

GENERAL NOTES

- THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. INCONSISTENCIES BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS.
- ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- THE REPAIRS TO THIS STRUCTURE HAVE BEEN DESIGNED TO RE-ESTABLISH THE STRUCTURAL INTEGRITY OF THE STRUCTURE AFTER THE REPAIRS ARE COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING THE RESTORATION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
- SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AS DETERMINED BY THE ENGINEER.
- THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF SHORING, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE. NO PERFORMANCE OF THE WORK, INCLUDING, BUT NOT LIMITED TO, DEMOLITION OF EXISTING STRUCTURE, OR FABRICATION OR ERECTION OF NEW STRUCTURAL ELEMENTS, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER. SUBMIT ONE COPY AND ONE SEPIA. COPY WILL BE REVIEWED AND SEPIA WILL BE RETURNED.
- ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

CONCRETE NOTES

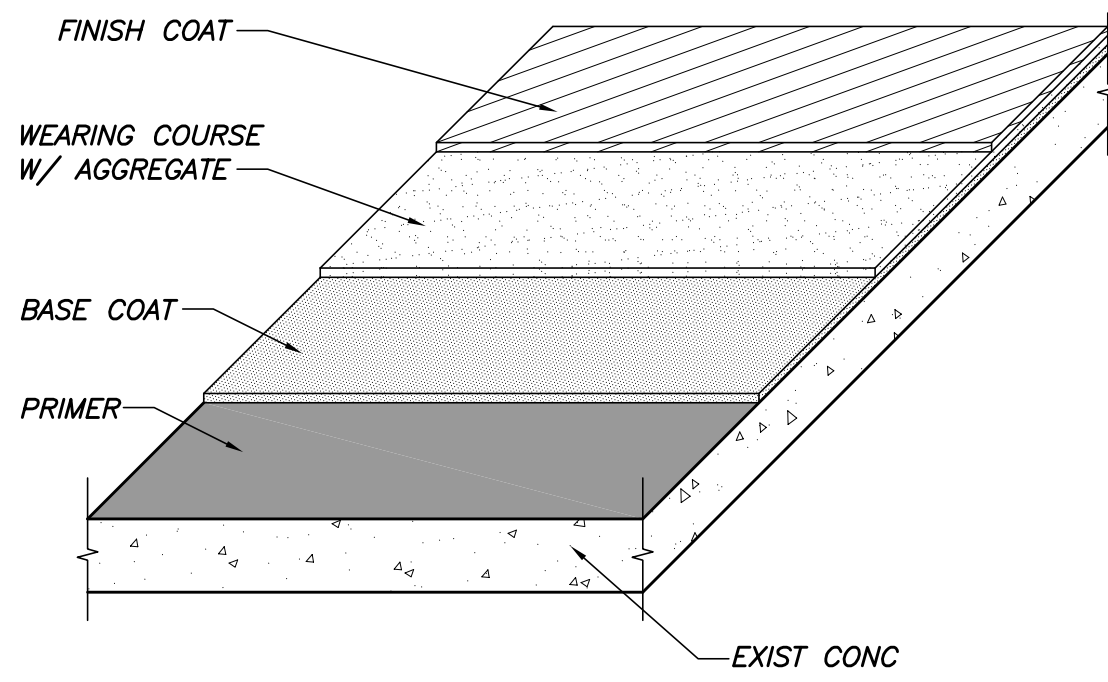
- CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318, LATEST EDITION)," AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301, LATEST EDITION)."
- GENERAL CONTRACTOR, CONSTRUCTION MANAGER OR OWNER'S CLERK OF THE WORKS SHALL HAVE AVAILABLE ON SITE AT ALL TIMES A COPY OF ACI "FIELD REFERENCE MANUAL SP-15(95)".
- CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED, AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.
- CONCRETE MIX DESIGN (TOPPING SLAB REPAIR):** SEE REPAIR DETAILS S3.1
 - ADD AIR ENTRAINING ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING THE ABOVE NOTED AIR CONTENTS.
 - ADDITIONAL SLUMP MAY BE ACHIEVED BY THE ADDITION OF A MIDRANGE OR HIGH RANGE WATER REDUCING ADMIXTURE. MAXIMUM SLUMP AFTER ADDITION OF ADMIXTURE SHALL BE 8 INCHES.
- CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
- REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318, LATEST EDITION.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND BE PROVIDED IN FLAT SHEETS.
- FIBER REINFORCEMENT SHALL BE TYPE III SYNTHETIC VIRGIN HOMOPOLYMER POLYPROPYLENE FIBERS CONFORMING TO ASTM C1116.
- MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
 - A) SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH 3.0"
 - B) FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO WEATHER #5 BARS, 5/8" DIAMETER WIRE, AND SMALLER 1.5"
 - C) SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER WALLS, SLABS, JOISTS #11 BARS AND SMALLER 1.0"
 - BEAMS, GIRDERS, AND COLUMNS; ALL REINFORCEMENT 1.5"
- WELDING OF REINFORCEMENT IS NOT PERMITTED.

MASONRY NOTES

- ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530, LATEST EDITION.
- ALL CONCRETE MASONRY UNITS SHALL BE ASTM C90 GRADE N, TYPE I STANDARD WEIGHT BLOCKS INCLUDING STRETCHERS AND CORNER BLOCKS. MINIMUM PRISM STRENGTH OF BLOCK SHALL BE F_m = 1500 PSI IN 28 DAYS.
- MORTAR SHALL CONFORM TO ASTM SPECIFICATION C270, TYPE S
- GROUT SHALL CONFORM TO ASTM-C476
- REINFORCING FOR BOND BEAMS, LINTEL BLOCKS AND VERTICAL WALL REINFORCING SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60
- HORIZONTAL JOINT REINFORCING SHALL BE DUP-0-WAL TRUSS DESIGN. STANDARD GLASS MILL GALVANIZED WITH 9 GAGE SIDE RODS AND 9 GAGE CROSS TIES UNO. REINFORCING SHALL BE PLACED IN MASONRY WALLS AT EVERY SECOND BLOCK COURSE.
- CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND UNLESS OTHERWISE NOTED. PROVIDE FULL MORTAR COVERAGE ON ALL WEBS AND FACE SHELLS. PROVIDE CORNER BLOCKS AND END BLOCKS TO FINISH ALL 90 DEGREE CORNERS AND WALL OPENINGS.
- STANDARD LAP LENGTH OF GRADE 60 MASONRY REINFORCING BARS SHALL BE 48 BAR DIAMETERS. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCEMENT
- CELLS TO BE GROUTED SHALL BE 2-CELL BLOCK. ALIGN CELLS TO MAINTAIN A CLEAR UNOBSTRUCTED, CONTINUOUS VERTICAL CHASE CELLS AND MUST BE KEPT CLEAN OF PROTRUSIONS OR FINS OF MORTAR. FILL CELLS OF MASONRY UNITS AND WALL CAVITIES WHERE INDICATED WITH 2500 PSI GROUT. MAXIMUM GROUT LIFT WITHOUT CLEAN-OUTS SHALL BE 4'-0". HIGH LIFT GROUTING SHALL CONFORM TO CODE REQUIREMENTS WITH A MINIMUM CEMENT CONTENT OF 8 SACKS PER CUBIC YARD. SUPPORT ALL VERTICAL BARS IN CENTER OF GROUTED CELLS WITH VERTICAL BAR POSITIONER.
- PROVIDE 1-#5 REINFORCING BAR MINIMUM UNO AROUND ALL SIDES OF ALL WALL OPENINGS.
- ALL STEEL SUPPORTED BY BLOCK WORK SHALL BE FIELD ANCHORED BY THE USE OF GOVERNMENT ANCHORS AND FIELD WELDED TO BEARING PLATES PROPERLY EMBEDDED IN THE BOND BEAM.
- SEALANT SHALL BE A ONE-COMPONENT NON-SAG "HORNFLYX" POLYSULFIDE POLYMER SEALANT AS LISTED IN SPECIFICATION SECTION 07920.

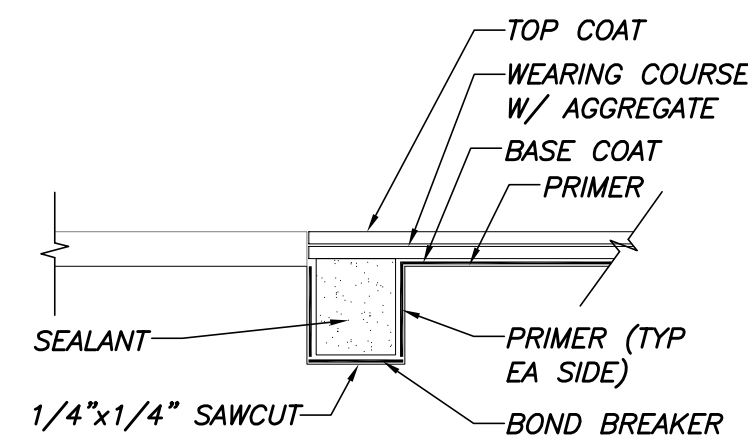
STRUCTURAL STEEL NOTES

- STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATIONS, AND ERECTION OF STRUCTURAL STEEL" LATEST EDITION, AND THE "CODE OF STANDARD PRACTICE", LATEST EDITION.
- STRUCTURAL STEEL: STEEL PLATES, SHAPES, AND BARS, CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE (U.N.O.). STRUCTURAL STEEL SHAPES DESIGNATED ON THE DRAWINGS FOR WIDE-FLANGE SECTIONS: ASTM A992 (ASTM A572 GRADE 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3 DATED MARCH, 1997)
- STRUCTURAL TUBING: CONFORM TO ASTM A500 GRADE B46 KSI.
- CONNECTION DESIGN FOR THIS PROJECT IS THE RESPONSIBILITY OF THE FABRICATOR. CONNECTION CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE SHALL BE SUBMITTED WITH THE SHOP DRAWINGS FOR THIS PROJECT. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- FIELD CONNECTIONS SHALL BE BOLTED USING ASTM A325N HIGH STRENGTH BOLTS (U.N.O.) EXCEPT WHERE SLIP CRITICAL CONNECTIONS ARE REQUIRED AND NOTED BY A325 (SC) ON THE DRAWINGS. PROVIDE SLIP CRITICAL (SC) CONNECTIONS AT ALL MOMENT CONNECTIONS, BRACED FRAMES, RELIEVING ANGLES AND AS OTHERWISE NOTED. USE A490 BOLTS WHERE INDICATED.
- WHERE WELDING IS INDICATED, ALL WELDING SHALL CONFORM TO AWS D1.1-LATEST EDITION. ELECTRODES SHALL CONFORM TO AWS A5.1 E70XX SERIES WITH PROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN)
- SEE CONCRETE NOTES AND DRAWINGS FOR ANCHOR BOLT INFORMATION, TYP.
- PROVIDE 3/8" MINIMUM STIFFENER PLATES EACH SIDE OF BEAM WEB AT BEAMS FRAMING OVER COLUMNS AND AT BEAMS SUPPORTING COLUMNS ABOVE.
- PROVIDE 1/4" THICK LEVELING PLATE UNDER ALL COLUMN BASE PLATES UNLESS OTHERWISE NOTED. LEVELING PLATES SHALL BE SET AND GROUTED PRIOR TO ERECTING COLUMNS.
- PROVIDE ALL MISCELLANEOUS ANGLES, PLATES, ANCHOR BLOTS ETC., SHOWN ON ARCHITECTURAL DRAWINGS FOR SUPPORT OF BLOCKING, PARAPETS, FINISHES, ETC. COORDINATE WITH MISCELLANEOUS METAL FABRICATOR TO ENSURE COMPLETE COVERAGE OF ALL ITEMS.
- PROVIDE L 4 x 4 x 1/4 SLAB SUPPORT ANGLE AS REQUIRED AT COLUMNS WHERE STRUCTURAL MEMBERS DO NOT FRAME IN AT ALL FOUR SIDES.



TYPICAL TRAFFIC MEMBRANE DETAIL @ EXPOSED CONCRETE

- NOTES:**
- REF SPECS FOR APPLICATION RATES.
 - REIMER AND PRE-STRIPING SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS.
 - TOTAL SYSTEM COATING THICKNESS AVERAGE 40 DRY MILS, EXCLUSIVE OF AGGREGATE.



MEMBRANE TERMINATION DETAIL

GENERAL

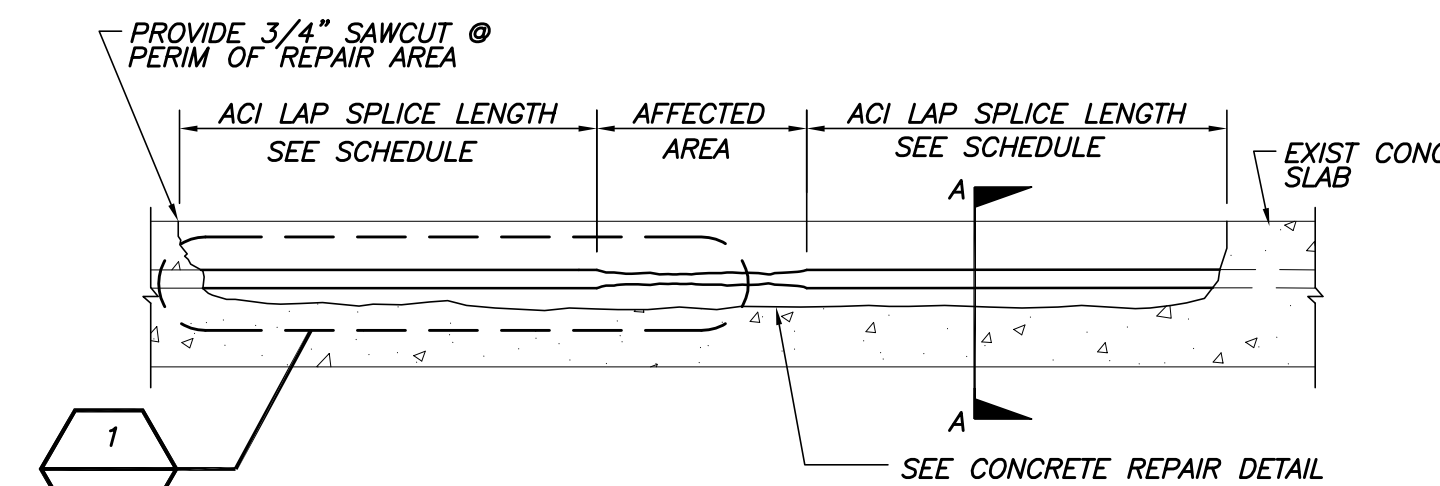
- CONTRACTOR SHALL COORDINATE A MEETING WITH OWNER, ENGINEER AND MATERIAL MANUFACTURER'S REPRESENTATIVE TO REVIEW APPLICATION, MAINTENANCE REQUIREMENTS, MATERIAL LIMITATIONS AND WARRANTY.
- PROVIDE IN WRITING FROM MANUFACTURER THAT TRAFFIC BEARING MEMBRANE SYSTEM IS COMPATIBLE WITH EXISTING CONDITIONS.
- ENSURE TRAFFIC STRIPING PAINT IS COMPATIBLE WITH THE SELECTED TRAFFIC BEARING MEMBRANE.
- APPLICATOR SHALL BE APPROVED BY TRAFFIC MEMBRANE MANUFACTURER WITH A MINIMUM OF 5 YEARS OF EXPERIENCE WITH SUBMITTED MATERIAL AND APPLICATION.
- CONTRACTOR SHALL VERIFY THAT ALL REPAIR/PATCH MATERIALS AND JOINT SEALANTS ARE COMPATIBLE WITH SEALANT MEMBRANE.
- MATERIAL SUPPLIER SHALL PERFORM AN ADHESION TEST TO EXISTING TRAFFIC MEMBRANE AND CONCRETE SURFACES.

EXAMINATION

- CONCRETE: VERIFY THAT THE WORK DONE UNDER OTHER SECTIONS MEETS THE FOLLOWING REQUIREMENTS:
 - THE CONCRETE DECK SURFACE IS FREE OF RIDGES AND SHARD PROJECTIONS. IF METAL FORMS OR DECKS ARE USED, THEY SHOULD BE VENTILATED TO PERMIT ADEQUATE DRYING OF CONCRETE ON EXTERIOR EXPOSED DECK.
 - THE CONCRETE WAS CURED FOR A MINIMUM OF 28 DAYS (MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH). WATER-CURED TREATMENT OF CONCRETE IS PREFERRED. THE USE OF CONCRETE CURING AGENTS, IF ANY, SHALL BE OF THE SODIUM SILICATE BASE ONLY; OTHERS REQUIRE WRITTEN APPROVAL BY NEOGARD®.
 - THE CONCRETE WAS FINISHED BY A POWER OF HAND STEEL TROWEL FOLLOWED BY SOFT HARD BROOM TO OBTAIN LIGHT TEXTURE OR "SIDEWALK" FINISH.
 - THAT DAMAGED AREAS OF THE CONCRETE DECK BE RESTORED AS PER CONTRACT DRAWINGS.

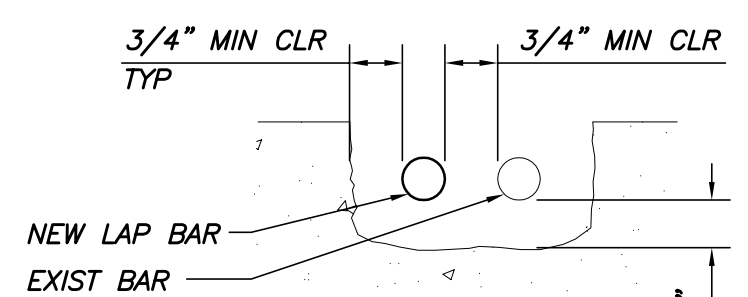
PREPARATION

- PROTECTION:
 - PROTECT PLANTS, VEGETATION, VEHICLES AND PEDESTRIANS WHICH MIGHT BE AFFECTED BY COATING. USE DROP CLOTHS OR MASKING AS REQUIRED.
- ADHERE TO SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS.
- APPLICATION:
 - ADHERE TO SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS.
- CLEANING:
 - REMOVE DEBRIS RESULTING FROM COMPLETION OF COATING OPERATION FROM THE PROJECT SITE.
- PROTECTION:
 - AFTER COMPLETION OF APPLICATION, DO NOT ALLOW TRAFFIC ON COATED SURFACES FOR A PERIOD OF AT LEAST 24 HOURS AT 75°F. AND 50% R.H., OR UNTIL COMPLETELY CURED.

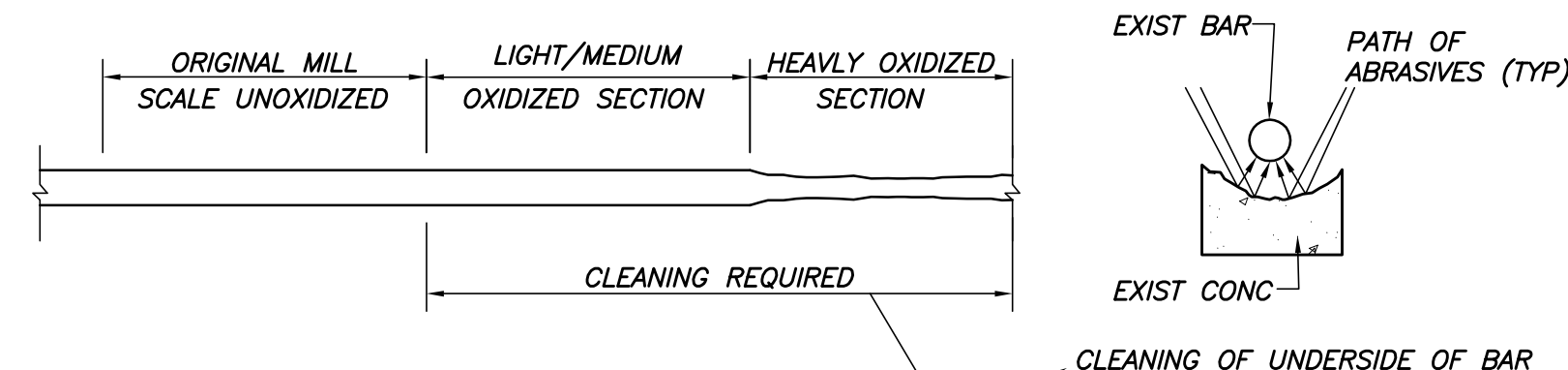


TYPICAL REINFORCEMENT REPAIR

- PREPARATION:**
- SEE TYPICAL CONCRETE REPAIR FOR REMOVAL/REPLACEMENT OF CONCRETE.
- INSPECTION:**
- IF REINFORCEMENT HAS LOST MORE THAN 25% OF ITS CROSS SECTIONAL AREA, NOTIFY STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH PATCH.
- REPAIR:**
- LAP BARS AS NOTED ABOVE.
 - SEE TYPICAL CONCRETE REPAIR.

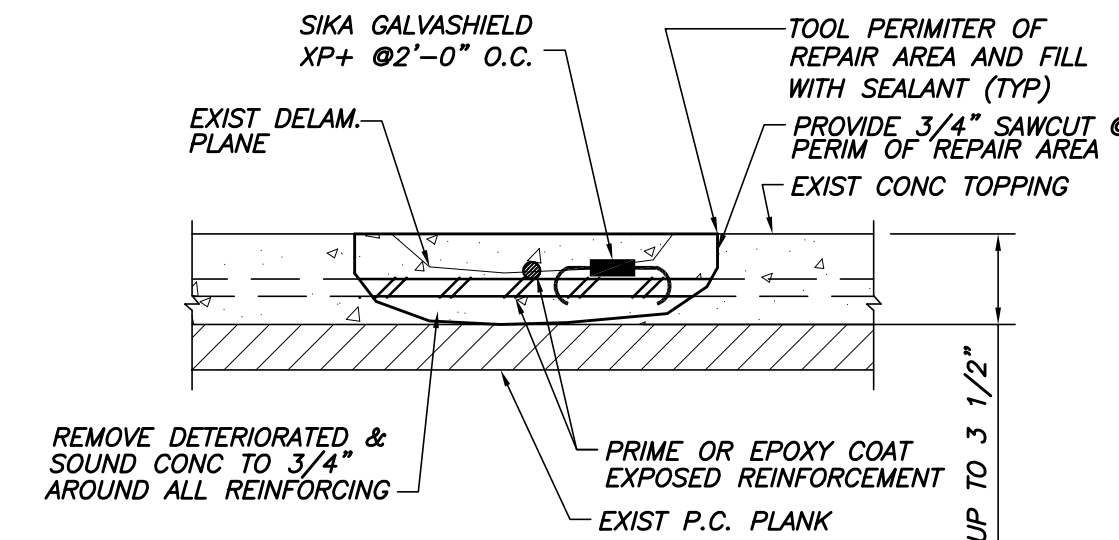


SECTION A-A



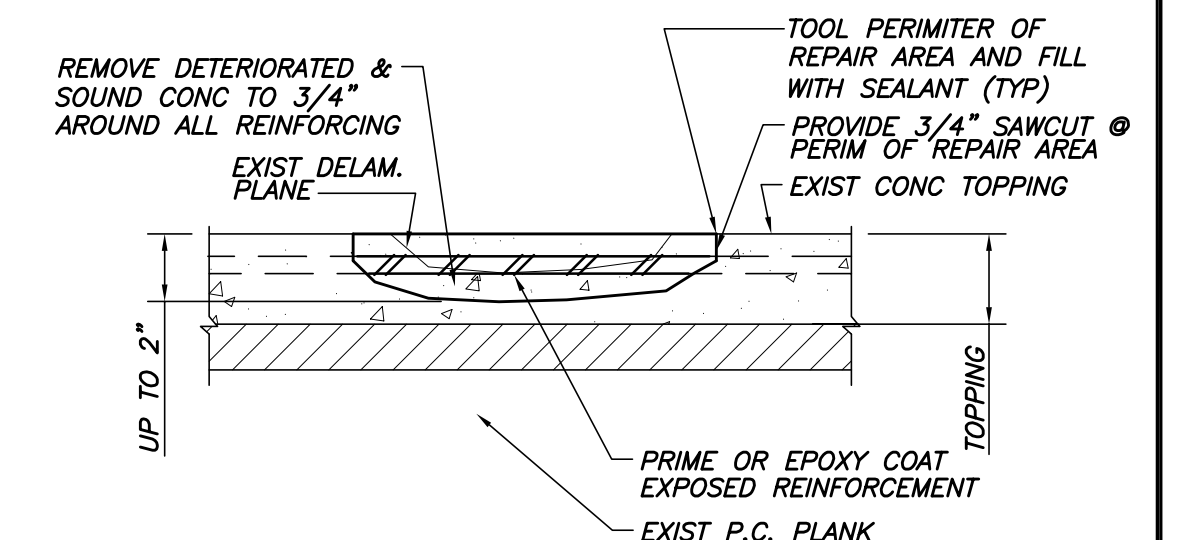
DETAIL

REBAR LAP SPLICE TABLE	
BAR SIZE	LAP LENGTH
#3	30"
#4	36"
#5	48"
#6	56"
#7	81"



TYPICAL DEEP CONCRETE REPAIR

- GENERAL:**
- ALL TOPPING SLAB REPAIRS ARE ASSUMED TO BE 4" DEEP. PROVIDE COST PER SQUARE FOOT/INCH OF DEPTH.
 - DUST AND MOISTURE PROTECTION SHALL BE PROVIDED AT AND BELOW THE LEVELS OF REPAIR.
- CONCRETE REMOVAL:**
- REFERENCES: ICRI 03750, 03732, ACI 546R-04.
 - AT EACH REPAIR AREA, REMOVE SMALL AREA OF CONCRETE TO CONFIRM DEPTH OF REINFORCEMENT PRIOR TO CUTTING.
 - SAW CUT PERIMETER OF REPAIR AREA TO A DEPTH OF 3/4". REFERENCE PARTIAL SLAB PLAN THIS SHEET FOR ADDITIONAL INFORMATION. NOTE THAT PERIMETER MAY NEED TO BE EXTENDED.
 - REMOVE ALL DETERIORATED, DELAMINATED AND UNSOUND CONCRETE TO THE TOP OF EXISTING PRECAST/PRESTRESSED PLANKS. CONCRETE SHALL BE REMOVED BY A METHOD THAT LIMITS THE DAMAGE TO SURROUNDING SOUND CONCRETE TOPPING, EXIST STEEL TRUSS REINF AND WITH MINIMAL DAMAGE TO EXISTING PRECAST/PRESTRESSED PLANKS.
 - MATERIAL REMOVAL SHALL CONTINUE UNTIL AGGREGATE PARTICLES ARE BEING BROKEN RATHER THAN BEING REMOVED FROM THE CEMENT MATRIX.
 - USE OF MECHANICAL IMPACT CHIPPING HAMMERS SHALL BE LIMITED TO 30LB WITH A 15lb RECOMMENDED. ALL NECESSARY PRECAUTIONS MUST BE TAKEN TO AVOID MICRO CRACKING (BRUISING) OF THE SURFACE OF THE PRECAST/PRESTRESSED PLANKS.
 - ALL EXISTING REINF AND STEEL TRUSS REINF SHALL BE SALVAGED.
- PREPARATION:**
- REMAINING EXISTING REINF AND STEEL TRUSS REINF SHALL BE PRIMED.
 - PRIOR TO PROCEEDING WITH REPAIR, INSPECT ALL CONCRETE SURFACES. INSTALLATION OF REPAIR MATERIAL INDICATES ACCEPTANCE OF ALL SUBSTRATE CONDITIONS.



TYPICAL SHALLOW CONCRETE REPAIR

- APPLY POLYMER ADHESIVE/BONDING AGENT TO ALL CONCRETE SURFACES.
- COAT ALL CONCRETE SURFACES WITH A CEMENT SLURRY PRIOR TO PLACING REPAIR MATERIAL.
- INSTALL NEW REINF IF REQUIRED AND TIE TO EXISTING. PROVIDE CARS AS REQUIRED TO MAINTAIN PROPER PLACEMENT. MINIMUM COVER=2".
- REPAIR MATERIAL FOR LARGE AREAS (TOTAL PLACEMENTS OVER 1 YARD)
 - COMPRESSIVE STRENGTH (f'c) = 5,000 PSI (MIN)
 - AIR CONTENT = 6 1/2 ±2%
 - WATER/CEMENT RATIO (W/C) = 0.35 (MAX)
 - AGGREGATE = 3/8" MIN
- REPAIR MATERIAL FOR SMALL PLACEMENTS (PLACEMENT LESS THAN 1 YARD) SHALL BE A ONE-COMPONENT, EARLY STRENGTH GAINING, CEMENTITIOUS REPAIR MATERIAL WITH THE FOLLOWING PROPERTIES (REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION):
 - COMPRESSIVE STRENGTH: 5,000 PSI (MIN)
- PLACEMENT: ALL CIP REPAIR MATERIAL MUST BE TESTED AS PER THE SPECIFICATIONS.
- ALL JOINTS SHALL BE HAND TOOLED.

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DESIGNED BY: **TMN** DATE: **2/7/13**
DRAWN BY: **BRG** CHECKED BY: **TMN**

FORE STREET PARKING FACILITY
PORTLAND, ME
FACADE REPAIRS PHASE 2
GENERAL NOTES

Scale: **NOTED**
Date: **2/7/13**
Becker Job Number: **2961**

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