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SUMMARY OF QUANTITIES				
BASE BID				
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	AS-BUILT QUANTITY
C100	CONTRACTOR QUALITY CONTROL PROGRAM	LS	1	
C102-5.1F	DANDY BAG CURB INLET PROTECTION	LF	15	
C105	MOBILIZATION	LS	1	
P101-5.6	COLD MILLING - 4"	SY	1200	
P101-5.7	REMOVE SLOTTED DRAIN	LF	200	
P101-5.8	REMOVE 6" UNDERDRAINS	LF	360	
P101-5.8a	REMOVE 6" VIT FOOTER DRAINS	LF	360	
P101-5.9	CONCRETE WEARING SURFACE REMOVAL - 4"	SY	700	
P101-5.10a	REPAIR OF STRUCTURAL SLAB TYPE A	SY	60	
P101-5.10b	REPAIR OF STRUCTURAL SLAB TYPE B	SY	60	
P101-5.10c	REPAIR OF STRUCTURAL SLAB TYPE C	SY	30	
D705-5.4	6" PIPE UNDERDRAIN - COMPLETE INCLUDING BACKFILL AND FILTER FABRIC	LF	180	
D705-5.5	6" SOLID PIPE UNDERDRAINS, COMPLETE, INCLUDING P-153 BACKFILL	LF	350	
D751-5.3	BOX INLETS	LF	200	
D751-5.4	INSPECTION HOLES	EA	8	
MC-003-6.1	TEMPORARY CONSTRUCTION ITEMS	LS	1	
MC-004-6.1	4" CONCRETE WEARING SLAB	SY	700	
MC-005-5.1	TUNNEL WATERPROOFING SYSTEM REMOVAL	SY	1100	
MC-005-5.2	TUNNEL WATERPROOFING SYSTEM INSTALLATION	SY	1100	
MC-005-5.3	REMOVAL AND DISPOSAL OF CLASS II ASBESTOS, PER PLAN	SY	1100	
MC-006-5.1	10" CONCRETE WALK REMOVED AND RECONSTRUCTED	SY	180	
MC-090-5.1	MECHANICAL ROOM WALL REPAIR	SF	40	
MC-090-5.2	REMOVAL OF EXISTING ELECTRICAL SERVICE	LS	1	
MC-091-5.1	SEWER CLEANING AND CCTV	LF	400	
MC-091-5.2	FLOOR SLAB REMOVAL AND REPLACEMENT	SF	400	
L-109-7.4	INSTALLATION OF EQUIPMENT IN EXISTING VAULT	EACH	1	
407-1	TACK COAT	GAL	82	
407-2	TACK COAT FOR INTERMEDIATE COURSE	GAL	44	
446-1	1" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG-22	CY	12	
446-2	VARIES 1"-3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG-22	CY	36	
516-1	3/4" PREFORMED EXPANSION JOINT FILLER	LF	200	
516-2	1/2" PREFORMED EXPANSION JOINT FILLER	LF	250	
516-3	1" PREFORMED EXPANSION JOINT FILLER	LF	200	
516-4	JOINT SEALER	LF	2000	
519	PATCHING CONCRETE STRUCTURE	SF	200	
642-2	LANE LINE, TYPE 2, 8" WIDE	SF	2000	

A-3

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A-3	03/19/24	SHEET INDEX & QUANTITIES REVISED	MSI
Revisions	Date	Description	By

**CLEVELAND HOPKINS
INTERNATIONAL AIRPORT
CLEVELAND, OHIO**

Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title SHEET INDEX AND SUMMARY OF QUANTITIES			
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Date: FEBRUARY 2024		Sheet: C-2	



**Michael Baker
INTERNATIONAL**

PROJECT DESCRIPTION:

THIS PROJECT CALLS FOR THE REMOVAL AND REPLACEMENT OF THE WATERPROOFING MEMBRANE COVERING THE RTA CONNECTOR/COLLECTOR TUNNEL. THE EXISTING MEMBRANE IS A MULTILAYERED SYSTEM CONSISTING OF WATERPROOFING MEMBRANES, FIBER REINFORCEMENT, AND PROTECTIVE SHEETS. THE REPLACEMENT INCLUDES THE FOLLOWING ITEMS:

- REMOVAL AND REPLACEMENT OF THE EXISTING MEMBRANE SYSTEM
- REMOVAL AND REPLACEMENT OF ASSOCIATED UNDERDRAINS
- THE REMOVAL AND REPLACEMENT OF THE SLOT DRAINS WITH BOX INLET DRAINS AS PER PLAN.
- THE PROJECT WILL REPAIR THE DAMAGE TO THE RTA CONNECTOR/COLLECTOR MECHANICAL ROOM WALL, INCLUDING THE RELOCATION OF THE ELECTRICAL SERVICE PANELS TO ELECTRICAL VAULT, EV-6.
- ALL OTHER ITEMS REQUIRED IN THE PROJECT DOCUMENTS.

GENERAL NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS AND ANY RULES, REGULATIONS, STANDARDS OR SPECIFICATIONS REFERENCED THEREIN. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE CITY OF CLEVELAND AND OTHER GOVERNING AGENCIES.
2. CLEVELAND HOPKINS INTERNATIONAL AIRPORT WILL BE IN OPERATION DURING THE CONSTRUCTION OF THIS PROJECT. COORDINATION OF WORK WITH AIRPORT AUTHORITIES IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS, BOTH ON AND OFF THE AIRFIELD.
3. EXISTING AND PROPOSED GRADES – EXISTING GRADES SHOWN ON THE DRAWINGS ARE BELIEVED TO BE ACCURATE, BUT THE CITY OF CLEVELAND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THESE GRADES. IF THE CONTRACTOR DOES NOT CONCUR WITH THE ELEVATIONS GIVEN ON THE DRAWINGS, THEY SHALL NOTIFY THE RESIDENT PROJECT REPRESENTATIVE IN WRITING PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITIES.
4. THE WORK AREA SHALL BE PROPERLY SECURED AT THE END OF EACH WORKING DAY TO PREVENT VEHICLES AND PEOPLE FROM ENTERING THE SITE. CONTRACTOR SHALL PREVENT UNAUTHORIZED ACCESS TO THE PROJECT SITE DURING WORKING AND NON WORKING HOURS. ANY COSTS FOR TEMPORARY GATES, SECURITY PERSONNEL, OR OTHER MISCELLANEOUS ITEMS REQUIRED TO PROVIDE A SECURE ENVIRONMENT SHALL BE AT THE CONTRACTORS EXPENSE.
5. PERMITS – THE CONTRACTOR MUST OBTAIN PROPER PERMITS FROM THE CITY OF BROOKPARK AND CLEVELAND TO USE THEIR ROADS FOR DELIVERY OF MATERIALS AND EQUIPMENT TO THE SITE. ANY DAMAGE TO OFF-SITE ROADS SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR. ALSO SEE GENERAL CONDITIONS FOR OTHER PERMITTING REQUIREMENTS.
6. WASTE AREAS – ALL EXCESS EXCAVATED MATERIAL, UNSUITABLE MATERIAL AND PAVEMENT RUBBLE SHALL BE DISPOSED OF OFF AIRPORT PROPERTY UNLESS DESIGNATED FOR RECYCLING. THE CONTRACTOR SHALL FURNISH THE RESIDENT PROJECT REPRESENTATIVE WITH COPIES OF SIGNED OFF-SITE WASTE AREA PERMITS.
7. HAUL ROUTES – THE LOCATION OF HAUL ROUTES ON THE AIRPORT SITE SHALL BE COORDINATED WITH THE RESIDENT PROJECT REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS, OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE ROADS UTILIZED AS HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROADS SHALL BE JOINTLY INSPECTED AND DETERMINED BY THE RESIDENT PROJECT REPRESENTATIVE. FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE WORK. ALL ON-SITE ACCESS ROADS TO AIRPORT FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES.
8. MOBILIZATION/EQUIPMENT STORAGE AREA – AN AREA WILL BE MADE AVAILABLE FOR CONTRACTOR'S MOBILIZATION AND STORAGE AS INDICATED ON THE GENERAL PROJECT LAYOUT.
9. VEHICLES – NO PRIVATE VEHICLES ARE ALLOWED ON THE AIRPORT BEYOND THE DESIGNATED PARKING AREA. ALL VEHICLES OPERATING ON THE AIRPORT, EXCEPT CONSTRUCTION EQUIPMENT, MUST HAVE PROPER IDENTIFICATION SIGNS, AIRFIELD VEHICLE PERMITS, FAA APPROVED BEACONS, AND/OR FLAGS. ANY VEHICLE NOT ELIGIBLE FOR REGISTRATION TO OPERATE ON PUBLIC ROADWAYS SHALL BE CONSIDERED CONSTRUCTION EQUIPMENT. HAUL TRUCKS MUST HAVE COMPANY LOGO SIGNS, BEACONS, AND/OR FLAGS AND LIGHTS.
10. SAFETY – THE CONTRACTOR SHALL CONDUCT ACTIVITIES IN A SAFE MANNER AS SPECIFIED IN THE SAFETY/PHASING PLAN AND IN ACCORDANCE WITH FEDERAL AVIATION ADMINISTRATION (FAA) ADVISORY CIRCULAR 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION" CURRENT EDITION, AND TO CONTRACT SPECIFICATIONS.
11. PROTECTION AND REPAIR OF DAMAGE TO EXISTING CABLES – LOCATION OF KNOWN EXISTING AIRPORT UNDERGROUND CABLES ARE SHOWN ON PLANS AND MUST BE VERIFIED BY THE CONTRACTOR. REPAIR OF DAMAGED CABLE MUST BE STARTED IMMEDIATELY AND CONTINUED UNTIL COMPLETED. ALL SUCH REPAIRS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, OR AS DIRECTED BY THE OWNER OF THE CABLE, AND SHALL BE AT THE CONTRACTOR'S EXPENSE. IF FAA CABLES ARE DAMAGED, REPAIRS SHALL BE DONE FROM POINT TO POINT IN ACCORDANCE WITH FAA REQUIREMENTS AND IN THE PRESENCE OF AN FAA REPRESENTATIVE. THE OWNER MAY ELECT TO HAVE THE REPAIR PERFORMED BY OTHERS, IN WHICH CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE INCURRED COSTS OF REPAIRS.

GENERAL NOTES (CONT.):

12. CONSTRUCTION LIMITS – ALL CONTRACTOR VEHICLES AND TRAFFIC (UNLESS OTHERWISE AUTHORIZED) SHALL REMAIN WITHIN THE DESIGNATED LIMITS OR HAUL ROUTES.
13. COORDINATION MEETINGS – CLEVELAND AIRPORT SYSTEM PERSONNEL SHALL CONDUCT WEEKLY COORDINATION MEETINGS TO DISCUSS WORK AREAS, SCHEDULING, SAFETY, ETC. WITH THE RESIDENT PROJECT REPRESENTATIVE, AIRPORT OPERATIONS, AND OTHER APPROPRIATE OFFICIALS. MINUTES FROM THE WEEKLY MEETINGS SHALL BE PREPARED BY THE CLEVELAND AIRPORT PERSONNEL, FURNISHED TO ALL ATTENDEES PRIOR TO THE SUBSEQUENT MEETING, AND KEPT ON FILE AT THE FIELD OFFICE.
14. OTHER CONSTRUCTION PROJECTS – SEVERAL OTHER CONSTRUCTION PROJECTS WILL BE TAKING PLACE CONCURRENTLY WITH, AND IN SOME CASES DIRECTLY ADJACENT TO THIS PROJECT. CONTRACTOR IS REQUIRED TO COORDINATE, THROUGH THE RESIDENT PROJECT REPRESENTATIVE AND AIRPORT ENGINEER, WITH THOSE CONTRACTORS TO ELIMINATE CONFLICTS BETWEEN SCHEDULES, WORK AREAS, ACCESS AND OTHER POTENTIAL ISSUES.
15. UTILITIES & EXCAVATION – CONTACT NUMBERS FOR UTILITY LOCATIONS ARE AS FOLLOWS:

OHIO UTILITIES PROTECTION SERVICE (OUPS) 100 FEDERAL PLAZA EAST LOWER LEVEL YOUNGSTOWN, OHIO 44503 (800) 362-2764	CITY OF CLEVELAND WATER DEPARTMENT 1201 LAKESIDE AVENUE CLEVELAND, OHIO 44114 (216) 664-4444
DEPARTMENT OF PORT CONTROL CLEVELAND HOPKINS INTERNATIONAL AIRPORT 5300 RIVERSIDE DRIVE CLEVELAND, OHIO 44135 (216) 265-6007 (ELECTRICAL) (216) 265-6090 (AIRPORT OPERATIONS)	THE ILLUMINATING COMPANY 6896 MILLER RD. SUITE 209 BROOKSVILLE, OH 44141 GLENN PRYOR 440-717-5482 (800) 589-3101
(216) 265-6061 (AIRPORT ENGINEER) (216) 898-5207 (SECURITY) (216) 265-6080 (MECHANICAL)	EAST OHIO GAS 1201 EAST 55TH STREET CLEVELAND, OHIO 44103 MS. MARGARET BEVEL (216) 736-6831 (800) 362-7557
AMERITECH 11TH FLOOR 150 EAST GAY STREET COLUMBUS, OHIO 43215 (614) 223-5123	

16. CONCRETE TRUCK WASHOUT – CONCRETE TRUCK WASHOUT MAY BE IN DESIGNATED AIRPORT AREAS AS DIRECTED BY THE AIRPORT ENGINEER AND MUST COMPLY WITH SWP3. THE AREA(S) SHALL BE RESTORED TO ITS ORIGINAL CONDITION UPON COMPLETION OF THE PROJECT. IF, IN THE OPINION OF THE RESIDENT PROJECT REPRESENTATIVE, CONCRETE TRUCK WASHOUTS ARE NOT CONTAINED WITHIN THE DESIGNATED AREAS OR DISPOSAL PROCEDURES DO NOT COMPLETELY REMOVE WASHOUT MATERIALS FROM AIRPORT PROPERTY, THE CONTRACTOR SHALL MAKE SUITABLE ARRANGEMENTS FOR WASHOUTS OFF AIRPORT PROPERTY (SEE NOTE 6).
17. STRUCTURAL CONCRETE – ALL CONCRETE WORK ON THIS PROJECT SHALL BE CAST-IN-PLACE UNLESS OTHERWISE SHOWN ON PLANS. DRAINAGE AND ELECTRICAL STRUCTURES MAY BE PRECAST PROVIDED THAT THEY ARE PLACED ON AN APPROVED BASE AND THAT THE MANUFACTURER CERTIFIES THE PRECAST STRUCTURE WILL MEET THE STRUCTURAL DESIGN REQUIREMENTS. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL OF ALL REINFORCED CONCRETE STRUCTURES, AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO.
18. RADIOS – THE CONTRACTOR SHALL FURNISH RADIOS OR CELL PHONES TO ALL FLAG PERSONS, GATE SECURITY PERSONNEL AND TO ONE PERSON FROM AIRPORT OPERATIONS. THE FREQUENCY SHALL BE APPROVED BY THE RESIDENT PROJECT REPRESENTATIVE BUT CAN ONLY BE USED IN MAINTAINING THE SAFE OPERATION OF THE PROJECT. AS AN ALTERNATIVE GATE GUARDS AND FLAGGERS MAY BE ISSUED CELL PHONES. CELL PHONE NUMBERS SHALL BE GIVEN TO AIRPORT OPERATIONS.
19. MAINTENANCE OF TRAFFIC – TRAFFIC SHALL BE MAINTAINED ON ALL AIRPORT AND PUBLIC ROADS AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING WARNING SIGNS, FLAG PERSONS, BARRICADES, AND OTHER ITEMS AS REQUIRED IN ACCORDANCE WITH ODOT SECTION 614, MC-003, AND THE PROJECT DOCUMENTS.
20. WORK DONE CONTRARY TO THE INSTRUCTIONS OF THE ENGINEER, WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR AS GIVEN, EXCEPT AS HEREIN SPECIFIED, OR ANY EXTRA WORK DONE WITHOUT AUTHORITY, WILL BE CONSIDERED AS UNAUTHORIZED AND WILL NOT BE PAID FOR UNDER THE PROVISIONS OF THE CONTRACT. WORK SO DONE MAY BE ORDERED REMOVED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
21. UPON THE CONTRACTOR'S FAILURE TO COMPLY IMMEDIATELY WITH ANY ORDER OF THE RESIDENT PROJECT REPRESENTATIVE UNDER THE PROVISIONS OF THIS CONTRACT, THE RESIDENT PROJECT REPRESENTATIVE WILL HAVE AUTHORITY TO CAUSE UNACCEPTABLE WORK TO BE REMEDIED OR REMOVED AND REPLACED AND UNAUTHORIZED WORK TO BE REMOVED AND TO DEDUCT THE COSTS (INCURRED BY THE OWNER) FROM ANY MONIES DUE OR TO BECOME DUE THE CONTRACTOR.

GENERAL NOTES (CONT.):

22. CONTRACTOR TO FIELD VERIFY ALL EXISTING GROUND CONDITIONS AS SHOWN ON THE PLAN SHEETS. (SEE NOTE 3).

A-3

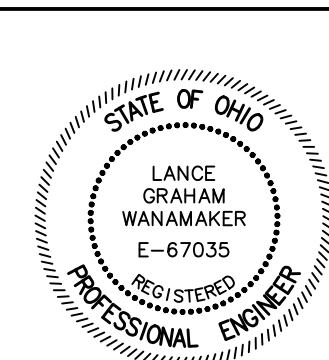
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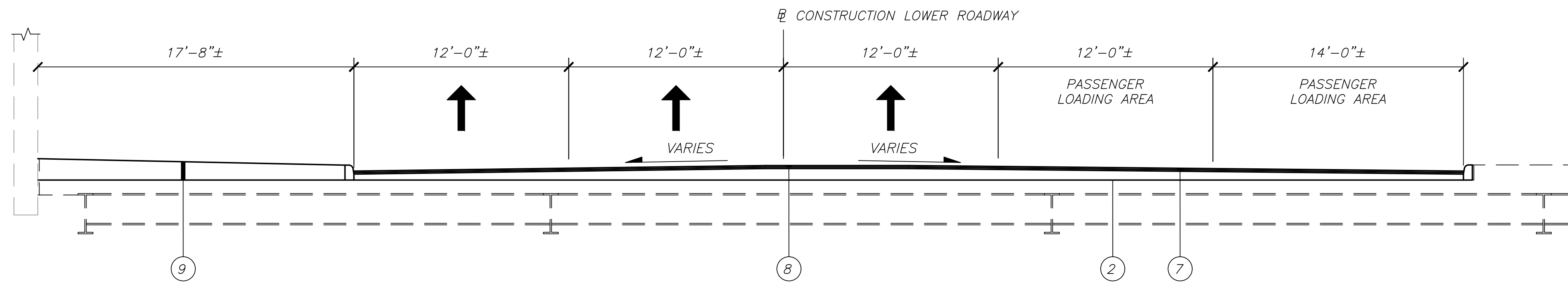
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A-3	03/19/24	NOTE REVISIONS	MSI
Revisions	Date	Description	By

**CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO**

Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title: GENERAL NOTES			
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Michael Baker INTERNATIONAL		Scale: AS SHOWN	Project No.: 198348
		Date: FEBRUARY 2024	Sheet: C-3

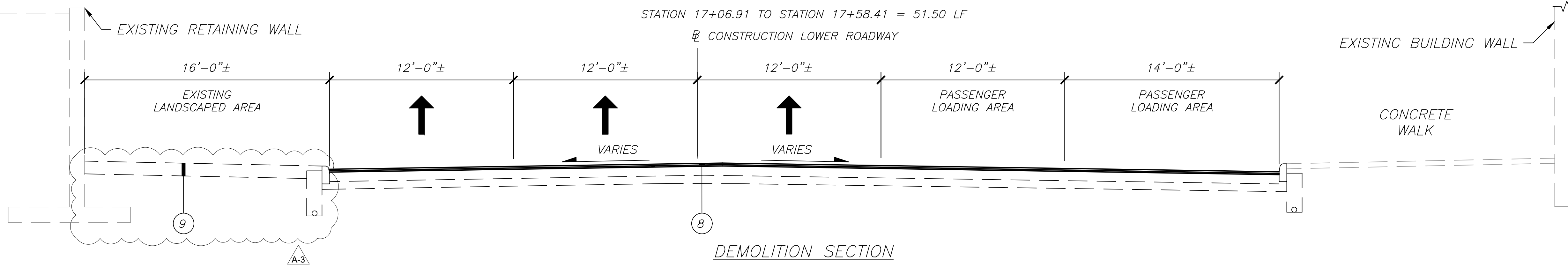




DEMOLITION SECTION AT TUNNEL

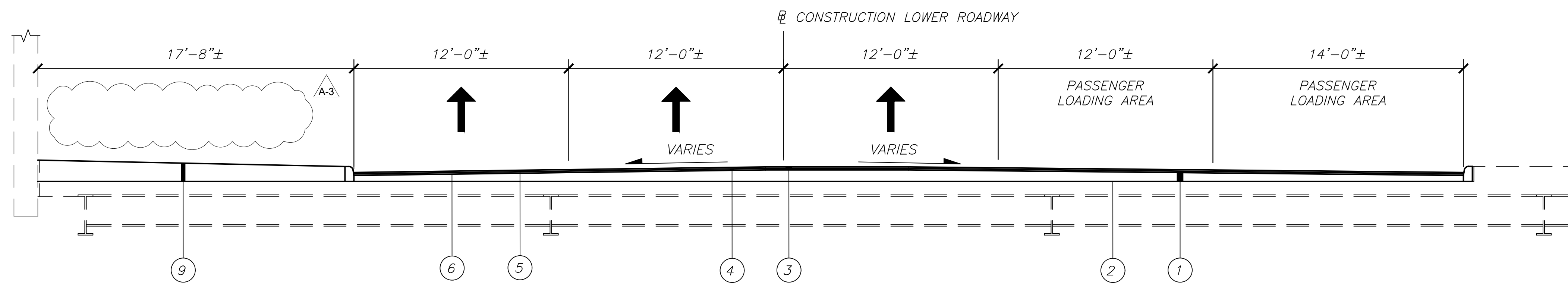
STATION 17+06.91 TO STATION 17+58.41 = 51.50 LF

CONSTRUCTION LOWER ROADWAY



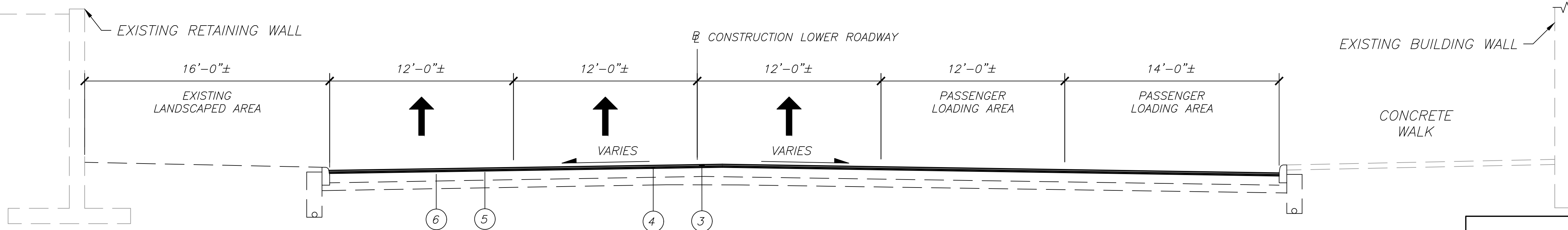
DEMOLITION SECTION

STATION 16+72.60 TO STATION 17+06.91 = 34.31 LF
STATION 17+58.41 TO STATION 17+93.38 = 34.97 LF



PROPOSED TYPICAL SECTION AT TUNNEL

STATION 17+06.91 TO STATION 17+58.41 = 51.50 LF



PROPOSED TYPICAL SECTION

STATION 16+72.60 TO STATION 17+06.91 = 34.31 LF
STATION 17+58.41 TO STATION 17+93.38 = 34.97 LF

DEMOLITION LEGEND

- ② MC-005 TUNNEL WATERPROOFING SYSTEM
- ⑦ P101 4" CONCRETE WEARING SURFACE REMOVAL
- ⑧ P101 3"± COLD MILLING
- ⑨ MC-006 10" CONCRETE WALK REMOVED AND RECONSTRUCTED

PROPOSED LEGEND

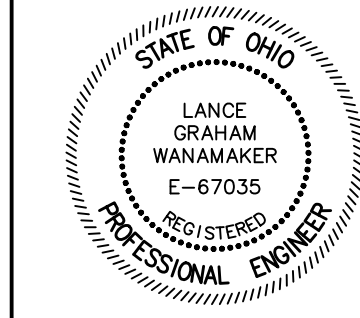
- ① MC-004 - 4" CONCRETE WEARING SLAB
- ② ITEM SPECIAL - TUNNEL WATERPROOFING SYSTEM
- ③ ITEM 448 - 1" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
- ④ ITEM 448 - VARIES 1"-3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
- ⑤ ITEM 407 - TACK COAT
- ⑥ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- ⑨ MC-006 - WALKWAY MISC.: 10" CONCRETE WALK REMOVED AND RECONSTRUCTED

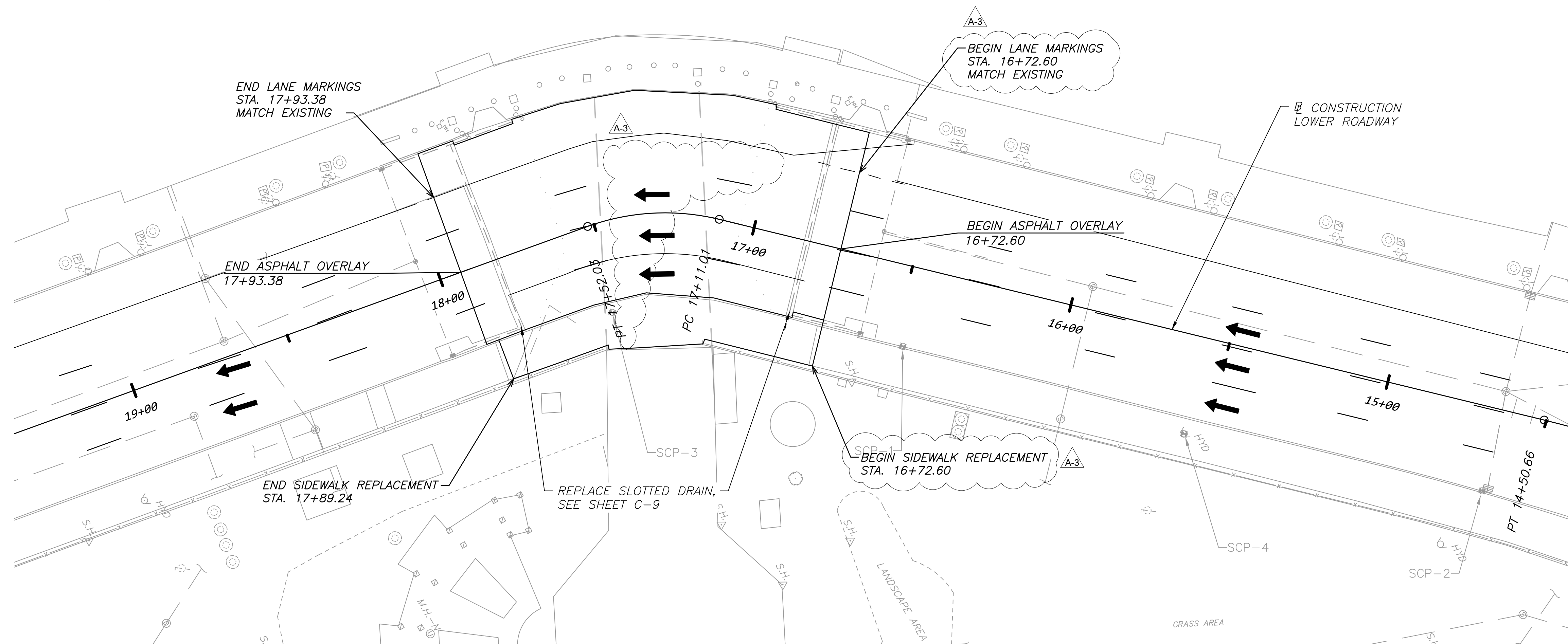
Revisions	Date	Description	By
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CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title: **RTA TUNNEL MEMBRANE REPLACEMENT**

Sheet Title: TYPICAL SECTIONS - 2			
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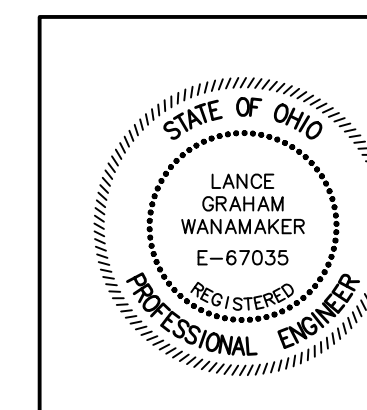


NOTE: STRUCTURAL CAPACITY OF THE EXISTING LOWER ROADWAY TUNNEL FRAMING IS LIMITED TO A MAXIMUM TOTAL VEHICLE WEIGHT OF 21 TONS FOR A SINGLE VEHICLE AND A MAXIMUM TOTAL WEIGHT OF 7 TONS FOR MULTIPLE VEHICLES DRIVEN SIDE BY SIDE. NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF ALLOWABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION, OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. SUBMIT STRUCTURAL ANALYSIS COMPUTATIONS, BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DEPARTMENT OF PORT CONTROL AT LEAST 10 DAYS BEFORE CONSTRUCTION BEGINS.

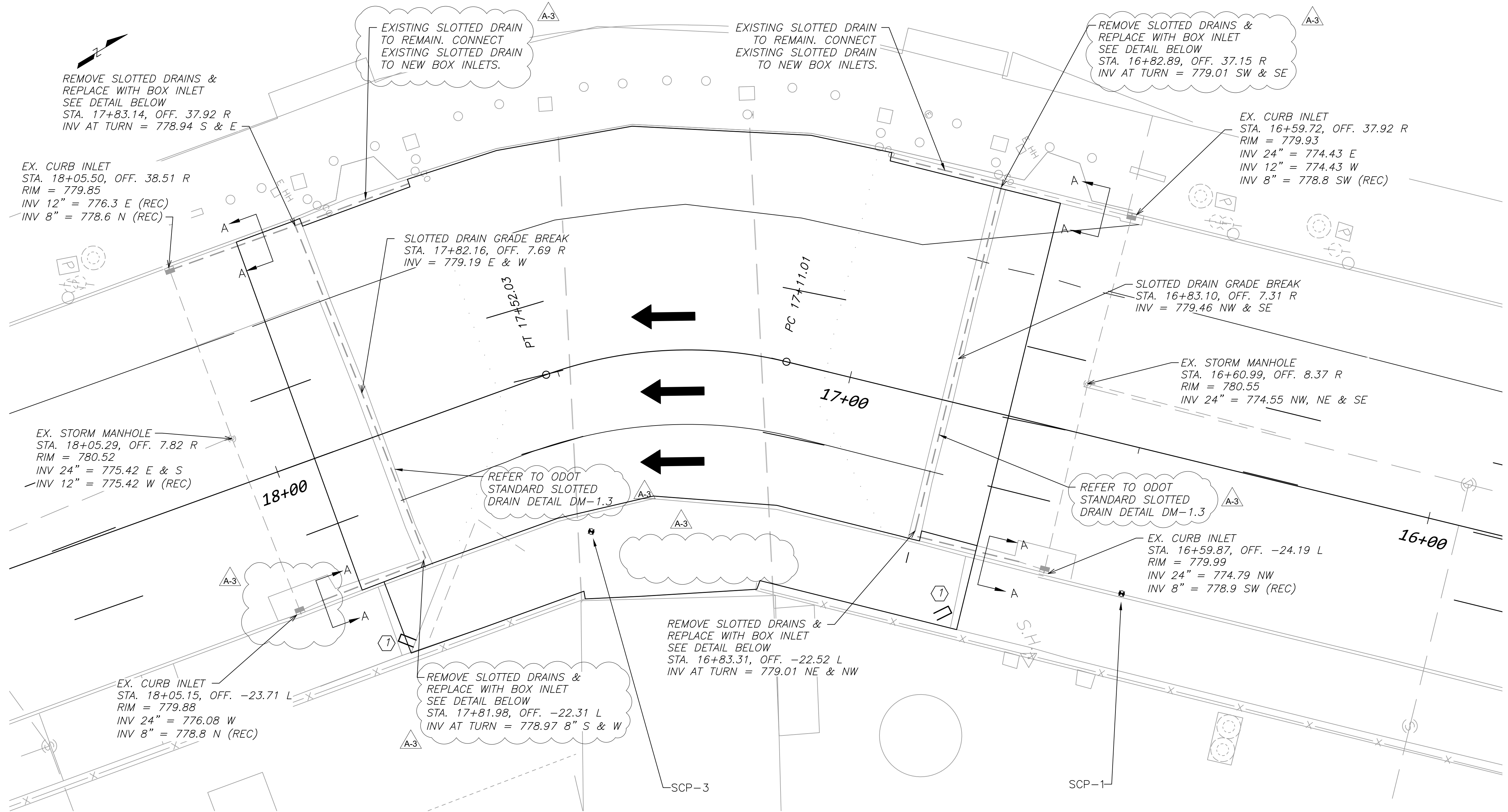
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CLEVELAND, OHIO**

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**Michael Baker
INTERNATIONAL**



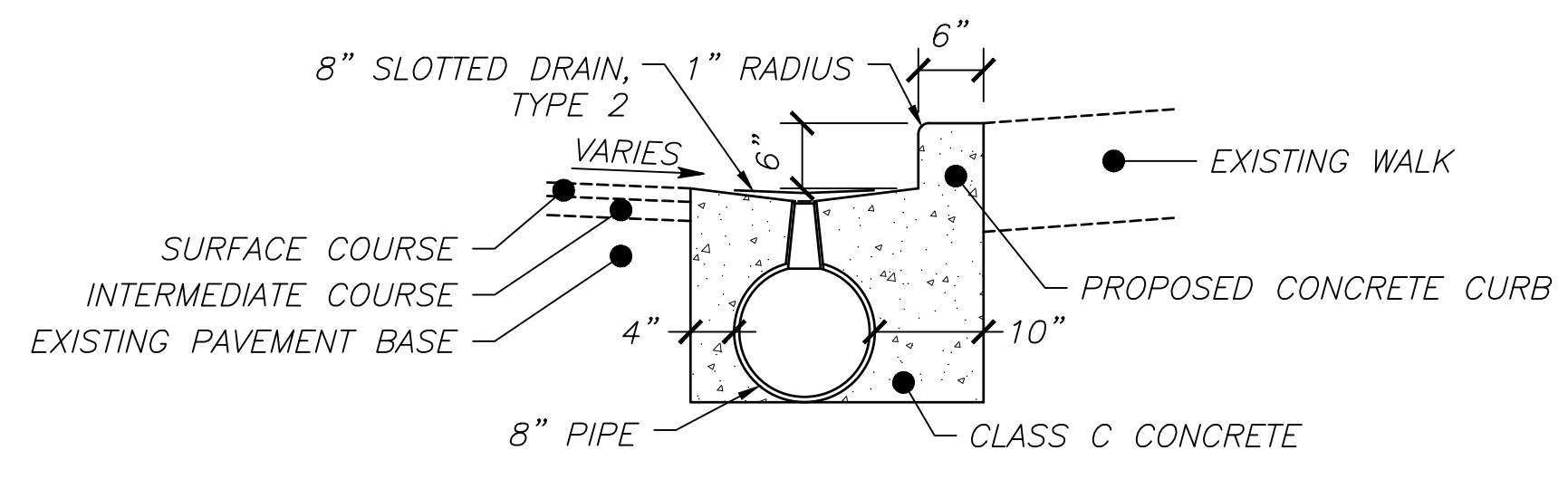
NOTES:

- CONTRACTOR TO SURVEY AND NOTE LOCATIONS OF ALL MARKINGS TO BE REMOVED. AT THE CONCLUSION OF THE WORK, CONTRACTOR TO REINSTALL MARKINGS AT THEIR ORIGINAL LOCATIONS.

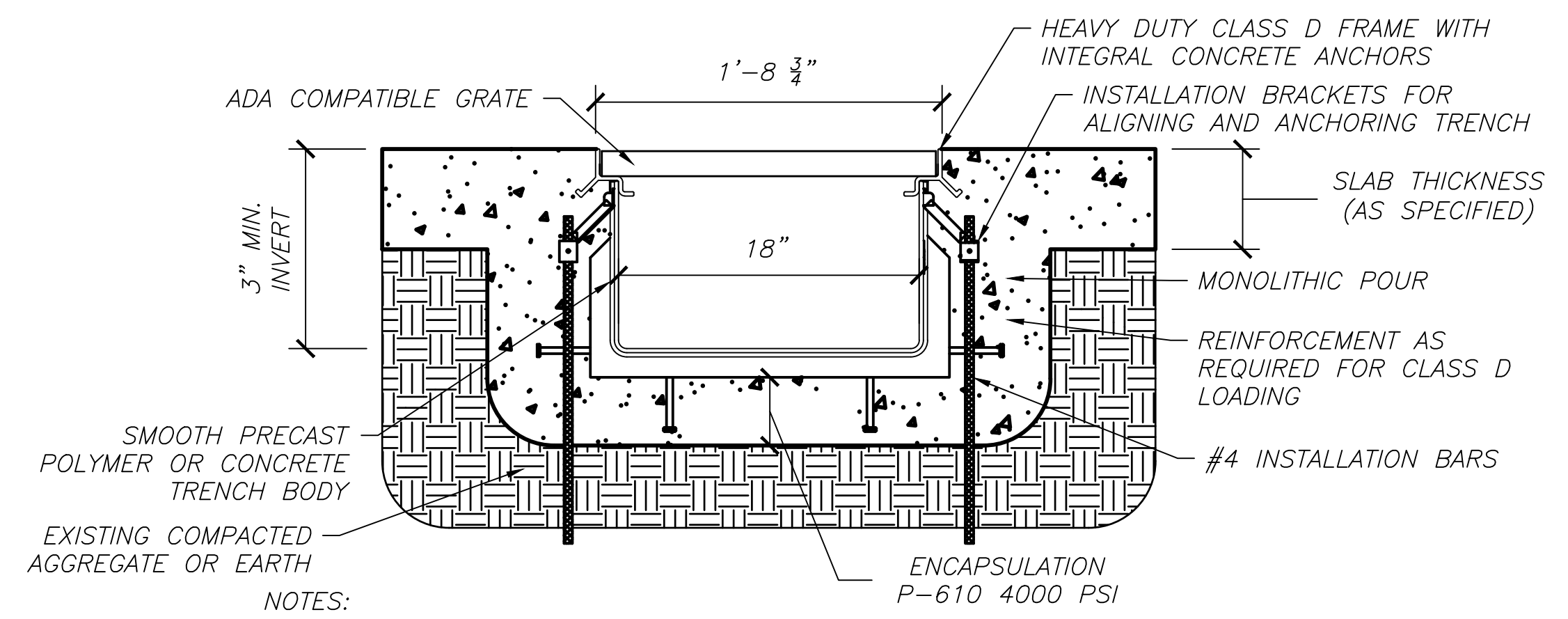
KEYNOTES:

- ELECTRICAL CONDUITS EXPOSED APPROX. 2' BELOW SIDEWALK.

SCALE 1"=10'



SECTION A-A
(TYPICAL ALONG CURB)
EXISTING 8" SLOTTED DRAIN, TYPE 2
SEE ODOT STANDARD DRAWING DM-1.3



NOTES:

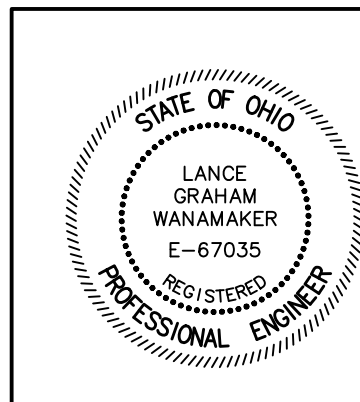
- THE EXISTING SLOT DRAIN WILL BE REMOVED AND REPLACED WITH BOX INLETS.
- SEE OHIO DOT STANDARD DRAWING DM-1.3 FOR SLOT DRAIN TYPICAL SECTION
- STANDARD SLOPE IS 0.5% UNLESS OTHERWISE SPECIFIED
- REINFORCE ACCORDING TO STRUCTURAL REQUIREMENTS FOR CLASS D LOADING
- TRENCH DRAIN MUST BE 1/8" BELOW FINISHED CONCRETE GRADE

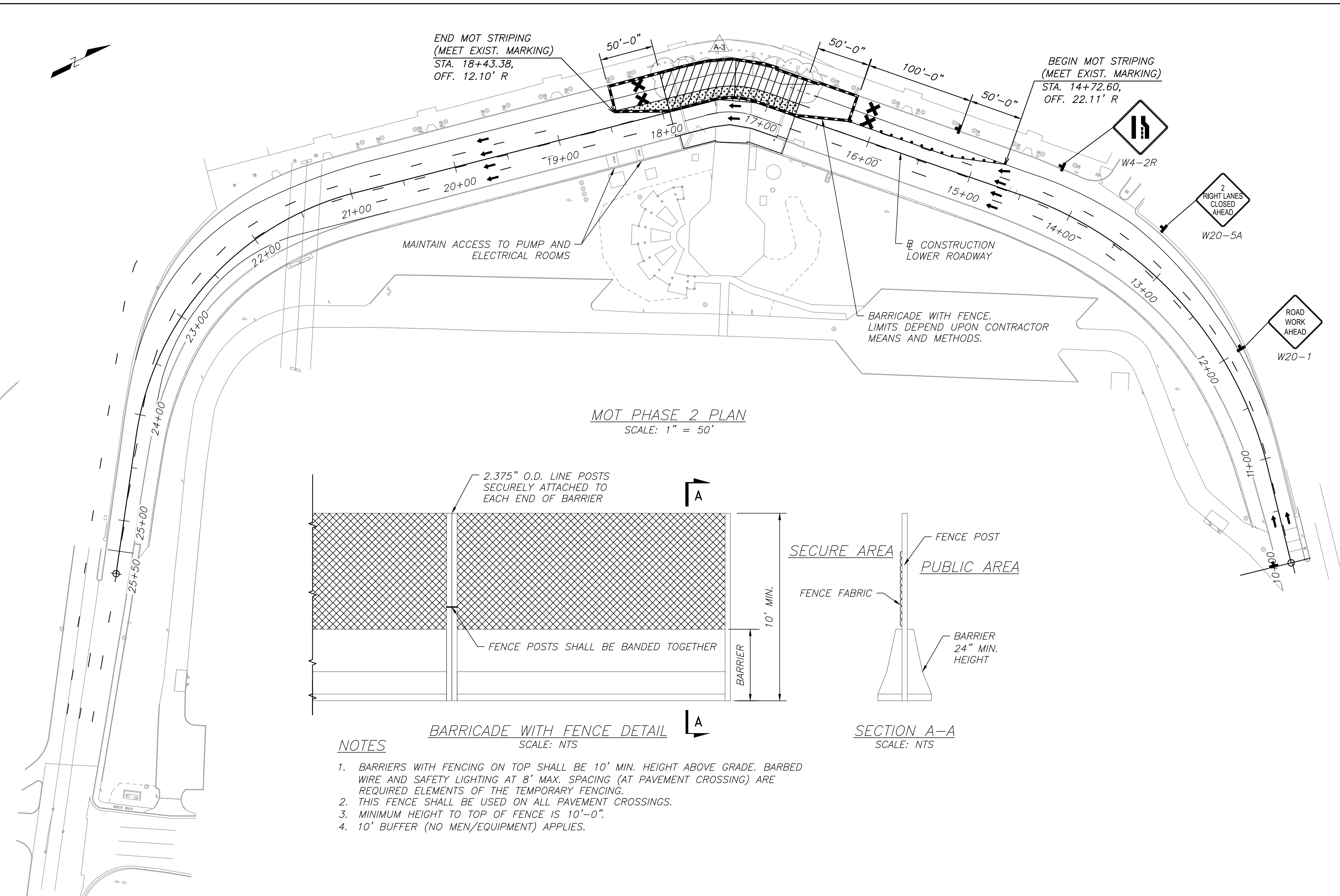
D751 BOX INLET
SCALE: NTS

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CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
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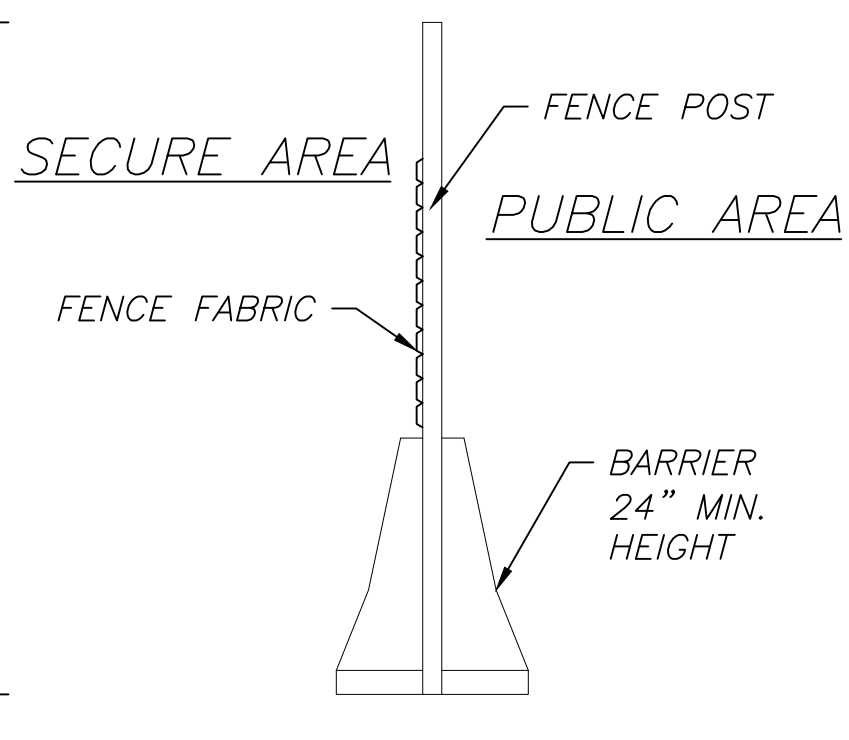
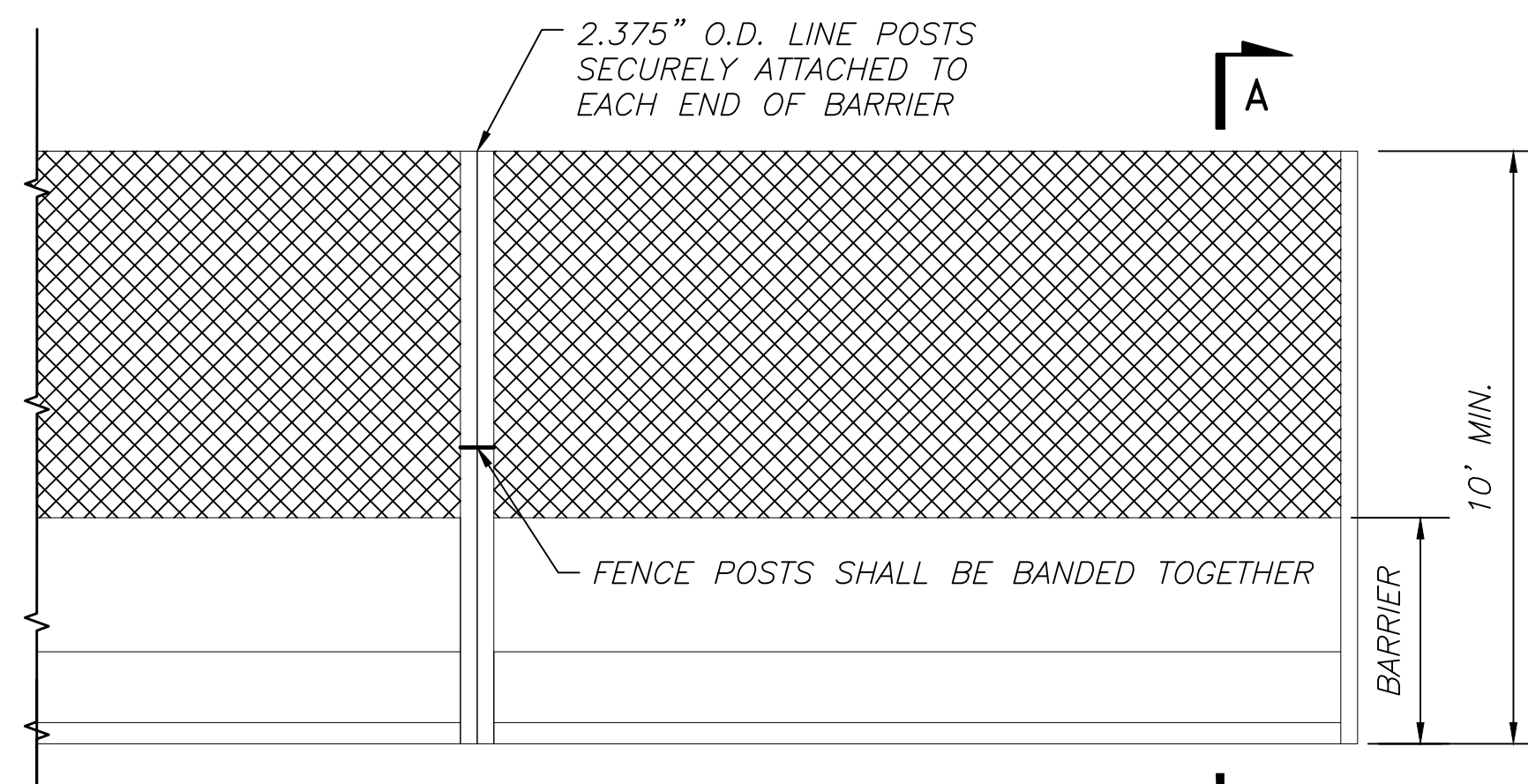




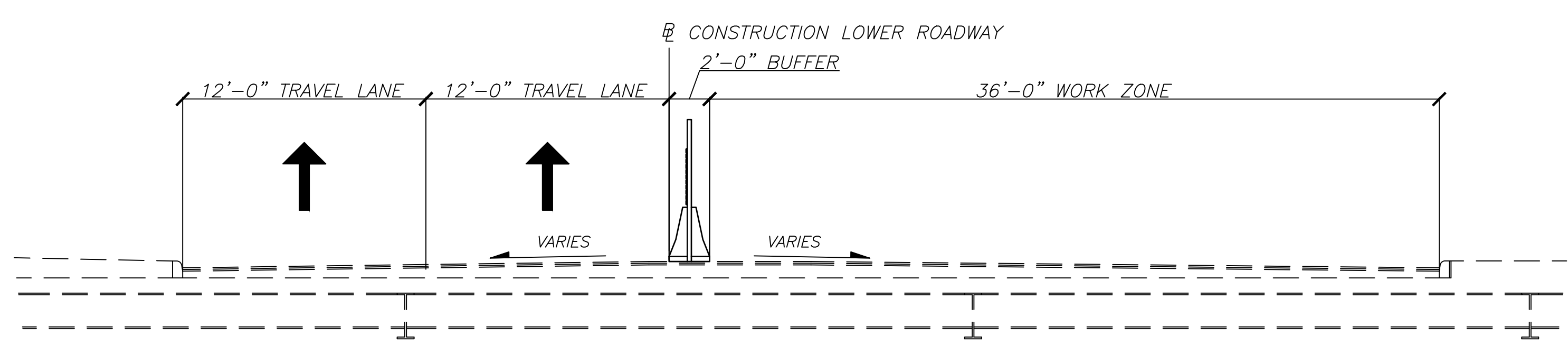
- PHASE 2 WORK**
- MILL ASPHALT CONCRETE WEARING COURSE OFF OF SURFACE
 - REMOVE EXISTING 4" CONCRETE WEARING SLAB, REMOVE EXISTING WATERPROOFING LAYER, AND REPLACEMENT OF THE TUNNEL FOOTER DRAINS.
 - MAKE ANY CONCRETE REPAIRS TO STRUCTURAL SLAB
 - INSTALL PROPOSED MC-005 WATERPROOFING AROUND TUNNEL
 - INSTALL PROPOSED MC-004 4" CONCRETE WEARING SLAB
 - REMOVE EXISTING SLOT DRAINS AND REPLACE WITH BOX INLETS
 - PLACE INTERMEDIATE ASPHALT CONCRETE COURSE
 - APPLY TEMPORARY PAVEMENT STRIPING

- NOTES**
- USING CONSTRUCTION DRUMS AND TEMPORARY STRIPING, ESTABLISH A PART WIDTH WORK ZONE. MAINTAIN TWO 12' TRAVEL LANES THROUGHOUT THE WORK ZONE AT ALL TIMES.
 - CONTRACTOR TO SURVEY AND NOTE LOCATIONS OF ALL MARKINGS TO BE REMOVED. AT THE CONCLUSION OF THE WORK, CONTRACTOR TO REINSTALL MARKINGS AT THEIR ORIGINAL LOCATIONS.

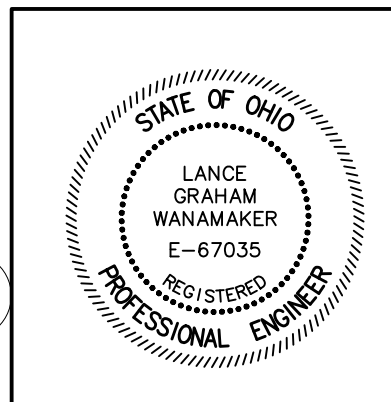
- LEGEND**
- WORK AREA, PHASE 2
 - DRUMS AT 10' C/C
 - BARRICADE WITH FENCE
 - TRAFFIC FLOW
 - CLOSED LANE
 - SHORING AREA



- NOTES**
- BARRIERS WITH FENCING ON TOP SHALL BE 10' MIN. HEIGHT ABOVE GRADE. BARBED WIRE AND SAFETY LIGHTING AT 8' MAX. SPACING (AT PAVEMENT CROSSING) ARE REQUIRED ELEMENTS OF THE TEMPORARY FENCING.
 - THIS FENCE SHALL BE USED ON ALL PAVEMENT CROSSINGS.
 - MINIMUM HEIGHT TO TOP OF FENCE IS 10'-0".
 - 10' BUFFER (NO MEN/EQUIPMENT) APPLIES.



NOTE: ENTIRE SHEET REVISED FOR ADDENDUM A-3.



Revisions	Date	Description	By
A-3	03/18/24	PLAN REVISIONS	MSI

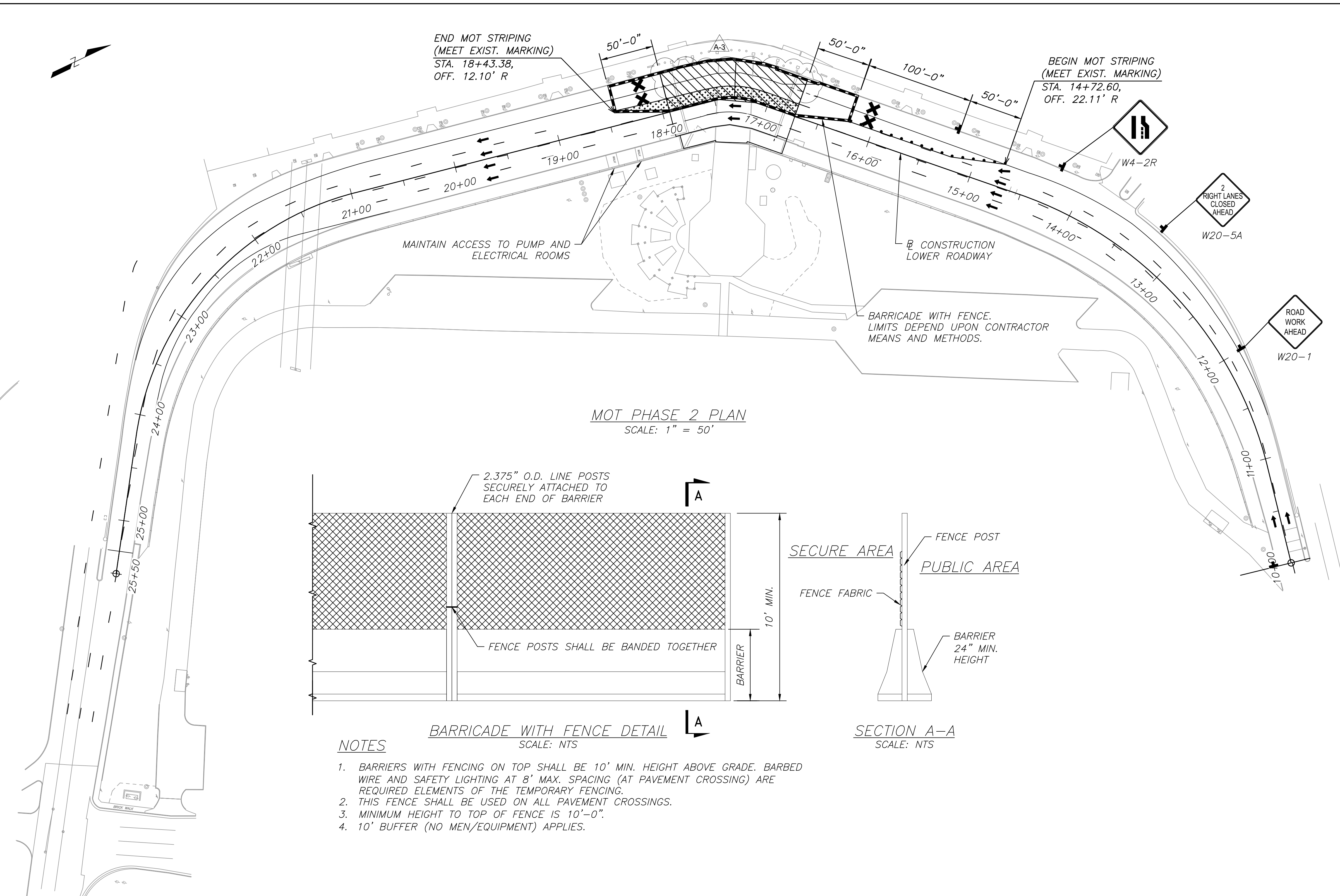
CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title: RTA TUNNEL MEMBRANE REPLACEMENT

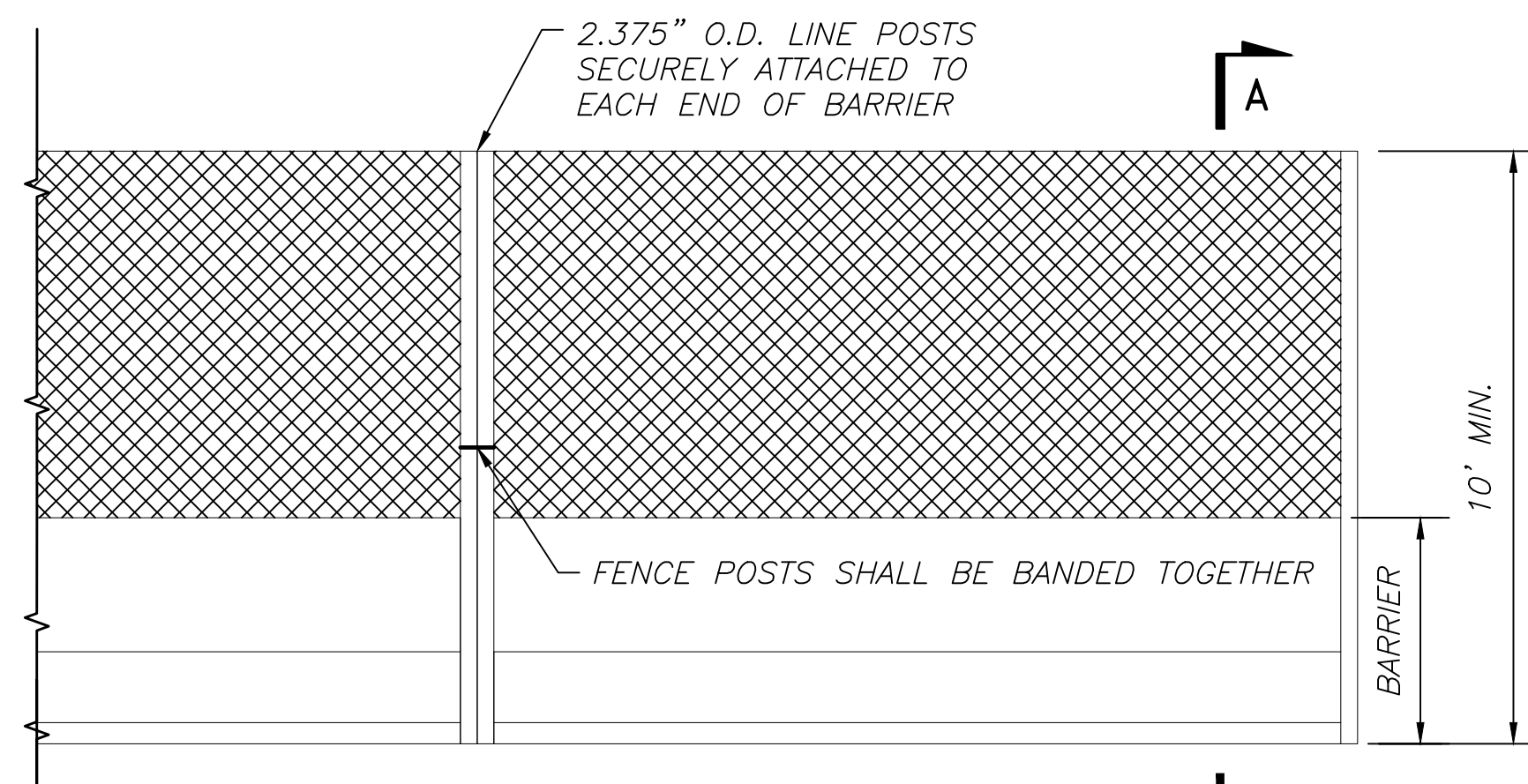
Sheet Title: MAINTENANCE OF TRAFFIC - PHASE 2

Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-11	

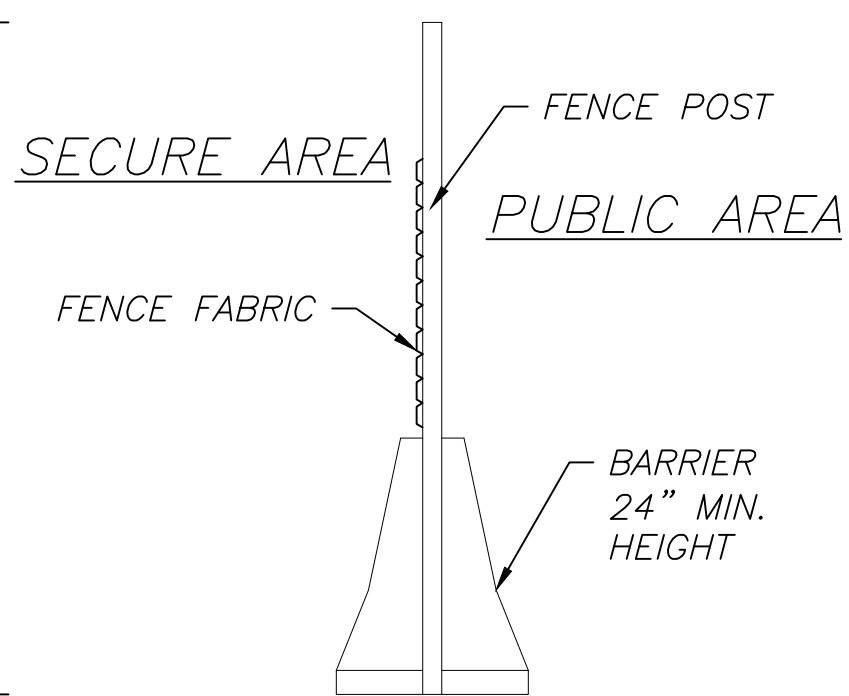
Michael Baker INTERNATIONAL



MOT PHASE 2 PLAN
SCALE: 1" = 50'

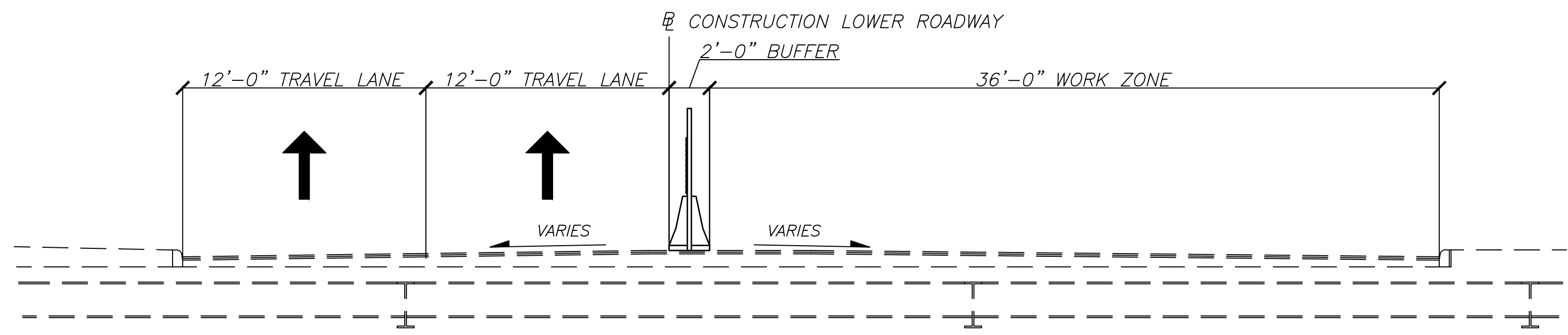


BARRICADE WITH FENCE DETAIL
SCALE: NTS



NOTES

1. BARRIERS WITH FENCING ON TOP SHALL BE 10' MIN. HEIGHT ABOVE GRADE. BARBED WIRE AND SAFETY LIGHTING AT 8' MAX. SPACING (AT PAVEMENT CROSSING) ARE REQUIRED ELEMENTS OF THE TEMPORARY FENCING.
2. THIS FENCE SHALL BE USED ON ALL PAVEMENT CROSSINGS.
3. MINIMUM HEIGHT TO TOP OF FENCE IS 10'-0".
4. 10' BUFFER (NO MEN/EQUIPMENT) APPLIES.



MOT PHASE 2 TYPICAL SECTION

NOTE: ENTIRE SHEET REVISED FOR ADDENDUM A-3.



PHASE 2 WORK

1. MILL ASPHALT CONCRETE WEARING COURSE OFF OF SURFACE
2. REMOVE EXISTING 4" CONCRETE WEARING SLAB, REMOVE EXISTING WATERPROOFING LAYER, AND REPLACEMENT OF THE TUNNEL FOOTER DRAINS.
3. MAKE ANY CONCRETE REPAIRS TO STRUCTURAL SLAB
4. INSTALL PROPOSED MC-005 WATERPROOFING AROUND TUNNEL
5. INSTALL PROPOSED MC-004 4" CONCRETE WEARING SLAB
6. REMOVE EXISTING SLOT DRAINS AND REPLACE WITH BOX INLETS
7. PLACE INTERMEDIATE ASPHALT CONCRETE COURSE
8. APPLY TEMPORARY PAVEMENT STRIPING

NOTES

1. USING CONSTRUCTION DRUMS AND TEMPORARY STRIPING, ESTABLISH A PART WIDTH WORK ZONE. MAINTAIN TWO 12' TRAVEL LANES THROUGHOUT THE WORK ZONE AT ALL TIMES.
2. CONTRACTOR TO SURVEY AND NOTE LOCATIONS OF ALL MARKINGS TO BE REMOVED. AT THE CONCLUSION OF THE WORK, CONTRACTOR TO REINSTALL MARKINGS AT THEIR ORIGINAL LOCATIONS.

LEGEND

- WORK AREA, PHASE 2
- DRUMS AT 10' C/C
- BARRICADE WITH FENCE
- TRAFFIC FLOW
- CLOSED LANE
- SHORING AREA

Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

CLEVELAND HOPKINS INTERNATIONAL AIRPORT
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Project Title: RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title: MAINTENANCE OF TRAFFIC - PHASE 2			
Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-11	


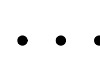

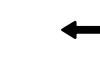

PHASE 3 WORK

1. INSTALL ASPHALT CONCRETE SURFACE COURSE AND PAVEMENT STRIPING
2. CONTRACTOR TO REINSTALL TRAFFIC MARKINGS AT THE PRE-CONSTRUCTION LOCATIONS

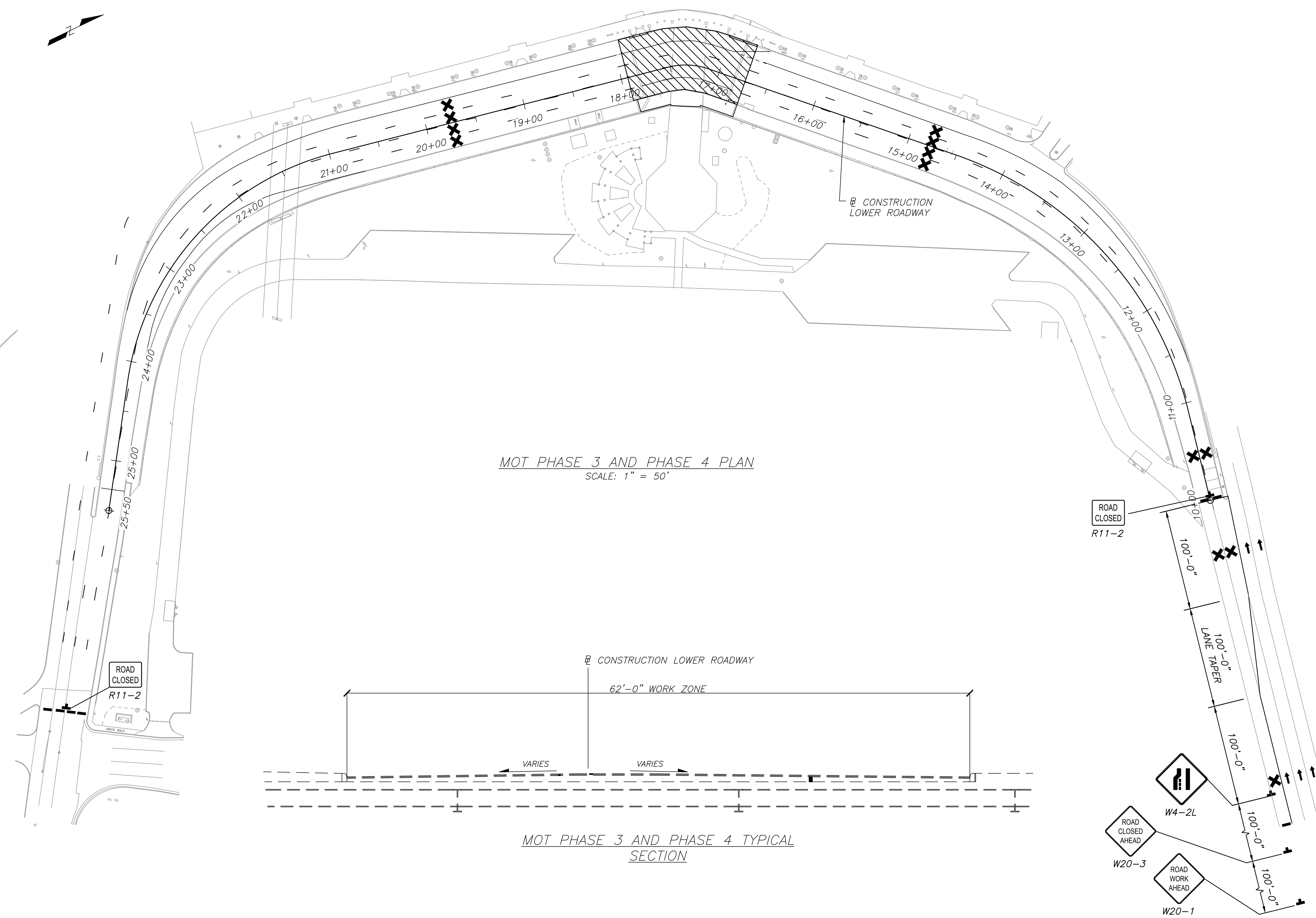
NOTES

LOWER ROADWAY TO BE CLOSED TO TRAFFIC. PERFORM ROAD CLOSURE AND WORK AT TIMES APPROVED BY THE CLEVELAND AIRPORT SYSTEM.

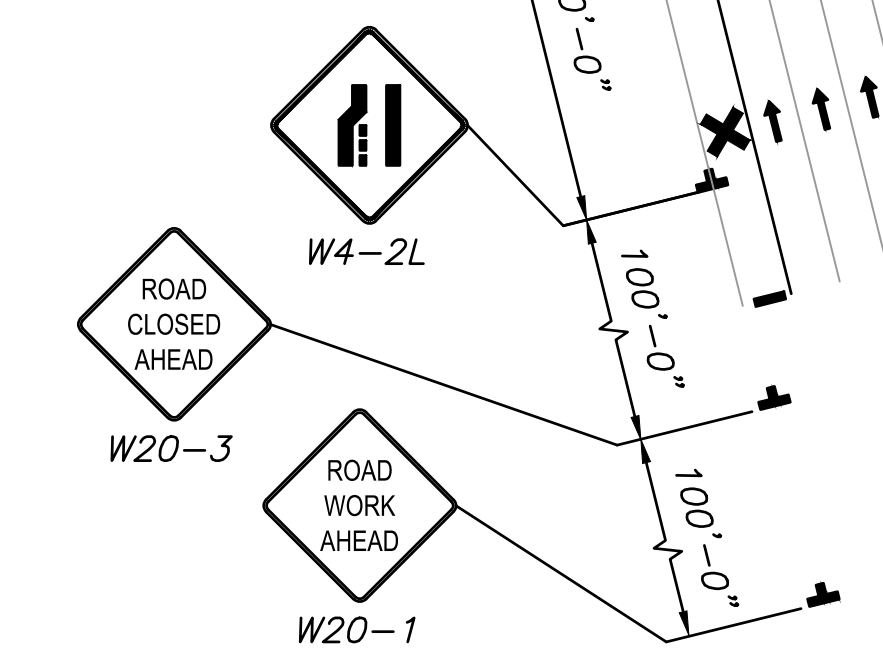
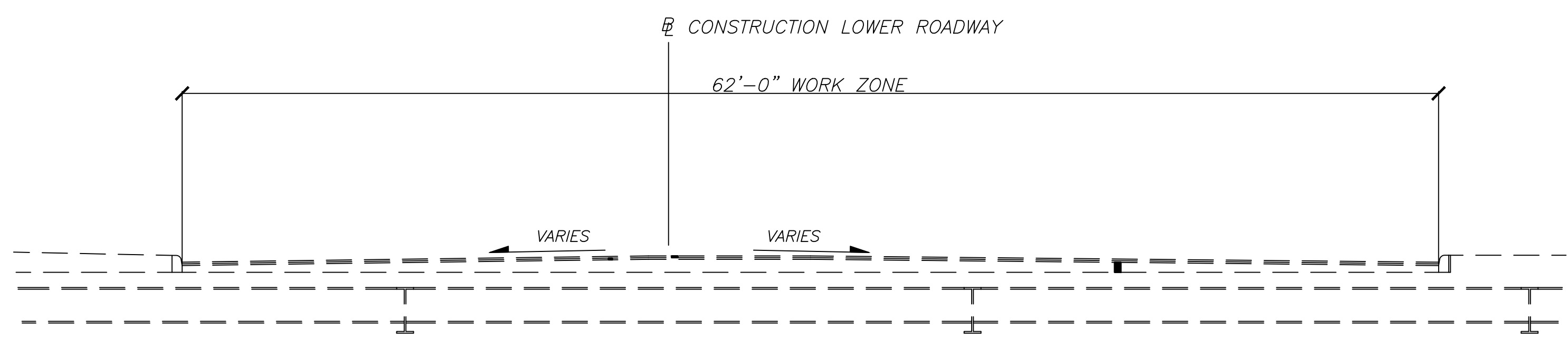
LEGEND

-  - WORK AREA, PHASE 4
-  - DRUMS AT 10' C/C
-  - TYPE 3 BARRICADE
-  - TRAFFIC FLOW
-  - CLOSED LANE

MOT PHASE 3 AND PHASE 4 PLAN
SCALE: 1" = 50'



MOT PHASE 3 AND PHASE 4 TYPICAL SECTION



NOTE: ENTIRE SHEET REVISED FOR ADDENDUM A-3.



Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title MAINTENANCE OF TRAFFIC PHASES 3 AND 4			
Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-13	



PROPOSED WORK

PHASE 1

1. INSTALL SCAFFOLDING/PEDESTRIAN PROTECTION UNDERNEATH TUNNEL TO MAINTAIN ACCESS TO THE RTA.
2. SET UP MOT STRIPING AND DRUMS TO CLOSE TRAFFIC TO LANES ON THE EAST SIDE OF THE MEDIAN AND CREATE WORKZONE WITH ASSOCIATED TAPERS FOR PHASE 1.
3. INSTAL BARRIER WITH FENCE, PER PLAN.
4. SAWCUT PHASE REMOVAL JOINT.
5. COLD MILLING, ASPHALT CONCRETE, 4"±.
6. REMOVE EXISTING 4" CONCRETE WEARING SLAB, CURB, & SIDEWALK.
7. REMOVE EXISTING WATERPROOFING SYSTEM ON THE STRUCTURAL SLAB AND TUNNEL WALLS.
8. INSPECT AND MAKE ANY NECESSARY REPAIRS TO EXISTING STRUCTURAL SLAB.
9. INSTALL PROPOSED WATERPROOFING SYSTEM AND CONCRETE WEARING SLAB. WATERPROOFING SHOULD EXTEND BEYOND LONGITUDINAL PHASE CONSTRUCTION JOINT. WEARING SLAB SHOULD TERMINATE AT PHASE CONSTRUCTION JOINT.
10. REMOVE EXISTING SLOTTED DRAINS IN THE PHASE 1 WORK AREA AND REPLACE WITH BOX INLETS PER PROJECT PLANS. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY CONNECTIONS TO THE EXISTING SYSTEM.
11. INSTALL PROPOSED INTERMEDIATE COURSE OF ASPHALT CONCRETE.
12. INSTALL TEMPORARY PAVEMENT MARKINGS FOR MAINTENANCE OF TRAFFIC IN PHASE 2.

PHASE 2

1. USE DRUMS AND MOT STRIPING TO CREATE WORKZONE AND ASSOCIATED TAPERS FOR PHASE 2.
2. INSTALL BARRIER WITH FENCE, PER PLAN.
3. PAVEMENT COLD MILLING, ASPHALT CONCRETE, 4"±.
4. REMOVE EXISTING 4" CONCRETE WEARING SLAB, CURB, & WALK (CURB RAMP).
5. REMOVE EXISTING WATERPROOFING SYSTEM ON THE STRUCTURAL SLAB AND TUNNEL WALLS.
6. INSPECT AND MAKE ANY NECESSARY REPAIRS TO EXISTING STRUCTURAL SLAB.
7. INSTALL PROPOSED WATERPROOFING SYSTEM AND CONCRETE WEARING SLAB.
8. REMOVE EXISTING SLOTTED DRAINS IN THE PHASE 2 WORK AREA AND REPLACE WITH BOX INLETS PER PROJECT PLANS. CONNECT TO DRAINS INSTALLED IN PHASE 1.
9. INSTALL PROPOSED INTERMEDIATE COURSE OF ASPHALT CONCRETE.

PHASE 3

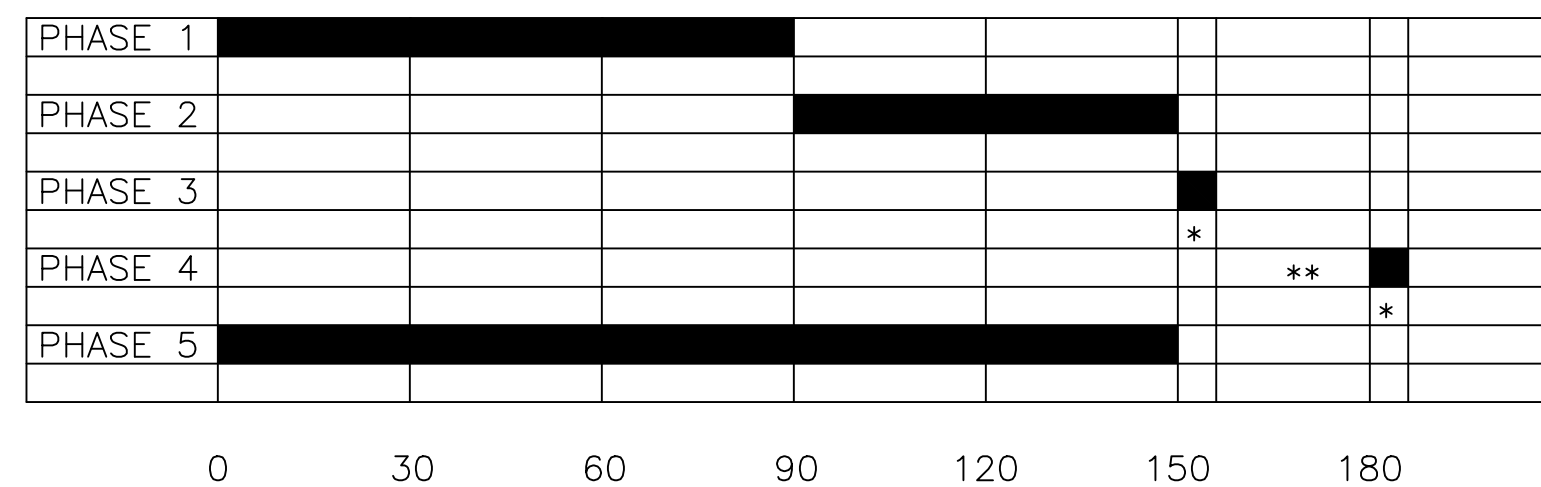
1. USE DRUMS TO CLOSE LOWER ROADWAY TO ALL TRAFFIC DURING NIGHT WORK (CONTRACTOR MUST NOTIFY AND RECEIVE APPROVAL FROM CLEVELAND AIRPORT SYSTEM OF DATES AND TIMES ROAD TO BE CLOSED PRIOR TO WORK).
2. INSTALL 1" SURFACE COURSE OF ASPHALT CONCRETE.

PHASE 4

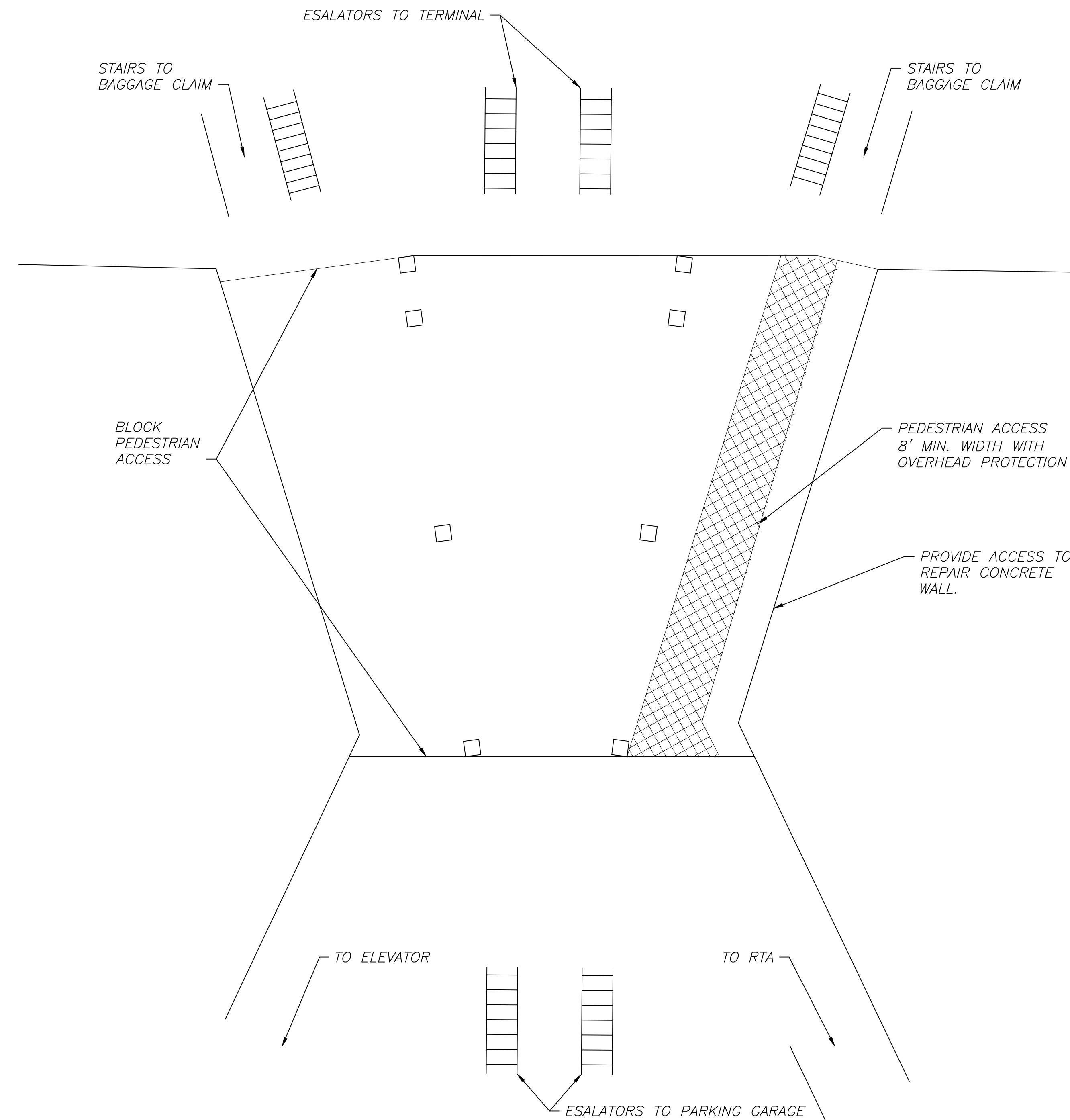
1. FINAL STRIPING WORK FOLLOWING 30 DAY ASPHALT CURE PERIOD..

PHASE 5

1. PLUMBING AND ELECTRICALS MODIFICATIONS IN THE RTA CONNECTOR/COLLECTOR MECHANICAL ROOM AND EV-6.
2. STRUCTURAL PATCHING AND INTERIOR MODIFICATIONS IN THE RTA CONNECTOR/COLLECTORS.



* 1 DAY DURATION
 **30 DAY CURE PERIOD



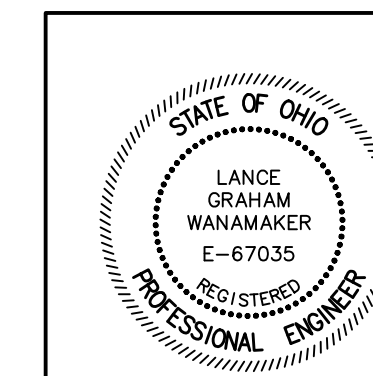
INTERIOR MAINTENANCE OF PEDESTRIAN TRAFFIC

NOTE: ENTIRE SHEET REVISED FOR ADDENDUM A-3

Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

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 CLEVELAND, OHIO

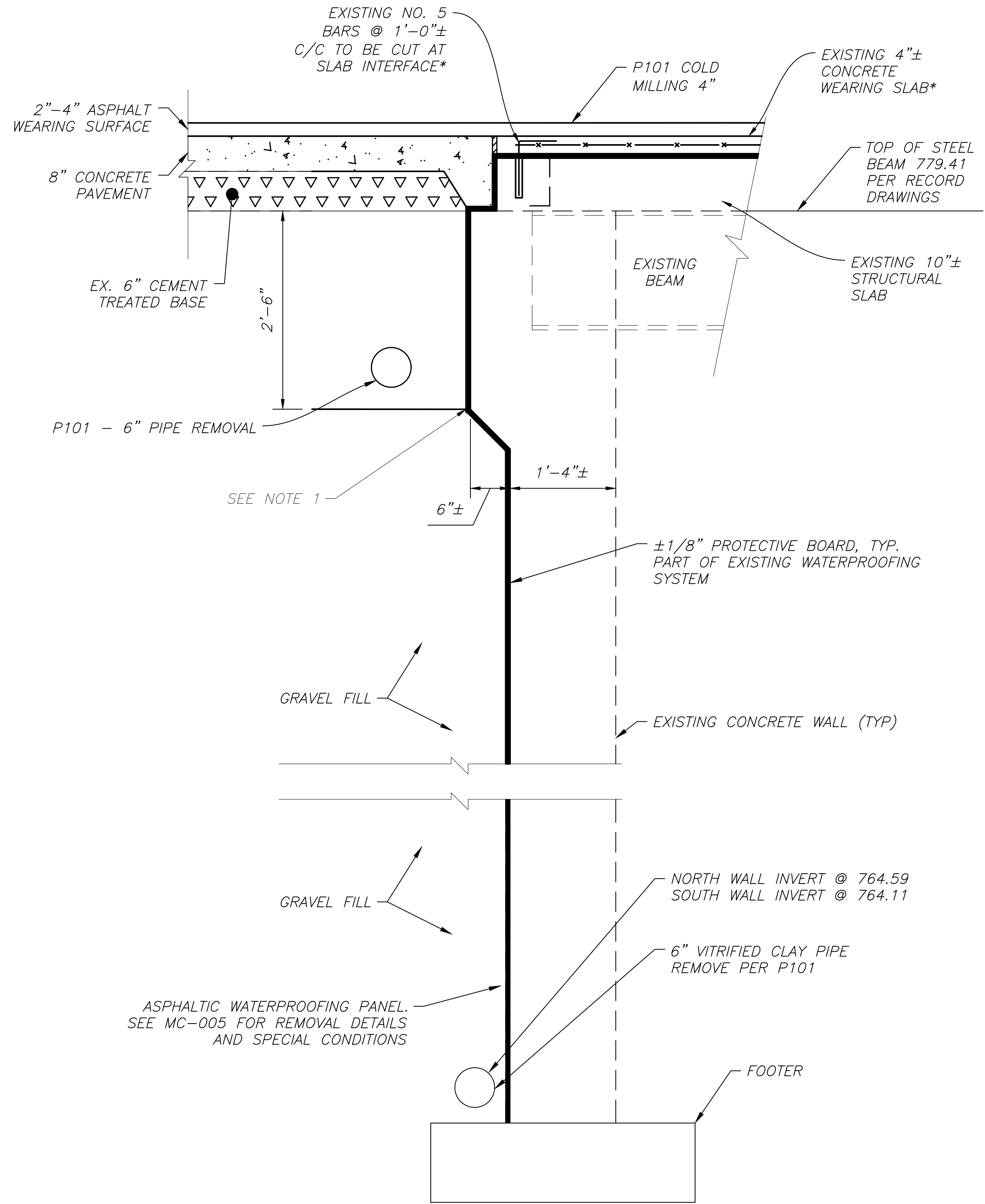
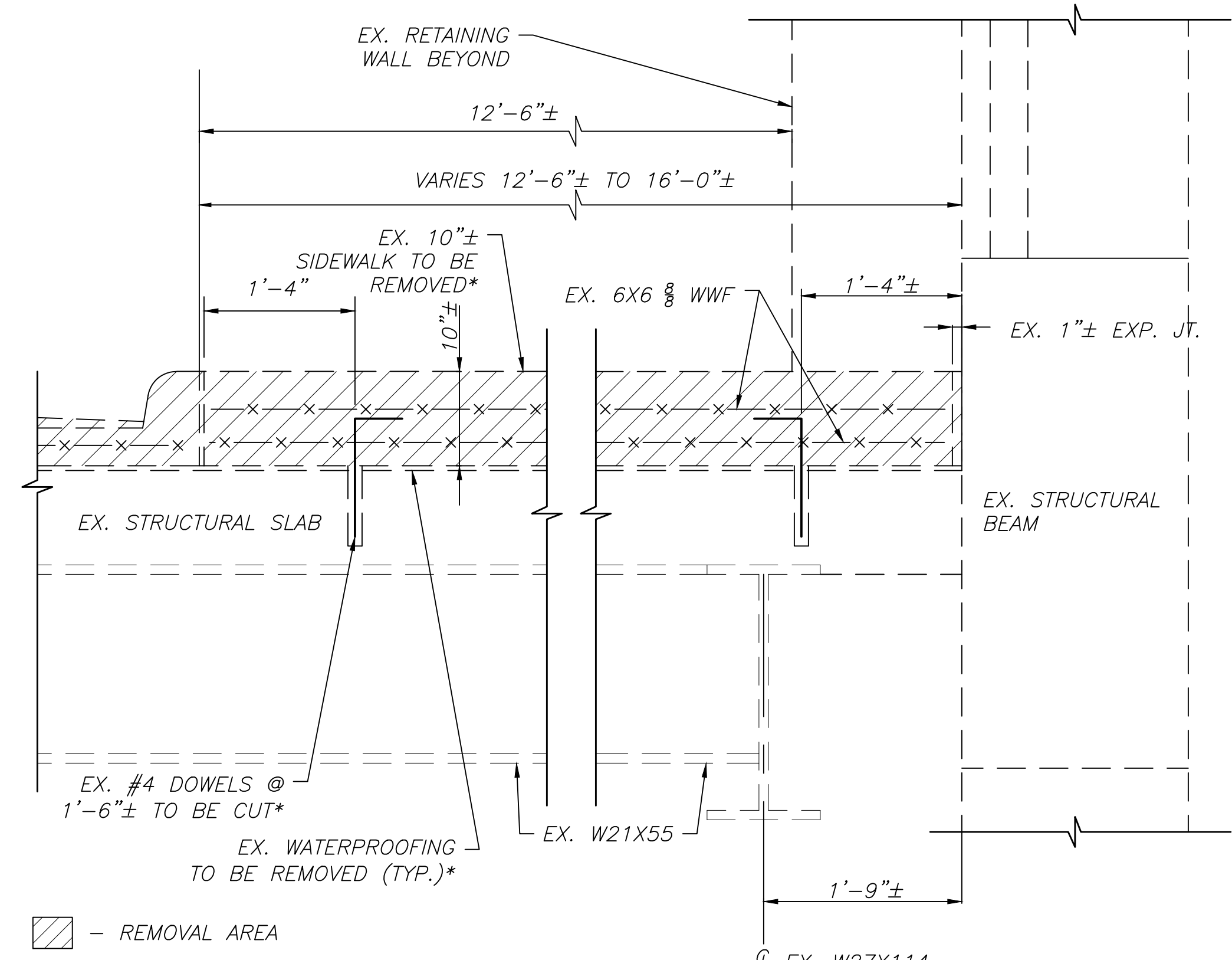
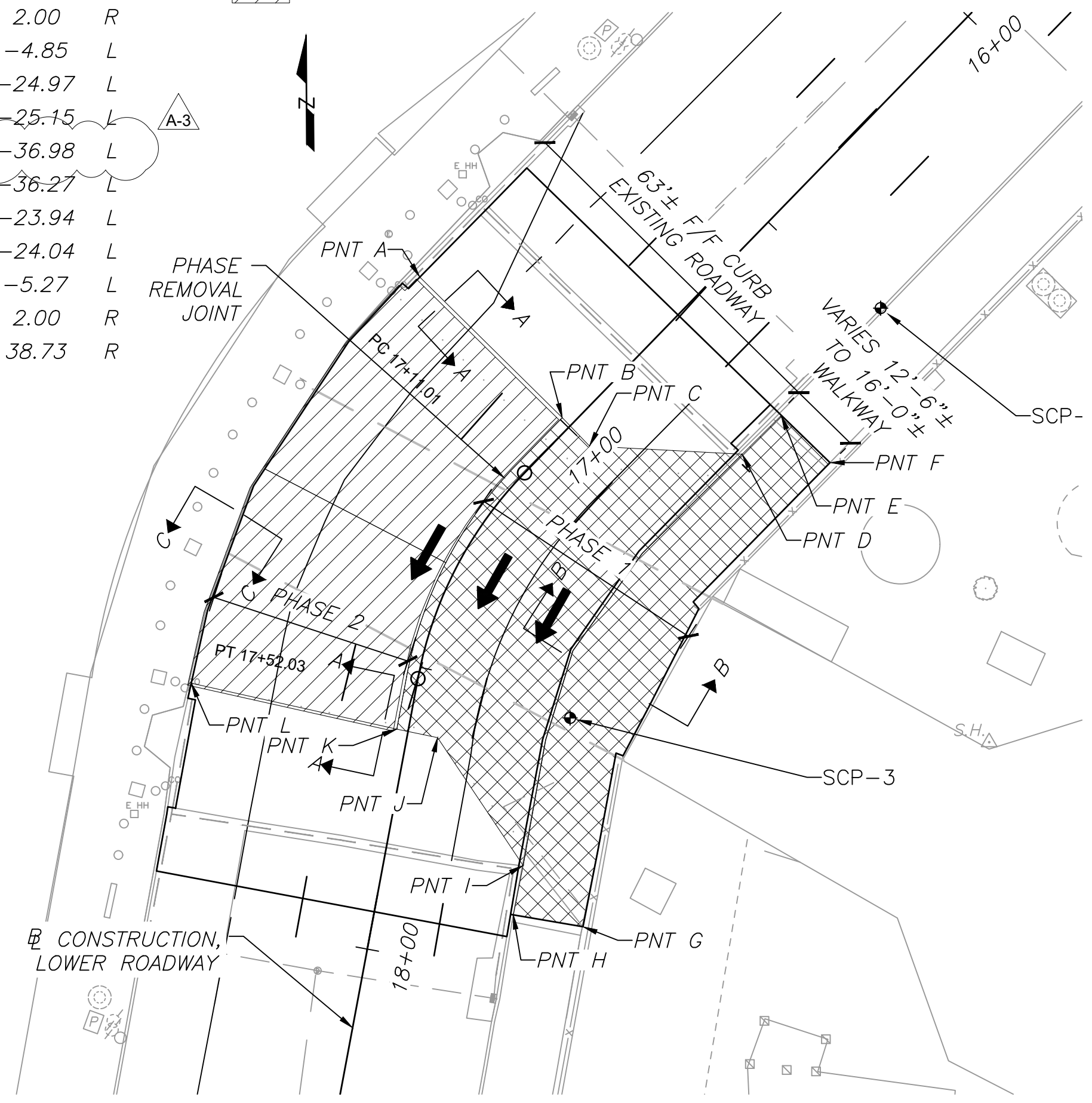
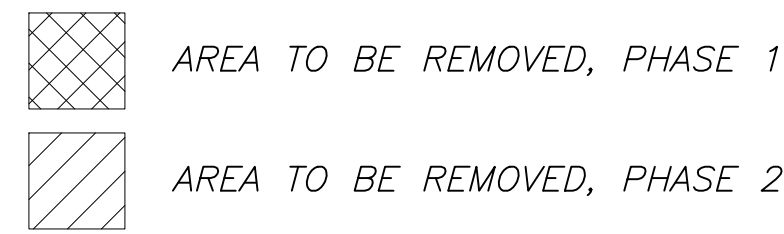
Project Title: RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title: PHASING NOTES			
Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-14	



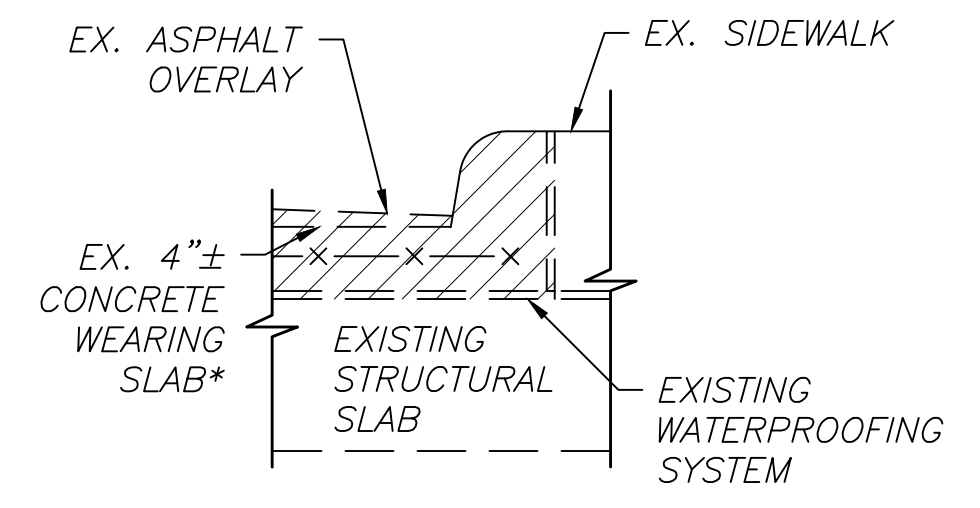
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COORDINATE TABLE

POINT	STATION	OFFSET	
A	16+99.24	36.90	R
B	16+99.51	2.00	R
C	16+99.75	-4.85	L
D	16+82.20	-24.97	L
E	16+72.61	-25.15	L
F	16+72.60	-36.98	L
G	17+89.24	-36.27	L
H	17+89.45	-23.94	L
I	17+80.66	-24.04	L
J	17+61.49	-5.27	L
K	17+61.35	2.00	R
L	17+60.07	38.73	R



NOTE 1: 2'-6" BELOW THE TOP OF THE STEEL BEAM REPRESENTS THE BOUNDARY BETWEEN TWO WATERPROOFING SYSTEMS. THE UPPER SYSTEM EXTENDS BELOW THE WEARING SLAB AND CONSISTS OF TWO (2) WATERPROOFING MEMBRANES, 1/2" PROTECTIVE BOARD, AND POLYESTER FABRIC REINFORCEMENT. THE REMAINDER OF THE WALL CONSISTS OF ASPHALTIC PANELS, 1/8" +/-, FABRIC REINFORCEMENT, AND WATERPROOFING MEMBRANES PER AVAILABLE INFORMATION. SEE MC-005 FOR REMOVAL OF THE WATERPROOFING SYSTEMS AND SPECIAL REQUIREMENTS.



AREA TO BE REMOVED

NOTE: ENTIRE SHEET REVISED FOR ADDENDUM A-3.

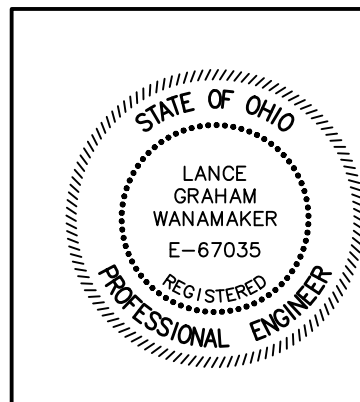
Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

**CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO**

RTA TUNNEL MEMBRANE REPLACEMENT

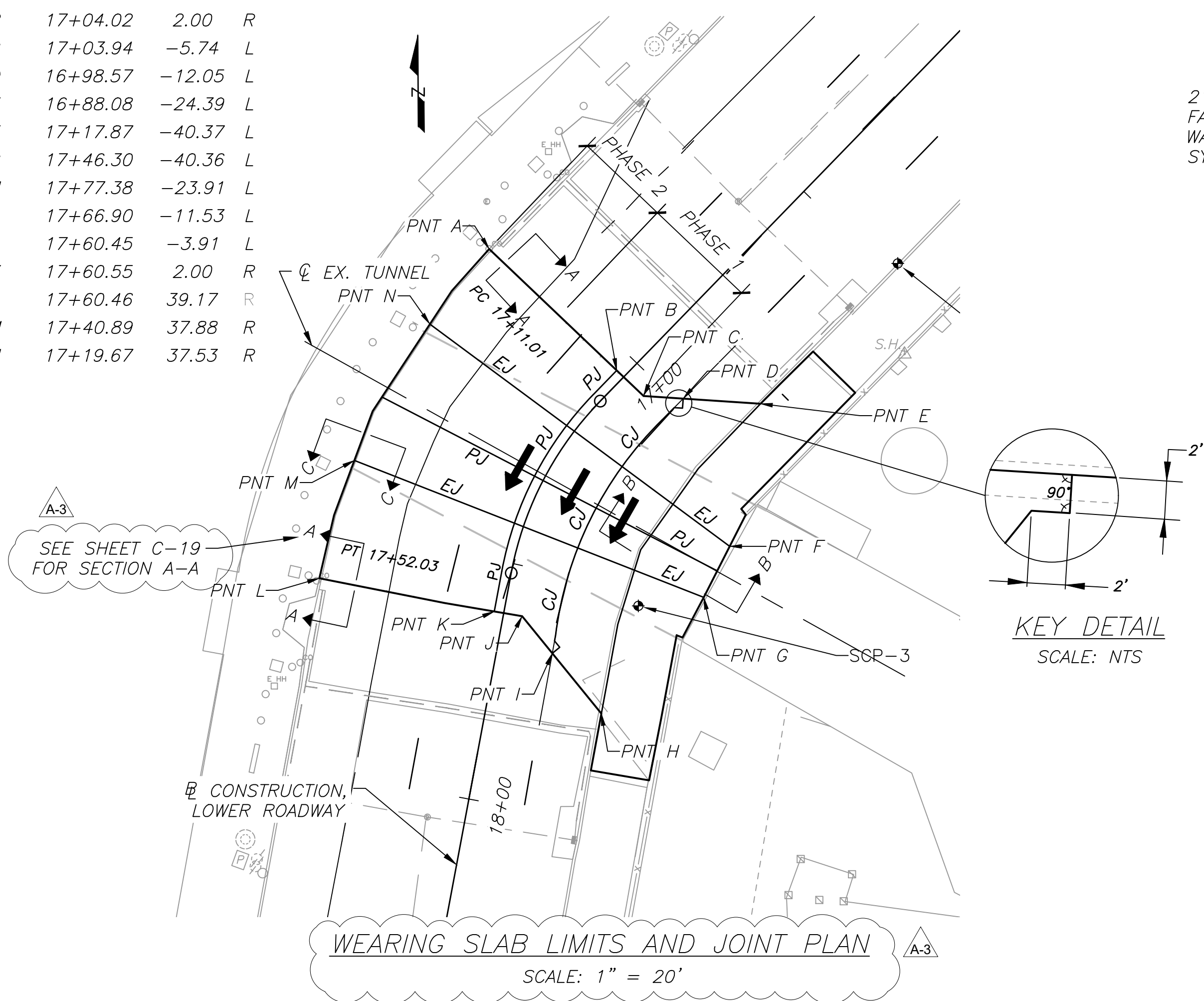
TUNNEL REPAIR - REMOVAL DETAILS

Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-15	



COORDINATE TABLE

POINT	STATION	OFFSET	
A	17+04.40	38.76	R
B	17+04.02	2.00	R
C	17+03.94	-5.74	L
D	16+98.57	-12.05	L
E	16+88.08	-24.39	L
F	17+17.87	-40.37	L
G	17+46.30	-40.36	L
H	17+77.38	-23.91	L
I	17+66.90	-11.53	L
J	17+60.45	-3.91	L
K	17+60.55	2.00	R
L	17+60.46	39.17	R
M	17+40.89	37.88	R
N	17+19.67	37.53	R



SCALE: NTS

SCALE: NTS

SCALE: NTS

SCALE: NTS

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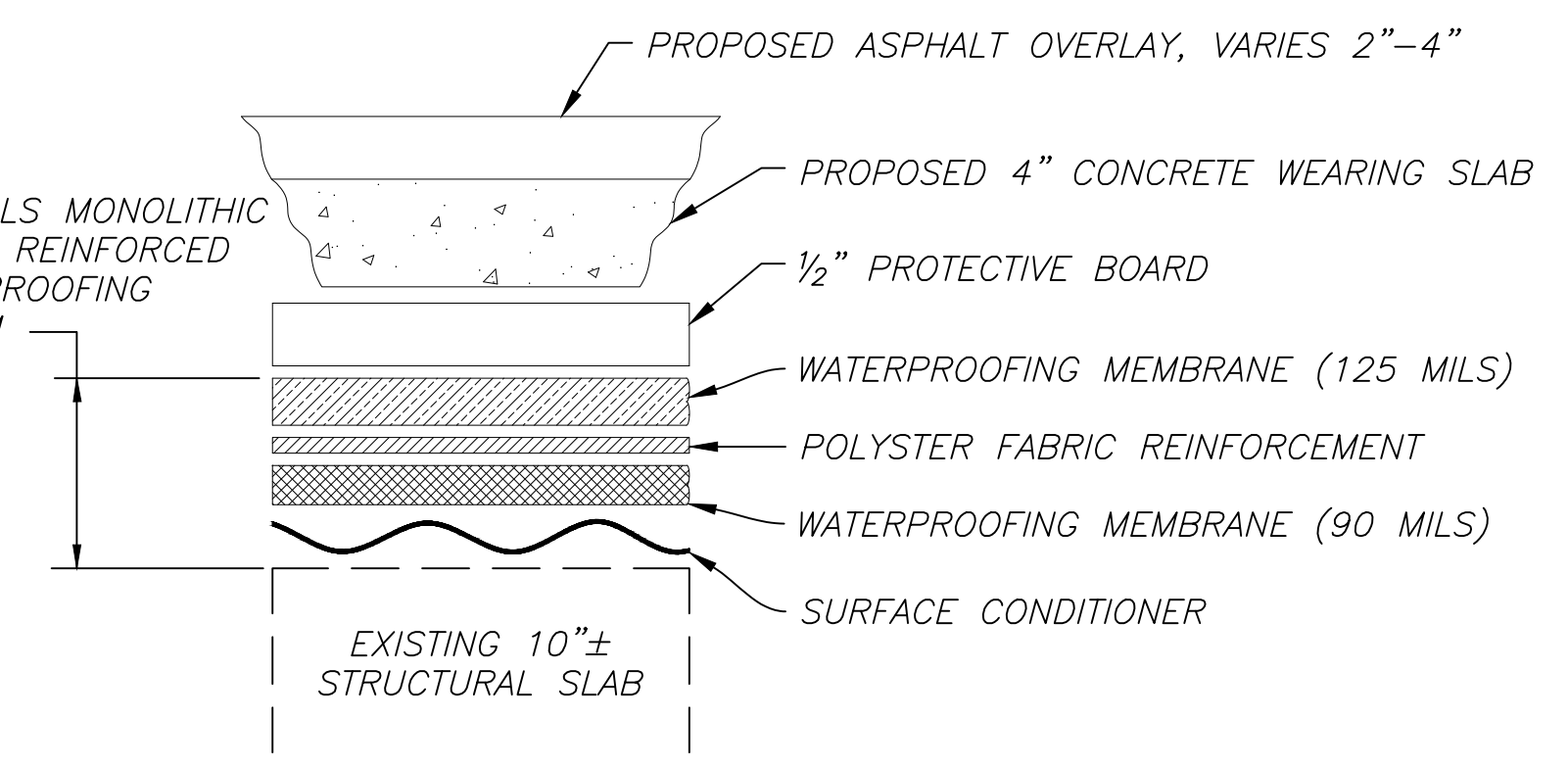
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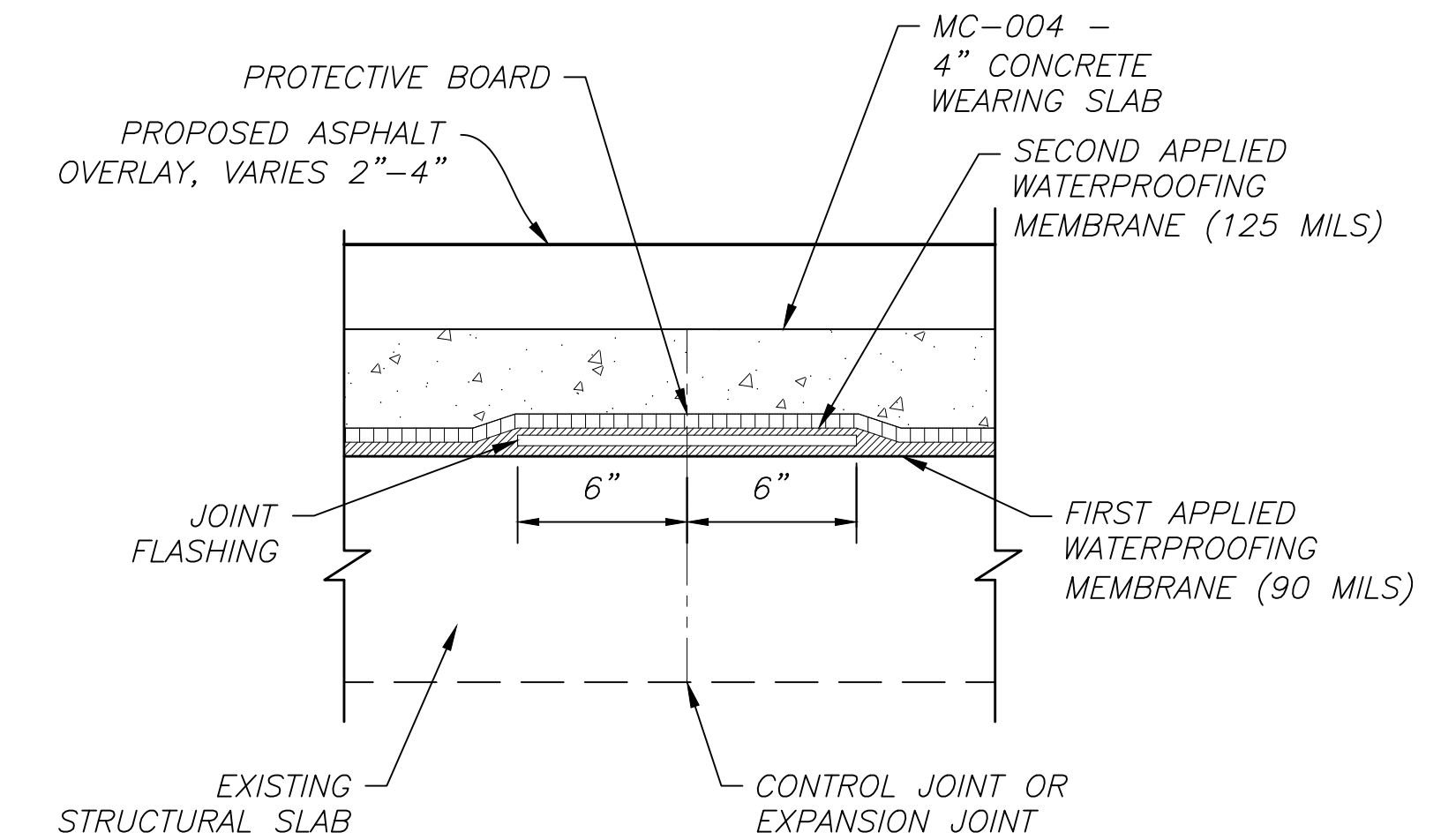
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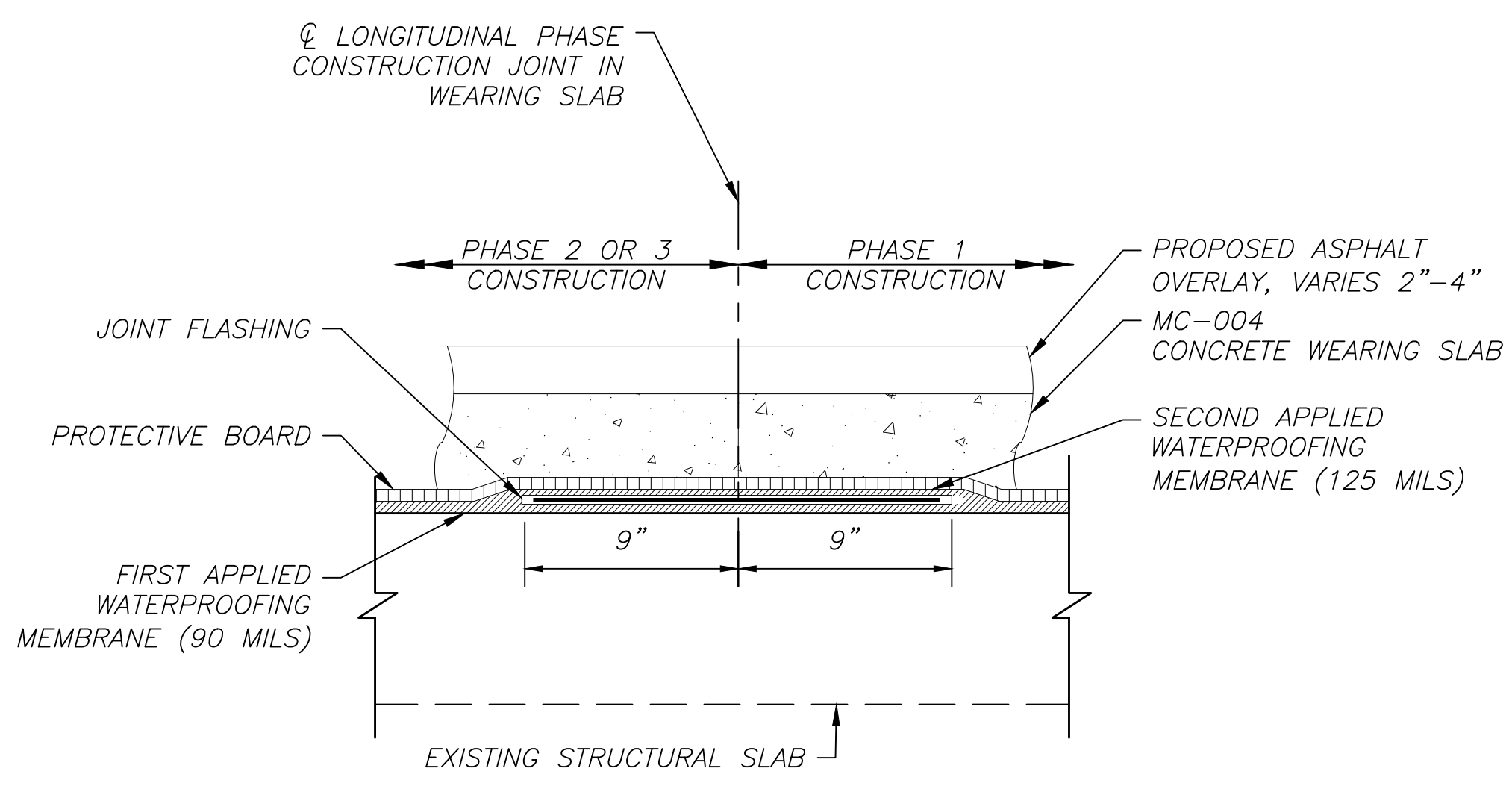
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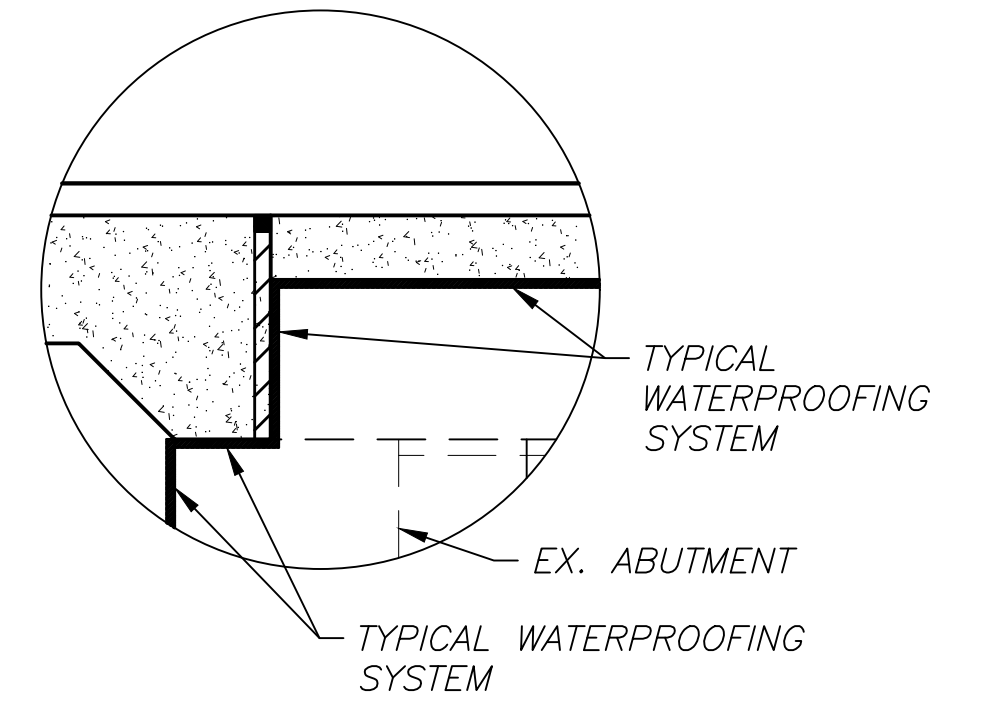
TYPICAL WATERPROOFING SYSTEM DETAIL
SCALE: NTS



TYPICAL WATERPROOFING SYSTEM DETAIL AT CONTROL JOINTS (CJ) OR EXPANSION JOINTS (EJ)
SCALE: NTS



TYPICAL WATERPROOFING SYSTEM DETAIL PHASE CONSTRUCTION JOINT (PJ)
SCALE: NTS



DETAIL C
SCALE: NTS

NOTES:
1. SEE SHEET C-19 FOR SECTION B-B AND C-C WATERPROOFING DETAILS.

Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

**CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO**

Project Title: RTA TUNNEL MEMBRANE REPLACEMENT

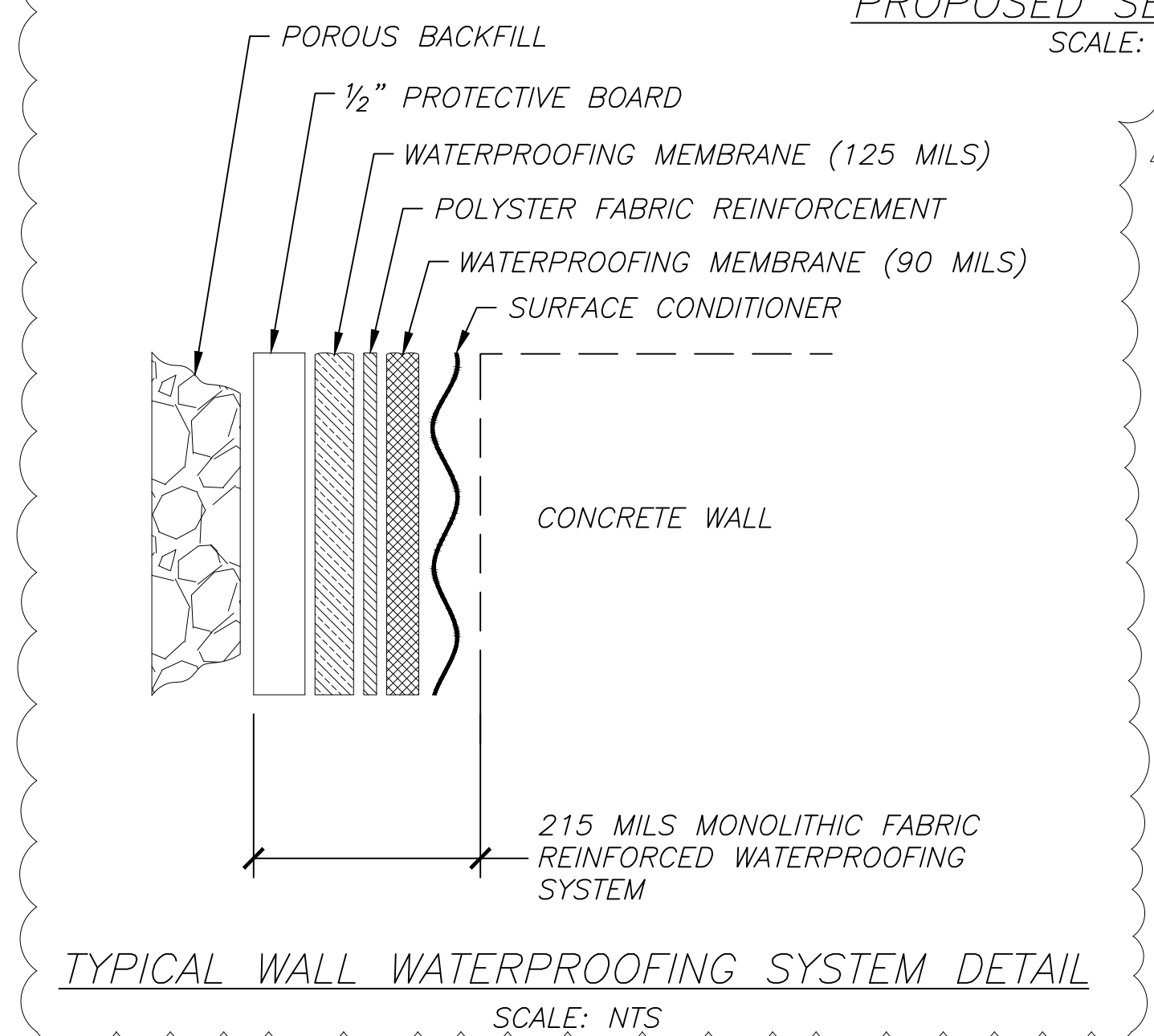
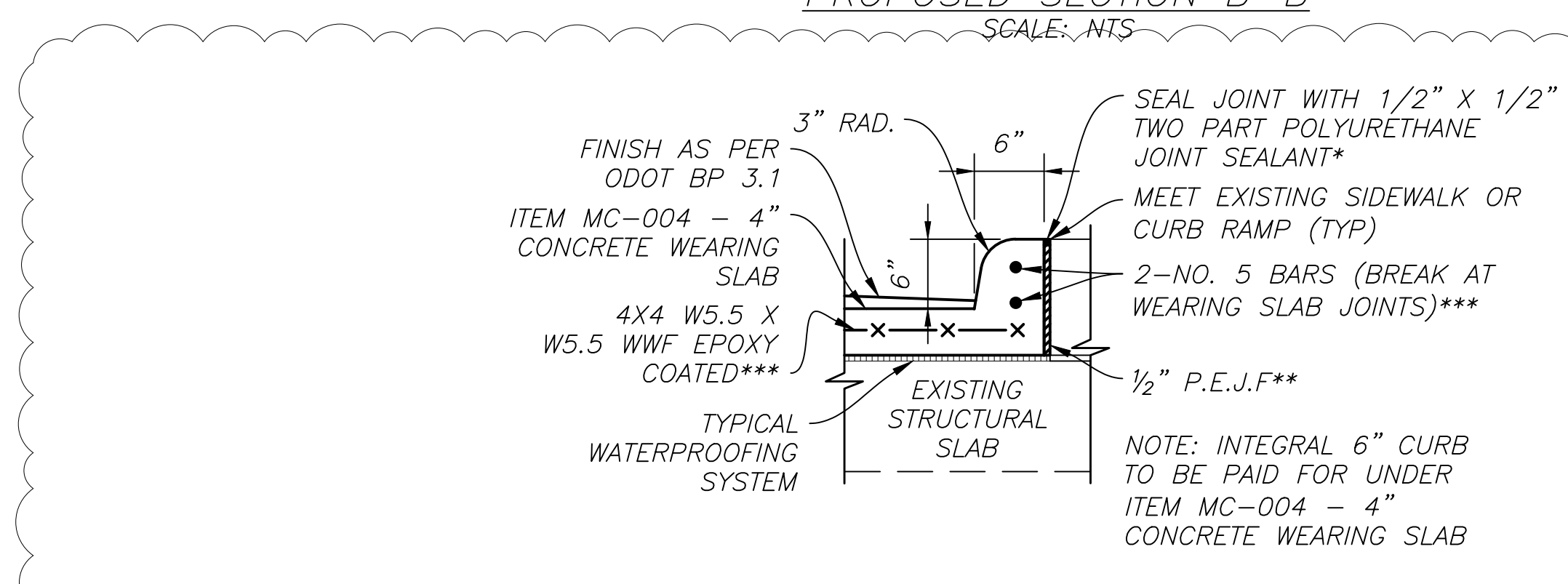
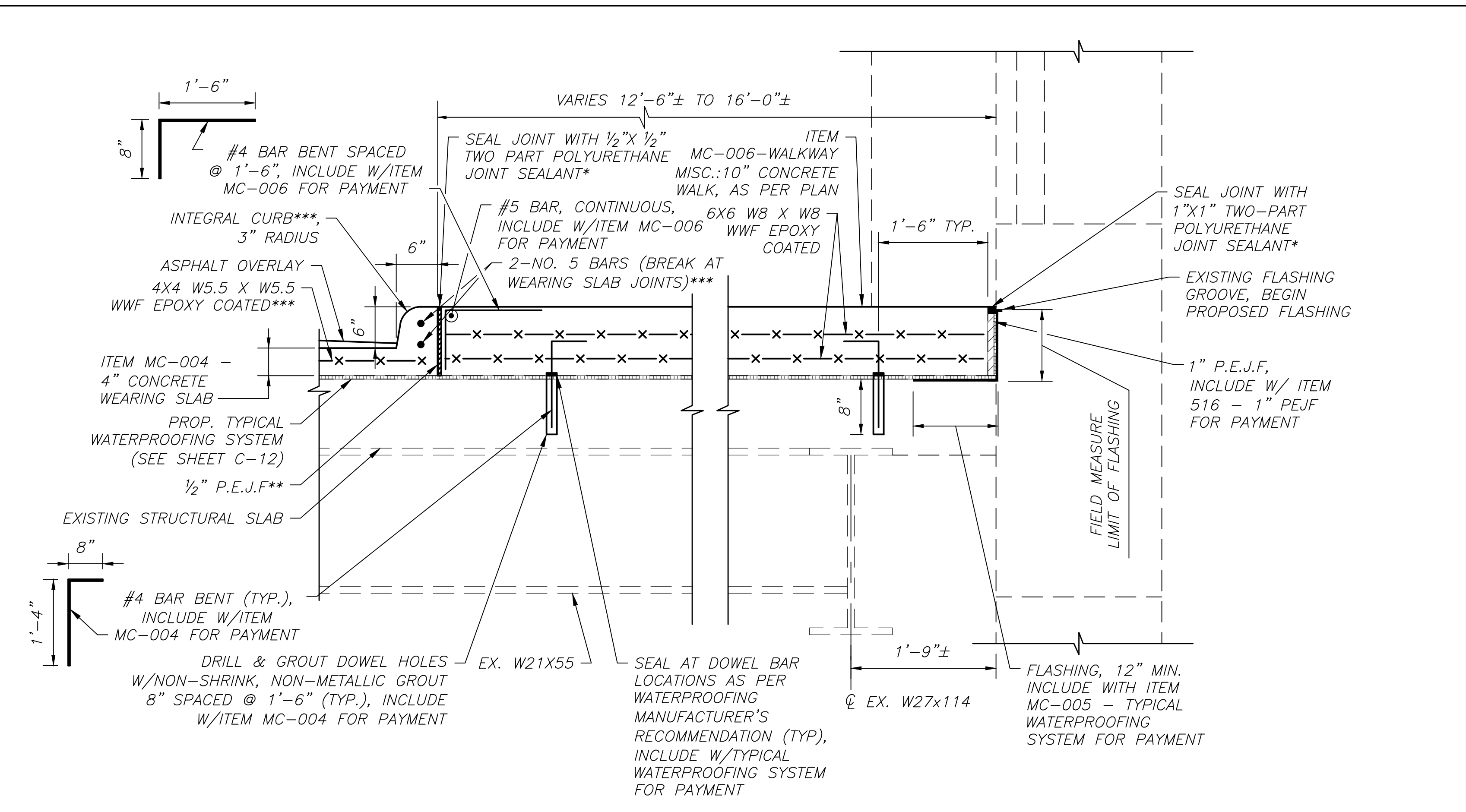
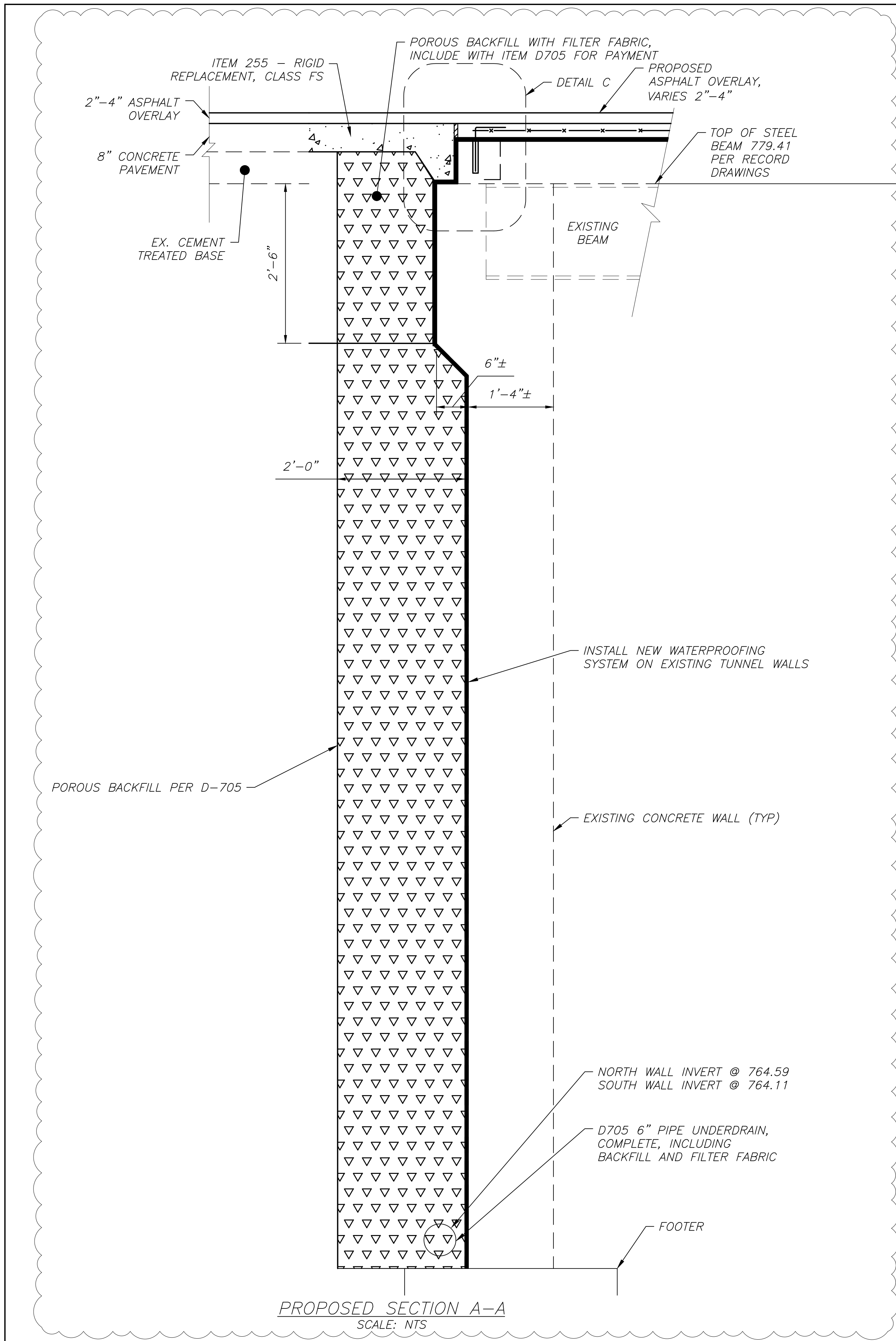
Sheet Title: TUNNEL REPAIR - WATERPROOFING DETAILS

Designed: MSI Drawn: MSI Checked: LGW Approved: LGW

Scale: AS SHOWN Project No.: 198348

Date: FEBRUARY 2024 Sheet: C-17





NOTES:
* INCLUDE WITH ITEM 516 - TWO COMPONENT POLYURETHANE SEALANT FOR PAYMENT
** INCLUDE WITH ITEM 516 - 1/2" PEJF FOR PAYMENT
*** INCLUDE WITH MC-004 4" CONCRETE WEARING SLAB FOR PAYMENT

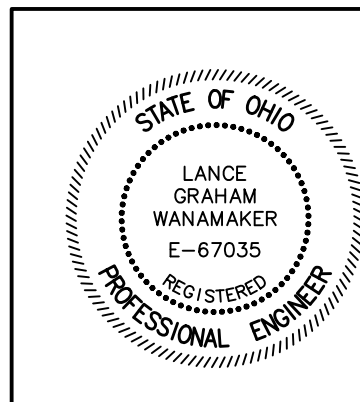
Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title: RTA TUNNEL MEMBRANE REPLACEMENT
Sheet Title: TUNNEL REPAIR - WEARING SLAB DETAILS

Designed: MSI | Drawn: MSI | Checked: LGW | Approved: LGW
Scale: AS SHOWN | Project No.: 198348
Date: FEBRUARY 2024 | Sheet: C-19

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WASTE MANAGEMENT (CONT.)

7. ALL HAZARDOUS WASTE MATERIALS SUCH AS OIL FILTERS, PETROLEUM PRODUCTS, PAINTS, AND EQUIPMENT MAINTENANCE FLUIDS WILL BE SEGREGATED FROM OTHER NON-HAZARDOUS WASTE MATERIALS AND STORED IN APPROPRIATE AND CLEARLY MARKED SEALED SHIPPING CONTAINERS, WITHIN THE HAZARDOUS MATERIALS STORAGE AREA. SECONDARY CONTAINMENT WILL BE PROVIDED FOR ALL WASTE MATERIALS IN THE HAZARDOUS MATERIALS STORAGE AREA AND WILL CONSIST OF COMMERCIALY AVAILABLE SPILL PALLETS.
8. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND MUNICIPAL REGULATIONS. HAZARDOUS WASTE MATERIALS WILL NOT BE DISPOSED OF INTO THE ON-SITE DUMPSTERS.
9. NO MATERIALS WILL BE BURIED ON-SITE, NOR WILL ANY OPEN BURNING OCCUR ON-SITE.
10. ALL MATERIAL STORAGE AND DISPOSAL WILL BE LOCATED IN THE STAGING AREAS SHOWN ON THE PLANS. THE STAGING AREA SHALL BE ESTABLISHED ON EXISTING PAVEMENT OR A STONE BASE. CONSTRUCTION ENTRANCES ARE SHOWN ON THE PLANS. IF NEEDED, ADDITIONAL CONSTRUCTION ENTRANCE(S) AND/OR HAUL ROADS SHALL BE ESTABLISHED ON 10" OF ODOT #2 (1.5-2.5 INCH) STONE BASE. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE STONE SUCH THAT IT IS REPLENISHED WHEN THE DEPTH IS LESS THAN 10" OR REMOVED AND REPLACED IF THE STONE BECOMES MUD-LADEN. THE FOLLOWING ITEMS SHALL BE LOCATED AT THE STAGING AREA UNLESS OTHERWISE AUTHORIZED: STORAGE OR DISPOSAL OF SOLID, SANITARY, AND HAZARDOUS WASTES, INCLUDING DUMPSTER AREAS, CONCRETE TRUCK WASHOUT AREAS AND VEHICLE FUELING AREAS.
11. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTRUCTING PERSONNEL REGARDING THE CORRECT DISPOSAL OF TRASH AND CONSTRUCTION DEBRIS AS WELL AS PROPER PROCEDURES FOR HAZARDOUS WASTE DISPOSAL. NOTICES THAT STATE THESE PROCEDURES WILL BE POSTED IN THE OFFICE TRAILER, AND THE INDIVIDUAL WHO MANAGES DAY-TO-DAY OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
12. THE CONTRACTOR MUST ENSURE THAT ALL CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, ARE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTES:
 - PREVENT SPILLS.
 - USE PRODUCTS UP.
 - FOLLOW LABEL DIRECTIONS FOR DISPOSAL.
 - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH.
 - RECYCLE WASTES WHENEVER POSSIBLE.
 - DO NOT POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
 - DO NOT POUR DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS.
 - DO NOT BURY CHEMICALS OR CONTAINERS.
 - DO NOT BURN CHEMICALS OR CONTAINERS.
 - DO NOT MIX CHEMICALS TOGETHER.
13. ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WILL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714

SPILLS AND UNINTENDED RELEASES

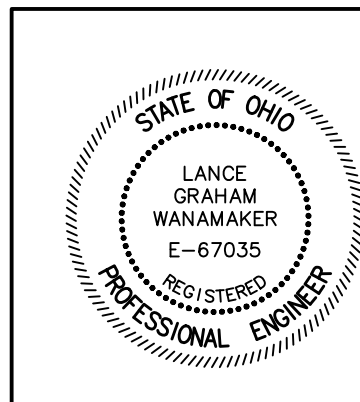
1. SHOULD AN ACCIDENTAL SPILL OR RELEASE OCCUR, THE CONTRACTOR SHALL MEET THE REPORTING REQUIREMENTS OF 40 CFR PART 117 AND 40 CFR PART 302.
2. THE CONTRACTOR MUST MINIMIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES WITH THE SITE'S STORM WATER DISCHARGES BY MEETING THE REQUIREMENTS OF THE CONSTRUCTION SWP3.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT, DURING ANY 24-HOUR PERIOD, STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE DO NOT CONTAIN A HAZARDOUS SUBSTANCE EQUAL TO OR IN EXCESS OF REPORTABLE QUANTITIES.
4. THE CONTRACTOR MUST TAKE IMMEDIATE ACTION TO CONTAIN, REMOVE, AND DISPOSE OF ANY SPILLED MATERIAL IN THE MANNER SPECIFIED BY LOCAL, STATE, AND FEDERAL REGULATIONS AND BY THE MANUFACTURER OF THE SPILLED PRODUCT.
5. WITHIN THIRTY (30) MINUTES OF A SPILL GREATER THAN 1 GALLON OR ANY SPILL THAT CAUSES A SHEEN ON A WATERWAY, THE CONTRACTOR MUST REPORT TO AIRFIELD OPERATIONS AT (216) 265-6090. THE OBSERVED SHEEN SHALL BE REMOVED BY ABSORBENT MATERIALS, A VACUUM TRUCK OR OTHER APPROPRIATE MEANS.
6. SPILLS GREATER THAN 25 GALLONS OR MORE THE CONTRACTOR MUST CONTACT OHIO EPA AT 1-800-282-9378, THE LOCAL FIRE DEPARTMENT AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) AT (216) 443-5700 (DAY) OR (216)711-1365 (24-HR) WITHIN 30 MINUTES OF A SPILL.

SPECIFICATIONS

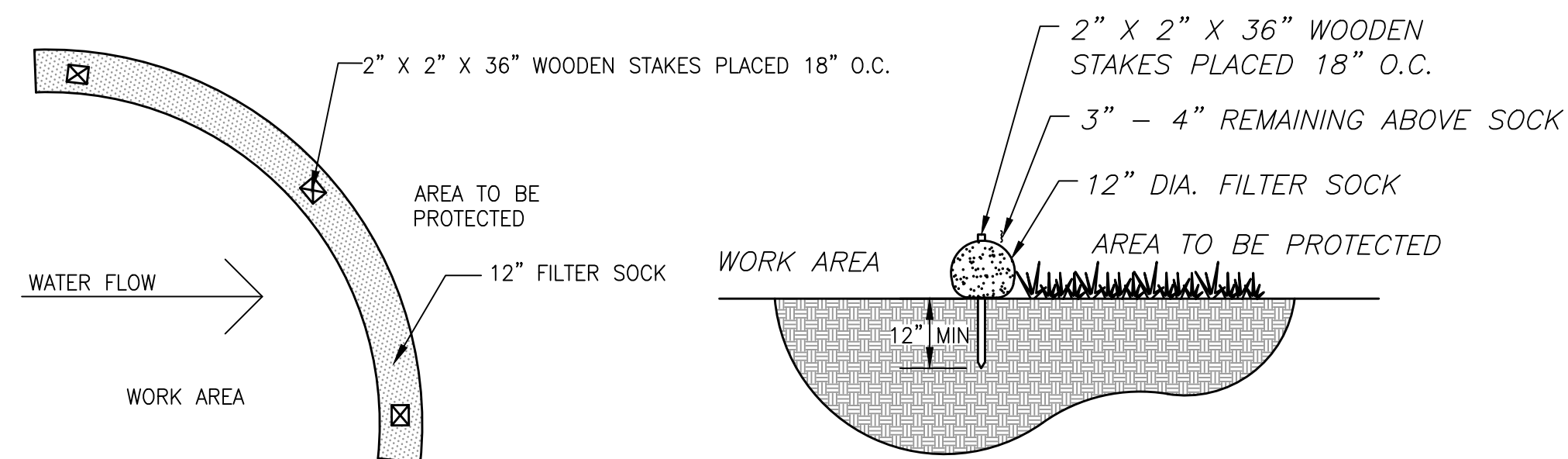
1. ALL WORK SPECIFIED AS AN ODOT ITEM SHALL BE GOVERNED BY THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION HANDBOOK. ALL OTHER ITEMS SHOULD CONFORM TO SPECIFICATIONS CONTAINED IN THE ODNR MANUAL - RAINWATER AND LAND DEVELOPMENT, CURRENT EDITION.

GENERAL CONSTRUCTION SEQUENCE

1. THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH ALL SUBCONTRACTORS TO REVIEW THE SWP3 AND POLLUTION PREVENTION MEASURES.
2. INSTALL TEMPORARY SIGNAGE AND TEMPORARY BARRICADES. SEE PHASING PLANS.
3. INSTALL ALL SEDIMENT CONTROL STRUCTURES PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
4. ALL OTHER TEMPORARY SEDIMENT AND EROSION CONTROL ITEMS (I.E., SEDIMENT BASINS) SHALL BE INSTALLED AS SOON AS POSSIBLE BUT NO LATER THAN WITHIN 7 DAYS OF THE FIRST SOIL DISTURBANCE.
5. INSTALL TRENCH AND GROUND WATER CONTROL MEASURES AS NECESSARY TO ENSURE THAT NO DEWATERING ACTIVITIES RESULT IN TURBID OR POLLUTANT-LADEN DISCHARGES TO WATERS OF THE STATE.
6. BEGIN UTILITY AND PAVEMENT REMOVAL FOR ONLY THAT PHASE SCHEDULED FOR WORK WITHIN THE NEXT 14 DAYS, OTHERWISE STABILIZATION IS REQUIRED WITHIN 7 DAYS OF LAST ACTIVITY.
7. BEGIN INSTALLATION OF NEW UTILITIES AND UNDERGROUND STRUCTURES.
8. THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH A BY-PASS PUMPING SYSTEM IN ORDER TO INSTALL DEEP MANHOLES WITHOUT SHUTTING DOWN THE EXISTING STORM SEWER. THE CONTRACTOR SHALL PLUG THE DOWNSTREAM SIDE OF THE UPSTREAM MANHOLE AND PUMP TO THE NEAREST DOWNSTREAM MANHOLE.
9. BEGIN EXCAVATION, GRADING AND COMPACTION FOR PAVEMENT SUBBASE. STABILIZE ALL PREPARED EARTH AREAS THAT WILL NOT BE WORKED ON WITHIN THE NEXT 14 DAYS WITH AGGREGATE COURSES OR FILTER FABRIC WITHIN 7 DAYS OF LAST ACTIVITY AT NO ADDITIONAL COST TO OWNER.
10. INSTALLATION OF NEW PAVEMENT.
11. BEGIN FINAL GRADING OPERATIONS.
12. WITHIN 7 DAYS AFTER REACHING FINAL GRADE, BEGIN SEEDING, OR SODDING OPERATIONS.
13. SOD SHALL BE PLACED WITHIN 20' OF ALL TAXIWAY AND RUNWAY PAVEMENT, AND ALL REMAINING AREAS SHALL BE SEEDED AND MULCHED UNLESS SPECIFIED OTHERWISE.
14. AFTER PERMANENT STORM WATER STRUCTURES ARE OPERATIONAL AND THE SITE IS SUFFICIENTLY STABLE, THE TEMPORARY SEDIMENT AND EROSION CONTROL ITEMS SHALL BE REMOVED. ALL SEDIMENT SHALL BE REMOVED FROM THE STORM SEWER AND DISPOSED OF IN A DESIGNATED LOCATION PREVIOUSLY APPROVED BY THE LOCAL REGULATORY AUTHORITIES AND RESIDENT ENGINEER.
15. AT COMPLETION OF WORK, THE CONTRACTOR SHALL REMOVE FROM THE SITE AND DISPOSE OF DEBRIS AND WASTE MATERIALS RESULTING FROM HIS ACTIVITIES. THE CONTRACTOR SHALL ALSO THOROUGHLY CLEAN ALL PAVEMENT, CLEANOUTS, PIPES AND STRUCTURES TO REMOVE DEBRIS AND DIRT ACCUMULATED AS A RESULT OF THE CONSTRUCTION AND OPEN ALL GUTTERS SO THAT FREE DRAINAGE IS OBTAINED.

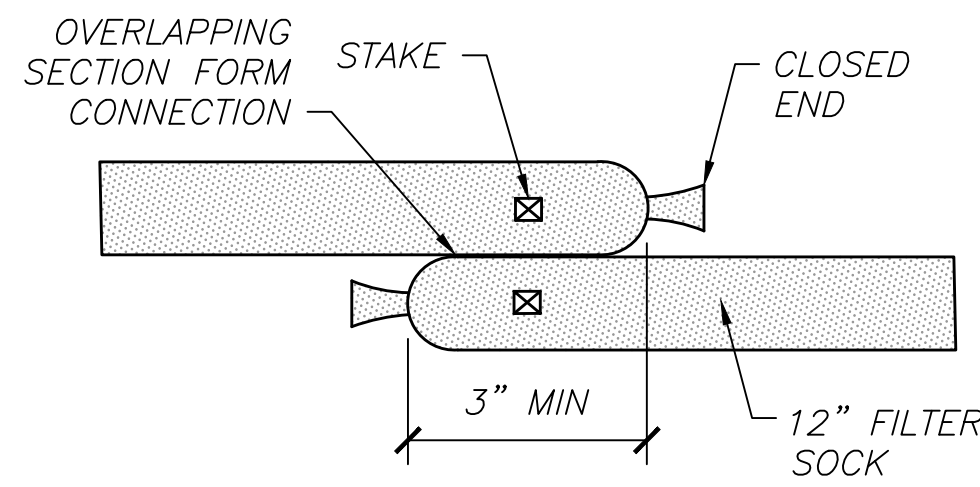


A-3	03/19/24	NOTE REVISED	MSI
Revisions	Date	Description	By
<p>CLEVELAND HOPKINS INTERNATIONAL AIRPORT CLEVELAND, OHIO</p>			
Project Title			
<p>RTA TUNNEL MEMBRANE REPLACEMENT</p>			
Sheet Title:			
<p>STORMWATER POLLUTION PREVENTION NOTES 2</p>			
Designed:	Drawn:	Checked:	Approved:
MSI	MSI	LGW	LGW
Scale:		Project No.:	
AS SHOWN		198348	
Date:		Sheet:	
FEBRUARY 2024		C-22	



PLAN

SECTION



FILTER SOCK CONNECTION / ATTACHMENT DETAIL

INSTALLATION

1. FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES AND AT LEAST 5 FT. FROM THE TOE OF THE SLOPES.
2. FILTER SOCKS SHOULD LIE PERPENDICULAR TO FLOWS, WITH ENDS OF THE FILTER SOCK POINTING UPSLOPE.

INSPECTION AND MAINTENANCE

1. INSPECT FILTER SOCKS WEEKLY AND AFTER EACH SIGNIFICANT RAIN (1/2" IN 24 HRS), MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
2. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
3. DRIVING OVER FILTER SOCKS IS NOT RECOMMENDED. IF THIS SHOULD OCCUR, THE SOCK SHALL BE INSPECTED AND REPAIRED IMMEDIATELY.
4. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT SHALL BE REPAIRED OR REPLACED.
5. FILTER SOCKS SHOULD BE REPLACED IF PONDING BECOMES EXCESSIVE.

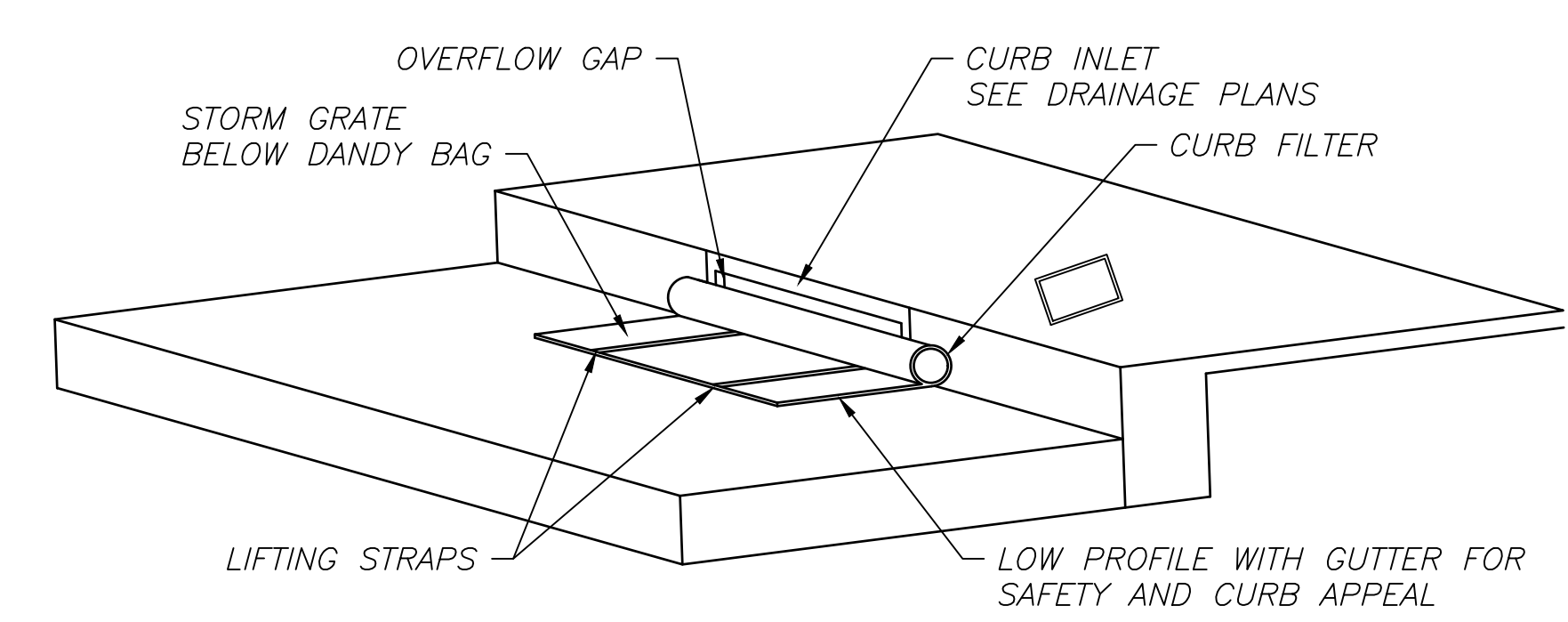
REMOVAL

1. REMOVE ACCUMULATED SEDIMENT.
2. CUT OPEN FILTER SOCK, AND DISPERSE COMPOST MATERIAL ON SITE, AS DETERMINED BY RESIDENT ENGINEER.
3. REMOVE MESH NETTING AND STAKES ENTIRELY, AND DISPOSE OF IN THE PROPER WASTE OR RECYCLING FACILITY.

ADDITIONAL NOTES

1. ALL MATERIAL TO MEET FILTER SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.

FILTER SEDIMENT CONTROL
SCALE: NTS



CURB BAG INLET PROTECTION NOTES

1. INSTALL EMPTY CURB BAG OVER THE GRATE AND ENSURE PROPER FIT. TUCK ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING STRAPS (DO NOT RELY ON THE LIFTING STRAPS TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME (STREET SIDE FIRST), THEN LOWER BACK EDGE WITH DAM INTO PLACE. WHEN PROPERLY INSTALLED, THE DANDY CURBBAG SHOULD BE PARTIALLY BLOCKING THE CURB HOOD.
2. REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM THE SURFACE AND VICINITY OF THE DANDY BAG AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE DANDY BAG AS NEEDED.
3. UPON PROJECT COMPLETION OR REMOVAL OF THE STORM CATCH BASIN OR GRATE, REMOVE THE DANDY BAG AND PROPERLY RECYCLE OR DISPOSE OF THE BAG IN ACCORDANCE WITH APPLICABLE REGULATIONS.

DANDY BAG CURB INLET PROTECTION

SCALE: NTS

INSTALLATION

1. CONCRETE WASH OUT PIT LOCATION(S), TYPES AND SIZE(S) SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE RESIDENT PROJECT REPRESENTATIVE. THE DIMENSIONS AND VOLUME SHOULD BE SUFFICIENT TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
2. THE CONCRETE WASH OUT PIT SHALL BE CONSTRUCTED WITH NO POTENTIAL FOR DISCHARGE.
3. CLEAR THE AREA OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL PRIOR TO INSTALLING THE CONCRETE WASH OUT PIT.
4. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FT. OF THE CONCRETE WASH OUT PIT SHALL BE CUT AND PLUGGED.
5. THE VISQUEEN LINER SHALL BE FREE OF TEARS OR HOLES THAT WOULD ALLOW THE WASH WATER TO ESCAPE.
6. IF THE CONCRETE WASH OUT FACILITY IS NOT WITHIN VIEW OF THE CONCRETE POUR LOCATION, SIGNAGE WILL BE NEEDED TO DIRECT THE TRUCK DRIVERS.

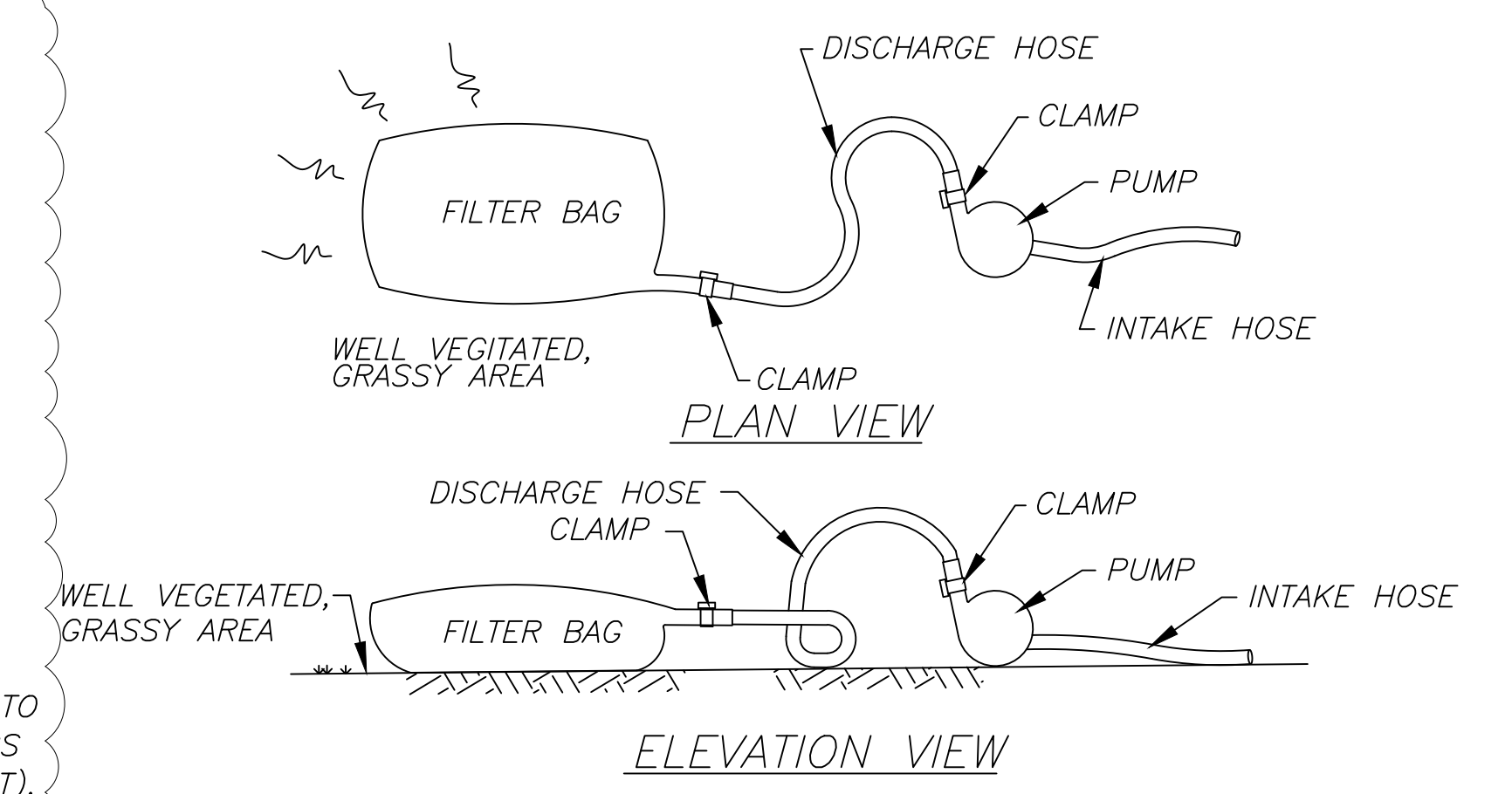
INSPECTION AND MAINTENANCE

1. THE CONCRETE WASH OUT PIT SHALL BE MAINTAINED TO ENSURE THAT CONCRETE WASH WATER IS NOT ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCES.
2. THE CONCRETE WASH OUT PIT SHALL BE INSPECTED DAILY AND AFTER EACH SIGNIFICANT RAIN EVENT (1/2" IN 24 HRS) TO IDENTIFY ANY PLASTIC LININGS AND SIDEWALLS THAT HAVE BEEN DAMAGED BY CONSTRUCTION ACTIVITIES. THE INSPECTOR SHALL ALSO DETERMINE WHETHER THE PIT HAS BEEN FILLED TO OVER 75 PERCENT CAPACITY.
3. PRIOR TO HEAVY RAINS, THE LIQUID LEVEL IN THE PIT SHALL BE LOWERED OR THE PIT SHALL BE COVERED TO AVOID OVERFLOW DURING THE RAIN STORM.
4. WHEN THE WASH OUT PIT HAS BEEN FILLED TO OVER 75 PERCENT OF ITS CAPACITY, THE WASH WATER SHOULD BE VACUUMED OFF OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS.
5. AFTER THE PIT HAS BEEN USED AND THE WASH WATER HAS EVAPORATED OR HAS BEEN VACUUMED OFF, THE REMAINING HARDENED SOLIDS SHALL BE BROKEN UP AND REMOVED FROM THE PIT.
6. MATERIAL COLLECTED IN THE CONCRETE WASH OUT PIT SHALL BE PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY. DISPOSAL SHALL BE SCHEDULED AS NEEDED.
7. IF EMPTYING OF THE PIT RESULTS IN DAMAGE TO THE FILTER SOCKS OR VISQUEEN LINER, THE PIT WILL NEED TO BE REPAIRED AND RELINED WITH NEW PLASTIC.
8. IN THE EVENT OF A LEACHATE OUTBREAK, MEASURES MUST BE TAKEN TO ISOLATE THE DISCHARGE FOR COLLECTION AND PROPER DISPOSAL. INVESTIGATIVE MEASURES AND CORRECTIVE ACTIONS MUST BE IMPLEMENTED TO IDENTIFY AND ELIMINATE THE SOURCE OF ALL LEACHATE OUTBREAKS.

REMOVAL

1. REMOVE ACCUMULATED SOLIDS FROM THE PIT, AND DISPOSE OF AT AN APPROVED DISPOSAL FACILITY.
2. CUT OPEN FILTER SOCK, AND DISPERSE COMPOST MATERIAL ON SITE, AS DETERMINED BY RESIDENT ENGINEER. IF COMPOST HAS BECOME CONTAMINATED, DISPOSE OF IN THE PROPER WASTE OR RECYCLING FACILITY.
3. REMOVE MESH NETTING, STAKES AND VISQUEEN LINER ENTIRELY, AND DISPOSE OF IN THE PROPER WASTE OR RECYCLING FACILITY.
4. RESTORE PIT AREA AND STABILIZE ANY EXPOSED SOIL.

CONCRETE WASHOUT PIT
SCALE: NTS



NOTES:

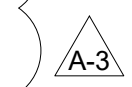
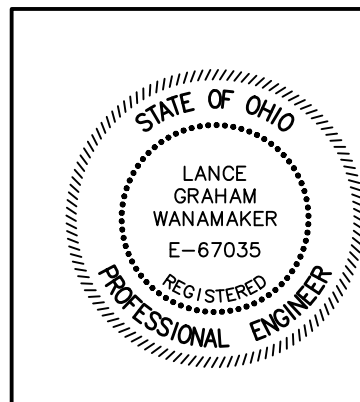
1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
6. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.
7. FILTER BAGS ARE DESIGNED TO FILTER WATER FROM WORK AREAS PRIOR TO DISCHARGE.

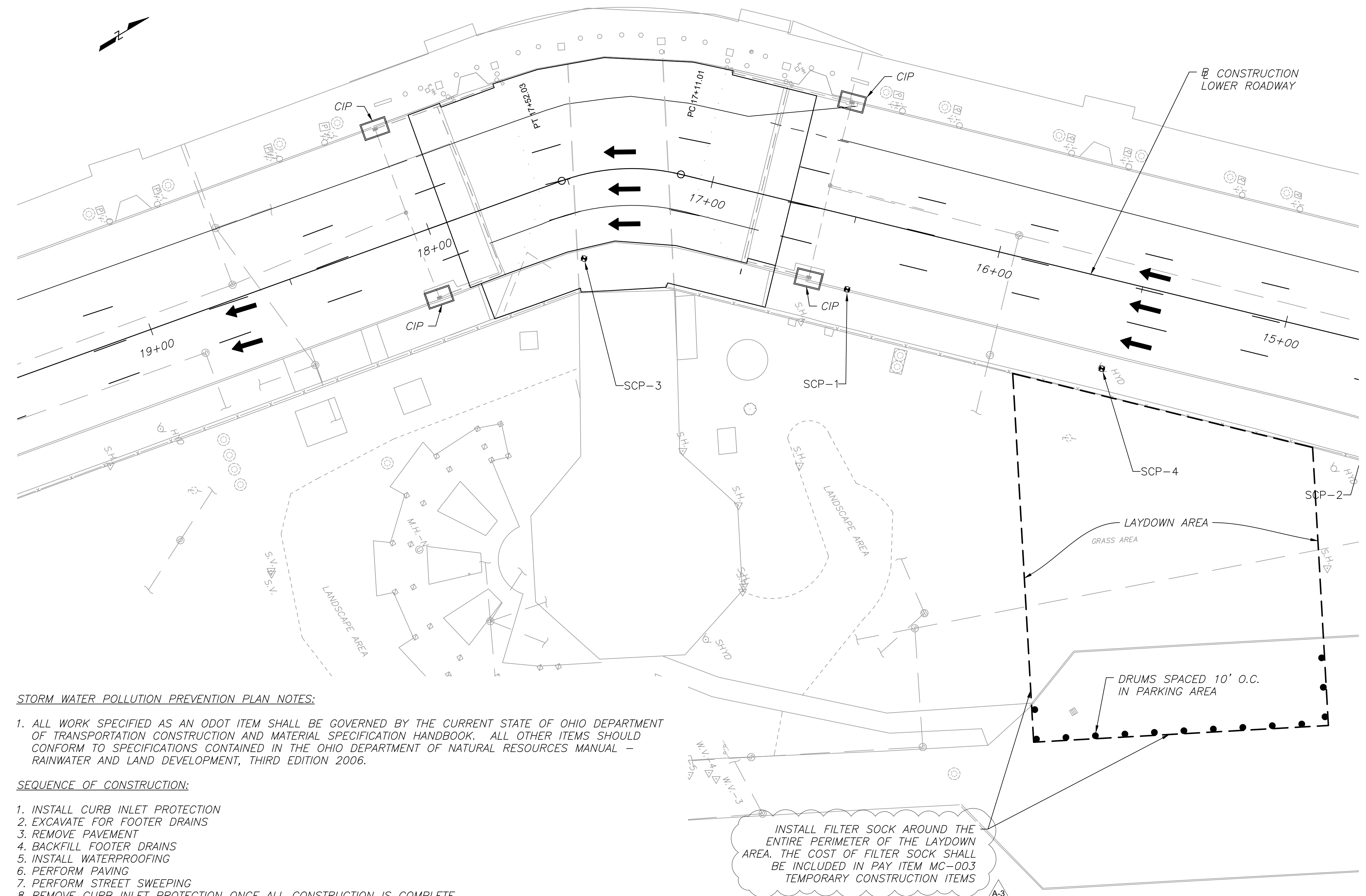
PUMPED WATER FILTER BAG
SCALE: NTS

Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title: STORMWATER POLLUTION PREVENTION DETAILS			
Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-23	





LEGEND

□ CURB INLET PROTECTION (CIP)

STORM WATER POLLUTION PREVENTION PLAN NOTES:

1. ALL WORK SPECIFIED AS AN ODOT ITEM SHALL BE GOVERNED BY THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION HANDBOOK. ALL OTHER ITEMS SHOULD CONFORM TO SPECIFICATIONS CONTAINED IN THE OHIO DEPARTMENT OF NATURAL RESOURCES MANUAL - RAINWATER AND LAND DEVELOPMENT, THIRD EDITION 2006.

SEQUENCE OF CONSTRUCTION:

1. INSTALL CURB INLET PROTECTION
2. EXCAVATE FOR FOOTER DRAINS
3. REMOVE PAVEMENT
4. BACKFILL FOOTER DRAINS
5. INSTALL WATERPROOFING
6. PERFORM PAVING
7. PERFORM STREET SWEEPING
8. REMOVE CURB INLET PROTECTION ONCE ALL CONSTRUCTION IS COMPLETE

REQUIREMENTS FOR CONTROLS OF OTHER WASTES:

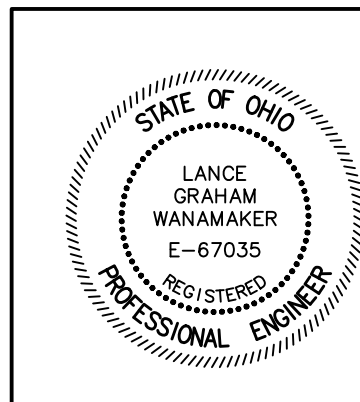
1. SOLID OR LIQUID WASTE, INCLUDING BUILDING MATERIALS OR THEIR PACKAGING, SHALL BE PROPERLY DISPOSED OF AND SHALL NOT BE DISCHARGED IN STORMWATER RUNOFF.
2. CONCRETE TRUCKS ARE NOT PERMITTED TO WASH OUT DIRECTLY INTO STORM SEWERS, STREAMS OR DRAINAGE CHANNELS.
3. OFF-SITE TRACKING OF SEDIMENTS BY CONSTRUCTION VEHICLES MUST BE REMOVED BY SWEEPING.
4. CONTAMINATED SOILS OR SOILS WHERE CONSTRUCTION SITE CHEMICALS HAVE BEEN SPILLED MUST BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
5. STORM WATER THAT COMES IN CONTACT WITH CONTAMINATED SOILS, OR SOLID AND INDUSTRIAL WASTE MUST BE COLLECTED AND DISPOSED OF AS WASTEWATER.
6. FUEL TANKS AND DRUMS OR OTHER CONTAINERS HOLDING CONSTRUCTION SITE CHEMICALS MUST BE STORED WITHIN A DIKED AREA.

INSTALL FILTER SOCK AROUND THE ENTIRE PERIMETER OF THE LAYDOWN AREA. THE COST OF FILTER SOCK SHALL BE INCLUDED IN PAY ITEM MC-003 TEMPORARY CONSTRUCTION ITEMS

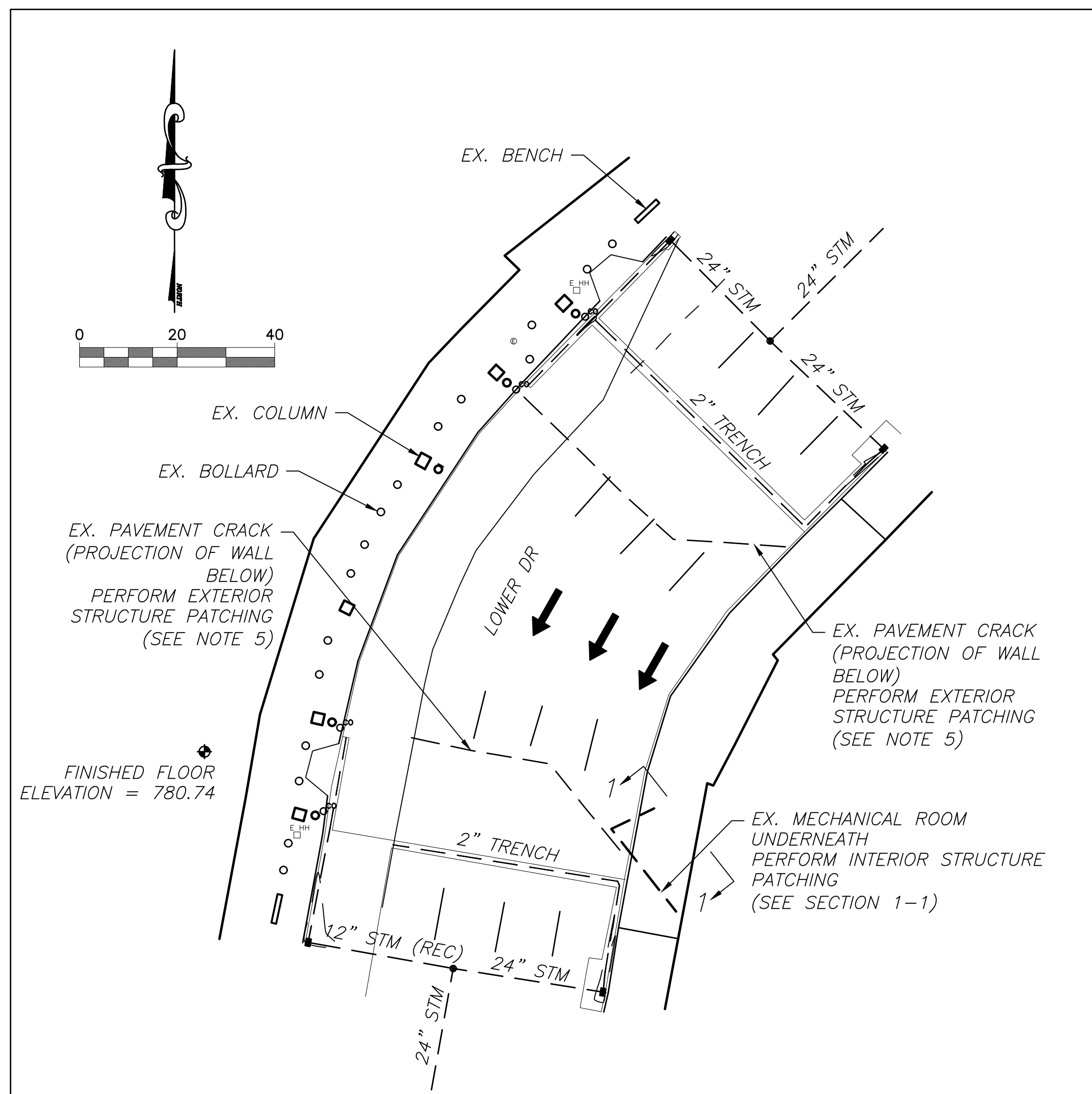
Revisions	Date	Description	By
A-3	03/19/24	ADDED LEADER	MSI

**CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO**

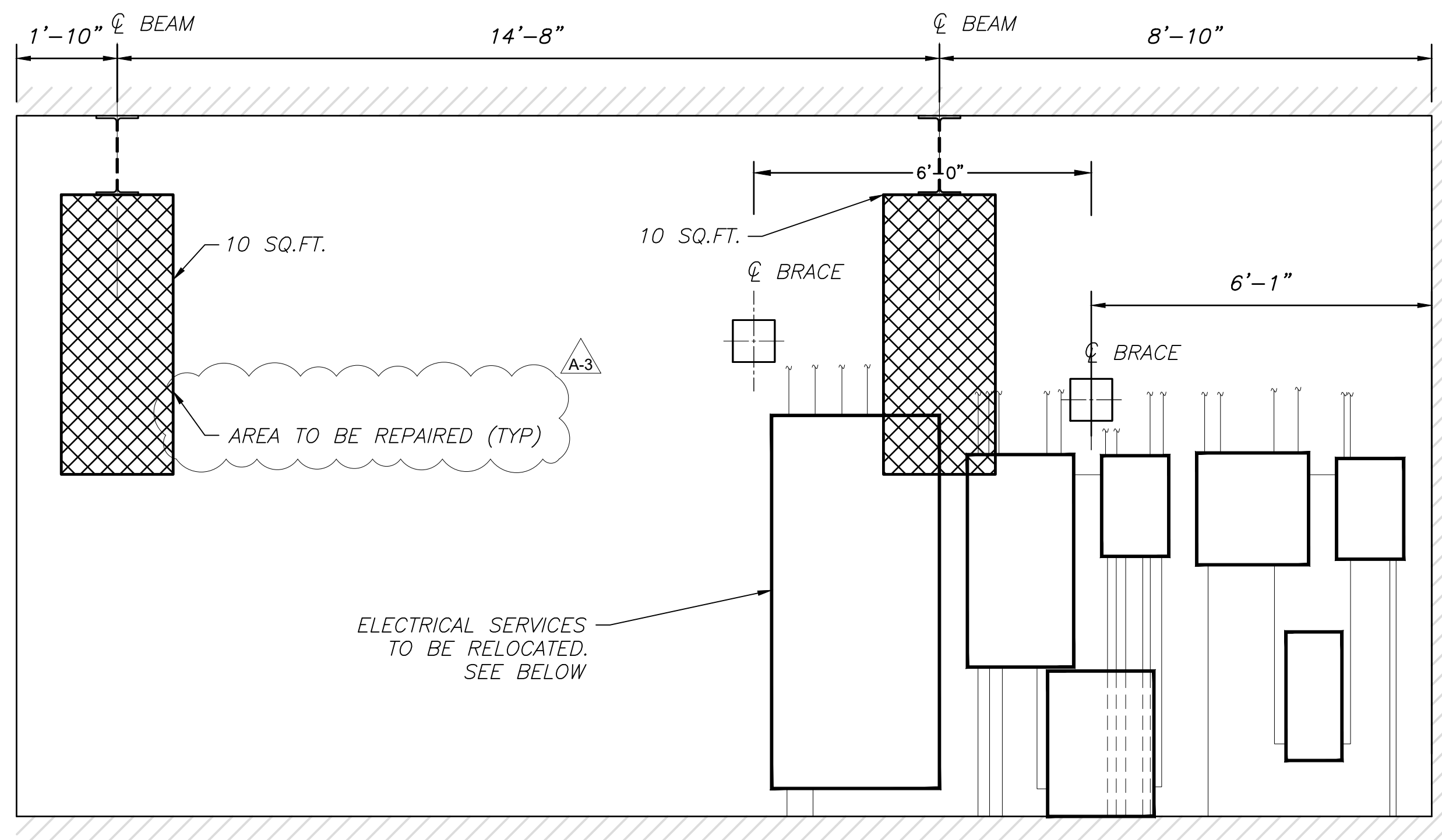
Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title STORMWATER POLLUTION PREVENTION PLAN			
Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-24	



Michael Baker INTERNATIONAL



PLAN
SCALE: 1" = 20'



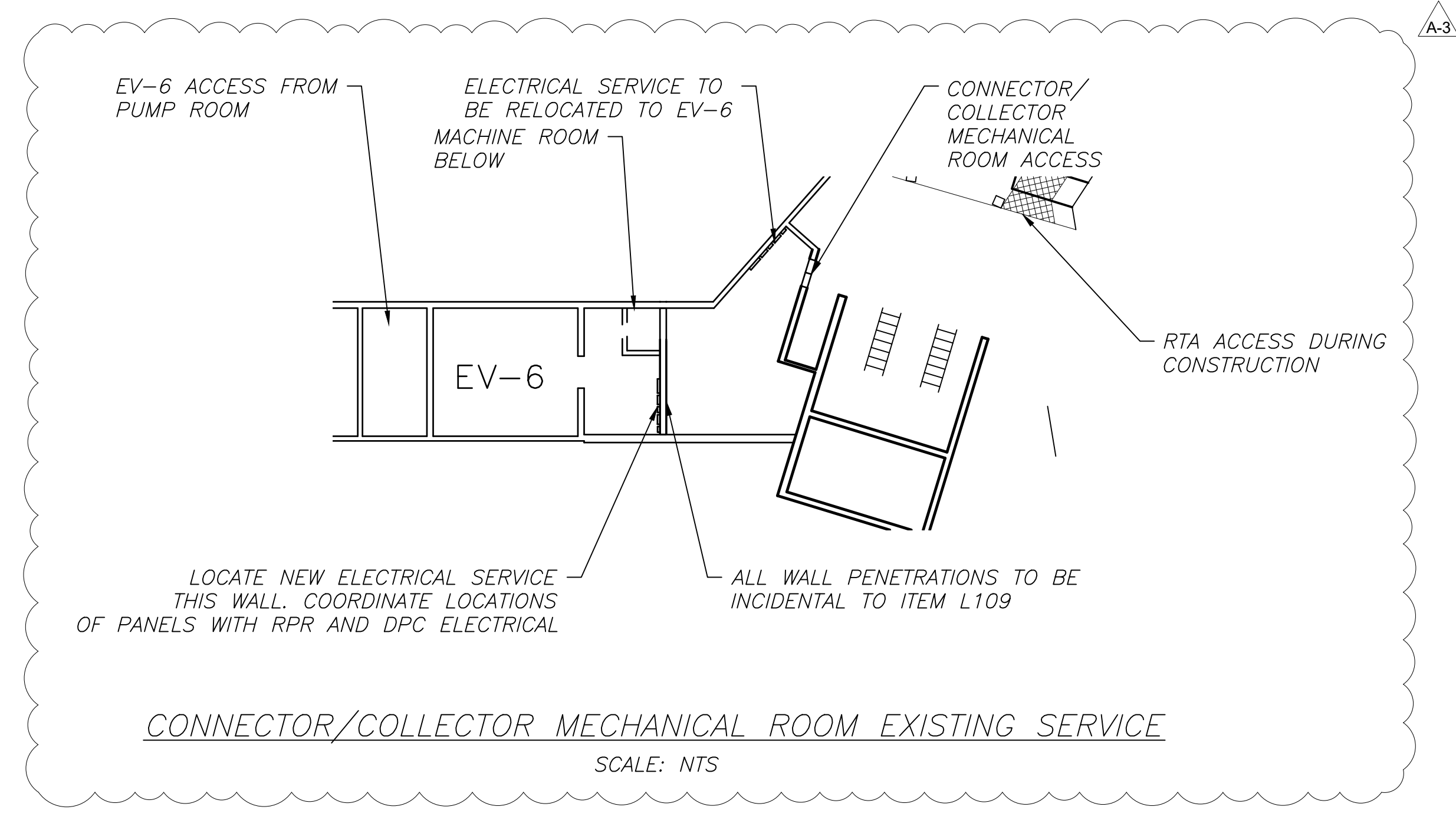
SECTION 1-1
MECHANICAL ROOM WALL PATCHING DETAIL
SCALE: NTS

WALL PATCHING NOTES:

1. THE CONTRACTOR TO FOLLOW ODOT ITEM 519 - PATCHING CONCRETE STRUCTURES SPECIFICATIONS WHEN PERFORMING THE PATCHING WORK.
2. THE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. NO DETAILED INSPECTION WAS PERFORMED. PATCH AREAS TO BE FIELD LOCATED BY THE CONTRACTOR AND APPROVED BY THE RESIDENT PROJECT REPRESENTATIVE (RPR). THE CONTRACTOR WILL BE PAID FOR THE ACTUAL SQUARE FOOT AREA PATCHED.
3. THE CONTRACTOR TO PROVIDE TEMPORARY SHORING UNDERNEATH THE BEAMS FOR THE DURATION OF WALL PREPARATION AND PATCHING WORK.
4. PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCED STEEL. ACCEPTABLE METHODS INCLUDE:
 - INTERIOR: VACUUM ABRASIVE BLASTING;
 - EXTERIOR: HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.
5. ADDITIONAL QUANTITIES ARE INCLUDED IN THIS PACKAGE FOR USE AS DIRECTED BY THE RPR TO ALLOW FOR ADDITIONAL EXTERIOR WALL PATCHING WORK ASSOCIATED WITH WALL WATERPROOFING APPLICATION. NO INSPECTION OF THE WALL HAS BEEN PERFORMED.
6. UNLESS NOTED OTHERWISE, ALL DETAILS ARE DRAWN NOT TO SCALE.

ELECTRICAL SERVICE RELOCATION NOTES:

1. THE EXISTING 600 AMP ELECTRICAL SERVICE CURRENTLY LOCATED IN THE CONNECTOR/COLLECTOR MECHANICAL ROOM IS TO BE RELOCATED TO ELECTRICAL VAULT EV-6. ALL OF THE AFFECTED SERVICE PANELS AND TRANSFORMERS ARE INCLUDED IN ITEM L109.
2. ACCESS TO EV-6 WILL BE THROUGH THE PUMP ROOM LOCATED ACROSS THE LOWER ROADWAY FROM THE CONNECTOR/ COLLECTOR MECHANICAL ROOM.
3. THE EXISTING SERVICE SKETCH WAS CREATED FROM THE AVAILABLE RECORD DRAWINGS.
4. THE PANEL SCHEDULE SKETCH WAS CREATED FROM AVAILABLE INFORMATION ON THE SERVICE PANELS. THE CONTRACTOR IS TO VERIFY THE LOCATION AND AFFECTED CIRCUITS PRIOR TO THE SERVICE RELOCATION TO EV-6.
5. THE CONTRACTOR SHALL ALLOW A MINIMUM OF 120 HOURS OF CREW TIME TO RESEARCH THE AFFECTED FACILITIES ASSOCIATED WITH THE PANELS/SERVICES TO BE RELOCATED. COSTS FOR RESEARCHING THE CURRENT CIRCUITRY TO BE INCIDENTAL TO ITEM L109.
6. SHUTDOWNS ARE LIMITED TO 4 HOURS/NIGHT AND ARE TO BE PERFORMED BETWEEN THE HOURS OF 0000 AND 0400, MILITARY TIME.
7. ALL COSTS, INCLUDING CREW TIME FOR RESEARCH FOR SERVICE RELOCATION, IS TO BE INCIDENTAL TO ITEM L109-7.4, INSTALLATION OF EQUIPMENT IN EXISTING VAULT



CONNECTOR/COLLECTOR MECHANICAL ROOM EXISTING SERVICE
SCALE: NTS

Revisions	Date	Description	By
A-3	03/19/24	PLAN REVISIONS	MSI

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CLEVELAND, OHIO**

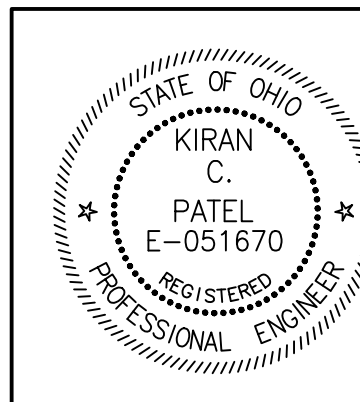
Project Title: RTA TUNNEL MEMBRANE REPLACEMENT

Sheet Title: MECHANICAL ROOM WALL REPAIR

Designed: MM Drawn: MM Checked: KCP Approved: KCP

Scale: AS SHOWN Project No.: 198348

Date: FEBRUARY 2024 Sheet: C-25



G & T Associates Inc.
Consulting Engineers
Cleveland, Ohio
Ph. (440) 572-0555

DP-CC					
TEXT ON PANEL	PAPER SCHEDULE	120	277	PAPER SCHEDULE	TEXT ON PANEL
MDP	BRK #1 600 AMP			BRK #2 200 AMP	HCP
	3 PHASE FEED MDP	1	2	3 PHASE FEED HCP	
		3	4		
	BRK #3 100 AMP	5	6	BRK #4 60 AMP *	ELEVATOR *
	3 PHASE FEED SPARE			3 PHASE FEED ELEV *	
AC-5	BRK #6 30 AMP			BRK #6 30 AMP	
	3 PHASE FEED AC-5			3 PHASE FEED AC-4	

LEM-2					
TEXT ON PANEL	PAPER SCHEDULE	120	277	PAPER SCHEDULE	TEXT ON PANEL
FIRE ALARM	ELEVATOR PIT LIGHTS & PLUGS/PUMP ROOM LIGHTS	1 20A	2 20A	(EM) LIGHTS CONNECTOR (EN) ESCALATOR #13 AND 14 PIT (EO) LIGHTS AND PLUGS	F/A TEMP/ESCALATOR PIT LIGHTS
HIGH LIGHTS	CENTER CAN LIGHTS	3 20A	4 20A	SIEMANS PANELS EAST WALLS	SIEMANS PANELS EAST WALL
RTA LIGHTING	ELEVATOR CAR LIGHTS	5 20A	6 20A	SUMP PUMP ALARM	SUMP PUMP ALARM
25	NORTH ELEC. DOOR OPENER COLLECTOR	7 20A	8 20A	CONTROL PANEL #2 F.A.	CONTROL PANEL #2 F.A.
23	SOUTH ELEC. DOOR OPENER COLLECTOR	11 20A	10 20A	FIELD CABINET #6	FIELD CABINET #6
RTA TRACK LIGHTS	(EM) LIGHTS CONNECTOR TEMP WALKWAY OUTLETS DOUBLED UP ON BRKRS 9 & 11	9 20A	12 20A	EMERGENCY LIGHTS CONNECTOR	RTA TRACK LIGHTS

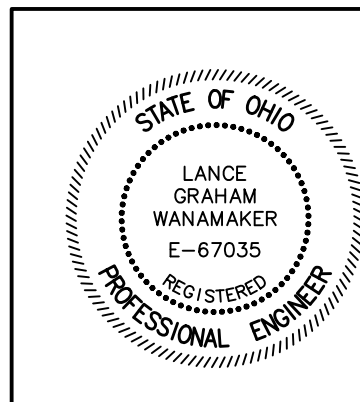
HEM-2					
TEXT ON PANEL	PAPER SCHEDULE	120	277	PAPER SCHEDULE	TEXT ON PANEL
SUMP PUMP	SUMP PUMPS #23 AND #25	30A	30A	15 KVA TRANSFORMER FEED FOR PANEL HEM SP	TRANS
CENTRIC PAK #1	SPARE	7 20A	8 20A	LIGHTS BY ELEVATOR	
LIGHTS-TEMPORARY WALKWAY	LIGHTS-TEMPORARY WALKWAY	11 20A	10 20A	LIGHTS BY ELEVATOR	HEM SP TRIPPED 10-29-98
LIGHTS-TEMPORARY WALKWAY	LIGHTS-TEMPORARY WALKWAY	9 20A	12 20A	"ONE" FIXTURE ELEVATOR	

LCP-3			
TEXT ON PANEL	PAPER SCHEDULE	120	277
BASE PLUG AT FLOOR BOXES-SOUTH	1 20A	2 20A	BAGGAGE ATM AND LOTTO
WATATA CABINET	3 20A	4 20A	BASE PLUG AND FLOOR BOXES-NORTH SIDE NEAR ESCALATOR 4
MECHANICAL ROOM LIGHTS	5 20A	6 20A	BASE PLUGS EAST OF ESCALATORS
BASE PLUGS EAST OF ESCALATOR	7 20A	8 20A	#4-5 PLUGS
#3 "7" PLUGS LIGHTS IN MECHANICAL ROOM	9 20A	10 20A	4 BASE PLUGS ON COLUMN V
RECEPTACLE FOR PRESSURE WASHER	11 20A	12 20A	CONNECTOR AND 2 PLUG COLLECTOR

HCP-3							
TEXT ON PANEL	PAPER SCHEDULE EDITS	PAPER SCHEDULE	120	277	PAPER SCHEDULE	PAPER SCHEDULE EDITS	TEXT ON PANEL
	SPARE #1	BRK #1-50 AMP 3-PHASE FEED TRANS 30 KVA	1	2	BRK #2-60 AMP 3-PHASE FEED ESC #14	#2 3 POLE CKT 36	
	SPARE #1	BRK #1-50 AMP 3-PHASE FEED TRANS 30 KVA	3	4	BRK #2-60 AMP 3-PHASE FEED ESC #14	#2 3 POLE CKT 38	
	SPARE #1	BRK #1-50 AMP 3-PHASE FEED TRANS 30 KVA	5	6	BRK #2-60 AMP 3-PHASE FEED ESC #14	#2 3 POLE CKT 40	
	#3 3 POLE CKT 30	BRK #3-60 AMP 3-PHASE FEED ESCALATOR #13	7	8	BRK #4-15 AMP 3-PHASE SPARE	#4 3 POLE	
	#3 3 POLE CKT 32	BRK #3-60 AMP 3-PHASE FEED ESCALATOR #13	9	10	BRK #4-15 AMP 3-PHASE SPARE	#4 3 POLE	
	#3 3 POLE CKT 34	BRK #3-60 AMP 3-PHASE FEED ESCALATOR #13	11	12	BRK #4-15 AMP 3-PHASE SPARE	#4 3 POLE	
	6	30 AMP FEED LOWER WINDOW HEATER	13	14	BRK #5-30 AMP 3-PHASE FEED SUMP PUMPS 35 & 36	#5 CKT 16	SUMP PUMP UNDER ESCALATOR
	7	30 AMP FEED LOWER WINDOW HEATER	15	16	BRK #5-30 AMP 3-PHASE FEED SUMP PUMPS 35 & 36	#5 CKT 18	SUMP PUMP
	8	30 AMP FEED LOWER WINDOW HEATER	17	18	BRK #5-30 AMP 3-PHASE FEED SUMP PUMPS 35 & 36	#5 CKT 20	
CKT-1	1	HI BAY LGT COLLECTOR VIA CONTACTOR #6 21 OF 42 LIGHTS	19	20	WALL WASHER FIXTURE N SIDE CONNECTOR VIA CONTACTOR 3	2	RED TAPE C3
CKT-3	3	HI BAY LGT COLLECTOR VIA CONTACTOR #6 21 OF 42 LIGHTS	21	22	WALL WASHER FIXTURE N SIDE CONNECTOR VIA CONTACTOR 3	4	RED TAPE C3
SOUTH 2X2 RTA LIGHTS RED TAPE C-1	5	LIGHTING MAIN AREA CONNECTOR CIRCUIT 5 & 11 VIA CONTACTOR 1	23	24	LTG CIRS BETWEEN ESCALATOR CONNECTOR TO TERMINAL CIR 7 & 9 VIA CONTACTOR 2	6	CENTER 2X2 LIGHT NORTH AND SOUTH RED TAPE C1
RTA: LIGHTS NORTH-CENTER 4 STRIP LIGHTS RED TAPE C-2	7	LGT MAIN AREA CONN CIR 7 & 9 VIA CONT 2	25	26	LTG CIRS BETWEEN ESCALATOR CONNECTOR TO TERMINAL	8	SOUTH RECESSED RED TAPE C2
RTA: LIGHTS RECESSED-SOUTH RED TAPE C-2	9	LTG MAIN AREA CONN CIR 7 & 9 VIA CONT 2	27	28	LTG CIRS BETWEEN ESCALATOR CONNECTOR TERMINAL *	10 *	RECEPTACLES THIS ROOM RED TAPE C-1 *
RTA: ESCALATORS EAST AND NORTH RED RAPE C-1	11	LTG MAIN AREA CONN CIR 5 & 11 CONT 1 CIR 7 & 9 CONT 2	29	30	HTR ON SOUTH SIDE OF COLLECTOR WAS CIR #33 *	12 *	
	13	12 MERC VAPER LIGHTS VIA CONTACTOR #5 OF SIDES OF UPPER COLLECTOR WAS CIR #37	31	32	SPARE *	14 *	
	15	SIGN LIGHTING VIA CONTACTOR #4	33	34	HTR ON NORTH SIDE OF COLLECTOR WAS CIR #28 *	16 *	
	CIR-17	8 PLANTER LIGHTS VIA CONTACTOR #4	35	36	SPARE *	18 *	
		HTR ON SOUTH SIDE OF COLLECTOR WAS CIR #31 *	37	38	HTR ON NORTH SIDE OF COLLECTOR WAS CIR #28		HTR
		HTR ON SOUTH SIDE OF COLLECTOR WAS CIR #27 *	39	40	HTR ON NORTH SIDE OF COLLECTOR	WAS CIR #22	HTR
		HTR ON SOUTH SIDE OF COLLECTOR WAS CIR #29	41	42	HTR ON NORTH SIDE OF COLLECTOR	WAS CIR #24	HTR

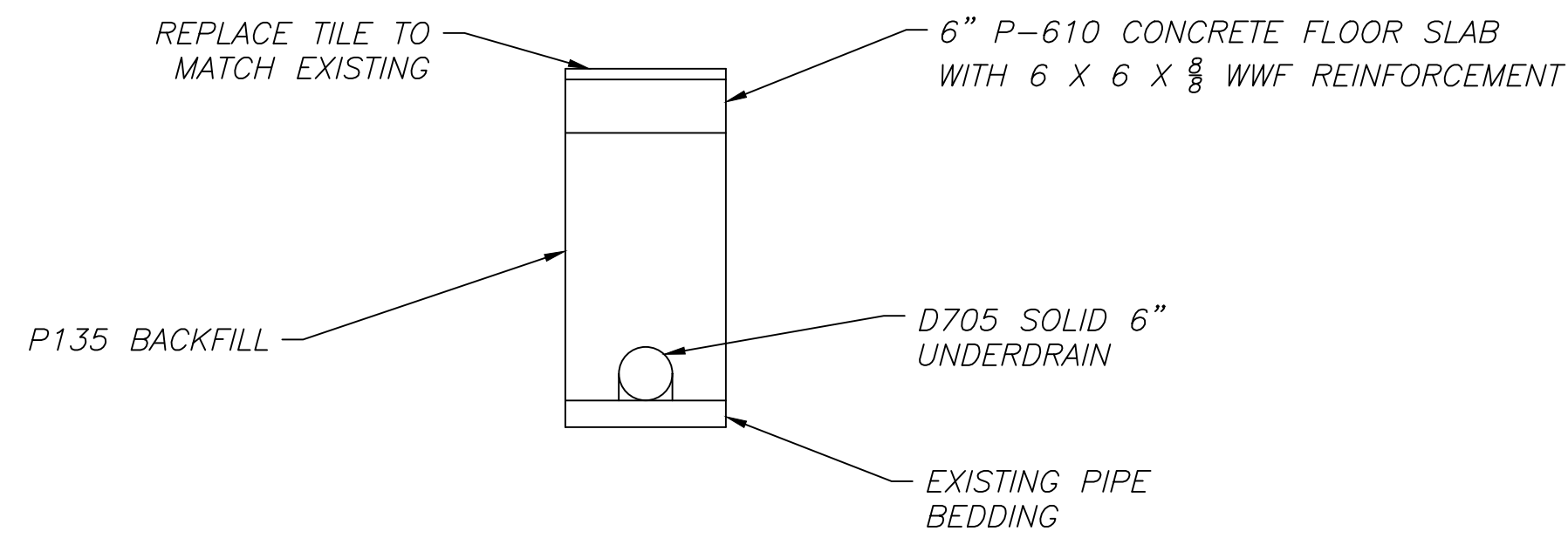
CONNECTOR/COLLECTOR MECHANICAL ROOM EXISTING SERVICE PANELS

NOTES:
* OUT OF SERVICE

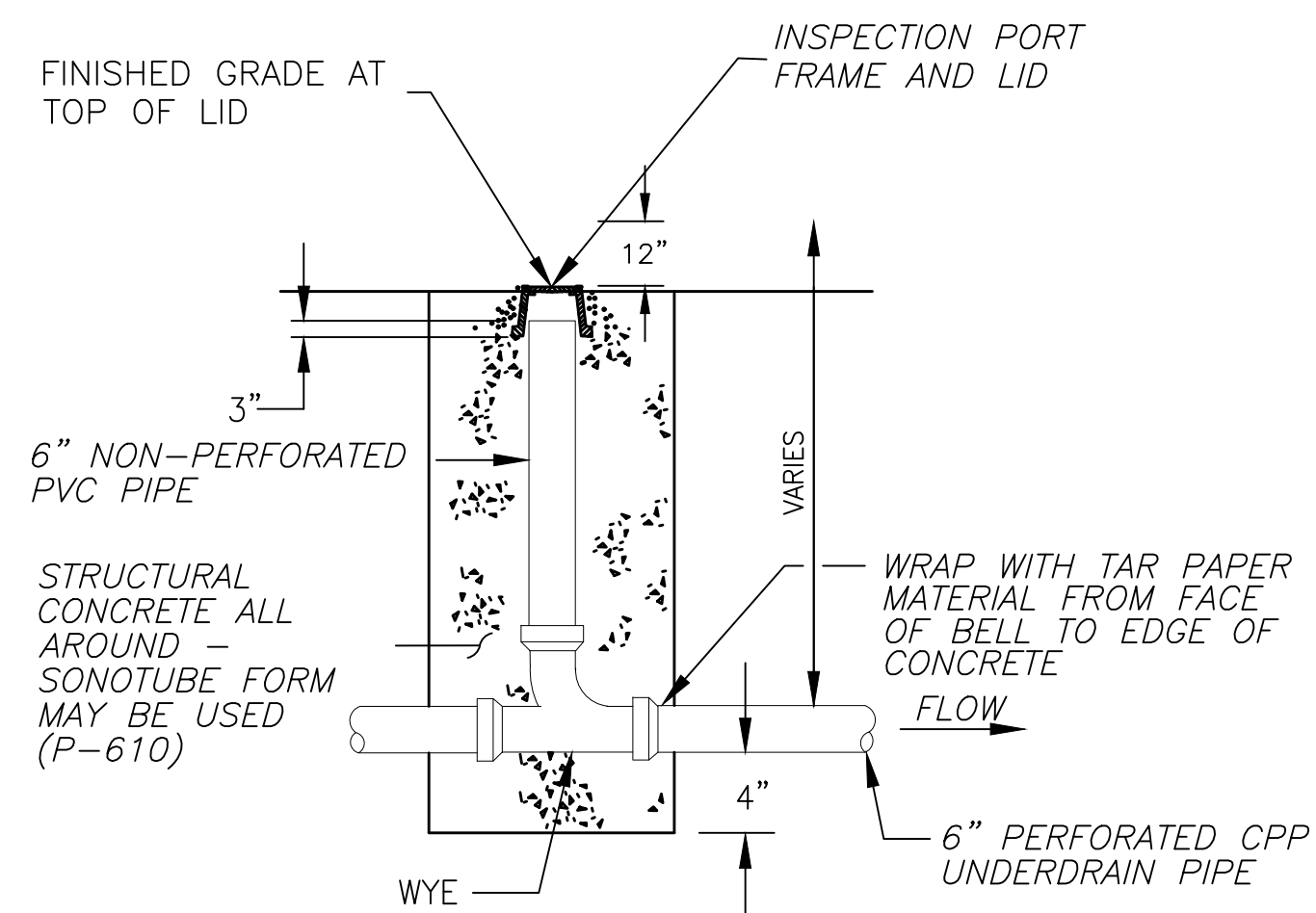


Project Title				RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title				CONNECTOR-COLLECTOR MECHANICAL ROOM EXISTING SERVICE PANELS			
Designed:	MSI	Drawn:	MSI	Checked:	LGW	Approved:	LGW
Michael Baker INTERNATIONAL		AS SHOWN		198348		Project No.:	
Date:		FEBRUARY 2024		Sheet:		C-26	

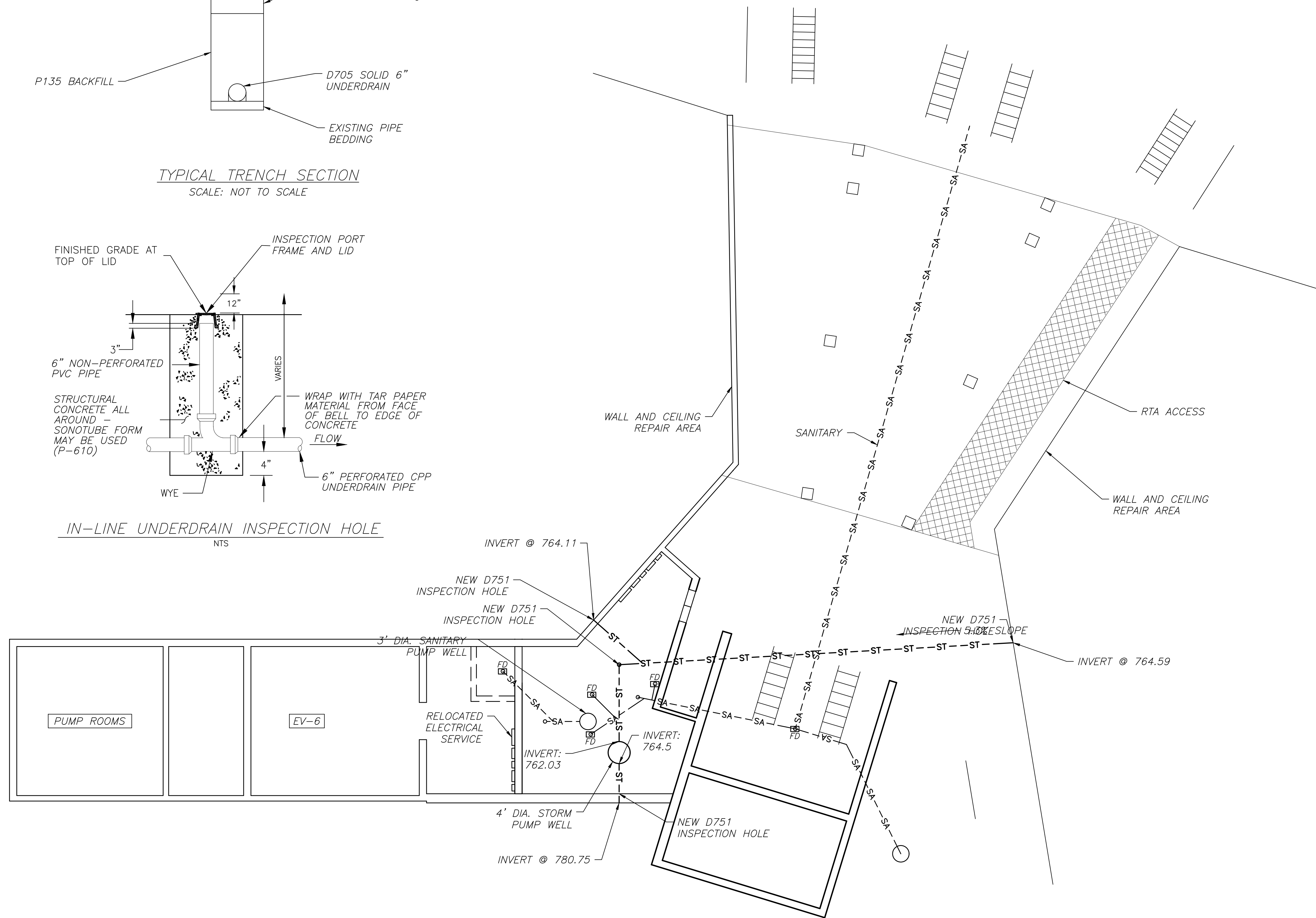
CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO



TYPICAL TRENCH SECTION
SCALE: NOT TO SCALE



IN-LINE UNDERDRAIN INSPECTION HOLE
NTS



LEGEND

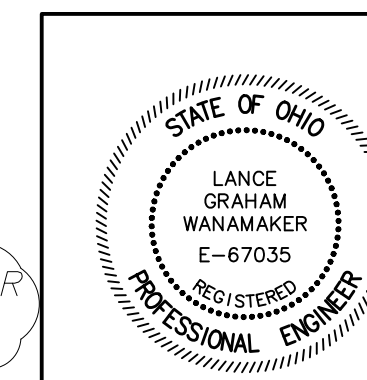
- SA-- - SANITARY PIPING
- ST-- - STORM PIPING

NOTES:

1. LOCATIONS BASED ON RECORD DRAWINGS. CONTRACTOR TO VERIFY LOCATIONS IN THE FIELD.
2. CONTRACTOR TO INSPECT AND LOCATE ALL STORM PIPING SHOWN ON THIS DRAWING
3. THE EXISTING UNDERDRAINS ARE 6" CAST IRON PER RECORD DRAWINGS.
4. SEE ITEM MC-091 SEWER CLEANING AND CCTV FOR SPECIFIC REQUIREMENTS.
5. A QUANTITY OF 150 LINEAR FEET OF SOLID 6" UNDERDRAIN HAS BEEN ADDED TO D705 IN THE EVENT THAT THE EXISTING PIPING WILL NEED TO BE REPLACED.
6. A QUANTITY OF 150 LINEAR FEET HAS BEEN ADDED TO ITEM P101-5.8 IN THE EVENT THAT THE PIPE WILL NEED TO BE REMOVED.

PLUMBING MODIFICATIONS PLAN
SCALE: 1" = 10'

NOTE: NEW SHEET ADDED FOR ADDENDUM A-3.



Revisions	Date	Description	By
A-3	03/19/24	NEW SHEET	MSI

CLEVELAND HOPKINS INTERNATIONAL AIRPORT
CLEVELAND, OHIO

Project Title RTA TUNNEL MEMBRANE REPLACEMENT			
Sheet Title PLUMBING MODIFICATIONS			
Designed: MSI	Drawn: MSI	Checked: LGW	Approved: LGW
Scale: AS SHOWN		Project No.: 198348	
Date: FEBRUARY 2024		Sheet: C-27	

2/26/2024 Prebid Questions:

Can existing drawings be made available for the work areas that work will be performed at under this contract?

Answer: Existing Drawings will be made available to the successful bidder.

Can the pre-bid meeting minutes and the pre-bid power point presentation be provided with an addendum?

Answer: Please see the attached minutes and presentation.

Question: The Maintenance Of Traffic plans for Phases 1 thru 4 show the use of drums at 10' C/C, to provide a 2'-0" buffer between the work zone and travel lanes. The work zone areas will have a drop off adjacent to the travel lanes. Should the maintenance of traffic plans be revised to include barrier protection for the work areas?

Answer: Please see the revised MOT Drawings.

Question: Will any of the Phases of construction require chain link fencing to separate the work areas from the Terminal? If so, please specify the locations.

Answer: Please see revised MOT Drawings.

Question: Plan Sheet C-20 provides cross sections "parallel to the roadway" to excavate for the replacement of the footer drain, but does not provide dimensions and/or elevations from the top of pavement to the top of the existing footers. Also, there are no cross section views of the excavation transverse to the roadway to show how this work will be performed in Phases 1 thru 3. Please have the Engineer of Record specify how the excavation for footer drain replacement can be performed adjacent to the existing travel lanes that are to be maintained, that are separated by only 2'-0" from the work areas?

Answer: Please see revised Maintenance of Traffic Drawings. There will be approximately 10' of the road that will be closed in bot Phase 1 and Phase 2. It is anticipated that the required shoring/bracing will be installed in the 10' +/- buffer.

Question: Plan Sheet C-6 states to install foam flashing Per Sheet "XX". There is no plan sheet "XX" included in the plans. Please clarify.

Answer: The foam flashing detail has been removed. Please see Sheet C-19 for flashing details.

Question: Plan Sheet C-17, Foam Flashing Detail, states to provide "premolded joint material". Please provide specified type and size to be installed.

Answer: The foam flashing detail has been removed. Please see Sheet C-19 for flashing details.

Question: Plan Sheet C-19, Section A-A, details Both "Item 255- Rigid Replacement, Class FS" and "proposed asphalt overlay, varies 2"-4" for the proposed pavement. Please clarify.

Answer: ODOT Item 255 is used to replace the existing 10" concrete pavement to be removed and replaced to install the footer drains for the tunnel. The existing section outside of the tunnel limits utilizes

an asphalt concrete overlay which varies from 4: to 2" in thickness. Please see sheets C-5, C-6, and C-8 for details.

Question: Please specify the existing waterproofing system that is to be removed from the tunnel lid and walls.

Answer: Please see the revised Project drawings and specification section MC-007 relating to the existing waterproofing membrane and sections.

Question: Work Item Number P101-5.10 includes repair of structural slab type A, B or C. Please separate type A, B or C into separate work items, as each work type requires a different level of effort.

Answer: The Pay Items have been separated.

Question: Proposed Typical Section on Plan Sheet C-6 details 10" concrete walk removed and reconstructed from Station 17+06.91 to Station 17+58.41 = 51.50 LF. However Plan Sheet C-7 shows begin sidewalk replacement at STA 16+72.65 and ending at STA 17+89.24. Please clarify.

Answer: Please see revised drawings.

2/27/2024 Prebid Questions:

Question: Has any subsurface investigations been performed, or are there any records on file of previous subsurface investigations that have been performed that can be provided?

Answer. Subsurface testing was not performed for this project. There are no records of subsurface investigations available.

2/28/2024 Prebid Questions:

Question: Specification D-751 does not provide information for the standard to follow in selecting the box inlet. Please provide.

Answer: Please see revised drawings.

Question: Specification D-751 does not state whether the grate for the box inlet needs to provide heel proof protection. Please clarify.

Answer: Please see the revised drawings. Grates must be ADA compliant.

Question: Neither the contract drawings nor Specification D-751 provides any information or standards on inspection holes, nor where they are to be installed. As Item Number D751-5.4 has a quantity of 4 EA inspection holes, more information is needed to clarify this work item. Please provide.

Answer: The Inspection Hole Item will be used on the RTA Connector/Collector level if required. Please see the revised drawings.

2/28/2024 Prebid Questions:

Question: Per Specifications Item D-705 Pipe Underdrains for Airports, it states “the quantity of pipe underdrains shall be made at the contract unit price per linear foot (meter) complete, including porous backfill and filter fabric”. However, Plan sheet C-20 states “excavation is incidental to D705 6” pipe under drains” and “embankment is incidental to D705 6” Pipe Under Drains”. Per Specifications D-705 Pipe Underdrains for the Airports, neither excavation nor embankment should be included with the work item. Please provide work items and quantities for both excavation and proposed backfill.

Answer: Specification Section D705-5.4 includes language relating to excavation for pipe underdrains.

Question: Please provide engineered calcs for Item Number P152-4.1.

Answer: Item P152-4.1 has been deleted. Please see reissued Specification.

2/29/2024 Prebid Questions:

Question: Can the City provide electronic bid documents for the RTA Tunnel Membrane Replacement Project?

Answer: The city does not provide electronic bid documents, but a hard copy of the bid documents is able at the Purchases & Supplies office, in City Hall, for a fee of \$50.00.