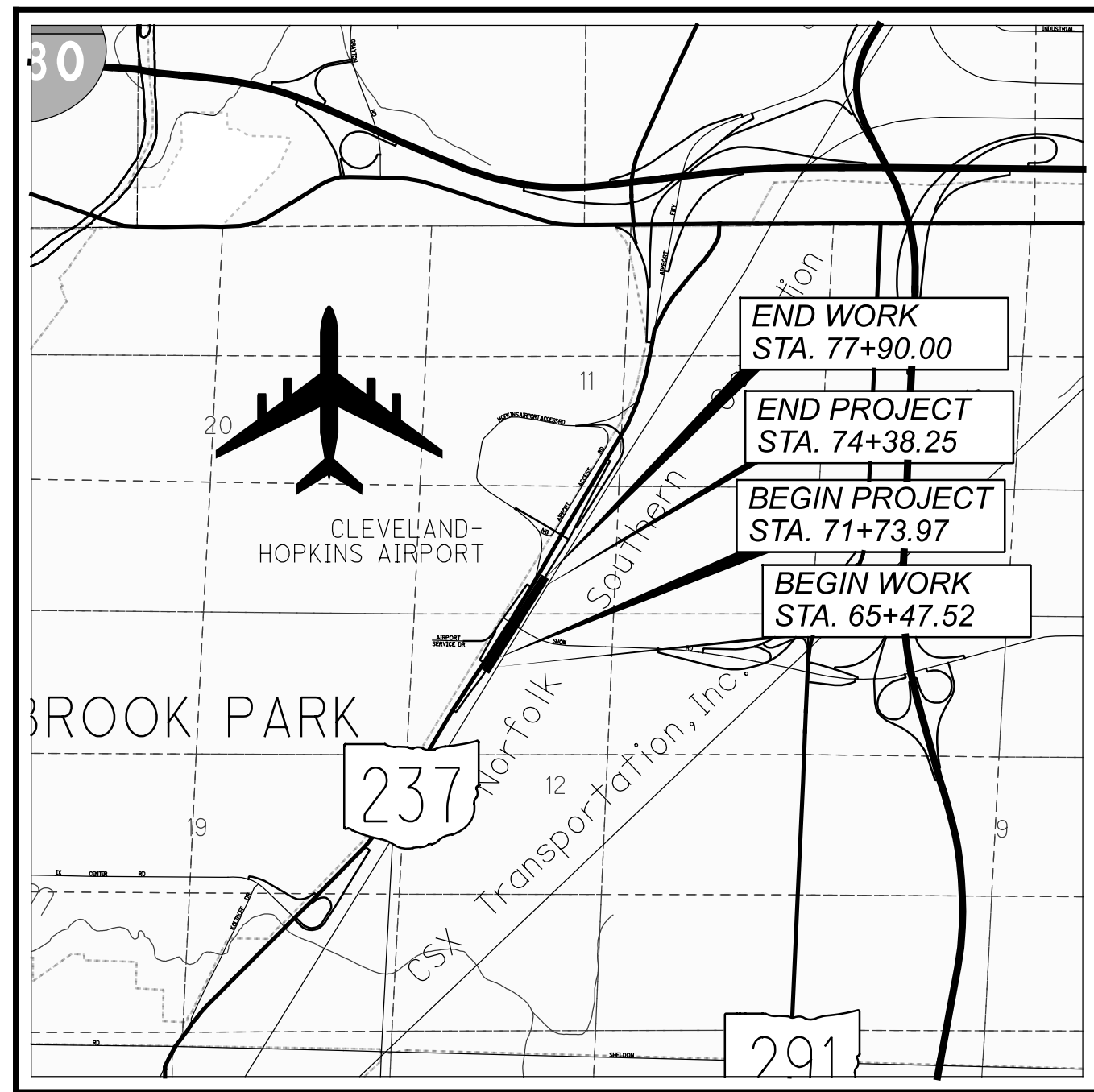


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

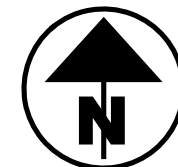
## CUY-237-06.95

BROOKPARK TOWNSHIP, ORIGINAL MIDDLEBURG TOWNSHIP  
SECTION 11, LOT 4 & SECTION 12, LOT 6, CUYAHOGA COUNTY



**LOCATION MAP**

LATITUDE: 41°24'15" LONGITUDE: -81°50'10"



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

**DESIGN DESIGNATION**

CURRENT ADT (2024)	33,000
DESIGN YEAR ADT (2044)	33,000
DESIGN HOURLY VOLUME (2044)	3,600
DIRECTIONAL DISTRIBUTION	0.55
TRUCKS (24 HOUR B&C)	0.05
DESIGN SPEED	55 MPH
LEGAL SPEED	50 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN PRINCIPAL ARTERIAL	
NHS PROJECT	YES - REGULAR ROUTE

**DESIGN EXCEPTIONS**

OUTSIDE SHOULDER WIDTH, APPROVAL DATE 11/28/22  
SHEET NUMBERS P.3, P.4, P.53

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

**OHIO811.org**  
Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764  
(Non members must be called directly)

PLAN PREPARED BY:  
PATRICK ENGINEERING



**INDEX OF SHEETS:**

TITLE SHEET	P.1
SCHEMATIC PLAN	P.2
TYPICAL SECTIONS	P.3-P.4
GENERAL NOTES	P.5-P.7
MAINTENANCE OF TRAFFIC PLANS	P.8-P.49
GENERAL SUMMARY	P.50-P.51
SUBSUMMARIES	P.52-P.54
PLAN AND PROFILE - MAINLINE	P.55
BARRIER DETAILS	P.56-P.57
PLAN - SNOW ROAD	P.58
CROSS SECTIONS, MAINLINE	P.59-P.67
TRAFFIC CONTROL	P.68-P.76
LIGHTING PLANS	P.77-P.81
STRUCTURES OVER 20 FOOT SPAN	P.82-P.110
MSE WALLS	P.111-P.120

**FEDERAL PROJECT NUMBER**

E240(087)

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

REPLACEMENT OF THE SUPERSTRUCTURE OF CUY-237-0695 (SFN 1810286), OVER SNOW ROAD, AS WELL AS APPROACH PAVEMENT REPLACEMENT.

**EARTH DISTURBED AREAS**

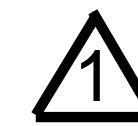
PROJECT EARTH DISTURBED AREA:	0.33 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.20 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)

**LIMITED ACCESS**

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

**2023 SPECIFICATIONS**

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



I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS (SNOW ROAD) AS DESCRIBED ON SHEETS P.47A THROUGH P.47R AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESITMATES.

ENGINEER'S SEAL  
FOR ROADWAY

---

ENGINEER'S SEAL  
FOR STRUCTURES OVER 20 FOOT SPAN

STANDARD CONSTRUCTION AWINGS								SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS		
BP-3.1	1/19/24	RM-3.1	7/20/18	MT-95.30	7/19/19	MT-102.30	10/16/15	TC-51.11	1/15/16	800-2023	1/19/24
BP-3.2	1/18/19	RM-4.1	1/17/20	MT-95.32	4/19/19	MT-105.10	1/17/20	TC-51.12	1/15/16	807	1/21/22
BP-5.1	7/15/22	RM-4.2	4/17/20	MT-95.40	7/21/23			TC-64.10	7/21/23	821	4/20/12
BP-9.1	1/18/19	RM-4.3	1/21/22	MT-95.45	7/21/23	HL-10.11	7/21/23	TC-65.10	1/17/14	832	7/21/23
		RM-4.5	7/21/17	MT-95.70	7/21/23	HL-10.12	7/21/23	TC-65.11	1/19/24	843	10/18/19
DM-1.1	7/17/20	RM-4.6	7/19/13	MT-95.82	7/19/13	HL-10.13	1/20/23			850	7/21/23
DM-1.2	7/16/21			MT-97.10	4/19/19	HL-20.13	7/21/23			873	4/16/21
DM-1.3	7/18/14	AS-1-15	1/20/23	MT-99.20	4/19/19	HL-30.31	1/19/24			921	4/20/12
DM-4.4	1/15/16	AS-2-15	7/21/23	MT-99.30	1/17/20	HL-40.20	1/19/24				
		GSD-1-19	1/19/24	MT-100.00	1/19/24	HL-60.11	7/21/17				
I-2	7/16/21	PCB-91	7/17/20	MT-101.60	4/21/23	HL-60.12	7/21/23				
		SBR-1-20	7/21/23	MT-101.70	7/21/23	HL-60.31	7/21/23				
MGS-1.1	7/16/21	SBR-2-20	7/21/23	MT-101.75	7/21/23						
MGS-2.1	1/19/18	SICD-1-21	1/19/24	MT-101.80	1/17/20						
MGS-2.3	1/20/23	SICD-2-14	1/15/21	MT-101.90	7/17/20						
MGS-4.2	7/19/13			MT-102.20	4/19/19						

ENGINEER'S SEAL  
FOR ROADWAY (SNOW ROAD)

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ENGINEER'S SEAL  
LIGHTING

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

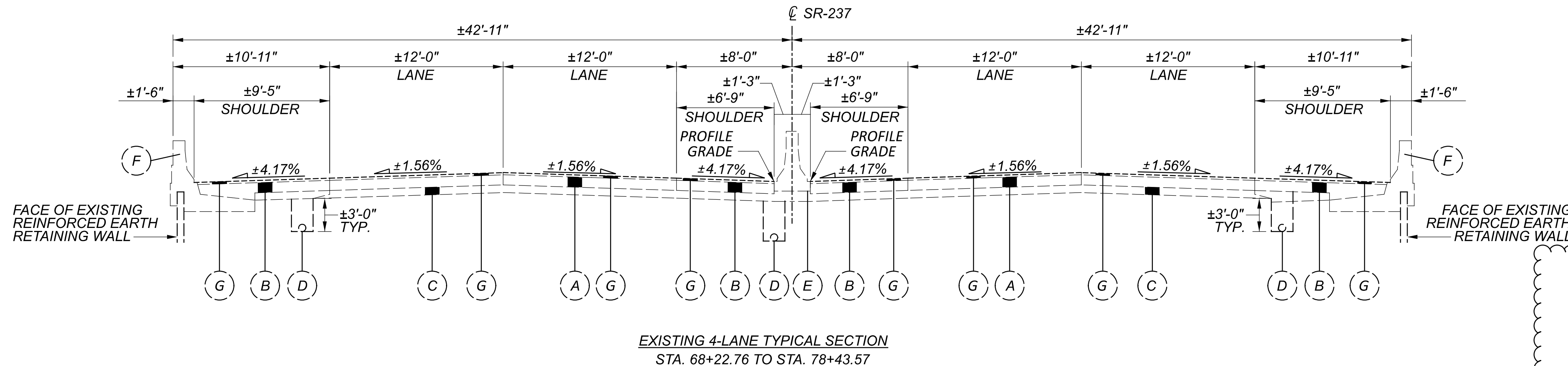
Jack Marchbanks, PhD  
 Director, Department of Transportation

ADDENDUM	NUMBER	DATE	DESCRIPTION
	⚠	11/26/2024	REVISED NOTE & ADDED CONST. DRAWING

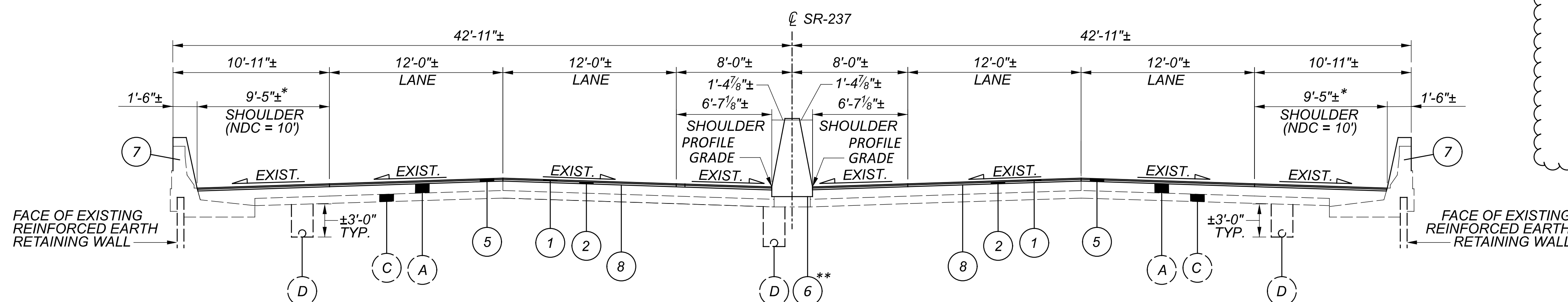
DESIGN AGENCY	<b>PATRICK</b>
DESIGNER	DJT
REVIEWER	JTB 01-29-24
PROJECT ID	114522
SHEET	P. 1
TOTAL	120

CUY-237-06.95  
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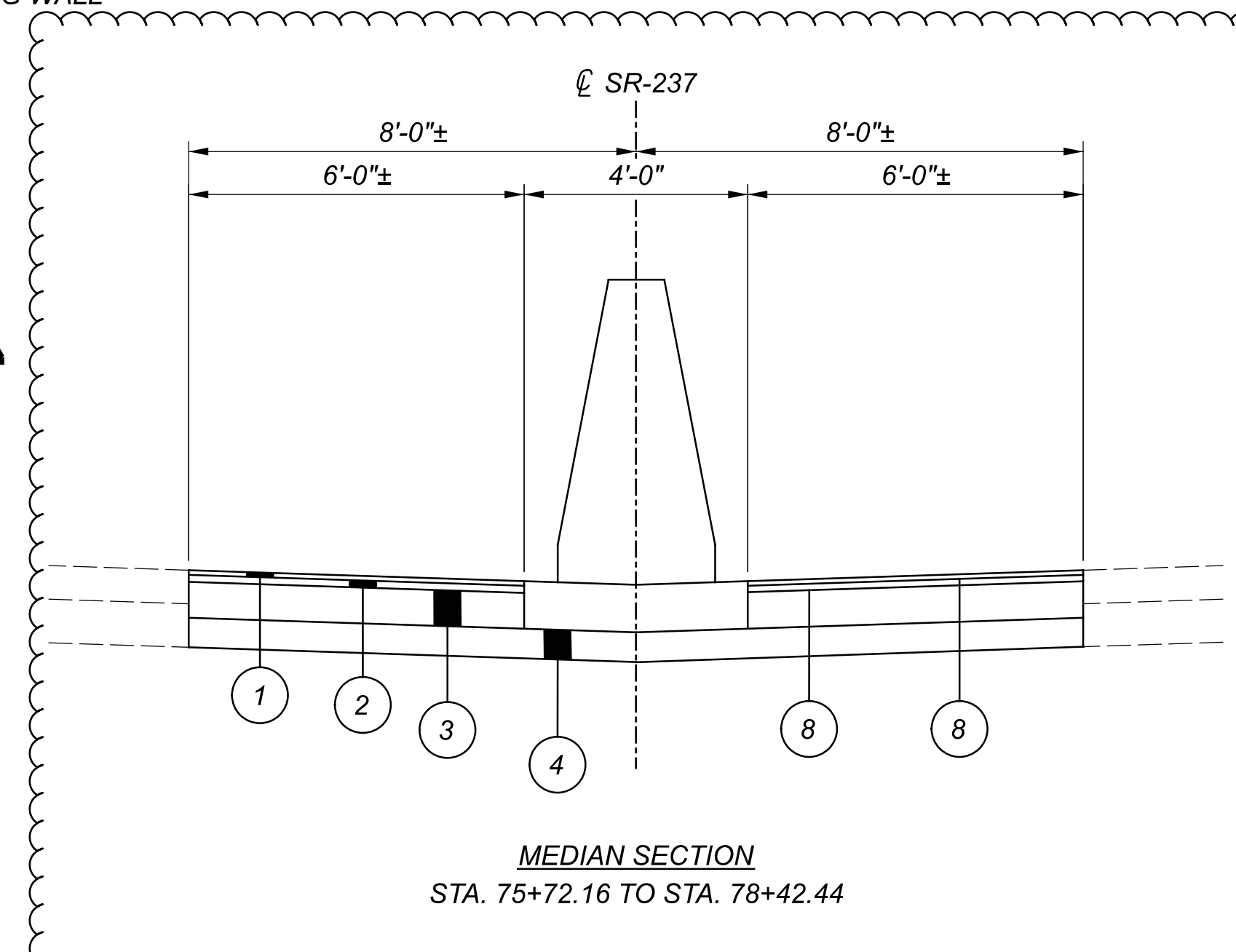
TITLE SHEET



EXISTING 4-LANE TYPICAL SECTION  
 STA. 68+22.76 TO STA. 78+43.57



PROPOSED PAVEMENT PLANING AND RESURFACING TYPICAL SECTION  
 STA. 71+23.97 TO STA. 71+73.97  
 STA. 74+38.25 TO STA. 74+88.25



ADDENDUM	NUMBER	DATE	DESCRIPTION
	▲	11/26/2024	ADDED MEDIAN SECTION DETAIL

EXISTING LEGEND

- (A) EXISTING REINFORCED CONCRETE (±9")
- (B) VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT
- (C) EXISTING CRUSHED AGGREGATE BASE (±6")
- (D) SHALLOW UNDERDRAIN, 6" (DO NOT DISTURB)
- (E) EXISTING CONCRETE MEDIAN BARRIER, 50"
- (F) EXISTING CONCRETE BARRIER, 32"
- (G) EXISTING ASPHALT CONCRETE OVERLAY

PROPOSED LEGEND

- (1) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, 1.5", PG76-22M
- (2) ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (449), 1.5"
- (3) ITEM 302 - ASPHALT CONCRETE BASE, PG64-22, (449), 9"
- (4) ITEM 304 - AGGREGATE BASE COURSE, 6"
- (5) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 3"

\*DESIGN EXCEPTION APPROVAL DATE: 11/28/22

\*\*APPLIES STA. 74+38.25 TO STA. 78+42.00 ONLY.  
 STA. 71+35.00 TO STA. 71+73.97 TO KEEP EXISTING BARRIER

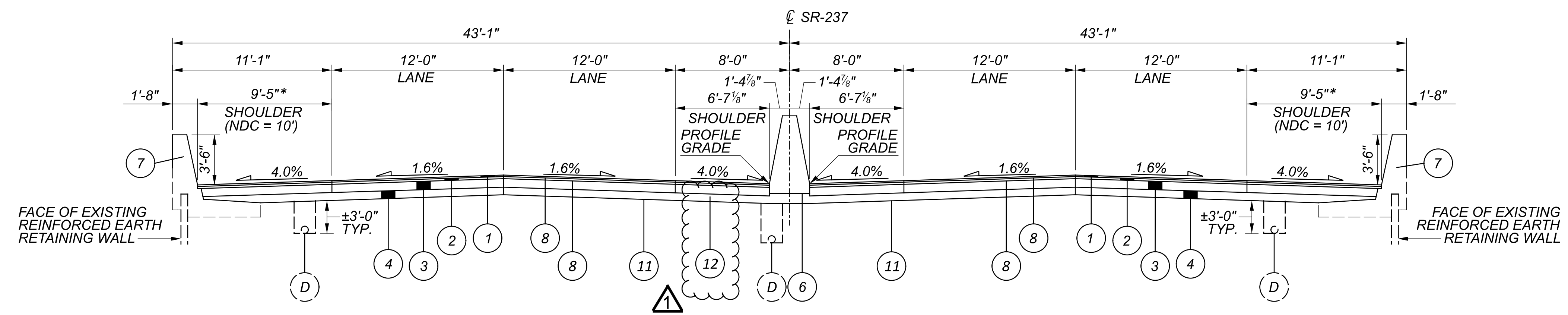
- (6) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN
- (7) BARRIER RESURFACING, SEE STRUCTURES PLANS
- (8) ITEM 407 - NON-TRACKING TACK COAT
- (9) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN
- (10) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
- (11) ITEM 204 - SUBGRADE COMPACTION

TYPICAL SECTIONS

DESIGN AGENCY

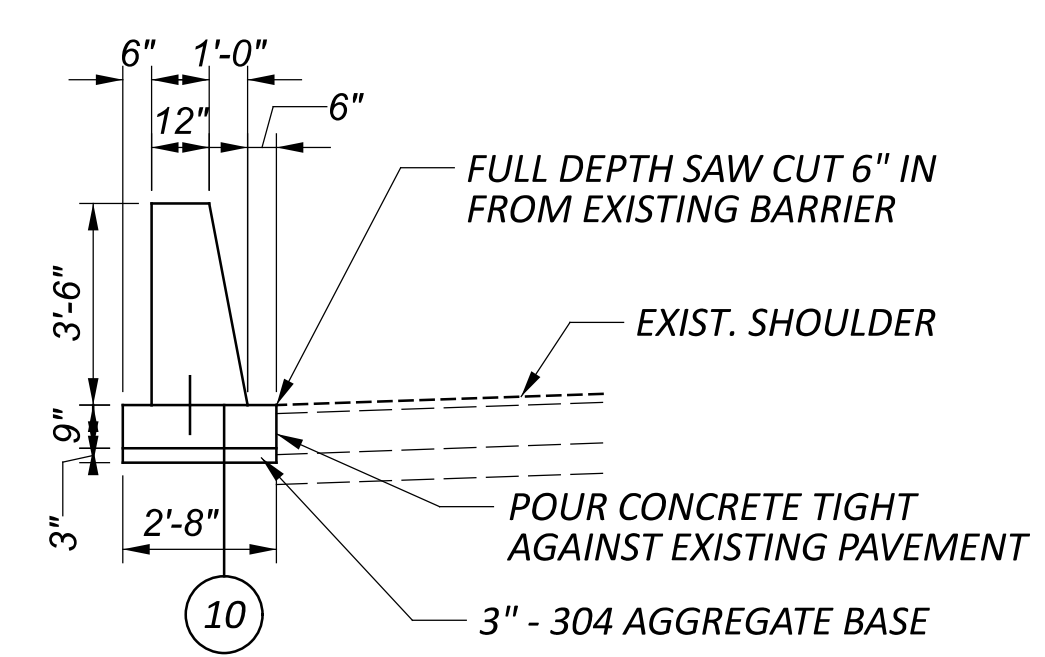


DESIGNER  
 DJT  
 REVIEWER  
 JMB 01-29-24  
 PROJECT ID  
 114522  
 SHEET TOTAL  
 P. 3 | 120

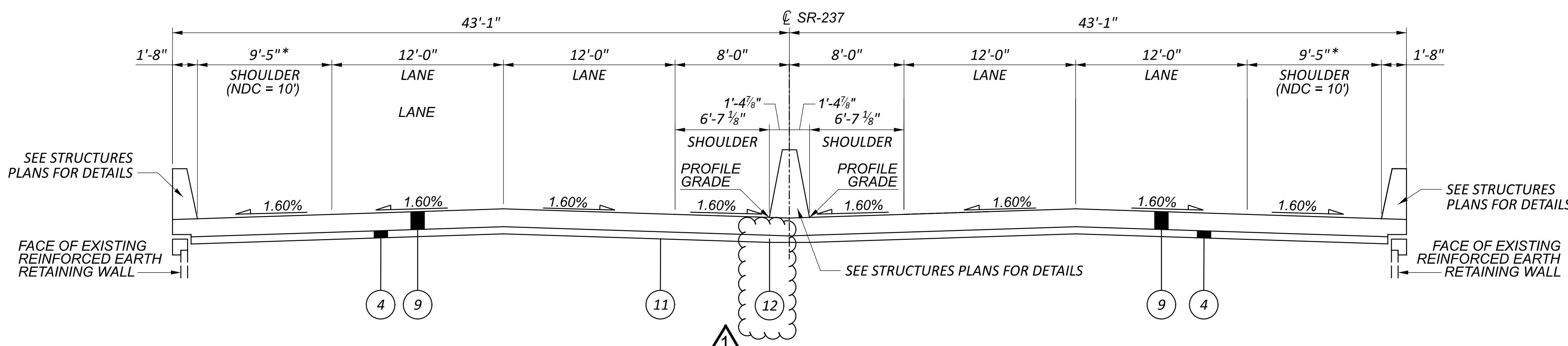


**PROPOSED FULL DEPTH ASPHALT REPLACEMENT TYPICAL SECTION**  
 STA. 71+73.97 TO STA. 72+25.94  
 STA. 73+62.44 TO STA. 74+38.25

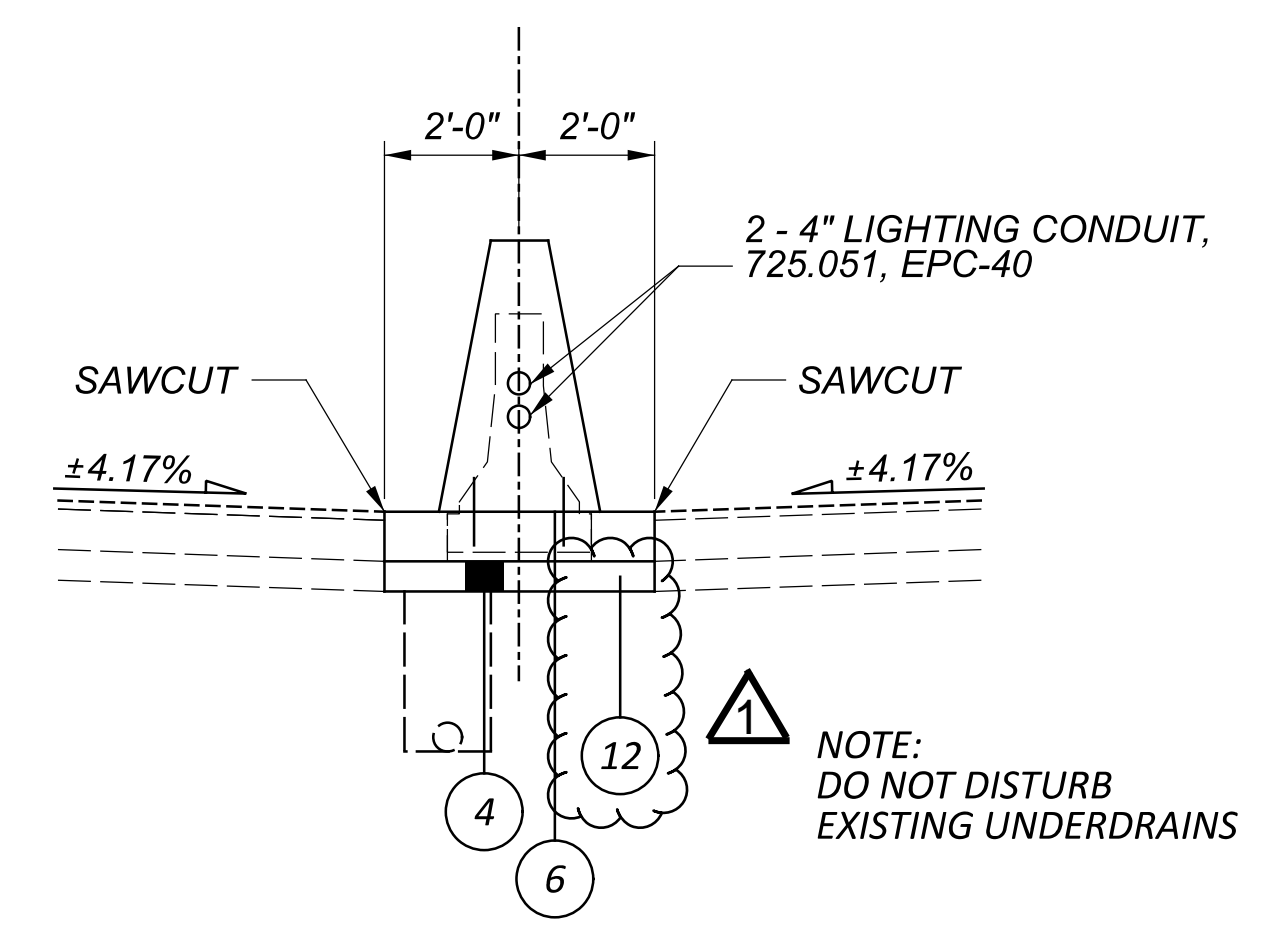
NOTE:  
DO NOT DISTURB EXISTING UNDERDRAINS



**ITEM 622 - BARRIER, SINGLE SLOPE, TYPE D, APP**  
 STA. 64+12.52 TO STA. 65+47.52 RT  
 STA. 76+91.54 TO STA. 78+51.54 LT



**PROPOSED APPROACH SLAB TYPICAL SECTION**  
 STA. 72+25.94 TO STA. 72+52.94  
 STA. 73+35.44 TO STA. 73+62.44



**PROPOSED BARRIER REPLACEMENT SECTION**  
 STA. 71+25.94 TO STA. 72+25.94  
 STA. 73+62.44 TO STA. 78+42.44

**EXISTING LEGEND**

- (A) EXISTING REINFORCED CONCRETE (±9")
- (B) VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT
- (C) EXISTING CRUSHED AGGREGATE BASE (±6")
- (D) SHALLOW UNDERDRAIN, 6" (DO NOT DISTURB)
- (E) EXISTING CONCRETE MEDIAN BARRIER, 50"
- (F) EXISTING CONCRETE BARRIER, 32"
- (G) EXISTING ASPHALT CONCRETE OVERLAY

**PROPOSED LEGEND**

- (1) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, 1.5", PG76-22M
- (2) ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (449), 1.5"
- (3) ITEM 302 - ASPHALT CONCRETE BASE, PG64-22, (449), 9"
- (4) ITEM 304 - AGGREGATE BASE COURSE, 6"
- (5) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 3"
- (6) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN

- (7) BARRIER RESURFACING, SEE STRUCTURES PLANS
- (8) ITEM 407 - NON-TRACKING TACK COAT
- (9) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN
- (10) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
- (11) ITEM 204 - SUBGRADE COMPACTION
- (12) ITEM 203 - EXCAVATION

\*DESIGN EXCEPTION APPROVAL DATE: 11/28/22

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	ADDED NEW CALLOUTS



**ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS**

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED IN SCD BP-3.1 AND C&MS 401.15, AFTER COMPLETION OF THE SURFACE COURSE, THE CONTRACTOR SHALL USE A CERTIFIED 702.01 PG BINDER TO SEAL THE FOLLOWING LOCATIONS:

- ALL CASTINGS INCLUDING BUT NOT LIMITED TO MONUMENTS, MANHOLES, WATER VALVES, CATCH BASINS, CURB INLETS.
- BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES
- FORWARD JOINT FOR DRIVEWAY ASPHALT AND TRAILING JOINT WHEN BUTTING TO EXISTING ASPHALT DRIVE.
- PERIMETER OF ALL PAVEMENT REPAIRS OR OTHER ASPHALT INLAYS WHEN PAVEMENT REPAIRS/INLAYS ARE NOT OVERLAID WITH AN ASPHALT CONCRETE SURFACE COURSE.
- ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT.

THE MATERIAL USED SHALL BE CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES.

ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED IN THE APPROPRIATE CONCRETE SURFACE COURSE ITEM OF WORK.

**ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449), AS PER PLAN, 1.5", PG 76-22M**

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

**EXISTING SUBSURFACE DRAINAGE**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

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

- ITEM 611, 6" CONDUIT, TYPE F, 20 FT.
- ITEM 611, 15" CONDUIT, TYPE A, 16 FT.
- ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS, 30 FT.

**ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING TYPE B1 CONCRETE BARRIER ACCORDING TO THE CMS AND STANDARD CONSTRUCTION DRAWING RM-4.3 WITH THE FOLLOWING MODIFICATIONS:

1. PROVIDE ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC, 9" THICK CONCRETE FOUNDATION WITH AN APPROXIMATE WIDTH OF 4.0' AS SHOWN IN THE TYPICAL SECTIONS.
2. INSTALL DOWEL BARS BETWEEN THE CONCRETE FOUNDATION AND THE CONCRETE BARRIER. THE SIZE LENGTH AND PLACEMENT OF THE DOWEL BARS SHALL FOLLOW THE DOWELING DETAILS SHOWN ON SHEET 2 OF RM-4.3.

ALL COSTS FOR THIS ITEM OF WORK, INCLUDING SAWCUTTING OF EXISTING SHOULDER ASPHALT, LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1, AS PER PLAN.

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

AFTER COMPLETION OF ALL WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING AND NEW BRIDGES WITHIN THE PROJECT LIMITS. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG EACH FASCIA BEAM AT THE EDGE OF SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW.

THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM SHALL BE USED, WHERE APPLICABLE, TO DOCUMENT THE MEASUREMENTS. WHERE THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM IS NOT APPLICABLE, THE MEASUREMENTS SHALL BE DOCUMENTED ON A CONTRACTOR-DEVELOPED FORM THAT CLOSELY RESEMBLES THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM AND ACCURATELY DEPICTS THE BRIDGE AND THE LANE AND SHOULDER CONFIGURATION OF THE ROADWAY THAT PASSES BELOW THE BRIDGE.

THE COMPLETED FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS AND SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

THE ODOT DISTRICT 12 VERTICAL CLEARANCE SURVEY FORM CAN BE DOWNLOADED FROM THE FOLLOWING FTP SITE:

<ftp://ftp.dot.state.oh.us/pub/Contracts/Attach/CUY-114522>

**CONCRETE BARRIER END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING BARRIER END ANCHORAGE, REINFORCED, TYPE B1 ACCORDING TO THE CMS AND STANDARD DRAWING RM-4.3 WITH THE FOLLOWING MODIFICATIONS:

1. THE BASE OF THE END ANCHORAGE WILL HAVE AN APPROXIMATE WIDTH OF 4'-0" AS SHOWN ON THE TYPICALS.

ALL COSTS FOR THIS ITEM OF WORK, INCLUDING SAWCUTTING OF EXISTING SHOULDER ASPHALT, LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622 - CONCRETE BARRIER END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN.

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	UPDATED NOTES

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

IN ADDITION TO THE REQUIREMENTS OF CMS 619, THE CONTRACTOR SHALL FURNISH AND SET UP A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11AC FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

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

ITEM 619 FIELD OFFICE, TYPE B, AS PER PLAN: 15 MONTHS

**BP PIPELINES (SEE SCHEMATIC PLAN FOR LOCATIONS)**

BP'S DAMAGE PREVENTION SPECIALIST, DAN PLEVNY AT 216-906-6374 MUST BE CONTACTED AT LEAST 48 HOURS PRIOR TO UNDERTAKING ANY ACTIVITIES WITHIN THE PIPELINE RIGHT OF WAY (SEE SCHEMATIC PLAN FOR APPROXIMATE LOCATION). NO CONSTRUCTION WORK WITHIN THE PIPELINE RIGHT OF WAY MAY COMMENCE WITHOUT HIS/HER PRESENCE OR PRIOR APPROVAL. IN THE EVENT DAN PLEVNY CANNOT BE REACHED PLEASE CONTACT DAN SMITH AT 216-246-3697 48 HOURS PRIOR TO UNDERTAKING ANY ACTIVITIES WITHIN THE PIPELINE RIGHT OF WAY.

IF THE BP DAMAGE PREVENTION SPECIALIST, IN HIS/HER SOLE DISCRETION, DETERMINES THAT OHIO DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS ODOT) ACTIVITIES COULD RESULT IN DAMAGE TO THE PIPELINE, SUCH DAMAGE PREVENTION SPECIALIST WILL NOTIFY ODOT, THEIR OPERATOR OR CONTRACTOR.

ODOT HEREIN ACKNOWLEDGES THAT THE BP DAMAGE PREVENTION SPECIALIST SHALL HAVE FULL AUTHORITY TO STOP ANY OF ODOT'S EXCAVATION OR CONSTRUCTION RELATED ACTIVITIES IN CLOSE PROXIMITY TO THE BP PIPELINE IF IN THE BP DAMAGE PREVENTION SPECIALIST'S SOLE OPINION, ODOT'S ACTIVITIES COULD RESULT IN DAMAGE TO THE BP PIPELINE. NOTE: UNLESS OTHERWISE STIPULATED HEREIN, NO EQUIPMENT WILL BE ALLOWED ON OR NEAR BP'S PIPELINE WITHOUT PRIOR WRITTEN APPROVAL FROM BP.

**EXCAVATION SPECIFIC REQUIREMENTS**

1. NO EXCAVATION OR CONSTRUCTION ACTIVITY WILL BE PERMITTED IN THE VICINITY OF A PIPELINE UNTIL ALL APPROPRIATE COMMUNICATIONS HAVE BEEN MADE WITH BP'S FIELD OPERATIONS AND THE RIGHT-OF-WAY DEPARTMENT. A FORMAL ENGINEERING ASSESSMENT MAY BE REQUIRED.
2. THERE SHALL BE NO EXCAVATION OR BACKFILLING WITHIN THE PIPELINE RIGHT-OF-WAY FOR ANY REASON WITHOUT A REPRESENTATIVE OF BP ON SITE GIVING PERMISSION.
3. IN SOME INSTANCES, EXCAVATION AND OTHER CONSTRUCTION ACTIVITIES AROUND CERTAIN PIPELINES CAN BE CONDUCTED SAFELY ONLY WHEN THE PIPELINE OPERATING PRESSURE HAS BEEN REDUCED. CONTRACTORS ARE THEREFORE CAUTIONED THAT EXCAVATION WHICH EXPOSES OR SIGNIFICANTLY REDUCES THE COVER OVER A PIPELINE MAY HAVE TO BE DELAYED UNTIL THE REDUCED OPERATING PRESSURES ARE ACHIEVED.

**GENERAL CONSTRUCTION ACTIVITIES**

1. THE CONTRACTOR SHALL NOT BE PERMITTED TO TRANSPORT CONSTRUCTION MATERIALS OR EQUIPMENT LONGITUDINALLY OVER THE PIPELINE.
2. WHERE IT IS NECESSARY FOR CONSTRUCTION EQUIPMENT (I.E., TRACTORS, BACKHOES, DUMP TRUCKS, ETC.) OR EQUIPMENT TRANSPORTING CONSTRUCTION MATERIALS TO CROSS THE PIPELINE, THE CROSSING OF THE PIPELINE RIGHT- OF-WAY SHALL BE AT, OR AS NEAR TO, A 90° ANGLE AS IS FEASIBLE.

**BP PIPELINES CONT'D**

3. TO GAIN ACCESS TO THE JOB SITE, THE CONTRACTOR SHALL SUBMIT A PLAN INDICATING WHERE CONSTRUCTION EQUIPMENT WILL CROSS THE PIPELINE, ALONG WITH THE DEPTH OF THE PIPE AT THE CROSSINGS, ANY PROPOSED RAMPING OVER THE PIPELINE, TOGETHER WITH THE FOLLOWING SPECIFICATIONS FOR THE EQUIPMENT: TYPE AND WEIGHT OF EQUIPMENT; FOR TRACK EQUIPMENT – TRACK WIDTH AND LENGTH; FOR WHEELED EQUIPMENT – NUMBER OF AXLES (SINGLE OR TANDEM AXLES). BP WILL PERFORM A STRESS FACTOR CALCULATION TO DETERMINE IF THE EQUIPMENT CAN SAFELY CROSS THE PIPELINE. IF CROSSING OF THE PIPELINE IS ALLOWED, SPECIAL MEASURES MAY NEED TO BE TAKEN TO ENSURE THE INTEGRITY OF THE PIPELINE.

4. NO TRACK TYPE CONSTRUCTION EQUIPMENT SHALL BE PERMITTED TO PIVOT OR TURN DIRECTLY OVER THE TOP OF THE PIPELINE.

5. A SCRAPER OR PAN TYPE TRACTOR SHALL NOT BE USED FOR REMOVAL OF SOIL WITHIN TEN FEET (10') OF THE CENTERLINE OF THE PIPELINE. RUBBER TIRE OR SMALL TRACK TYPE EQUIPMENT IS AN ACCEPTABLE ALTERNATIVE.

6. A SHEEPSFOOT ROLLER SHALL NOT BE USED FOR COMPACTION PURPOSES WITHIN THE BP/CHICAP/OLYMPIC ROW.

7. NO VIBRATORY ROLLERS SHALL BE USED WITHIN THE BP/CHICAP/OLYMPIC ROW.

**ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN**

REMOVAL OF THE EXISTING CONCRETE BARRIER FOUNDATION SHALL BE INCLUDED IN THIS ITEM OF WORK. THE CONTRACTOR MAY ELECT TO SAWCUT THE PAVEMENT AT THE BARRIER FOUNDATION EDGE PRIOR TO THE CONCRETE BARRIER AND CONCRETE BARRIER FOUNDATION REMOVAL AS TO PREVENT ADJACENT PAVEMENT FROM BEING DISTURBED. IN AREAS WHERE THE PROPOSED FOOTER LIMITS DIFFER FROM THE EXISTING FOOTER LIMITS, REMOVAL OF PAVEMENT BETWEEN THE SAWCUT AND THE EXISTING FOOTER SHALL BE INCLUDED IN THIS ITEM OF WORK.

THIS ITEM OF WORK SHALL ALSO INCLUDE REMOVAL OF REINFORCED SECTIONS OF BARRIER LOCATED WITHIN THE PROJECT LIMITS INCLUDING, BUT NOT LIMITED TO, LIGHT POLE FOUNDATIONS AND SIGN FOUNDATIONS, AS WELL AS REMOVAL OF ANY REFERENCE MARKERS AND BARRIER MOUNTED SUPPORTS LOCATED ON THE EXISTING BARRIER. IF NEEDED, REMOVAL OF THE EXISTING CONDUIT AND DISTRIBUTION CABLE SHALL ALSO BE INCLUDED IN THIS ITEM. EXISTING LIGHT POLE FOUNDATIONS SHALL BE REMOVED AS PER C&MS 625.21C. EXERCISE CAUTION SO AS NOT TO DAMAGE THE EXISTING CONDUIT AND CIRCUIT DISTRIBUTION CABLE ENTERING/EXITING AND MEDIAN JUNCTION BOXES IN THE BARRIER. EXISTING SIGN FOUNDATIONS SHALL BE REMOVED AS PER C&MS 630.12.

ALL COSTS FOR THIS ITEM OF WORK, INCLUDING SAWCUTTING, LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PID PRICE FOR ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN.

**625. PULL BOX MISC.: ADJUST TO GRADE**

THIS WORK SHALL CONFORM TO ALL REQUIREMENTS OF C&MS SECTION 625. PULL BOX SHALL BE ADJUSTED TO GRADE FOR THE CROSSOVER PAVEMENT DURING MAINTENANCE OF TRAFFIC. THIS PAY ITEM SHALL INCLUDE ALL RESTORATION IN THE IMMEDIATE SURROUNDING AREA. CONTRACTOR SHALL NOT DISTURB CABLES INSIDE THE PULL BOX. ANY DAMAGE TO CABLES IN THE PULL BOX SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.





**ITEM 614, MAINTAINING TRAFFIC (AT ALL TIMES)**

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A ... 1600 SY

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**SEQUENCE OF CONSTRUCTION**

PRE-PHASE

THIS PHASE SHALL INCLUDE REMOVAL OF EXISTING MEDIAN BARRIER AND CONSTRUCTION OF CROSSOVER. PLACE PORTABLE BARRIER TO CLOSE SOUTHBOUND MEDIAN SHOULDER. USE STANDARD DRAWING MT-95.40 TO CLOSE THE LEFT LANE OF NORTHBOUND BETWEEN STATIONS 75+00 TO 80+00 WHILE REMOVING THE EXISTING BARRIER. ONCE THE EXISTING MEDIAN BARRIER IS REMOVED, MOVE THE PORTABLE BARRIER TO CREATE A NORTHBOUND INSIDE SHOULDER CLOSURE. REMOVE EXISTING MEDIAN BARRIER BETWEEN STATIONS 75+00 TO 78+42. BEGIN NORTHERN CROSSOVER CONSTRUCTION.

PLACE PORTABLE BARRIER TO CREATE NORTHBOUND AND SOUTHBOUND INSIDE SHOULDER CLOSURES BETWEEN STATIONS 55+00 TO 60+00. BEGIN SOUTHERN CROSSOVER CONSTRUCTION.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PRE-PHASE WORK:  
NORTHERN CROSSOVER - SOUTHBOUND 1 BARRIER SETUP AT 640', NORTHBOUND 2 BARRIER SETUPS AT 830'  
SOUTHERN CROSSOVER - SOUTHBOUND 1 BARRIER SETUP AT 730', NORTHBOUND 1 BARRIER SETUP AT 730'  
ITEM 622 PORTABLE BARRIER, 50" AS PER PLAN = 640 + 2X830 + 730 + 730 = 3760 LF  
ITEM 614 WORKZONE IMPACT ATTENUATOR, 24" WIDE HAZARD (UNIDIRECTIONAL) = 5 EA

PHASE 1

THIS PHASE SHALL RECONSTRUCT THE SOUTHBOUND LANES OF SR 237. ONE LANE OF NORTHBOUND TRAFFIC WILL BE MAINTAINED UTILIZING THE EXISTING OUTSIDE NORTHBOUND LANE AND SHOULDER, WHILE ONE LANE OF SOUTHBOUND TRAFFIC WILL BE MAINTAINED BY THE CROSSOVER CONSTRUCTED IN THE PRE-PHASE TO UTILIZE THE EXISTING INSIDE NORTHBOUND LANE AND SHOULDER.

NORTHBOUND RAMP TO SNOW ROAD WILL REMAIN OPEN. SOUTHBOUND TRAFFIC TO SNOW ROAD WILL EXIT NORTH OF AIRPORT AND UTILIZE EXISTING RAMPS TO AVOID MERGING IN CROSSOVER APPROACH TANGENT.

PHASE 2

THIS PHASE SHALL RECONSTRUCT THE NORTHBOUND LANES OF SR 237. ONE LANE OF SOUTHBOUND TRAFFIC WILL BE MAINTAINED UTILIZING THE EXISTING OUTSIDE SOUTHBOUND LANE AND SHOULDER, WHILE ONE LANE OF NORTHBOUND TRAFFIC WILL BE MAINTAINED BY THE CROSSOVER CONSTRUCTED IN THE PRE-PHASE TO UTILIZE THE EXISTING INSIDE SOUTHBOUND LANE AND SHOULDER.

LANE CLOSURES LEADING TO CROSSOVER WILL UTILIZE MERGES AS DESIGNED IN PHASE 1. NORTHBOUND RAMP TO SNOW ROAD WILL REMAIN OPEN. SOUTHBOUND TRAFFIC TO SNOW ROAD WILL EXIT NORTH OF AIRPORT AND UTILIZE EXISTING RAMPS TO AVOID MERGING IN CROSSOVER APPROACH TANGENT.

PHASE 3

THIS PHASE SHALL REMOVE TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC AND CONSTRUCT NEW MEDIAN BARRIER AND ASPHALT SHOULDER FOR THE NORTHERN CROSSOVER AND REMOVE THE TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC AND RESTORE TO PRE-EXISTING CONDITION FOR THE SOUTHERN CROSSOVER. MAINTAIN TRAFFIC IN ACCORDANCE WITH SCD MT-95.40.

**ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURE/ REDUCTION REQUIRED)**

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

**ITEM 614, MAINTAINING TRAFFIC (SIGNS AND BARRICADES)**

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS SHOWN IN THE PLANS

**ITEM 614, MAINTAINING TRAFFIC (WINTER TIME LIMITATIONS)**

ALL EXISTING LANES, INCLUDING RAMPS, SHALL BE OPEN AND AVAILABLE TO TRAFFIC IN THE ORIGINAL OR PROPOSED FINAL ALIGNMENT BETWEEN [OCTOBER 15] AND [APRIL 1]. SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS, A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$5,000 PER CALENDAR DAY.

**ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449), AS PER PLAN, PG 76-22M**

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

IN ADDITION TO THE JOINT SEALING REQUIREMENTS SPECIFIED IN 401.17, THE CONTRACTOR SHALL SEAL THE PERIMETER OF ALL RUMBLE STRIP PAVEMENT REPLACEMENT AREAS. THE MATERIAL USED SHALL BE A CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES.

THE PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449), AS PER PLAN, PG76-22M.

**RUMBLE STRIP REMOVAL AND REPLACEMENT**

ALL EXISTING STRIPS ON THE WESTBOUND OUTSIDE SHOULDER THAT ARE IN CONFLICT WITH THE PROPOSED MOVEMENT OF TRAFFIC DURING THE MOT OPERATIONS SHALL BE REMOVED BY PAVEMENT PLANING. THE REMOVED RUMBLE STRIP AREAS SHALL BE FILLED WITH ASPHALT CONCRETE SURFACE COURSE. THE RUMBLE STRIP REMOVAL AND REPLACEMENT AREA SHALL BE 2.5 FEET WIDE AND 1.5 INCHES DEEP, CENTERED ON THE RUMBLE STRIP. THE PAVEMENT PLANING AND PLACEMENT OF ASPHALT CONCRETE SURFACE COURSE SHOULD BE COMPLETED IN THE SAME OPERATION. THE ESTIMATED REMOVAL AND REPLACEMENT LENGTH IS 7,671 FT.

IMMEDIATELY FOLLOWING COMPLETION OF MOT OPERATIONS AND RESTORING THE TRAFFIC TO ITS ORIGINAL POSITION, NEW RUMBLE STRIPS SHALL BE INSTALLED AT THE LOCATION WHERE THE EXISTING RUMBLE STRIPS WERE REMOVED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH) ... 2131 SY

ITEM 407 - NON-TRACKING TACK COAT ... 192 GAL

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, PG76-22M, 1.5" ... 89 CY

ITEM 618 - RUMBLE STRIPS, SHOULDER, (ASPHALT CONCRETE) ... 1.46 MILE

**SCHEDULE OF THROUGH LANES TO BE MAINTAINED**

ALL LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON THE ODOT WEBSITE:

<http://www.dot.state.oh.us/districts/D12/HighwayManagement/Pages/PermittedLaneClosures.aspx>

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED, UNLESS DIRECTED BY THE ENGINEER. SHOULDER CLOSURES SHALL ONLY BE ALLOWED AT THE TIMES SPECIFIED FOR LANE CLOSURES.

ANY ROADWAY NOT LISTED SHALL NOT HAVE ANY LANE CLOSURES ON WEEKDAYS FROM 6:30AM TO 9:00AM AND 3:00PM TO 8:00PM. CONTACT TROY ONESTI, DISTRICT 12 WORK ZONE TRAFFIC MANAGER, AT (216) 584-2204 IF THERE ARE ANY QUESTIONS.

ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THE PROJECT.

**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 MT-101.70.

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

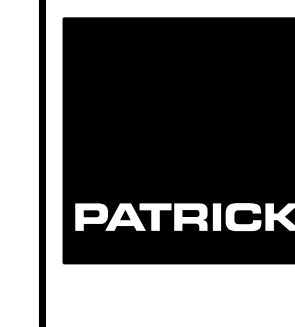
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1, ONE-WAY 183 EACH  
ITEM 614, OBJECT MARKER, TWO-WAY 183 EACH  
ITEM 614, INCREASED BARRIER DELINEATION 9,441 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.

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	UPDATED NOTES

DESIGN AGENCY



DESIGNER  
TAS  
REVIEWER  
JMB 01-29-24  
PROJECT ID  
114522  
SHEET TOTAL  
P. 8 | 120



**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN**

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

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

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

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

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 24 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

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

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

**ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN CONT'D.**

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 32 SIGN MONTH ASSUMING 2 PCMS SIGN FOR 15 MONTH AND 2 PCMS SIGNS FOR 1 MONTH

**ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM**

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.06, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FEET (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE USED.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM ... 4 EACH

**ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 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'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

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 A 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.

**ITEM 622, PORTABLE BARRIER, 50", AS PER PLAN**

THIS WORK SHALL CONSIST OF FURNISHING, MAINTAINING, AND SUBSEQUENTLY REMOVING A 50-INCH PORTABLE BARRIER AT THE LOCATIONS SHOWN ON THE PLANS. FOR DETAILS, SEE SCD RM-4.1.

PORTABLE STEEL BARRIER IS AN APPROVED ALTERNATIVE TO PORTABLE CONCRETE BARRIER. FOR INFORMATION ON APPROVED VENDORS, SEE THE APPROVED PRODUCTS LIST MAINTAINED BY THE OFFICE OF ROADWAY ENGINEERING.

PORTABLE BARRIER, 32 INCHES HIGH WITH AN 18-INCH MINIMUM HEIGHT GLARE SCREEN MAY BE USED AT THE OPTION OF THE CONTRACTOR. THE GLARE SCREEN SHALL BE CONSTRUCTED USING ONE OF THE SCREENS PROVIDED ON THE APPROVED LIST, AVAILABLE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

PADDLE OR INTERMITTENT TYPE GLARE SCREENS SHALL BE DESIGNED USING A 20 DEGREE CUT-OFF ANGLE BASED ON TANGENT ALIGNMENT. THAT SPACING SHALL BE USED THROUGHOUT THE BARRIER LENGTH WITHOUT REGARD TO BARRIER CURVATURE.

THE GLARE SCREEN SYSTEM SHALL BE SECURELY FASTENED TO THE 32-INCH PORTABLE BARRIER USING THE HARDWARE AND PROCEDURES SPECIFIED BY THE MANUFACTURER.

FOR DIRECTIONS ON HOW TO INSTALL THE GLARE SCREEN AND THE BARRIER, SEE THE MANUFACTURER'S INSTRUCTIONS.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 622, PORTABLE BARRIER, 50", AS PER PLAN.

**NOTIFICATION OF TRAFFIC RESTRICTIONS**

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

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

**NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE**

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

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

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	UPDATED NOTES

DESIGN AGENCY



DESIGNER  
TAS

REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET TOTAL  
P. 9 | 120

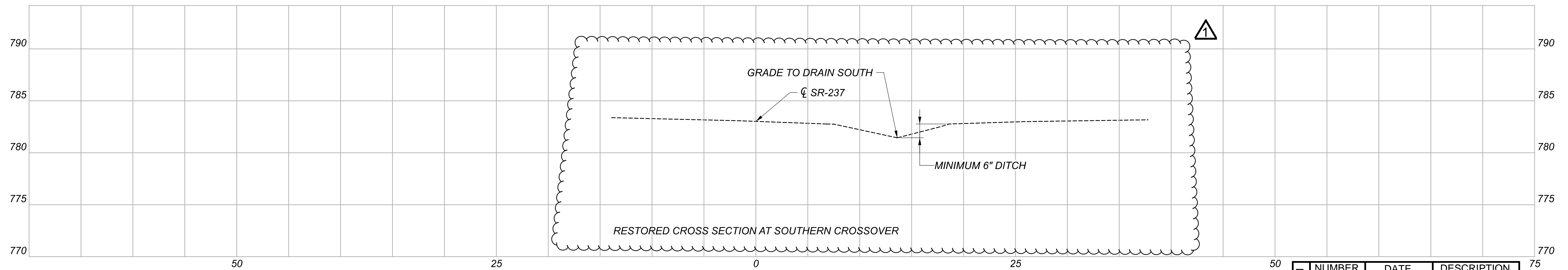
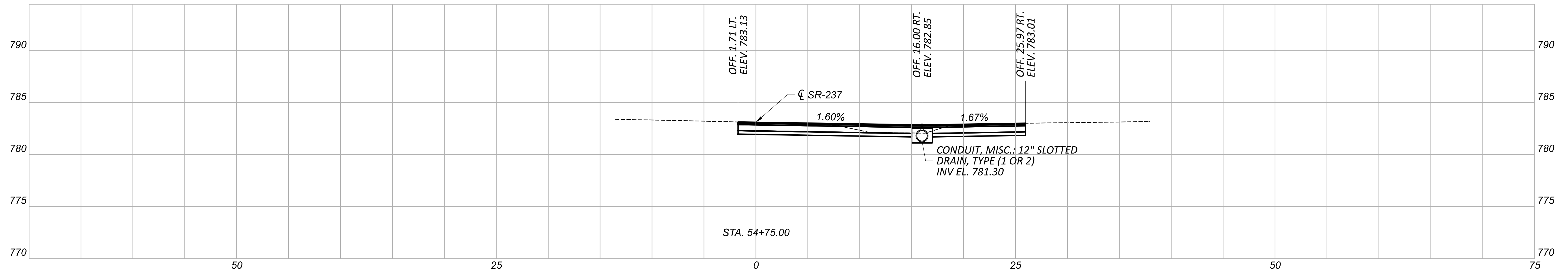
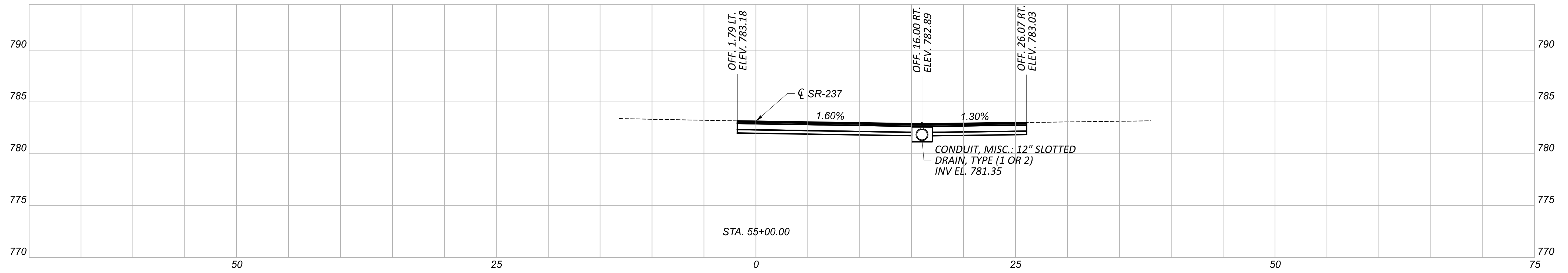
REF NO.	SHEET NO.	PHASE NO.	STATION TO STATION		614	614	614	614	614	614	614	622	625	630	630	630	630	630	646	
					WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE EDGE LINE, CLASS I, 6", 873, WHITE	WORK ZONE EDGE LINE, CLASS I, 6", 873, YELLOW	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 873	WORK ZONE DOTTED LINE, CLASS I, 6", 873	WORK ZONE GORE MARKING, CLASS II, 873	PORTABLE BARRIER, 50", AS PER PLAN	PULL BOX, MISC.: ADJUST TO GRADE	SIGN, OVERHEAD EXTRUSHEET	SIGN, TEMPORARY OVERLAY	COVERING OF SIGN	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL	EDGE LINE, 4" (740.06)	
					EACH	EACH	MILE	MILE	FT	FT	FT	FT	EACH	SF	SF	SF	EACH	EACH	MILE	
CH-1	27-29	1&2	44+24.34	TO					59+75.08											
CH-2	28-29	1	51+00.46			52			58+34.59											
CH-3	28	1	52+00.49						53+00.46											
CH-4	32-33	1&2	100+00.00						106+46.00											
CH-5	32-33	1&2	100+00.00						106+46.00											
DL-1	26	1&2	N/A						N/A			270								
DL-2	31-32	1&2	91+00.00						97+00.00			600								
DL-3	32-33	1&2	103+00.00						108+76.93			577								
ELW-1	26-27	1&2	N/A						N/A											
ELW-2	27-28	1&2	44+24.34						50+25.00											
ELW-3	28-32	1&2	53+00.46						100+00.00											
ELW-4	29-31	1	65+14.64						81+22.29											
ELW-5	31-32	1&2	83+79.22						100+00.00											
ELW-6	31-32	1&2	88+45.91						102+25.00											
ELW-7	32-33	1&2	97+00.00						106+46.00											
ELW-8	40-42	2	52+53.42						79+76.88											
ELW-9	41-43	2	58+34.59						83+70.85											
ELY-1	27-31	1&2	44+24.34						81+72.29											
ELY-2	28-33	1&2	54+00.56						108+76.93											
ELY-3	40-42	2	52+53.42						79+26.88											
ELY-4	40-43	2	55+09.64						83+70.85											
GM-1	32	1&2	100+00.00						102+25.00			109								
IA-1	28	1	53+15.00																	
IA-2	30	1	79+65.60																	
IA-3	31	1&2	100+00.00																	
IA-4	40	2	56+09.64																	
IA-5	41	2	59+00.00																	
IA-6	42	2	70+94.71																	
IA-7	42	2	76+75.00																	
IA-8	43	2	81+00.00																	
PCB-1	28-30	1	53+15.00						79+65.60											
PCB-2	30-32	1&2	71+50.00						100+00.00											
PCB-3	40-43	2	56+09.64						81+00.00											
PCB-4	41	2	59+00.00						63+94.68											
PCB-5	42	2	70+94.71						74+88.25											
PCB-6	42	2	76+75.00						78+42.00											
PCB-7	42-43	2	79+76.78						83+70.85											
OH-1	31	1&2	83+65.00												8					1
OH-2	32	1&2	101+45.00													77				
OH-3	33	1&2	106+25.00												8					1
OH-4	33	1&2	106+25.00																	119
OH-5	33	1&2																		63
OH-6	34	1&2																		42
	13		55+02.00																	
	8	3	54+00.00						58+00.00											
	8	3	54+00.00						58+00.00											
	8	3	75+00.00						79+00.00											
	8	3	75+00.00						79+00.00											
<b>SUBTOTALS</b>					12	725	3.25	2.80	3677	1447	109									
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					12	725		6.05	3677	1447	109									

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	ADDED & UPDATED QUANTITIES

MAINTENANCE OF TRAFFIC SUBSUMMARY

DESIGN AGENCY  
  
 DESIGNER  
 TAS  
 REVIEWER  
 JMB 01-29-24  
 PROJECT ID  
 114522  
 SHEET TOTAL  
 P. 12 | 120





ADDENDUM	NUMBER	DATE	DESCRIPTION
	▲	11/26/2024	UPDATED CROSS SECTION

DESIGN AGENCY



DESIGNER  
TAS

REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET TOTAL  
P. 14 | 120



ADDENDUM	NUMBER	DATE	DESCRIPTION
	△	11/26/2024	ADDED MOT SHEET

I-X CENTER  
DRIVE

SR-237

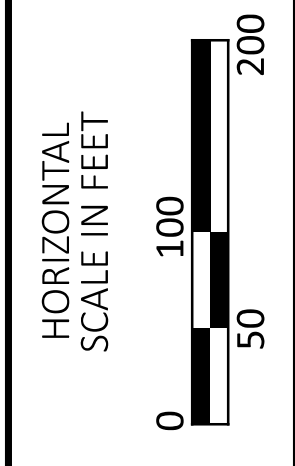
**DETOUR FOR SNOW ROAD EASTBOUND**  
SB SR-237 TO I-X CENTER DR TO NB SR-237 TO SNOW RD

LEGEND:

█ DETOUR ROUTE



SNOW ROAD



DETOUR - SNOW ROAD CLOSURE

DESIGN AGENCY



DESIGNER  
TAS

REVIEWER  
JMB

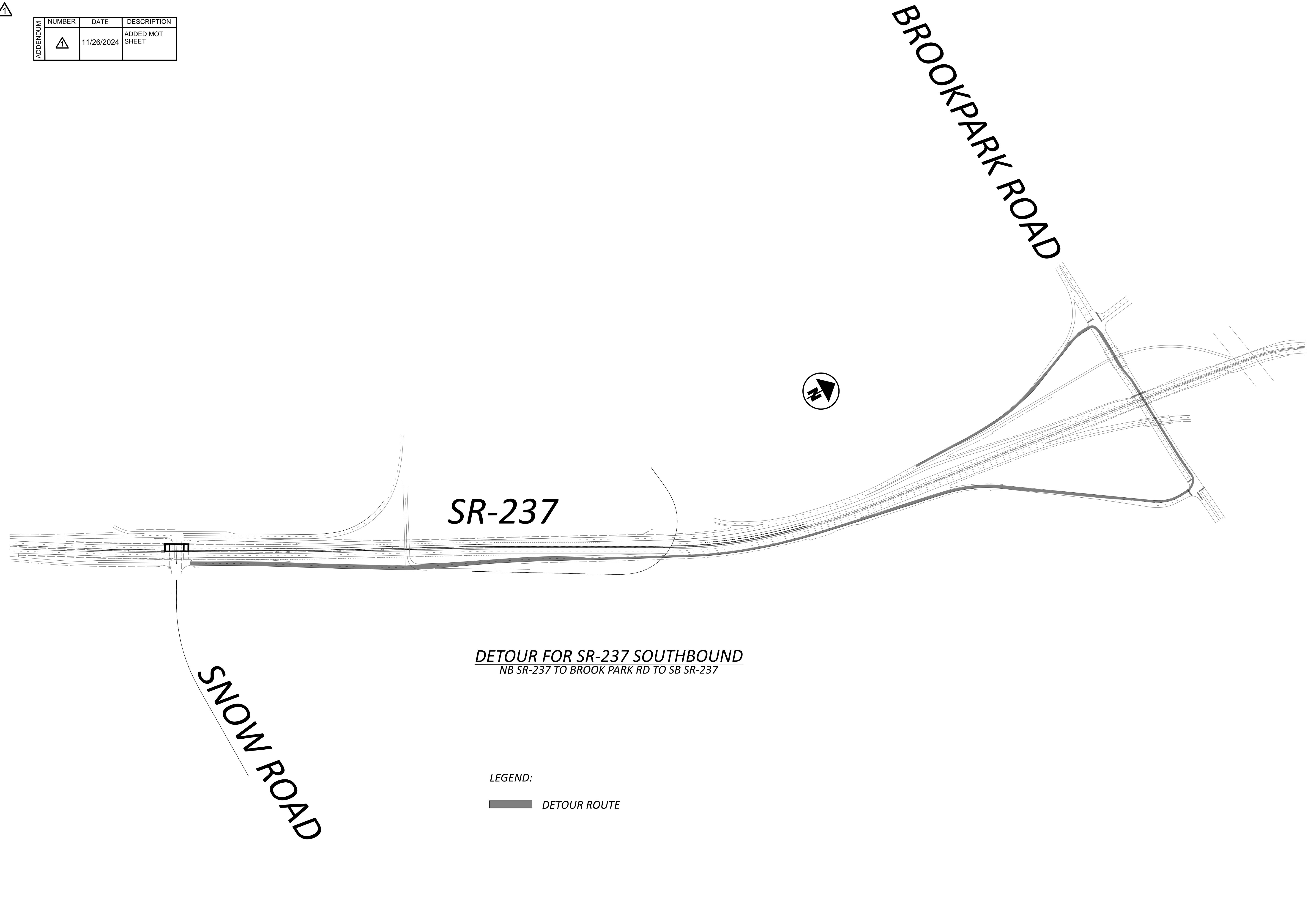
PROJECT ID  
01-29-24

PROJECT ID  
114522

SHEET TOTAL  
P.47A 120



ADDENDUM	NUMBER	DATE	DESCRIPTION
	△	11/26/2024	ADDED MOT SHEET



SR-237

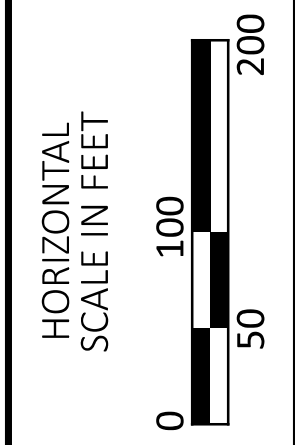
BROOKPARK ROAD

SNOW ROAD

**DETOUR FOR SR-237 SOUTHBOUND**  
NB SR-237 TO BROOK PARK RD TO SB SR-237

LEGEND:

█ DETOUR ROUTE



DETOUR - SNOW ROAD CLOSURE

DESIGN AGENCY



DESIGNER  
TAS

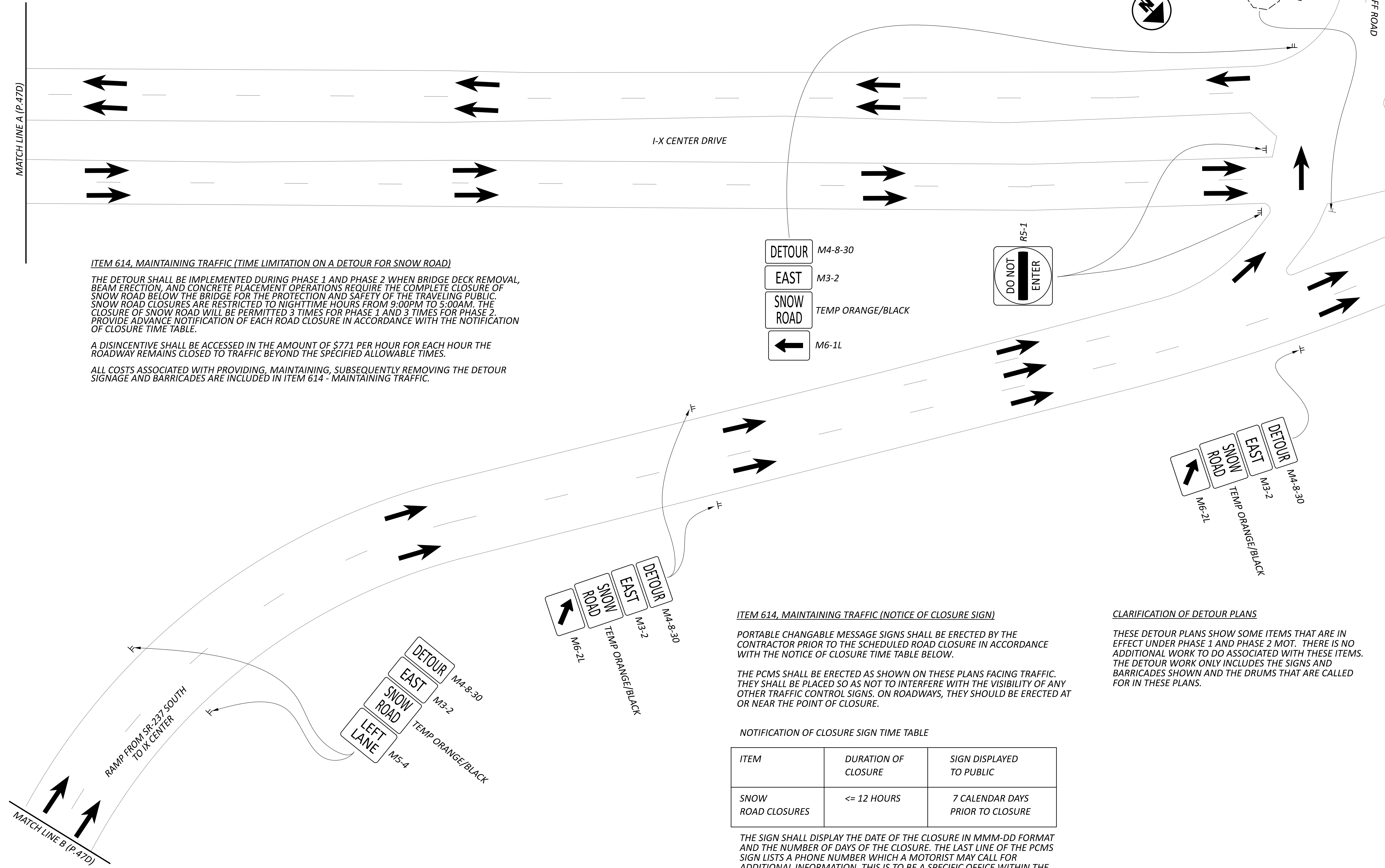
REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET TOTAL  
P.47B 120



ADDENDUM	NUMBER	DATE	DESCRIPTION
▲	▲	11/26/2024	ADDED MOT SHEET



**ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR FOR SNOW ROAD)**

THE DETOUR SHALL BE IMPLEMENTED DURING PHASE 1 AND PHASE 2 WHEN BRIDGE DECK REMOVAL, BEAM ERECTION, AND CONCRETE PLACEMENT OPERATIONS REQUIRE THE COMPLETE CLOSURE OF SNOW ROAD BELOW THE BRIDGE FOR THE PROTECTION AND SAFETY OF THE TRAVELING PUBLIC. SNOW ROAD CLOSURES ARE RESTRICTED TO NIGHTTIME HOURS FROM 9:00PM TO 5:00AM. THE CLOSURE OF SNOW ROAD WILL BE PERMITTED 3 TIMES FOR PHASE 1 AND 3 TIMES FOR PHASE 2. PROVIDE ADVANCE NOTIFICATION OF EACH ROAD CLOSURE IN ACCORDANCE WITH THE NOTIFICATION OF CLOSURE TIME TABLE.

A DISINCENTIVE SHALL BE ACCESSED IN THE AMOUNT OF \$771 PER HOUR FOR EACH HOUR THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED ALLOWABLE TIMES.

ALL COSTS ASSOCIATED WITH PROVIDING, MAINTAINING, SUBSEQUENTLY REMOVING THE DETOUR SIGNAGE AND BARRICADES ARE INCLUDED IN ITEM 614 - MAINTAINING TRAFFIC.

**ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)**

PORTABLE CHANGABLE MESSAGE SIGNS SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

THE PCMS SHALL BE ERECTED AS SHOWN ON THESE PLANS FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

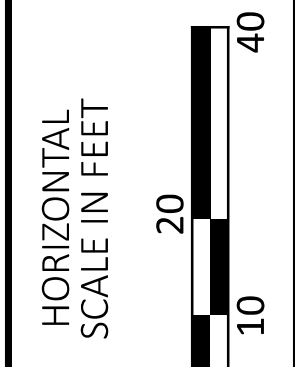
**NOTIFICATION OF CLOSURE SIGN TIME TABLE**

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
SNOW ROAD CLOSURES	<= 12 HOURS	7 CALENDAR DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE PCMS SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

**CLARIFICATION OF DETOUR PLANS**

THESE DETOUR PLANS SHOW SOME ITEMS THAT ARE IN EFFECT UNDER PHASE 1 AND PHASE 2 MOT. THERE IS NO ADDITIONAL WORK TO DO ASSOCIATED WITH THESE ITEMS. THE DETOUR WORK ONLY INCLUDES THE SIGNS AND BARRICADES SHOWN AND THE DRUMS THAT ARE CALLED FOR IN THESE PLANS.



**DETOUR - SNOW ROAD CLOSURE**

DESIGN AGENCY



DESIGNER  
TAS

REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET TOTAL  
P.47C 120

CUY-237-06.95

MODEL: CUY-237 MOT - Phase 1\_02NEW PAPER SIZE: 34x22 (in.) DATE: 11/26/2024 TIME: 12:32:29 PM USER: dtroyer  
pw:\patrick-pw\benley.com\patrick-pw-07\Documents\ODOT\_CUY-237-0695\400-Engineering\MOT\Sheets\Jm\114522\_MP1001MB.dgn



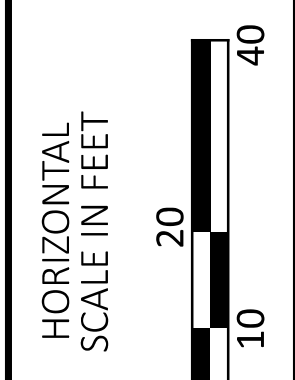
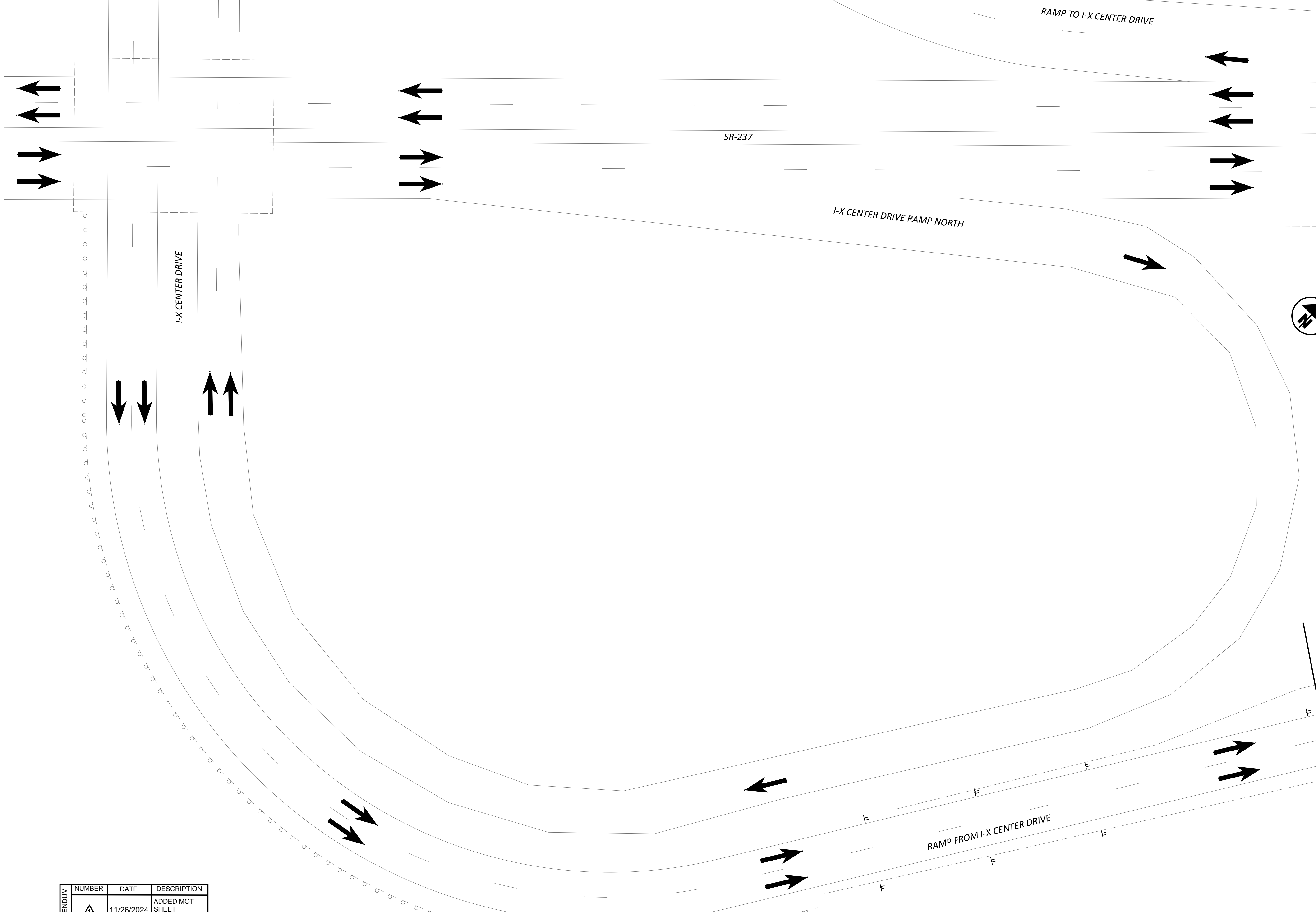
APPENDIX	NUMBER	DATE	DESCRIPTION
▲	1	11/26/2024	ADDED MOT SHEET

MATCH LINE A (P.47C)

MATCH LINE B (P.47C)

MATCH LINE C (P.47E)

MATCH LINE E (P.47E)



### DETOUR - SNOW ROAD CLOSURE

DESIGN AGENCY



DESIGNER

TAS

REVIEWER

JMB 01-29-24

PROJECT ID

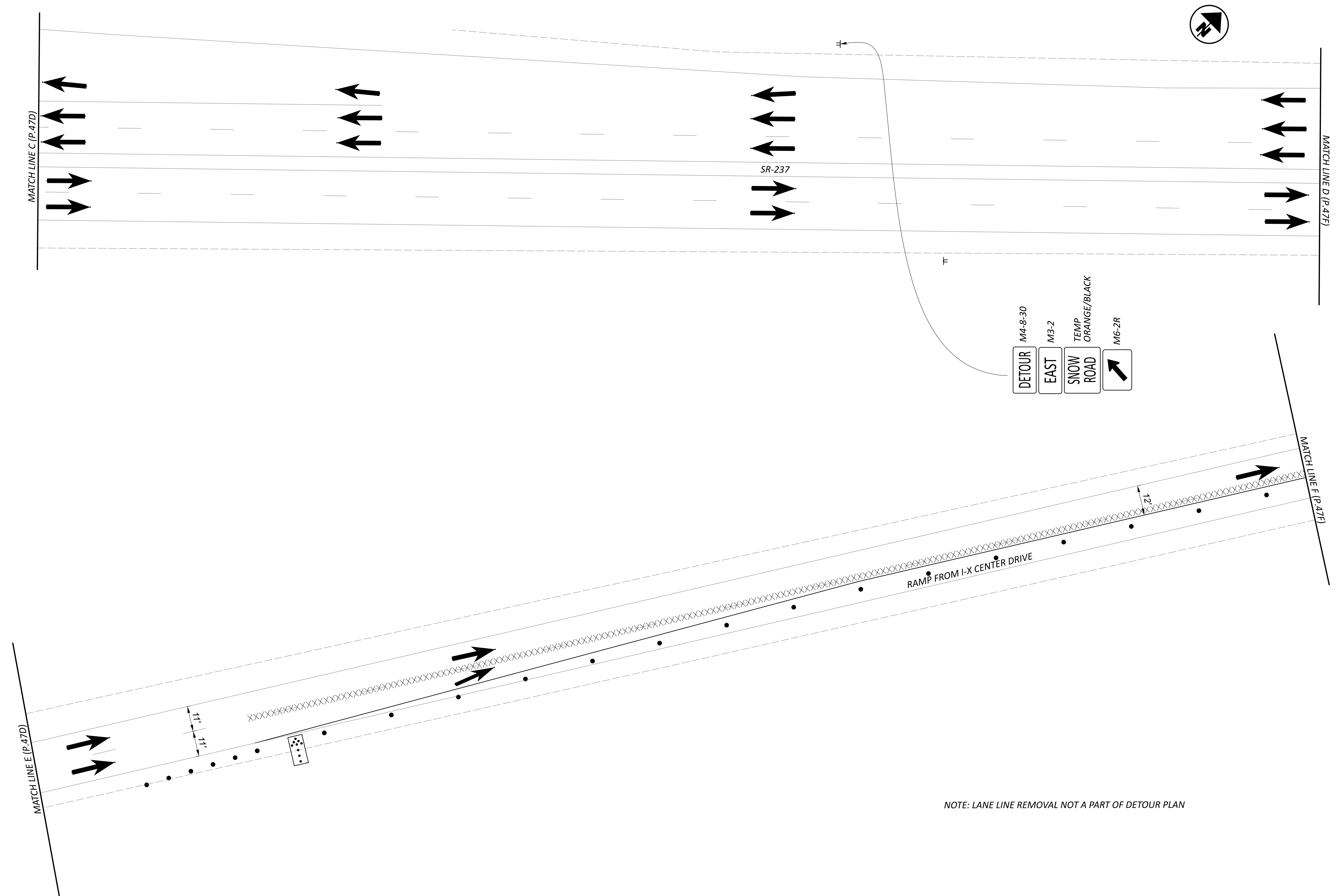
114522

SHEET TOTAL

P.47D 120

CUY-237-06.95

MODEL: CUY-237 MOT - Phase 1\_01NEW PAPER SIZE: 34x22 (in.) DATE: 11/26/2024 TIME: 11:50:31 AM USER: dtroyer  
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M4-8-30  
 M3-2  
 TEMP ORANGE/BLACK  
 M6-2R

DETOUR EAST SNOW ROAD

SR-237

MATCH LINE C (P.47D)

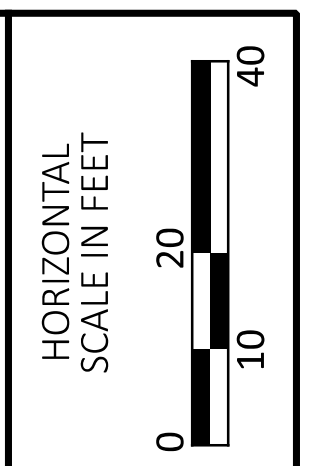
MATCH LINE D (P.47F)

MATCH LINE E (P.47D)

MATCH LINE F (P.47F)

NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN

ADDENDUM	NUMBER	DATE	DESCRIPTION
▲		11/26/2024	ADDED MOT SHEET



DETOUR - SNOW ROAD CLOSURE

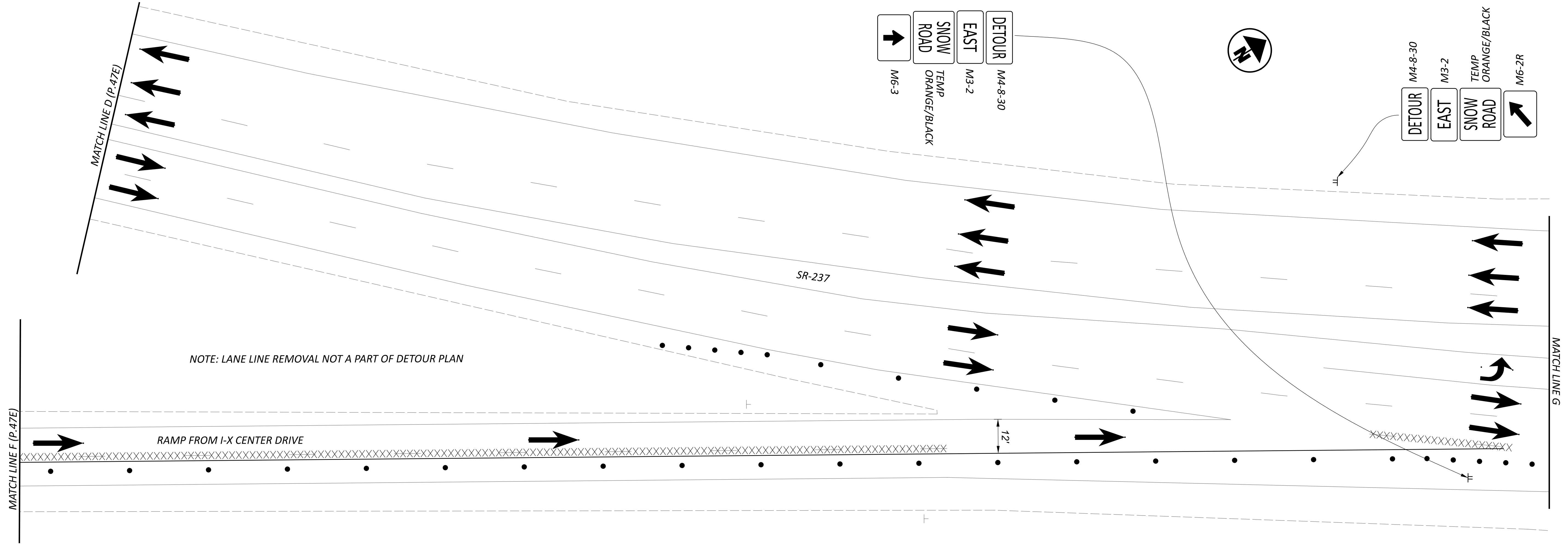
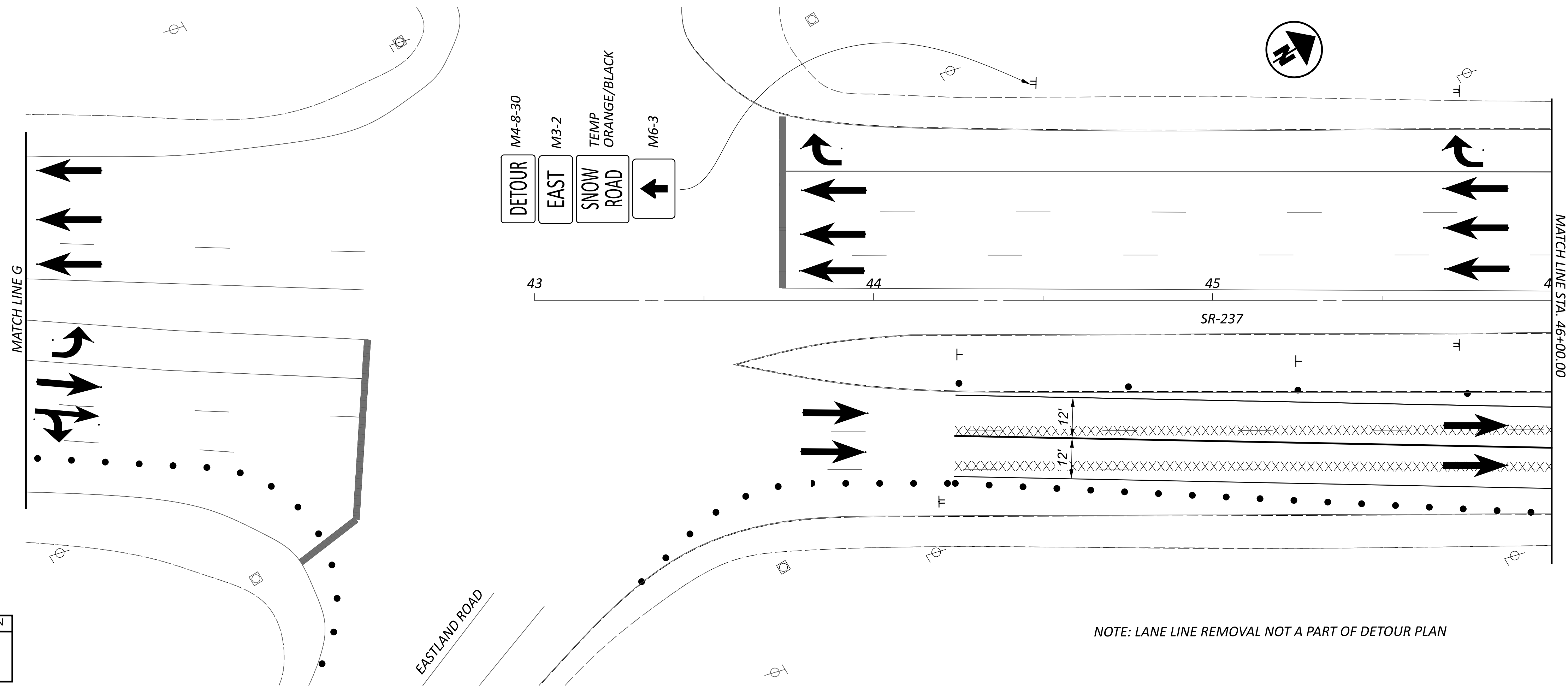


DESIGN AGENCY

DESIGNER: TAS  
 REVIEWER: JMB  
 PROJECT ID: 114522  
 SHEET: P.47E TOTAL: 120



APPENDIX	NUMBER	DATE	DESCRIPTION
▲	11/26/2024	ADDED MOT SHEET	



DETOUR - SNOW ROAD CLOSURE  
 STA. 35+50 TO STA. 46+00

DESIGN AGENCY

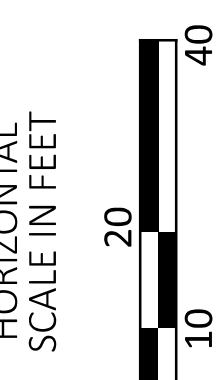


DESIGNER  
 TAS

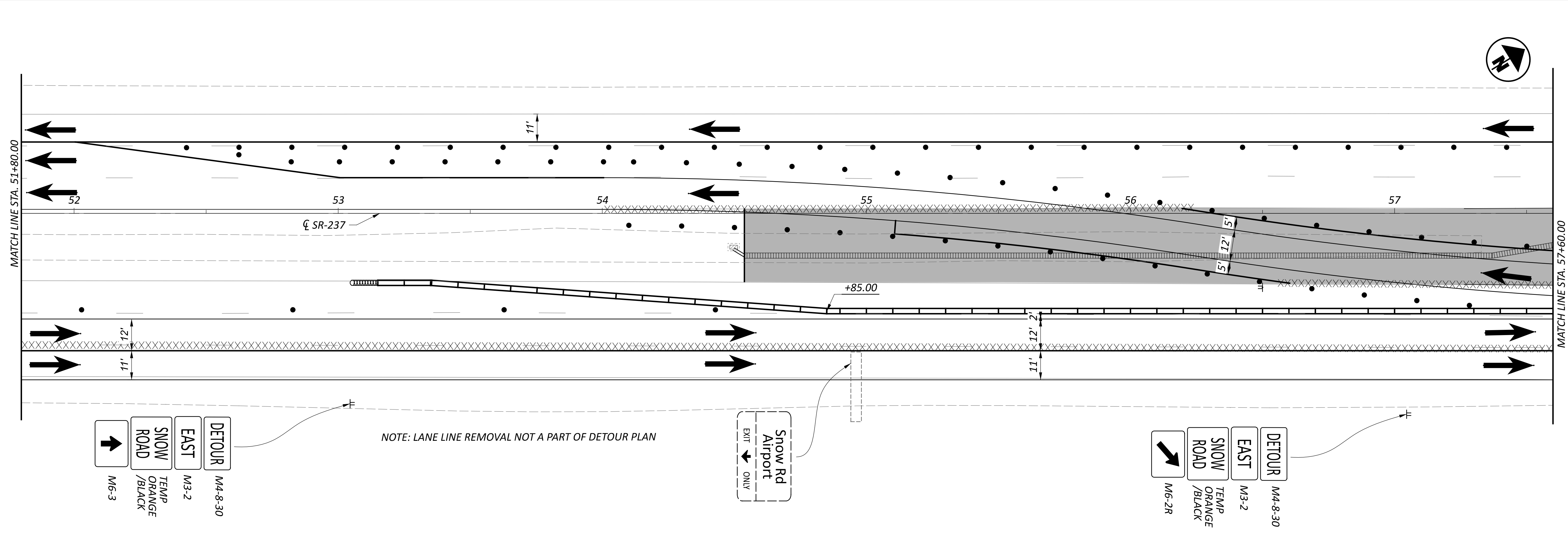
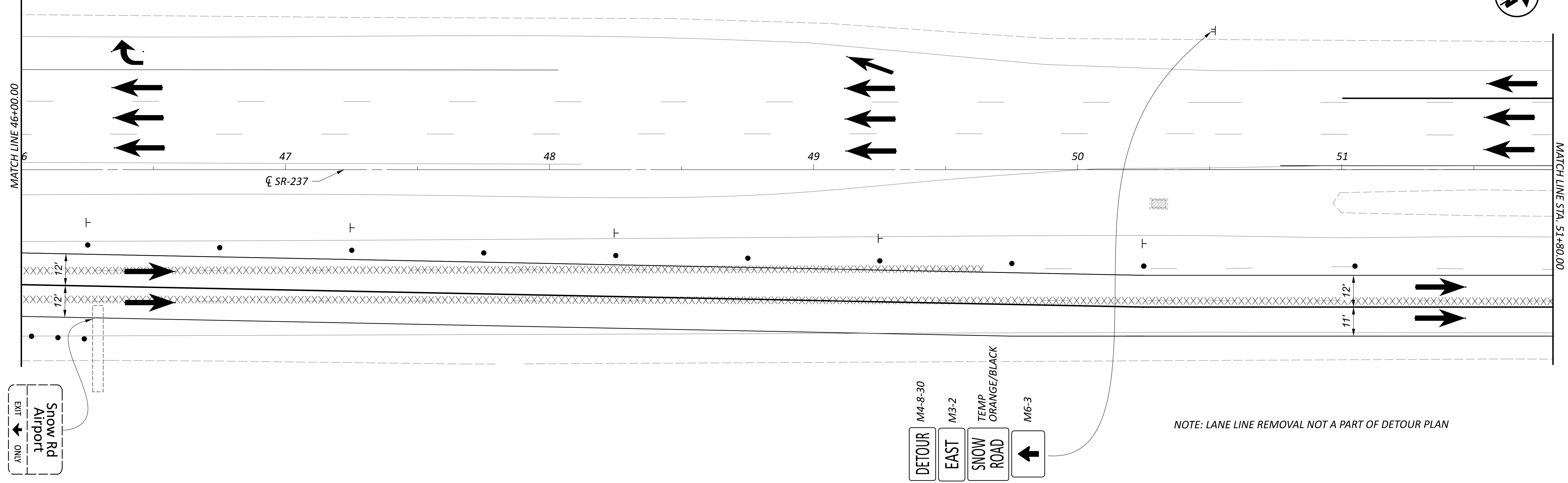
REVIEWER  
 JMB 01-29-24

PROJECT ID  
 114522

SHEET TOTAL  
 P.47F 120



ADDENDUM	NUMBER	DATE	DESCRIPTION
▲	▲	11/26/2024	ADDED MOT SHEET



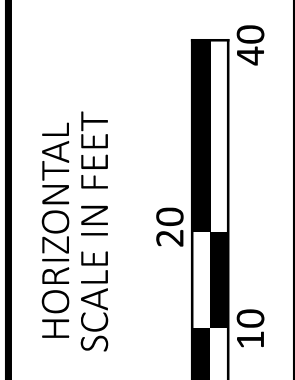
M4-8-30  
M3-2  
M6-3  
DETOUR  
EAST  
SNOW ROAD

NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN

M6-3  
M4-8-30  
M3-2  
DETOUR  
EAST  
SNOW ROAD

NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN

M6-2R  
M4-8-30  
M3-2  
DETOUR  
EAST  
SNOW ROAD



**DETOUR - SNOW ROAD CLOSURE**  
 STA. 46+00 TO STA. 57+60

DESIGN AGENCY



DESIGNER

TAS

REVIEWER

JMB 01-29-24

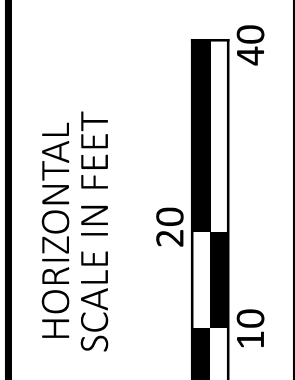
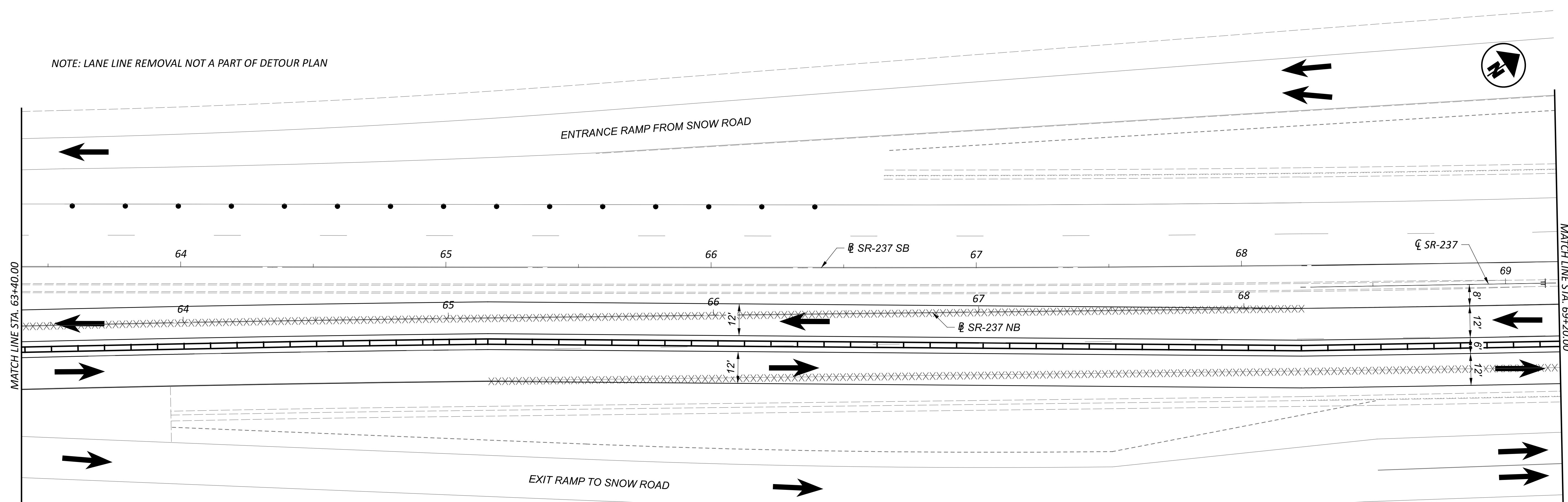
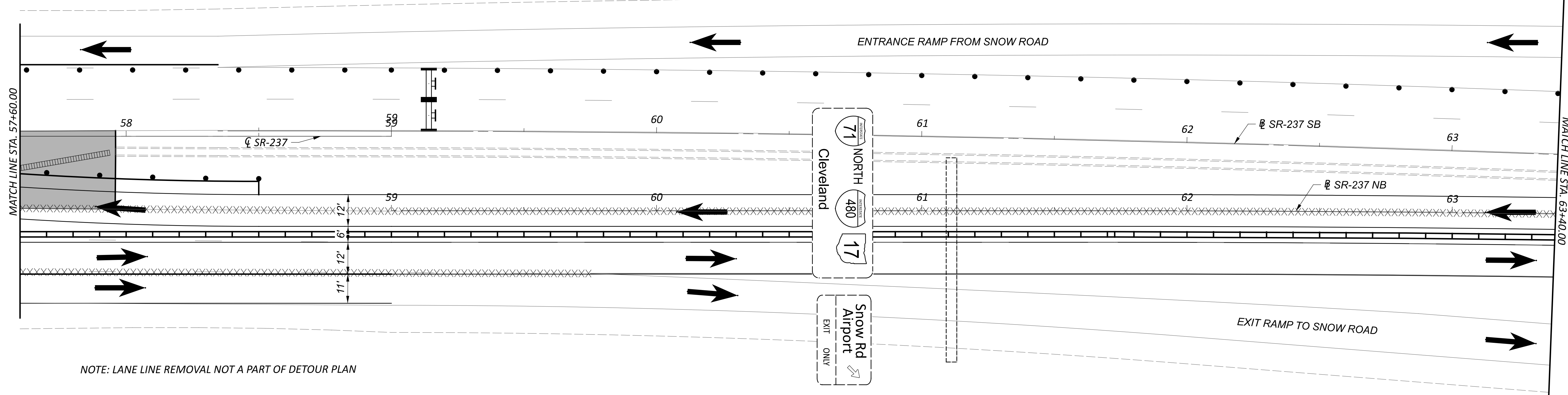
PROJECT ID

114522

SHEET TOTAL

P.47G 120

APPENDIX	NUMBER	DATE	DESCRIPTION
▲	▲	11/26/2024	ADDED MOT SHEET



**DETOUR - SNOW ROAD CLOSURE**  
 STA. 57+60 TO STA. 69+20

DESIGN AGENCY



DESIGNER  
TAS

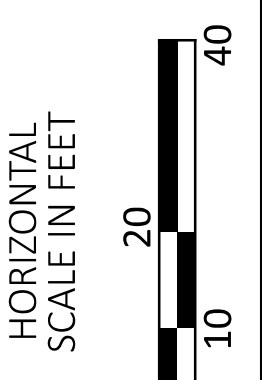
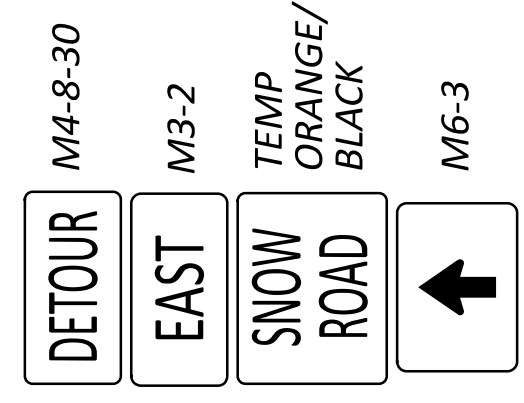
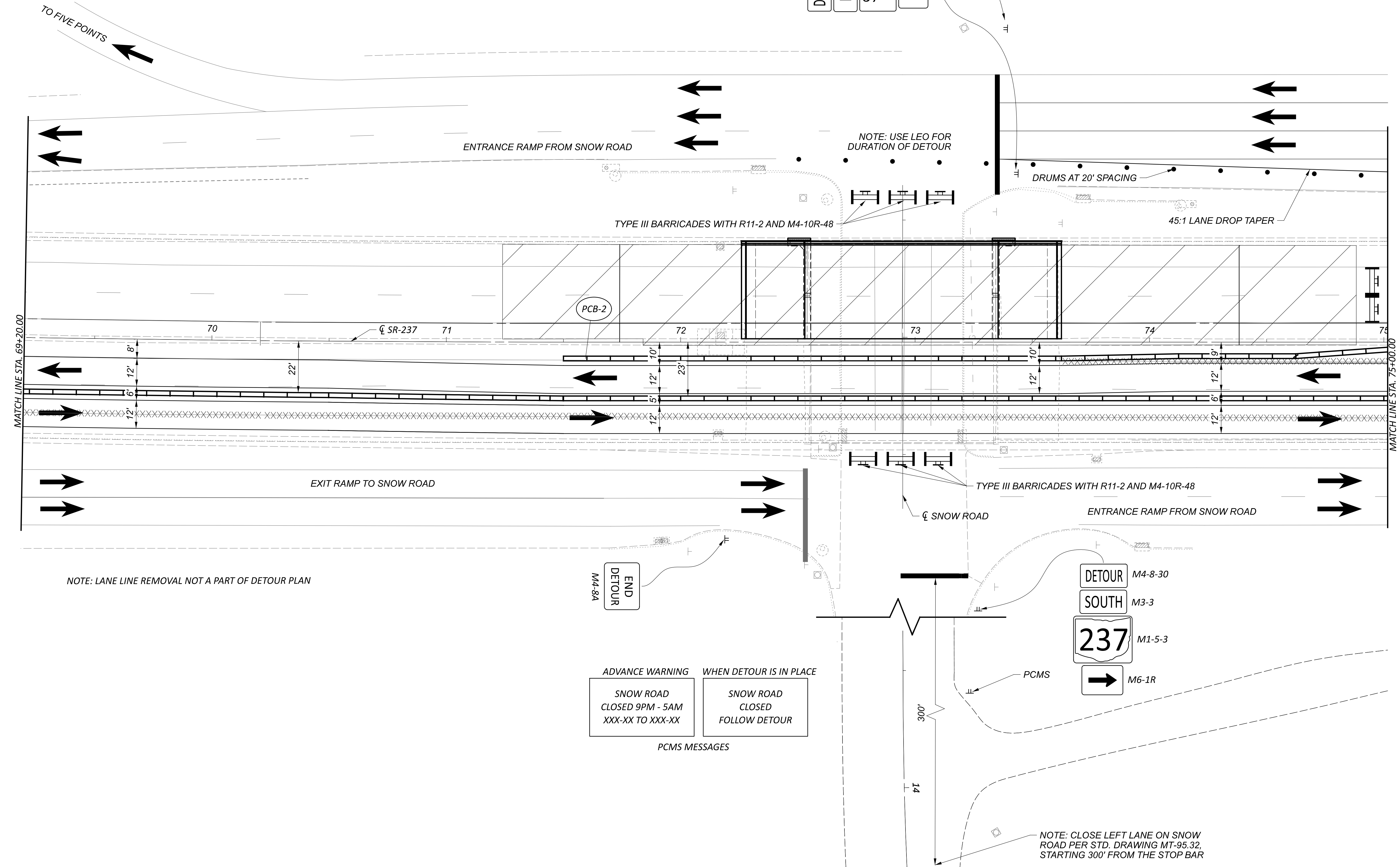
REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET	TOTAL
P.47H	120



ADDENDUM	NUMBER	DATE	DESCRIPTION
▲		11/26/2024	ADDED MOT SHEET



DETOUR - SNOW ROAD CLOSURE  
 STA. 69+20 TO STA. 75+00

DESIGN AGENCY



DESIGNER  
TAS

REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET TOTAL  
P.471 120

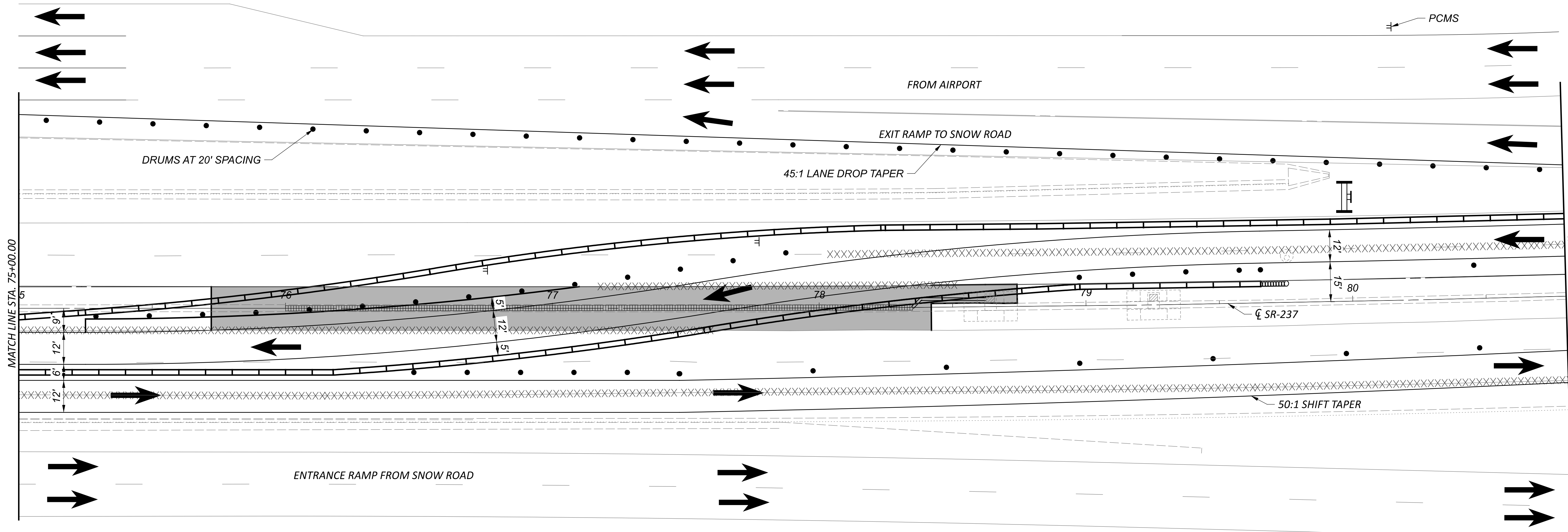
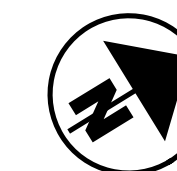


APPENDIX	NUMBER	DATE	DESCRIPTION
▲	▲	11/26/2024	ADDED MOT SHEET



ADVANCE WARNING	WHEN DETOUR IS IN PLACE
SNOW ROAD CLOSED 9PM - 5AM XXX-XX TO XXX-XX	SNOW ROAD CLOSED FOLLOW DETOUR

PCMS MESSAGES



NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN

DETOUR - SNOW ROAD CLOSURE  
 STA. 75+00 TO STA. 80+80

DESIGN AGENCY



DESIGNER

TAS

REVIEWER

JMB 01-29-24

PROJECT ID

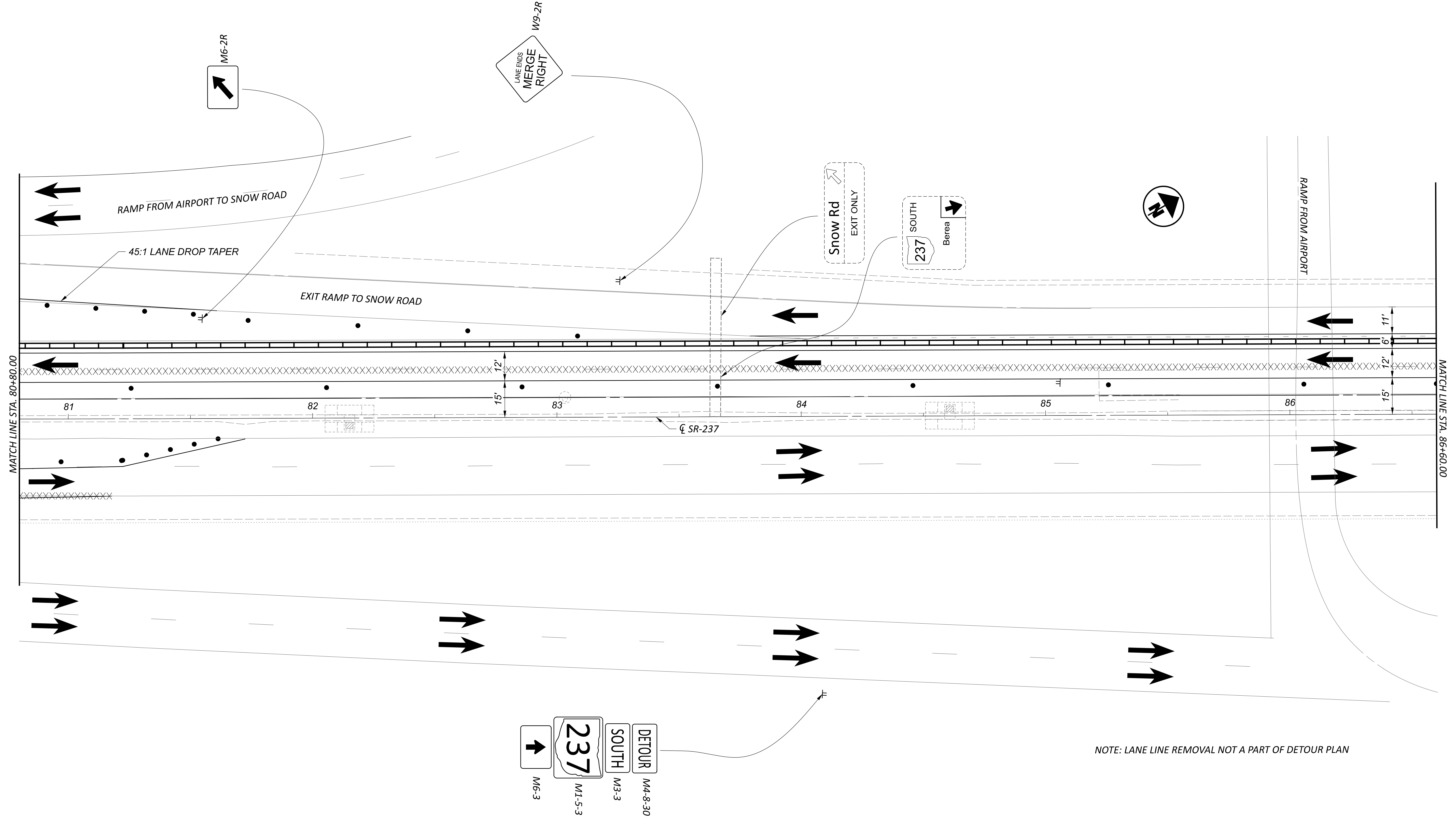
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SHEET TOTAL

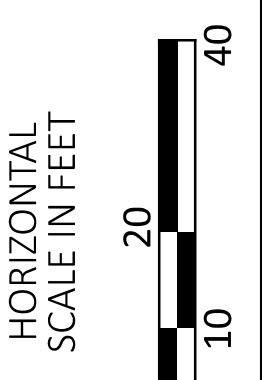
P.47J 120



APPENDIX	NUMBER	DATE	DESCRIPTION
△	△	11/26/2024	ADDED MOT SHEET



NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN



**DETOUR - SNOW ROAD CLOSURE**  
**STA. 80+80 TO STA. 86+60**

DESIGN AGENCY



DESIGNER  
TAS

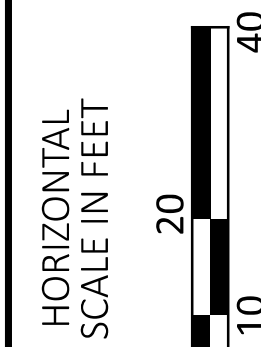
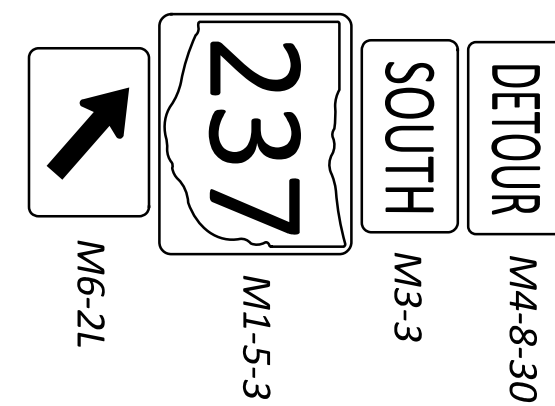
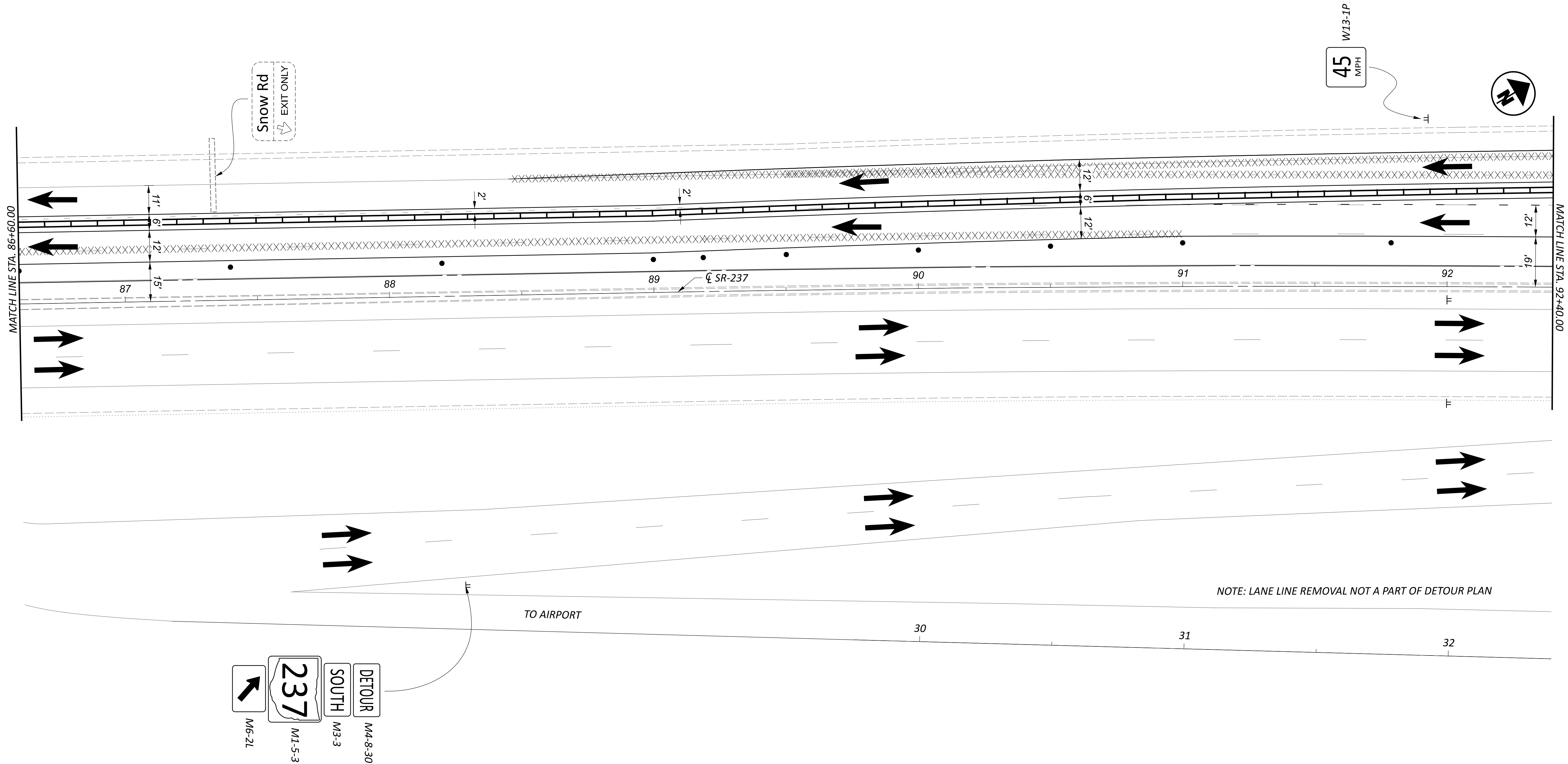
REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET	TOTAL
P.47K	120



ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	ADDED MOT SHEET



DETOUR - SNOW ROAD CLOSURE  
 STA. 86+60 TO STA. 92+40

DESIGN AGENCY



DESIGNER

TAS

REVIEWER

JMB 01-29-24

PROJECT ID

114522

SHEET TOTAL

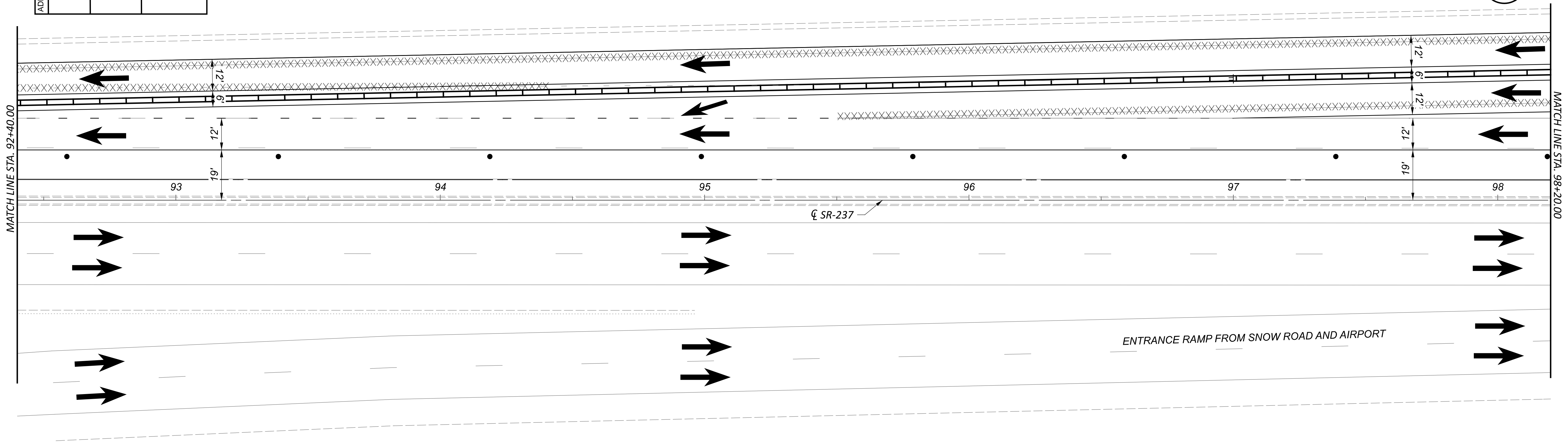
P.47L 120



CUY-237-06.95

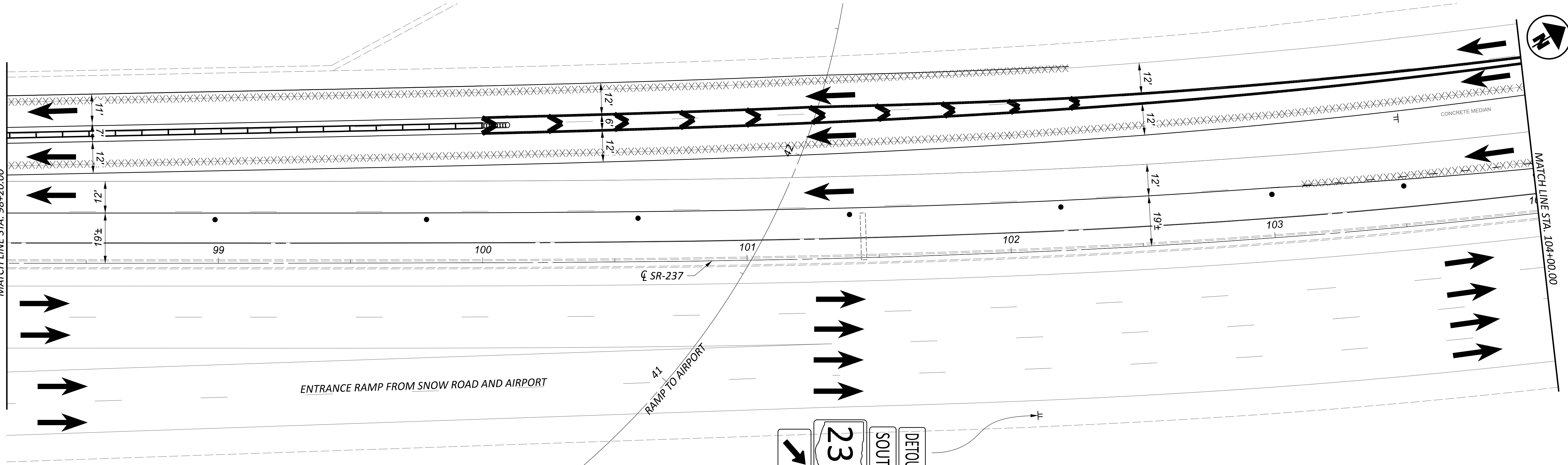
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APPENDIX	NUMBER	DATE	DESCRIPTION
▲	▲	11/26/2024	ADDED MOT SHEET



ENTRANCE RAMP FROM SNOW ROAD AND AIRPORT

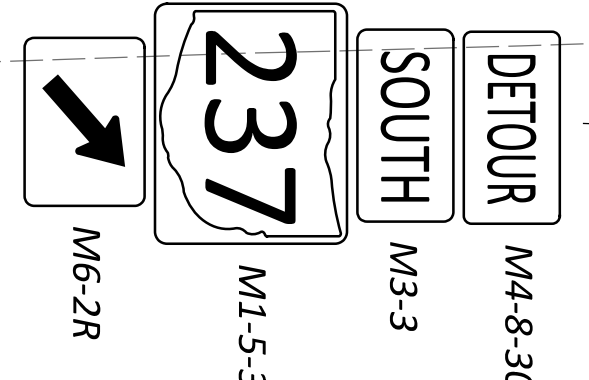
NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN



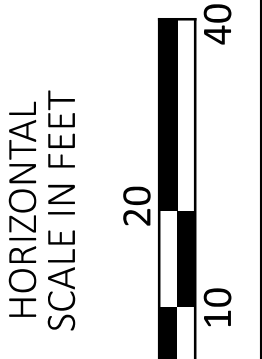
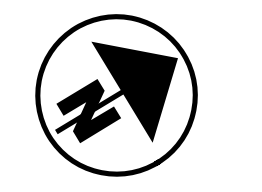
ENTRANCE RAMP FROM SNOW ROAD AND AIRPORT

RAMP TO AIRPORT

CONCRETE MEDIAN



NOTE: LANE LINE REMOVAL NOT A PART OF DETOUR PLAN



**DETOUR - SNOW ROAD CLOSURE**  
STA. 92+40 TO STA. 104+00

DESIGN AGENCY



DESIGNER

TAS

REVIEWER

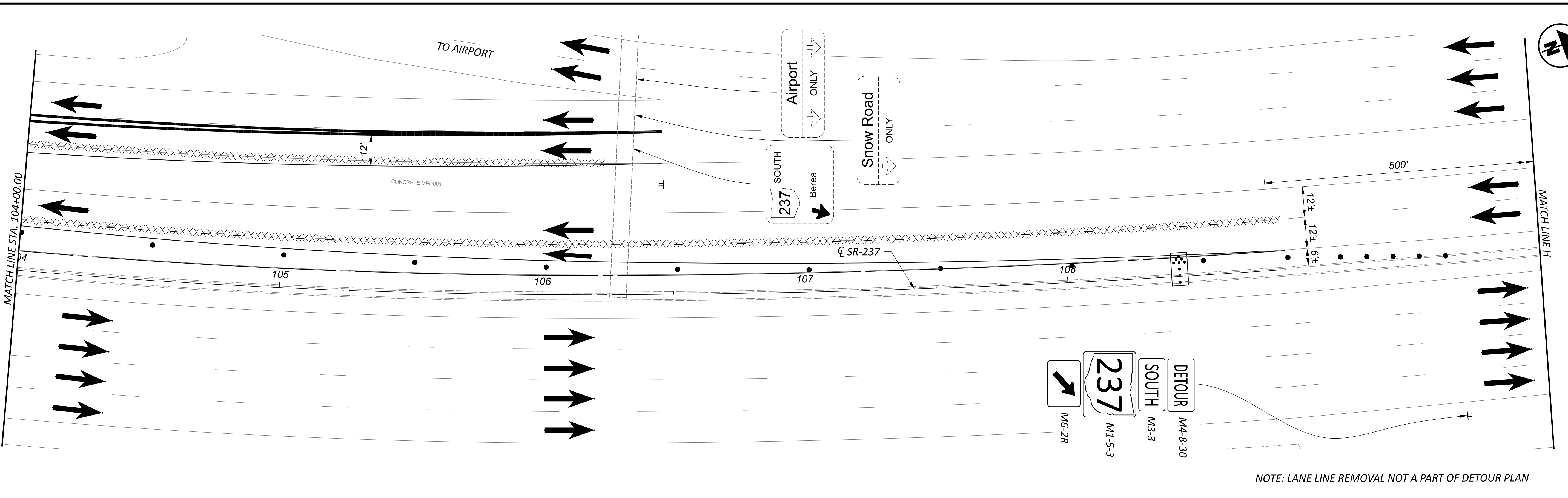
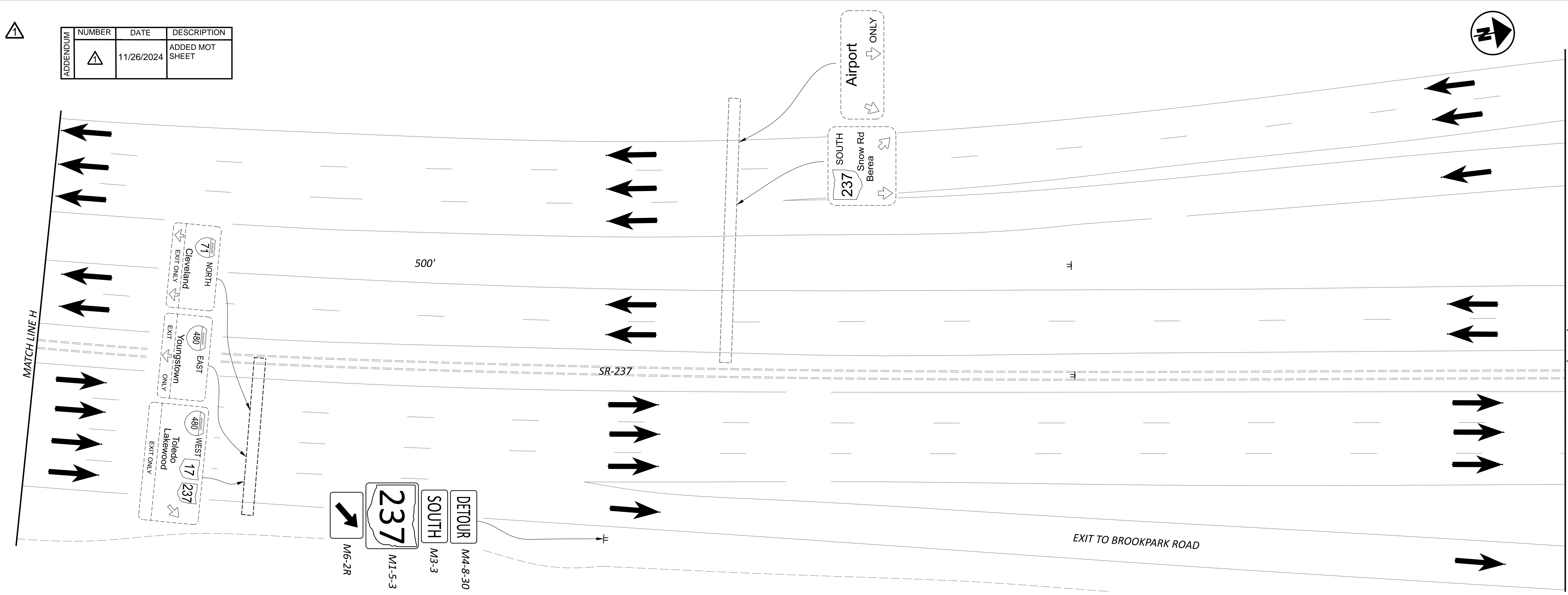
JMB 01-29-24

PROJECT ID

114522

SHEET TOTAL

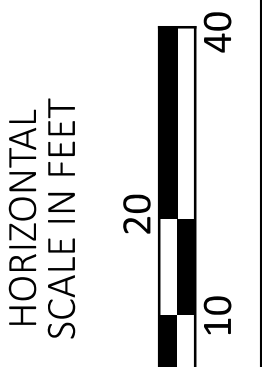
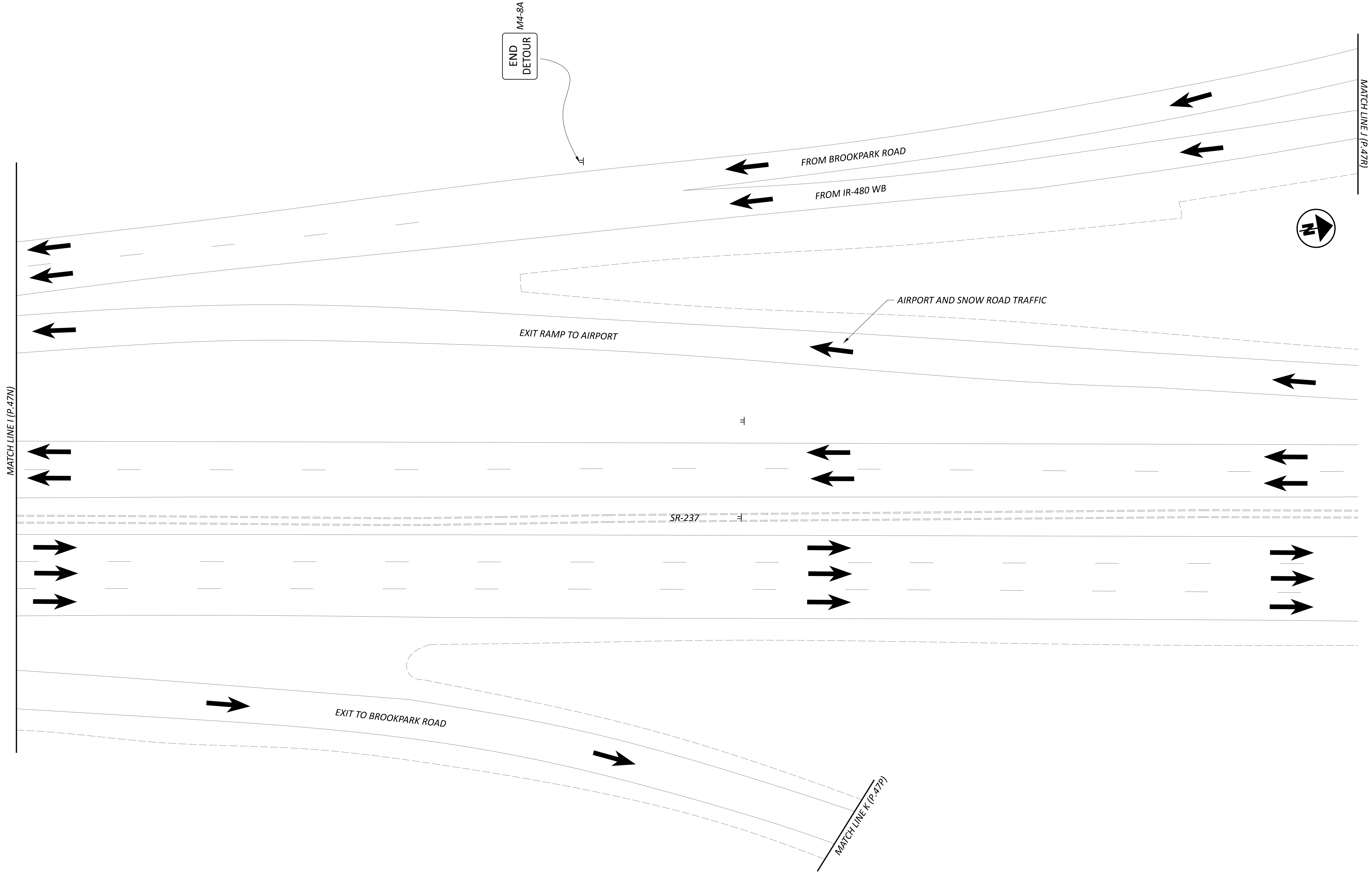
P.47M 120



ADDENDUM	NUMBER	DATE	DESCRIPTION
▲		11/26/2024	ADDED MOT SHEET



ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	ADDED MOT SHEET



DETOUR - SNOW ROAD CLOSURE

DESIGN AGENCY

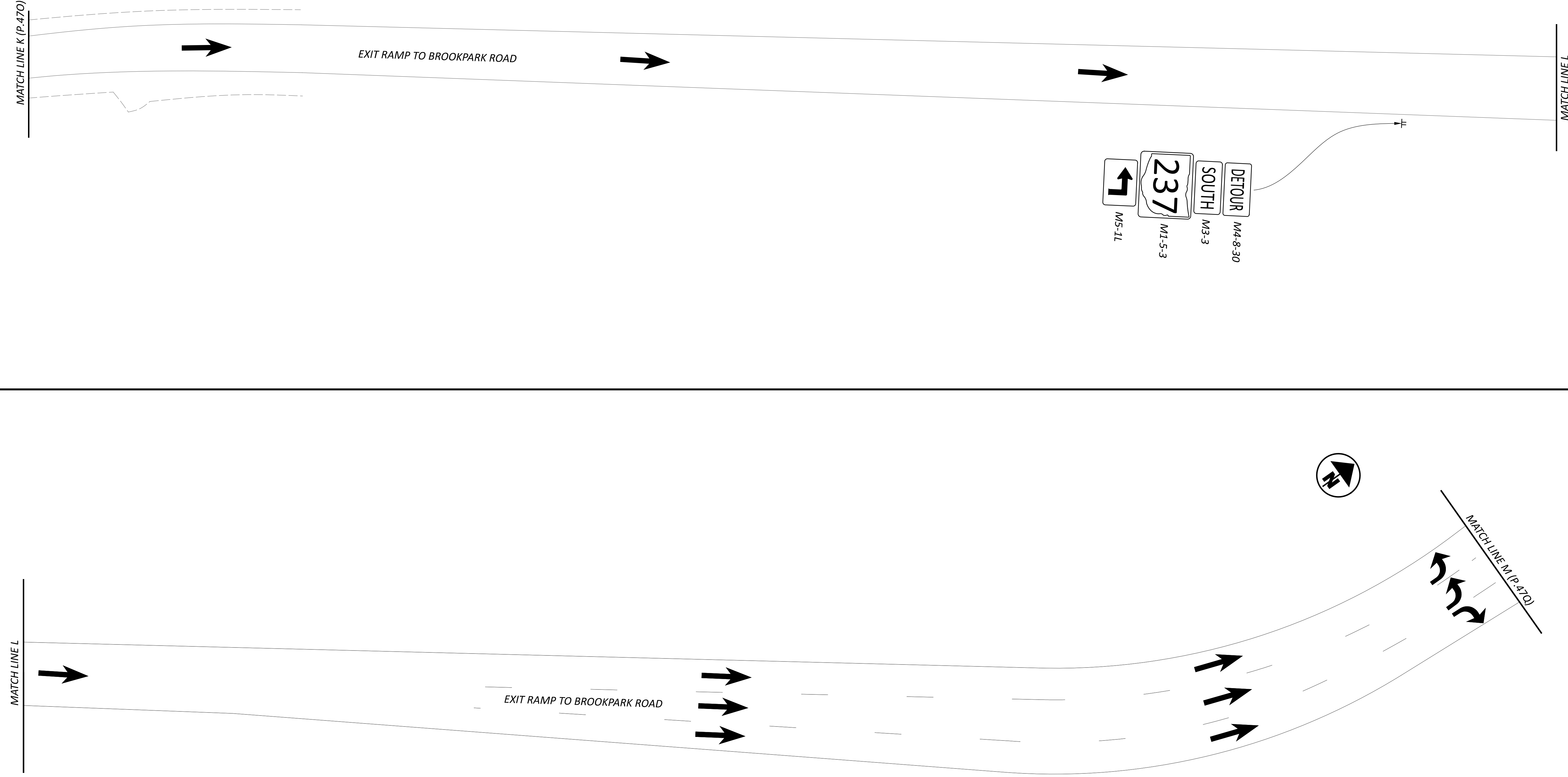


DESIGNER  
TAS

REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

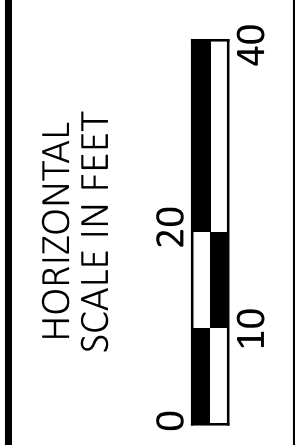
SHEET TOTAL  
P.470 120



ADDENDUM	NUMBER	DATE	DESCRIPTION
▲	▲	11/26/2024	ADDED MOT SHEET

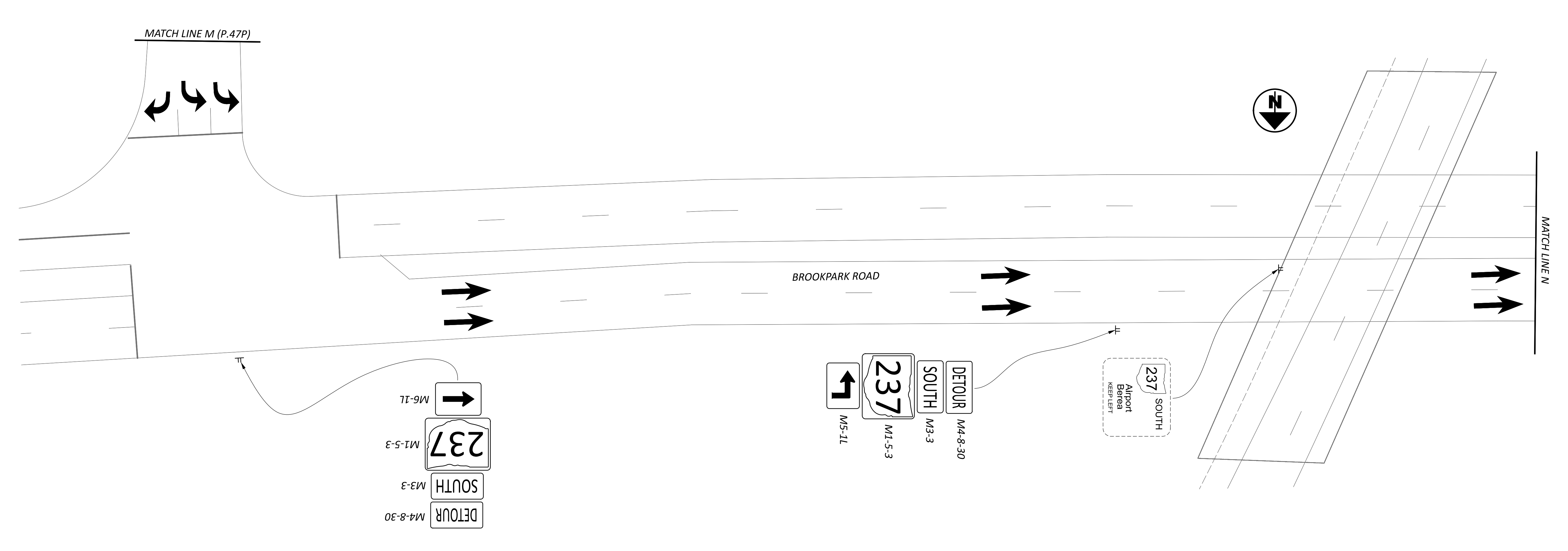
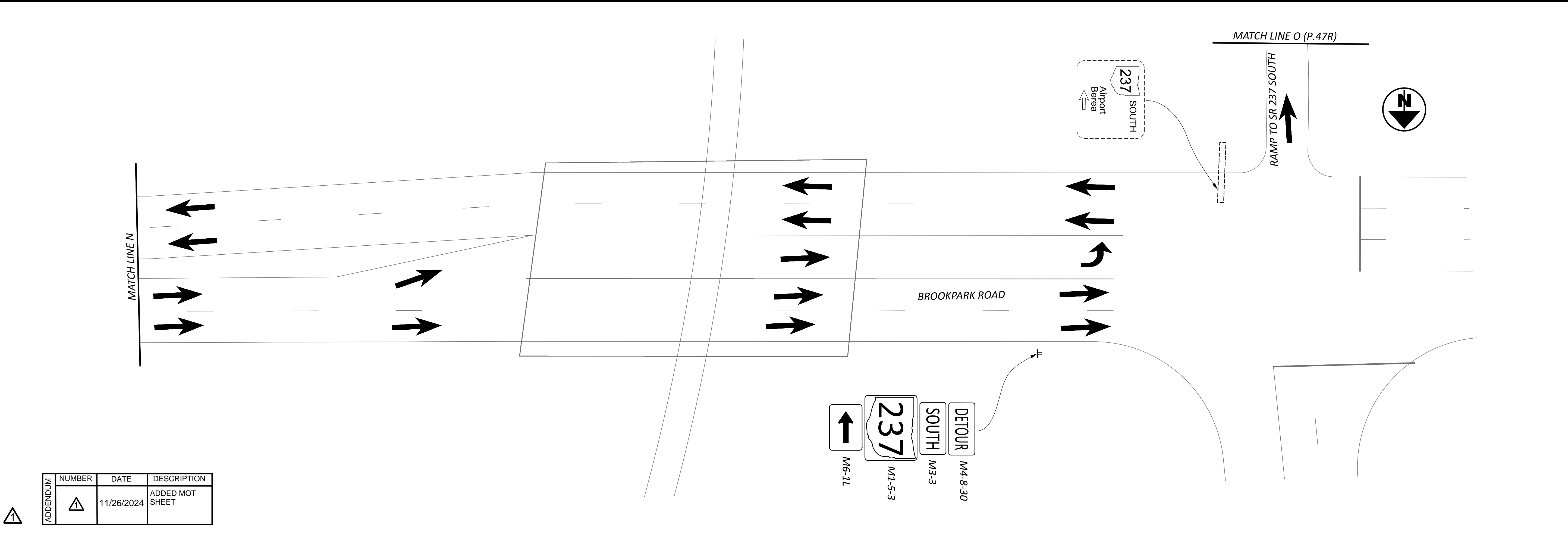
DESIGN AGENCY	
<b>PATRICK</b>	
DESIGNER	TAS
REVIEWER	JMB
PROJECT ID	01-29-24
SHEET	114522
TOTAL	120

DETOUR - SNOW ROAD CLOSURE



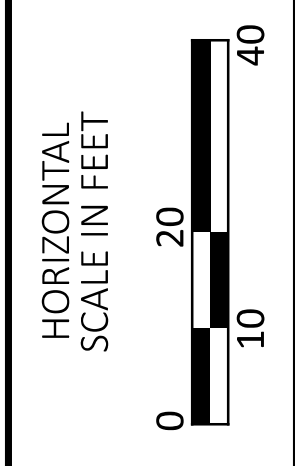


ADDENDUM	NUMBER	DATE	DESCRIPTION
▲		11/26/2024	ADDED MOT SHEET



DESIGN AGENCY	<b>PATRICK</b>
DESIGNER	TAS
REVIEWER	JMB
PROJECT ID	01-29-24
SHEET	114522
TOTAL	120

DETOUR - SNOW ROAD CLOSURE

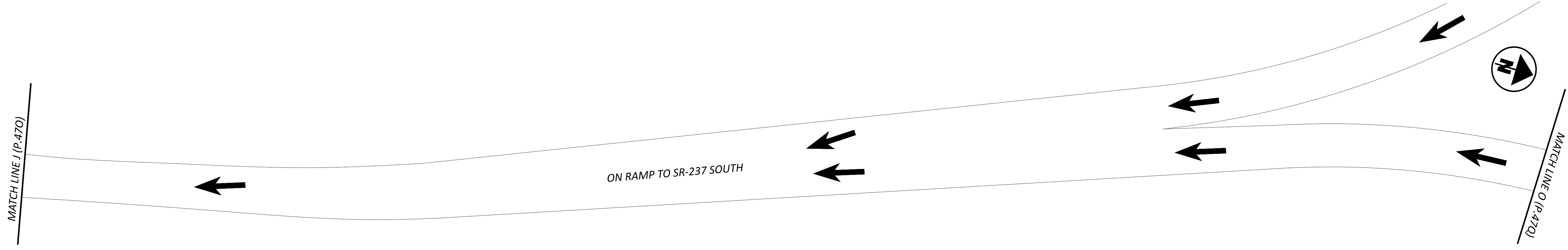


CUY-237-06.95

MODEL: CUY-237 MOT - Phase 1\_16NEW PAPER SIZE: 34x22 (in.) DATE: 11/26/2024 TIME: 11:50:53 AM USER: dtroyer  
pw:\patrickco-pw\benley.com\patrickco-pw-07\Documents\ODOT\_CUY-237-0695\400-Engineering\MOT\Sheets\Jm\114522\_MF1001MB.dgn



ADDENDUM	NUMBER	DATE	DESCRIPTION
	▲	11/26/2024	ADDED MOT SHEET



DESIGN AGENCY



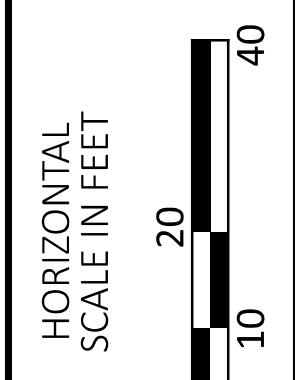
DESIGNER  
TAS

REVIEWER  
JMB 01-29-24

PROJECT ID  
114522

SHEET	TOTAL
P.47R	120

DETOUR - SNOW ROAD CLOSURE







SHEET NUM.						PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
6	8	9	10	11	12	01/BRO/13	EXT	TOTAL					
											<b>RETAINING WALLS (MSE)</b>		
											MSE WALL ESTIMATED QUANTITIES	112	
											<b>STRUCTURE OVER 20 FOOT SPAN (CUY-237-06.95)</b>		
											STRUCTURE CUY-237-0695 ESTIMATED QUANTITIES	85	
											<b>MAINTENANCE OF TRAFFIC</b>		
	2,131						2,131	254	01000	2,131	SY	PAVEMENT PLANING, ASPHALT CONCRETE, (1.5" DEPTH)	
	192						192	407	20000	192	GAL	NON-TRACKING TACK COAT	
	89						89	442	22101	89	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, PG76-22M	8
				584			584	611	97400	584	FT	CONDUIT, MISC.: 12" SLOTTED DRAIN, TYPE (1 OR 2)	11
			80				80	614	11110	80	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	9,441						9,441	614	11630	9,441	FT	INCREASED BARRIER DELINEATION	
	5				12		17	614	12380	17	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
							LS	614	12420	LS		DETOUR SIGNING	
			7				7	614	12484	7	EACH	WORK ZONE INCREASED PENALTIES SIGN	
		4					4	614	12756	4	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
				725			725	614	12800	725	EACH	WORK ZONE RAISED PAVEMENT MARKER	
	183						183	614	13310	183	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
	183						183	614	13360	183	EACH	OBJECT MARKER, TWO WAY	
			32				32	614	18601	32	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	9
					6.04		6.04	614	22326	6.04	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 873	
					3,677		3,677	614	23130	3,677	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 873	
					1,447		1,447	614	24122	1,447	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 873	
					109		109	614	28000	109	FT	WORK ZONE GORE MARKING, CLASS II	
	1,600						1,600	615	20000	1,600	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
	1.46						1.46	618	40600	1.46	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
	3,760						16,437	622	41011	16,437	FT	PORTABLE BARRIER, 50", AS PER PLAN	9
							1	625	31600	1	EACH	PULL BOX, MISC.: ADJUST TO GRADE	6
							224	630	80224	224	SF	SIGN, OVERHEAD EXTRUSHEET	
							16	630	80300	16	SF	SIGN, TEMPORARY OVERLAY	
							77	630	83000	77	SF	COVERING OF SIGN	
							3	630	87400	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
							2	630	89894	2	EACH	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL	
							2	646	10000	2	MILE	EDGE LINE, 4", (740.06)	
											<b>INCIDENTALS</b>		
							LS	614	11000	LS		MAINTAINING TRAFFIC	8
							15	619	16011	15	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	6
							LS	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	6
							LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	ADDED AND UPDATED QUANTITIES

DESIGN AGENCY  
  
 DESIGNER  
 DJT  
 REVIEWER  
 JMB 02-01-24  
 PROJECT ID  
 114522  
 SHEET TOTAL  
 P. 51 | 120



REF NO.	SHEET NO.	STATION TO STATION		202	202	202	203	204	601	606	622	622	622	622	622	622	626	626
				SY	FT	SY	CY	SY	SY	SY	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH
		TO																
	55	71+73.97	72+25.94	463.92														
	55	73+62.44	74+38.25	676.73														
R-1	55	71+25.94	72+25.94		100.00													
R-2	55	73+62.44	78+42.44		480.00													
R-3	58	10+58.50	11+50.80			128												
R-4	58	10+54.50	11+50.50			133												
SP1	58	10+58.50	11+50.80						128									
SP2	58	10+54.50	11+50.50						133									
B-1	55	71+25.94	72+25.94								22.00		1			2		6
B-2	55	73+62.44	78+42.44								414.00		1			2		14
B-3	57	64+12.52	65+47.52		120.00							120.00						3
B-4	57	76+91.54	78+51.54		145.00							145.00						3
B-5	56	66+73.28	66+85.28											1				
B-6	56	77+90.00								1								
	4	71+25.94	71+73.97				3.56											
	4	71+73.97	72+27.94				86.12	516.73										
	4	72+27.94	72+52.94				39.89	239.36										
	4	73+35.44	73+60.44				39.89	239.36										
	4	73+60.44	74+38.25				124.16	744.99										
	4	74+38.25	75+72.16				9.92											
	4	75+72.16	78+42.44					480.5										
	4	78+42.44	78+74.23															
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				1141	845	261	304	2221	261	1	436	265	2	1	4	2	20	6



ROADWAY SUBSUMMARY

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	ADDED QUANTITIES

DESIGN AGENCY  
  
 DESIGNER  
 DJT  
 REVIEWER  
 JMB 01-29-24  
 PROJECT ID  
 114522  
 SHEET TOTAL  
 P. 52 | 120

STATION RANGE	TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	254	302	304	407	442	442													
							PAVEMENT PLANING, ASPHALT CONCRETE, 3" SY	ASPHALT CONCRETE BASE, PG64-22, (449) CY	AGGREGATE BASE CY	NON-TRACKING TACK COAT GAL	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, PG76-22M CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (449) CY													
TO																									
MAINLINE CUY-237																									
71+23.97	71+73.97	LT	50.00	40.01	222.28		222.28						66.68	9.26	9.26										
		RT	50.00	40.01	222.28		222.28						66.68	9.26	9.26										
71+25.94	71+73.97	CNTR	48.03	4.00	21.35			3.56																	
71+73.97	72+27.94	CNTR	53.97	86.17	516.73			129.18	86.12	310.04	21.53	21.53													
72+27.94	72+52.94	CNTR	25.00	86.17	239.36				39.89																
73+35.44	73+60.44	CNTR	25.00	86.17	239.36				39.89																
73+60.44	74+38.25	CNTR	77.81	86.17	744.99			186.25	124.16	446.99	31.04	31.04													
74+38.25	75+72.16	CNTR	133.91	4.00	59.52				9.92																
74+38.25	74+88.25	LT	50.00	40.01	222.28		222.28						66.68	9.26	9.26										
		RT	50.00	40.01	222.28		222.28						66.68	9.26	9.26										
75+72.16	78+42.44	CNTR	270.28	12.00	360.37			90.09	60.06	216.22	15.02	15.02													
78+42.44	78+74.23	LT	31.79	6.00	21.19			5.30	3.53	12.72	0.88	0.88													
<b>SUBTOTALS</b>							889.11		410.82	367.15	1252.71	105.52	105.52												
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>							890		411	368	1253	106	106												

PAVEMENT SUBSUMMARY

ADDENDUM	NUMBER	DATE	DESCRIPTION
	1	11/26/2024	UPDATED QUANTITIES

DESIGN AGENCY  
  
 DESIGNER  
 DJT  
 REVIEWER  
 JMB 01-29-24  
 PROJECT ID  
 114522  
 SHEET TOTAL  
 P. 53 | 120



MADE BY: JH	12/22/2023
CHECKED BY: SAP	12/22/2023

PARTICIPATION 01/BRO/13	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ESTIMATED QUANTITIES				SEE SHEET NO.
						WALL 1	WALL 2	WALL 3	WALL 4	
LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	LS	LS	LS	LS	2/10
36257	509	10000	36257	LB	EPOXY COATED STEEL REINFORCEMENT	10000	12547	6089	7621	
313	509	30020	313	FT	NO. 4 DEFORMED GFRP REINFORCEMENT	0	0	0	313	
4016	510	10000	4016	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	1100	1380	670	866	
145	511	34450	145	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	40	50	24	31	
3827	512	10100	3827	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	903	1410	569	945	
252	512	10601	252	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN	18	12	144	78	2/10
284	516	13200	284	SF	1/2" PREFORMED EXPANSION JOINT FILLER	79	99	47	59	
174	519	11101	174	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	6	112	24	32	2/10
10	613	41201	10	CY	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN				10	2/10
24	626	00102	24	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	5	8	5	6	
LS	690	98400	LS		SPECIAL - GROUND PENETRATING RADAR				LS	2/10
149	843	50000	149	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	12	9	39	89	

1

1

REVISION	NUMBER	DATE	DESCRIPTION
	1	11/26/24	REVISED PAY ITEM AND NOTES

**GENERAL NOTES**

SEE STRUCTURE PLANS FOR ADDITIONAL GENERAL NOTES.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04.

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

**ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:**

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

**ITEM 512, CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN**

REPAIR CONCRETE CRACKS ON EXISTING ABUTMENT WALLS AS SHOWN ON THE PLAN, AND ANY CRACKS DESIGNATED BY THE ENGINEER ACCORDING TO ODOT CMS 512.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL NECESSARY EQUIPMENT TO INSPECT THIS WORK. THE DEPARTMENT WILL MEASURE THE REPAIRED CRACKS BY THE NUMBER OF FEET.

THE ESTIMATED QUANTITIES OF CONCRETE REPAIR BY EPOXY INJECTION SHOWN ON THIS SHEET HAS BEEN INCREASED BY 20% TO ACCOUNT FOR FUTURE DETERIORATION.

**ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN**

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

THE ESTIMATED QUANTITY OF PATCHING REQUIRED IS BASED ON FIELD MEASUREMENTS OF ABOVE GROUND DETERIORATION. A 20% INCREASED QUANTITY IS ALSO INCLUDED IN THE ESTIMATED QUANTITIES FOR CONTINGENCY AND FUTURE DETERIORATION.

1

**ITEM 690, SPECIAL - GROUND PENETRATING RADAR**

CONTRACTOR TO PROVIDE A GROUND PENETRATING RADAR (GPR) SUBCONSULTANT TO PERFORM NON-DESTRUCTIVE EXPLORATORY WORK TO IDENTIFY VOIDS, IF ANY, BENEATH THE NORTHBOUND RIGHT-HAND LANE AND SHOULDER MOMENT SLAB (MSE WALL #4). RESULTS OF THE GPR EXPLORATION SHALL BE PROVIDED TO ODOT FOR REVIEW. EXPLORATION TO BE PERFORMED ONCE WORK IN PHASE 2 WORK ON THE STRUCTURE IS COMPLETE, BUT PRIOR TO THE PLACEMENT OF THE ASPHALT.

STATION LIMITS FOR THE GPR EXPLORATION SHALL BE STA 73+42.69 TO STA 77+85.02

PAYMENT WILL BE MADE ON A LUMP SUM BASIS FOR SPECIAL - GROUND PENETRATING RADAR.

**ITEM 613, LOW STRENGTH MORTAR BACKFILL, AS PER PLAN**

A CONTINGENCY QUANTITY HAS BEEN ASSUMED FOR THE FILLING OF VOIDS IDENTIFIED IN THE GPR EXPLORATION.

CONTRACTOR SHALL CORE SUFFICIENT HOLES IN PAVEMENT AND MOMENT SLAB TO PERMIT PLACEMENT AND VENTING OF LOW STRENGTH MORTAR (LSM). A MINIMUM OF 1 PUMPING CORE AND 1 VENTING CORE SHALL BE PERFORMED AT EACH IDENTIFIED VOID. ADDITIONAL CORES TO BE PLACED AT THE DIRECTION OF THE ENGINEER. PAVEMENT CORING AND PATCHING OF THE PAVEMENT AND MOMENT SLAB SHALL BE INCIDENTAL TO THIS ITEM.

CORE HOLES SHALL BE BACKFILLED WITH QC 1 CONCRETE.

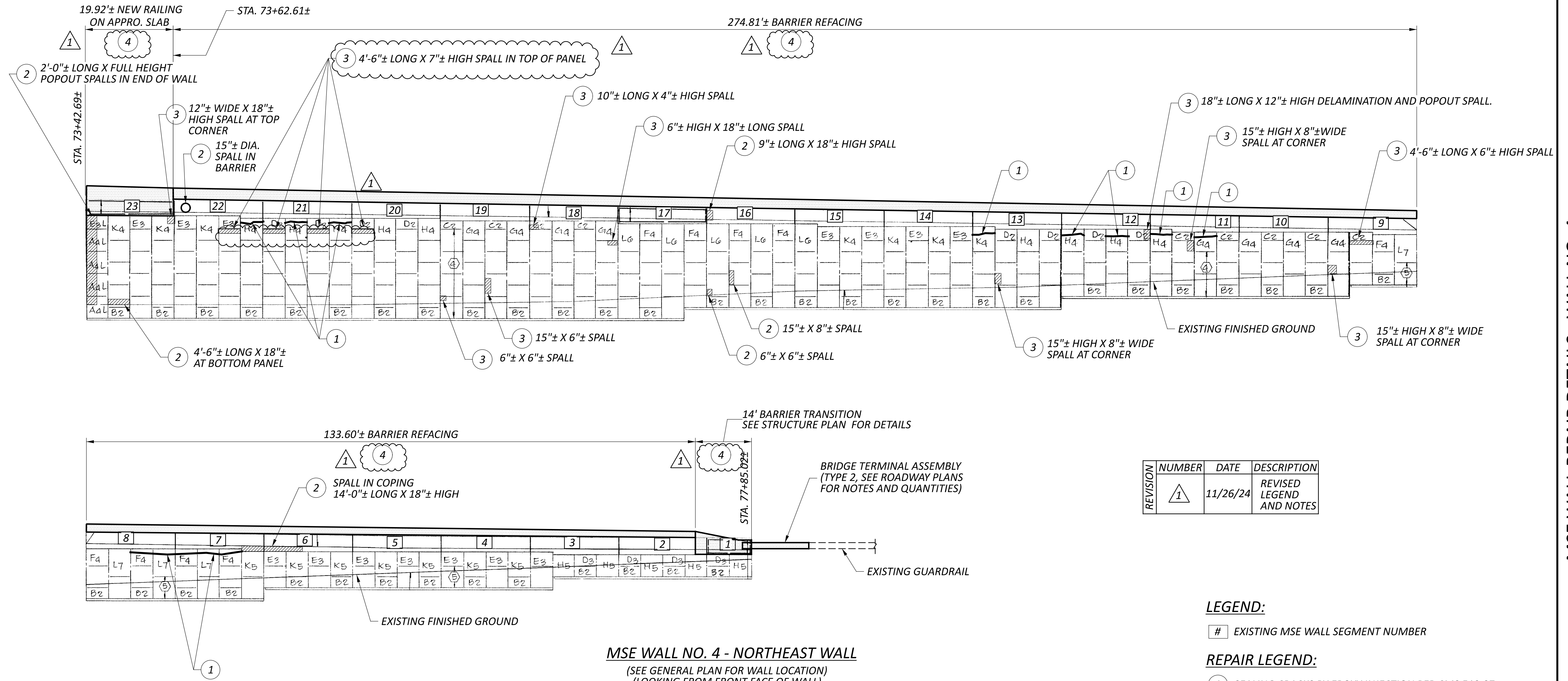
CONTRACTOR SHALL PUMP AND PLACE SUFFICIENT LSM IN IDENTIFIED VOIDS THAT LSM EXPRESSES OUT OF ADJACENT VENT HOLES.

THIS OPERATION SHALL BE PERFORMED PRIOR TO THE PLACEMENT OF THE 442 SURFACE COURSE.

PAYMENT WILL BE MADE ON A CY BASIS FOR LOW STRENGTH MORTAR BACKFILL, AS PER PLAN.

SFN	N/A
DESIGN AGENCY	
<b>PATRICK</b>	
DESIGNER	CHECKER
JH	SAP
REVIEWER	
BMG 11-25-24	
PROJECT ID	
114522	
SUBSET	TOTAL
2	10
SHEET	TOTAL
P.112	120





**MSE WALL NO. 4 - NORTHEAST WALL**  
 (SEE GENERAL PLAN FOR WALL LOCATION)  
 (LOOKING FROM FRONT FACE OF WALL)

CONCRETE REPAIR BY EPOXY INJECTION		CONCRETE PATCHING PER SS843	
SEGMENT #	LENGTH (FT.)	SEGMENT #	AREA (SF)
7	15	9	4
8	10	11	1
11	10	12	2
12	10	13	1
13	5	16	1
21	10	18	1
22	5	19	1
TOTAL	65	20	3
		21	6
		22	5
		23	49
		TOTAL	74

CONCRETE PATCHING PER CMS519	
SEGMENT #	AREA (SF)
6	14
7	8
16	2
22	2
TOTAL	26

REVISION	NUMBER	DATE	DESCRIPTION
1	1	11/26/24	REVISED LEGEND AND NOTES

- LEGEND:**
- # EXISTING MSE WALL SEGMENT NUMBER
- REPAIR LEGEND:**
- 1 SEALING CRACKS BY EPOXY INJECTION PER CMS 512.07
  - 2 PATCHING CONCRETE SURFACES PER CMS 519
  - 3 PATCHING CONCRETE WITH TROWELABLE MORTAR PER SS843
  - 4 SEAL ENTIRE EXPOSED MSE WALL AND BARRIER WITH EPOXY-URETHANE SEALER

- NOTES:**
- SEE 1/10 FOR EXISTING WALL AND PROPOSED RAILING REFACING LIMITS.
  - THE MSE WALL ELEVATION VIEW IMAGES SHOWN ARE TAKEN FROM THE EXISTING 1986 MSE WALL CONSTRUCTION PLANS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
  - SEE TYPICAL MSE WALL COPING REPAIR DETAILS AND NOTES ON SHEET 3/10.
  - SEE NOTES ON SHEET 2/10 FOR GROUND PENETRATING RADAR EXPLORATION AND LOW STRENGTH MORTAR REPAIRS.

**MSE WALL REPAIR DETAILS - WALL NO. 4**  
**BRIDGE NO. CUY-237-06.95**  
**S.R. 237 OVER SNOW ROAD**

SFN	N/A
DESIGN AGENCY	<b>PATRICK</b>
DESIGNER	CHECKER
JH	SAP
REVIEWER	
BMG	11-25-24
PROJECT ID	114522
SUBSET	TOTAL
6	10
SHEET	TOTAL
P.116	120