MANCHESTER BOSTON REGIONAL AIRPORT PARKING GARAGE: LEVEL-4 FLOOR & LEVEL-3 CEILING SEALANTS, WATERPROOFING, & MISCELLANEOUS REPAIRS



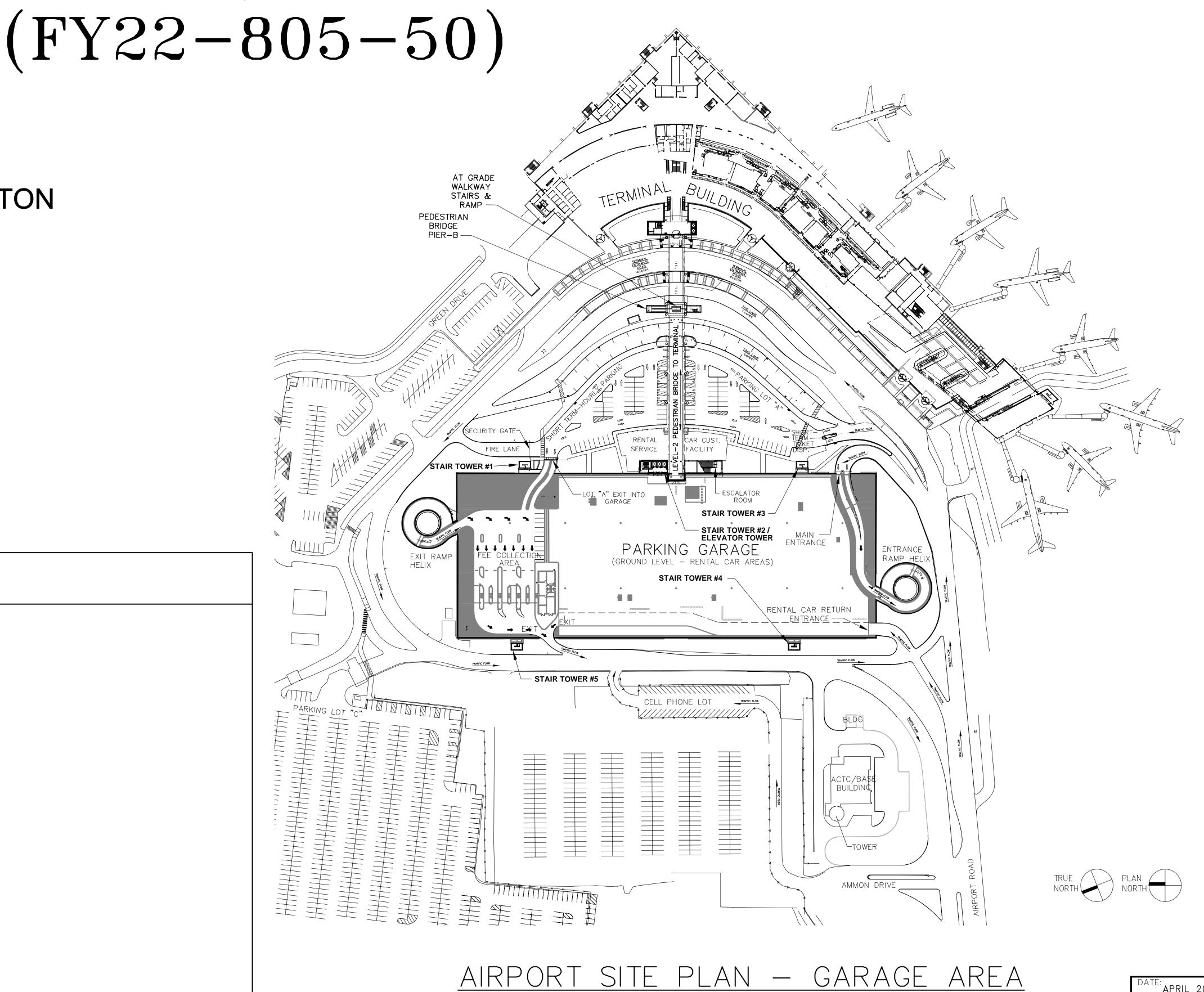
One Airport Road, Suite 300 Manchester, New Hampshire 03103 www.flymanchester.com

# AECOM

1155 ELM STREET, SUITE 401 MANCHESTER, NH 03101 PROJECT # 60638480\_T18

# LIST OF DRAWINGS

SHEET #	<u>Drawing no.</u>	<u>TITLE</u>
	GENERAL:	
1	TS.22-1	TITLE SHEET & AIRPORT SITE PLAN
2	GN.22-1	GENERAL NOTES & WORK ITEM LIST
3	PZ.22-3/4	PHASING AND TRAFFIC PLAN: LEVEL 3 & 4
	REPAIR PLANS:	
4	RP.22-FLR.4N	REPAIR PLAN: LEVEL 4 - FLOOR / NORTH END
5	RP.22-FLR.4S	REPAIR PLAN: LEVEL 4 - FLOOR / SOUTH END
6	RP.22-CLG.3N	DRIVE BAY & CEILING REPAIR PLAN: LEVEL-3 CEILING (NORTH)
7	RP.22-CLG.3S	DRIVE BAY & CEILING REPAIR PLAN: LEVEL-3 CEILING (SOUTH)
8	RP.22-PBST.1	REPAIR PLAN: LEVEL-1 PEDESTRIAN BRIDGE PIER-B GRADE STAIRS & RAMP REPAIRS
	REPAIR DETAILS:	
9	RD.22-F1	FLOOR REPAIR DETAILS - I
10	RD.22-F2	FLOOR REPAIR DETAILS - II
11	RD.22-F3	FLOOR REPAIR DETAILS - III
12	RD.22-F4	FLOOR REPAIR DETAILS — IV DRIVE BAY JOINTLINE REBUILD
13	RD.22-C1	CEILING REPAIR DETAILS - I
14	RD.22-C2	CEILING REPAIR DETAILS - II



SCALE: 1:100

APRIL 2022

TS.22-1

SHEET # 1 OF 14

\*CONSTRUCTION DOCUMENTS INCLUDE THE PLANS AND DETAILS ON THE FOLLOWING

- CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL STATE OF NEW HAMPSHIRE AND CITY OF MANCHESTER CODES AND
- ALL DRAIN AND PIPING WORK SHALL CONFORM TO LOCAL BUILDING CODES
- ALL MATERIAL PROPERTIES SHALL BE AS NOTED IN THE SPECIFICATION.
- COORDINATE ALL UTILITIES SHUTDOWNS WITH OWNER PRIOR TO INTERRUPTING
- CONTRACTOR SHALL CONFORM TO TRAFFIC FLOW COORDINATION AND AREA CLOSURE REQUIREMENTS CONTAINED IN THE CONTRACT DOCUMENTS.
- F. CONTRACTOR SHALL LIMIT FLOOR LOADING WITHIN THE WORK AREA TO NO MORE THAN 50 PSF. VEHICLE WHEEL LOADS SHALL BE LIMITED TO A MAXIMUM OF 2,000 LBS OVER A 20 SQ. IN. TIRE CONTACT AREA (FLOOR DESIGN LOAD). CONTRACTOR SHALL NOT STORE SUPPLIES OR PARK
- THE INTENT OF THE STRUCTURAL REPAIR DRAWINGS IS TO SHOW THE EXISTING STRUCTURAL FEATURES AND THE GENERAL LOCATIONS OF REPAIR
- BUBBLE NUMBER REFERS TO SPECIFIC REPAIR DETAIL IN THE DETAIL SHEETS AND/OR WORK ITEM IDENTIFIED IN SECTION 02000 OF THE PROJECT SPECIFICATIONS "WORK ITEMS". NOT ALL ITEMS ARE REPRESENTED WITH A
- WHERE WORK ITEM BUBBLE IS NOTED TYP., IT MEANS THE WORK IS TYPICAL
- WHERE WORK ITEM BUBBLE IS NOTED WITH T.A.R., THE WORK IS TYPICAL AS REQUIRED AND OCCURS AT AREAS IN ADDITION TO THE DESIGNATED
- CONTRACTOR SHALL ESTABLISH EXTENT AND LOCATION OF WORK AND REPAIR AREA AND BE VERIFIED BY THE ENGINEER PRIOR TO COMMENCEMENT
- REFER TO THE UNIT PRICE BID FORM FOR APPROXIMATED QUANTITIES FOR EACH WORK ITEM, AS APPLICABLE. QUANTITIES MAY VARY AND MAY BE INCREASED, DECREASED OR DELETED AT THE DISCRETION OF THE ENGINEER
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI (28 DAY) CONFORMING TO NHDOT CLASS AA, AND SHALL BE HIGH EARLY STRENGTH MIX FOR A MINIMUM OF 3,000 PSI IN 5 DAYS. BAGGED MATERIAL MAY BE USED SUBJECT TO PRODUCT DATA, SUBMITTAL TO, AND APPROVAL
- CONCRETE EXPOSED TO VIEW SHALL HAVE SMOOTH FORM FINISH WITH FINS
- REINFORCEMENT INTENDED TO BE WELDED SHALL MEET ASTM A706
- F. AT EXPOSED REINFORCEMENT WHERE CROSS-SECTIONAL LOSSES DUE TO DETERIORATION EXCEED 20 PERCENT, SPLICE WITH REINF. MATCHING EXISTING REINF. BAR SIZE. EXTEND LAP SPLICE REINFORCEMENT BEYOND DETERIORATED SECTION TO DEVELOP PROPER TENSION SPLICE OR, AT ENGINEERS DISCRETION, CONTRACTOR MAY BE DIRECTED TO USE
- ALL EXPOSED REINF. SHALL BE CLEANED BY SAND BLASTING, WIRE SCABBLING TO REMOVE ALL TRACES OF RUST DOWN TO WHITE METAL.
- B. FOR REMOVAL OF MATERIAL AT AREAS TO BE PATCHED, PROVIDE NEAT
- NOTIFY ENGINEER IMMEDIATELY OF ANY FIELD CONDITIONS WHICH APPEAR TO DIFFER FROM THOSE SHOWN OR IMPLIED ON THE DRAWINGS.
- RESTORE PRECAST PIECES REQUIRING STRUCTURAL REPAIR.
- PROPERLY DISPOSE OF ALL MATERIALS REMOVED FROM THIS EXISTING STRUCTURE RELATED TO WORK COVERED BY THE CONTRACT DOCUMENTS.

5. PAY ITEMS:

QUANTITIES FOR PAY ITEMS MUST BE VERIFIED BY THE FIELD ENGINEER AND/OR AUTHORIZED REPRESENTATIVE AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION OF PAYMENT APPLICATIONS.

PHASING AND WORK ZONE CAPTURE NOTES:

THE PROJECT SHALL BE PERFORMED IN (2) PHASES AS SHOWN ON THE PLANS AND DESCRIBED AS FOLLOWS:

PHASE 4S-F / 3S-C (LEVEL 4 SOUTH FLOOR & LEVEL 3 SOUTH CEILING): WORK AREA GENERALLY EXTENDS FROM COLUMN LINE 14.0 SOUTHWARD TO COLUMN LINE 26.

PHASE 4N-F / 3N-C (LEVEL 4 NORTH FLOOR & LEVEL 3 NORTH CEILING): WORK AREA GENERALLY EXTENDS FROM COLUMN LINE 14.0 NORTHWARD TO COLUMN LINE 2.

- THE OWNER (AIRPORT) WILL CLOSE AND CAPTURE THE WORK AREAS ON LEVEL-4 AND LEVEL-3 IN ADVANCE OF THE CONTRACTOR'S WORK IN ACCORDANCE WITH THE PROJECT MILESTONE SCHEDULE
- THE OWNER WILL PLACE BARRICADES AND SIGNAGE AT THE HELIX ENTRANCES AND PEDESTRIAN ENTRANCES TO THE WORK AREAS. THE CONTRACTOR SHALL GIVE THE OWNER AT LEAST 2 WEEKS ADVANCE WRITTEN NOTICE (WITH EXPLANATION) IF THE MILESTONE SCHEDULE START-DATE OF A PHASE CANNOT BE MET.
- THE OWNER WILL FURNISH AND INSTALL VEHICULAR ACCESS LANE AND PEDESTRIAN WALKWAY TRAFFIC CONTROL DEVICES (BARRELS, ROPING, ETC.) AS ILLUSTRATED ON THE PLANS TO FACILITATE THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OWNER TO VERIFY AND MONITOR THE ACCURACY OF SAFETY AREA PLACEMENT AROUND AND UNDER HIS WORK TO ENSURE THE SAFETY OF THE GENERAL PUBLIC AND PROTECTION OF PARKED PATRON VEHICLES. CONTRACTOR SHALL MAINTAIN AND/OR ADJUST DEVICES TO SUIT THE WORK AREAS DELINEATION AND PUBLIC SAFETY.
- THE OWNER WILL FURNISH AND INSTALL DIRECTIONAL SIGNAGE AS INDICATED ON THE PLANS AND AS REQUIRED FOR PUBLIC USE OF THE FACILITY DURING CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL CONSTRUCTION HAZARD WARNING SIGNAGE SUBSIDIARY TO ITEM 1.1 GENERAL REQUIREMENTS (SEE TECHNICAL SPECIFICATION SECTION
- PUBLIC PEDESTRIAN ACCESS TO THE ELEVATOR LOBBY SHALL BE MAINTAINED AT ALL TIMES. SUB-PHASING OF LOCALIZED WORK AREAS IN FRONT OF THE DOORS WILL BE REQUIRED TO BE PERFORMED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOT BEGIN THE WORK IN THE NORTH PHASE AREA UNTIL SPECIFICALLY AUTHORIZED TO DO SO BY THE OWNER. THE WORK IN THE SOUTH PHASE AREA MUST BE COMPLETE AND PREPARED FOR PUBLIC PARKING PRIOR TO RELOCATING THE TRAFFIC CONTROL AND BEGINNING GENERAL WORK IN THE NEXT PHASE AREA
- ISOLATED (UNOCCUPIED) SUB-WORK AREAS (AND SAFETY AREAS) IN THE NEXT PHASE AREA MAY BE CAPTURED BY THE CONTRACTOR, SUBJECT TO THE APPROVAL OF THE OWNER, AND LOCALIZED PREPARATORY WORK INITIATED DURING THE PARKED VEHICLE ATTRITION PERIOD (APPROX. 2 WEEKS) JUST PRIOR TO THE GENERAL CHANGE FROM THE SOUTH PHASE TO THE NORTH PHASE.

# WORK ITEM LIST FOR WORK ITEM DEFINITIONS, SEE PROJECT SPECIFICATIONS SECTION 02000

WORK ITEM	<u>DESCRIPTION</u>	UNITS		
1.0	GENERAL REQUIREMENTS			
	1.1 GENERAL REQUIREMENTS — MOBILIZATION AND SUPPLEMENTARY GENERAL CONDITIONS*	LS		
2.0	FLOOR REPAIRS			
	2.1 FLOOR REPAIR — FULL DEPTH AT C.I.P WASH — DRIVE BAYS	SF		
	2.2 FLOOR REPAIR — PARTIAL DEPTH AT C.I.P WASH	SF		
	2.3 FLOOR REPAIR — PARTIAL DEPTH — AT PRECAST CONCRETE FLOOR SLAB	SF		
	2.6 FLOOR REPAIR — TRAFFIC TOPPINGS — PEDESTRIAN GRADE*	SF		
	2.7A FLOOR REPAIR — TRAFFIC TOPPING — FULL MEMBRANE SYSTEM*	SF		
	2.7B FLOOR REPAIR — TRAFFIC TOPPING — WEARCOAT AND UV—TOPCOAT	SF		
	2.7J FLOOR REPAIR — TRAFFIC TOPPING AT JOINTLINE PRECAST TEE—TO—TEE FLANGE EDGE	SF		
	JOINTS, NYLON REINFORCED			
	2.7H-R FLOOR REPAIR - TRAFFIC TOPPINGS MEMBRANE REPAIR AT ENTRANCE & EXIT HELIX	SF		
	2.8. FLOOR REPAIR — PENETRATING CONCRETE SEALER WITH MIGRATING CORROSION INHIBITO	R SF		
	(MCI)*			
3.0	CEILING REPAIRS			
	3.3 CEILING REPAIR — EPOXY CRACK INJECTION	LF		
	3.4 CEILING REPAIR — OVERHEAD CONCRETE MORTAR REPAIR	SF		
-	3.5 CEILING REPAIR — GFRP FABRIC WRAP*	SF		
	3.6 CEILING REPAIR — PENETRATING CORROSION INHIBITOR*	SF		
	3.8 CEILING REPAIR — GALVANIC CORROSION PROTECTION	EA		
	3.9 CEILING REPAIR — BLAST CLEANING W/ ABRASIVE MEDIA*	SF		
5.0	FLOOR SLAB JOINT REPAIRS			
	5.2A FLOOR SLAB JOINT REPAIR — EXPANSION JOINT NOSING — SURFACE REPAIR	LF		
	5.3 FLOOR SLAB JOINT REPAIR — REMOVE AND REPLACE FAILED T/T FLANGE JOINT SEALAN	TS LF		
	5.5 FLOOR SLAB JOINT REPAIR-PRECAST TEE ENDJOINT REPLACEMENT-C.I.P. WASH	LF		
	5.6 FLOOR SLAB JOINT REAIR — INSTALL OR REPLACE COVE SEALANT	LF		
8.0	BOLLARDS & TRAFFIC CONTROL			
	8.1 BOLLARDS & TRAFFIC CONTROL — CONCRETE BOLLARD REMOVAL	EA		
	8.2 BOLLARDS & TRAFFIC CONTROL — CONCRETE BOLLARD DISPOSAL*	LS		
	8.3 BOLLARDS & TRAFFIC CONTROL — PROVIDE TRAFFIC DELINEATOR DEVICES (MATERIAL)*	EA		
	8.4 BOLLARDS & TRAFFIC CONTROL — INSTALL TRAFFIC DELINEATOR DEVICES	EA		
9.0	FIELD ITEMS & ALLOWANCES			
	9.1 FIELD ITEM — PEDESTRIAN BRIDGE PIER—B — GRADE STAIRS & RAMP REPAIR	LS		
	9.5 FIELD ITEM ALLOWANCE — GENERAL*	AL		

\*NOT ALL WORK ITEMS ARE REPRESENTED BY A DRAWING DETAIL. REFER TO WORK ITEMS SCOPE AND TECHNICAL SPECIFICATIONS.

UNITS LEGEND:

SF SQUARE FOOT MD MANDAY(8 HR)

LS LUMP SUM

LF LINEAR FEET T&M TIME & MATERIAL N/A NOT APPLICABLE

EA EACH AL ALLOWANCE ITEM WORK AND

SUITE 03101

AECOM 1155 ELM S MANCHESTEI (603) 606-

**ECOM** 

REET, NH 800

NOTE

PROJECT NO: 60638480-T18 CAD DWG FILE: 2\_GN.22-1 DESIGNED BY: JGG PRAWN BY: CMP DEPT CHECK: MAB PROJ CHECK: RJD

DATE: APRIL 2022

SCALE: N/A

GN.22-1 SHEET 2 OF 14

NUMBER

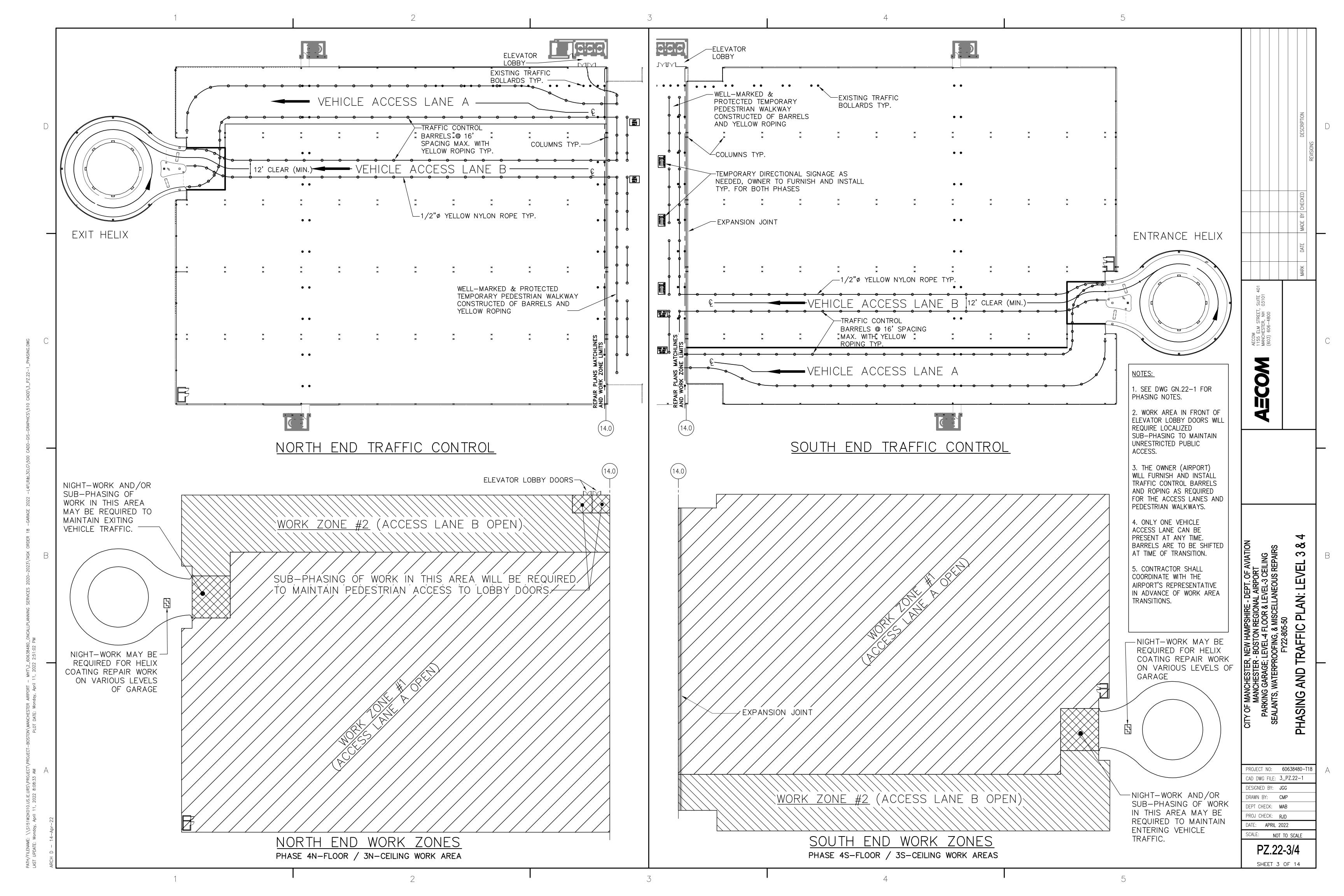
DIAMETER

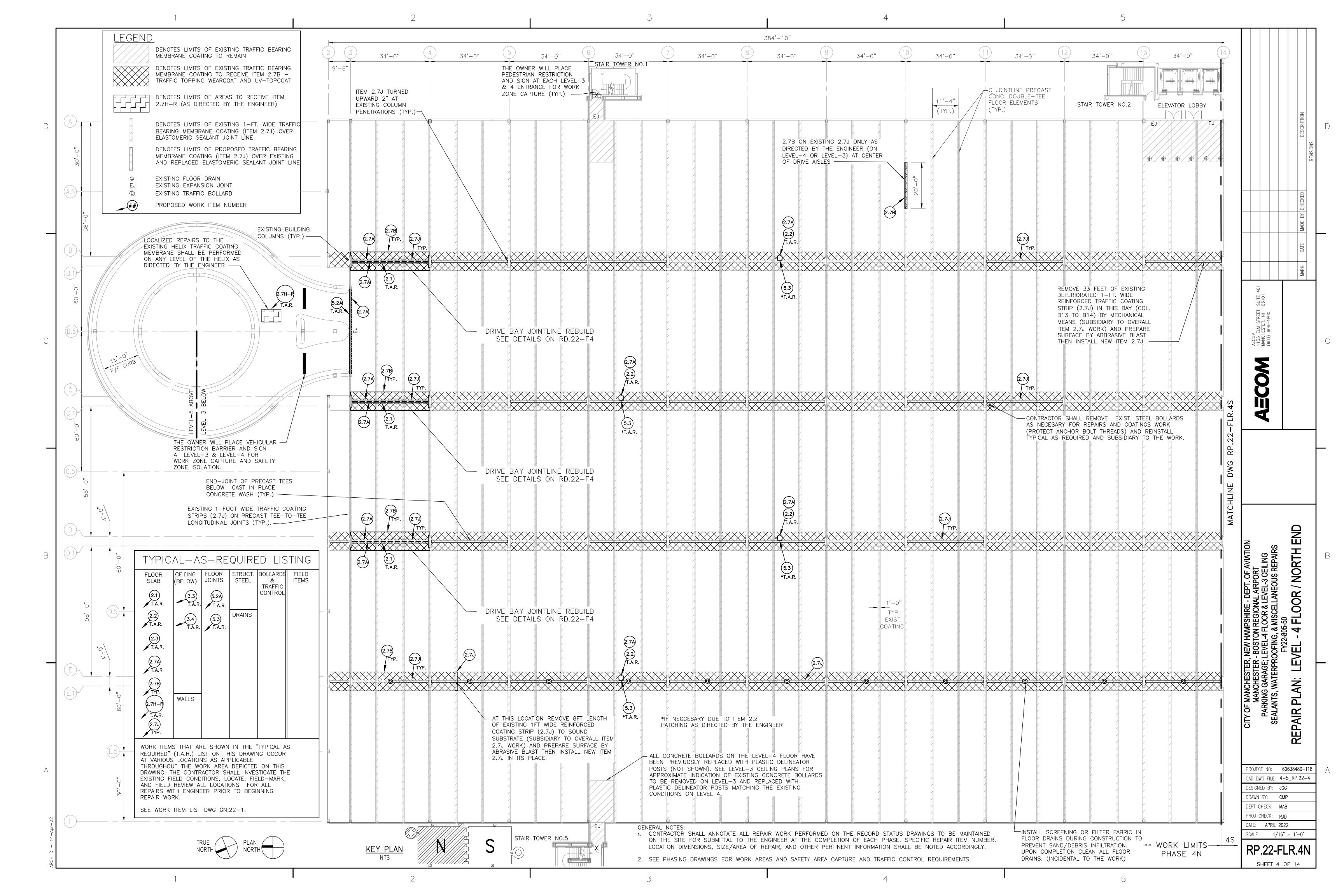
SPECIFIED 28-DAY DESIGN COMPRESSIVE

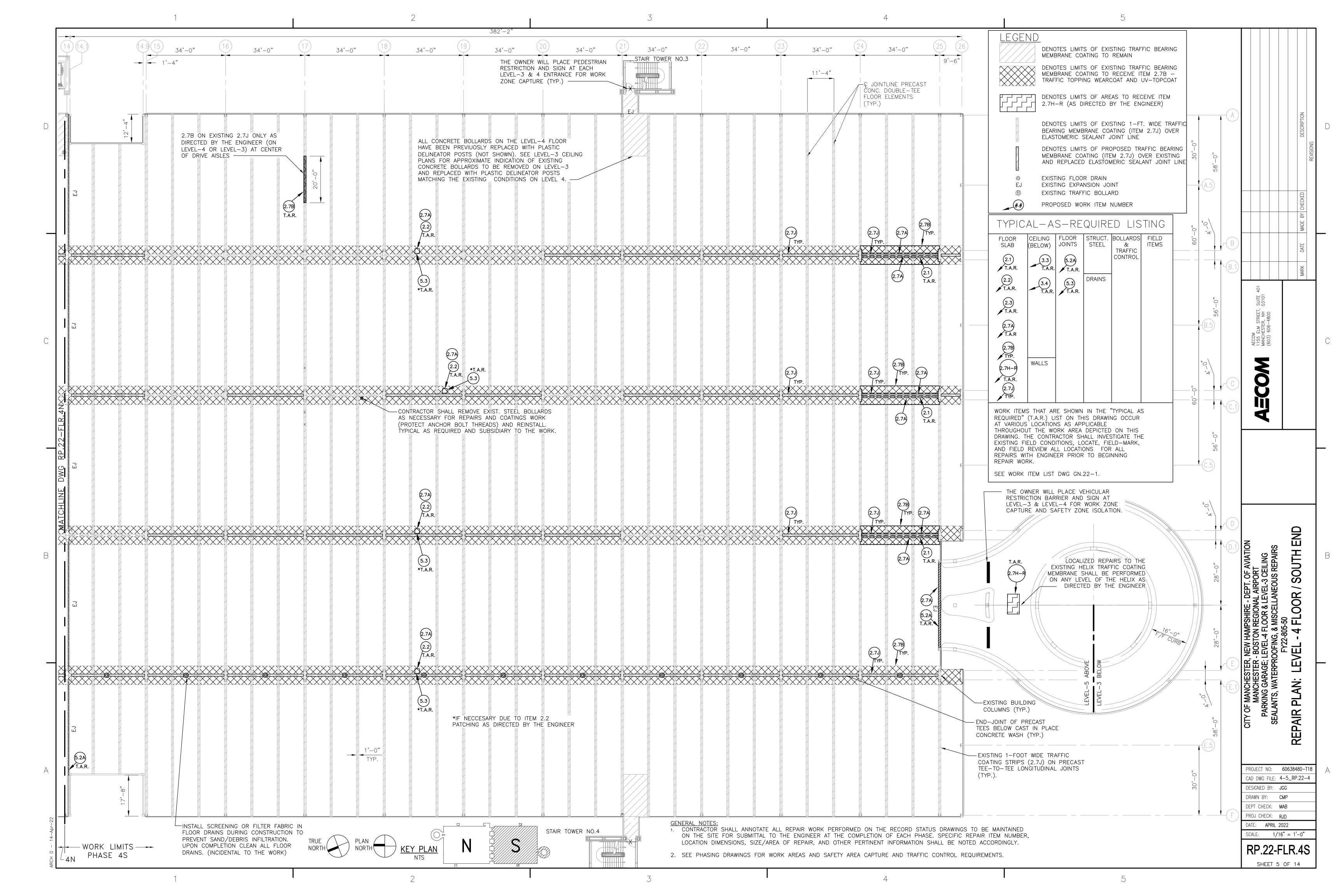
REINFORCING BAR SIZE AND SPACING

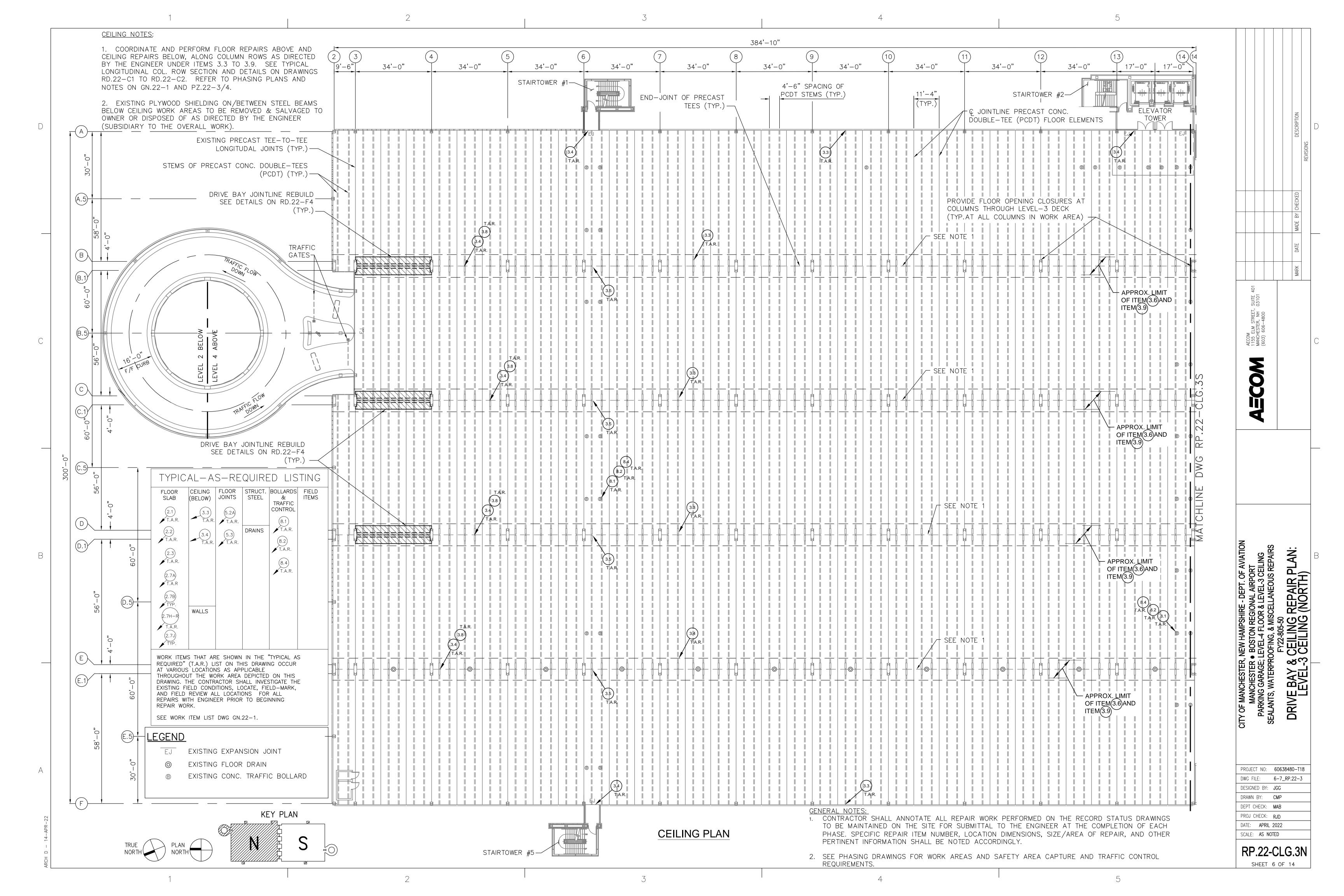
STRENGTH OF CONCRETE

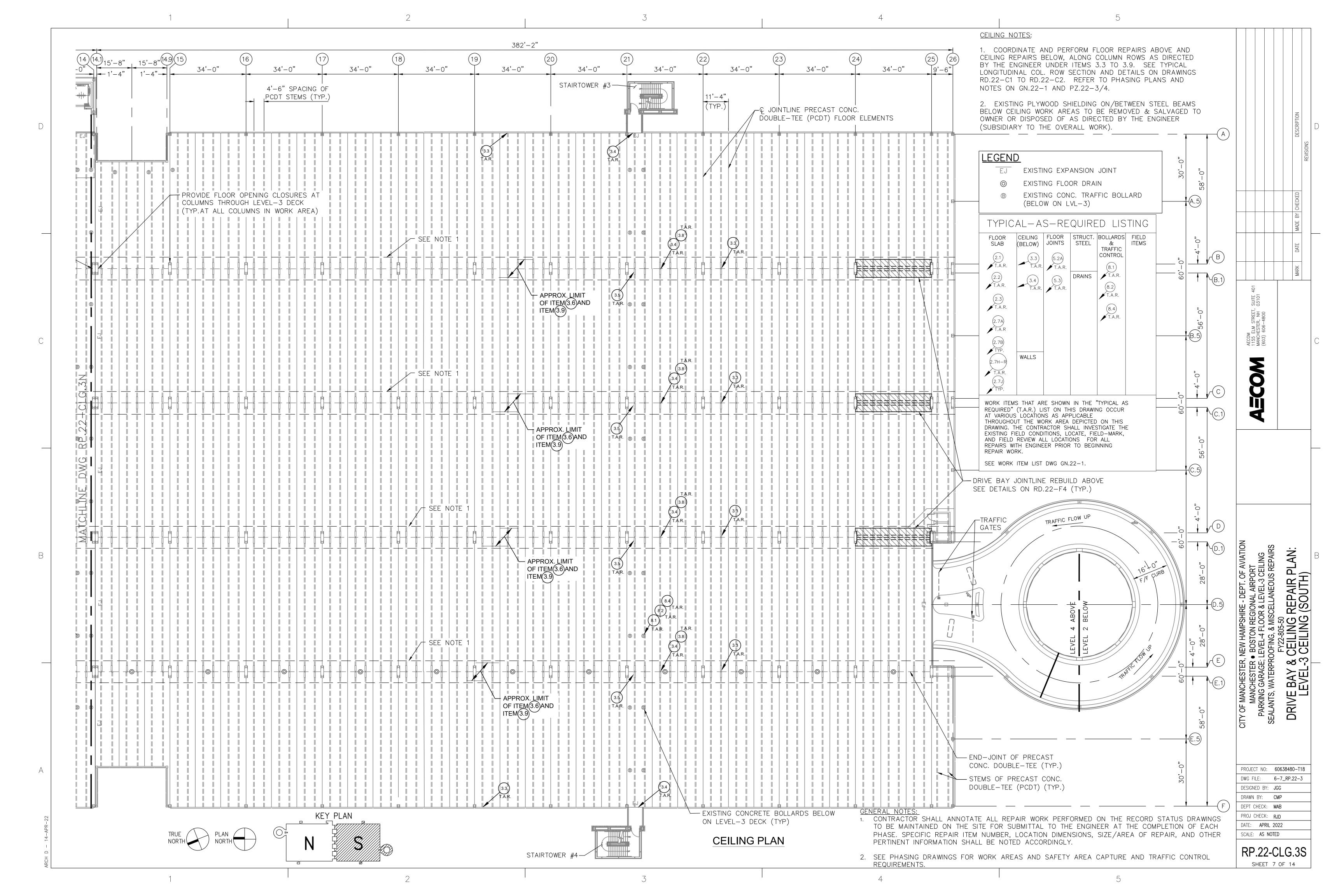
SPECIFIED YIELD STRENGTH

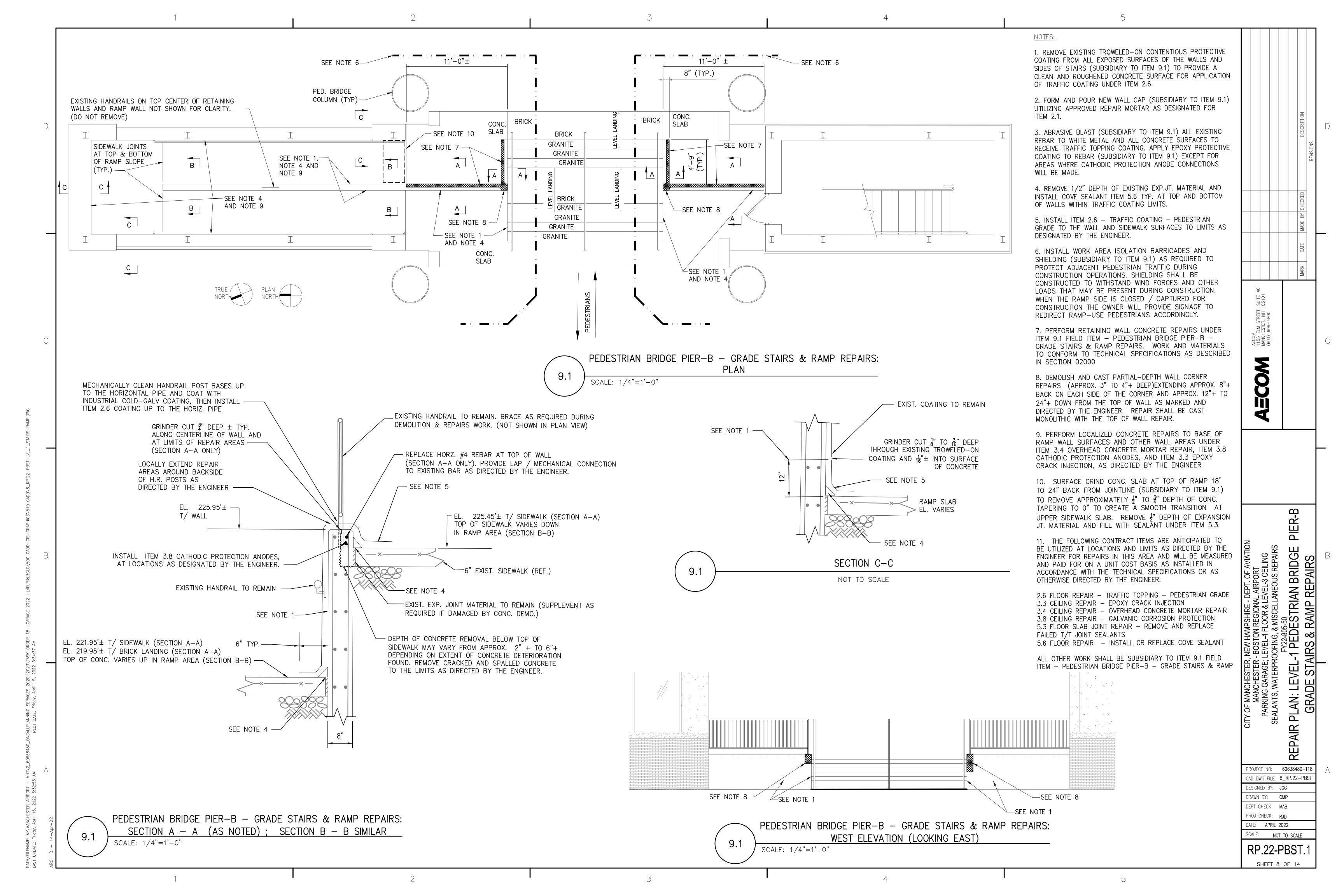












### TEE-TEE FLANGE JOINT PREPARATION & SEALANT NOTES:

WORK ITEM 5.2A

NOSING SURFACE REPAIR: (LENGTH VARIES FROM 1'-0" TO 4'-0"±) SAWCUT MAXIMUM OF 3/8"

DEEP AT LONGITUDINAL AND TRANSVERSE LÍMITS

OF NOSING MATERIAL TO BE REMOVED. USE

CAUTION WHEN SAWCUTTING TO AVOID DAMAGE

TO EXPANSION JOINT GLAND FLANGES.

EXISTING 1" WIDE ALUMINUM

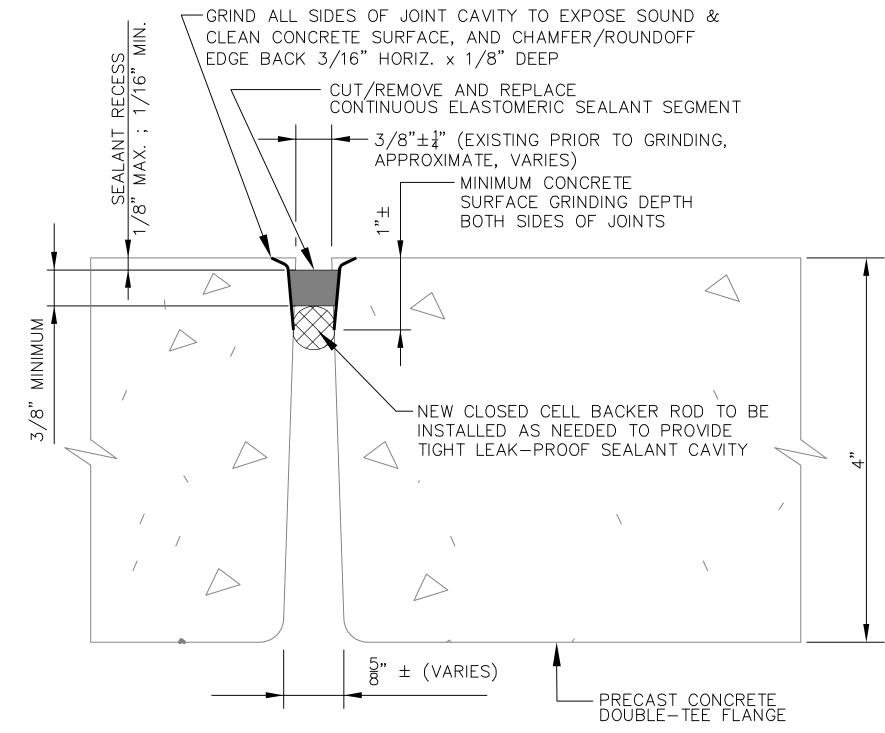
SCALE: NTS

HOLD-DOWN STRIP WITH STEEL

@ 12" C/C. <u>REMOVE (GRIND-OFF)</u>

FASTENER HEAD AND WASHER.

- 1. REMOVE EXISTING FAILED JOINT SEALANTS AND DEBONDED/CRACKED LOOSE CONCRETE TO SOUND CONCRETE WITHIN REPAIR AREAS.
- 2. IF THE DAMAGED CONCRETE REPAIR AREA EXTENDS MORE THAN  $\frac{3}{4}$ " FROM THE FINISHED EDGE OF THE JOINT NOTIFY ENGINEER PRIOR TO PERFORMING REPAIRS.
- 3. GRIND CONCRETE SURFACES TO RECEIVE SEALANT APPLICATION. CLEAN JOINT THOROUGHLY INCLUDING BRUSH AND VACUUMING. SEALANT ADHESION SURFACES WHICH REMAIN OPEN AND ARE EXPOSED TO RAINWATER OR OTHER CONTAMINANTS SHALL BE DRIED THOROUGHLY AND WIPED CLEAN WITH SOLVENT (XYLENE OR APPROVED SEALANT MANUFACTURER RECOMMENDED ALTERNATE).
- 4. INSTALL CLOSED CELL BACKER ROD (AND NON-SAG ELASTOMERIC SEALANT AT BACKER ROD JOINTS) AS NEEDED TO ENSURE TIGHT LEAK-PROOF FIT. THE CONTRACTOR SHALL CLEAN ALL SEALANT LEAKS FROM THE UNDERSIDE CEILING SURFACES AND FLOOR BELOW.
- PRIME ALL SURFACES TO RECEIVE SEALANT ADHESION WITH SEALANT MFR.'S RECOMMENDED PRIMER.
- 6. INSTALL SELF-LEVELING ELASTOMERIC SEALANT (SIKAFLEX 2C-SL, AS MFD BY SIKA CORP OR APPROVED EQUAL) IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. FINISHED SURFACE OF SEALANT SHALL BE  $\frac{1}{16}$ " TO  $\frac{1}{8}$ " (MAX.) BELOW TOP OF PRECAST CONCRETE FLOOR. DEPTH OF SEALANTS (3/8" MIN.) SHALL BE HALF OF THE JOINT WIDTH TO BE SEALED UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- 7. EACH SEGMENT OF NEW SEALANT SHALL BE PLACED CONTINUOUSLY WITHOUT ALLOWING IN-PLACE SEALANTS TO SKIN-CURE BEFORE INSTALLING CONTINUATION OF THE SEALANT SEGMENT.
- 8. AFTER COMPLETION OF SEALANT REPLACEMENTS THE CONTRACTOR SHALL WATER TEST JOINTLINES TO VERIFY LEAK-TIGHT FLOOR JOINTS PRIOR TO SHOT-BLAST CONCRETE SURFACE PREPARATION AND TRAFFIC TOPPING MEMBRANE COATING SYSTEM.



TYPICAL SECTION AT JOINT SEALANTS (BEYOND CONNECTION)

SCALE: FULL

CONTRACTOR SHALL VERIFY AND COORDINATE THAT THE EXTENTS OF ALL REPAIRS ARE WITHIN CAPTURED

SAFETY AREAS ON THE LEVEL BELOW

---INSTALL BACKER ROD — CONCRETE FLOOR SURFACE (BEYOND) — PROPOSED ELASTOMERIC SEALANT 1" MINIMUM 2" MAXIUM THOROUGHLY CLEAN EXISTING SEALANT AT TRANSITION WITH BRUSH APPLY RECESSED SEGMENT OF NON-SAG AND XYLENE SOLVENT ELASTOMERIC SEALANT AT ALL BACKER ROD FXISITNG BACKER ROD -SPLICE POINTS AND T/T CONNECTION POCKETS TO PREVENT LEAKAGE PRIOR TO EXISTING ELASTOMERIC SEALANT. — INSTALLING SELF-LEVELING SEALANT ABOVE.

SEALANT TRANSITION DETAIL

( PROPOSED / EXISTING )

FLOOR SLAB JOINT REPAIR -REMOVE AND REPLACE T/T FLANGE JOINT SEALANTS

SCALE: AS NOTED

#### NOTES (ITEM 5.2A):

1.) SAWCUT & REMOVE EXISTING NOSING MATERIAL FROM DESIGNATED REPAIR AREA TO SOUND SUBSTRATE MATERIAL (TOP OF EXPANSION JOINT GLAND FLANGE & HOLD-DOWN STRIP).

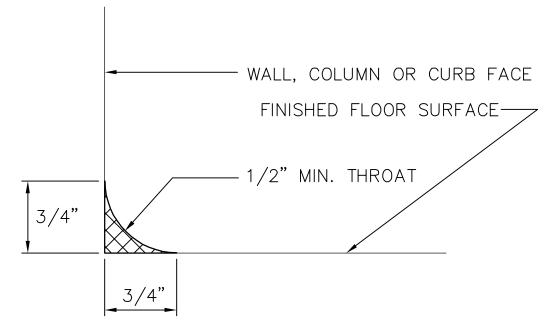
2.) REMOVE HOLD-DOWN FASTENER HEADS & WASHERS WITHIN THE REPAIR AREA BY GRINDING. HOLD-DOWN STRIP TO REMAIN. INSTALL NEW STAINLESS STEEL FASTENERS AS REQUIRED TO HOLD THE EXPANSION JOINT GLAND FLANGE IN PLACE AND KEEP THE ALUMINUM STRIP FIRMLY AT THE BOTTOM OF THE NOSING MATERIAL.

3.) PREPARE EXPOSED SURFACES FOR ELASTOMERIC CÓNCRETE NOSING MATERIAL BY SANDBLASTING OR FASTENER & 1" DIA. STEEL WASHERS MECHANICAL MEANS ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

2" EXP. JOINT AT LINES 8 & 20

4.) INSTALL ELASTOMERIC CONCRETE NOSING MATERIAL INSTALL ELASTOMERIC IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONCRETE NOSING MATERIAL -1" EXISTING NOSING MATERIAL BLOCKOUT -LIMITS OF WORK ITEM 2.7A TO BE APPLIED AT BOTH SIDES OF EXPANSION JOINTS AS DIRECTED BY THE ENGINEER. TERMINATE COATING EDGE IN 1/4" DEEP SAWCUT. 7 1/2" EXISTING CONCRETE WASH PRECAST CONCRETE DOUBLE TEE FLANNGE (TYP.) 3" EXISTING - EXISTING EXPANSION JOINT GLAND (TO REMAIN). NOSING BLOCKOUT -TREMCO DEKTITE EXP. JOINT SYSTEM; MODEL #525 NTS.

FLOOR SLAB JOINT REPAIR -EXPANSION JOINT NOSING SURFACE REPAIR



NOTES (ITEM 5.6):

- 1. PREPARE CONCRETE SURFACES BY GRINDING AND OTHER SURFACES BY SOLVENT WIPE (XYLENE OR APPROVED EQUAL.). APPLY PRIMER, AND ALLOW PRIMER TO CURE PER MANUF. RECOMMENDATIONS, PRIOR TO APPLYING SPECIFIED SEALANTS.
- 2. SEE SPECIFICATIONS FOR APPROVED MATERIALS.

FLOOR SLAB JOINT REPAIR — INSTALL OR REPLACE COVE SEALANT SCALE: NTS

**LEGEND** 



WORK ITEM NUMBER

SCALE: AS NOTED

PROJECT NO: 60638480-T18

CAD DWG FILE: 9-11\_RD.22-1

DESIGNED BY: JGG DRAWN BY: CMP

DEPT CHECK: MAB

PROJ CHECK: RJD

DATE: APRIL 2022

FLOOR

RD.22-F1 SHEET 9 OF 14

SUITE 03101

AECOM 1155 ELM STREET, MANCHESTER, NH (603) 606-4800

**ECOM** 

----VARIES 1" ± DEEP

CONCRETE

1" MIN.

└1.5" MAX.,

REMOVE UNSOUND

(AVERAGE)

#### NOTES (ITEM 2.2):

1. THE CONTRACTOR SHALL CHAIN DRAG THE FULL SURFACE OF THE CIP CONC. WASH AREAS (6FT WIDE X FULL COLUMN ROW LENGTH) AND MARK LOCATIONS & EXTENTS OF SPALLED/DETERIORATED CONC. THEN REVIEW EACH AREA WITH THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING DEMOLITION SUBSIDARY TO THE OVERALL WORK UNDER ITEM 1.1 GENERAL REQUIREMENTS.

2. GRIND A PERIMETER GROOVE 1/4" DEEP AROUND EXTENTS OF REPAIR AREA ENSURING THAT ALL EDGES ARE ENCOMPASSED BY THE GROOVE. THE PERIMETER GROOVE SHOULD BE CONTINUOUS AND CONSISTANT DEFINING A CONCRETE REPAIR AREA THAT CLOSELY FOLLOWS THE GENERAL SHAPE OF THE DETERIORATION AREA IN A NEAT WORKMANSHIP MANNER WITH A UNIFORM PATTERN AND NO SHARP ANGLES.

3. REMOVE DETERIORATED CONCRETE IN REPAIR AREA TO SOUND CONCRETE BY CHIPPING WITH HAND-HELD LIGHT-WEIGHT CHIPPING HAMMERS AND CARE MUST BE TAKEN TO ENSURE CONCRETE REMOVAL DOES NOT CREATE CRACKING OR FRACTURES BEYOND THE ORIGINAL DETERIORATED CONCRETE REMOVAL AREA OR IN THE PRECAST CONC. BELOW.

4. REMOVE REMAINING CONCRETE WITHIN THE PERIMETER GROOVE LINES TO A DEPTH GRADUALLY TAPERING FROM THE 1/4" DEPTH AT THE GROOVE TO THE EXTENTS OF THE SOUND CONCRETE IN THE DEEPEST PART OF THE REPAIR AREA (VARIES). EXPOSED AGGREGATE SURFACE WITH A SURFACE PROFILE OF 1/16" ± SHOULD REMAIN.

5. CLEAN ALL EXPOSED REINFORCING STEEL AND CONCRETE SURFACES BY MEANS OF BLAST CLEANING W/ ABRASIVE MEDIA TO NEAR-WHITE METAL SURFACE SSPC-SP10 (SUBSIDIARY) TO REMOVE ALL LOOSE MATERIAL, RUST, AND LATENCE. CONTRACTOR SHALL TAKE CARE TO NOT DAMAGE EXISTING REINFORCING BARS. REINFORCING BARS DAMAGED BY THE CONTRACTOR'S CONSTRUCTION PRACTICES SHALL BE EXPOSED AND SPLICED IN A MANNER AS DIRECTED BY THE ENGINEER AT NO COST TO THE OWNER.

6. COAT ALL REINFORCING STEEL AND CONCRETE SURFACES WITH THE REPAIR MORTAR MANUFACTURER'S APPROVED BONDING AGENT/PROTECTIVE COATING SUBSIDIARY TO ITEM 2.4 (EMACO P24 BONDING AGENT, SIKA ARMATEC 110 EPOCEM, OR APPROVED EQUUV.).

7. INSTALL POLYMER-MODIFIED CEMENTITIOUS REPAIR MORTAR (NEAT) WITH INTEGRAL PENETRATING CORROSION INHIBITOR (EMACO R310-CI AS MFD BY DEGUSSA/MASTER BUILDERS TECHNOLOGIES, SIKATOP 122 PLUS AS MFD. BY SIKA CORP., OR APPROVED EQUIV.) IN ACCORDANCE WITH MFR. INSTRUCTIONS. SCRUB-COAT, TROWEL, AND BROOM FINISH TO MATCH ADJOINING SURFACES.

- INSTALL WORK ITEM 2.7A FLOOR REPAIR TRAFFIC TOPPING—FULL MEMBRANE SYSTEM OVER THE CURED PATCH AREA TO 1" BEYOND THE EDGES OF THE REPAIR

FLOOR REPAIR - PARTIAL DEPTH
AT C.I.P WASH

SCALE: 1 1/2" = 1'-0"

# NOTES (ITEM 2.3):

- 1. LOCATE AND MARK AREAS FOR REPAIR WITH THE ENGINEER, AND CAPTURE AN ADEQUATE SAFETY AREA ON THE FLOOR LEVEL BELOW THE REPAIR AREA WITH CONSTRUCTION BARRELS AND ROPE.
- 2. REMOVE DETERIORATED CONCRETE OR OLD PATCHING MATERIALS TO SOUND CONCRETE (15-LB CLASS HAMMERS MAX.)
- 3. SAW CUT PERIMETER OF CONCRETE REPAIR AREA IN A NEAT WORKMANSHIP MANNER WITH A UNIFORM PATTERN; REMOVE REMAINING CONCRETE WITHIN SAW CUT LINES.
- 4. CLEAN ALL EXPOSED REINF. BARS AND CONCRETE BY SANDBLAST (SUBSIDIARY). PROVIDE (SUBSIDIARY) SUPPLEMENTARY REINFORCING BARS OR WELDED WIRE FABRIC (WWF) AS REQUIRED BY DETAILS OR AS DIRECTED BY THE ENGINEER.
- 5. COAT ALL REINFORCING AND CONCRETE SURFACES WITH EPOXY BONDING AGENT/PROTECTIVE COATING SUBSIDIARY TO THIS ITEM (MASTER EMACO P 124, SIKA ARMATEC 110 EPOCEM, OR APPROVED EQUAL.)
- 6. APPLY CEMENTITIOUS REPAIR MORTAR IN ACCORDANCE WITH SECTION 03732 CONCRETE REPAIR, AND HEAVY BROOM FINISH TO MATCH ADJOINING SURFACES.
- 7. ENSURE LOCALIZED SAFETY AREA BELOW DEMOLITION AREA IS CLEAR AND CAPTURED. SAFETY WATCH/MONITORING OF SAFETY AREA BELOW DURING CHIPPING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER

FLOOR REPAIR — PARTIAL DEPTH AT PRECAST CONCRETE FLOOR SLAB

SCALE: 1 1/2" = 1'-0"

SAW CUT PERIMETER

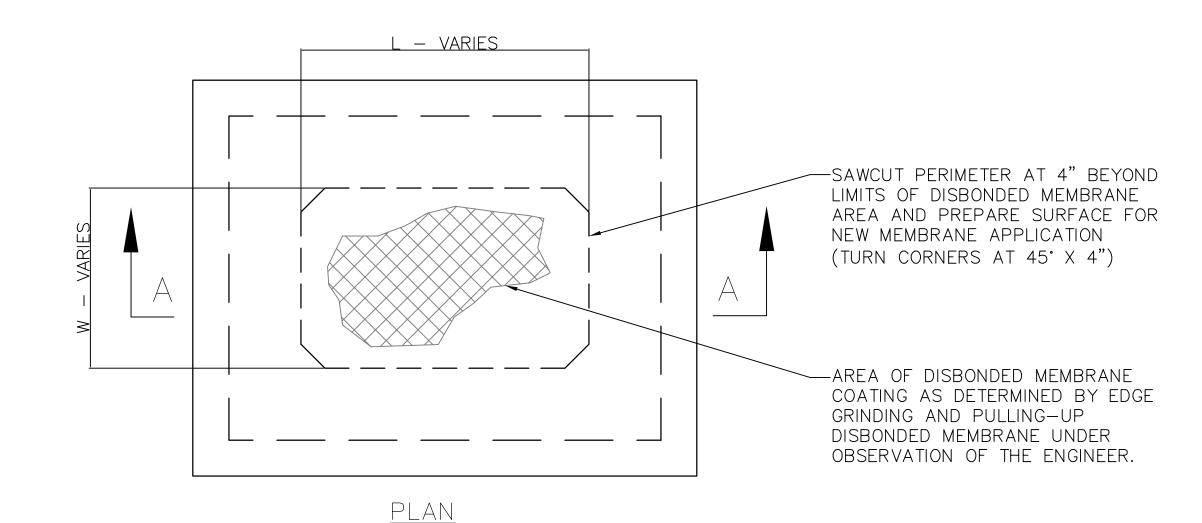
4" THICK PRECAST

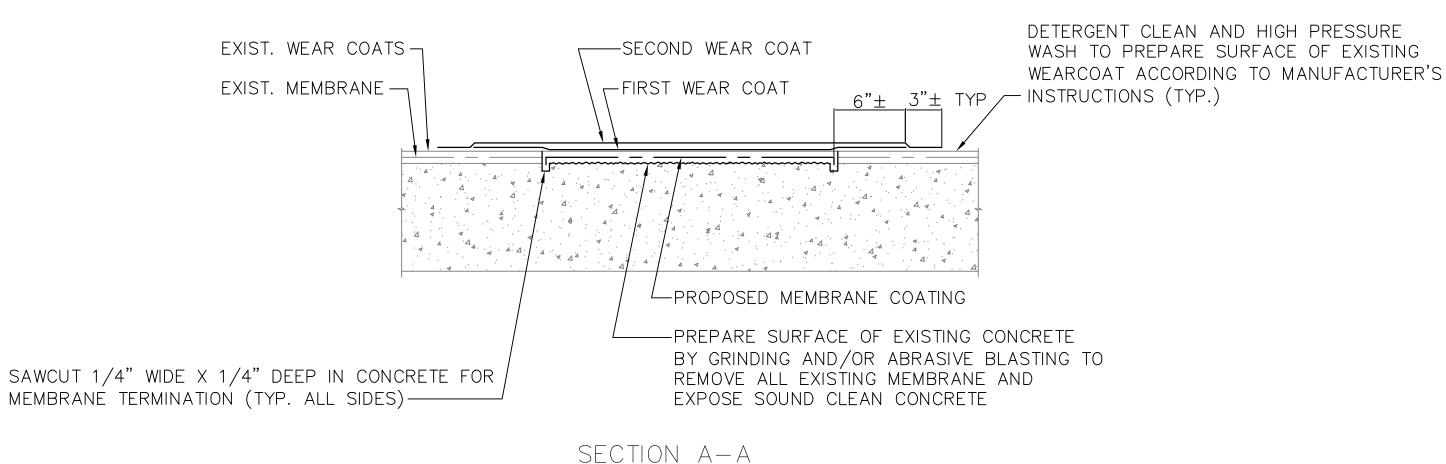
DETERIORATED CONCRETE

AREA (SIZE VARIES)

TEE FLANGE

<sup>1</sup>/<sub>2</sub>" DEEP



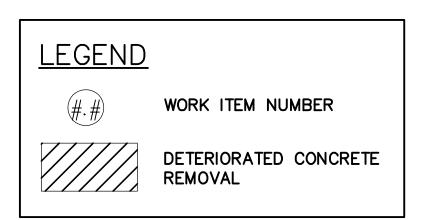


# NOTES (ITEM 2.7H-R):

- 1. IT IS ANTICIPATED THAT THE LOCATIONS OF THE REPAIR AREAS MAY NOT ALLOW HELIX TRAFFIC TO BE MAINTAINED AND TO PASS SAFELY AROUND THE REPAIR AREAS WITH PROPER TRAFFIC CONTROL DEVICES AS REQUIRED.

  PREPARATIONS AND APPLICATION OF COATINGS FOR ITEM 2.7H—R SHALL BE PERFORMED DURING NIGHT—TURN HOURS (12:00PM TO 5:00AM) IF IT IS DETERMINED THAT THE LOCATION OF A REPAIR AREA PREVENTS TRAFFIC PASSAGE IN THE HELIX.
- 2. REPAIR AREAS SHALL BE PROTECTED FROM TRAFFIC WITH BARRELS, OR CONES AS REQUIRED AT ALL TIMES UNTIL COMPLETE.
- 3. MEASUREMENT FOR PAYMENT OF ITEM 2.7H-R SHALL BE MADE AFTER THE SAWCUT LINES ARE COMPLETE AND PRIOR TO COATING APPLICATION AS L X W.





CITY OF MANCHESTEF
MANCHESTEF
PARKING GARAGE
SEALANTS, WATERPI

DETAILS

REPAIR

SUITE 03101

REET, NH 800

AECOM 1155 ELM STR MANCHESTER, 1 (603) 606—481

**ECOM** 

PROJECT NO: 60638480-T18

CAD DWG FILE: 9-11\_RD.22-1
DESIGNED BY: JGG

DRAWN BY: CMP

DEPT CHECK: MAB

PROJ CHECK: RJD

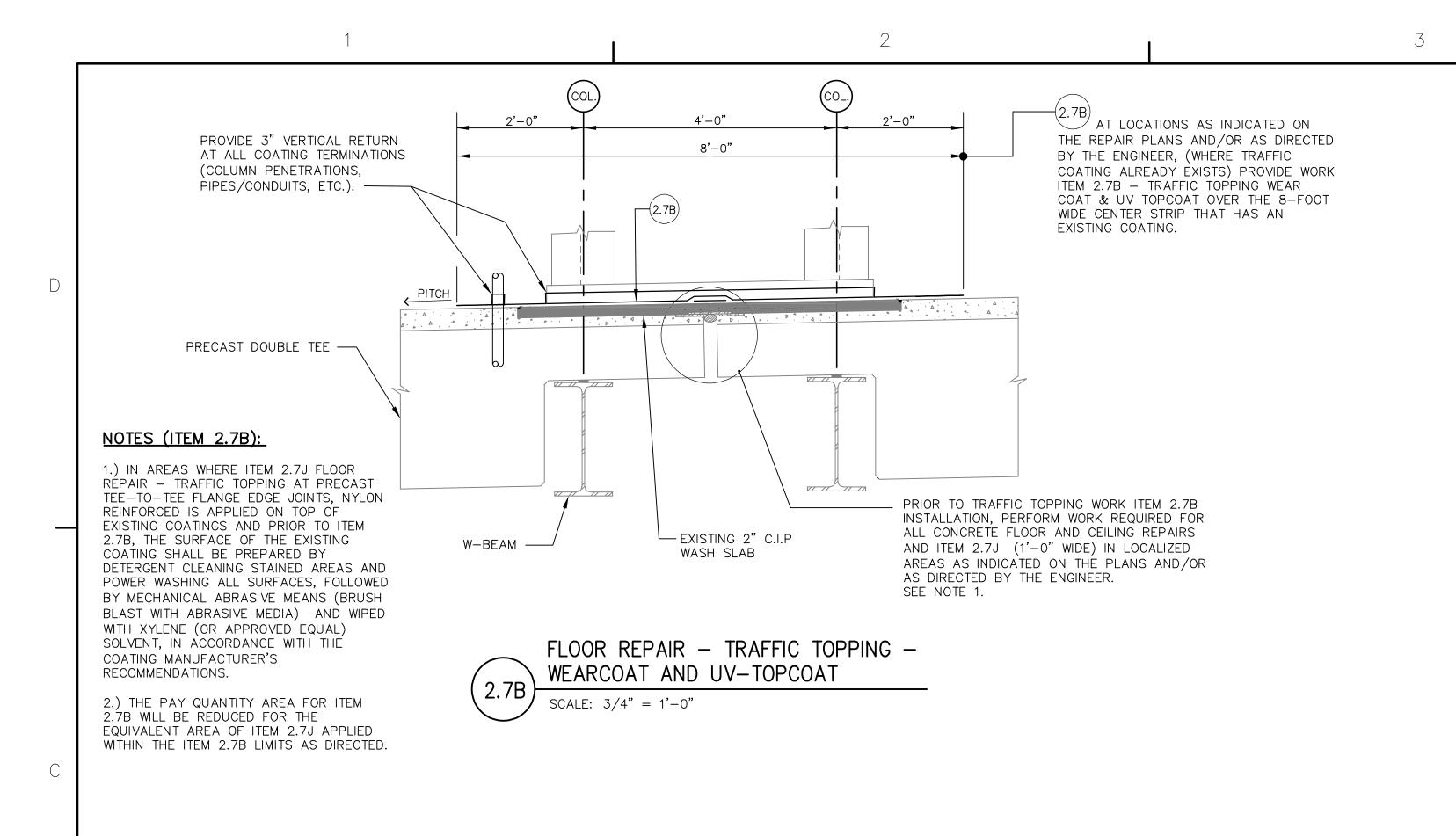
DATE: APRIL 2022

SCALE: AS NOTED

**RD.22-F2**SHEET 10 OF 14

3

5

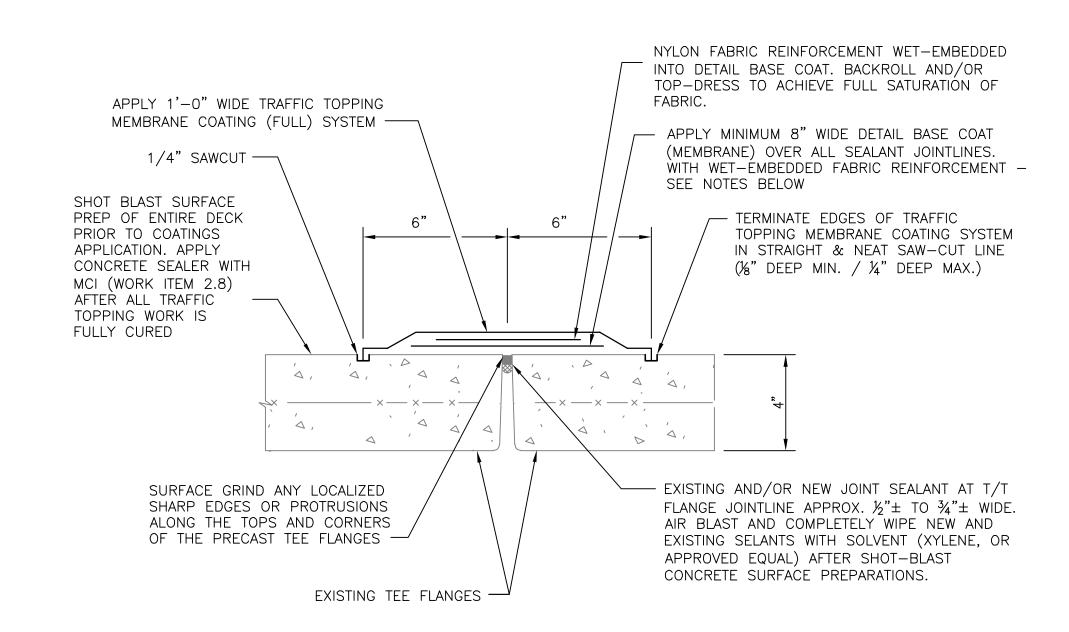


# **LEGEND**

WORK ITEM NUMBER

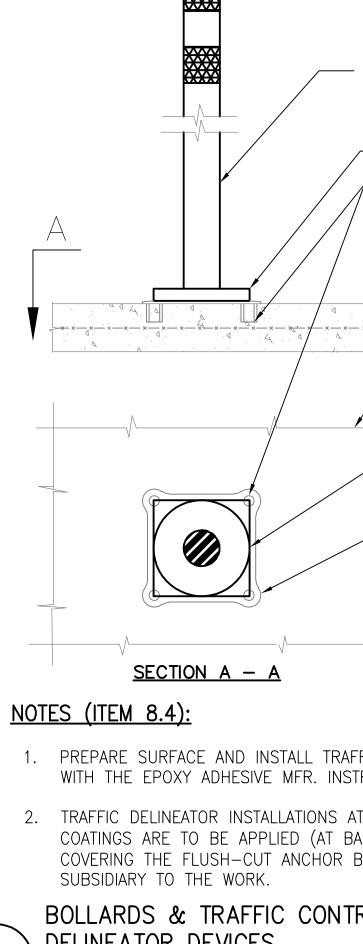
#### NOTES (ITEM 2.7J):

- RECESSES, DEPRESSIONS, OR IRREGULARITIES ALONG THE JOINTLINES SHALL BE FILLED TO PROVIDE A SMOOTH LEVEL COATING TRANSITION BETWEEN PRECAST TEE FLANGES ACROSS THE JOINTLINES. PROVIDE A 100% SOLIDS FLEXIBLE EPOXY FILLER PASTE MATERIAL AS NEEDED PRIOR TO THE DETAIL BASE COAT -OR- THE DETAIL BASE COAT APPLICATION SHALL BE APPLIED IN THICKNESS AS REQUIRED ACROSS THE JOINTLINES TO FILL THE JOINTLINE AND PROVIDE THE SMOOTH TRANSITION (IN ACCORDANCE WITH THE COATING SYSTEM MANUFACTURER RECOMMENDATIONS).
- 2. A 6" NYLON FABRIC REINFORCEMENT STRIP SHALL BE WET-EMBEDDED AND BACKROLLED INTO THE DETAIL BASE COAT TO BE SUPPLIED BY THE COATING SYSTEM MANUFACTURER AS PART OF THE COATING SYSTEM TO PROVIDE JOINT-BRIDGING STRENGTH FOR A 5-YEAR WARRANTY OF THE COATING SYSTEM FOR THIS APPLICATION.
- 3. SEE SPECIFICATIONS FOR APPROVED MATERIALS.
- 4. ALL COATING EDGES SHALL BE MASKED/TAPED OR OTHERWISE GUARDED TO ENSURE NEAT, STRAIGHT, AND TRUE LINES. MASKING SHALL BE REMOVED PRIOR TO COATING COMPONENT CURE AS REQUIRED TO PREVENT DAMAGE OR MASKING TAPE RESIDUE. EXCESS COATING OR TAPE RESIDUE SHALL BE REMOVED BY GRINDING AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- 5. WHERE EXISTING ITEM 2.7J MUST BE REMOVED MAKE EDGE CUTS (SAW OR GRINDER) AND REMOVE FULL COATING SYSTEM DOWN TO CONCRETE BY MECHANICAL MEANS (GRINDER WHEEL, ABRASIVE BLAST, SCABBLER, SHOT BLAST, OR HYDRO-REMOVAL) TO CLEAN CONCRETE SURFACE OR SOUND SUBSTRATE AS APPROVED BY THE ENGINEER SUBSIDIARY TO THE WORK UNDER ITEM 2.7J AND/OR ITEM 1.1.



FLOOR REPAIR - TRAFFIC TOPPING AT JOINTLINE PRECAST TEE-TO-TEE FLANGE EDGE JOINT, NYLON REINFORCED

SCALE: 3"=1'-0"



3"ø DELINEATOR POST DELINEATOR BASE — ANCHOR BOLT STUBS IN FLOOR - 4" THICK PRECAST TEE FLANGE OUTLINE OF DELINEATOR BASE (8"ø OR 8"x8" SQUARE) - OUTLINE OF EPOXY ADHESIVE APPLICATION AREA TO BE 1 LARGER THAN DELINEATOR BASE AND EXTENDED TO COVER FLUSH-CUT ANCHOR BOLT STUBS OR VOIDS IN FLOOR. TAPER THE EPOXY THICKNESS TO A MAX. AT EDGE.

1. PREPARE SURFACE AND INSTALL TRAFFIC DELINEATORS IN ACCORDANCE WITH THE EPOXY ADHESIVE MFR. INSTRUCTIONS.

2. TRAFFIC DELINEATOR INSTALLATIONS AT LOCATIONS WHERE NO TRAFFIC COATINGS ARE TO BE APPLIED (AT BARE CONCRETE) SHALL INCLUDE COVERING THE FLUSH-CUT ANCHOR BOLT STUBS WITH EPOXY ADHESIVE

BOLLARDS & TRAFFIC CONTROL — INSTALL TRAFFIC **DELINEATOR DEVICES** 

SCALE: NTS 18" DIA. x 42" TALL PRECAST CONRETE BOLLARD TO BE REMOVED — BREAK-AWAY VIEW BOLLARD BASE OF BOLLARD BASE CAVITY — INTERIOR EXISTING EPOXY STEEL MOUNTING ADHESIVE ANCHOR BASE PL---BOLTS EMBEDDED INTO CONCRETE FLOOR APPROX. 1<sup>1</sup>/<sub>2</sub>". \_ 4" THICK PRECAST TEE FLANGE STRUCTURAL STEEL TUBING - CONCRETE BOLLARD WALL

# NOTES (ITEM 8.1):

<u>SECTION B — B</u>

- 1. LIFT AND REMOVE CONCRETE BOLLARD FROM STEEL BASE POST, REMOVE ANCHOR BOLT NUTS AND STEEL BASE. USE CAUTION TO AVOID DAMAGE TO FLOOR.
- 2. CUT-OFF EXISTING ANCHOR BOLTS FLUSH TO FLOOR AND GRIND SMOOTH WITH SLIGHT RECESS INTO (BELOW) FLOOR TEXTURE RIDGES. REMOVE ALL BURRS AND SHARP EDGES.
- 3. ANCHOR BOLT HOLES FOR ANCHORS THAT PULL OUT OF THE FLOOR (ADHESIVE BONDING FAILURE) SHALL BE THOROUGHLY MECHANICALLY CLEANED AND FILLED WITH NON-SHRINK GROUT.
- 4. COAT OVER THE CUT-OFF BOLTS AND FILLED HOLES WHERE TRAFFIC TOPPINGS ARE DESIGNATED FOR INSTALLATION.
- 5. REPAIR ANY PREVIOUSLY DAMAGED (SPALLED) FLOOR AREAS UNDER WORK ITEM 2.3. ANY AREAS THAT ARE DAMAGED BY BOLLARD REMOVAL WORK SHALL BE REPAIRED IN ACCORDANCE WITH ITEM 2.3 AT NO EXPENSE TO THE OWNER.
- 6. ALL BOLLARDS SHALL BE REMOVED FROM THE GARAGE AND NEATLY PLACED AT THE MAINTENANCE DRIVEWAY AREA LOCATED AT THE NORTH END OF THE PARKING GARAGE AS DIRECTED BY THE OWNER. CONTRACTOR SHALL DISPOSE OF STEEL BASES SUBSIDIARY TO THIS WORK. DISPOSAL OF CONCRETE BOLLARDS IS UNDER WORK ITEM 8.2.

BOLLARDS & TRAFFIC CONTROL - CONCRETE BOLLARD REMOVAL 8.1

SCALE: NTS

PROJ CHECK: RJD DATE: APRIL 2022 SCALE: AS NOTED RD.22-F3

 $\simeq$ R

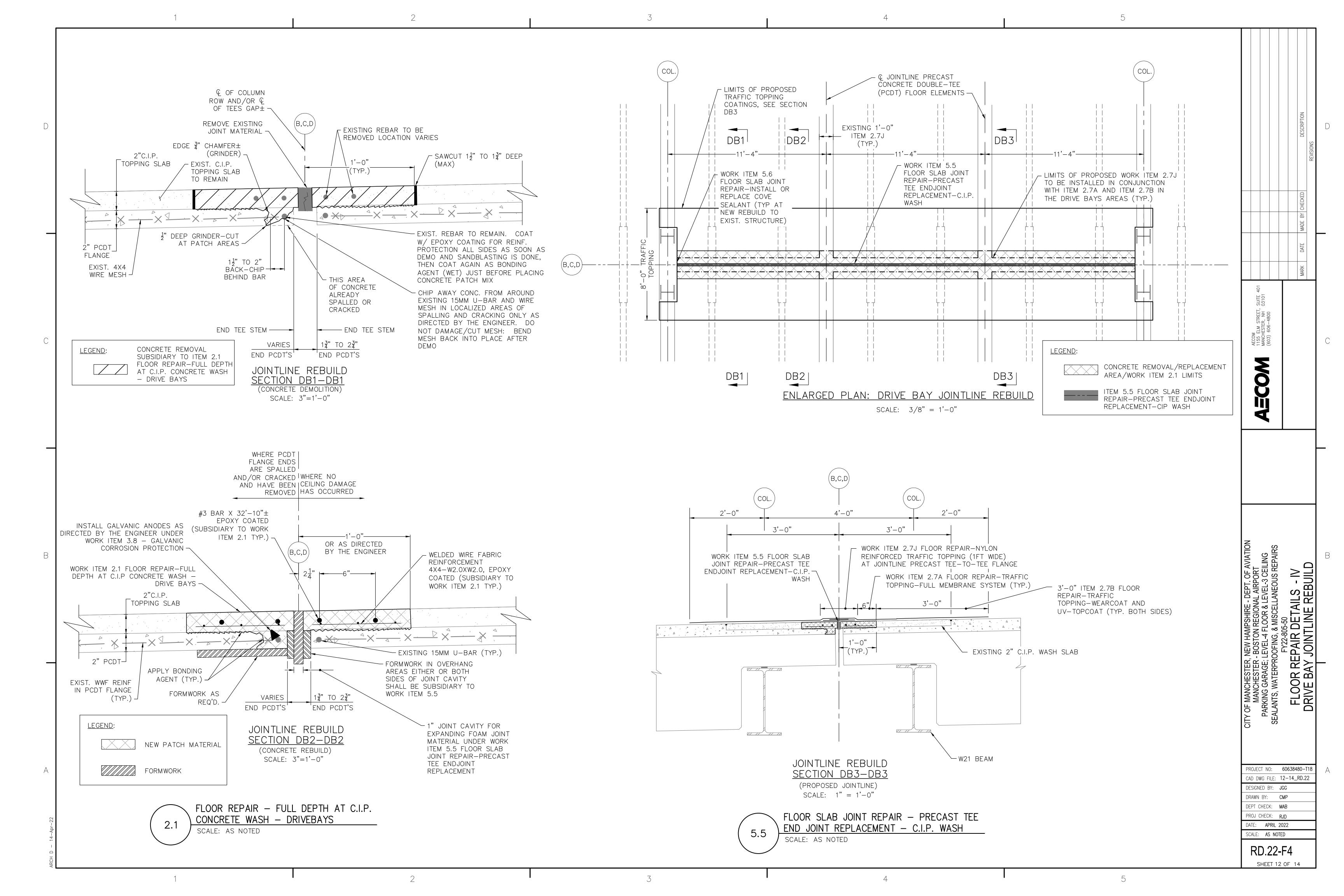
S

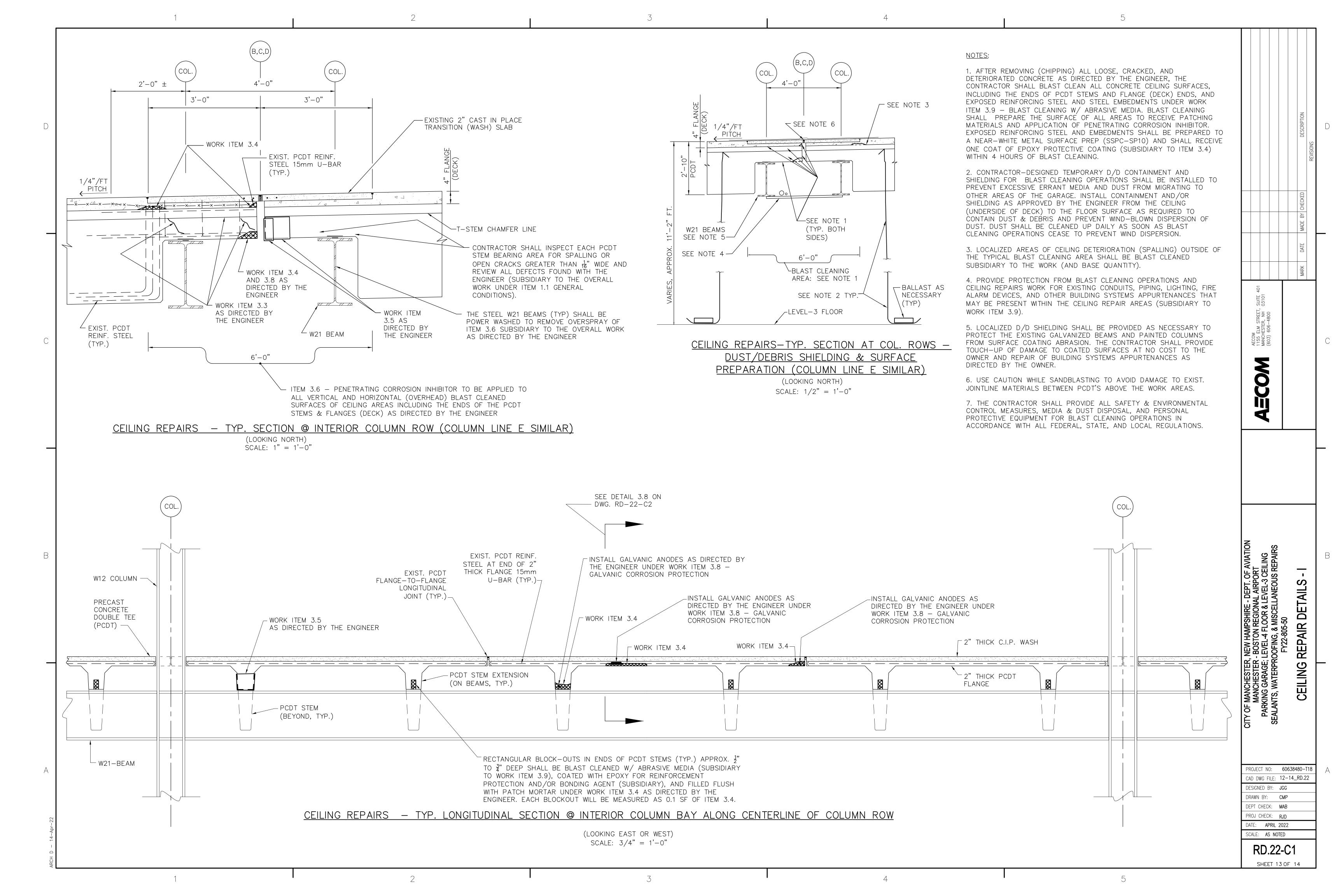
SUITE 03101

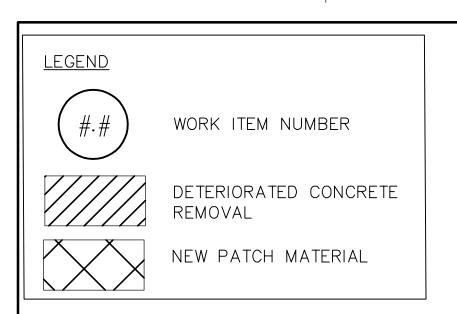
PROJECT NO: 60638480-T18 CAD DWG FILE: 9-11\_RD.22-1 DESIGNED BY: JGG

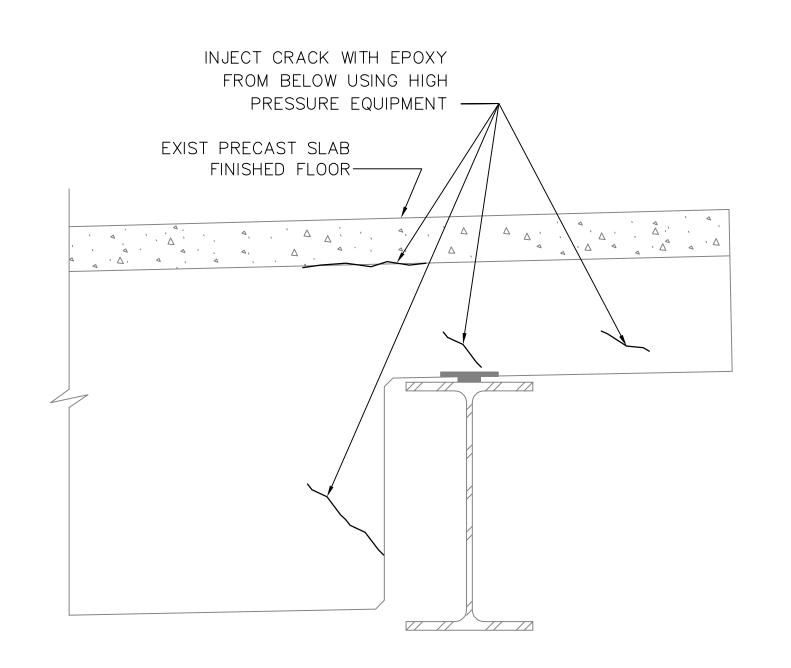
PRAWN BY: CMP DEPT CHECK: MAB

SHEET 11 OF 14





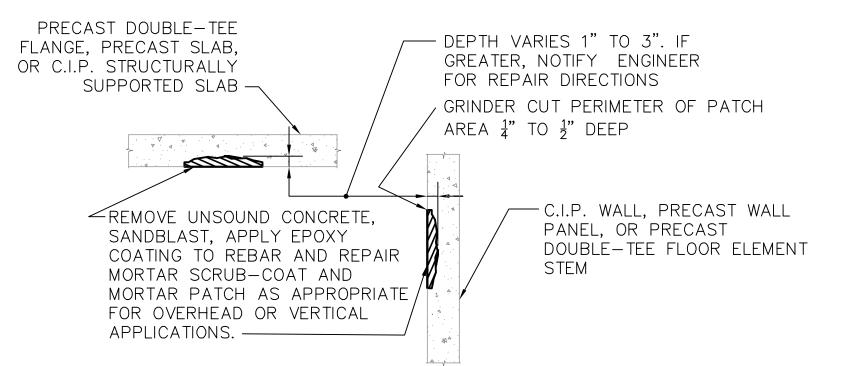




#### NOTES (ITEM 3.3):

- 1. THE CONTRACTOR SHALL INSPECT ALL AREAS TO LOCATE CRACKS FOR POTENTIAL INJECTION AND PRE-MARK CRACK LOCATIONS ON A PLANS WORKSHEET FOR PRIOR REVIEW WITH AND APPROVAL BY THE ENGINEER. THE ENGINEER SHALL REVIEW AND MARK THE APPROVED CRACK LOCATIONS WITH THE CONTRACTOR'S SITE REPRESENTATIVE PRIOR TO COMMENCEMENT OF CRACK GRINDING PREPARATIONS.
- ADDITIONAL CRACKS IN SOME AREAS MAY BE IDENTIFIED/NOTICED BETWEEN SUBSEQUENT PARTS OF THE REPAIR WORK AND ADDITIONAL CRACK INJECTION SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.
- 3. ONLY CRACK INJECTION LOCATIONS APPROVED, MARKED, AND RECORDED BY THE ENGINEER SHALL BE PAID.
- 4. GROOVE CRACKS WITH GRINDER AND CLEAN CRACKS OF LOOSE MATERIALS AND DEBRIS USING MECHANICAL MEANS AND COMPRESSED AIR BLAST.
- 5. INSTALL PORT ADAPTERS TO SURFACE IN ACCORDANCE WITH APPROVED EPOXY INJECTION RESIN MANUFACTURERS INSTRUCTIONS. A MINIMUM OF TWO INJECTION PORTS ARE REQUIRED ON EACH CRACK.
- 6. SEAL SURFACE OF CRACK BY APPLYING EPOXY PASTE AND ALLOW IT TO
- 7. INJECT EPOXY USING CONSTANT PRESSURE INTO CRACK AT PORTING ADAPTERS. BEGIN INJECTION AT FIRST PORT AND CONTINUE UNTIL THERE IS APPEARANCE OF EPOXY AT THE NEXT PORT. WORK CRACKS FROM THE LOW ELEVATION TOWARDS HIGHER ELEVATION.
- 8. REMOVE ALL PORTING ADAPTERS AND REMOVE ALL SURFACE SEALER BY GRINDING FLUSH TO CONC. SURFACE.
- 9. REFER TO SPECIFICATIONS FOR ADDITIONAL INFO.

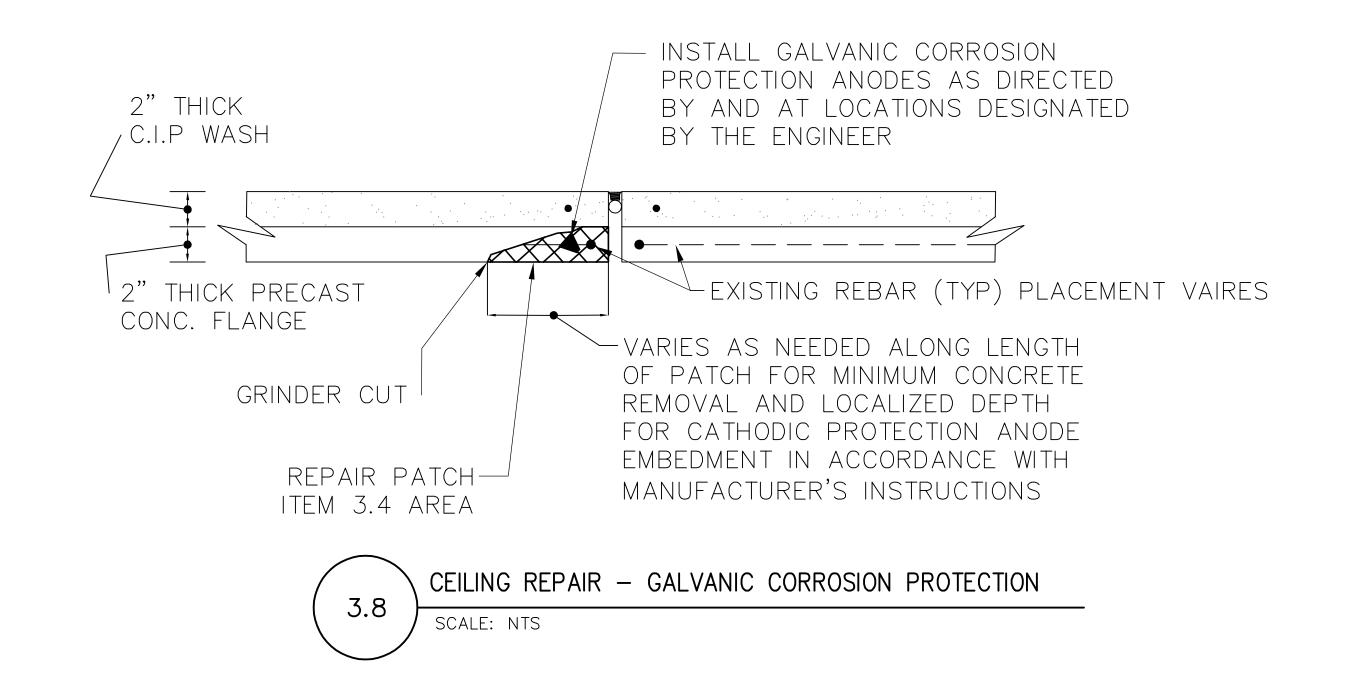




#### NOTES (ITEM 3.4):

- 1. THE CONTRACTOR SHALL HAMMER-SOUND AND INSPECT TO LOCATE AND MARK AREAS FOR REPAIRS. REVIEW MARKED AREAS WITH THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF EDGE CUTTING.
- 2. REMOVE DETERIORATED CONCRETE TO SOUND CONCRETE.
- 3. CLEAN ALL CONCRETE CAVITY SURFACES AND EXPOSED REINF. BARS BY BLAST CLEANING W/ ABRASIVE MEDIA (SUBSIDIARY); COAT ALL EXPOSED REINF. BARS WITH EPOXY PROTECTIVE COATING SUBSIDIARY TO THIS WORK ITEM (MASTER EMACO P 124 , SIKA ARMATEC 110 EPOCEM, OR APPROVED EQUAL.).
- 4. APPLY REPAIR MORTAR SCRUB-COAT AND MORTAR ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND FINISH TO MATCH ADJOINING SURFACES.
- 5. FOR EXPOSED ARCHITECTURAL PRECAST PANEL REPAIRS (IF REQUIRED), (AT ELEVATOR TOWER, ETC.) EFFORTS SHALL BE MADE TO MATCH THE COLOR AND TEXTURE OF THE EXISTING WALL PANELS AS CLOSELY AS POSSIBLE. INSTALLER TO FIELD PREPARE TEST SAMPLE OF PATCHING MATERIAL FOR APPROVAL BY THE OWNER PRIOR TO THE APPLICATION OF THE REPAIR.

CEILING REPAIR - OVERHEAD CONCRETE MORTAR REPAIR SCALE:  $1 \frac{1}{2} = 1'-0"$ 



AECOM 1155 ELM STREET, MANCHESTER, NH (603) 606-4800 **ECOM** 

> DETAILS REPAIR

CEILING

PROJECT NO: 60638480-T18 CAD DWG FILE: 12-14\_RD.22 DESIGNED BY: JGG DRAWN BY: CMP DEPT CHECK: MAB

RD.22-C2 SHEET 14 OF 14

PROJ CHECK: RJD DATE: APRIL 2022 SCALE: AS NOTED