

# PARKING GARAGE FIRST LEVEL STRUCTURAL REPAIRS AT 35 NORTHAMPTON STREET

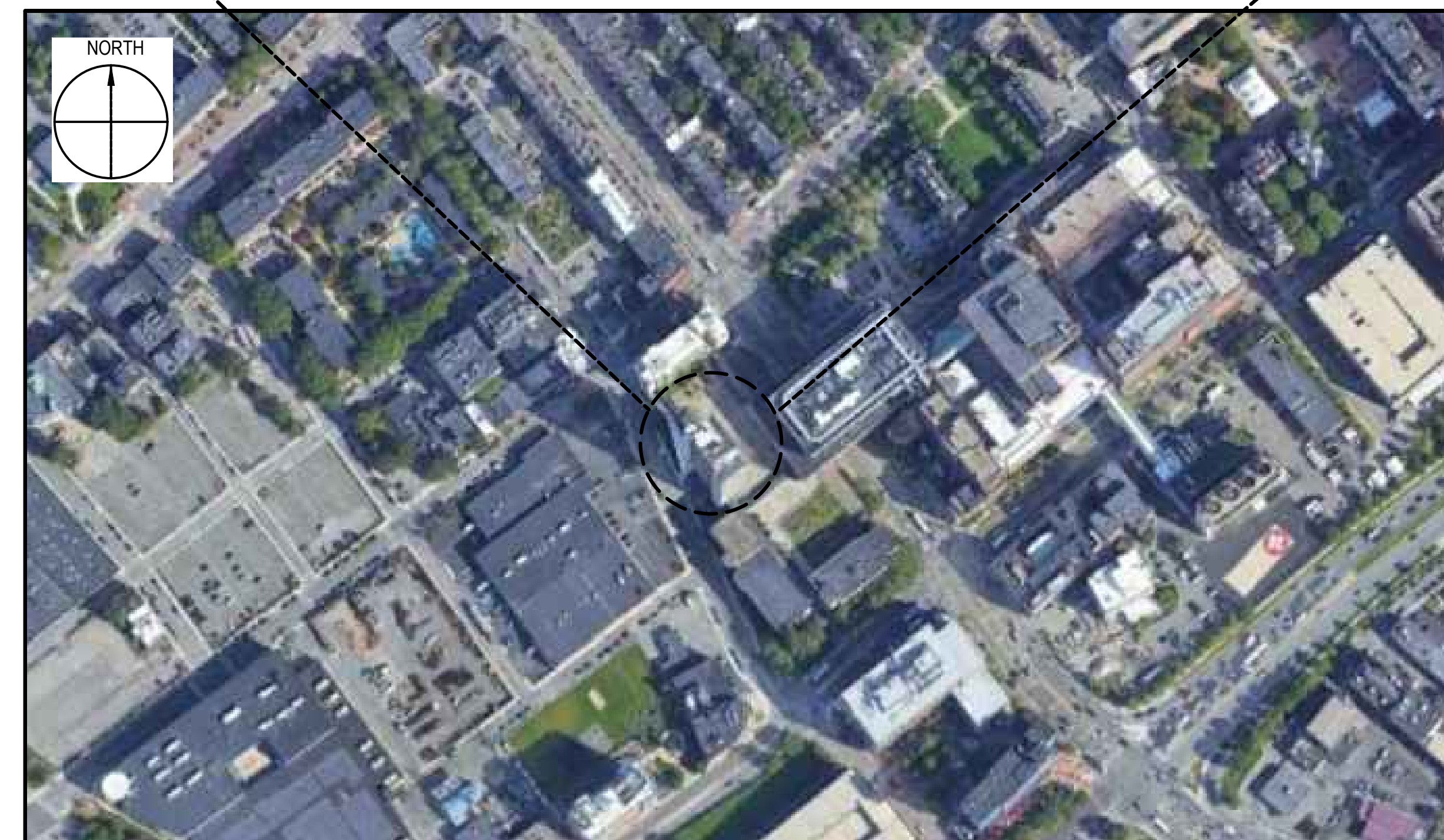
35 NORTHAMPTON STREET  
BOSTON, MA 02118

PREPARED FOR  
BOSTON PUBLIC HEALTH COMMISSION  
1010 MASSACHUSETTS AVENUE  
BOSTON, MA 02118

DRAWING NO.	TITLE
G100	COVER SHEET
S001	STRUCTURAL NOTES
S101	FIRST LEVEL OVERHEAD PLAN
S102	SECOND LEVEL WEARING SURFACE PLAN
S201	INVERTED T-BEAM SOUTH ELEVATION
S202	INVERTED T-BEAM NORTH ELEVATION
S501	STRUCTURAL DETAILS
S502	TRAFFIC COATING DETAILS



SITE MAP  
NOT TO SCALE



LOCATION MAP  
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BID DOCUMENTS

PROJECT  
PARKING GARAGE FIRST LEVEL  
STRUCTURAL REPAIRS  
35 NORTHAMPTON STREET  
BOSTON, MA 02118

OWNER  
BOSTON PUBLIC HEALTH COMMISSION  
1010 MASSACHUSETTS AVENUE, 6TH FLOOR  
BOSTON, MA 02118

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	838800		
CADD FILE	838800 G100		
DESIGNED BY	MSL/SPJ		
DRAWN BY	MSL		
CHECKED BY	SPJ/AEO		
DATE	3/26/2023		
DRAWING SCALE	NOT TO SCALE		

GRAPHIC SCALE

SHEET TITLE

COVER SHEET

DRAWING NO.

G100

**GENERAL NOTES:**

- THE GENERAL AND SUBCONTRACTORS INSTALLING WORK DEFINED IN THE CONTRACT DOCUMENTS SHALL CONFORM TO THE CURRENT EDITION OF THE COMMONWEALTH OF MASSACHUSETTS STATE BUILDING CODE (CMR 780), PROJECT SPECIFICATIONS, AND THIS DESIGN PACKAGE.
- FOR THE SAKE OF CLARITY, EACH INDIVIDUAL DETAIL ON THE PARKING LEVEL FLOOR PLANS HAS NOT BEEN INDICATED. INSTALLATION DETAILS HAVE BEEN INDICATED FOR TYPICAL COMPONENTS AT RANDOM LOCATIONS.
- HATCH PATTERNS ARE FOR REPRESENTATION ONLY AND SHOULD NOT BE USED AS A MEANS FOR QUANTIFYING.
- DISCREPANCIES NOTED BY THE CONTRACTOR IN THE DRAWINGS OR SPECIFICATIONS MUST BE BROUGHT TO THE OWNER AND ENGINEER'S ATTENTION PRIOR TO BID SUBMISSION.
- ALL ITEMS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS APPLICABLE TO THE PROJECT.
- THE CONTRACTOR SHALL REPORT DETERIORATED OR UNSUITABLE STRUCTURAL CONCRETE OR SUBSTRATES TO THE OWNER AND ENGINEER IN WRITING PRIOR TO PERFORMING OR CONTINUING WITH THE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR SEGREGATING WORK AREAS FROM THE GENERAL PUBLIC USING SIGNS, CONES, CAUTION TAPE, ETC. THE CONTRACTOR SHALL CONTAIN ALL DUST AND DEBRIS DURING ALL PHASES OF THE WORK.
- UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL SUBMIT AN ALL-INCLUSIVE LABOR AND MATERIALS GUARANTEE OF THE WORK TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP. THIS GUARANTEE SHALL BE FOR A PERIOD OF TWO (2) YEARS AND SHALL BE SIGNED BY A PRINCIPAL OF THE CONTRACTOR'S FIRM AND SEALED IF A CORPORATION.
- THE CONTRACTOR'S BASE BID FOR THIS PROJECT MUST INCLUDE ALL LABOR, MOBILIZATION, PERMITTING, MATERIALS, TEMPORARY PROTECTION, ETC. NO ADDITIONAL COSTS WILL BE SUBMITTED TO THE OWNER OR ENGINEER IN ORDER TO COMPLETE THE INTENT OF THE WORK AS INDICATED ON THE DESIGN DRAWINGS.
- THE CONTRACTOR PERSONNEL PRESENT AT THE SITE DURING ALL PHASES OF THE WORK MUST BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE WORK. THE CONTRACTOR'S WORKERS SHALL NOT BE CHANGED OR ROTATED DURING THE DURATION OF THIS PROJECT UNLESS SPECIFICALLY TRAINED FOR THIS PARTICULAR RENOVATION PROJECT AND APPLICATION - NO EXCEPTIONS.
- THE CONTRACTOR IS TO COORDINATE ON-SITE USE OF WATER & ELECTRICITY WITH THE OWNER.
- WATERPROOFING AND CONCRETE REPAIR MATERIAL MANUFACTURER'S TECHNICAL REPRESENTATIVE AND SUBCONTRACTORS MUST BE PRESENT AT THE PROJECT PRECONSTRUCTION MEETING AND MUST INCLUDE PERIODIC SITE VISITS WITH FORMAL REPORTING AS SPECIFIED.
- JOB SITE SAFETY IS THE CONTRACTOR'S RESPONSIBILITY. GALE REPRESENTATIVES, INCLUDING SUBCONSULTANTS RETAINED BY GALE, MAY VISIT THE JOB SITE FROM TIME TO TIME. THESE VISITS ARE FOR CLARIFICATION OF SPECIFIC DESIGN RELATED ISSUES ONLY AND ARE NOT FOR THE PURPOSE OF JOB SITE SAFETY. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLY WITH ALL SITE SAFETY APPLICABLE REQUIREMENTS.

**DEMOLITION NOTES:**

- NO DEMOLITION WORK SHALL PROCEED UNTIL A PLAN HAS BEEN SUBMITTED TO AND APPROVED BY THE OWNER AND ENGINEER DETAILING THE METHODS AND EQUIPMENT TO BE USED TO DEMOLISH AND/OR SURFACE PREPARE STRUCTURES AND FEATURES.
- ALL DEMOLISHED MATERIALS AND DEBRIS SHALL BE LEGALLY DISPOSED OF OFF SITE IN A MANNER SATISFACTORY TO THE OWNER AND CURRENT DEP/MEPA REQUIREMENTS.
- TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ALL REPAIRS ARE COMPLETED AND FULLY CURED.

**PROTECTION OF EXISTING STRUCTURES:**

- EXISTING STRUCTURES, UTILITY LINES AND EMBEDDED UTILITIES MUST BE COORDINATED WITH AND IDENTIFIED BY THE OWNER AND CONTRACTOR, AND MARKED ON-SITE PRIOR TO INITIATING CONSTRUCTION. IN THE EVENT THAT ANY UNMARKED OR UNKNOWN STRUCTURE/UTILITY ARE UNCOVERED BY THE CONTRACTOR, WORK MUST HALT AND THE CONTRACTOR SHALL REPORT ITS FINDINGS TO THE OWNER'S SITE REPRESENTATIVE FOR INSTRUCTIONS BEFORE PROCEEDING FURTHER. THE EXISTING STRUCTURES AND UTILITIES WHICH ARE ADJACENT TO THE SITE AND THOSE TO REMAIN WITHIN THE LIMITS OF THE WORK SHALL BE PROTECTED AGAINST DAMAGE. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO THE OWNER IN THE EVENT OF REMOVAL OF OR DAMAGE TO ANY EXISTING OBJECTS BY CONTRACTORS PERSONNEL, WHICH ARE INTENDED BY THE OWNER TO REMAIN IN PLACE.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT THE EXISTING DRAINAGE SYSTEM. ANY DAMAGE THAT OCCURS AS A RESULT OF THE CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

**QUALITY ASSURANCE:**

- CONTRACTOR MUST COORDINATE AND PAY FOR ALL MATERIAL MANUFACTURER'S SITE VISITS TO REVIEW CONSTRUCTION. AT A MINIMUM, THE MANUFACTURER'S TECHNICAL REPRESENTATIVE SHALL BE ON SITE FOR THE FOLLOWING REVIEWS:
  - PRE-CONSTRUCTION MEETING.
  - CONCRETE PREPARATION PRIOR TO INSTALLATION OF MATERIALS.
  - REVIEW MATERIAL STORAGE, MIXING, SURFACE PREPARATION, APPLICATION, CURING AND TEMPORARY PROTECTION FOR EACH MATERIAL TYPE OR COMPONENT.
  - MINIMUM ONE (1) SITE VISIT PER WEEK DURING INSTALLATION. MOCK-UP OF EACH REPAIR TYPE WITH MANUFACTURER'S REPRESENTATIVE PRESENT.
  - PERIODIC TESTING OF MATERIAL THICKNESS TO CONFIRM CONFORMANCE TO MANUFACTURER'S WRITTEN TECHNICAL DATA AND THESE CONTRACT DOCUMENTS.
- FOR EACH SITE VISIT, THE MANUFACTURER'S REPRESENTATIVE MUST PROVIDE A WRITTEN FIELD REPORT INDICATING AREAS REVIEWED, PROCEDURES USED, RECOMMENDATIONS MADE, INCORRECT INSTALLATIONS, CORRECTIVE ACTIONS AND PHOTOGRAPHIC DOCUMENTATION. THE WRITTEN FIELD REPORT MUST INCLUDE DATE, TIME, COMPLETE LIST OF PERSONNEL ON SITE, AREAS REVIEWED WITH SKETCH PLAN IDENTIFICATION; PLACED WITH PHOTO DOCUMENTS ON MANUFACTURER'S COMPANY LETTERHEAD.
- THE CONTRACTOR SHALL OBTAIN AND PROVIDE COPIES OF ALL MATERIAL AND SYSTEM WARRANTIES TO THE OWNER.

**CONCRETE REPAIR NOTES:**

- ALL CONCRETE REPAIRS SHALL BE PERFORMED IN ACCORDANCE WITH THESE TECHNICAL NOTES AND REPAIR DETAILS AS WELL AS MANUFACTURER'S SPECIFIC REQUIREMENTS FOR THE SPECIFIED PRODUCTS.
- DO NOT FEATHER EDGE ANY REPAIRS. THE MIN. REPAIR MORTAR APPLICATION THICKNESS IS PREFERRED TO BE 1", HOWEVER, NEVER LESS THAN 1/2" THICK AT PERIMETERS.
- ALL LOOSE, DETERIORATED, PUNKY, SOFT, CARBONATED, DELAMINATING, SEGREGATED, CRACKED AND OTHER DEFICIENT CONCRETE MUST BE FULLY REMOVED DOWN TO SOLID CONCRETE SUBSTRATE. NOTIFY ENGINEER IF FULL DEPTH REPLACEMENT IS REQUIRED OR IF CRACKS ARE OBSERVED BEHIND THE SPALL AFTER THE DETERIORATED CONCRETE IS REMOVED.
- PERIMETERS OF ALL SPALL REPAIRS MUST BE SAW-CUT TO A "NORMAL" STRAIGHT EDGE IN A POLYGON SHAPE. IN NO CASE REINFORCING STEEL OR OTHER EMBEDDED ITEMS BE CUT OR DAMAGED. THE CONTRACTOR MUST PROVIDE GROUND PENETRATING RADAR OR OTHER MEANS OF ELECTRONIC SCANNING TO LOCATE AND MARK EMBEDDED STEEL TO AVOID CUTTING DAMAGE TO ANY STEEL REINFORCING OR OTHER EMBEDDED ITEMS DUE TO CUTTING/REMOVAL OF THE DETERIORATED CONCRETE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR MUST PROVIDE ELECTRIC CURRENT SCANNING TO LOCATE AND MARK EMBEDDED CONDUIT.
- ALL SPALL REPAIR AREA SUBSTRATES MUST BE THOROUGHLY EXAMINED AFTER COMPLETING THE FINAL SURFACE PREPARATION. TO VERIFY THAT NO ADDITIONAL SUBSTRATE CRACKING OR OTHER STRUCTURAL CONDITIONS EXIST. NOTIFY GALE IF ANY CRACKS OR OTHER DETERIORATED CONDITIONS ARE IDENTIFIED.
- SPALL REPAIR SURFACE PROFILE MUST ACHIEVE AN ICRI-CSP 8 OR 9. WHERE ACCESS IS LIMITED OR DIFFICULT DUE TO PIPING OR OTHER OBSTRUCTIONS, THEN AN ICRI-CSP 7 SURFACE PROFILE MAY BE CONSIDERED AS APPROVED BY THE ENGINEER.
- RUSTED REINFORCING STEEL BARS MUST BE FULLY CLEANED TO BRIGHT, SHINY STEEL TO CONFORM TO SSPC SP11 REQUIREMENTS. WHERE REINFORCING STEEL IS SHOWING SECTION LOSS OF 1/4" OR 25% OR MORE, EPOXY COATED SUPPLEMENTAL REINFORCING STEEL MUST BE PLACED TO ACHIEVE A MINIMUM OF 40 BAR DIAMETER LENGTH LAPS, AND TIED DIRECTLY ADJACENT TO SOLID BAR SECTIONS THAT DO NOT HAVE SECTION LOSS. ADDITIONAL CONCRETE REMOVAL AND DRILLING WILL BE REQUIRED TO PLACE THE NEW REINFORCING STEEL. IF 40 BAR DIAMETER LAP LENGTH CANNOT BE ACHIEVED, SUBMIT PHOTOS TO ENGINEER. DRILL AND EPOXY BARS MAY BE PERMITTED PER ENGINEER'S DIRECTION. AS NOTED IN SUPPLEMENTAL REINFORCING STEEL DETAIL.
- REMOVE ADDITIONAL CONCRETE BEHIND AND AROUND ALL REINFORCING STEEL BARS WHICH ARE CORRODED SO THAT PROPER AND THOROUGH CLEANING MAY BE ACHIEVED AROUND THE ENTIRE BAR. A MINIMUM OF 1" CLEAR, UNOBSTRUCTED SPACE AROUND EACH REINFORCING STEEL BAR MUST BE ACHIEVED ALONG THE FULL LENGTH OF THE BAR IN THE AREA OF THE SPALL REPAIR. CLEAN BARS TO ACHIEVE SSPC-SP11 COMPLIANCE. BARS MUST BE FULLY UNCOVERED TO COMPLY WITH THAT NOTED HEREIN, IF ANY PORTION OF THE REBAR IS EXPOSED AND IT IS RUSTED.
- IN ALL CASES, THE EXISTING AND NEW REINFORCING STEEL MUST HAVE A MINIMUM CONCRETE/REPAIR MORTAR COVER OF 1 1/2". NOTIFY THE ENGINEER IF MODIFICATION OF STEEL PLACEMENT OR CONCRETE THICKNESS IS REQUIRED TO ACHIEVE THIS REQUIREMENT.
- WITH LARGE OR DEEPER SPALL REPAIR AREAS, WITH DEPTHS EXCEEDING 3 INCHES, IF NO EXISTING REBAR IS PRESENT, OR REBAR GRID (INNER AND OUTER GRIDS) IS SEPARATED BY MORE THAN 6 INCHES, THEN THE SUBSTRATE OF THE REPAIR MUST BE PINNED WITH STAINLESS STEEL, 8 MM HELICAL TIES, OR STAINLESS STEEL FULLY THREADED CAP SCREWS WITH HEX HEADS PROJECTING OUTWARD BY 2 INCHES INTO THE MEDIUM OF THE REPAIR. DRILL HOLES FOR THREADED BOLTS (CAP SCREWS) TO 1/8" TO 1/4" LARGER THAN THE BOLT DIAMETER. BOLT DIAMETERS SHALL BE 3/16" TO 1/4", AND SHALL BE EMBEDDED 2 INCHES INTO SOLID CONCRETE. USE SPECIFIED STRUCTURAL ADHESIVE TO PLACE THREADED ROD PINS. HELICAL ANCHOR PINS, IF USED, MUST BE DRIVEN USING THE MANUFACTURER REQUIRED DRIVING TOOL AND BIT. PLACE PINS A MAXIMUM OF 8 INCHES ON CENTER, AND TIE 2" X 2" X 14 GAUGE HOT-DIP GALVANIZED OR STAINLESS STEEL MESH FROM PIN-TO-PIN. PLACE THE MESH 2" FROM THE BELLY OF THE PREPARED SPALL AREA, WHILE ALWAYS MAINTAINING A MINIMUM 1 1/2" OF CONCRETE/REPAIR MORTAR COVER AT THE OUTSIDE SURFACE OF THE REPAIR.
- WHEN DRILLING INTO SOLID CONCRETE TO PLACE NEW SUPPLEMENTAL STEEL REINFORCING BARS, DRILL THE HOLES 1/4" LARGER THAN THE BAR DIAMETER. FULLY VACUUM, BLOW OUT (WITH OIL FREE COMPRESSED AIR) AND BRISTLE BRUSH OUT THE HOLES TO REMOVE ALL DUST, DEBRIS, LAITANCE, ETC. THE DEPTH OF THE HOLES MUST BE DETERMINED BY GALE BASED UPON BAR SIZE, LOCATION, AND NEED FOR DEVELOPMENT. THIS WILL BE DETERMINED ON A CASE BY CASE BASIS. IN NO CASE SHALL THE DRILLED HOLES BE LESS THAN THAT NOTED ON THE DESIGN DRAWINGS UNLESS APPROVED BY THE ENGINEER. IN NO CASE SHALL SUPPLEMENTAL BARS BE LESS THAN #5 BARS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. IN MANY CASES, NEW REINFORCING STEEL BARS MAY BE #5 OR LARGER, DEPENDING UPON THE EXTENT OF REINFORCEMENT CORROSION AND NEED FOR SUPPLEMENTAL STEEL. BARS EMBEDDED INTO CLEANED DRILLED HOLES MUST BE FULLY ADHERED IN PLACE.
- JUST PRIOR TO PLACING THE REPAIR MORTAR AND FORMWORK, THE ENTIRE SUBSTRATE OF THE SPALL REPAIR MUST BE THOROUGHLY CLEANED OF ALL BOND INHIBITING MATERIALS, BROUGHT TO SATURATED SURFACE DRY (SSD) CONDITION WITH POTABLE WATER, RECEIVE THE BONDING AGENT OR BRISTLE BRUSH APPLIED BONDING SLURRY (ALL AS REQUIRED BY THE MATERIAL MANUFACTURER), AND CLEANED REBAR COATED WITH SPECIFIED COATING. APPLY TWO (2) COATS OF THE SPECIFIED REBAR COATING ON CLEANED EXISTING STEEL WITHOUT SPILLING THE MATERIAL ON ANY OTHER SURFACES OR COMPONENTS. DO NOT ALLOW THE COATING TO DRY BETWEEN COATS, NOR DRY PRIOR TO APPLYING THE REPAIR MORTAR. ALL MATERIALS MUST BE APPLIED IN A "WET-ON-WET" CONDITION FOR GREATER BOND.
- FOLLOW ALL CURRENT MANUFACTURER DATA SHEETS AND CURRENT ACI AND ICRI CONCRETE REPAIR REQUIREMENTS AND CODE REGULATIONS FOR PROPER PLACEMENT, VIBRATION, CURING AND STRIPPING OF FORMS.
- ALL CONCRETE PATCH REPAIRS MUST BE APPLIED VIA FORM-AND-POUR METHODS. HAND PATCHING IS NOT ALLOWED ON THIS PROJECT.

**TRAFFIC COATING NOTES:**

- EXISTING COATING SHALL BE REMOVED TO BARE CONCRETE BY HIGH PRESSURE WATERBLASTING (HYDRO-DEMOLITION) OR ENGINEER'S APPROVE EQUIVALENT METHOD. ALL EXISTING WATERPROOFING, DEBRIS, LOOSE CONCRETE, ETC. SHALL BE REMOVED TO PROVIDE AN OPEN CAPILLARY CONCRETE SURFACE FOR APPLICATION OF THE NEW COATING SYSTEM, AND MINIMUM SURFACE PROFILE TO COMPLY WITH ICRI-CSP 5.
- THE TRAFFIC COATING SYSTEM MUST BE A POLYURETHANE VEHICULAR TRAFFIC COATING WITH AN ALTERNATING WEAR COAT AND AGGREGATE BROADCAST. TOTAL SYSTEM THICKNESS SHALL BE 0.071" MINIMUM. REFER TO SPECIFICATIONS FOR ALLOWABLE PRODUCTS
- A DETAIL COAT OF THE BASE COAT SHALL BE INSTALLED OVER ALL CRACKS PRIOR TO INSTALLING MEMBRANE OVER THE ENTIRE AREA. THE DETAIL COAT SHALL BE MINIMUM 4" WIDE OVER ALL CRACKS. CRACKS AND CONTROL JOINTS GREATER THAN 1/8" WIDE SHALL BE ROUTED AND SEALED PRIOR TO INSTALLING STRETCH COAT.
- AT ALL CONTROL JOINTS AND CRACKS INDICATED TO RECEIVE SEALANT, THE DETAIL COAT SHALL BE INSTALLED AND FLEECE MEMBRANE SHALL BE EMBEDDED INTO THE BASE COAT.
- CONCRETE SURFACE PRIMER SHALL BE AN EPOXY PRIMER. PRIMER SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL MEASURE THE MOISTURE CONTENT OF THE CONCRETE DECK PRIOR TO ORDERING THE TRAFFIC COATING PRIMER.
- WEAR COATS SHALL HAVE SILICON CARBIDE OR ALUMINUM OXIDE AGGREGATE BROADCAST TO REFUSAL. SILICON CARBIDE OR ALUMINUM OXIDE AGGREGATE SHALL BE NO. 20 OR NO. 24. CONTRACTOR SHALL PROVIDE IN-PLACE MOCK-UPS UTILIZING EACH AGGREGATE SIZE FOR OWNER, ENGINEER AND MANUFACTURER'S REPRESENTATIVE REVIEW. WEAR COAT SHALL BE INSTALLED IN MULTIPLE LIFTS (THREE LIFTS MINIMUM) TO A TOTAL 55 MIL THICKNESS (W/O AGGREGATE). AGGREGATE SHALL BE BROADCAST TO REFUSAL IN EACH LIFT. ALLOWED TO CURE AND THE EXCESS SHALL BE BRUSHED OFF PRIOR TO INSTALLATION OF NEXT LIFT.
- SEALANT FOR USE UNDER AND IN CONTACT WITH WATERPROOFING SHALL BE A SOLVENT-FREE, MOISTURE-TOLERANT, FLEXIBLE EPOXY CONTROL JOINT SEALER AND ADHESIVE, EITHER NON-SAGGING OR SELF-LEVELING AS REQUIRED.

**TRAFFIC MARKING PAINT:**

- PRIOR TO DEMOLITION, CONTRACTOR SHALL FIELD MEASURE ALL EXISTING PARKING STALLS, NO PARKING AREAS, ARROWS, ETC. AND PROVIDE OWNER AND ENGINEER WITH DIMENSIONED AS-BUILT LAYOUT OF ALL TRAFFIC MARKINGS. THE INTENT OF THE DESIGN IS TO REPLICATE THE EXISTING TRAFFIC MARKINGS.
- TRAFFIC MARKING PAINT SHALL BE A PREMIUM QUALITY WATERBORNE ACRYLIC ALKYD TRAFFIC MARKING PAINT SUCH AS PRO-PARK 897 SERIES AS MANUFACTURED BY SHERWIN WILLIAMS OR APPROVED EQUAL. COLOR TO BE SELECTED BY OWNER.
- STENCILS SHALL BE USED TO PROVIDE STRAIGHT, CONSISTENT TRAFFIC MARKINGS.
- TRAFFIC COATING SHALL BE ALLOWED TO CURE MINIMUM 24 HOURS AFTER TOP COAT HAS BEEN INSTALLED PRIOR TO APPLICATION OF TRAFFIC MARKING PAINT.

**PAINT:**

- ALL CONCRETE REPAIRS THAT ARE INSTALLED BETWEEN GRID LINES 8 AND 12 SHALL BE PAINTED TO MATCH THE ADJACENT EXISTING COLUMNS, INVERTED T-BEAMS AND T-BEAMS.
- PREPARE ALL SURFACES TO BE PAINTED AND PRIMED BY CLEANING FREE FROM DEBRIS.
- CONCRETE PAINT SHALL BE A PREMIUM QUALITY WATERBORNE CONCRETE PAINT. COLOR TO MATCH ADJACENT SURFACES AND TO BE SELECTED BY THE OWNER.
- APPLY ONE (1) COAT OF PAINT TO ALL SURFACES TO BE PAINTED, FOLLOW ALL PAINT MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. INSPECT FIRST COAT OF PAINT FOR DEFECTS OR AREAS OF UNADHERED PAINT. PREPARE ANY PAINT DEFECT AREAS AND RECOAT PRIOR TO INSTALLING THE FINAL COAT OF PAINT (2ND COAT).

**ABBREVIATIONS:**

APPROX.	APPROXIMATE
BOT.	BOTTOM
	CENTER LINE
CONC.	CONCRETE
EL.	ELEVATION
EMBED.	EMBEDDED
(E)	EXISTING
HORIZ.	HORIZONTAL
LONG.	LONG
MAX.	MAXIMUM
MIN.	MINIMUM
REINF.	REINFORCEMENT
TRANS.	TRANSVERSE
TYP.	TYPICAL
VERT.	VERTICAL



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**BID DOCUMENTS**

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PROJECT NO.		838800	
CADD FILE			
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DRAWING SCALE		AS NOTED	

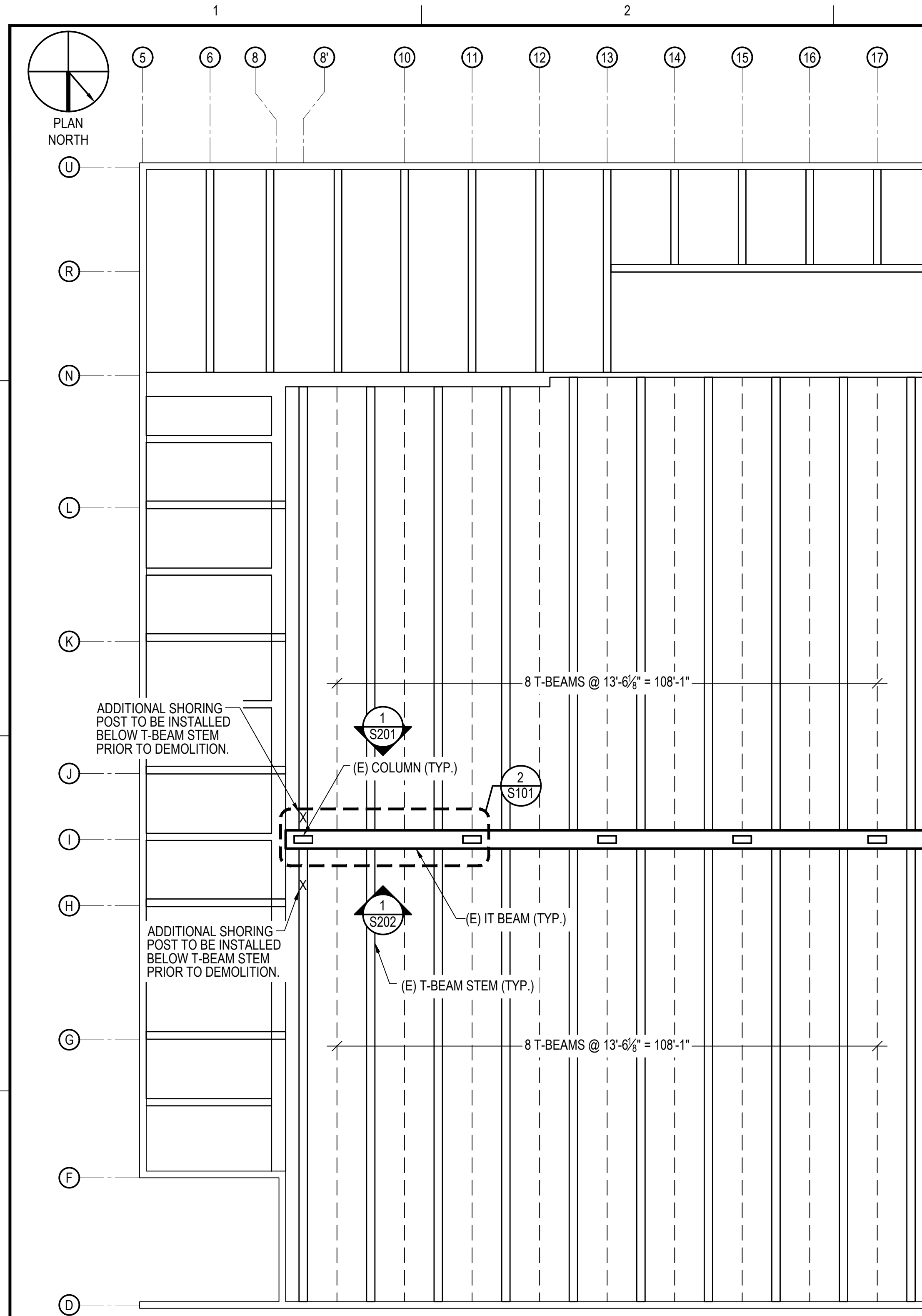
GRAPHIC SCALE

SHEET TITLE

**STRUCTURAL NOTES**

DRAWING NO.

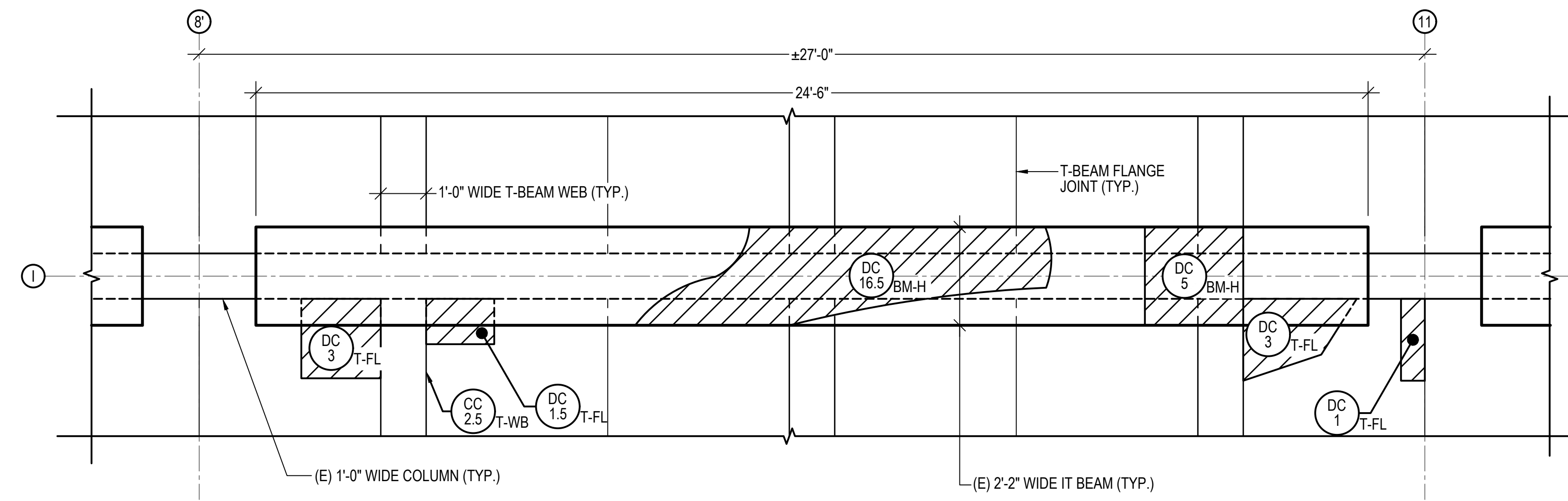
S001



**1 PARTIAL FIRST LEVEL OVERHEAD PLAN (SECOND LEVEL UNDERSIDE)**  
SCALE: 1/16"=1'-0"

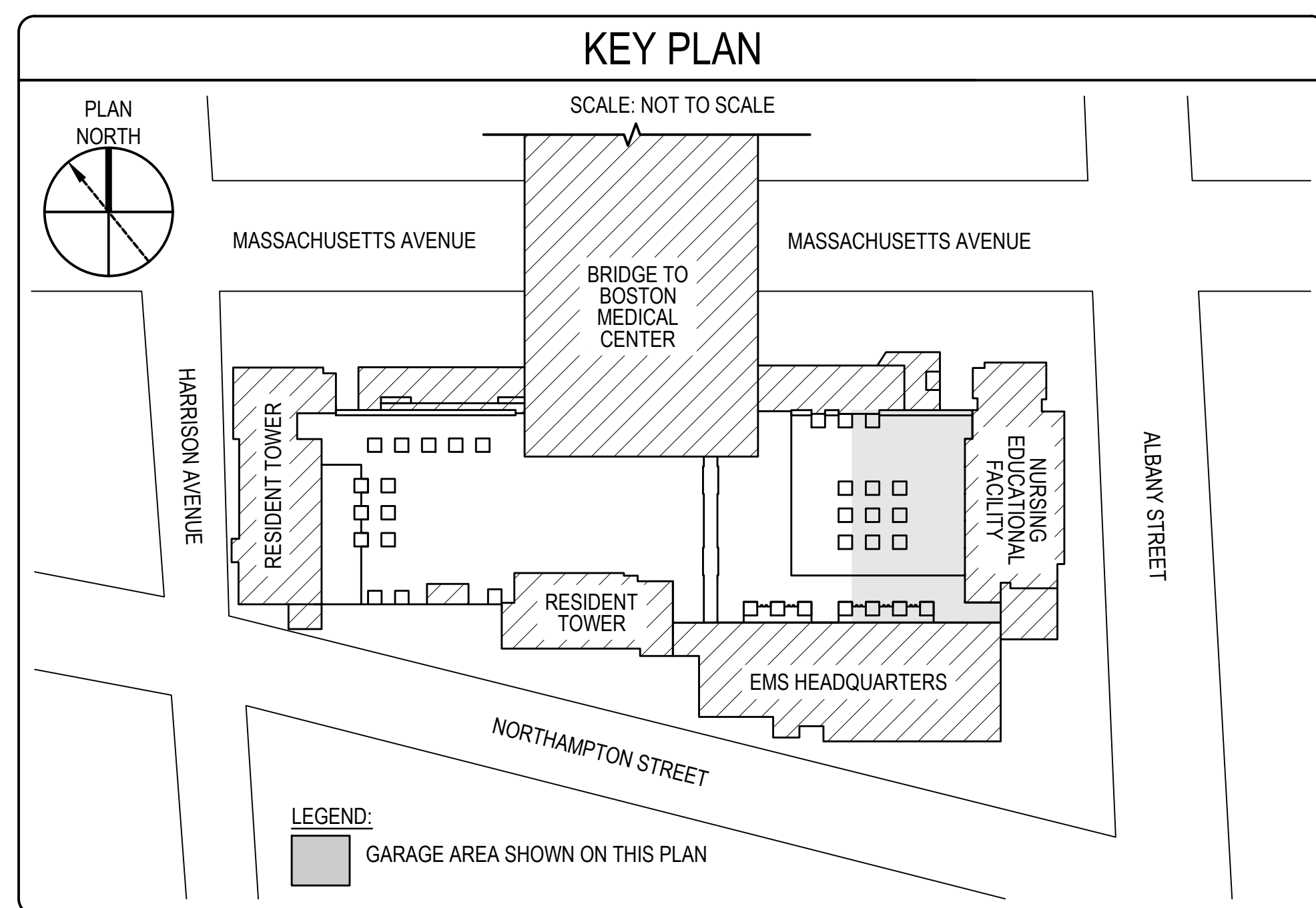
ANNOTATION LEGEND	
BM-L	LEDGE OF INVERTED T-BEAM
BM-V	VERTICAL FACE OF INVERTED T-BEAM
BM-H	HORIZONTAL FACE OF INVERTED T-BEAM
T-WB	WEB/STEM OF T-BEAM
T-FL	FLANGE OF T-BEAM
COL	CONCRETE COLUMN
E	EXISTING
S	CONCRETE TOPPING SLAB

REPAIR LEGEND	
SC #	DEEP SPALL
BM-L	LOCATION; REFER TO ANNOTATION LEGEND
CC #	CRACKED CONCRETE; # INDICATES LINEAR FEET PERFORM CRACK REPAIR AS SPECIFIED IN DETAIL 7/S501
DC #	DELAMINATED CONCRETE; # INDICATES SQUARE FEET PERFORM DEEP SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501
SC #	CONCRETE SPALL; # INDICATES SQUARE FEET PERFORM SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501
[Hatched Pattern]	APPROXIMATE EXTENTS OF DELAMINATED CONCRETE
[Hatched Pattern]	APPROXIMATE EXTENTS OF CONCRETE SPALL



**2 FIRST LEVEL OVERHEAD PLAN AT INVERTED T-BEAM**  
SCALE: 1/2"=1'-0"

- GENERAL NOTES**
- THE INFORMATION SHOWN ON THIS DRAWING HAS BEEN COMPILED FROM VARIOUS SOURCES AND MAY NOT REFLECT THE ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
  - HATCH PATTERNS ARE FOR REPRESENTATION ONLY AND SHOULD NOT BE USED AS A MEANS FOR QUANTIFYING.
  - THESE REPAIRS WILL REQUIRE REMOVAL AND DISPOSAL OF LOOSE, DETERIORATED MATERIALS AS SPECIFIED SUBSTRATE SURFACE PREPARATION, FOLLOWED BY SPECIFIED CONCRETE COLUMN REPAIRS.
  - CONTRACTOR SHALL ASSUME "OVERHEAD DELAMINATED CONCRETE" AS 100% DEEP SPALL REPAIR. CONTRACTOR SHALL ASSUME "WEARING SURFACE DELAMINATED CONCRETE" AS 50% DEEP SPALL REPAIR AND 50% SHALLOW SPALL REPAIR.
  - CONTRACTOR SHALL REPLACE ALL JOINT SEALANT WITHIN THE EXTENTS OF THE NEW TRAFFIC COATING AREA. REFER TO DETAIL 4/S501.
  - PRIOR TO REMOVAL OF EXISTING TRAFFIC COATING AND START OF CONCRETE REPAIRS CONTRACTORS SHALL RECORD THE AS-BUILT CONFIGURATION OF ALL EXISTING STRIPING AND PAINT MARKINGS (TO INCLUDE COLOR, DIMENSIONS, NUMBERS, LOCATIONS, ETC.) SUBMIT PLANS TO THE OWNER AND ENGINEER FOR RECORD. CONTRACTOR SHALL REPLICATE ALL EXISTING STRIPING AND PAINT MARKINGS FOLLOWING CONCRETE REPAIRS AND TRAFFIC COATING INSTALLATION. REFER TO SPECIFICATIONS, AND NOTES S001.
  - CONTRACTOR SHALL COORDINATE WITH AND REMOVE/REPLACE HUNG ELECTRICAL CONDUIT, UTILITIES, SIGNAGE, ETC. AS REQUIRED TO PERFORM OVERHEAD CONCRETE REPAIRS. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THIS SCOPE OF WORK.
  - EXISTING TEMPORARY T-BEAM SHORING SHALL REMAIN IN PLACE UNTIL REPAIRS ARE COMPLETED AND FULLY CURED. CONTRACTOR SHALL INSTALL ADDITIONAL T-BEAM AND/OR INVERTED T-BEAM TEMPORARY SHORING AS REQUIRED TO STABILIZE THE STRUCTURE DURING CONSTRUCTION.
  - EXISTING TEMPORARY T-BEAM SHORING WAS PREVIOUSLY INSTALLED BY ISAAC BLAIR & CO. CONTRACTOR TO COORDINATE WITH OWNER FOR INSTALLATION OF THE ADDITIONAL TEMPORARY SHORING BELOW T-BEAM PRIOR TO DEMOLITION. SHORING CONTRACTOR SHALL CALCULATE THE ADDITIONAL LOAD FROM THE T-BEAM ON THE EXISTING SHORING BEAM.



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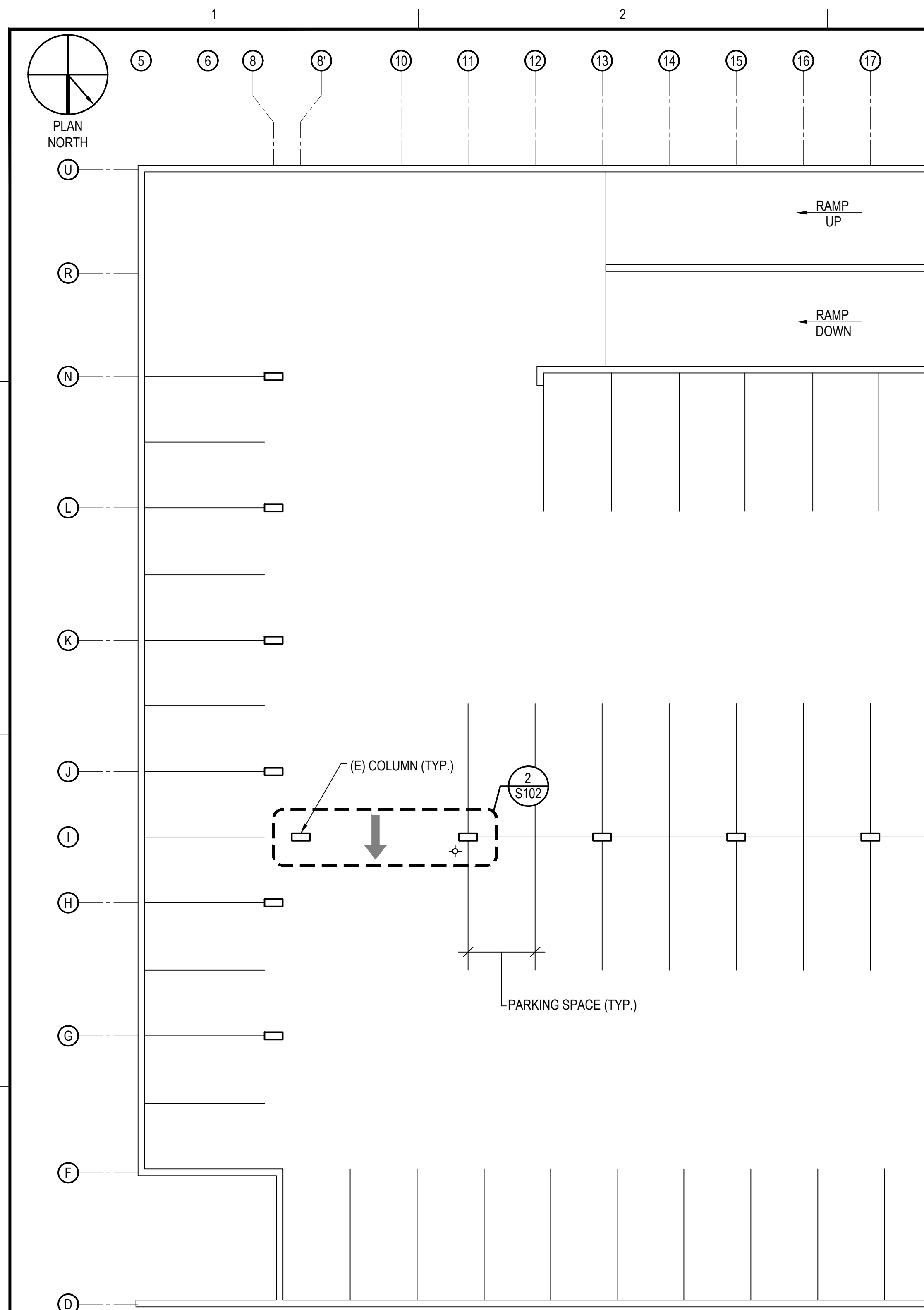
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1010 MASSACHUSETTS AVENUE, 6TH FLOOR  
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NO.	DATE	DESCRIPTION	BY
PROJECT NO.	838800		
CADD FILE	838800 S100s		
DESIGNED BY	MSL/SPJ		
DRAWN BY	MSL		
CHECKED BY	SPJ/AEO		
DATE	3/26/2023		
DRAWING SCALE	AS NOTED		

SHEET TITLE  
**FIRST LEVEL  
OVERHEAD PLAN**

DRAWING NO.  
**S101**

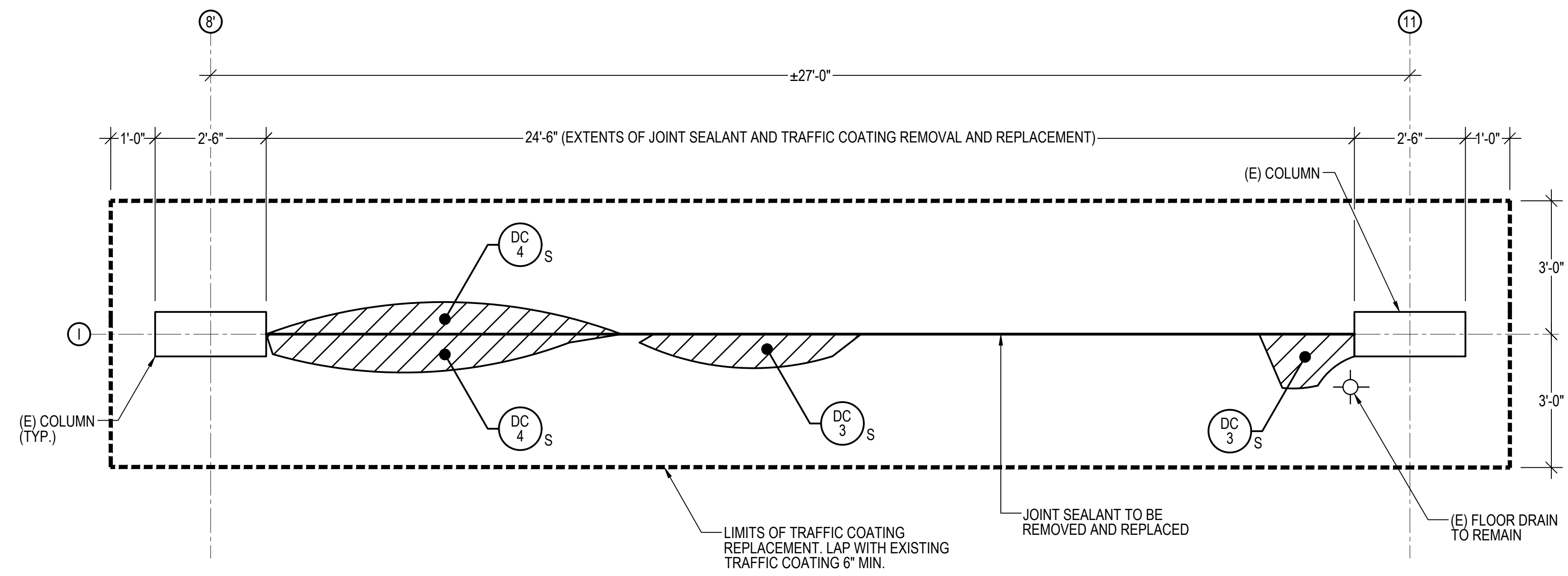


1 PARTIAL SECOND LEVEL WEARING SURFACE PLAN

SCALE: 1/16"=1'-0"  
0 8' 16' 32'

ANNOTATION LEGEND	
BM-L	LEDGE OF INVERTED T-BEAM
BM-V	VERTICAL FACE OF INVERTED T-BEAM
BM-H	HORIZONTAL FACE OF INVERTED T-BEAM
T-WB	WEB/STEM OF T-BEAM
T-FL	FLANGE OF T-BEAM
COL	CONCRETE COLUMN
E	EXISTING
S	CONCRETE TOPPING SLAB

REPAIR LEGEND	
SC #	DEEP SPALL
BM-L	LOCATION; REFER TO ANNOTATION LEGEND
DC #	DELAMINATED CONCRETE; # INDICATES SQUARE FEET PERFORM DEEP SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501.
--- ---	EXTENTS OF EXISTING TRAFFIC COATING TO BE REMOVED AND NEW TRAFFIC COATING TO BE INSTALLED. REFER TO SPECIFICATIONS, NOTES ON S001 AND DETAILS ON S502.
— — —	EXISTING JOINT SEALANT TO BE REMOVED AND REPLACED; REFER TO DETAIL 4/S501.
+	EXISTING FLOOR DRAIN TO REMAIN
▨	APPROXIMATE EXTENTS OF DELAMINATED CONCRETE
▩	APPROXIMATE EXTENTS OF CONCRETE SPALL

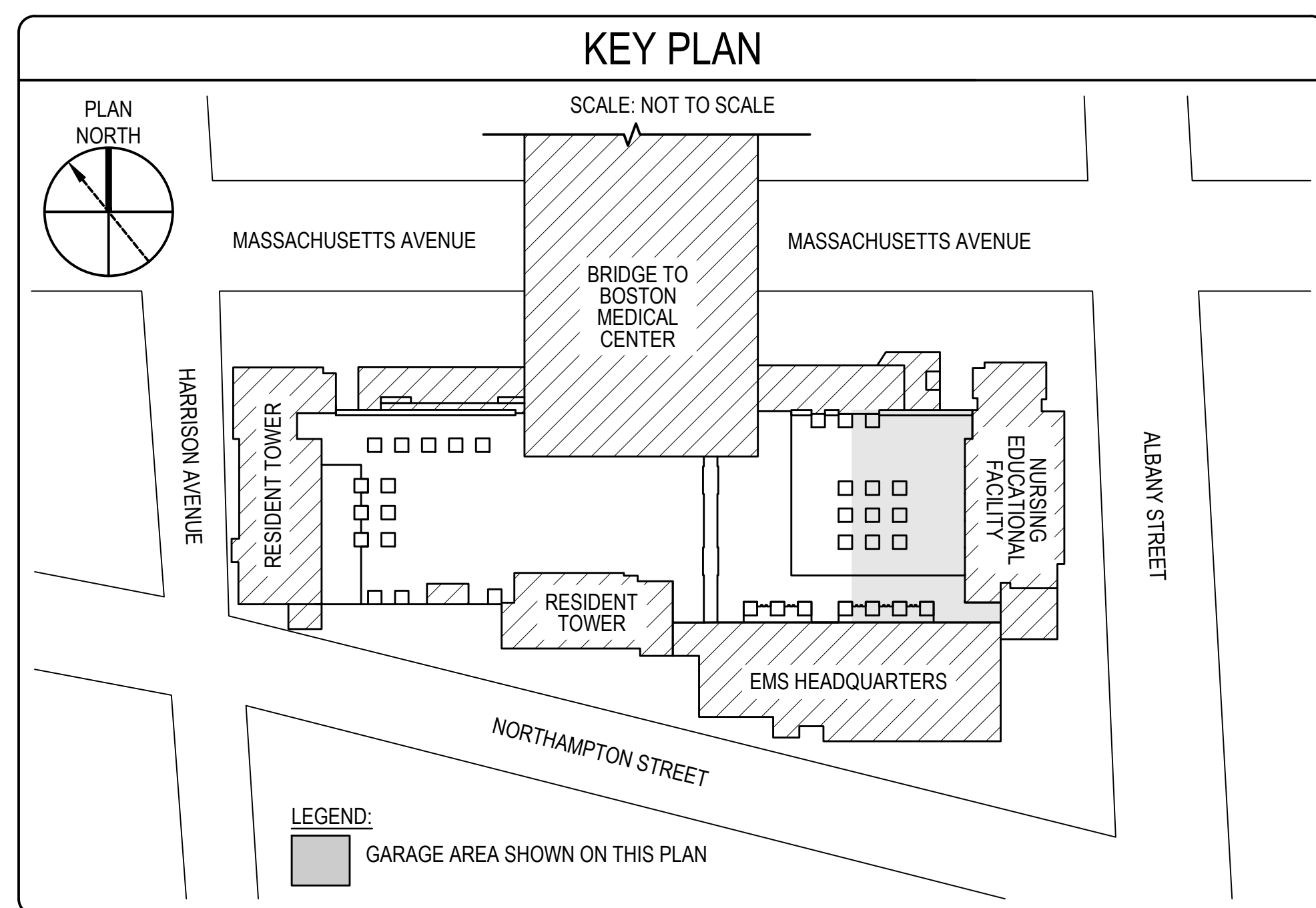


2 SECOND LEVEL WEARING SURFACE PLAN ABOVE INVERTED T-BEAM

SCALE: 1/2"=1'-0"  
0 1' 2' 4'

NOTE:  
1. CONTRACTOR SHALL INSTALL SUPPLEMENTAL W.W.F. AS REQUIRED TO MATCH EXISTING.

- ### GENERAL NOTES
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  - HATCH PATTERNS ARE FOR REPRESENTATION ONLY AND SHOULD NOT BE USED AS A MEANS FOR QUANTIFYING.
  - THESE REPAIRS WILL REQUIRE REMOVAL AND DISPOSAL OF LOOSE, DETERIORATED MATERIALS AS SPECIFIED SUBSTRATE SURFACE PREPARATION, FOLLOWED BY SPECIFIED CONCRETE COLUMN REPAIRS.
  - CONTRACTOR SHALL ASSUME "OVERHEAD DELAMINATED CONCRETE" AS 100% DEEP SPALL REPAIR. CONTRACTOR SHALL ASSUME "WEARING SURFACE DELAMINATED CONCRETE" AS 50% DEEP SPALL REPAIR AND 50% SHALLOW SPALL REPAIR.
  - CONTRACTOR SHALL REPLACE ALL JOINT SEALANT WITHIN THE EXTENTS OF THE NEW TRAFFIC COATING AREA. REFER TO DETAIL 4/S501.
  - PRIOR TO REMOVAL OF EXISTING TRAFFIC COATING AND START OF CONCRETE REPAIRS CONTRACTORS SHALL RECORD THE AS-BUILT CONFIGURATION OF ALL EXISTING STRIPING AND PAINT MARKINGS (TO INCLUDE COLOR, DIMENSIONS, NUMBERS, LOCATIONS, ETC.) SUBMIT PLANS TO THE OWNER AND ENGINEER FOR RECORD. CONTRACTOR SHALL REPLICATE ALL EXISTING STRIPING AND PAINT MARKINGS FOLLOWING CONCRETE REPAIRS AND TRAFFIC COATING INSTALLATION. REFER TO SPECIFICATIONS, AND NOTES S001.
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  - EXISTING TEMPORARY T-BEAM SHORING SHALL REMAIN IN PLACE UNTIL REPAIRS ARE COMPLETED AND FULLY CURED. CONTRACTOR SHALL INSTALL ADDITIONAL T-BEAM AND/OR INVERTED T-BEAM TEMPORARY SHORING AS REQUIRED TO STABILIZE THE STRUCTURE DURING CONSTRUCTION.
  - EXISTING TEMPORARY T-BEAM SHORING WAS PREVIOUSLY INSTALLED BY ISAAC BLAIR & CO. CONTRACTOR TO COORDINATE WITH OWNER FOR INSTALLATION OF THE ADDITIONAL TEMPORARY SHORING BELOW T-BEAM PRIOR TO DEMOLITION. SHORING CONTRACTOR SHALL CALCULATE THE ADDITIONAL LOAD FROM THE T-BEAM ON THE EXISTING SHORING BEAM.



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**BID DOCUMENTS**

PROJECT  
**PARKING GARAGE FIRST LEVEL  
STRUCTURAL REPAIRS**  
35 NORTHAMPTON STREET  
BOSTON, MA 02118  
OWNER  
BOSTON PUBLIC HEALTH COMMISSION  
1010 MASSACHUSETTS AVENUE, 6TH FLOOR  
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DATE	3/26/2023		
DRAWING SCALE	AS NOTED		

SHEET TITLE

**SECOND LEVEL WEARING SURFACE PLAN**

DRAWING NO.  
**S102**

1 2 3 4 5 6

E  
D  
C  
B  
A

### REPAIR LEGEND

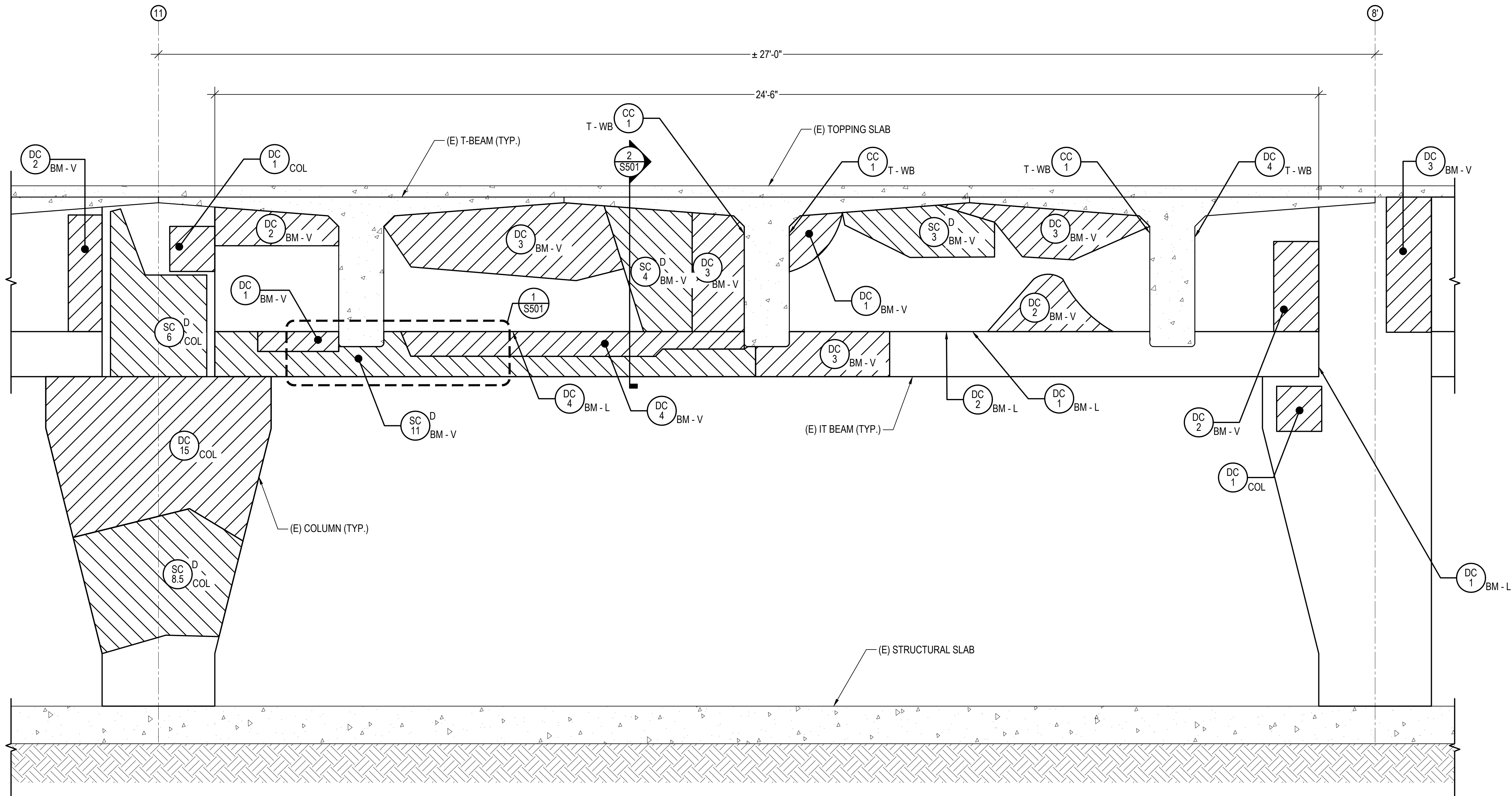
DEEP SPALL  
 DELAMINATED CONCRETE; # INDICATES SQUARE FEET PERFORM DEEP SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501.  
 DEEP CONCRETE SPALL; # INDICATES SQUARE FEET PERFORM DEEP SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501.  
 CRACK CONCRETE; # INDICATES LINEAR FEET PERFORM CRACK REPAIR AS SPECIFIED IN DETAIL 7/S501.  
 APPROXIMATE EXTENTS OF DELAMINATED CONCRETE  
 APPROXIMATE EXTENTS OF CONCRETE SPALL

### ANNOTATION LEGEND

BM-L LEDGE OF CONCRETE INVERTED T-BEAM  
 BM-V VERTICAL FACE OF CONCRETE INVERTED T-BEAM  
 BM-H HORIZONTAL FACE OF INVERTED T-BEAM  
 T-WB WEB/STEM OF CONCRETE T-BEAM  
 T-FL FLANGE OF T-BEAM  
 COL CONCRETE COLUMN  
 E EXISTING  
 S CONCRETE TOPPING SLAB

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1 INVERTED T-BEAM SOUTH ELEVATION  
SCALE: 3/4"=1'-0"

NOTE: FOUNDATIONS NOT SHOWN FOR CLARITY.



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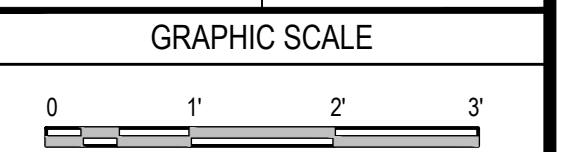
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BID DOCUMENTS

PROJECT  
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BOSTON, MA 02118

OWNER  
BOSTON PUBLIC HEALTH COMMISSION  
1010 MASSACHUSETTS AVENUE, 6TH FLOOR  
BOSTON, MA 02118

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	838800		
CADD FILE	838800 S200s		
DESIGNED BY	MSL/SPJ		
DRAWN BY	MSL		
CHECKED BY	SPJ/AEO		
DATE	3/26/2023		
DRAWING SCALE	3/4"=1'-0"		



SHEET TITLE  
INVERTED T-BEAM  
SOUTH  
ELEVATION

DRAWING NO.

S201

1 2 3 4 5 6

E  
D  
C  
B  
A

### REPAIR LEGEND

DEEP SPALL  
 DELAMINATED CONCRETE; # INDICATES SQUARE FEET PERFORM DEEP SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501.  
 DEEP CONCRETE SPALL; # INDICATES SQUARE FEET PERFORM DEEP SPALL REPAIR AS SPECIFIED IN DETAIL 5/S501.  
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 APPROXIMATE EXTENTS OF CONCRETE SPALL

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 T-FL FLANGE OF T-BEAM  
 COL CONCRETE COLUMN  
 E EXISTING  
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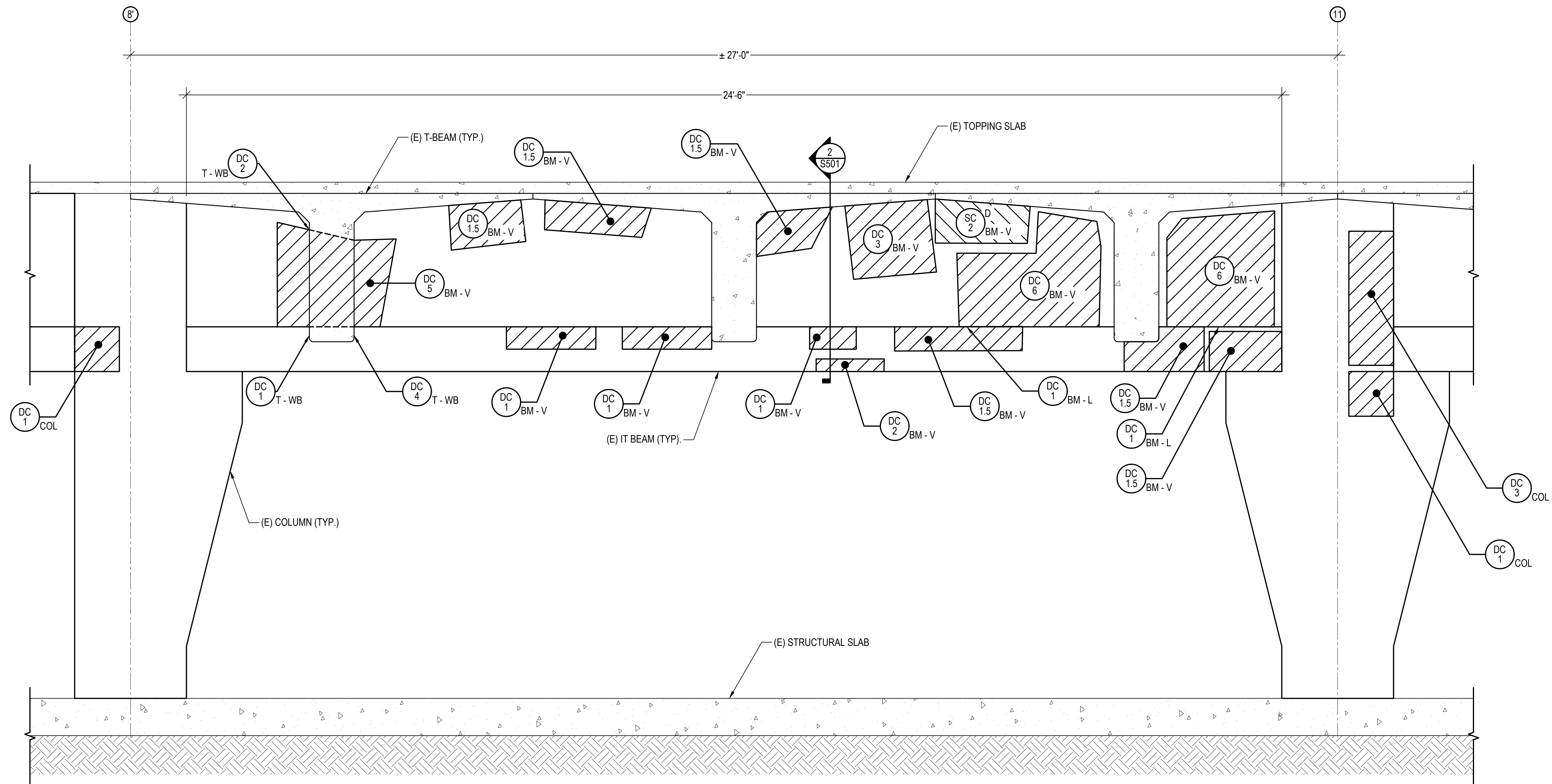
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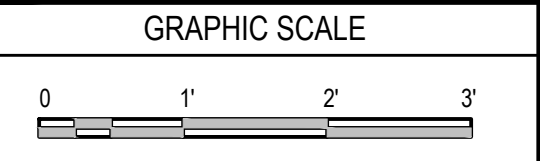
**1 INVERTED T-BEAM NORTH ELEVATION**  
SCALE: 3/4"=1'-0"

NOTE: FOUNDATIONS NOT SHOWN FOR CLARITY.

PROJECT  
**PARKING GARAGE FIRST LEVEL  
STRUCTURAL REPAIRS**  
35 NORTHAMPTON STREET  
BOSTON, MA 02118

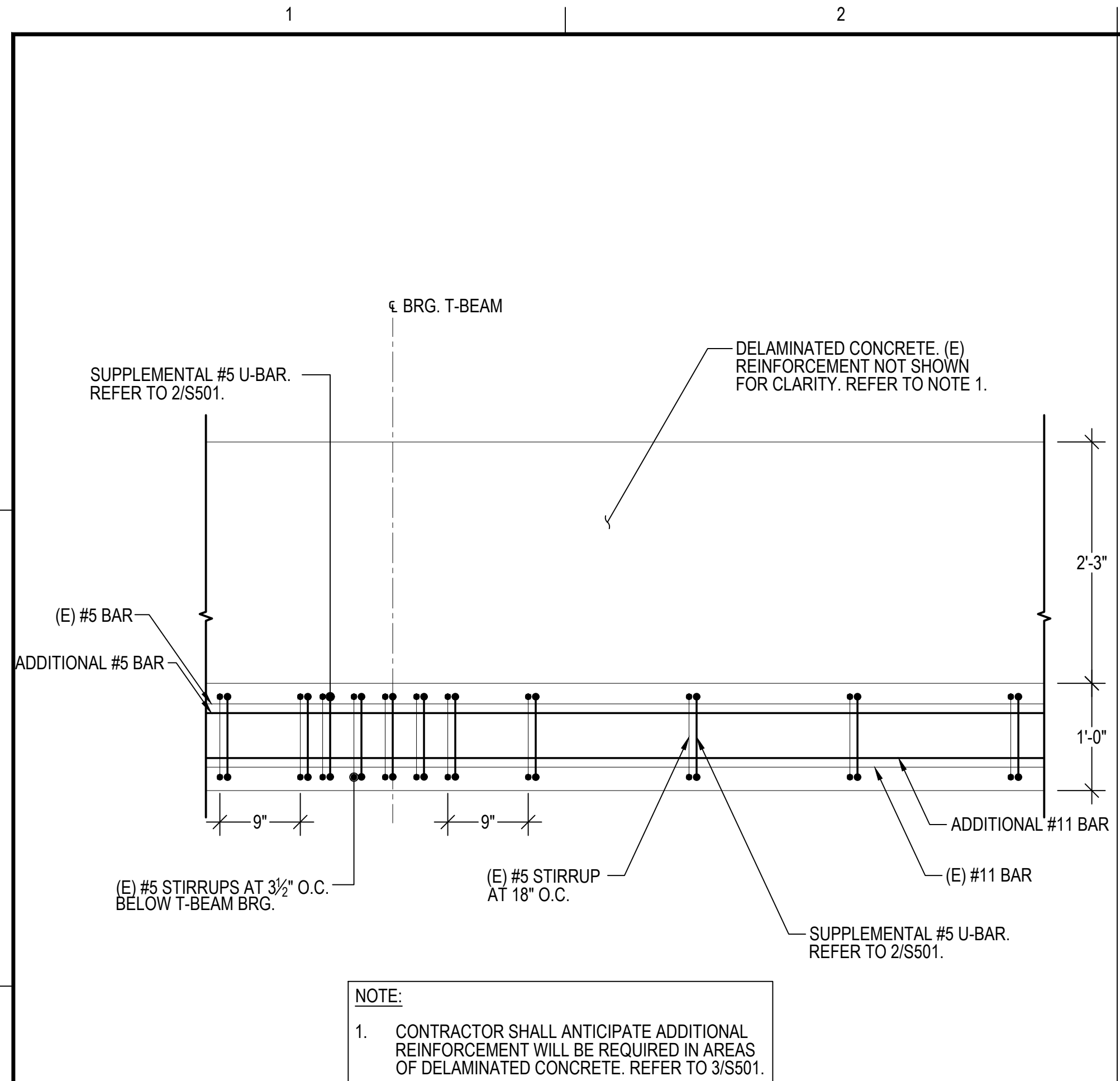
OWNER  
BOSTON PUBLIC HEALTH COMMISSION  
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BOSTON, MA 02118

NO.	DATE	DESCRIPTION	BY
PROJECT NO.	838800		
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DATE	3/26/2023		
DRAWING SCALE	3/4"=1'-0"		

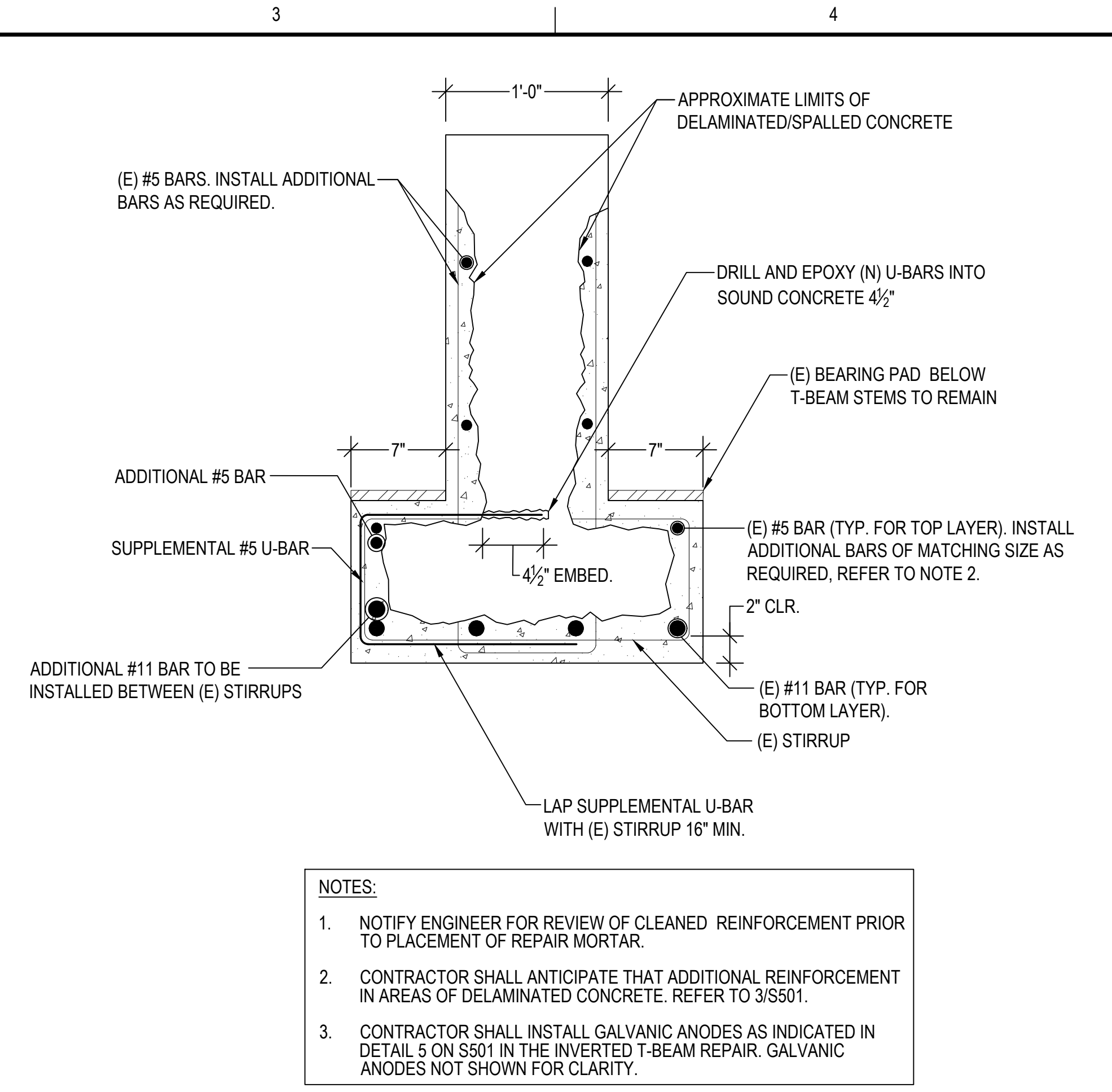


SHEET TITLE  
**INVERTED T-BEAM  
NORTH  
ELEVATION**

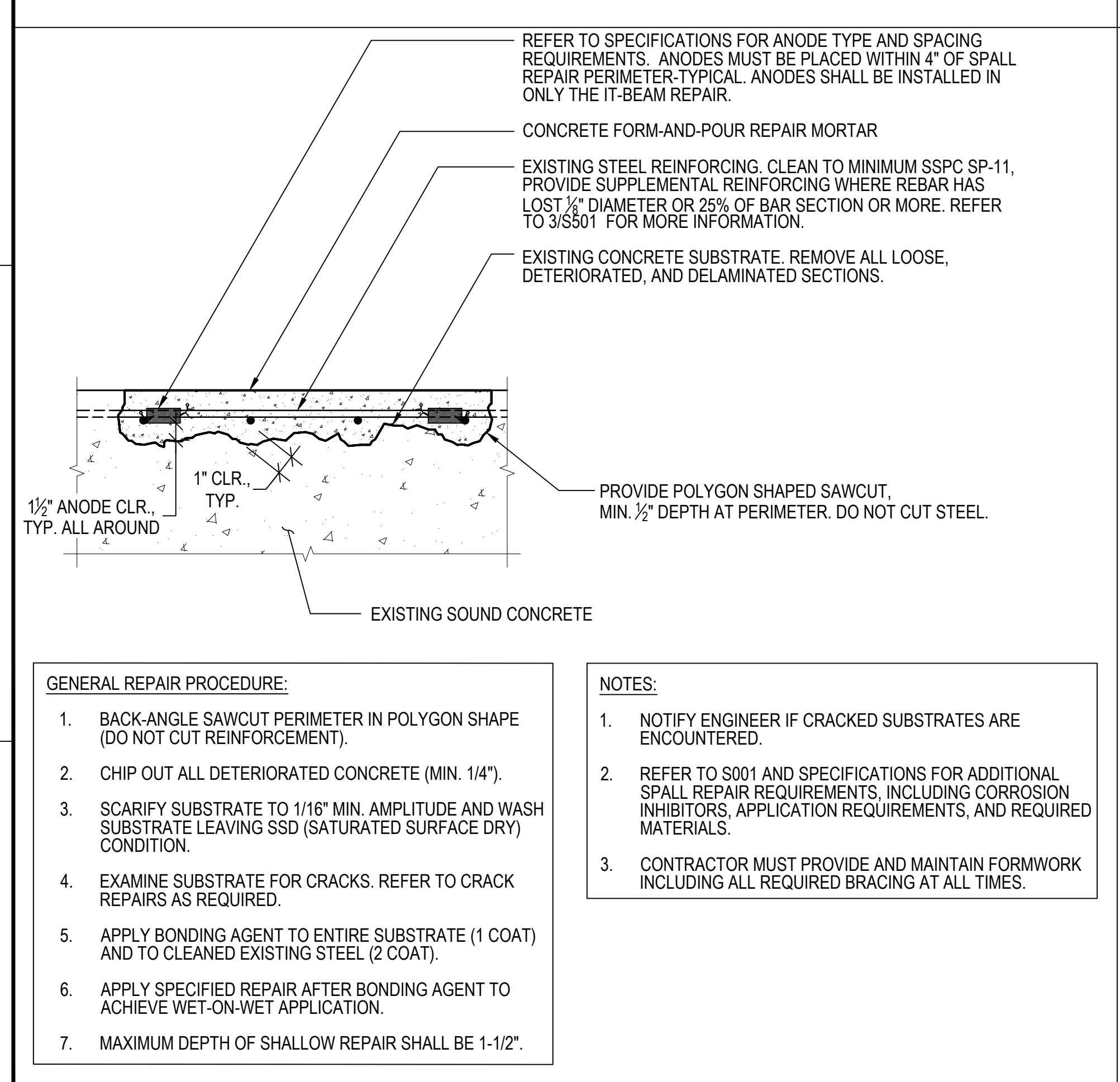
DRAWING NO.  
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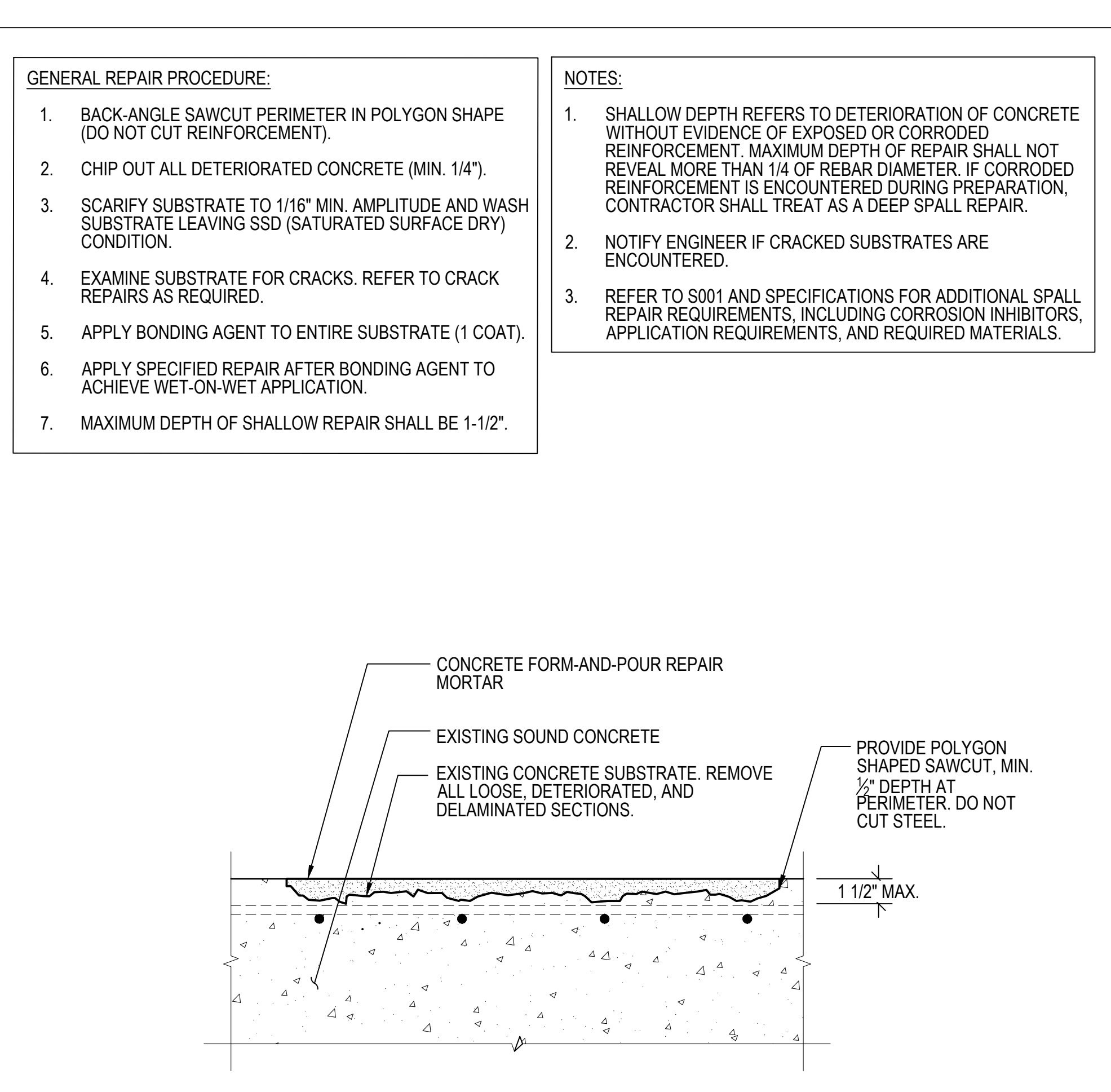
**1 PRECAST INVERTED T-BEAM REPAIR - ELEVATION**  
SCALE: 1" = 1'-0"



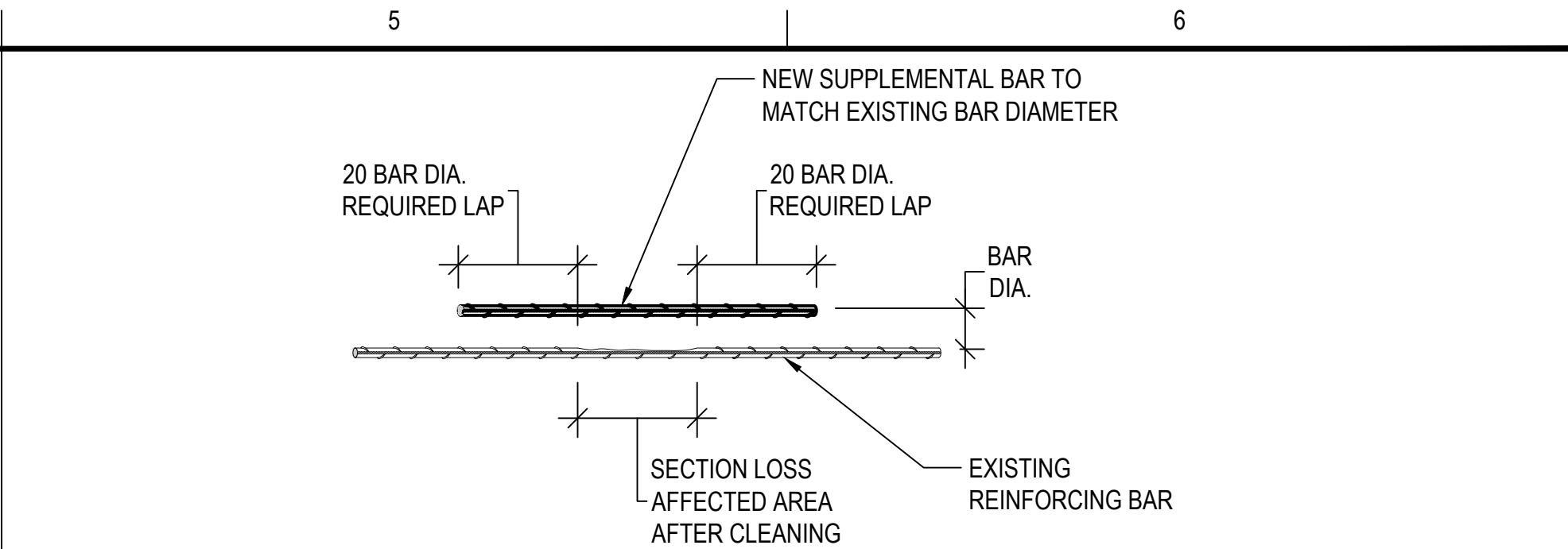
**2 PRECAST INVERTED T-BEAM REPAIR - SECTION**  
SCALE: 1-1/2" = 1'-0"



**5 DEEP SPALL REPAIR DETAIL**  
SCALE: NOT TO SCALE

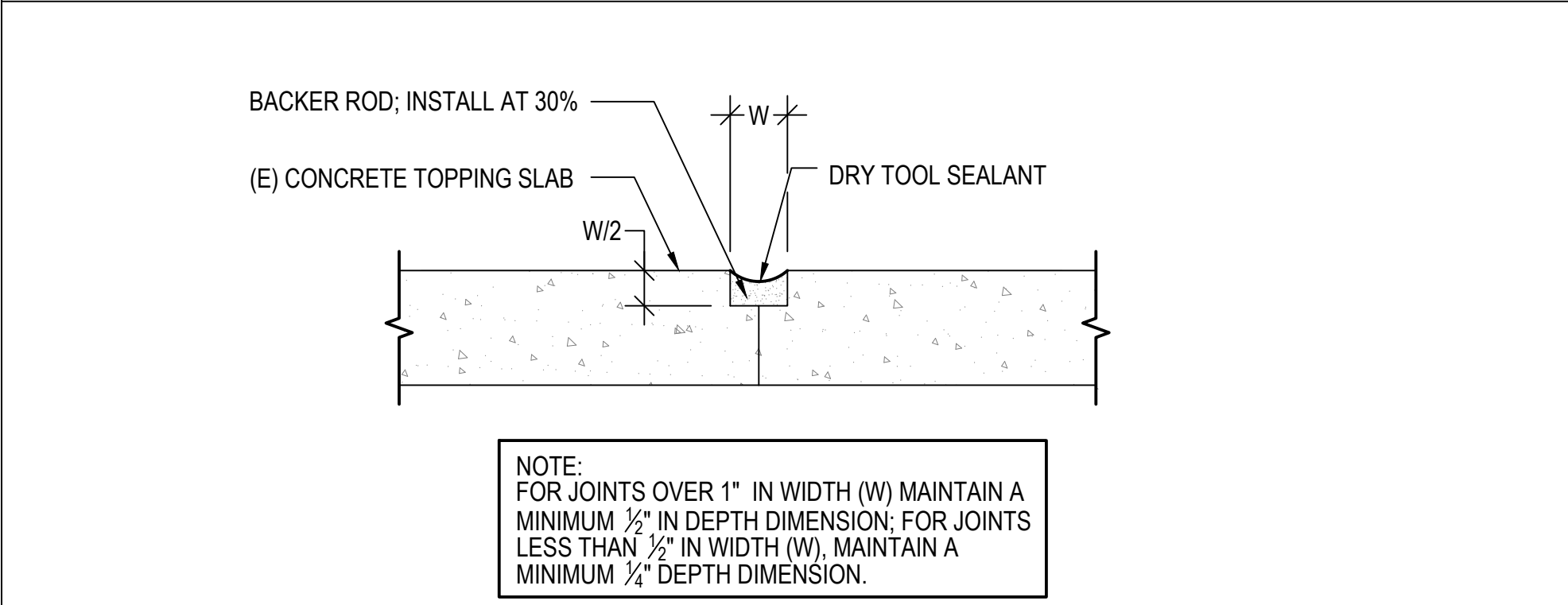


**6 SHALLOW SPALL REPAIR DETAIL**  
SCALE: NOT TO SCALE



- NOTES:**
- THIS DETAIL IS REQUIRED FOR BARS WITH 1/8" OR 25% OR MORE SECTION LOSS.
  - CONTRACTOR SHALL ASSURE THAT SUPPLEMENTAL REINFORCING STEEL WILL BE DRILLED AND EPOXIED INTO EXISTING CONCRETE WITH 4" MIN. EMBEDMENT ON EITHER SIDE OF THE REPAIR. PHOTOGRAPHS TO ENGINEER PRIOR TO COMPLETING REPAIR. ENGINEER WILL MARK THE REINFORCING LOCATIONS AND PROVIDE THIS AS A SKETCH FOR THE CONTRACTOR TO INSTALL.
  - IN THE BASE BID, THE CONTRACTOR SHALL INCLUDE 100 LINEAR FEET OF #5 EPOXY COATED STEEL REINFORCEMENT REPLACEMENT AND THE COST ASSOCIATED WITH DRILLING AND GROUTING THE REINFORCEMENT IN THE REPAIRS.

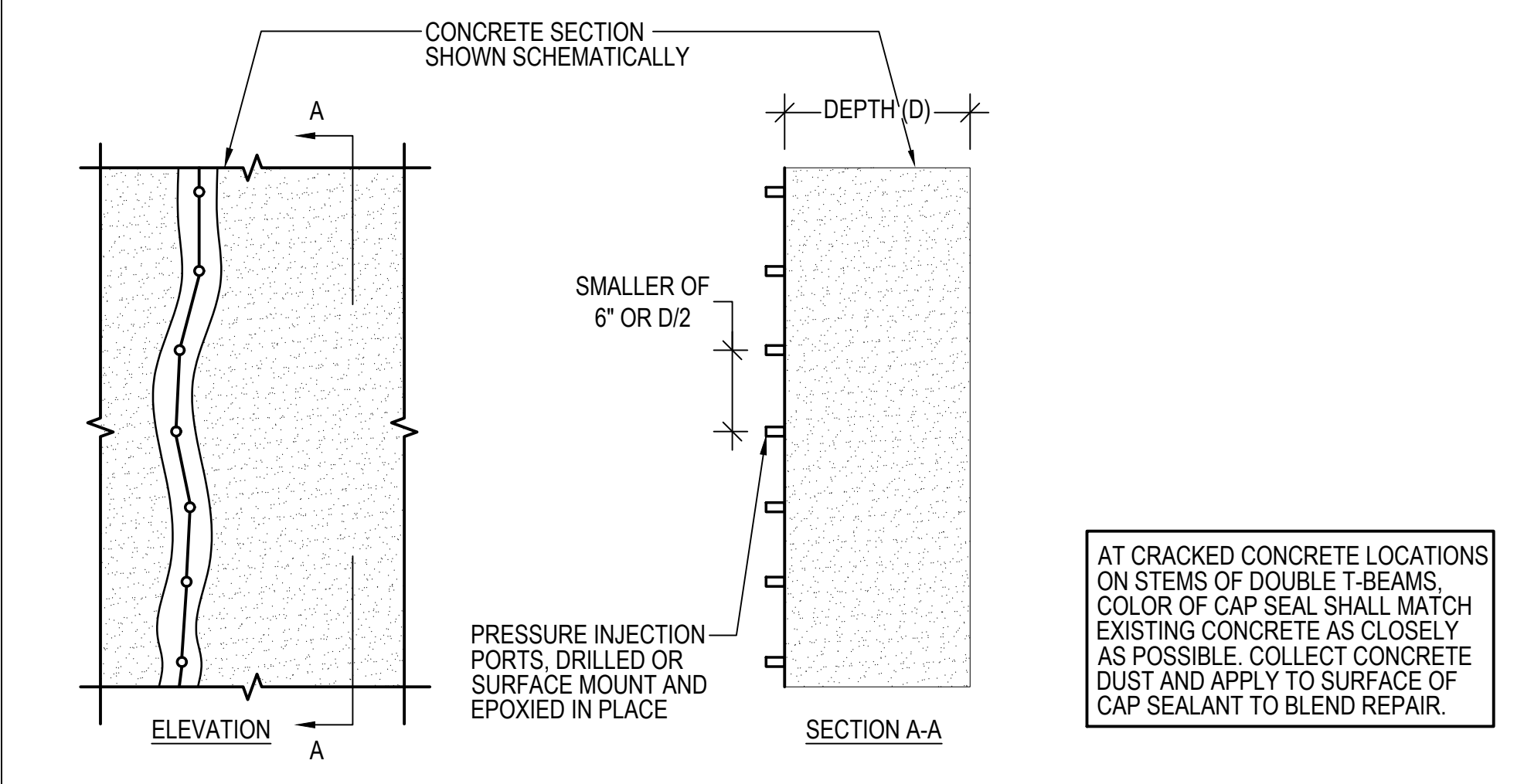
**3 SUPPLEMENTAL REINFORCING STEEL DETAIL**  
SCALE: NOT TO SCALE



- NOTE:**  
FOR JOINTS OVER 1" IN WIDTH (W) MAINTAIN A MINIMUM 1/2" IN DEPTH DIMENSION; FOR JOINTS LESS THAN 1/2" IN WIDTH (W), MAINTAIN A MINIMUM 1/4" DEPTH DIMENSION.

**4 JOINT SEALANT REPLACEMENT DETAIL**  
SCALE: NOT TO SCALE

- GENERAL PROCEDURE FOR PRESSURE INJECTION CONCRETE CRACK REPAIR FOR OVERHEAD OR VERTICAL SURFACES:**
- WIDEN CRACKS AS REQUIRED BY CONTINUOUS SAWCUT. CLEAN OUT CUT JOINT. DO NOT OVERCUT.
  - SPACE INJECTION PORTS AS REQUIRED BASED ON DEPTH AND WIDTH OF CRACK. DO NOT SPACE GREATER THAN 6" APART, OR D/2.
  - MASK EDGES OF CRACK TO CONTROL WIDTH OF APPLIED CAP SEAL.
  - INSERT INJECTION PORTS.
  - APPLY EPOXY CAP SEAL CONTINUOUSLY ALONG CRACK AND AROUND PORTS. CLEAR PORTS TO ENSURE EPOXY HAS NOT BLOCKED PASSAGE.
  - AFTER CAP SEAL CURE, USE HIGH-PRESSURE INJECTION EQUIPMENT TO INJECT APPROPRIATE VISCOSITY EPOXY INTO PORTS. START AT BOTTOM PORT, FILLING FULL DEPTH OF CRACK. DO NOT MOVE TO NEXT PORT UNTIL EPOXY BEGINS TO FLOW FROM ADJACENT PORT, THUS INDICATING TRAVEL. EXTEND EPOXY WITH SAND IF REQUIRED AS SPECIFIED.
  - AFTER ENTIRE CRACK IS FILLED AND EPOXY CURED, REMOVE PORTS AND GRIND CAP SEAL FLUSH.
  - QUANTITY OF PORTS SHOWN SCHEMATICALLY.



**7 TYPICAL CRACK PRESSURE INJECTION CONCRETE CRACK REPAIR**  
SCALE: NOT TO SCALE

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NO.	DATE	DESCRIPTION	BY

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CHECKED BY	SPJ/AEO
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DRAWING SCALE	AS NOTED

GRAPHIC SCALE

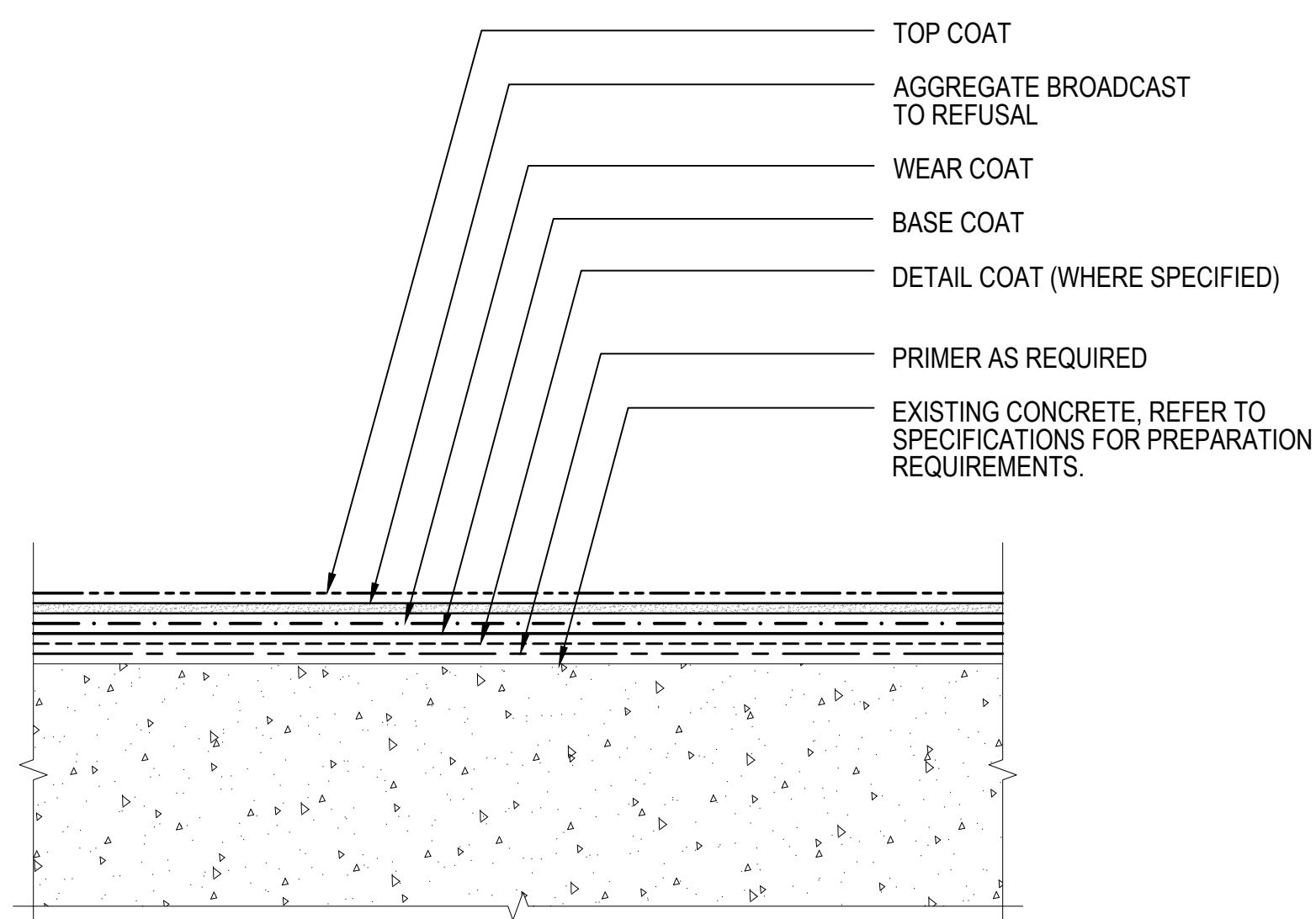
**SHEET TITLE**

**STRUCTURAL DETAILS**

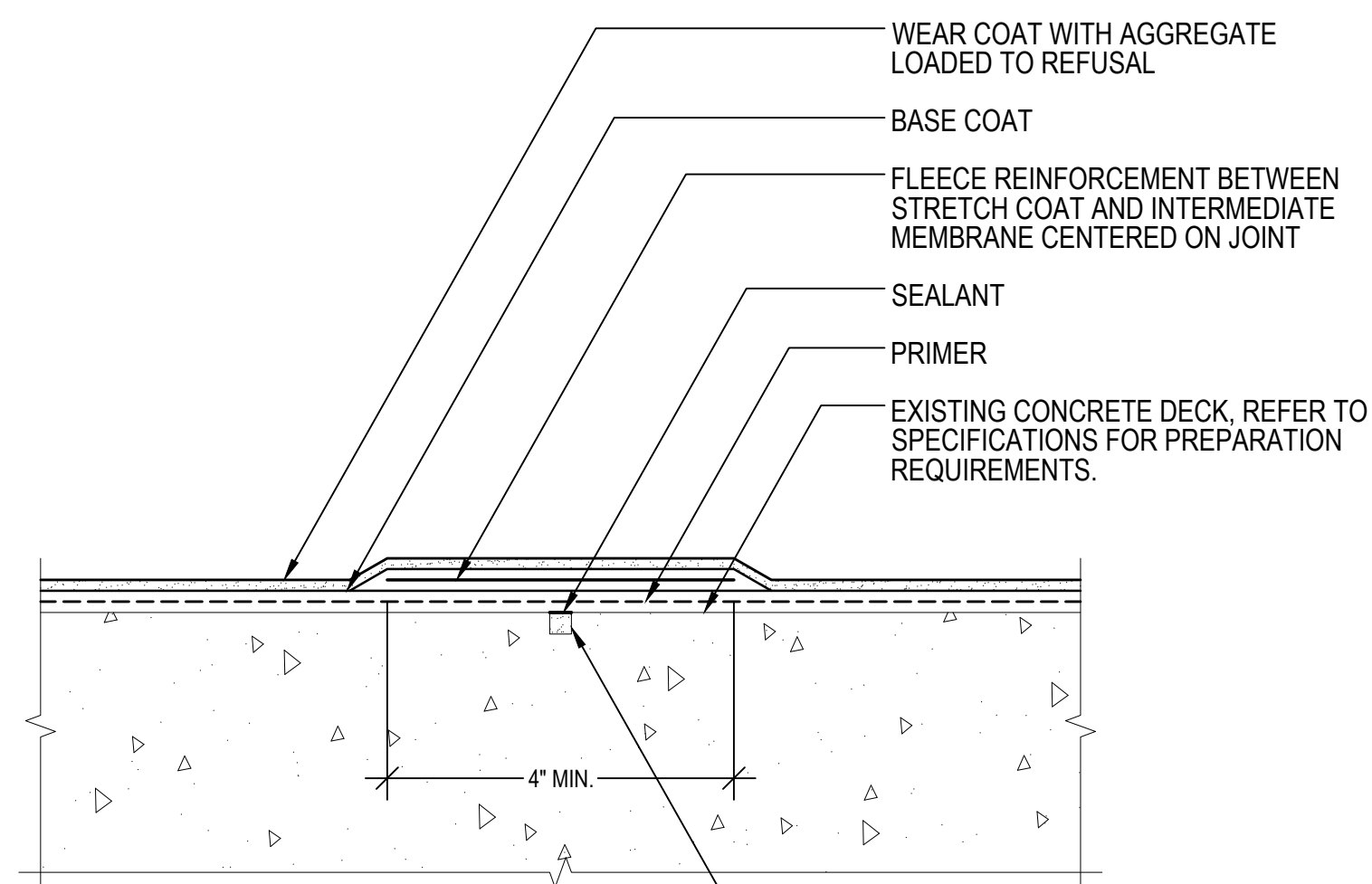
DRAWING NO.	S501
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NOTES:

1. TRAFFIC COATING TO INCLUDE MINIMUM THREE (3) LIFTS OF ALTERNATING EPOXY AND AGGREGATE BROADCAST TO REACH REQUIRED MINIMUM THICKNESS. DETAILS TYPICALLY DO NOT SHOW ALL THREE (3) LAYERS OF TOP COAT. FOR CLARITY PURPOSES.
2. CONTRACTOR MUST MEASURE CONCRETE MOISTURE CONTENT AT EACH 10 FT X 10 FT GRID AREA AND AT EACH REPAIR OR SLAB REPLACEMENT LOCATION USING A MOISTURE METER. PRIMER APPLIED TO SPECIFIED THICKNESS BASED ON CONCRETE MOISTURE RESULTS AND PER MANUFACTURER'S GUIDELINES.



**1** TRAFFIC COATING  
SCALE: NOT TO SCALE

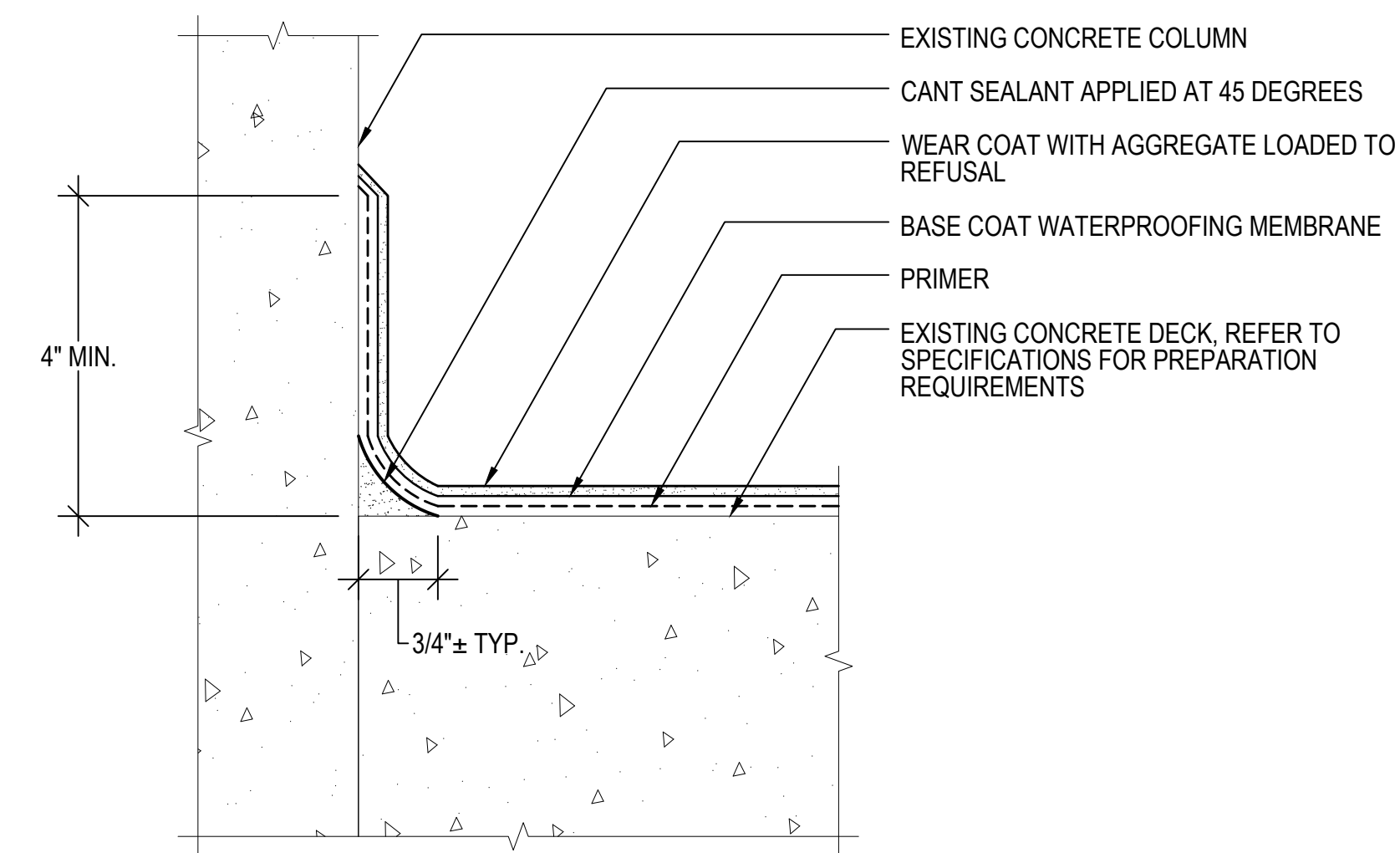


NOTE: SIZE AND SHAPE OF JOINT IS SHOWN SCHEMATICALLY AND MAY VARY.

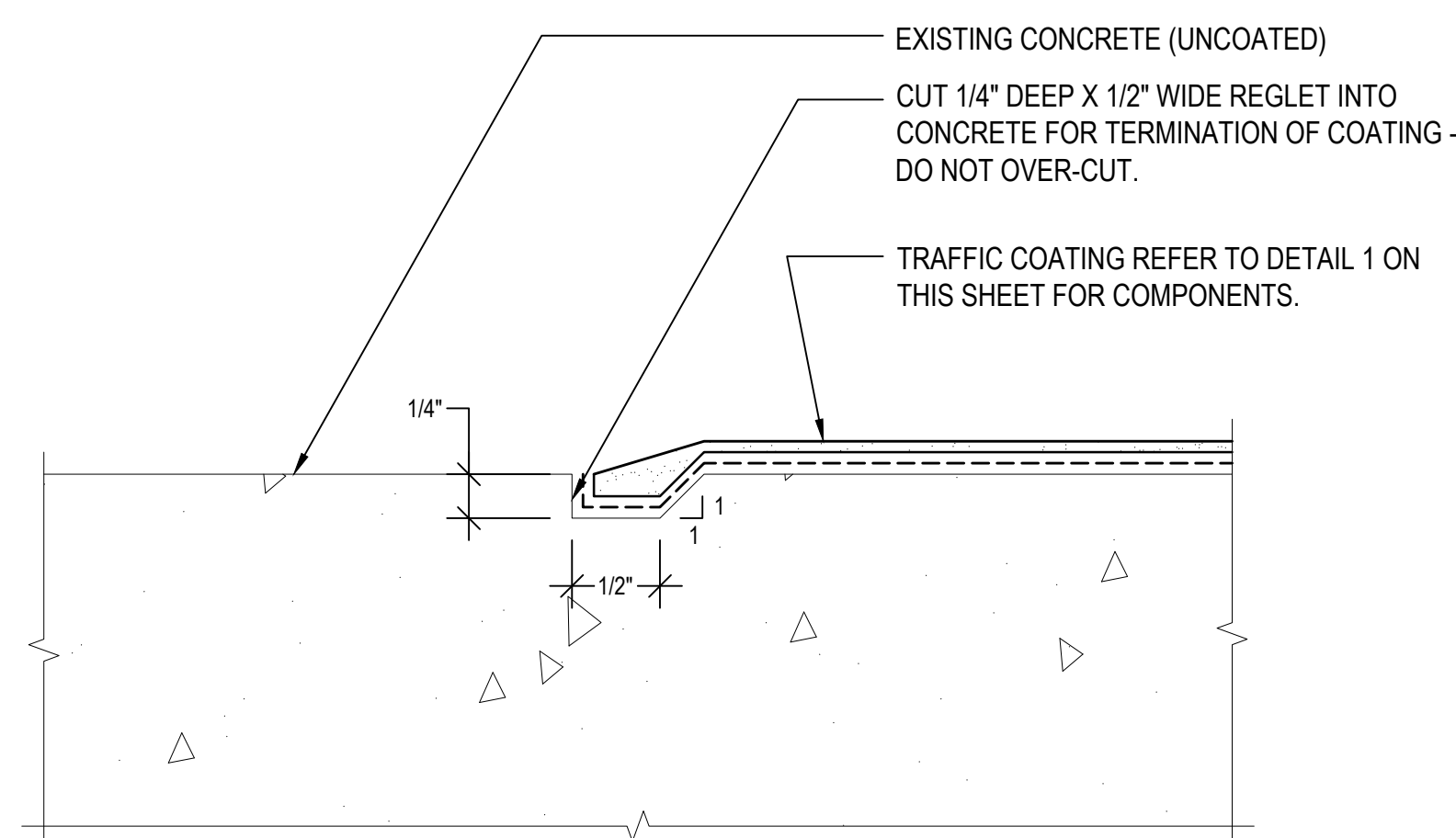
REMOVE ALL REMNANTS OF EXISTING SEALANT IN CONTROL JOINT AND MECHANICALLY GRIND JOINT TO CLEAN, OPEN CAPILLARY CONCRETE CONDITION PRIOR TO INSTALLING NEW SEALANT

**2** TYPICAL CONTROL JOINT DETAIL  
SCALE: NOT TO SCALE

NOTE: TRAFFIC COATING TO INCLUDE MINIMUM THREE (3) LIFTS OF ALTERNATING EPOXY AND AGGREGATE BROADCAST TO REACH REQUIRED MINIMUM THICKNESS. DETAILS TYPICALLY DO NOT SHOW ALL THREE (3) LAYERS OF TOP COAT, FOR CLARITY PURPOSES.



**3** TYPICAL DECK TO WALL OR VERTICAL SURFACE DETAIL  
SCALE: NOT TO SCALE



**4** TYPICAL TERMINATION ON HORIZONTAL SURFACE  
SCALE: NOT TO SCALE



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DRAWING SCALE	AS NOTED		

GRAPHIC SCALE

SHEET TITLE

**TRAFFIC COATING  
DETAILS**

DRAWING NO.

S502