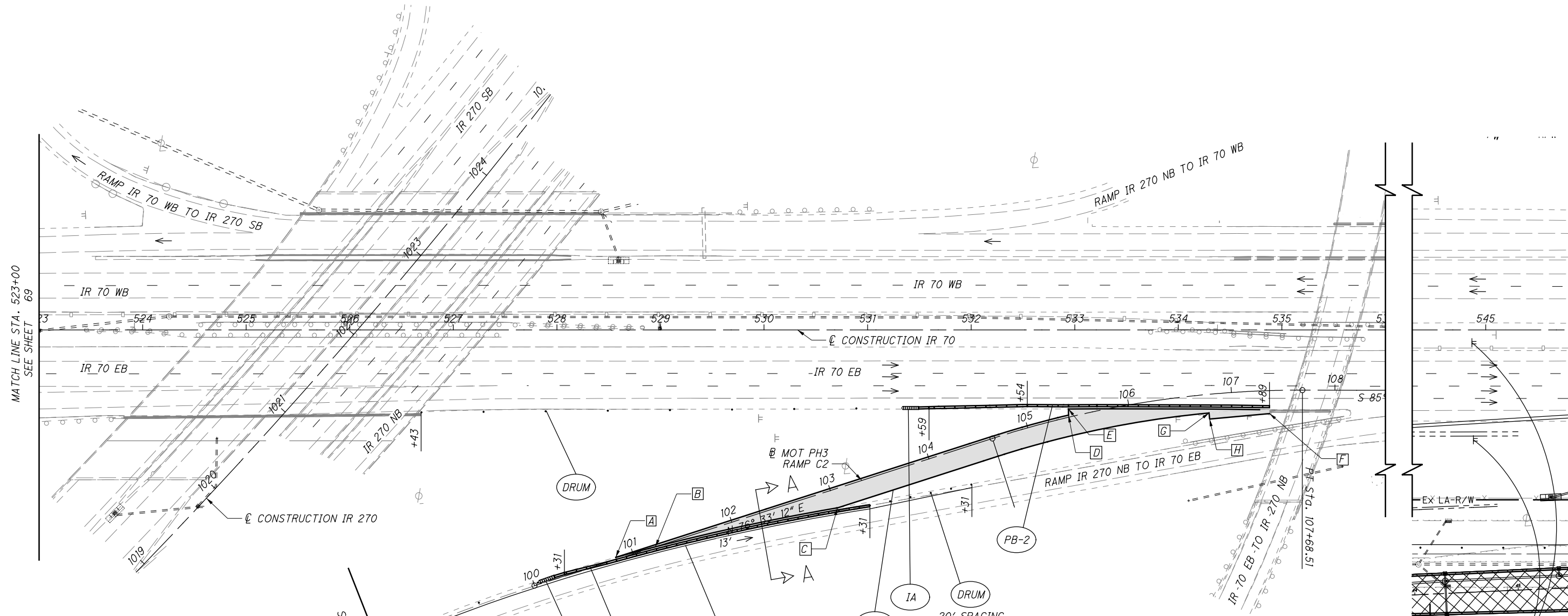


CALCULATED
BPT
CHECKED
EMW

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 523+00 TO STA. 536+00

FRA-70-22.61

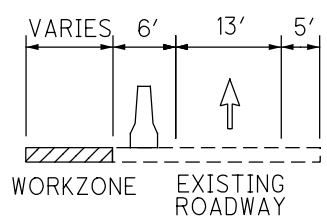
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- [A] BEGIN TEMPORARY PAVEMENT
STA. 100+83.04, 2.0' LT
- [B] BEGIN TEMPORARY PAVEMENT
STA. 101+22.65, 0.0' RT/LT
- [C] END TEMPORARY PAVEMENT
STA. 103+01.42, 19.0' RT
- [D] TEMPORARY PAVEMENT
STA. 105+41.12, 2.02' LT
- [E] END TEMPORARY PAVEMENT
STA. 105+42.29, 7.84' LT
- [F] END TEMPORARY PAVEMENT
STA. 107+35.94, 22.0' RT
- [G] TEMPORARY PAVEMENT
STA. 106+76.65, 16.5' RT
- [H] TEMPORARY PAVEMENT
STA. 106+76.65, 21.9' RT

SEE SHEET 72
MATCH LINE

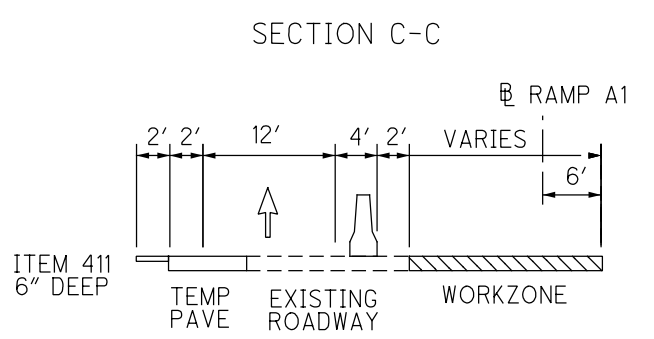
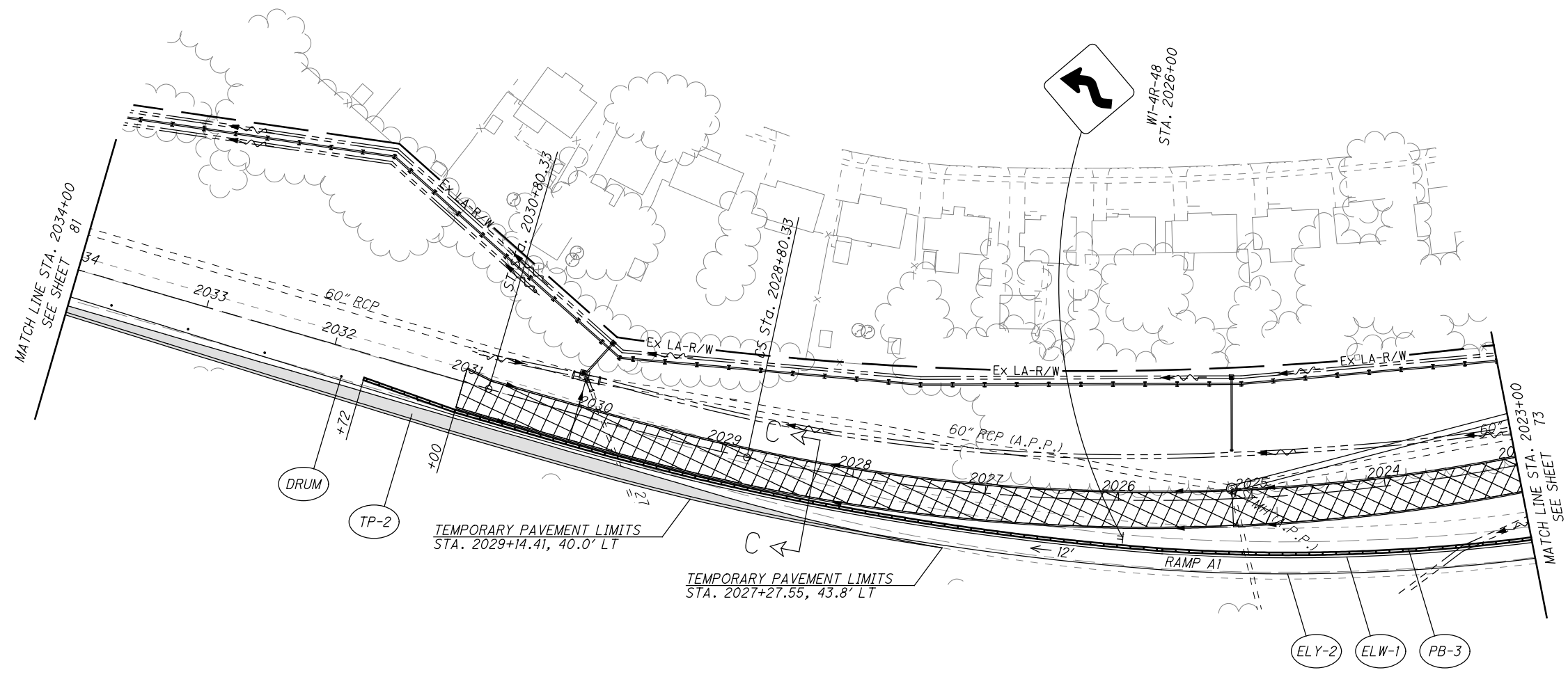
SECTION A-A



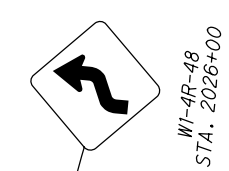
NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .
2. FOR TEMPORARY ROAD PROFILE AND CROSS SECTIONS
SEE SHEETS 124 - 129.

END
ROAD WORK
G20-2-48
STA. 544+87

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ELY-2
ELW-1
PB-3



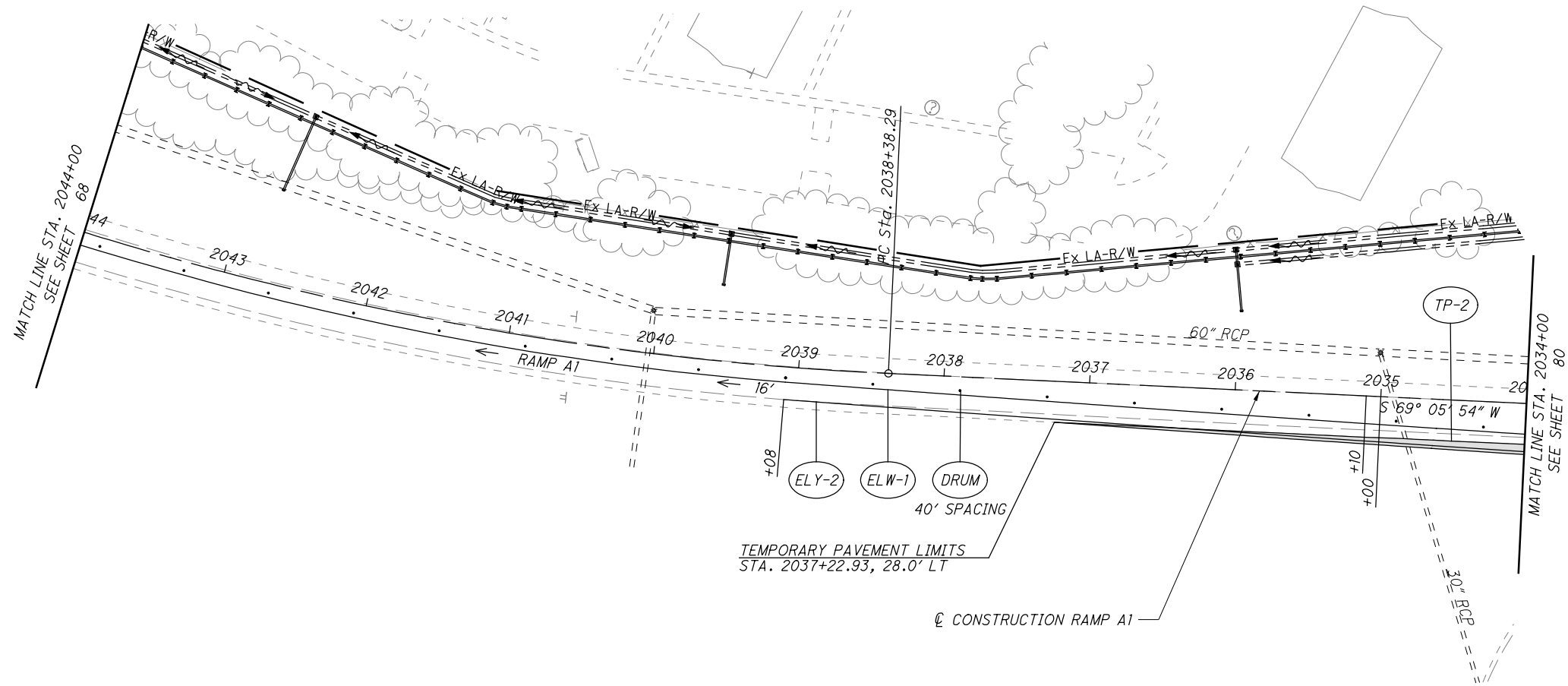
CALCULATED
BPT
CHECKED
EMW

0 50 100
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 2023+00 TO STA. 2034+00

FRA-70-22.61

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .



NOTES:
 1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

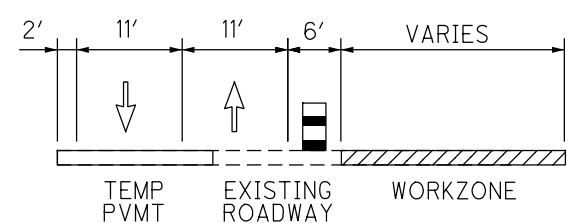
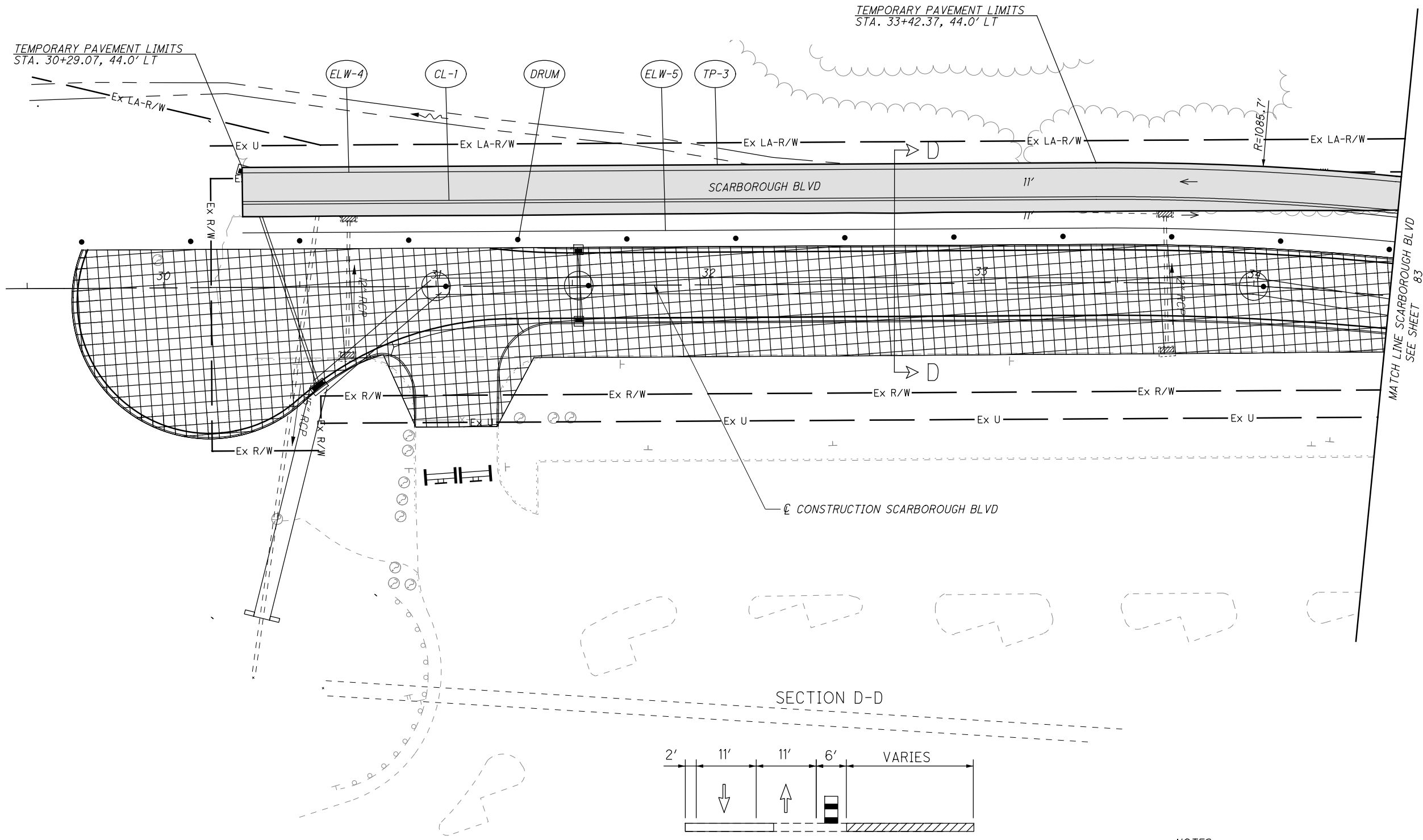
CALCULATED	BPT
CHECKED	EMW

0 50 100
 HORIZONTAL
 SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 2034+00 TO END WORK

FRA-70-22.61

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NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.

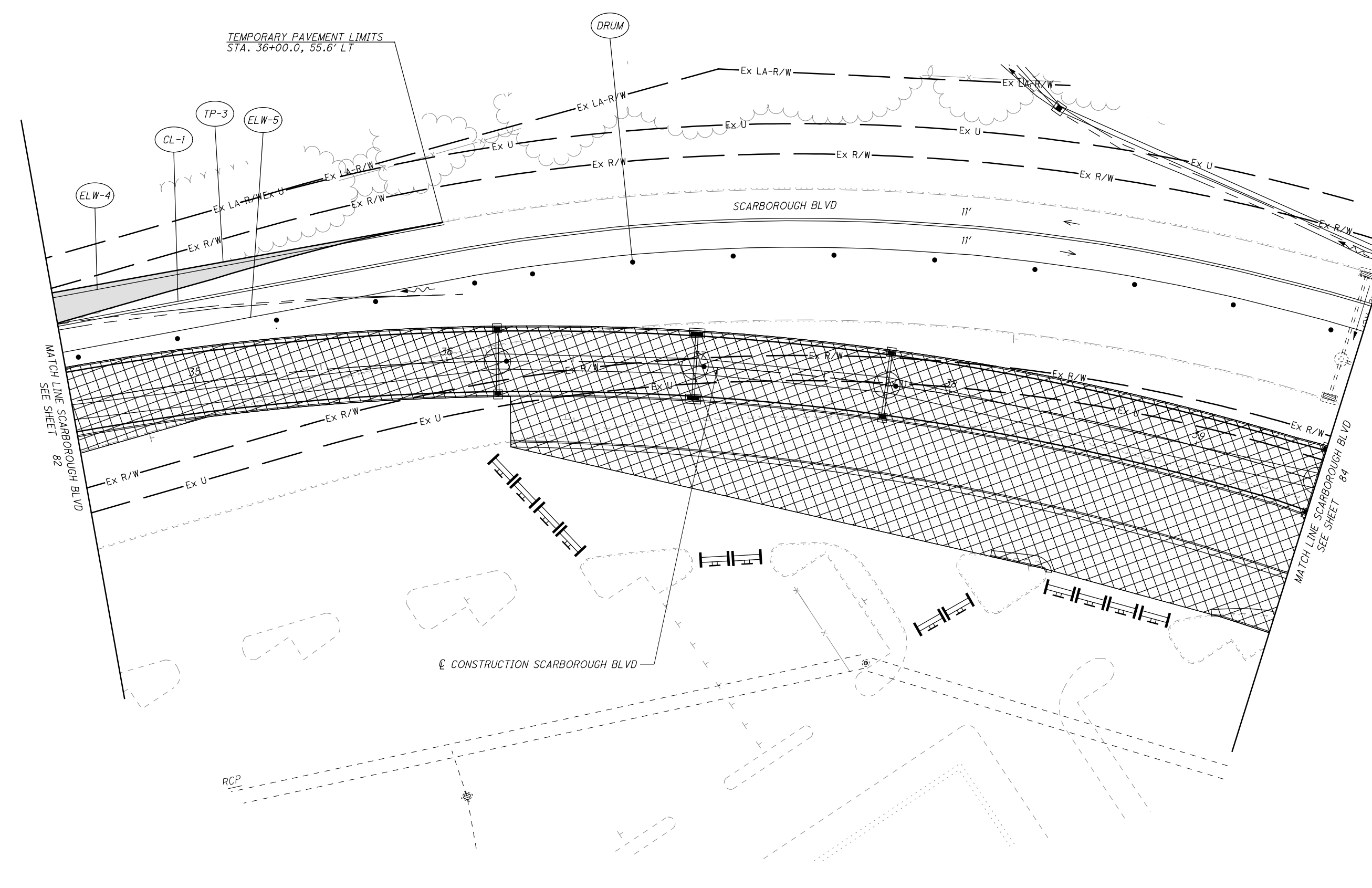
CALCULATED
BPT
CHECKED
EMW

0 20 40
HORIZONTAL
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
BEGIN WORK TO STA. 34+50**

FRA-70-22.61

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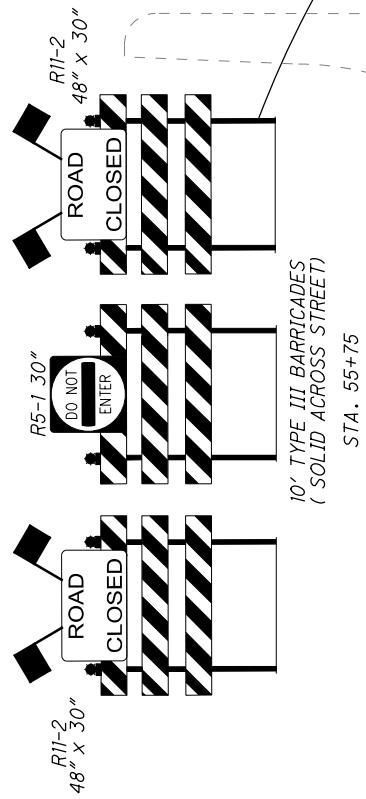
CALCULATED BPT CHECKED EMW

0 20 40
10
HORIZONTAL SCALE IN FEET

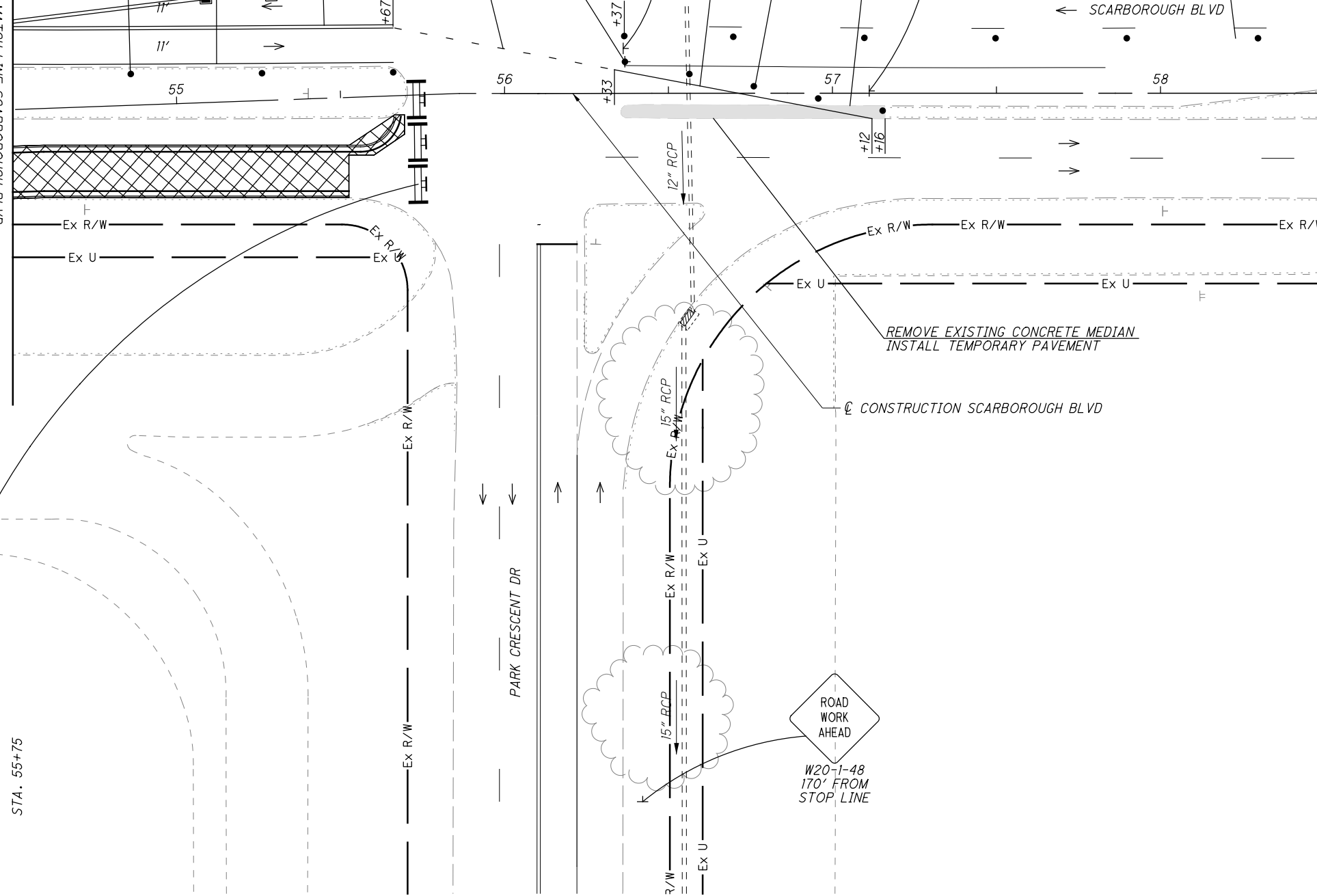
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 34+50 TO STA. 39+50

FRA-70-22.61

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.



MATCH LINE SCARBOROUGH BLVD
SEE SHEET 86



MATCH LINE SCARBOROUGH BLVD
SEE SHEET 88

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 54+50 TO STA. 58+50

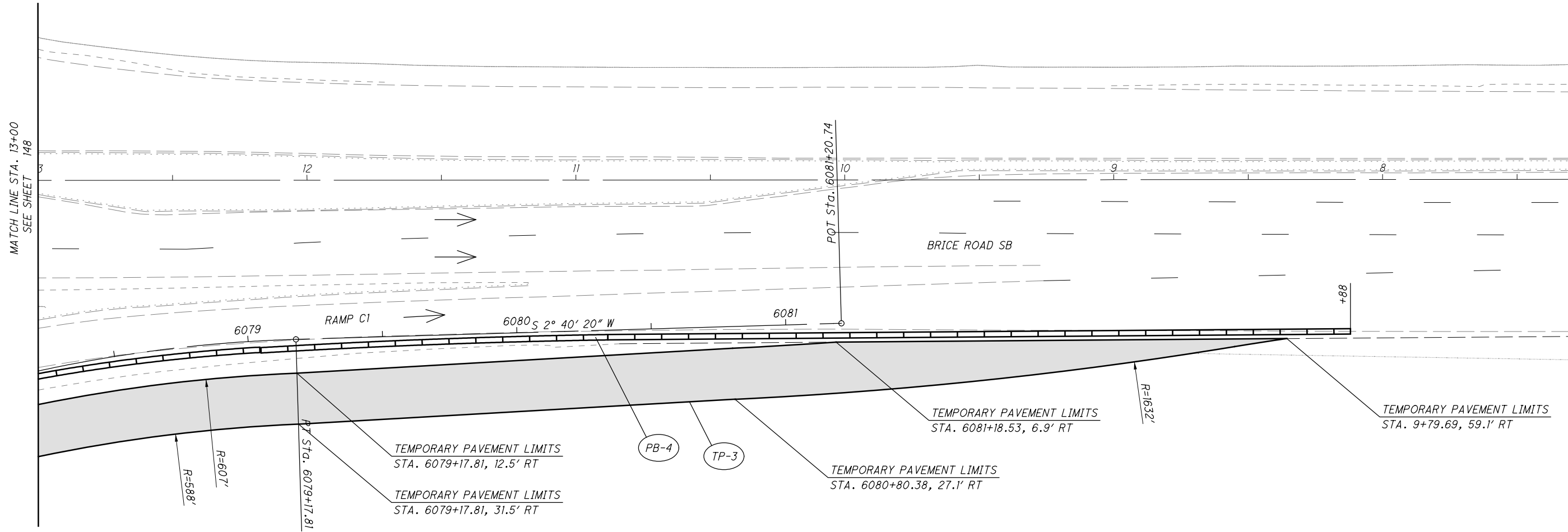
FRA-70-22.61

CALCULATED BPT CHECKED EMW

0 20 40
HORIZONTAL SCALE IN FEET

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.

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NOTES:
 1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .
 2. FOR TEMPORARY PAVEMENT CROSS SECTIONS SEE SHEET 150-153 .

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EMW

0 20 40
HORIZONTAL
SCALE IN FEET

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MAINTENANCE OF TRAFFIC PLAN - PHASE 3
 STA. 13+00 TO STA. 8+50

FRA-70-22.61

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SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
41	42	213	214	215	234	235	01/IMS/PV	EXT	TOTAL										
	24,939							24,939	204	50000	24,939	SY	GEOTEXTILE FABRIC						
		2,037.5	6,762.5	775				9,575	606	15050	9,575	FT	GUARDRAIL, TYPE MGS						
		25						25	606	15550	25	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS						
		25						25	606	16000	25	FT	GUARDRAIL REBUILT						
		1		2				3	606	26050	3	EACH	ANCHOR ASSEMBLY, MGS TYPE B						
		4	2	1				7	606	26150	7	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)						
		3	6	2				11	606	26550	11	EACH	ANCHOR ASSEMBLY, MGS TYPE T						
		1	2	2				5	606	35002	5	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1						
			3					3	606	35102	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2						
				1				1	SPECIAL	60655150	1	EACH	CABLE BARRIER, ANCHOR ASSEMBLY				44		
				1				1	606	60002	1	EACH	IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)						
				1				1	606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), 50 MPH DESIGN SPEED, 98" WIDE HAZARD						
		1	1					2	606	60022	2	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), 60 MPH DESIGN SPEED, 24" WIDE HAZARD						
		1						1	606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), 70 MPH DESIGN SPEED, 24" WIDE HAZARD						
				2				2	606	60028	2	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 70 MPH DESIGN SPEED, 24" WIDE HAZARD						
				1				1	606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARD (UNIDIRECTIONAL)				42		
								17,895	17,895	607	23000	17,895	FT	FENCE, TYPE CLT					
								1	607	61200	1	EACH	GATE, TYPE CLT						
								17,895	17,895	607	70000	17,895	FT	FENCELINE SEEDING AND MULCHING					
					105			105	608	15000	105	SF	8" CONCRETE WALK						
				6,219				6,219	609	12001	6,219	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN				43		
				19				19	609	24510	19	FT	CURB, TYPE 4-C						
				1,442				1,442	609	26000	1,442	FT	CURB, TYPE 6						
				105				105	609	72000	105	SY	CONCRETE MEDIAN						
				348				348	622	10101	348	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN				844		
		2,066	2,737					4,803	622	10120	4,803	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C						
		587	60					647	622	10121	647	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN				844		
			5,359					5,359	622	10160	5,359	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D						
		7		1				8	622	10200	8	EACH	BARRIER TRANSITION						
		2	1					3	622	24840	3	EACH	CONCRETE BARRIER END SECTION, TYPE B						
		1	2					3	622	24841	3	EACH	CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN				842		
				2				2	622	24851	2	EACH	CONCRETE BARRIER END SECTION, TYPE B1, AS PER PLAN				843		
				2	1			3	622	25000	3	EACH	CONCRETE BARRIER END SECTION, TYPE D						
				2				2	622	25006	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1						
		54	30					84	622	25008	84	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C						
		1						1	622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN 1				836		
		1						1	622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN 2				837		
		1						1	622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN 3				838		
		2						2	622	25009	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN 4				839		
			24	1				25	622	25050	25	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D						
			2					2	622	25051	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 1				840		
				1				1	622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 2				841		
	50							50	623	38500	50	EACH	MONUMENT ASSEMBLY						
	19							19	623	40520	19	EACH	RIGHT-OF-WAY MONUMENT						
								24	625	32000	24	EACH	GROUND ROD						
								LS	878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS						

CALCULATED	TJS	CHECKED	CO
GENERAL SUMMARY			
FRA - 70 - 22.61			
207			
1199			

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SHEET NUM.																PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
42	54	237	238	239	240	241	242	243	244	245	687	743	748	749	751	01/IMS/PV	EXT	TOTAL					
		3	2	3	3											26	602	20000	26	CY	DRAINAGE (CONT.)		
										6,026			2	12	1	6,026	605	06000	6,026	FT	CONCRETE MASONRY		
						11,284	9,317	10,996	10,112							41,709	605	11100	41,709	FT	4" BASE PIPE UNDERDRAINS		
20						609	907	35	33							1,604	605	13300	1,604	FT	6" SHALLOW PIPE UNDERDRAINS		
																					6" UNCLASSIFIED PIPE UNDERDRAINS		
						9,507	5,199	6,884	7,852							29,442	605	14000	29,442	FT	6" BASE PIPE UNDERDRAINS		
20																20	605	31100	20	FT	AGGREGATE DRAINS		
																17	611	00410	17	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET		
						683	343	462	377							1,865	611	00510	1,865	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		
20																20	611	01500	20	FT	6" CONDUIT, TYPE F		
																					12" CONDUIT, TYPE A		
	68															43	611	04200	43	FT	12" CONDUIT, TYPE B		
																					12" CONDUIT, TYPE C		
		569	1,756	520	274	149										520	611	04600	520	FT	12" CONDUIT, TYPE C		
			163													2,748	611	05900	2,748	FT	15" CONDUIT, TYPE B		
																163	611	05900	163	FT	15" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS		
		57														57	611	06700	57	FT	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21		
		597	684													1,848	611	07400	1,848	FT	18" CONDUIT, TYPE B		
			62													62	611	07400	62	FT	18" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS		
		13														61	611	07600	61	FT	18" CONDUIT, TYPE C		
		60													48	60	611	08200	60	FT	18" CONDUIT, TYPE F, 707.05 TYPE C, 707.21		
																					21" CONDUIT, TYPE B		
		48	276													480	611	08900	480	FT	21" CONDUIT, TYPE B		
		89	106	83												278	611	10400	278	FT	24" CONDUIT, TYPE B		
			220													220	611	10401	220	FT	24" CONDUIT, TYPE B, AS PER PLAN, 706.02, WITH NONSHRINK, NONMETALLIC GROUT		43
			446	36												482	611	10600	482	FT	24" CONDUIT, TYPE C		
		50														50	611	11200	50	FT	24" CONDUIT, TYPE F, 707.05 TYPE C, 707.21		
																					27" CONDUIT, TYPE B		
		58	90													148	611	11900	148	FT	27" CONDUIT, TYPE B		
			14													14	611	12100	14	FT	27" CONDUIT, TYPE C		
			51													51	611	12100	51	FT	27" CONDUIT, TYPE C, 706.02 WITH PREMIUM JOINTS		
			561	281												842	611	13400	842	FT	30" CONDUIT, TYPE B		
				33												33	611	13600	33	FT	30" CONDUIT, TYPE C		
		658	568													1,226	611	16400	1,226	FT	36" CONDUIT, TYPE B		
		762														762	611	16600	762	FT	36" CONDUIT, TYPE C		
																					42" CONDUIT, TYPE A, 706.02, 707.02 ALUMINIZED, 707.04, 707.33 WITH WELDED BELL		
																148	611	19200	148	FT	42" CONDUIT, TYPE A, 706.02, 707.01 ALUMINIZED, 707.04, 707.33 WITH WELDED BELL		
		5														195	611	20700	195	FT	48" CONDUIT, TYPE A, 706.02, 707.01 ALUMINIZED, 707.04, 707.33 WITH WELDED BELL		
																5	611	21100	5	FT	48" CONDUIT, TYPE C		
		501	1,462													1,963	611	22600	1,963	FT	54" CONDUIT, TYPE C		
			30													30	611	24000	30	FT	60" CONDUIT, TYPE C		
																1,430	611	26200	1,430	FT	72" CONDUIT, TYPE B		
		162														162	611	26200	162	FT	72" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS, 706.11		
		10														10	611	28200	10	FT	84" CONDUIT, TYPE B		
		160														160	611	52904	160	FT	34" X 53" CONDUIT, TYPE C, 706.04		
																22	611	94938	22	FT	9' X 5' CONDUIT, TYPE A, 706.05		
																118	611	96600	118	FT	CONDUIT, BORED OR JACKED, 18", TYPE B		
																7	611	98151	7	EACH	CATCH BASIN, NO. 3, AS PER PLAN		43
																28	611	98181	28	EACH	CATCH BASIN, NO. 3A, AS PER PLAN		43
		2														2	611	98341	2	EACH	CATCH BASIN, NO. 5A		
		6	5	16												27	611	98410	27	EACH	CATCH BASIN, NO. 8		
		1	3													4	611	98434	4	EACH	CATCH BASIN, NO. 8A		
		4	13	4												21	611	99104	21	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C		
		5	12													17	611	99114	17	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D		
			1													1	611	99115	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN		43
		13	16	3	21											53	611	99574	53	EACH	MANHOLE, NO. 3		
																1	611	99575	1	EACH	MANHOLE, NO. 3, AS PER PLAN		43
		1														1	611	99600	1	EACH	MANHOLE, NO. 4		
4						11		5	5							25	611	99710	25	EACH	PRECAST REINFORCED CONCRETE OUTLET		
																1	611	99854	1	EACH	WATER QUALITY BASIN, DETENTION		

GENERAL SUMMARY

FRA - 70 - 22.61

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.									
		54	42	213	214	215	234	778	785	804	832	01/IMS/PV	02/IMS/BR															
																		PAVEMENT										
												44,148							44,148	254	01000	44,148	SY	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH				
												19,597							19,597	255	20001	19,597	FT	FULL DEPTH PAVEMENT SAWING, AS PER PLAN	43			
												19,394							19,394	301	46000	19,394	CY	ASPHALT CONCRETE BASE, PG64-22				
												10,204							10,204	302	46000	10,204	CY	ASPHALT CONCRETE BASE, PG64-22.				
												24,614							24,614	304	20000	24,614	CY	AGGREGATE BASE				
												10,837							10,837	305	12010	10,837	SY	8" CONCRETE BASE, CLASS QC 1P				
												26,283							26,283	407	20000	26,283	GAL	NON-TRACKING TACK COAT				
477																			477	411	10001	477	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	46			
												45							45	441	50400	45	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)				
												60							60	441	50600	60	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS)				
												6,529							6,529	442	00100	6,529	CY	ANTI-SEGREGATION EQUIPMENT				
												2,127							2,127	442	10001	2,127	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M	43			
												5,625							5,625	442	10100	5,625	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)				
												3,198							3,198	442	10301	3,198	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	43			
												407							407	442	20000	407	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)				
												407							407	442	20200	407	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)				
												148							148	452	12010	148	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P				
												10,247							10,247	452	13010	10,247	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P				
3.25																			3.25	618	40600	3.25	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)				
												74							74	875	10000	74	LB	LONGITUDINAL JOINT ADHESIVE				
												WATER WORK																
																			86	SPECIAL	63820040	86	FT	6" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (COL. 801)				
																			17	SPECIAL	63820080	17	FT	8" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (COL. 801)				
																			2,712	SPECIAL	63820168	2,712	FT	12" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (COL. 801)				
																			398	SPECIAL	63820464	398	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED (COL. 806)				
																			10		638	98000	10	EACH	WATER WORK, MISC.-6" WATCH VALVE WITH VALVE BOX (COL. 802)	783		
																			2	SPECIAL	63820554	2	EACH	8" GATE VALVE WITH VALVE BOX (COL. 802)				
																			6	SPECIAL	63820586	6	EACH	12" GATE VALVE WITH VALVE BOX (COL. 802)				
																			10	SPECIAL	63820750	10	EACH	6" FIRE HYDRANT (COL. 809)				
																			1	SPECIAL	63821400	1	EACH	FIRE HYDRANT ADJUSTED TO GRADE (COL. 810)				
												SANITARY SEWER																
																			498			498	FT	10" CONDUIT, TYPE B				
																			2			2	EACH	MANHOLE, NO. 3 (SANITARY)				
																			2			2	EACH	MANHOLE ADJUSTED TO GRADE (SANITARY)				
																			406	SPECIAL	63820464	406	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED (COL. 806)				
												LIGHTING																
												FOR LIGHTING ESTIMATED QUANTITIES, SEE SHEET 940																
												TRAFFIC CONTROL																
												55	15						70		626	00102	70	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY			
												55	238	15					237	71	626	00102	308	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL			
												9							9		626	00110	9	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY			
												29	101	16					146		626	00110	146	EACH	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL			
														1					1		626	00118	1	EACH	BARRIER REFLECTOR, TYPE 6, BI-DIRECTIONAL			
												FOR SIGNING ESTIMATED QUANTITIES, SEE SHEET 850A																
												FOR PAVEMENT MARKING ESTIMATED QUANTITIES, SEE SHEET 850A																
												TRAFFIC SIGNALS																
												FOR TRAFFIC SIGNAL & ITS ESTIMATED QUANTITIES, SEE SHEET 927																
												RETAINING WALLS																
												FOR RETAINING WALL I ESTIMATED QUANTITIES, SEE SHEET 755																
												FOR RETAINING WALL J ESTIMATED QUANTITIES, SEE SHEET 764																
												FOR RETAINING WALL K ESTIMATED QUANTITIES, SEE SHEET 769 & 775																
												FOR RETAINING WALL B ESTIMATED QUANTITIES, SEE SHEET 1139																
												FOR RETAINING WALL G-H ESTIMATED QUANTITIES, SEE SHEET 1140																
												NOISE BARRIERS																
																			79,340	21,400	100,740		SPECIAL	60610210	100,740	SF	NOISE BARRIER (REFLECTIVE)	799 & 831

GENERAL SUMMARY

FRA - 70 - 22.61

CALCULATED
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210
1199

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SHEET NO.	REFERENCE NO.	STATION TO STATION		SIDE	606										609				622						626			
		FROM	TO		GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE E	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	SPECIAL - CABLE BARRIER, ANCHOR ASSEMBLY	IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), 50 MPH DESIGN SPEED, 98" WIDE HAZARD	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 70 MPH DESIGN SPEED, 24" WIDE HAZARD	IMPACT ATTENUATOR MISC.: WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARD (UNIDIRECTIONAL)	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	CURB, TYPE 4-C	CURB, TYPE 6	CONCRETE MEDIAN	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 AS PER PLAN	BARRIER TRANSITION	CONCRETE BARRIER END SECTION, TYPE B1, AS PER PLAN	CONCRETE BARRIER END SECTION, TYPE D	CONCRETE BARRIER, END ANCHORAGE - REINFORCED, TYPE B1	CONCRETE BARRIER, END ANCHORAGE - REINFORCED, TYPE D	BARRIER, MISC.: PORTABLE BARRIER, UNANCHORED	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL	BARRIER REFLECTOR, TYPE 6, BI-DIRECTIONAL
				FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	SY	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH		
		IR 70																										
253 - 254	B1	532+63	537+49	RT/LT																								
253	G1	533+45	534+03	LT						1																1		
		IR 270																										
353	G7	995+66		RT						1																		
		RAMP C1																										
490	B29	6076+00	6077+67	RT																						165		
		RAMP D2																										
575	B30	100587.3	100636.34	LT															1							1		
575	G22	100601.3	100798.15	LT	150.0				1																	3		
577	G23	1014+84	1016+65	LT	125.0	1			1																	3		
577	G24	1015+44	1017+53	RT	137.5		1																			3		
577 - 578	G25	1018+74	1021+21	RT/LT	275.00						1															4		
		RAMP G1																										
594	G26	8588+53	8589+93	RT	87.5	1			1					19												3		
596	B31	8589+91	8591+41	RT																					2			
		SCARBOROUGH BLVD.																										
621	C1	31+28	31+50	LT/RT									412															
621	C2	31+28	55+51	RT									2424															
621	C3	31+50	55+67	LT									2416															
629	C4	50+83	55+67	RT									483															
629	C5	50+83.46	55+66.82	LT									483															
627	C6	47+69.30	50+83.46	RT												105												
621	C7	DRIVEWAY 31+07.30		RT																								
625	C8	DRIVEWAY 42+00.64		RT																								
627	C9	DRIVEWAY 47+34.95		RT																								
629	C10	DRIVEWAY 51+91.27		RT																								
623	C11	36+25.00	41+64.73	RT																								
625	C12	42+36.20	42+65.27	RT																								
625	C13	42+65.27	42+65.27	RT																								
625	C14	42+65.27	44+00.00	RT																								
623	C15	38+28.05	38+52.50	RT																								
623	C16	39+24.53	39+53.07	RT																								
623	C17	40+09.25	40+35.47	RT																								
TOTALS CARRIED TO GENERAL SUMMARY					775.0	2	1	2	2	1	1	1	2	1	6219	19	1442	105	348	1	2	1	2	1	165	15	16	1

ROADWAY SUBSUMMARY

CALCULATED
TJS
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CO

FRA - 70 - 22.61

215
1199

c:\pwworking\pitt\Bd1607352B95639_GS1401.dgn 4/15/2022 9:52:08 AM TSCHOEN

STATION TO STATION		SIDE	LENGTH L (FT)	AVERAGE WIDTH W (FT)	SURFACE AREA A=LxW (SF)	CADD MEASURED AREAS (SF)	202	204	204	254	255	301	302	304	304	407	407	442	442	442
							PAVEMENT REMOVED	SUBGRADE COMPACTION	PROOF ROLLING	PAVEMENT PLANING, ASPHALT CONCRETE	FULL DEPTH PAVEMENT SAWING, AS PER PLAN	ASPHALT CONCRETE BASE, P664-22	ASPHALT CONCRETE BASE, P664-22.	AGGREGATE BASE	AGGREGATE BASE	NON-TRACKING TACK COAT	NON-TRACKING TACK COAT	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	ANTI-SEGREGATION EQUIPMENT
FROM	TO						SY	SY	HR	SY	FT	3.5" CY	12" CY	6" CY	10" CY	0.06 GAL	0.09 GAL	1.75" CY	1.5" CY	442 CY
I-70 (CONTINUED)																				
606+00.00	610+68.64	RT	468.64	6.00	2812					312	469						19	28	15	13
				20.69	9694															97
				22.69	10631												142		57	49
				23.02	10787							117					72			
				23.77	11139												74			
				24.52	11490											177				
				25.02	11725											181				
						7524	836													
610+68.64	612+68.64	RT	200.00	6.00	1200					133	200						8	12	6	6
				14.00	2800															28
				18.00	3600												48		19	17
				18.33	3667							40					24			
				19.08	3817												25			
				19.83	3967											61				
				20.33	4067											63				
						1889	210													
612+68.64	641+05.19	RT	2836.55	6.00	17019					1891	2843						113	170	92	79
				12.00	34039															341
				18.00	51058												681		276	236
				18.33	52003							562					347			
				19.08	54131									2005			361			
				19.83	56258											868				
				20.33	57677										890					
						12540	1393													
494+20.00	504+97.00	RT			37580					4176									376	174
					23923															111
526+81.00	535+85.00	RT			36345					4038									363	168
					26234															121
588+68.00	596+69.00	RT			36909					4101									369	171
					28534															132
638+15.00	648+25.00	RT			40563					4507									406	188
					35883															166
SUBTOTALS THIS SHEET							2439	8163	4.1	19159	3511	718	2559	2240		3639	466	1101	997	
TOTALS CARRIED FROM SUBSUMMARY SHEET					216	9720	14359	7.2	7345	5451	1295	4508	2541		4315	1000	852	1104		
TOTALS CARRIED FROM SUBSUMMARY SHEET					217	5129	1790	0.9	411	1108	165	578	492		516	102	76	58		
TOTALS CARRIED FROM SUBSUMMARY SHEET					218	0	1422	0.7	1032	622	142	486	395		577	121	94	137		
TOTALS CARRIED FROM SUBSUMMARY SHEET					219	0	772	0.4	247	284	77	262	215		269	50	40	91		
TOTALS CARRIED FROM SUBSUMMARY SHEET					220	0	3093	1.5	977	1512	291	933	787		1016	191	158	332		
TOTALS CARRIED TO SUBSUMMARY SHEET					234	17288	29599	14.8	29171	12489	2687	9326	6670		10333	1931	2322	2719		

PAVEMENT SUBSUMMARY - IR 70

FRA-70-22.61

CALCULATED
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CO

221
1199

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STATION TO STATION		SIDE	LENGTH L (FT)	AVERAGE WIDTH W (FT)	SURFACE AREA A = LxW (SF)	CADD MEASURED AREAS (SF)	202	204	204	254	255	301	304	407	407	442	442	442	
							PAVEMENT REMOVED SY	SUBGRADE COMPACTION SY	PROOF ROLLING HOUR	PAVEMENT PLANING, ASPHALT CONCRETE SY	FULL DEPTH PAVEMENT SAWING, AS PER PLAN FT	ASPHALT CONCRETE BASE, PG64-22 CY	AGGREGATE BASE CY	NON-TRACKING TACK COAT GAL	NON-TRACKING TACK COAT GAL	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN CY	ANTI-SEGREGATION EQUIPMENT CY	
FROM	TO																		
IR 270 (CONTINUED)																			
985+10.35	989+89.65	LT/RT				1779	198												
						2242			249					15	22	12	10		
						3192								21		17	15		
						3462							64						
						3998		444.2	0										
1028+16.18	1030+57.75	RT	241.57	24.50	5918													27	
			241.57	29.20	7054														
						6372	708			568	294	131	188						
1029+47.30	1032+24.05	LT	276.75	21.30	5895													27	
			276.75	25.60	7085					643	295	131	189						
						6447	716												
1054+53.66	1056+45.55	LT	191.89	5.30	1017													5	
			191.89	8.00	1535					392	64	28	41			8			
						1096	122												
1029+93.00	1035+25.00	LT				17137				1904					171			79	
						12008												56	
1062+74.00	1073+02.00	LT				52657				5851					527			244	
						49329												228	
SUBTOTALS THIS SHEET							1744	2185.8	1	8004	1603	653	354	1175	114	408	284		
TOTALS CARRIED FROM SUBSUMMARY SHEET 222							2885	5120	2	5359	3914	1475	853	1720	504	417	364		
TOTALS CARRIED TO SUBSUMMARY SHEET 234							4629	7306.1	4	13364	5518	2129	1208	2895	618	826	648		

CALCULATED TJS CHECKED CO	PAVEMENT SUBSUMMARY - IR 270
	223 1199

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STATION TO STATION		SIDE	LENGTH L (FT)	AVERAGE WIDTH W (FT)	SURFACE AREA A=LxW (SF)	CADD MEASURED AREAS (SF)	202	204	204	301	304	304	305	407	407	441	441	442	442	452	608
							PAVEMENT REMOVED SY	SUBGRADE COMPACTION SY	PROOF ROLLING HOUR	ASPHALT CONCRETE BASE, PG64-22 4.5" CY	AGGREGATE BASE 4" CY	AGGREGATE BASE 6" CY	8" CONCRETE BASE, CLASS CC IP SY	NON-TRACKING TACK COAT 0.06 GAL	NON-TRACKING TACK COAT 0.09 GAL	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS), (PG64-22) 1.5" CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS), (PG64-22) 2" CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), (PG70-22M) 1.5" CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448) 1.5" CY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS CC IP SY	8" CONCRETE SIDEWALK SY
FROM	TO																				
SCARBOROUGH BLVD.																					
30+18.99	39+93.17	LT/RT	998.68	52.00	51931		5770														
39+93.17	41+84.88	LT	199.82	24.44	4884		543														
39+93.17	41+84.88	RT	195.58	24.97	4884		543														
41+84.88	42+44.56	LT/RT	59.72	64.00	3822		425														
42+44.56	44+16.77	LT	172.39	36.00	6206		690														
44+16.77	45+14.25	LT	96.99	30.00	2910		323														
45+14.25	47+12.68	LT	200.21	24.00	4805		534														
42+44.56	47+12.68	RT	469.26	24.00	11262		1251														
47+12.68	47+57.31	LT/RT	44.65	64.00	2858		318														
47+57.31	48+57.75	LT	99.65	36.00	3587		399														
48+57.75	49+59.16	LT	101.13	30.00	3034		337														
49+59.16	55+66.78	LT	607.75	24.00	14586		1621														
47+57.31	55+51.41	RT	794.66	24.00	19072		2119														
29+68.61	31+50.32	LT				4815		535	0.3		89	535	21	40				22	22		
29+68.61	31+27.59	RT				5355		595	0.3		99	595	24	45				25	25		
29+68.61	30+75.05	RT	147.60																		
30+75.05	30+83.66	RT				24															
30+83.66	31+30.14	RT	47.52																		
31+30.14	31+42.33	RT				32															
31+42.33	39+36.49	RT	794.16																		
31+50.32	39+36.49	LT	786.17	12.00	9434			1048	0.6		175	1048	42	79				44	44		
31+27.59	39+36.49	RT	808.90	12.00	9707			1079	0.6		180	1079	43	81				45	45		
39+36.49	40+97.63	LT/RT	161.14	30.00	4834			537	0.3		90	537	21	40				22	22		
40+97.63	46+56.63	LT	559.00	18.00	10062			1118	0.6		186	1118	45	84				47	47		
40+97.63	43+92.68	RT	295.05	18.00	5311			590	0.3		98	590	24	44				25	25		
40+97.63	41+64.73	RT	67.10																		
41+64.73	41+73.50	RT				25															
41+73.50	42+26.30	RT	52.80																		
42+26.30	42+36.20	RT				29															
42+36.20	43+92.68	RT	156.48																		
43+92.68	46+56.63	RT	263.95	20.50	5411			601	0.4		100	601	24	45				25	25		
46+56.63	47+70.80	LT/RT	114.17	41.00	4681			520	0.3		87	520	21	39				22	22		
46+56.63	46+98.27	RT	41.64	12.00	500			56	0.1		9	56	2	4				2	2		
46+98.27	47+10.47	RT			37																
47+10.47	47+53.13	RT	42.66																		
47+56.13	47+68.32	RT			37																
47+70.80	50+83.46	LT	312.66	23.00	7191			799	0.4		133	799	32	60				33	33		
50+83.46	55+56.36	LT	472.90	23.00	10877			1209	0.7		201	1209	48	91				50	50		
47+68.32	50+83.46	RT	315.14	12.00	3782			420	0.3		70	420	17	32				18	18		
50+83.46	55+52.29	RT	468.83	12.00	5626			625	0.4		104	625	25	47				26	26		
50+83.46	51+56.84	RT	73.38																		
51+56.84	51+69.30	RT				37															
51+69.30	52+14.14	RT	44.84																		
52+14.14	52+26.34	RT				37															
55+56.36	55+69.49	LT				266		30	0.1		5	30	1	2				1	1		
55+52.29	55+69.49	RT				40		4	0.1		1	4	0	0				0	0		
TOTALS CARRIED TO SUBSUMMARY SHEET							233	14871	9766	6	0	1628	9766	1123	0	0	407	407	0	0	

PAVEMENT SUBSUMMARY - SCARBOROUGH BLVD.

FRA - 70 - 22.61

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STATION TO STATION		SIDE	LENGTH L (FT)	AVERAGE WIDTH W (FT)	SURFACE AREA A=LxW (SF)	CADD MEASURED AREAS (SF)	202	204	204	301	304	304	305	407	407	441	441	442	442	452	608
							PAVEMENT REMOVED	SUBGRADE COMPACTION	PROOF ROLLING	ASPHALT CONCRETE BASE, PG64-22	AGGREGATE BASE	AGGREGATE BASE	8" CONCRETE BASE, CLASS CC IP	NON-TRACKING TACK COAT	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS), (PG64-22)	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS), (PG64-22)	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), (PG70-22M)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS CC IP	8" CONCRETE SIDEWALK
FROM	TO						SY	SY	HOUR	4.5" CY	4" CY	6" CY	SY	0.06 GAL	0.09 GAL	1.5" CY	2" CY	1.5" CY	1.5" CY	SY	SY
SCARBOROUGH BLVD. (CONTINUED)																					
36+25.00	41+30.04	RT	505.04	2.00	1010							19	112	4	8	5	6				
31+31.30		RT			499						9									55	
31+31.30		RT			332						6										37
31+31.30		RT			378				7	7			42	2	3	2	2				
42+00.64		RT			321					6										36	
42+00.64		RT			241					4											27
42+00.64		RT			3919				73	73			435	17	33	18	24				
47+34.95		RT			269					5										30	
47+34.95		RT			184					3											20
47+34.95		RT			1658				31	31			184	7	14	8	10				
51+91.27		RT			242					4										27	
51+91.27		RT			182					3											20
51+91.27		RT			1998				37	37			222	9	17	9	12				
38+28.05	38+52.50	RT			75					1	1		8	0	1	0	0				
39+24.53	39+53.11	RT			200					4	4		22	1	2	1	1				
40+10.37	40+35.45	RT			131						2		15	1	1	1	1				
42+65.27	44+00.00	RT	134.73	2.00	269						5		30	1	2	1	2				
SUBTOTALS THIS SHEET							0	1323	2.0	147	226	1071	123	45	59	0	0	148	105		
TOTALS CARRIED FROM SUBSUMMARY SHEET						232	14871	9766	5.8	0	1628	9766	1123	0	0	407	407	0	0		
TOTALS CARRIED TO SUBSUMMARY SHEET						234	14872	11089	7.8	148	1854	10837	1247	45	60	407	407	148	105		

PAVEMENT SUBSUMMARY - SCARBOROUGH BLVD.

FRA - 70 - 22.61

CALCULATED
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CO

233
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	202	204	204	254	255	301	302	304	305	407	441	441	442	442	442	442	442	452	452	608	875		
	PAVEMENT REMOVED	SUBGRADE COMPACTION	PROOF ROLLING	PAVEMENT PLANING, ASPHALT CONCRETE	FULL DEPTH PAVEMENT SAWING, AS PER PLAN	ASPHALT CONCRETE BASE, PG64-22	ASPHALT CONCRETE BASE, PG64-22.	AGGREGATE BASE	8" CONCRETE BASE, CLASS QC IP	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS), (PG64-22)	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS), (PG64-22)	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), (PG70-22M)	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	ANTI-SEGREGATION EQUIPMENT	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP	8" CONCRETE SIDEWALK	LONGITUDINAL JOINT ADHESIVE	
TOTALS CARRIED FROM SUBSUMMARY SHEET 221	17288	29599	14.8	29171	12489	2687	9326	6670		10333				1931	2322			2719					
TOTALS CARRIED FROM SUBSUMMARY SHEET 223	4629	7307	3.6	13364	5518	2129		1208		2895				618	826			648					
TOTALS CARRIED FROM SUBSUMMARY SHEET 224	8054	20676	10.5			5664		3446		3647			694	979				963					
TOTALS CARRIED FROM SUBSUMMARY SHEET 227		47747	24.4	101	310	8273		9721		7123			1295	1914				1998		5382			
TOTALS CARRIED FROM SUBSUMMARY SHEET 228	2165	725	1.0	675	556	252		121		261			46	65				36				74	
TOTALS CARRIED FROM SUBSUMMARY SHEET 229	1106	4969	2.5					829												4865			
TOTALS CARRIED FROM SUBSUMMARY SHEET 231	1379	2777	1.4	837	724	241	878	765		777			92	118	50			165					
TOTALS CARRIED FROM SUBSUMMARY SHEET 233	14872	11089	7.8			148		1854	10837	1247	45	60				407	407		148		105		
TOTALS CARRIED TO GENERAL SUBSUMMARY	49493	124889	66.0	44148	19597	19394	10204	24614	10837	26283	45	60	2127	5625	3198	407	407	6529	148	10247	105	74	

FRA - 70 - 22.61	CALCULATED
	TJS CHECKED CO
PAVEMENT SUBSUMMARY	

SHEET NO.	REFERENCE NO.	STATION TO STATION		SIDE	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611		
		FROM	TO		CONCRETE MASONRY	15" CONDUIT, TYPE B	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21	18" CONDUIT, TYPE B	CONDUIT, BORED OR JACKED, 18", TYPE B	18" CONDUIT, TYPE C	18" CONDUIT, TYPE F, 707.05 TYPE C, 707.21	21" CONDUIT, TYPE B	24" CONDUIT, TYPE B	24" CONDUIT, TYPE F, 707.05 TYPE C, 707.21	27" CONDUIT, TYPE B	36" CONDUIT, TYPE B	36" CONDUIT, TYPE C	48" CONDUIT, TYPE C	54" CONDUIT, TYPE C	72" CONDUIT, TYPE B, 706.02 W/ PREMIUM JOINTS, 706.11	84" CONDUIT, TYPE B	34"x53" CONDUIT, TYPE C, 706.04	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 5A	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	MANHOLE, NO. 3	MANHOLE, NO. 4
					CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EA	EA	EA	EA	EA	EA	EA	EA	EA	
IR-70																													
705	D501	534+56.89	534+06.44	RT	0.66															55							1		
705	D502	535+60.20	534+56.89	RT																105	1						1		
705	D154	535+94.86	535+60.20	RT				118																			1		
705	D503	536+82.61	535+60.20	RT																		124					1		
705	D507	536+82.61	536+83.52	RT																		20					1		
705	D950	537+60.00	537+59.97	RT									13																
705	D155	537+59.97	535+94.86	RT			165																				1		
705	D504	538+37.11	536+82.61	RT																									
705	D505	539+97.03	538+37.11	RT																									
705	D506	542+96.94	539+97.03	RT																									
705	D105	544+15.98	544+15.98	RT	0.02																							1	
707	D104	545+96.38	542+96.94	RT	0.01	5																						1	
707	D103	548+77.89	545+96.38	RT																								1	
709	D85	561+96.03	561+96.03	RT																								1	
709	D84	562+15.02	561+96.03	RT			19													10						1		1	
709	D113	564+10.80	562+10.80	RT																								1	
709	D83	565+50.00	565+50.00	RT																						1		1	
IR-270																													
716	D203	977+88.96	978+54.42	RT																									
716	D700	978+32.73	978+54.42	RT	0.43	41																							
716	D202	978+54.42	979+38.83	RT																									
716	D183	979+79.06	980+02.00	RT		23																						1	
716	D184	980+02.00	980+50.00	RT								48																1	
716	D181	980+50.00	980+50.02	RT																								1	
716	D182	980+50.02	980+50.02	RT	0.43																								
716	D180	981+28.45	980+50.00	RT		78																						1	
716	D178	982+14.23	981+28.45	RT		87																						1	
717	D176	988+00.00	980+00.00	RT			57																					1	
717	D177	988+00.00	980+00.00	RT	0.25																								
717	D175A	989+30.86	989+30.86	RT								60																1	
717	D175C	989+30.86	989+30.86	RT	0.31																								
721	D156	1047+93.66	1050+09.50	LT			212																					1	
721	D149	1050+09.50	1052+03.72	LT			191																					1	
721	D153	1047+02.21	1051+92.08	LT																								1	
721	D150	1052+03.72	1052+06.52	LT	0.03		5						58															1	
721	D151	1052+06.52	1051+92.08	LT																								1	
722	D152	1057+00.00	1057+00.00	LT	0.06		5																					1	
TOTALS CARRIED TO GENERAL SUMMARY					2.2	569	57	597	118	13	60	48	89	50	58	658	762	5	501	162	10	160	6	1	2	4	5	13	1

DRAINAGE SUBSUMMARY	CALCULATED REM CHECKED KAG
FRA - 70 - 22.61	237 1199

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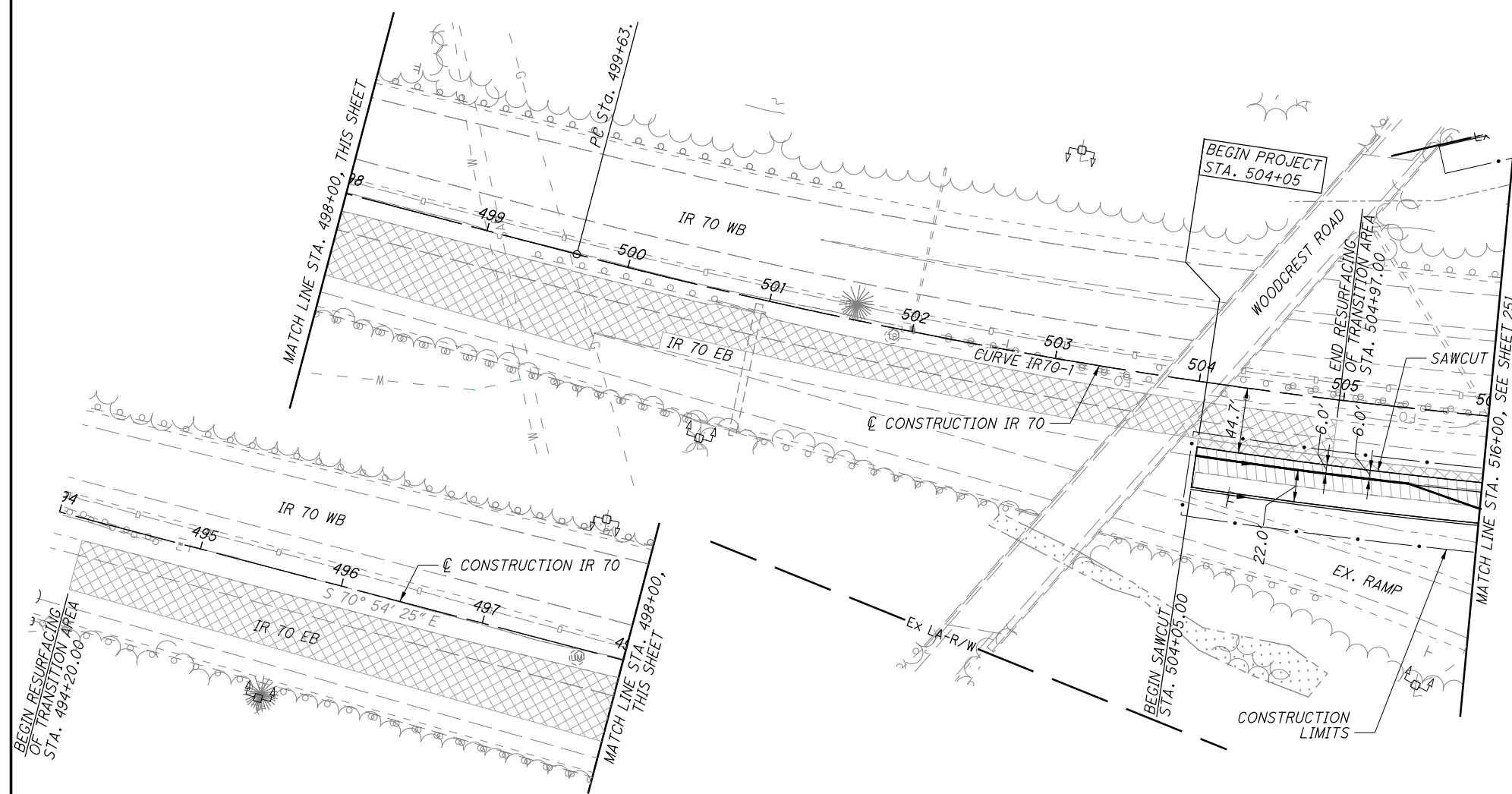
SHEET NO.	REFERENCE NO.	STATION TO STATION		SIDE	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	
		CONCRETE MASONRY	15" CONDUIT, TYPE B		15" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS	18" CONDUIT, TYPE B	18" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS	21" CONDUIT, TYPE B	24" CONDUIT, TYPE B	24" CONDUIT, TYPE C	24" CONDUIT, TYPE B, AS PER PLAN, 706.02, WITH NONSHRINK, NONMETALLIC GROUT	27" CONDUIT, TYPE B	27" CONDUIT, TYPE C	27" CONDUIT, TYPE C, 706.02 WITH PREMIUM JOINTS	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	54" CONDUIT, TYPE C	60" CONDUIT, TYPE C	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 8	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	MANHOLE, NO. 3		
		FROM	TO		CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	
RAMP A1																										
721	D148	2010+39.14	2010+39.74	RT	0.03					5					14										1	
721	D147	2010+39.74	2015+24.17	RT														481	1							
720	D146	2015+24.17	2020+10.00	RT														483	1							
720	D138	2020+10.00	2025+14.85	RT														498							1	
720	D139	2020+15.00	2020+10.00	LT	0.03				62					53											1	
720	D137	2025+14.85	2025+14.85	RT												10									1	
715	D136	2030+15.49	2030+15.49	RT	0.06									10					10	20	1					
RAMP A2																										
720	D144	3004+10.78	2015+24.17	RT																					1	
720	D143	3004+33.73	3004+10.78	LT																						
720	D144A	3005+36.48	3004+10.78	RT																						
720	D142	3006+02.79	3005+36.48	RT																						
720	D141	3006+50.00	3006+02.79	RT																						
707	D110	3035+00.00	3036+00.00	RT																					1	
707	D111	3036+00.00	3038+19.09	RT																						
707	D102	3038+17.66	548+77.89	LT						219																
707	D97	3038+19.09	3038+17.66	RT														12							1	
707	D96	3039+08.48	3038+19.09	LT														30							1	
707	D95	3040+38.75	3039+08.48	LT														89								
707	D94	3042+38.89	3040+38.75	LT														130							1	
707	D94	3042+38.89	3040+38.75	LT														200							1	
RAMP C1																										
717	D174	5989+16.68	5989+16.68	RT	0.49																					
717	D173A	5989+16.75	5989+16.68	RT	0.16																					
717	D173	5989+16.78	5989+16.75	LT																						
717	D187A	5991+00.72	5989+16.78	LT																						
718	D172	5992+50.00	5991+00.72	LT																						
718	D171	5993+50.00	5992+50.00	LT																						
718	D170	5993+50.00	5993+50.06	RT																						
718	D185	5995+19.30	5993+50.06	LT																						
718	D280	6002+05.12	6002+05.12	RT	0.28																					
718	D200	6002+38.88	6002+38.88	RT	0.71																					
705	D508	6027+73.12	536+83.52	RT/LT																						
705	D509	6030+60.25	6027+73.12	LT																						
705	D107	6030+87.01	6030+60.25	RT																						
705	D108	6031+66.13	6030+87.01	RT																						
705	D109	6032+45.01	6031+66.13	RT																						
707	D101	6037+00.00	6038+22.57	RT																						
707	D100	6038+22.56	3038+19.09	LT																						
707	D99	6038+22.57	6038+22.56	RT																						
707	D115	6040+50.00	6038+22.57	RT																						
707	D98	6041+50.01	6040+50.00	RT																						
707	D114	6044+00.95	6042+40.27	LT																						
707	D93	6046+40.54	6044+00.95	LT																						
707	D91	6047+99.87	6046+40.54	LT																						
707	D90	6048+00.00	6047+99.87	RT																						
707	D92	6048+35.79	6047+99.87	LT																						
709	D70	6060+20.00	6061+03.57	RT																						
709	D74	6060+20.02	6061+03.57	LT																						
709	D71	6061+03.57	6061+90.00	RT																						
709	D75	6061+03.57	6061+90.00	LT																						
709	D72	6061+90.00	6061+90.00	RT																						
709	D73	6061+90.00	6061+90.00	LT																						
710	D76	6064+35.80	6065+00.00	LT																						
710	D77	6065+00.00	6065+00.00	RT																						
710	D78	6065+00.00	577+82.07	LT																						
TOTALS CARRIED TO GENERAL SUMMARY					1.80	1756	163	684	62	276	106	446	220	90	14	51	561	568	1462	30	3	5	13	12	1	16

DRAINAGE SUBSUMMARY

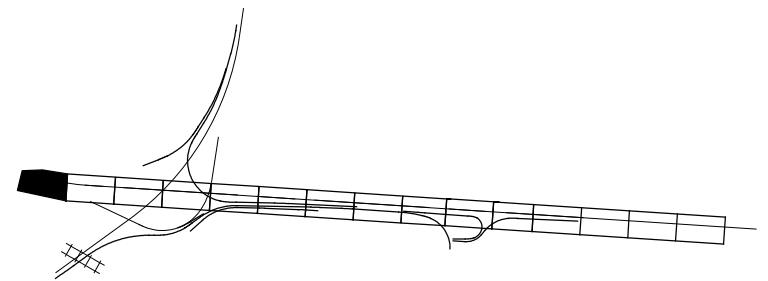
FRA - 70 - 22.61

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REM
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PLAN KEY MAP:



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
274 - 351	IR 70 CROSS SECTIONS
703 - 753	DRAINAGE
670 - 683	TERMINAL DETAILS
701 - 702	GRADING PLAN

GEOMETRIC DATA:

☉ CONSTRUCTION IR 70
 CURVE DATA IR70-1
 P.I. Sta. 504+68.75
 $\Delta = 14^\circ 43' 59''$ (LT)
 $D_c = 1^\circ 28' 00''$
 $R = 3,906.53'$
 $T = 505.05'$
 $L = 1,004.53'$
 $E = 32.51'$
 $C = 1,001.76'$
 C.B. = $S 78^\circ 16' 25'' E$
 $e_{MAX} = Ex. (0.046)$

LEGEND:

- EXISTING WETLAND
- PAVEMENT PLANING
- PAVEMENT REMOVED

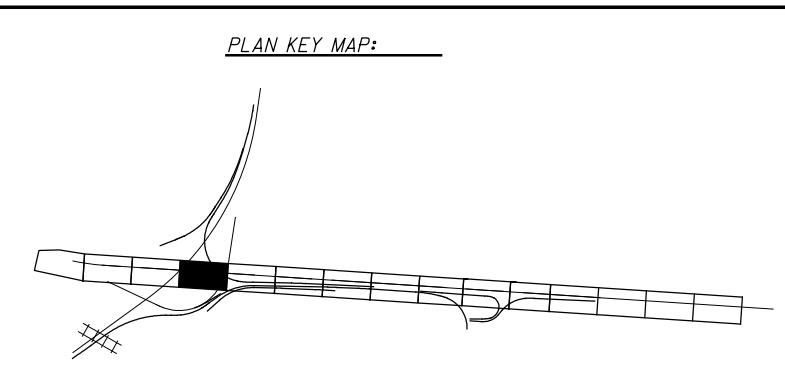
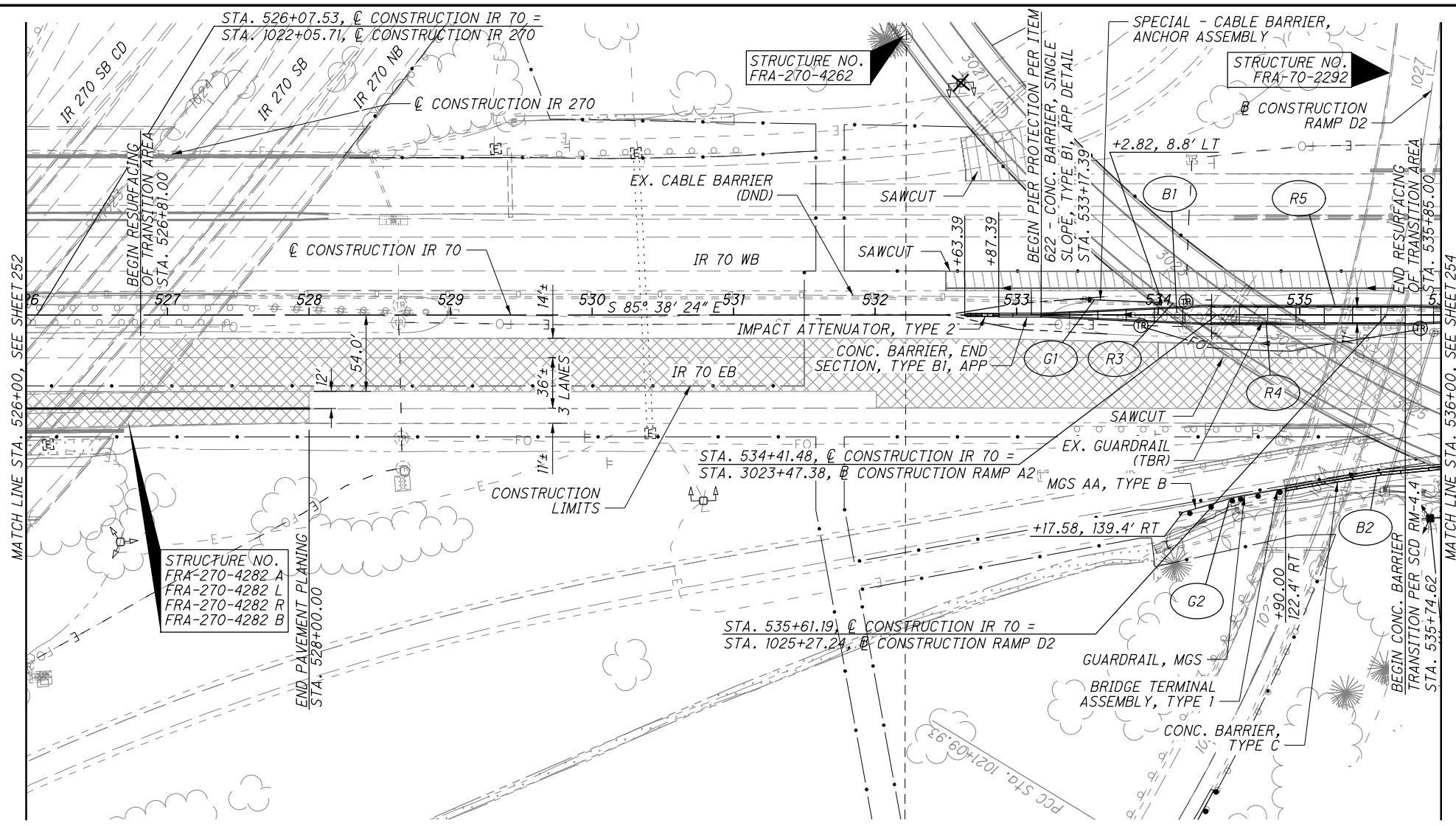
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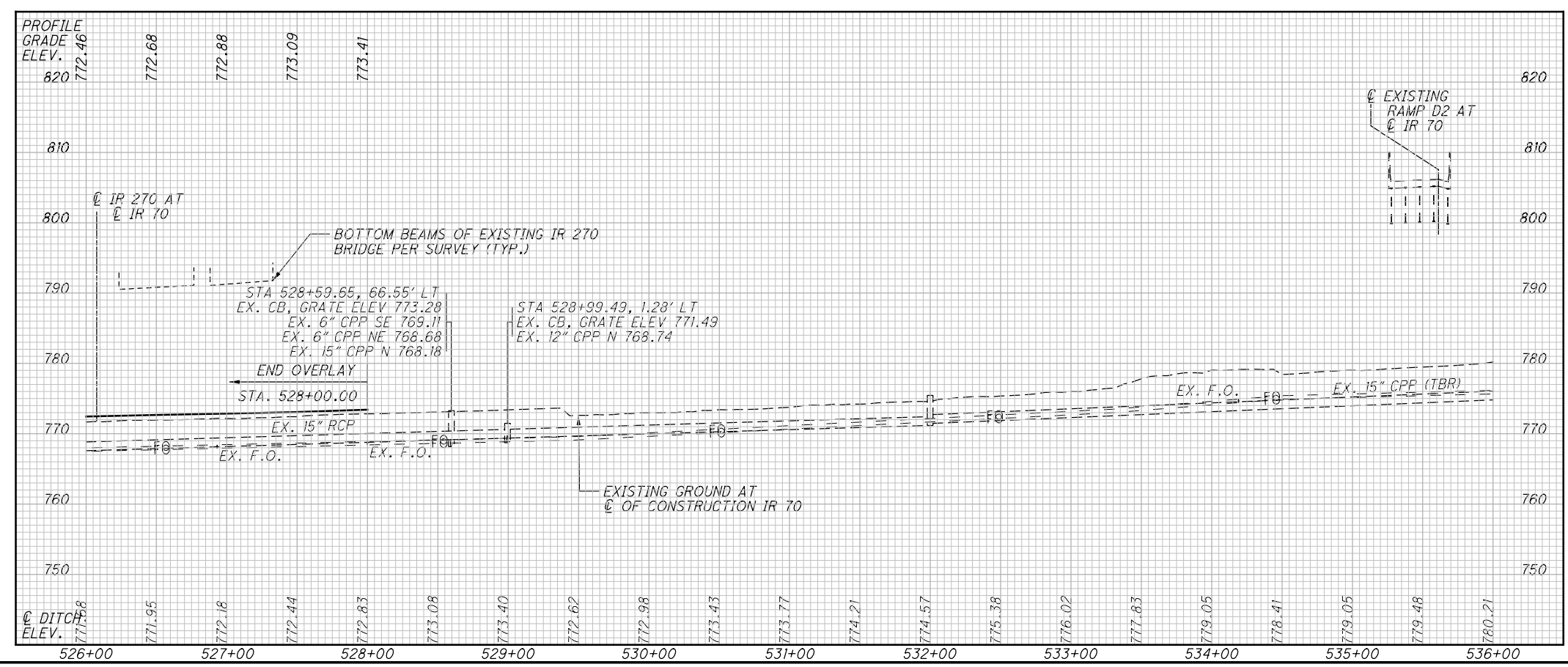
PLAN AND PROFILE - IR 70
BEGIN TO STA. 506+00

FRA-70-22.61

250
1199



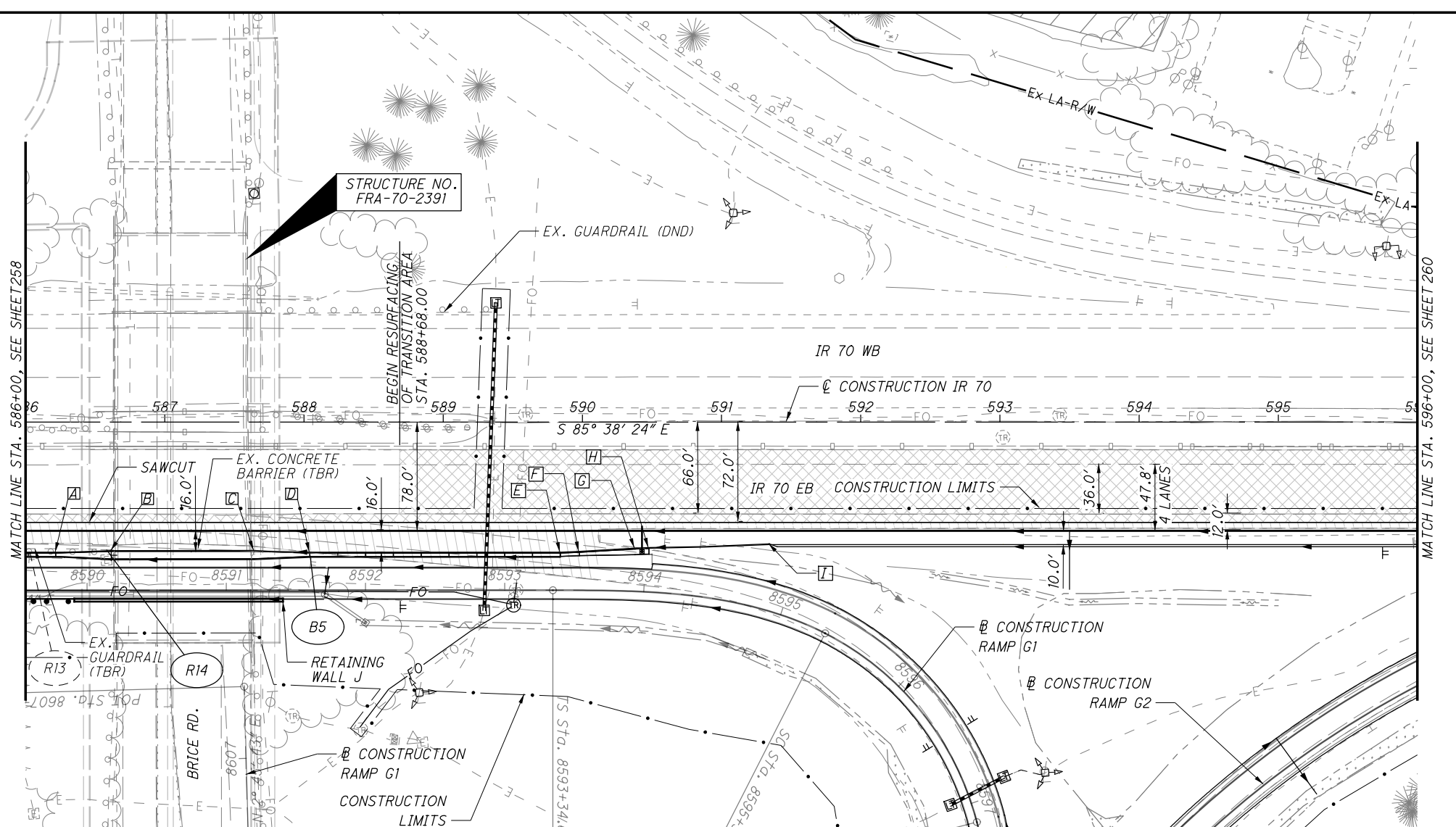
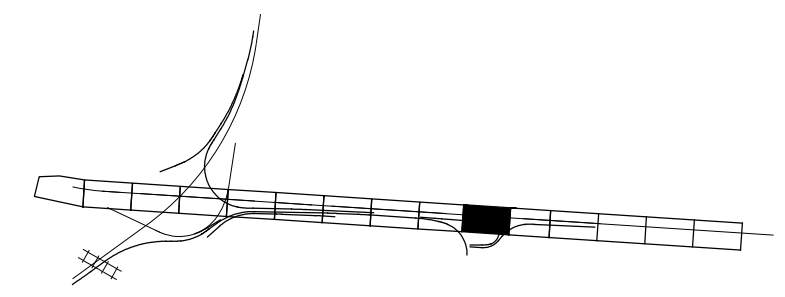
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
274 - 351	IR 270 CROSS SECTIONS
352 - 361	IR 270 PLAN AND PROFILES
362 - 399	IR 270 CROSS SECTIONS
703 - 753	DRAINAGE
701 - 702	GRADING PLAN



- LEGEND:**
- EXISTING WETLAND
 - PAVEMENT PLANING
 - PAVEMENT REMOVED
- NOTES:**

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PLAN KEY MAP:

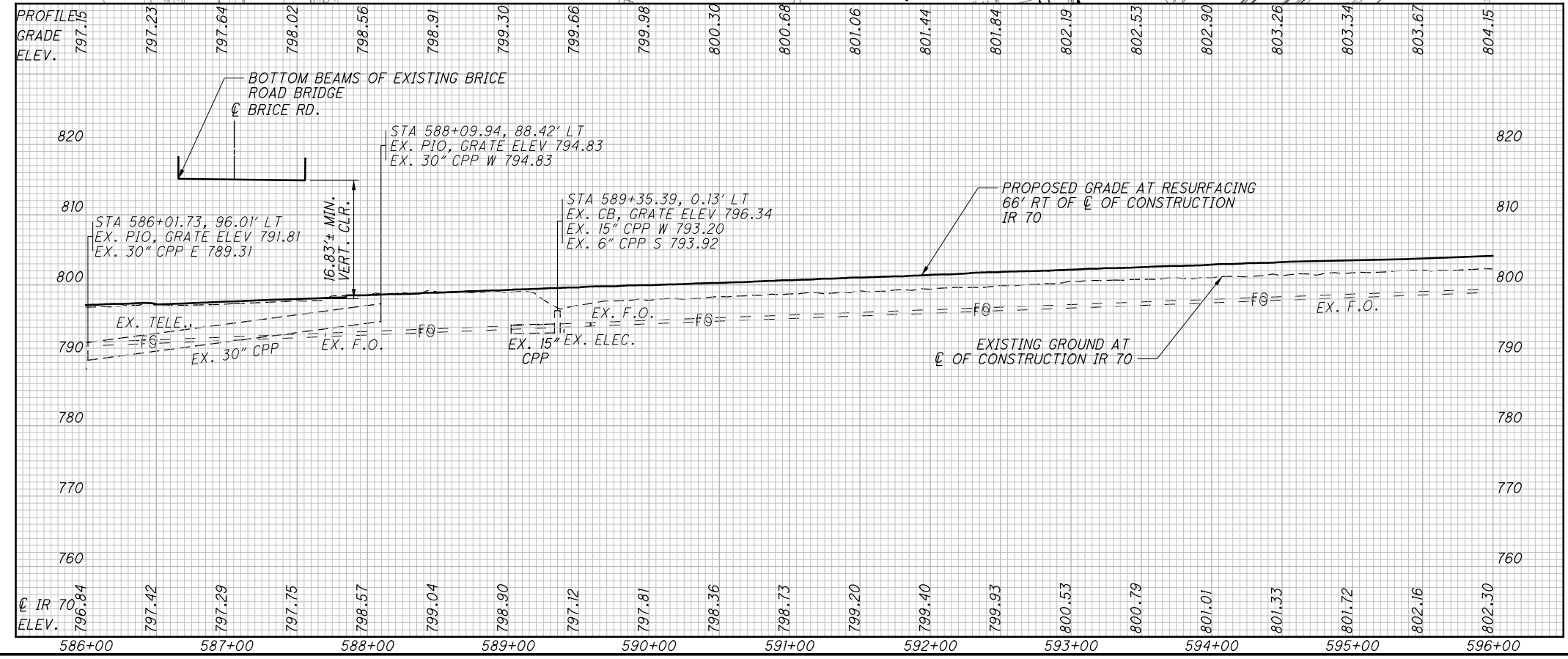


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
274 - 351	IR 70 CROSS SECTIONS
593 - 600	RAMP G1 PLAN & PROFILES
601 - 611	RAMP G1 CROSS SECTIONS
612 - 614	RAMP G2 PLAN & PROFILES
616 - 620	RAMP G2 CROSS SECTIONS
670 - 683	TERMINAL DETAILS
701 - 702	GRADING PLAN
703 - 723	DRAINAGE
844	ITEM 622 - CONCRETE BARRIER SINGLE SLOPE, TYPE C, AS PER PLAN

LEGEND:

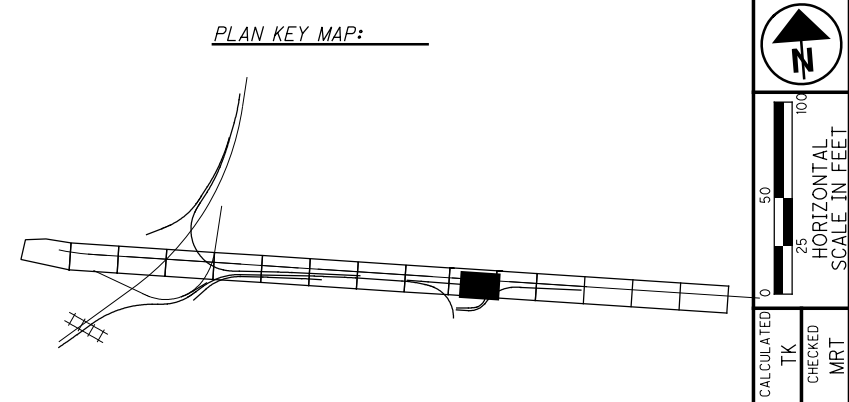
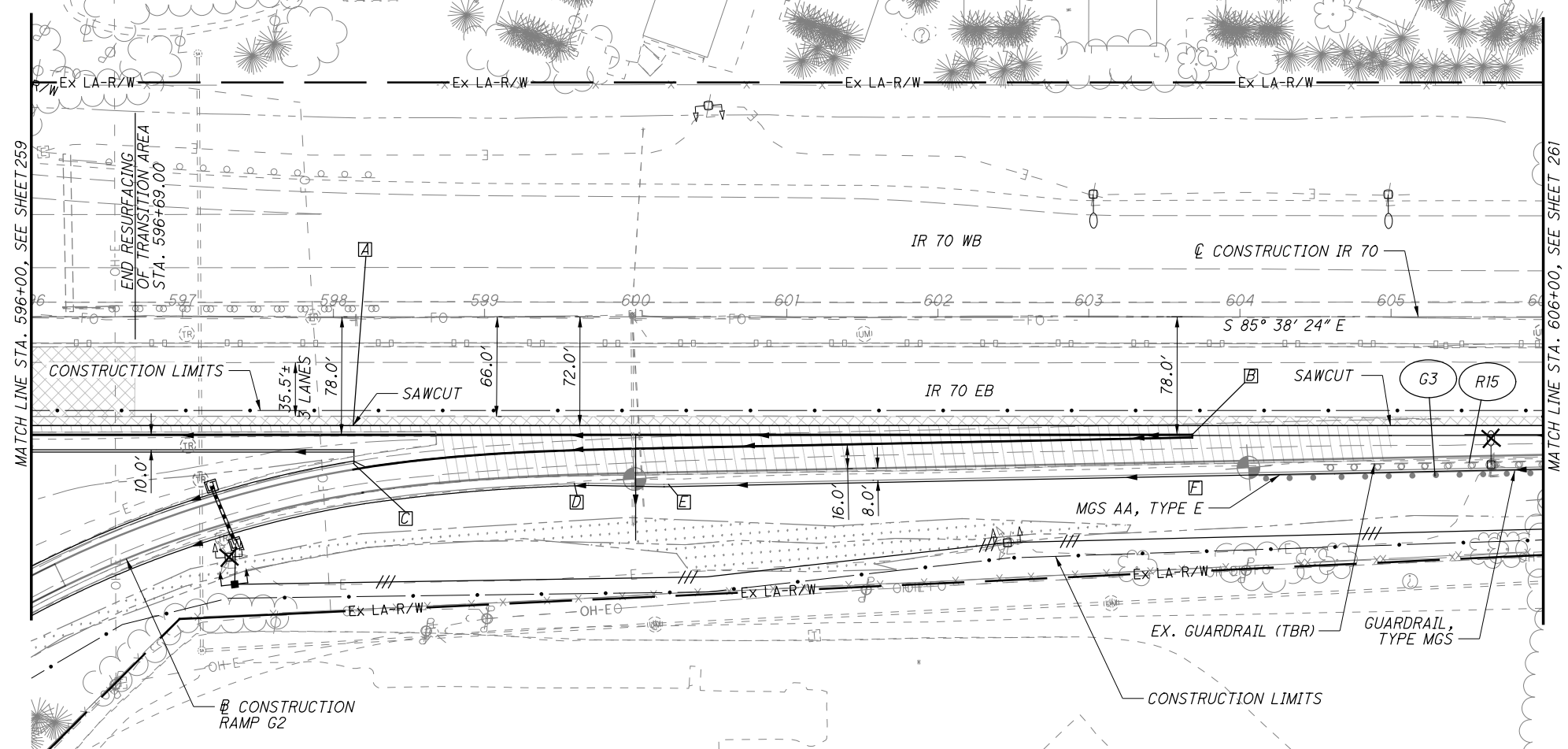
	EXISTING WETLAND
	PAVEMENT PLANING
	PAVEMENT REMOVED

- NOTES:**
- ☐ BEGIN SHLDR TAPER & BARRIER WIDTH TRANSITION PER ITEM 622 - CONCRETE BARRIER SINGLE SLOPE, TYPE C, AS PER PLAN STA. 586+21.59.
 - ☐ END SHLDR TAPER & BARRIER WIDTH TRANSITION PER ITEM 622 - CONCRETE BARRIER SINGLE SLOPE, TYPE C, AS PER PLAN STA. 586+61.59.
 - ☐ BEGIN SHLDR TAPER & BARRIER WIDTH TRANSITION PER ITEM 622 - CONCRETE BARRIER SINGLE SLOPE, TYPE C, AS PER PLAN STA. 587+64.15.
 - ☐ END SHLDR TAPER & BARRIER WIDTH TRANSITION PER ITEM 622 - CONCRETE BARRIER SINGLE SLOPE, TYPE C, AS PER PLAN STA. 588+04.16.
 - ☐ BEGIN SHLDR TAPER STA. 589+84.26
 - ☐ BEGIN BARRIER WIDTH TRANSITION, STA. 589+97.71. SEE SCD RM-4.4
 - ☐ END BARRIER WIDTH TRANSITION, STA. 590+37.77. SEE SCD RM-4.4
 - ☐ END BARRIER TYPE C BARRIER, STA. 590+47.77.
 - ☐ END SHLDR TAPER, STA. 591+34.26



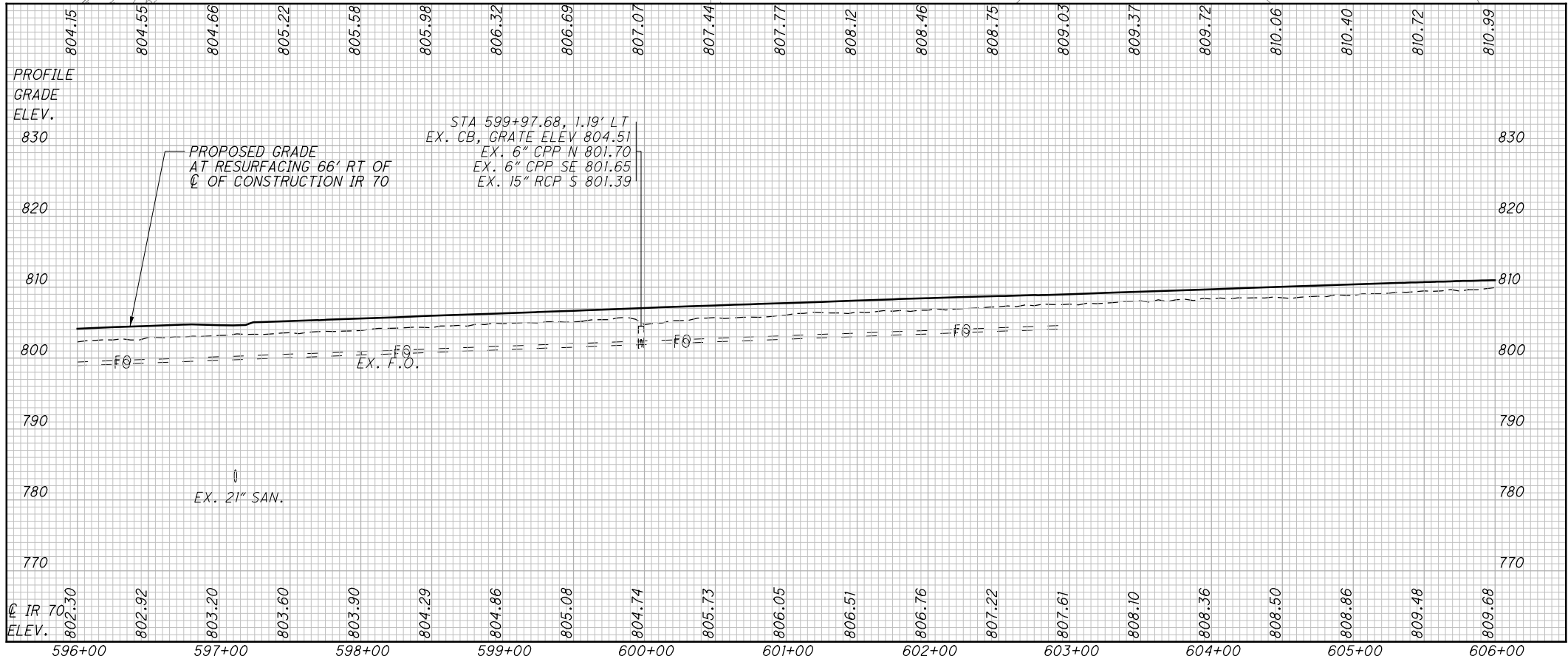
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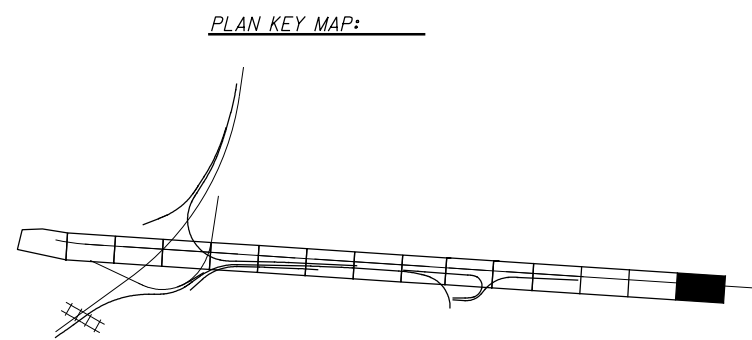
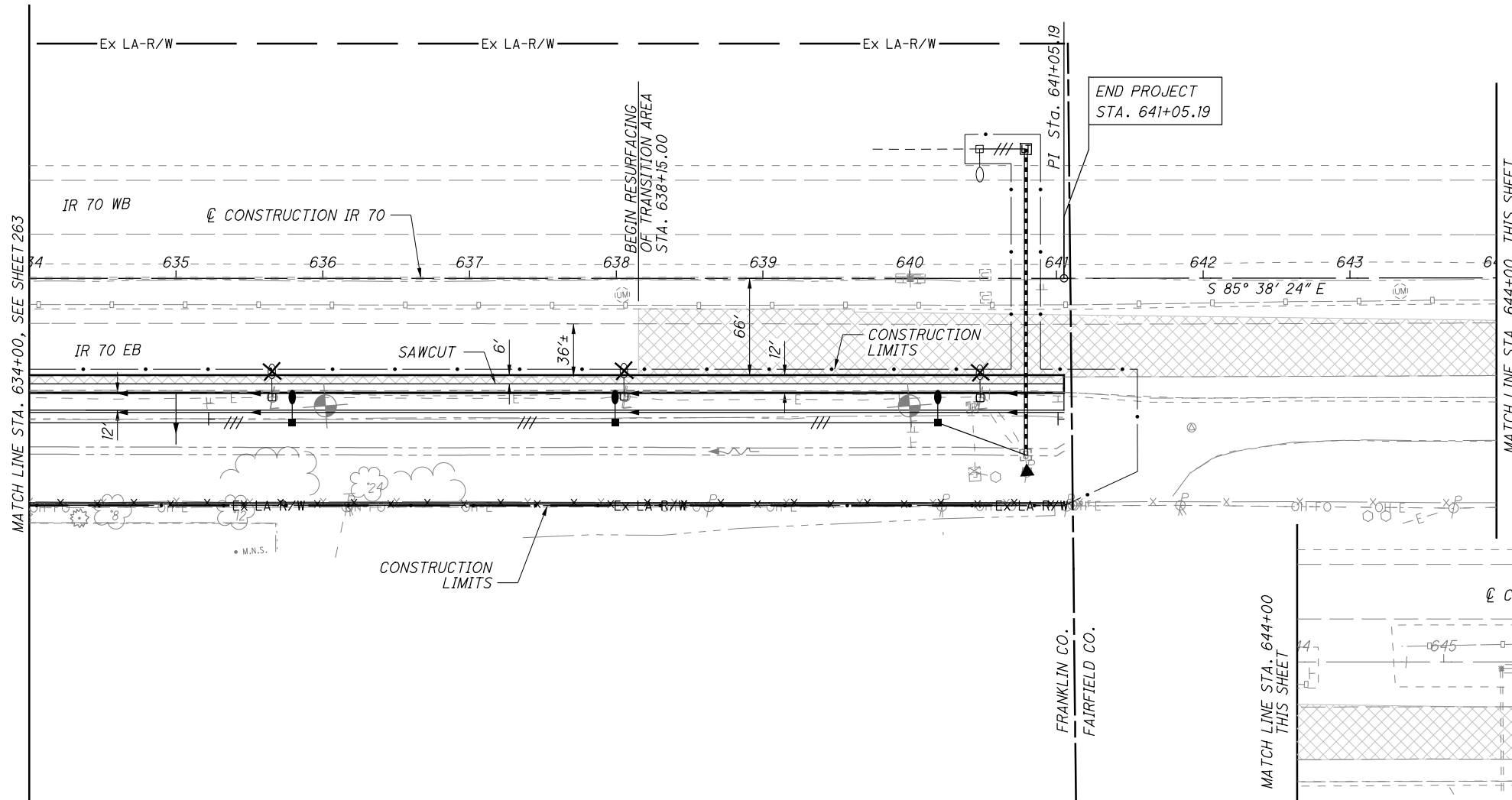
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
313 - 332	IR 70 CROSS SECTIONS
612 - 614	RAMP G2 PLAN & PROFILES
616 - 620	RAMP G2 CROSS SECTIONS
670 - 683	TERMINAL DETAILS
701 - 702	GRADING PLAN
703 - 723	DRAINAGE

- LEGEND:**
- EXISTING WETLAND
 - PAVEMENT PLANING
 - PAVEMENT REMOVED
- NOTES:**

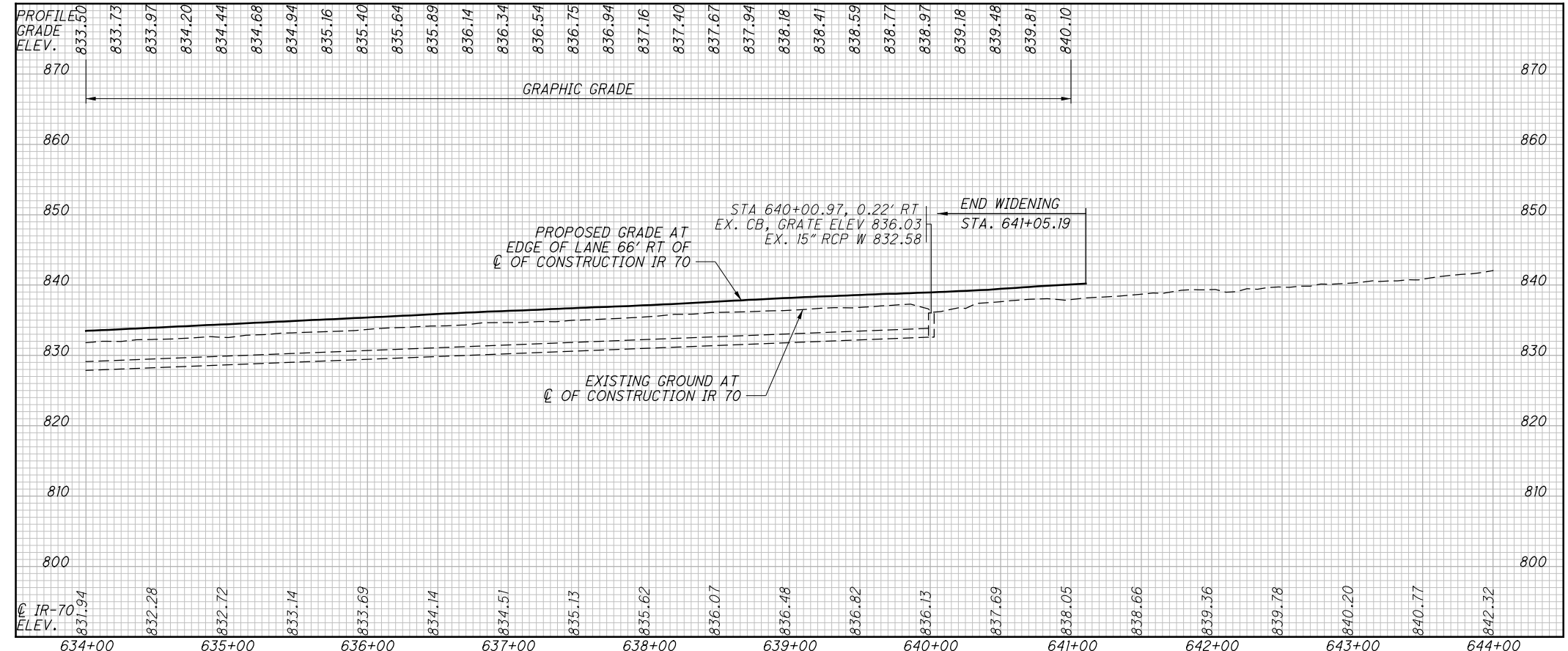
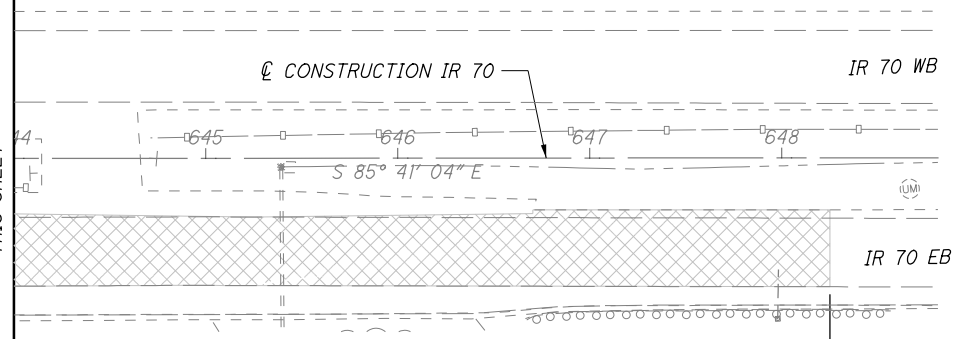


- IR 70**
- STA. 598+13.58
 - STA. 603+68.49
 - RAMP G2 STA. 1114+01.11
 - RAMP G2 STA. 1115+56.80
 - RAMP G2 STA. 1116+06.86
 - RAMP G2 STA. 1119+56.76

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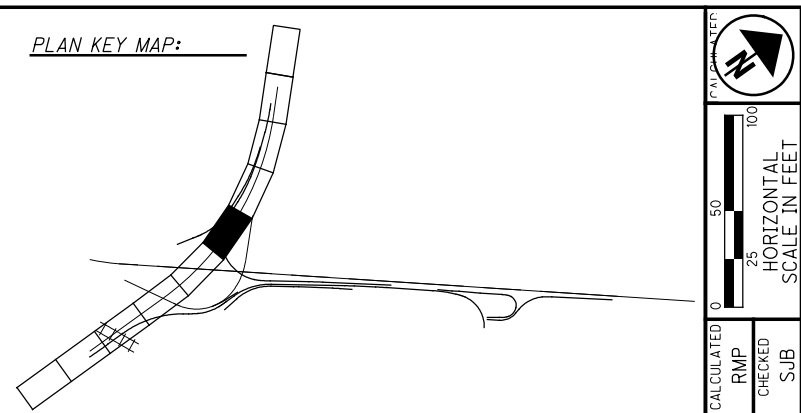
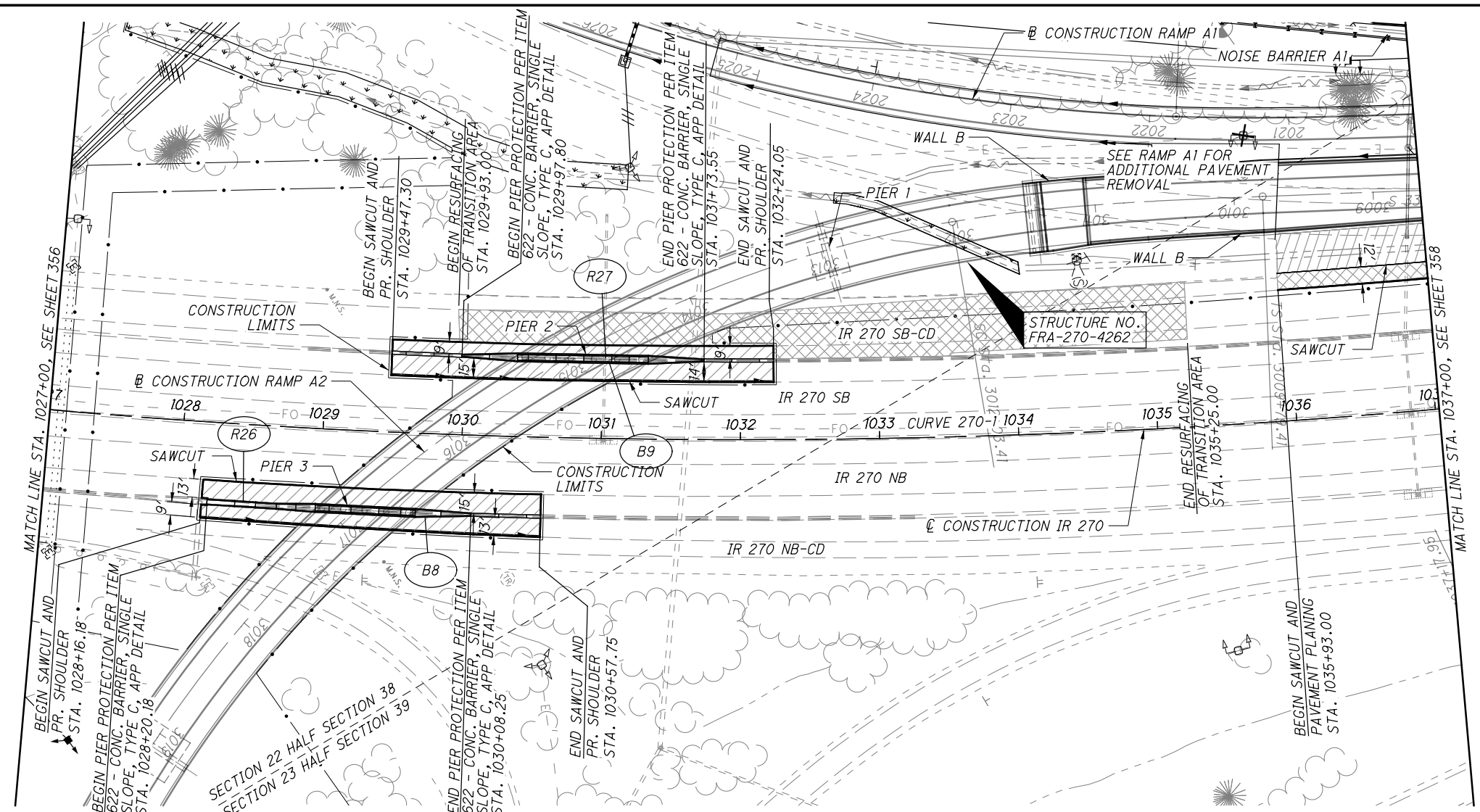


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
347 - 351	IR 70 CROSS SECTIONS
703 - 753	DRAINAGE

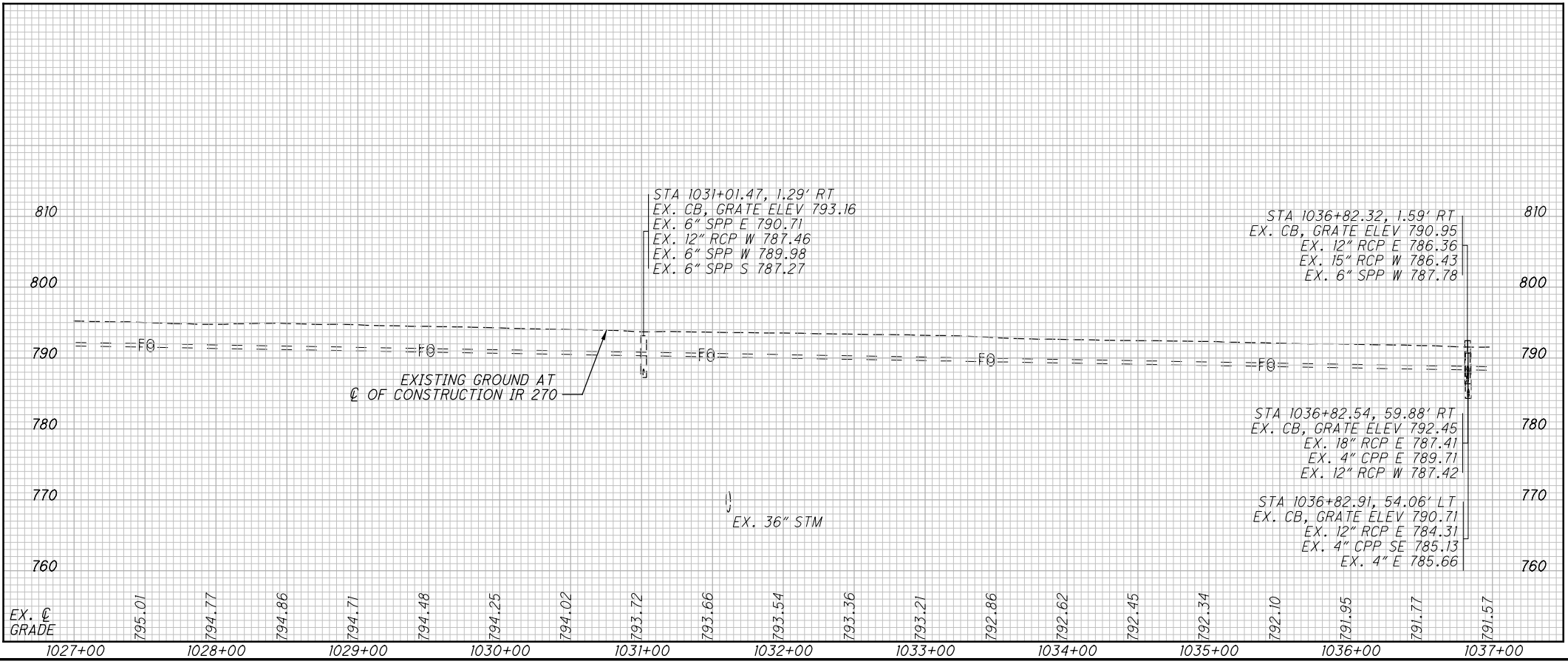


- LEGEND:**
- EXISTING WETLAND
 - PAVEMENT PLANING
 - PAVEMENT REMOVED
- NOTES:**

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
362 - 399	IR 270 CROSS SECTIONS
400 - 406	RAMP A1 PLAN AND PROFILES
407 - 422	RAMP A1 CROSS SECTIONS
423 - 438	RAMP A2 PLAN AND PROFILES
439 - 466	RAMP A2 CROSS SECTIONS
703 - 753	DRAINAGE
701 - 702	GRADING PLAN
670 - 683	TERMINAL DETAILS

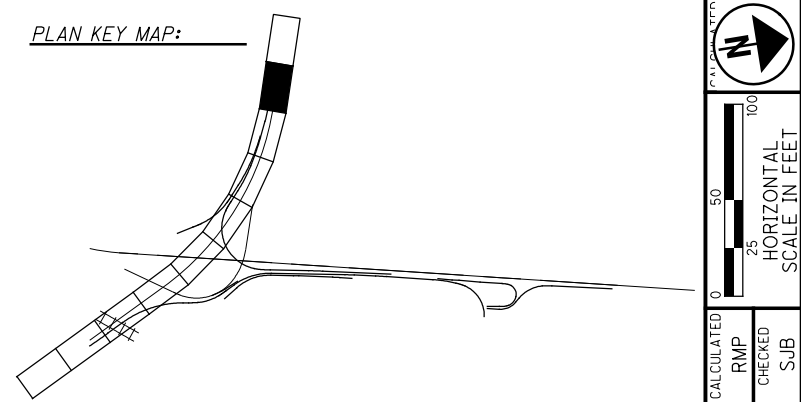
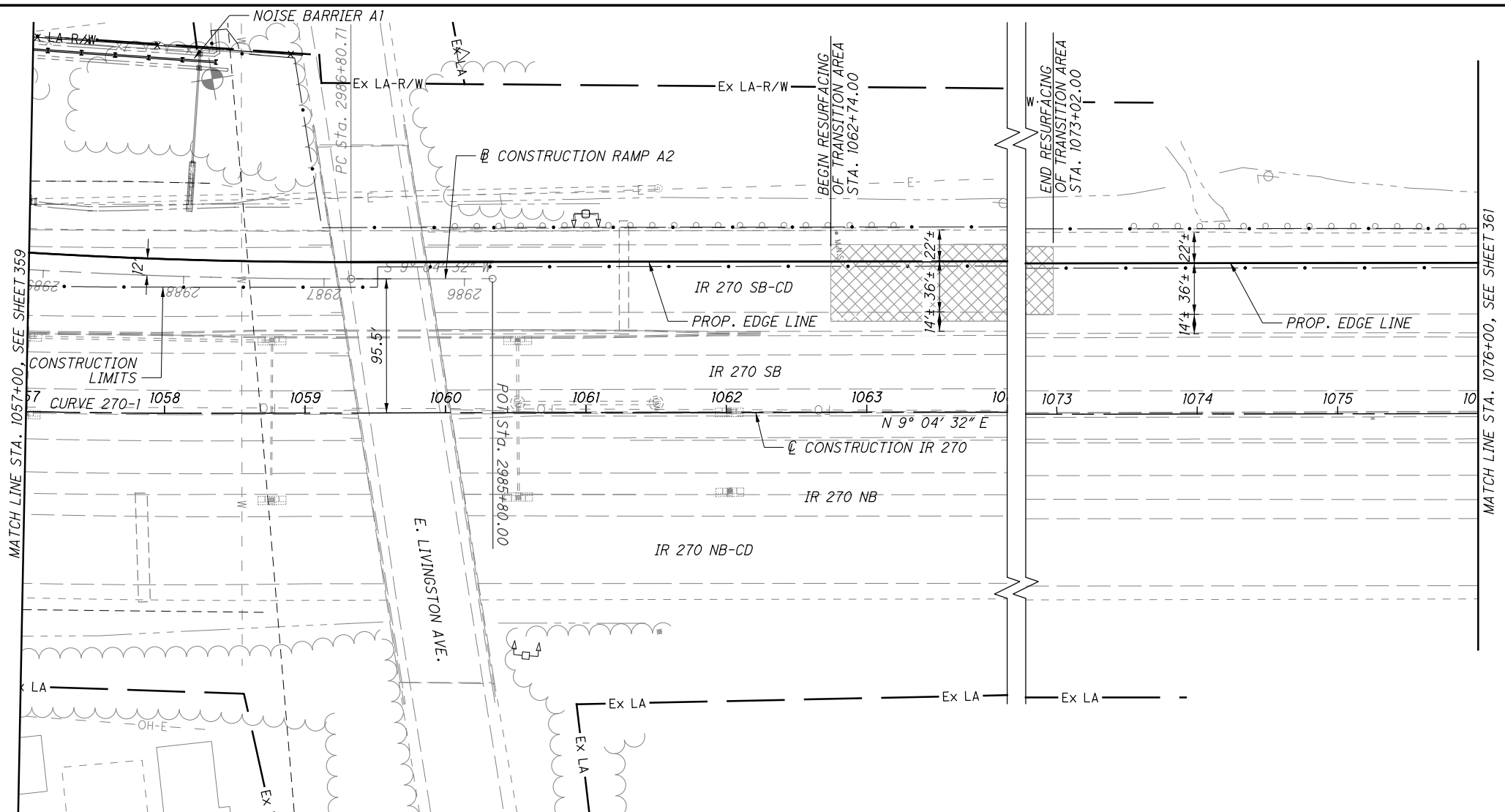


GEOMETRIC DATA:
 ☉ CONSTRUCTION IR 270
 CURVE 270-1
 P.I. Sta. 1036+65.35
 $\Delta = 45^\circ 38' 24''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 2,410.85'$
 $L = 4,564.00'$
 $E = 486.55'$
 $C = 4,444.29'$
 $C.B. = N 31^\circ 53' 44'' E$
 $e_{MAX} = 0.033$

NOTES:

LEGEND:
 PAVEMENT PLANING
 PAVEMENT REMOVED

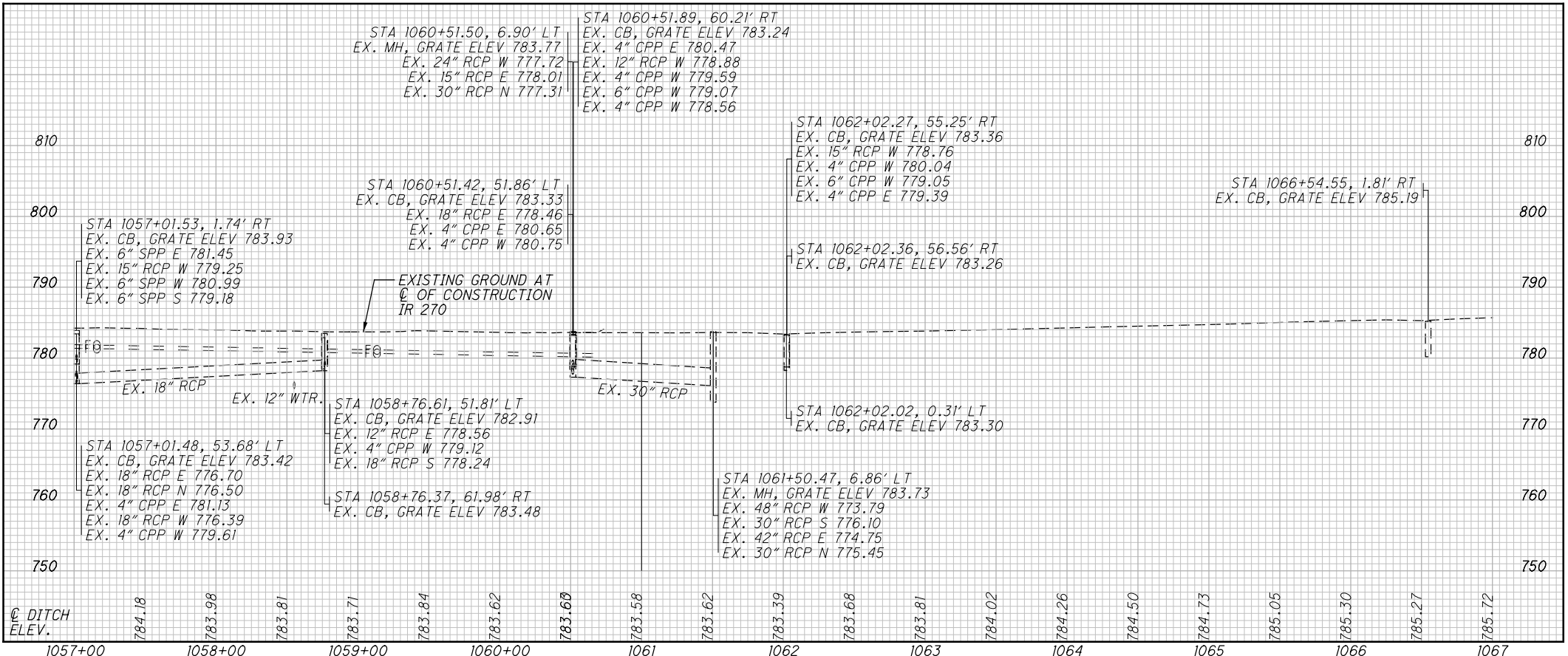
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 CHECKED: []
 SUB: []
PLAN AND PROFILE - IR 270
STA. 1027+00 TO STA. 1037+00
FRA-70-22.61
 357
 1199



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3 - 7	☉ REFERENCE & BENCHMARKS
212 - 213	ESTIMATED QUANTITIES
362 - 399	IR 270 CROSS SECTIONS
400 - 406	RAMP A1 PLAN AND PROFILES
407 - 422	RAMP A1 CROSS SECTIONS
703 - 753	DRAINAGE
670 - 683	TERMINAL DETAILS

GEOMETRIC DATA:

☉ CONSTRUCTION IR 270
 CURVE 270-1
 P.I. Sta. 1036+65.35
 $\Delta = 45^\circ 38' 24''$ (LT)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 2,410.85'$
 $L = 4,564.00'$
 $E = 486.55'$
 $C = 4,444.29'$
 $C.B. = N 31^\circ 53' 44'' E$
 $e_{MAX} = 0.033$



NOTES:

LEGEND:

PAVEMENT PLANING

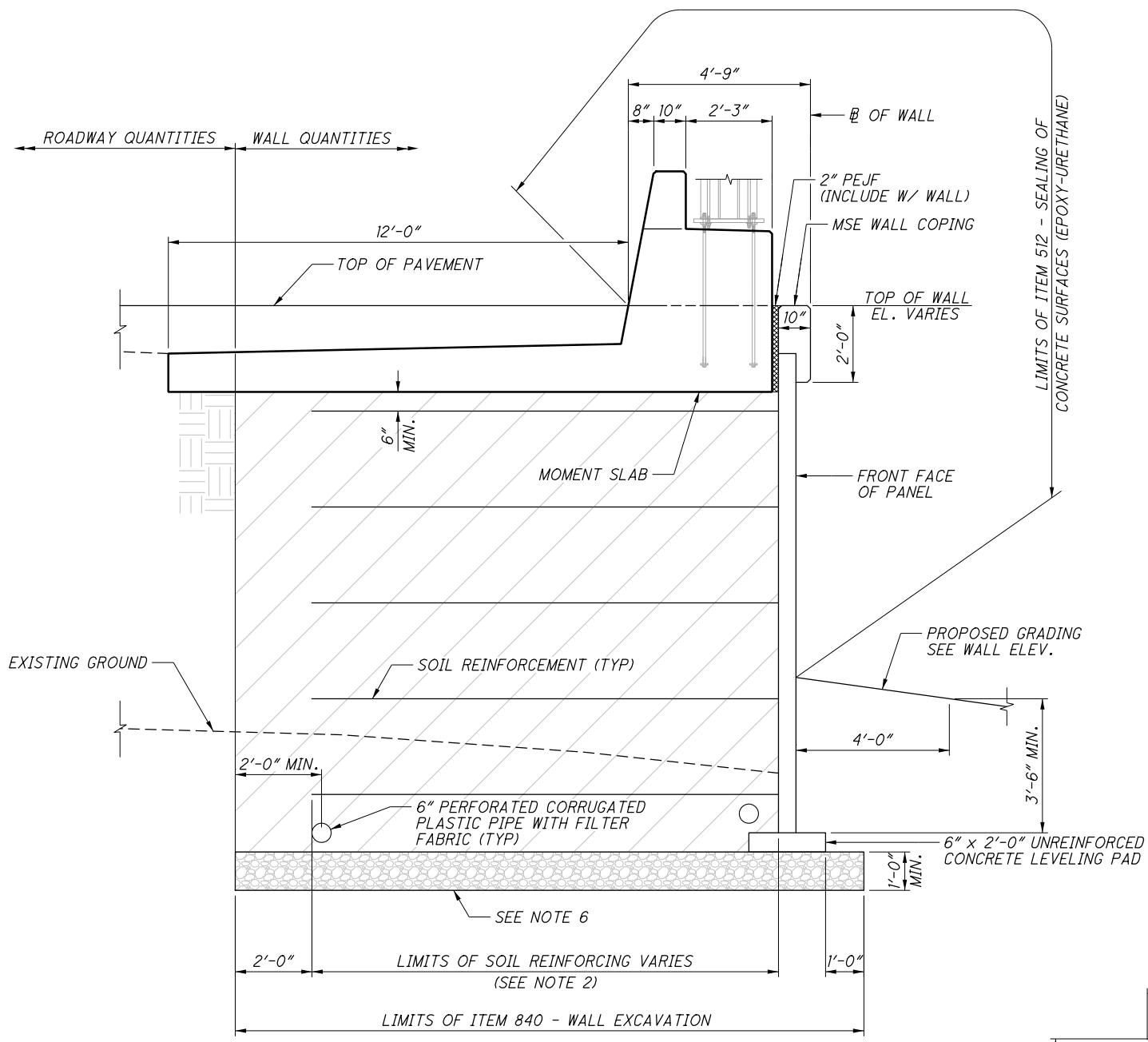
CALCULATED
 RMP
 CHECKED
 SUB

**PLAN AND PROFILE - IR 270
 STA. 1057+00 TO STA. 1076+00**

FRA-70-22.61

360
 1199

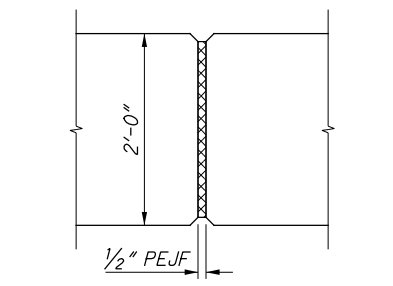
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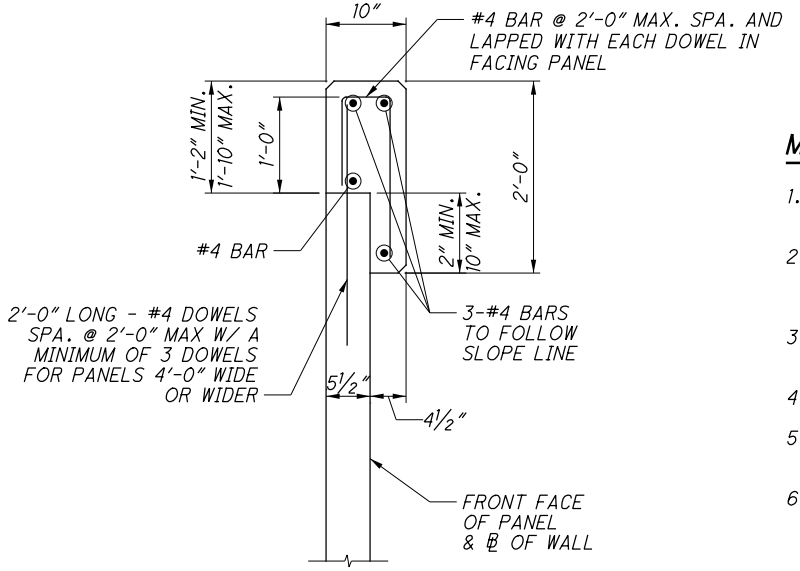
TYPICAL SECTION
 MSE PORTION OF THE WALL

- LEGEND:**
- ITEM 203, EMBANKMENT
 - SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840
 - ITEM 203, GRANULAR MATERIAL TYPE C

* - GFRP BARS PER SBR-1-13 STD. DWG. TO BE USED AT PARAPET JOINTS 1/2" DIA. GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENT.



COPING EXPANSION JOINT



MSE WALL COPING

MSE WALL NOTES:

1. FLOW LINE OF 6" φ PERFORATED PLASTIC PIPE WILL VARY TO PROVIDE POSITIVE DRAINAGE AT OUTLET. MINIMUM SLOPE OF PIPE SHALL BE 1/8" PER FOOT.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER ON THE APPROVED WALL SYSTEM, BUT SHALL NOT BE LESS THAN 0.7H WHERE H IS THE DESIGN HEIGHT OF THE WALL OR 8'-0", WHICHEVER IS GREATER.
3. THE MAXIMUM DESIGN HEIGHT OF THE TURNBACK PORTION OF MSE WALLS IS AS SHOWN IN THE PLANS, FINAL HEIGHT TO BE DETERMINED BY WALL SUPPLIER.
4. THE THICKNESS OF MSE WALL PANELS IS ASSUMED AT 5 1/2".
5. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FALLING PANELS.
6. COMPACT EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF CMS 204 AND SS 840.

WALL K					REF. SHEET
ITEM	EXT.	TOTAL	UNIT	DESCRIPTION	
503	11100	LS	LS	COFFERDAMS AND EXCAVATION BRACING	
509	10000	288,455	LB	EPOXY COATED REINFORCING STEEL	
511	53010	2,341	CY	CLASS QC1 CONCRETE, MISC.: MOMENT SLAB AND PARAPET	8/9
512	10100	4,403	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	112	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13600	674	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	4,126	SF	2" PREFORMED EXPANSION JOINT FILLER	
840	20000	25,861	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	5,643	CY	WALL EXCAVATION	
840	22000	2,701	SY	FOUNDATION PREPARATION	
840	23000	14,559	CY	SELECT GRANULAR BACKFILL	
840	25010	2,704	FT	6" DRAINAGE PIPE, PERFORATED	
840	26000	1,352	FT	CONCRETE COPING	
840	27000	5	DAY	ON-SITE ASSISTANCE	

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NOISE BARRIER

ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE)

THIS WORK CONSISTS OF PREPARING ANY NECESSARY SHOP DRAWINGS, AND MANUFACTURING, TESTING, TRANSPORTING, STORING, AND INSTALLING NOISE BARRIERS; FURNISHING AND INSTALLING DRILLED SHAFTS; EXCAVATING AND BACKFILLING; AND RESTORING THE WORK AREA IN ACCORDANCE WITH STANDARD DRAWING NBS-1-09, THESE PROVISIONS AND IN CONFORMITY WITH THE DIMENSIONS, LINES AND GRADES SHOWN ON THE PLANS.

NO MIXING OF BARRIER MATERIAL TYPES OR COLORS AT ANY ONE NOISE BARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS WILL BE ALLOWED. BARRIER MATERIAL TYPE SUPPLIED SHALL BE AS LISTED ON THE APPROVED REFLECTIVE BARRIER SUPPLIER TABLE BELOW UNLESS OTHERWISE SPECIFIED.

INDIVIDUAL BARRIER FABRICATION AND ERECTION DETAILS, EXCEPT FOR POSTS AND FOUNDATIONS, SHALL BE AS PER APPROVED MANUFACTURER'S DRAWINGS LISTED ON THE APPROVED REFLECTIVE BARRIER SUPPLIER TABLE. POSTS AND FOUNDATIONS SHALL BE AS DETAILED IN STANDARD DRAWING NBS-1-09 AND AS MODIFIED IN THESE PLANS.

ANY INTERFERENCE WITH UTILITIES OR OTHER POST SPACING ADJUSTMENTS REQUIRED TO MEET DESIGN PLAN ALIGNMENT, CONNECTIONS TO STRUCTURES, OR OTHER CONDITIONS CREATED DUE TO CHANGING OF POST SPACINGS SHALL BE AT THE CONTRACTOR'S EXPENSE.

COPIES OF THE ODOT APPROVED, MANUFACTURER'S DRAWINGS LISTED ON APPROVED REFLECTIVE BARRIER SUPPLIER TABLE, SHALL BE FURNISHED TO THE ENGINEER BEFORE ANY WORK IS INITIATED. ALL PROJECT SPECIFIC DETAILS NOT COVERED BY THE PLANS OR THE MANUFACTURER'S DRAWINGS SHALL BE APPROVED BY THE ENGINEER BEFORE WORK IS INITIATED.

THE BARRIER AND THE ASSOCIATED WORK SHALL CONFORM TO SECTIONS 499 AND 501 OF THE CMS AS APPROPRIATE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING DETAILED PLANS INCORPORATING THE NOISE BARRIER MATERIALS HE PROPOSES TO USE.

A TRENCH OR FAN NOISE BARRIER WILL NOT BE ACCEPTABLE FOR THIS PROJECT AT ANY OF THE LOCATIONS.

TYPICAL SECTIONS ARE SHOWN FOR NOISE BARRIERS MOUNTED WITHIN THE FLANGES OF THE POSTS. SEE SHEET 798 AND STANDARD DRAWING NBS-1-09.

CONCRETE POSTS SHALL BE USED.

POST CAPS SHALL BE INTEGRAL.

POSTS SHALL USE A CONCRETE WATERPROOFING ADMIXTURE. PENETRON, BASF MASTERLIFE 300D, SIKA WT-240 P, SIKA MIX AE-6, AND CONBLOCK CDA ARE ODOT APPROVED CONCRETE WATERPROOFING ADMIXTURES.

PLAN QUANTITIES AND DETAILS HAVE BEEN DEVELOPED FOR 24-FOOT PANEL WIDTHS. OTHER PANEL WIDTHS ARE ACCEPTABLE TO AVOID UNDERGROUND FEATURES AND TO MEET THE OVERALL WALL LENGTHS BETWEEN BENDS ONLY. PANEL SPACING ON A LONGITUDINAL 2:1 SLOPE SHALL BE A MAXIMUM 16-FEET.

HORIZONTAL LINES BETWEEN PANELS SHALL MATCH, EXCEPT AT 90-DEGREE ANGLE BREAKS. MISMATCH OF LINES IS ACCEPTABLE IN THE TOP PANEL WHERE THERE IS AN ELEVATION CHANGE. MISMATCH OF LINES IS ACCEPTABLE AT LONGITUDINAL DISTANCES OF 500 FEET (MAX) IN ORDER TO MINIMIZE EXCESS WALL AREA.

THE CONTRACTOR SHALL BE PAID FOR S.F. OF NOISE BARRIER AS CALLED FOR ON SHEET 804. ANY ADDITIONAL SQUARE FEET SHALL BE AT THE CONTRACTOR'S EXPENSE EXCEPT WHEN THE EXISTING GROUND LINE ALONG THE WALL, AS FIELD MEASURED, IS LOWER THAN WHAT IS SHOWN IN THE PLANS BY AN AMOUNT REQUIRING EQUIVALENT TO THE PROPOSED MEDIAN THEORETICAL TOP OF WALL.

THE CALCULATED NOISE WALL AREA SHOWN IN THE PLANS IS BASED UPON A 1-FOOT INCREMENTAL PANEL HEIGHT. IF THE PANELS SUPPLIED HAVE GREATER MINIMUM INCREMENTS AND THEREFORE EXTEND ABOVE THE TOP OF WALL ELEVATION OR BELOW THE BOTTOM OF WALL ELEVATION, AS SHOWN IN THE PLANS, THE ADDITIONAL WALL AREA WILL NOT BE INCLUDED IN THE MEASURED AREA FOR PAYMENT.

PRIOR TO THE CREATION OF THE SHOP DRAWINGS, THE CONTRACTOR SHALL PERFORM A FIELD SURVEY, UTILITY LOCATIONS SHALL BE INCLUDED IN THIS SURVEY BUT SHALL BE PERFORMED BY THE OWNER OF THE UTILITY. THIS INFORMATION SHALL BE SHOWN ON THE SHOP DRAWINGS AND ALL FOUNDATIONS MOVED TO AVOID ANY UNDERGROUND FEATURES.

THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT, OES, AND OMM FOR REVIEW AND APPROVED BY THE PROJECT ENGINEER.

SEE THE OFFICE OF MATERIALS MANAGEMENT (OMM) WEBPAGE FOR LIST OF APPROVED CONCRETE NOISE BARRIER SUPPLIERS.

WALL MATERIAL AND COLOR:

THE CONTRACTOR MUST MAINTAIN UNIFORMITY OF WALL TYPE, TEXTURE, JOINTS, AND COLOR. THE TONGUE AND GROOVE JOINTS OF NOISE BARRIER PANELS BETWEEN ADJOINING POSTS MUST BE MAINTAINED AT CONSTANT ELEVATIONS. THE POSTS USED FOR THIS PROJECT SHALL BE CONCRETE POSTS OR PRESTRESSED CONCRETE POSTS AS SPECIFIED IN STANDARD DRAWING NBS-1-09.

THE BARRIER PANELS SHALL BE COLORED AS PER THE FOLLOWING REQUIREMENTS:

ROADWAY SIDE TEXTURE WILL BE ARCHITECTURAL POLYMERS ASHLAR 905 OR ENGINEER-APPROVED EQUAL. ROADWAY SIDE COLOR SHALL BE GREY, FEDERAL COLOR NUMBER 16515.

FOR WALL A1, RESIDENT SIDE TEXTURE SHALL BE ARCHITECTURAL POLYMERS LARGE STONE OHIO DRYSTACK #9110 OR ENGINEER-APPROVED EQUAL. RESIDENTIAL SIDE COLOR SHALL BE GREY, FEDERAL COLOR NUMBER 16515.

CALCULATED
NSP
CHECKED
MAW

NOISE BARRIER A1 NOTES

FRA-70-22.61

3 / 32

799
1199

NOISE BARRIER

ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE)

THIS WORK CONSISTS OF PREPARING ANY NECESSARY SHOP DRAWINGS, AND MANUFACTURING, TESTING, TRANSPORTING, STORING, AND INSTALLING NOISE BARRIERS; FURNISHING AND INSTALLING DRILLED SHAFTS; EXCAVATING AND BACKFILLING; AND RESTORING THE WORK AREA IN ACCORDANCE WITH STANDARD DRAWING NBS-1-09, THESE PROVISIONS AND IN CONFORMITY WITH THE DIMENSIONS, LINES AND GRADES SHOWN ON THE PLANS.

NO MIXING OF BARRIER MATERIAL TYPES OR COLORS AT ANY ONE NOISE BARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS WILL BE ALLOWED. BARRIER MATERIAL TYPE SUPPLIED SHALL BE AS LISTED ON THE APPROVED REFLECTIVE BARRIER SUPPLIER TABLE BELOW UNLESS OTHERWISE SPECIFIED.

INDIVIDUAL BARRIER FABRICATION AND ERECTION DETAILS, EXCEPT FOR POSTS AND FOUNDATIONS, SHALL BE AS PER APPROVED MANUFACTURER'S DRAWINGS LISTED ON THE APPROVED REFLECTIVE BARRIER SUPPLIER TABLE. POSTS AND FOUNDATIONS SHALL BE AS DETAILED IN STANDARD DRAWING NBS-1-09 AND AS MODIFIED IN THESE PLANS.

ANY INTERFERENCE WITH UTILITIES OR OTHER POST SPACING ADJUSTMENTS REQUIRED TO MEET DESIGN PLAN ALIGNMENT, CONNECTIONS TO STRUCTURES, OR OTHER CONDITIONS CREATED DUE TO CHANGING OF POST SPACINGS SHALL BE AT THE CONTRACTOR'S EXPENSE.

COPIES OF THE ODOT APPROVED, MANUFACTURER'S DRAWINGS LISTED ON APPROVED REFLECTIVE BARRIER SUPPLIER TABLE, SHALL BE FURNISHED TO THE ENGINEER BEFORE ANY WORK IS INITIATED. ALL PROJECT SPECIFIC DETAILS NOT COVERED BY THE PLANS OR THE MANUFACTURER'S DRAWINGS SHALL BE APPROVED BY THE ENGINEER BEFORE WORK IS INITIATED.

THE BARRIER AND THE ASSOCIATED WORK SHALL CONFORM TO SECTIONS 499 AND 501 OF THE CMS AS APPROPRIATE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING DETAILED PLANS INCORPORATING THE NOISE BARRIER MATERIALS HE PROPOSES TO USE.

A TRENCH OR FAN NOISE BARRIER WILL NOT BE ACCEPTABLE FOR THIS PROJECT AT ANY OF THE LOCATIONS.

TYPICAL SECTIONS ARE SHOWN FOR NOISE BARRIERS MOUNTED WITHIN THE FLANGES OF THE POSTS. SEE SHEET 830 AND STANDARD DRAWING NBS-1-09.

CONCRETE POSTS SHALL BE USED.

POST CAPS SHALL BE INTEGRAL.

POSTS SHALL USE A CONCRETE WATERPROOFING ADMIXTURE. PENETRON, BASF MASTERLIFE 300D, SIKA WT-240 P, SIKA MIX AE-6, AND CONBLOCK CDA ARE ODOT APPROVED CONCRETE WATERPROOFING ADMIXTURES.

PLAN QUANTITIES AND DETAILS HAVE BEEN DEVELOPED FOR 24-FOOT PANEL WIDTHS. OTHER PANEL WIDTHS ARE ACCEPTABLE TO AVOID UNDERGROUND FEATURES AND TO MEET THE OVERALL WALL LENGTHS BETWEEN BENDS ONLY. PANEL SPACING ON A LONGITUDINAL 2:1 SLOPE SHALL BE A MAXIMUM 16-FEET.

HORIZONTAL LINES BETWEEN PANELS SHALL MATCH, EXCEPT AT 90-DEGREE ANGLE BREAKS. MISMATCH OF LINES IS ACCEPTABLE IN THE TOP PANEL WHERE THERE IS AN ELEVATION CHANGE. MISMATCH OF LINES IS ACCEPTABLE AT LONGITUDINAL DISTANCES OF 500 FEET (MAX) IN ORDER TO MINIMIZE EXCESS WALL AREA.

THE CONTRACTOR SHALL BE PAID FOR S.F. OF NOISE BARRIER AS CALLED FOR ON SHEET 832. ANY ADDITIONAL SQUARE FEET SHALL BE AT THE CONTRACTOR'S EXPENSE EXCEPT WHEN THE EXISTING GROUND LINE ALONG THE WALL, AS FIELD MEASURED, IS LOWER THAN WHAT IS SHOWN IN THE PLANS BY AN AMOUNT REQUIRING EQUIVALENT TO THE PROPOSED MEDIAN THEORETICAL TOP OF WALL.

THE CALCULATED NOISE WALL AREA SHOWN IN THE PLANS IS BASED UPON A 1-FOOT INCREMENTAL PANEL HEIGHT. IF THE PANELS SUPPLIED HAVE GREATER MINIMUM INCREMENTS AND THEREFORE EXTEND ABOVE THE TOP OF WALL ELEVATION OR BELOW THE BOTTOM OF WALL ELEVATION, AS SHOWN IN THE PLANS, THE ADDITIONAL WALL AREA WILL NOT BE INCLUDED IN THE MEASURED AREA FOR PAYMENT.

PRIOR TO THE CREATION OF THE SHOP DRAWINGS, THE CONTRACTOR SHALL PERFORM A FIELD SURVEY, UTILITY LOCATIONS SHALL BE INCLUDED IN THIS SURVEY BUT SHALL BE PERFORMED BY THE OWNER OF THE UTILITY. THIS INFORMATION SHALL BE SHOWN ON THE SHOP DRAWINGS AND ALL FOUNDATIONS MOVED TO AVOID ANY UNDERGROUND FEATURES.

THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT, OES, AND OMM FOR REVIEW AND APPROVED BY THE PROJECT ENGINEER.

SEE MSE WALL K PLAN SHEET 775 FOR STRUCTURE MOUNTED NOISE BARRIER DETAILS.

SEE THE OFFICE OF MATERIALS MANAGEMENT (OMM) WEBPAGE FOR LIST OF APPROVED CONCRETE NOISE BARRIER SUPPLIERS.

WALL MATERIAL AND COLOR:

THE CONTRACTOR MUST MAINTAIN UNIFORMITY OF WALL TYPE, TEXTURE, JOINTS, AND COLOR. THE TONGUE AND GROOVE JOINTS OF NOISE BARRIER PANELS BETWEEN ADJOINING POSTS MUST BE MAINTAINED AT CONSTANT ELEVATIONS. THE POSTS USED FOR THIS PROJECT SHALL BE CONCRETE POSTS OR PRESTRESSED CONCRETE POSTS AS SPECIFIED IN STANDARD DRAWING NBS-1-09.

THE BARRIER PANELS SHALL BE COLORED AS PER THE FOLLOWING REQUIREMENTS:

ROADWAY SIDE TEXTURE WILL BE ARCHITECTURAL POLYMERS ASHLAR 905 OR ENGINEER-APPROVED EQUAL. ROADWAY SIDE COLOR SHALL BE GREY, FEDERAL COLOR NUMBER 16515.

FOR WALL K, RESIDENT SIDE TEXTURE SHALL BE ARCHITECTURAL POLYMERS ASHLAR 905 OR ENGINEER-APPROVED EQUAL. RESIDENT SIDE COLOR SHALL BE GREY, FEDERAL COLOR NUMBER 16515.

DISC BEARING DATA TABLE												
LOCATION	GIRDER NO.	BEARING TYPE	MAXIMUM DEAD LOADS (KIPS)					DESIGN MOVEMENTS (INCHES) PARALLEL TO GUIDE BARS		DESIGN ROTATION (RADIAN)		DESIGN COEFFICIENT OF FRICTION
			STRENGTH LIMIT STATE		SERVICE LIMIT STATE			CONTRACTION	EXPANSION	STRENGTH LIMIT STATE	SERVICE LIMIT STATE	
			TOTAL VERTICAL LOAD	TOTAL HORIZONTAL LOAD **	TOTAL VERTICAL LOAD	VERTICAL DEAD LOAD	TOTAL HORIZONTAL LOAD **					
REAR ABUTMENT	G1, G5	NON-GUIDED	394	--	278	153	--	10.79	9.07	0.0103	0.0089	0.06
	G2, G3, G4	GUIDED	369	65	252	143	25			0.0433	0.0368	0.06
PIER 1	G1, G5	NON-GUIDED	1192	--	874	564	--	9.80	8.45	0.0172	0.0139	0.06
	G2, G3, G4	GUIDED	1170	238	834	586	85			0.0421	0.0352	0.06
PIER 2	G1, G2, G3, G4, G5	GUIDED	1561	157	1116	754	65	8.57	7.61	0.0294	0.0242	0.06
PIER 3	G1, G2, G3, G4, G5	GUIDED	1650	163	1179	763	54	7.05	6.58	0.0247	0.0204	0.06
PIER 4	G1, G2, G3, G4, G5	FIXED	1397	923	1031	702	122	--	--	0.0370	0.0316	--
PIER 5	G1, G5	NON-GUIDED	1256	--	907	597	--	7.22	6.44	0.0223	0.0170	0.06
	G2, G3, G4	GUIDED	1247	255	882	612	52			0.0275	0.0226	0.06
PIER 6	G1, G5	NON-GUIDED	1385	--	1014	683	--	8.84	7.50	0.0239	0.0179	0.06
	G2, G3, G4	GUIDED	1398	293	996	714	72			0.0330	0.0270	0.06
PIER 7	G1, G5	NON-GUIDED	1408	--	1030	708	--	10.55	8.63	0.0237	0.0179	0.06
	G2, G3, G4	GUIDED	1447	305	1035	759	79			0.0373	0.0304	0.06
FORWARD ABUTMENT	G1, G5	NON-GUIDED	486	--	345	192	--	11.68	9.31	0.0125	0.0105	0.06
	G2, G3, G4	GUIDED	452	73	310	178	31			0.0602	0.0498	0.06

** HORIZONTAL LOADS SHOWN FOR GUIDED BEARINGS ARE NORMAL TO THE BEARING GUIDE BARS
HORIZONTAL LOADS SHOWN FOR FIXED BEARINGS ARE IN ANY SINGLE DIRECTION

BEARING HEIGHTS									
	REAR ABUTMENT	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	FORWARD ABUTMENT
GIRDER 1	5.08"	6.58"	10.74"	10.74"	12.51"	6.58"	7.08"	7.08"	5.33"
GIRDER 2	6.08"	9.58"	10.74"	10.74"	12.51"	9.58"	9.83"	10.08"	6.83"
GIRDER 3	6.08"	9.58"	10.74"	10.74"	12.51"	9.58"	9.83"	10.08"	6.83"
GIRDER 4	6.08"	9.58"	10.74"	10.74"	12.51"	9.58"	9.83"	10.08"	6.83"
GIRDER 5	5.08"	6.58"	10.74"	10.74"	12.51"	6.58"	7.08"	7.08"	5.33"

FUTURE JACKING NOTES:

- SUBMIT THE PROPOSED JACKING AND/OR BEARING REPLACEMENT PROCEDURE TO THE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF ANY JACKING OPERATIONS.
- JACK THE SUPERSTRUCTURE ONLY AT LOCATIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE JACKS AND JACKING PROCEDURE, INCLUDING, BUT NOT LIMITED TO, CHECKING CONCRETE BEARING STRESSES, STABILITY, AND GIRDER AND DETAIL STRESSES. FOR LOADS, SEE MAXIMUM JACKING LOAD TABLE. NOTE THAT THE LOADS GIVEN ARE THOSE AT THE BEARINGS, NOT NECESSARILY THE JACKS. ANALYSIS MAY BE REQUIRED TO DETERMINE SOME JACKING LOADS.
- JACK AT ALL POINTS ACROSS THE STRUCTURE WIDTH INDICATED ON THE DRAWINGS SIMULTANEOUSLY AND WITH THE SAME DISPLACEMENT AND RATE OF DISPLACEMENT. PROVIDE HYDRAULIC REGULATING DEVICES AS REQUIRED.
- CENTER THE JACKS ON THE CENTERLINE OF THE GIRDER WEBS AND THE JACKING STIFFENER PLATES OR AS DETAILED IN THE JACKING PROCEDURE SUBMITTED TO THE DEPARTMENT.

MAXIMUM JACKING LOAD TABLE (TONS)					
	DL	JDL	LL	JLL	TOTAL
REAR ABUTMENT	76	99	53	93	192
PIER 1	293	381	115	201	581
PIER 2	377	490	163	286	776
PIER 3	381	496	185	323	819
PIER 4	351	457	136	238	694
PIER 5	299	388	133	233	622
PIER 6	357	464	132	232	696
PIER 7	380	493	129	226	719
FORWARD ABUTMENT	96	125	63	111	235

FUTURE JACKING NOTES: (CONT'D)

- ACCOUNT FOR ANY THERMAL MOVEMENTS AND ANY HORIZONTAL FORCES THAT MAY BE ENCOUNTERED DURING THE PERIOD WHEN THE SUPERSTRUCTURE IS BEING JACKED OR IS SHORED ON TEMPORARY SUPPORTS.
- IF TRAFFIC IS PERMITTED ON THE BRIDGE DURING JACKING, ACCOUNT FOR THE EFFECTS OF VIBRATIONS DUE TO TRAFFIC ON THE BRIDGE AND ALSO NEAR THE SUBSTRUCTURE UNIT ON WHICH JACKING IS TAKING PLACE OR WHILE THE SUPERSTRUCTURE IS BEING SHORED ON TEMPORARY SUPPORTS.
- WHEN JACKING AT EXPANSION JOINTS, REMOVE THE PARAPET COVER PLATES TO PREVENT DAMAGE TO THE JOINT.
- DO NOT DAMAGE THE SUPERSTRUCTURE OR SUBSTRUCTURE WHEN JACKING AND REPLACING THE BEARINGS.
- THE MAXIMUM ALLOWABLE JACKING DISPLACEMENT OF THE SUPERSTRUCTURE IS ONE INCH (1") VERTICAL.
- PROVIDE RESTRAINT AGAINST TRANSVERSE WIND LOADING DURING JACKING OPERATIONS.

JACKING LOAD NOTES:

JDL = 1.30DL
JLL = 1.75LL

WHERE:

DL DENOTES DEAD LOAD REACTIONS AT BEARING
JDL DENOTES JACKING DESIGN DEAD LOAD REACTIONS AT BEARING
LL DENOTES LIVE LOAD + IM REACTIONS AT BEARING
JLL DENOTES JACKING DESIGN LIVE LOAD + IM REACTIONS AT BEARING
TOTAL DENOTES JDL + JLL

LOADS SHOWN ARE PER BEARING AND IN UNITS OF TONS.

DISC BEARING DATA TABLE					
LOCATION	GIRDER NO.	BEARING TYPE	MINIMUM DESIGN LOADS (KIPS)		
			STRENGTH LIMIT STATE	SERVICE LIMIT STATE	
			TOTAL VERTICAL LOAD	TOTAL VERTICAL LOAD	VERTICAL DEAD LOAD
PIER 2 & 3	G1, G5	GUIDED	-104	-28	243

* NEGATIVE (-) VALUES INDICATE UPLIFT.

BREAKDOWN OF TOTAL VERTICAL LOADS (KIPS)					
LIMIT STATE	DC	TU	WS	WL	LL+IM
STRENGTH = -104	219	-10	-66	-8	-239
SERVICE = -28	243	-20	-66	-8	-177

NOTES:

- FOR INFORMATION AND DETAILS ASSOCIATED WITH THE BEARING ASSEMBLIES, SEE SHEETS 71/113 THRU 74/113.
- DISC BEARINGS SHALL BE DESIGNED, FABRICATED, TESTED AND INSTALLED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 869, CHAPTER 14 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION AND CHAPTER 18 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS. THE SHOP DRAWINGS SHALL BE SUBMITTED SHOWING MANUFACTURER, MATERIALS, AND DIMENSIONS OF ALL COMPONENTS OF THE BEARING ASSEMBLY TO THE ENGINEER FOR APPROVAL. THE MANUFACTURER SHALL SUBMIT CERTIFIED COPIES OF TEST REPORTS TO THE ENGINEER FOR REVIEW.
- HIGH LOAD MULTI-ROTATIONAL BEARINGS SHALL BE DISC TYPE. POT BEARINGS ARE NOT PERMITTED. BEARING ASSEMBLIES SHOWN ARE SCHEMATIC.
- ANCHOR BOLTS SHALL BE ASTM F1554, GRADE 105. NUTS SHALL CONFORM TO ASTM A563. WASHERS SHALL CONFORM TO ASTM F436. MASONRY PLATE SHALL CONFORM TO ASTM A709, GRADE 50.
- BEARINGS SHALL BE DESIGNED AND DETAILED SUCH THAT THE BEARING ASSEMBLY CAN BE REMOVED FOR REPLACEMENT OR REPAIR.
- MARK THE THICKER EDGE OF THE SOLE PLATE AS SUCH FOR THE PURPOSE OF FIELD IDENTIFICATION. PLACE MARK ON THE EDGE OF THE SOLE PLATE SO THAT IT WILL BE VISIBLE AFTER BEARING INSTALLATION.
- MARK EACH BEARING WITH THE NAME OF THE MANUFACTURER AND TYPE OR MODEL NUMBER. PLACE THE IDENTIFICATION MARK IN A PERMANENT MANNER AND LOCATION SO THAT IT IS VISIBLE AFTER ERECTION.
- THE MANUFACTURER SHALL WELD OR PRESS FIT THE BEARING PLATE TO THE MASONRY PLATE TO ENSURE FULL LATERAL CAPACITY CAN BE TAKEN BY THE BEARING.
- GUIDED AND NON-GUIDED BEARINGS MAY BE REQUIRED TO BE FIXED TEMPORARILY DURING ERECTION OF SUPERSTRUCTURE. THE CONTRACTOR SHALL DESIGN TEMPORARY FIXING DEVICES AND SUBMIT DETAILS FOR REVIEW BY THE ENGINEER.
- TACK WELD OR SECURELY CLAMP THE BEVELED LOAD PLATE TO THE GIRDER BOTTOM FLANGE DURING DECK CASTING. AFTER A MINIMUM OF SEVEN DAYS AFTER DECK CASTING IS COMPLETE, THE BEARING SHALL BE RESET. THE BEARING RE-SETTING SHALL CENTER THE DISC (ACCOUNTING FOR SETTING TEMPERATURE) ON THE SOLE PLATE PRIOR TO COMPLETING THE BOTTOM FLANGE TO BEVELED LOAD PLATE WELD.
- THE BEARING PROVIDER IS RESPONSIBLE FOR DESIGN AND SUPPLY OF ELASTOMERIC NEOPRENE PAD, MASONRY PLATE, LOWER BEARING PLATE, ELASTOMERIC DISC, UPPER BEARING PLATE, SOLE PLATE AND GUIDE BARS, ANY AND ALL PTFE AND STAINLESS STEEL SLIDING SURFACES, AND ANY OTHER REQUIRED COMPONENTS OF THE BEARING ASSEMBLY.
- THE MINIMUM THICKNESS OF EACH BEARING PLATE AND SOLE PLATE SHALL BE AS REQUIRED BY DESIGN BUT MUST BE AT LEAST 3/4".
- PREFORMED BEARING PADS CONFORMING TO CMS 711.21 SHALL BE PROVIDED FOR EACH BEARING WHERE INDICATED AND PLACED AS SHOWN IN THE BEARING DETAILS.
- ROTATION VALUES IN THE TABLE INCLUDE AN ALLOWANCE OF 0.005 RADIAN FOR UNCERTAINTIES.
- THE PIER AND ABUTMENT BEAM SEAT ELEVATIONS ARE BASED ON BEARING HEIGHTS PROVIDED IN THE TABLE SHOWN. IF THE CONTRACTOR'S SELECTED BEARING MANUFACTURER HAS A DESIGN THAT DOES NOT CONFORM TO THE HEIGHTS PROVIDED IN THE TABLE, ADJUST THE BEARING SEAT ELEVATIONS AT NO ADDITIONAL COST TO THE STATE. ADJUST THE LOCATION OF REINFORCING STEEL HORIZONTALLY AS NECESSARY TO AVOID INTERFERENCE WITH THE BEARING ANCHOR BOLTS. MAINTAIN THE MINIMUM CONCRETE COVER AND MINIMUM SPACING REQUIRED BY THE PROJECT PLANS. IF THE REINFORCING STEEL CANNOT BE MOVED TO PROVIDE THE REQUIRED POSITION FOR THE ANCHOR BOLTS, THE CONTRACTOR'S BEARING MANUFACTURER SHALL RE-DESIGN THE BEARINGS TO ACCOMMODATE AN ACCEPTABLE ANCHOR BOLT CONFIGURATION.

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DESIGN AGENCY: HBS ENGINEERING, INC.
2800 CORPORATE EXCHANGE DR.,
SUITE 100
COLUMBUS, OHIO 43231
614-835-5770

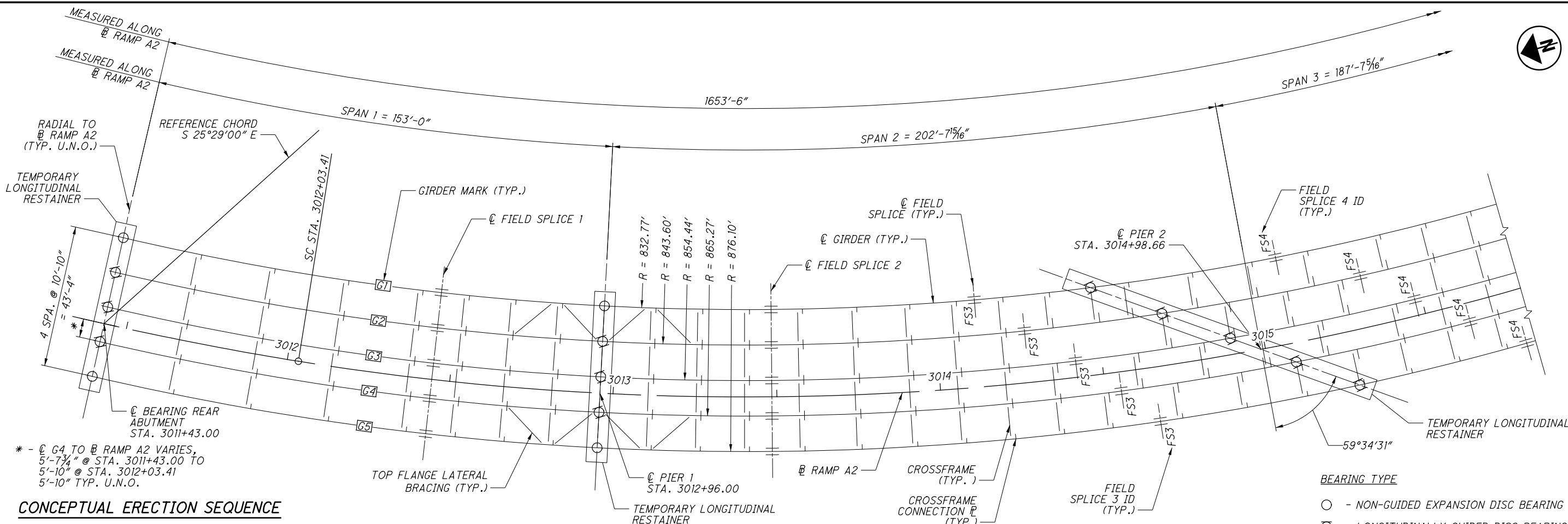
DATE: 8/13/20
REVIEWED: BTA
DRAWN: JTB
DESIGNED: RBK
CHECKED: DWV

STRUCTURE FILE NUMBER: 2511300

BEARING DETAILS - 3
BRIDGE NO. FRA-270-4262
RAMP A2 OVER IR 270, IR 70 AND RAMP D2

FRA-70-22.61
PID No. 95639

75/113
1067
1199



CONCEPTUAL ERECTION SEQUENCE

- PHASE 1A: SET ALL BEARINGS ON THE REAR ABUTMENT AND PIER 1. TEMPORARILY RESTRAIN LONGITUDINAL MOVEMENT. PLACE GIRDER 5 FROM REAR ABUTMENT TO FIELD SPLICE 2. UTILIZE A HOLD CRANE TO SUPPORT GIRDER 5.
- PHASE 1B: PLACE GIRDER 4 FROM REAR ABUTMENT TO FIELD SPLICE 2 AND CONNECT ALL CROSSFRAMES AND TOP FLANGE LATERAL BRACING BETWEEN THE TWO GIRDERS WITH BOLTS SNUG TIGHT. RELEASE GIRDERS 4 AND 5 AFTER THE CONNECTIONS ARE MADE.
- PHASE 1C: PLACE GIRDER 3 FROM REAR ABUTMENT TO FIELD SPLICE 2 AND CONNECT ALL CROSSFRAMES BETWEEN GIRDERS 3 AND 4 WITH BOLTS SNUG TIGHT. RELEASE GIRDER 3 AFTER THE CONNECTIONS ARE MADE.
- PHASE 1D: PLACE GIRDER 2 FROM REAR ABUTMENT TO FIELD SPLICE 2 AND CONNECT ALL CROSSFRAMES BETWEEN GIRDERS 2 AND 3 WITH BOLTS SNUG TIGHT. RELEASE GIRDER 2 AFTER THE CONNECTIONS ARE MADE.
- PHASE 1E: PLACE GIRDER 1 FROM REAR ABUTMENT TO FIELD SPLICE 2 AND CONNECT ALL CROSSFRAMES AND TOP FLANGE LATERAL BRACING BETWEEN GIRDERS 1 AND 2 WITH BOLTS SNUG TIGHT. RELEASE GIRDER 1 AFTER THE CONNECTIONS ARE MADE.
- PHASE 2A: SET ALL BEARINGS ON PIER 2. TEMPORARILY RESTRAIN LONGITUDINAL MOVEMENT. PLACE GIRDER 5 FROM FIELD SPLICE 2 TO FIELD SPLICE 4. UTILIZE A HOLD CRANE TO SUPPORT GIRDER 5.
- PHASE 2B: PLACE GIRDER 4 FROM FIELD SPLICE 2 TO FIELD SPLICE 4 AND CONNECT ALL CROSSFRAMES BETWEEN THE TWO GIRDERS WITH BOLTS SNUG TIGHT. RELEASE GIRDERS 4 AND 5 AFTER THE CONNECTIONS ARE MADE.
- PHASE 2C: PLACE GIRDER 3 FROM FIELD SPLICE 2 TO FIELD SPLICE 4 AND CONNECT ALL CROSSFRAMES BETWEEN GIRDERS 3 AND 4 WITH BOLTS SNUG TIGHT. RELEASE GIRDER 3 AFTER THE CONNECTIONS ARE MADE.
- PHASE 2D: PLACE GIRDER 2 FROM FIELD SPLICE 2 TO FIELD SPLICE 4 AND CONNECT ALL CROSSFRAMES BETWEEN GIRDERS 2 AND 3 WITH BOLTS SNUG TIGHT. RELEASE GIRDER 2 AFTER THE CONNECTIONS ARE MADE.
- PHASE 2E: PLACE GIRDER 1 FROM FIELD SPLICE 2 TO FIELD SPLICE 4 AND CONNECT ALL CROSSFRAMES BETWEEN GIRDERS 1 AND 2 WITH BOLTS SNUG TIGHT. RELEASE GIRDER 1 AFTER THE CONNECTIONS ARE MADE.

ERECTION PLAN

NOTES:

1. THE CONCEPTUAL ERECTION SEQUENCE IS A REPRESENTATION OF HOW THE BRIDGE COULD BE ERECTED AND IS BASED ON THE LIFT CRANE AND HOLD CRANE METHOD. ALL INTERMEDIATE STAGES OF ERECTION, TEMPORARY RESTRAINING DEVICES, TEMPORARY BRACING, COMPRESSION FLANGE STIFFENING TRUSS, CRANE LOCATIONS, ETC. THAT MAY BE NECESSARY ARE NOT SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF PARTIAL AND COMPLETE GIRDERS DURING THE ERECTION PROCESS. THE CONTRACTORS ATTENTION IS DIRECTED TO CMS 513.26 FOR THE REQUIREMENTS FOR STABILITY OF STEEL GIRDERS DURING SHIPPING AND ERECTION AND THE SUBMITTAL REQUIREMENTS OF CMS 501.05.B.4.
2. THE METHODS USED BY THE CONTRACTOR SHALL BE DOCUMENTED ON THE ERECTION DRAWINGS WITH ALL SUPPORTING STABILITY CALCULATIONS SUBMITTED IN ACCORDANCE WITH CMS 501 AND 513. THE CONTRACTOR MAY SUBMIT AN ALTERNATE MEANS OF ERECTION FROM THE ONE SHOWN IN THE PLANS AND SHALL REFERENCE THE FHWA NHI-15-044 PUBLICATION FOR STRUCTURAL STABILITY IN BRIDGE CONSTRUCTION. THE FOLLOWING HAS BEEN INCLUDED IN THE PRELIMINARY INVESTIGATION OF THE PARTIALLY ERECTED STRUCTURE AND ARE RECOMMENDED AS MINIMUM GUIDELINES. FOR PHASES IN WHICH A SINGLE GIRDER IS NOT CONNECTED TO ANOTHER GIRDER BY CROSSFRAMES, DETERMINE WIND PRESSURES BASED ON A 30 MPH DESIGN WIND VELOCITY. FOR PHASES WHEN ONLY 2 GIRDERS PROJECT INTO THE NEXT SPAN, DETERMINE WIND PRESSURES BASED ON AN 85 MPH DESIGN WIND VELOCITY. FOR ALL OTHER PHASES DETERMINE WIND PRESSURES BASED ON A 115 MPH DESIGN WIND VELOCITY. THE CONTRACTOR SHALL PROVIDE WORK LIMITATIONS RELATIVE TO WIND SPEED AND PROCEDURES FOR HIGH WIND EVENTS.
3. IF A FIELD SPLICE IS INCLUDED IN THE SPECIFIED LIFT LENGTH, BOLT THE GIRDER SECTIONS TOGETHER ON THE GROUND BEFORE LIFTING IN PLACE. INSTALL ONE HUNDRED PERCENT (100%) OF THE HOLES WITH COMPLETELY TIGHTENED BOLTS.
4. IF TWO GIRDER LINES ARE TO BE PLACED SIMULTANEOUSLY, INSTALL ALL CROSSFRAMES BETWEEN THE TWO GIRDERS AND SNUG TIGHT THE BOLTS ON THE GROUND BEFORE LIFTING AND PLACING THE PAIR OF GIRDERS.
5. IF A SINGLE GIRDER LINE IS PLACED, DO NOT RELEASE THE GIRDER FROM THE LIFTING APPARATUS UNTIL ALL CROSSFRAMES AND TOP FLANGE LATERAL BRACING, IF APPLICABLE, IN THE ADJACENT BAY HAVE BEEN INSTALLED WITH THE BOLTS SNUG TIGHT. THIS REQUIREMENT CAN BE WAIVED IF A REDUCED NUMBER OF CROSSFRAMES IS SHOWN TO BE SUFFICIENT ON THE CONTRACTOR'S APPROVED ERECTION PROCEDURE.
6. SEVENTY FIVE PERCENT (75%) OF THE BOLTS IN THE FIELD SPLICE MUST BE INSTALLED BEFORE ALLOWING TRAFFIC TO PASS BENEATH OR ADJACENT TO THE STRUCTURE.
7. TEMPORARY LONGITUDINAL RESTRAINERS SHOWN ARE REQUIRED AND MUST REMAIN IN PLACE UNTIL THE ENTIRE SUPERSTRUCTURE HAS BEEN ERECTED. THE TEMPORARY RESTRAINER SHALL BE A DEVICE CAPABLE OF PREVENTING, WITHOUT DAMAGE, THE FREE LONGITUDINAL MOVEMENT OF THE BRIDGE. THIS REQUIREMENT CAN BE WAIVED IF STABILITY IS DEMONSTRATED IN THE CONTRACTOR'S APPROVED ERECTION PROCEDURE.
8. UNLESS NOTED OTHERWISE, PERMANENTLY FASTEN ALL CROSSFRAME, FIELD SPLICE, AND TOP FLANGE LATERAL BRACING CONNECTIONS PER CMS 513.26 AFTER PHASE 8E AND BEFORE POURING THE DECK.
9. ALL CROSSFRAMES MUST BE IN PLACE WITH ALL BOLTS INSTALLED BEFORE ALLOWING TRAFFIC TO PASS BENEATH OR ADJACENT TO THE STRUCTURE. THIS REQUIREMENT CAN BE WAIVED IF A REDUCED NUMBER OF CROSSFRAMES IS SHOWN TO BE SUFFICIENT ON THE CONTRACTOR'S APPROVED ERECTION PROCEDURE.

BEARING TYPE

- - NON-GUIDED EXPANSION DISC BEARING
- ◐ - LONGITUDINALLY GUIDED DISC BEARING

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DESIGN AGENCY
H&B ENGINEERING, INC.
2800 CORPORATE EXCHANGE DR.,
SUITE 100
COLUMBUS, OHIO 43231
614-835-5770



DESIGNED	JTW	CHECKED	NUH
DRAWN	JTW	REVISED	
REVIEWED	BTA	STRUCTURE FILE NUMBER	2511300
DATE	8/13/20		

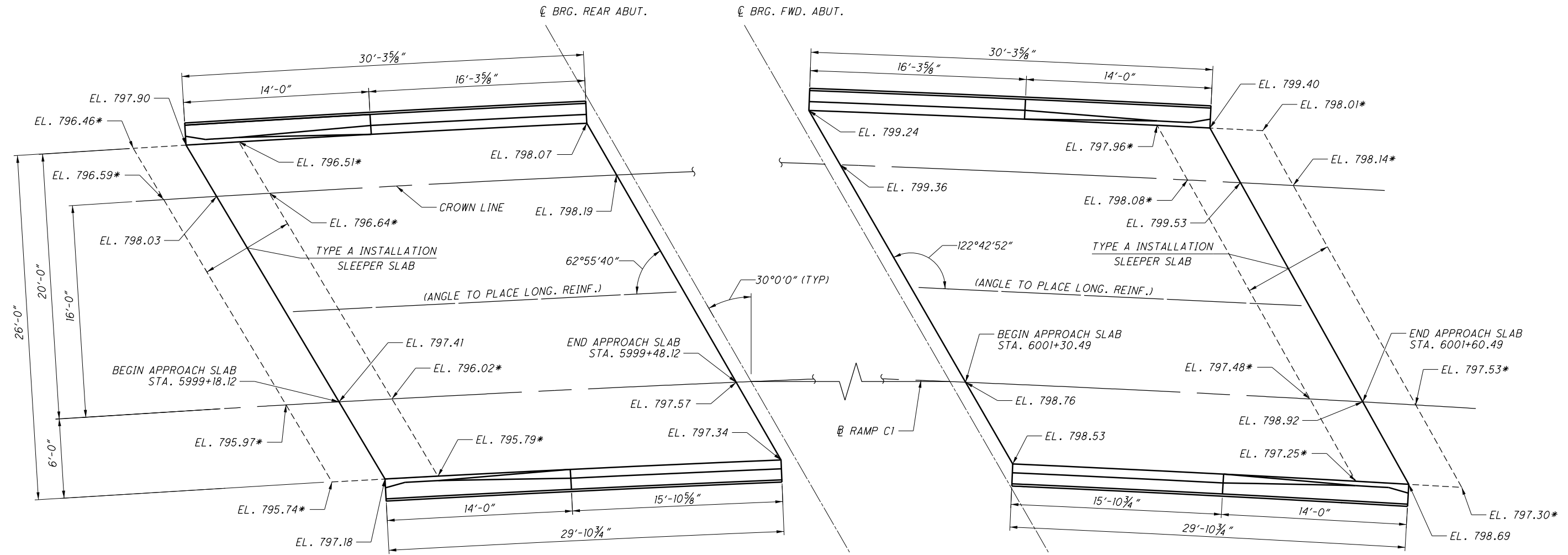
ERECTION PLAN - 1
BRIDGE NO. FRA-270-4262
RAMP A2 OVER I.R. 270, I.R. 70 AND RAMP D2

FRA-70-22-61
PID No. 95639

76/113

1068
1199

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REAR APPROACH SLAB PLAN

FORWARD APPROACH SLAB PLAN

LEGEND

* TOP OF SLEEPER SLAB SURFACE ELEVATION

NOTES:

1. APPROACH SLAB TYPE A INSTALLATION PER STD. DWG. AS-2-15.
2. ALL ELEVATIONS SHOWN ARE FINISHED GRADE, UNLESS OTHERWISE NOTED.
3. FOR GENERAL NOTES, SEE SHEETS [3/32].
4. FOR REINFORCING STEEL LIST, SEE SHEET [31/32].
5. FOR ADDITIONAL PARAPET BARRIER DETAILS, SEE SHEET [22/32].
6. FOR ADDITIONAL APPROACH SLAB DETAILS NOT SHOWN, INCLUDING REINFORCING STEEL AND SLEEPER SLAB INSTALLATION, SEE STD. DWGS. AS-1-15 AND AS-2-15.



DESIGNED	ERM	CHECKED	JDM
DRAWN	TLN	REVISED	
REVIEWED	JTH	STRUCTURE FILE NUMBER	2511304
DATE	10/20		

ESTIMATED QUANTITIES OF WALL B						
CALC.	DATE	CHK'D	DATE			AS PER PLAN OR REFERENCE SHEET
CMR	1/14/20	SRW	1/16/20			
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	LUMP	
503	21100	256	CY	UNCLASSIFIED EXCAVATION	256	
509	10000	118717	LB	EPOXY COATED REINFORCING STEEL	118717	
511	46212	184	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL INCLUDING FOOTING	184	
511	53012	480	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET	480	1, 21 / 28
511	53012	32	CY	CLASS QC2 CONCRETE, MISC.: PARAPET ON RETAINING WALL	32	1, 20 / 28
512	10100	2480	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	2480	
512	33000	17	SY	TYPE 2 WATERPROOFING	17	
516	13600	14	SF	1" PREFORMED EXPANSION JOINT FILLER	14	
518	21200	64	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	64	
518	40000	212	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	212	
518	40010	89	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	89	
601	21001	16	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	16	8 / 28
840	20000	16871	SF	MECHANICALLY STABILIZED EARTH WALL	16871	
840	21000	2832	CY	WALL EXCAVATION	2832	
840	22000	1820	SY	FOUNDATION PREPARATION	1820	
840	23000	8472	CY	SELECT GRANULAR BACKFILL	8472	
840	25010	2056	FT	6" DRAINAGE PIPE, PERFORATED	2056	
840	25020	19	FT	6" DRAINAGE PIPE, NON-PERFORATED	19	
840	26001	1048	FT	CONCRETE COPING, AS PER PLAN	1048	1, 19 / 28
840	27000	2	DAY	ON-SITE ASSISTANCE	2	



ESTIMATED QUANTITIES OF WALL G-H						
CALC.	DATE	CHK'D	DATE			AS PER PLAN OR REFERENCE SHEET
CMR	1/14/20	SRW	1/17/20			
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	LUMP	
503	21100	142	CY	UNCLASSIFIED EXCAVATION	142	
509	10000	181635	LB	EPOXY COATED REINFORCING STEEL	181635	
511	46210	114	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING	114	
511	53012	852	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET	852	1, 21 / 28
511	53012	19	CY	CLASS QC2 CONCRETE, MISC.: PARAPET ON RETAINING WALL	19	1, 20 / 28
512	10100	4999	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	4999	
512	33000	12	SY	TYPE 2 WATERPROOFING	12	
518	21200	45	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	45	
518	40000	125	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	125	
518	40010	112	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	112	
601	21001	16	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	16	18 / 28
840	20000	39746	SF	MECHANICALLY STABILIZED EARTH WALL	39746	
840	21000	5750	CY	WALL EXCAVATION	5750	
840	22000	3715	SY	FOUNDATION PREPARATION	3715	
840	23000	29116	CY	SELECT GRANULAR BACKFILL	29116	
840	25010	3340	FT	6" DRAINAGE PIPE, PERFORATED	3340	
840	25020	64	FT	6" DRAINAGE PIPE, NON-PERFORATED	64	
840	26001	1698	FT	CONCRETE COPING, AS PER PLAN	1698	1, 19 / 28
840	27000	2	DAY	ON-SITE ASSISTANCE	2	