

THIN EPOXY OVERLAY NOTES

THE TOP OF THE NEW OVERLAY SHALL CONFORM TO THE CROSS SLOPE AND GRADE OF THE BRIDGE.

TYPE 1 THIN EPOXY OVERLAY SYSTEM - USE DECK PRETREATMENT/PRIMER PER MANUFACTURER'S RECOMMENDATION, AND 2 LIFTS OF AN EPOXY-URETHANE COPOLYMER AND AGGREGATE. TYPE 1 OVERLAY SHALL BE APPLIED MECHANICALLY USING METERED EQUIPMENT; HAND MIXING OF MATERIAL IS NOT PERMITTED.

THIN OVERLAY SYSTEM SHALL BE FROM THE QUALIFIED PRODUCTS LIST 23, SECTION D2. MINIMUM OVERLAY THICKNESS SHALL BE 3/8".

APPLICATION EQUIPMENT SHOULD:

- A) BE CAPABLE OF METERING, MIXING AND DISTRIBUTING THE POLYMER AND PRETREATMENT TO MANUFACTURER'S RECOMMENDATION.
- B) USE AN APPLICATION MACHINE THAT FEATURES POSITIVE DISPLACEMENT VOLUMETRIC METERING PUMPS CONTROLLED BY A HYDRAULIC POWER UNIT.
- C) STORE COMPONENTS IN TEMPERATURE CONTROLLED RESERVOIRS CAPABLE OF MAINTAINING 100 DEGREES FAHRENHEIT (PLUS OR MINUS 10 DEGREES) TO INSURE OPTIMAL MIXING.
- D) CHECK MIXING RATIO AT THE PUMP OUTLETS AS WELL AS CYCLE COUNTING CAPABILITIES TO MONITOR OUTPUT ON STANDARD FEATURES.
- E) USE MOTIONLESS IN-LINE MIXING SO AS TO NOT OVERLY SHEAR THE MATERIAL TO ENTRAP AIR IN THE MIX.
- F) MAXIMIZE MATERIAL WORKING TIME BY MIXING IT IMMEDIATELY BEFORE DISPENSING.

AGGREGATE SHALL BE ANGULAR, HAVING LESS THAN 0.2% MOISTURE AND FREE OF DIRT, CLAY, ASPHALT AND OTHER FOREIGN OR ORGANIC MATERIALS. AGGREGATE FOR ALL LAYERS SHALL BE BAUXITE OR FLINT ROCK PRODUCTS FLINT AND MEETS THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING
NO. 6	95-100
NO. 10	10-35
NO. 20	0-3

FULL AND PARTIAL DEPTH DECK REPAIR SHALL CURE A MINIMUM OF 28 DAYS BEFORE THE OVERLAY IS PLACED. TRAFFIC SHALL BE ALLOWED TO USE THE BRIDGE DURING THE CURING PERIOD OF THE PATCHES BUT NOT AFTER SHOTBLASTING. MAGNESIUM PHOSPHATE BASED MATERIALS WILL NOT BE ALLOWED.

THE CONCRETE DECK SURFACE SHALL BE CLEANED BY SHOTBLASTING TO REMOVE ANY OIL, DIRT, RUBBER, TRAFFIC STRIPING, OR ANY OTHER POTENTIAL DETRIMENTAL MATERIAL SUCH AS CURING COMPOUND AND LAITANCES, WHICH THE MANUFACTURER AND ENGINEER'S OPINION WOULD PREVENT PROPER BONDING AND CURING OF THE MATERIAL. IN AREAS WHERE SHOTBLASTING EQUIPMENT CAN NOT REACH (I.E., ALONG CURBS AND BRIDGE RAILS) SANDBLASTING IS PERMITTED TO AN EXTENT TO THE ENGINEER'S AND MANUFACTURER'S APPROVAL. IMMEDIATELY BEFORE APPLICATION, ALL PREPARED SURFACES SHALL BE CLEANED WITH COMPRESSED AIR OR VACUUMED TO REMOVE DUST AND DEBRIS.

THE CONTRACTOR IS TO PREVENT THE TRACKING OF TACKCOAT AND CONSTRUCTION DEBRIS ACROSS THE DECK PRIOR TO APPLICATION OF THE THIN EPOXY OVERLAY. MILLING THE BRIDGE DECK WILL NOT BE AN OPTION FOR TACKCOAT OR DEBRIS REMOVAL.

ALL SURFACES THAT ARE TREATED SHALL BE DRY AT THE TIME OF APPLICATION. THE OVERLAY SHALL NOT BE APPLIED WHEN IT HAS RAINED 24 HOURS PRIOR TO, OR RAIN IS FORECAST WITHIN 8 HOURS AFTER, APPLICATION. THE MOISTURE CONTENT IN THE DECK SUBSTRATE SHALL BE TESTED. MOISTURE IS NOT TO EXCEED 4.5% WHEN MEASURED BY ELECTRONIC METER OR; BY TAPING A 4'x4' POLYETHYLENE SHEET TO THE CONCRETE DECK, IF MOISTURE COLLECTS UNDER THE PLASTIC IN LESS TIME THAN IT WOULD TAKE FOR THE EPOXY TO CURE. IF EITHER TEST SHOWS EXCESS MOISTURE, THE DECK SHALL CONTINUE TO DRY BEFORE APPLICATION PROCEEDS.

BLUSHING (A WAXY SURFACE COATING ON THE EPOXY) IS CAUSED BY THE REACTION OF MOISTURE WITH THE HARDENING AGENT. BLUSHING CREATES A SURFACE THAT MAKES FUTURE LAYERS DIFFICULT TO ADHERE. LIFTS THAT SHOW SIGNS OF BLUSHING SHALL BE REMOVED AND REPLACED PRIOR TO APPLICATION OF THE NEXT. THE COST TO REMOVE AND REPLACE THESE AREAS SHALL BE AT THE CONTRACTOR'S EXPENSE.

TRAFFIC, OTHER THAN APPLICATION EQUIPMENT, SHALL NOT BE ALLOWED ON ANY PORTION OF THE DECK THAT HAS BEEN SHOTBLASTED OR WHERE PART OF THE APPLICATION HAS BEEN PLACED.

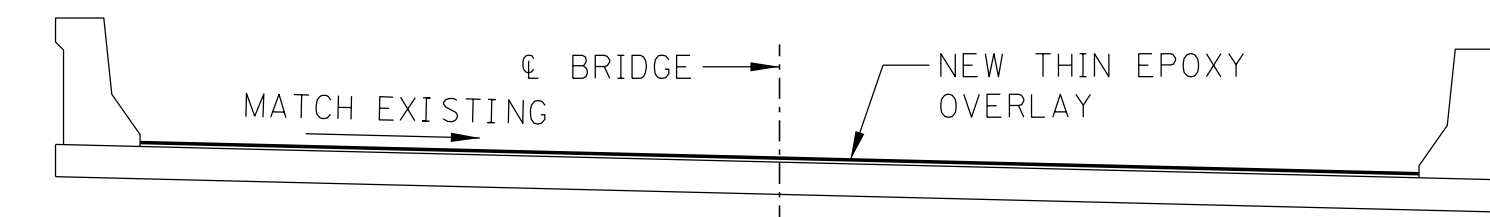
SEE MANUFACTURER'S RECOMMENDATIONS FOR REQUIRED AMBIENT AND SURFACE TEMPERATURES AND HUMIDITY LIMITS FOR APPLICATION.

THE MANUFACTURER SHALL HAVE A REPRESENTATIVE ON THE JOB SITE AT ALL TIMES DURING APPLICATION AND CURE TIME. THE REPRESENTATIVE, ALONG WITH CONSULTATION WITH ENGINEER, MAY SUSPEND ANY ITEM OF WORK THAT IS SUSPECT AND DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS. WORK SHALL NOT RESUME UNTIL THE ENGINEER AND REPRESENTATIVE ARE SATISFIED THAT APPROPRIATE REMEDIAL ACTION HAS BEEN TAKEN BY THE CONTRACTOR.

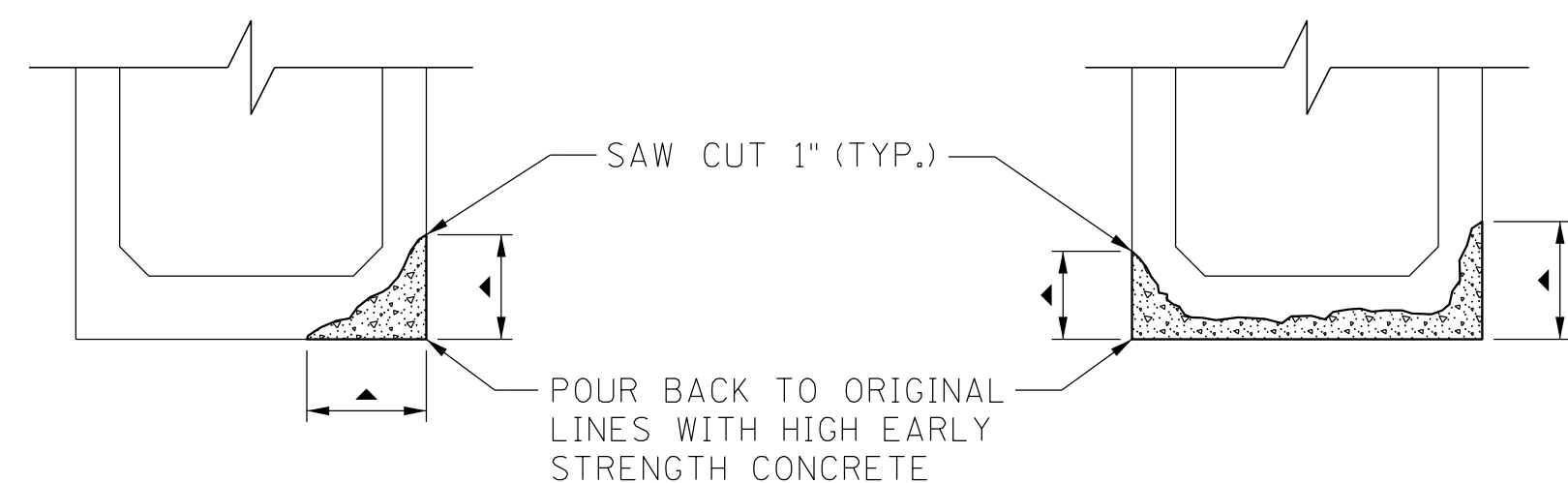
ALL COSTS FOR AGGREGATE, EPOXY FOR MINIMUM OF TWO LIFTS, SURFACE PREPARATION, LABOR AND ANY OTHER MISCELLANEOUS MATERIALS REQUIRED TO PLACE THIN OVERLAY SHALL BE INCLUDED IN TYPE 1 THIN EPOXY OVERLAY (EPOXY-URETHANE).

THICKNESS VERIFICATION: THE PROJECT ENGINEER SHALL BE NOTIFIED OF THE NUMBER OF GALLONS USED ON THE PROJECT WITH NOTARIZED QUANTITY STATEMENTS FROM THE CONTRACTOR AND THE MANUFACTURER. THE CONTRACTOR SHALL VERIFY TO TDOT THAT THE OVERLAY IS AN AVERAGE OF AT LEAST 3/8" THICK AT THREE RANDOM LOCATIONS AGREED UPON BY THE PROJECT ENGINEER AND THE MATERIAL MANUFACTURER REPRESENTATIVE. IF 3/8" AVERAGE IS NOT ACHIEVED, A RETEST SHALL BE PERFORMED IN ADJOINING AREAS. THIN AREAS SHALL BE RE-COATED AS DESCRIBED ABOVE BY THE CONTRACTOR AND RE-VERIFIED AT NO ADDITIONAL COST TO TDOT. THIS VERIFICATION MAY CONSIST OF CORES, HOLES, ETC., BUT IN ALL CASES, ANY DESTRUCTIVELY TESTED AREAS SHALL BE REPAIRED BY THE CONTRACTOR BEFORE FINAL ACCEPTANCE BY THE PROJECT ENGINEER.

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REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL
LOOKING AHEAD



BEAM REPAIR DETAILS

▲ REMOVE CONCRETE TO A DEPTH OF 3/4" BEHIND ANY EXPOSED PRESTRESSING STRANDS OR REINFORCING STEEL. SEE TDOT INSPECTION REPORTS FOR APPROX. LIMITS AND LOCATIONS. FINAL LIMITS AND LOCATIONS OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.

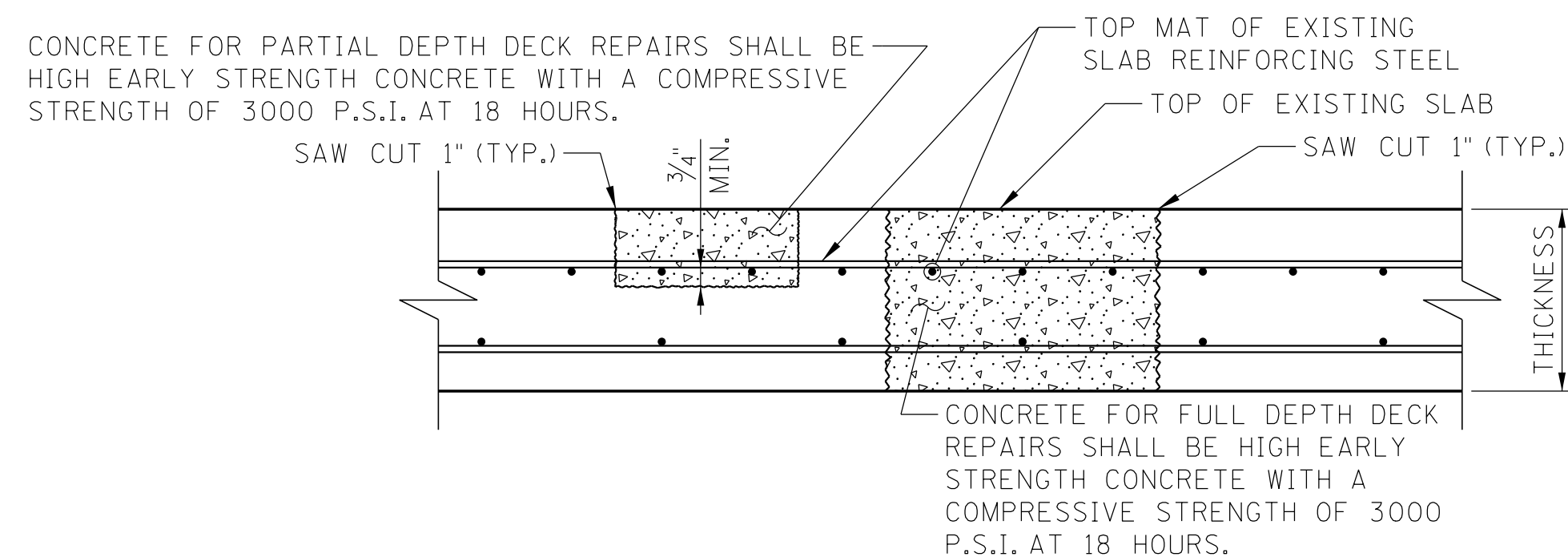
THE COST OF REMOVING PORTIONS OF THE EXISTING CONCRETE WITHIN THE LIMITS SHOWN, SAW CUTTING, COMPLETELY CLEANING EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR, AND ALL MISCELLANEOUS MATERIAL NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN PRICE BID FOR CONCRETE BEAM REPAIRS.

CONTRACTOR TO TAKE EXTREME CARE WHEN REMOVING DELAMINATED CONCRETE SO AS NOT TO DAMAGE EXISTING REINFORCING STEEL OR PRESTRESSING STRANDS. ALL EXISTING REINFORCING STEEL AND PRESTRESSING STRANDS SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE ENGINEER BEFORE REPOURING.



THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS TO THE BEAMS. DETAILS OF ANY TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE THE BEGINNING OF ANY BEAM REPAIR. COST TO BE INCLUDED IN CONCRETE BEAM REPAIRS.

CONCRETE BEAM REPAIRS MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.



DETAIL SHOWING FULL AND PARTIAL DEPTH DECK REPAIR

REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF 3/4" BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE COMPLETELY CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM HEADQUARTERS, BRIDGE INSPECTION AND REPAIR OFFICE. INSPECTIONS TO DETERMINE AREAS OF DECK REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE. DECK REPAIR WILL BE PAID FOR UNDER BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB) AND BRIDGE DECK REPAIR (FULL DEPTH OF SLAB). DURING PARTIAL DEPTH REPAIRS, SHOULD DETERIORATED CONCRETE BE ENCOUNTERED WHICH APPEARS TO RUN FULL DEPTH IN THE SLAB, THE ENGINEER MAY DESIGNATE THESE AREAS TO BE REPAIRED UNDER BRIDGE DECK REPAIR (FULL DEPTH OF SLAB). POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE IN MAKING FULL AND PARTIAL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1. PARTIAL DEPTH REPAIRS - PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60-POUND CLASS SHALL NOT BE USED.
2. FULL DEPTH REPAIRS - PNEUMATIC HAMMERS HEAVIER THAN A 60-POUND CLASS SHALL NOT BE USED. ALSO ALL DECK REPAIR OVER BEAMS WILL BE RESTRICTED TO 35-POUND PNEUMATIC HAMMERS.
3. CHIPPING HAMMERS OF THE 15-POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

WHEN REMOVING CONCRETE FROM THE LIMITS SHOWN, CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING TRANSVERSE REINFORCING STEEL. EXISTING REINFORCING STEEL THAT IS EXPOSED DURING REMOVAL OF PORTIONS OF CONCRETE SLAB SHALL BE THOROUGHLY CLEANED AND MAINTAINED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS. EXTENSIVE AREAS OF DECK REMOVAL WILL REQUIRE A SUPPORT SYSTEM FOR THE BEAM AND DETAILS SUBMITTED TO THE ENGINEER FOR APPROVAL.

BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB) AND BRIDGE DECK REPAIR (FULL DEPTH OF SLAB) MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.



DETAILS FOR FULL DEPTH DECK REPAIRS ON BRIDGES WITH EXISTING PRECAST DECK PANELS SHALL BE SUBMITTED TO TDOT FOR APPROVAL PRIOR TO THE CONSTRUCTION OF SAID REPAIRS. EXISTING PANEL(S) IN THESE AREAS ARE TO BE REMOVED IN THEIR ENTIRETY. REMOVAL OF PORTIONS OF A PANEL WILL NOT BE PERMITTED.

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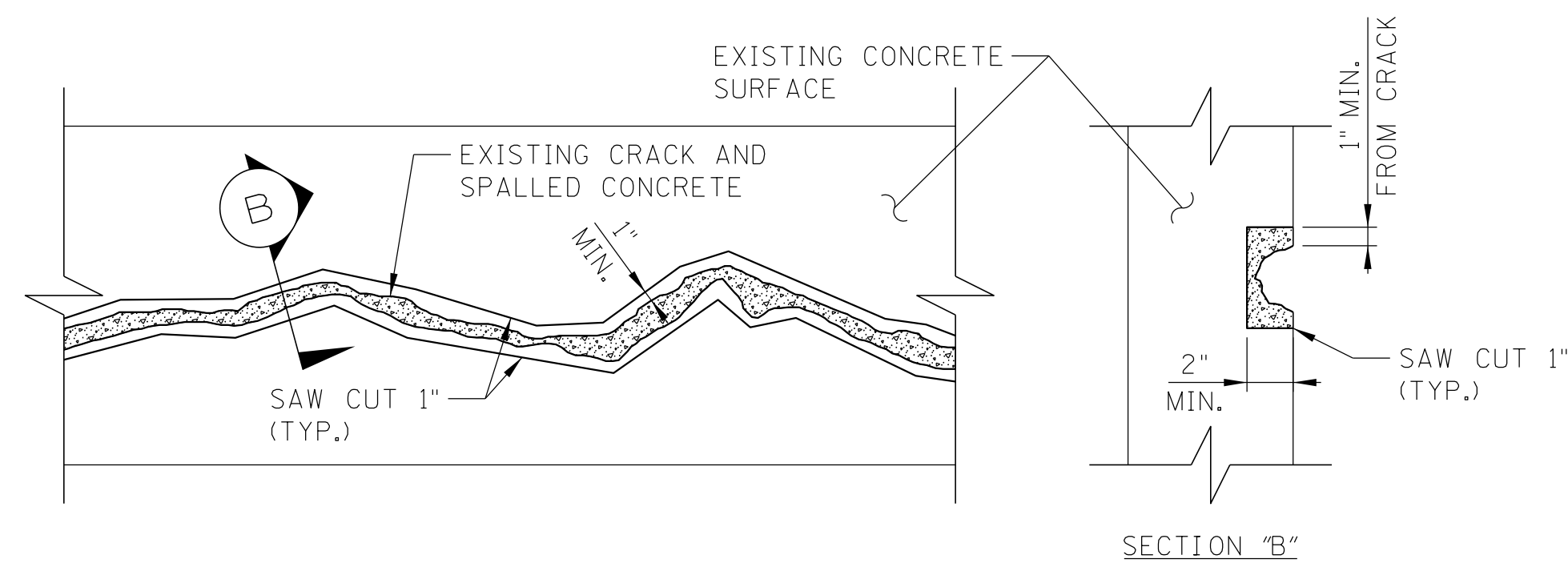
SUPERSTRUCTURE REPAIR DETAILS
INTERSTATE 440
DAVIDSON COUNTY
2018

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DESIGNED BY	H.H. NEAL	DATE	2018
DRAWN BY	M.D. SIMPSON	DATE	2018
SUPERVISED BY	G.S. WILSON	DATE	2018
CHECKED BY	G.S. WILSON	DATE	2018

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DETAIL SHOWING CRACKED CONCRETE SURFACE TO BE REPAIRED

THE CONTRACTOR MAY OBTAIN A LIST OF ACCEPTABLE BRANDS OF POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TEST.

COST OF SAW CUTTING, REMOVING SPALLED CONCRETE, NEW POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL, LABOR, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN CONCRETE REPAIRS (CRACKS), L.F.

SPECIAL NOTES FOR EPOXY INJECTION

UNLESS OTHERWISE NOTED, THE INTENT OF THIS SPECIFICATION IS FOR DESIGNATED CRACKS TO BE INJECTED THEIR FULL LENGTH AND DEPTH.

DESIGNATED CRACKS SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE FILLING ALL VOIDS FOR THE CRACK DEPTH OR THICKNESS OF THE MEMBER. THE EPOXY RESIN ADHESIVE SHALL BE ON THE CURRENT QUALIFIED PRODUCTS LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TEST. ALL CRACKS SHALL BE INJECTED USING AN ADHESIVE SUITABLE FOR THE FIELD CONDITIONS (CRACK WIDTH, TEMPERATURE, HUMIDITY, ETC.) RECOMMENDED BY THE ADHESIVE MANUFACTURER AS SHOWN ON MATERIAL DATA SHEETS. FOLLOWING INJECTION, ALL INJECTION PORTS AND CAPPING MATERIAL SHALL BE REMOVED FROM EXPOSED SURFACES LEAVING THE SURFACE SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES. THIS WORK ALSO INCLUDES MAKING ANY EXISTING INJECTION PORTS (FROM A PREVIOUS REPAIR PROJECT) SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

THE CONTRACTOR SHALL HAVE SUFFICIENT EXPERIENCE AND TRAINING TO PERFORM THE EPOXY INJECTION IN ACCORDANCE WITH THESE PLANS. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A WRITTEN PROCEDURE FOR PERFORMING THE EPOXY INJECTION. THE PROCEDURE SHALL DESCRIBE IN DETAIL HOW THE WORK WILL BE PERFORMED. THE PROCEDURE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION:

- 1) DESCRIPTION OF EQUIPMENT.
 - A. THE INJECTION EQUIPMENT SHALL BE OF THE TYPE THAT MIXES ADHESIVE COMPONENTS AT THE INJECTION HEAD.
 - B. THE INJECTION EQUIPMENT SHALL BE CAPABLE OF DISCHARGING MIXED ADHESIVE AT ANY PRESSURE UP TO 300 PSI. THE INJECTION EQUIPMENT SHALL BE EQUIPPED WITH GAUGES WHICH CAN MEASURE THE INJECTION PRESSURE AND VOLUME.
- 2) EQUIPMENT CALIBRATION PROCEDURES AND SCHEDULE.
- 3) MATERIALS TO BE USED (INCLUDING MANUFACTURER DATA SHEETS).
 - A. CAPPING MATERIAL
 - B. EPOXY ADHESIVE (TYPE TO BE APPROPRIATE FOR CRACK SIZES TO BE INJECTED).
- 4) PORT SPACING
 - A. PORT SPACING SHALL NOT BE LESS THAN THE THICKNESS OF THE CONCRETE IN THAT LOCATION.
- 5) INJECTION SEQUENCE
 - A. INJECTION SHALL PROCEED FROM LOWER END OF CRACK ALONG ADJACENT PARTS.
 - B. SKIPPING OF PORTS DURING INJECTION SHALL NOT BE ALLOWED.

THE CONTRACTOR SHALL HAVE THE MANUFACTURER'S INSTRUCTIONS FOR PROPORTIONING AND MIXING AVAILABLE AT THE JOB SITE AT ALL TIMES AND SHALL ENSURE THAT THE EQUIPMENT IS SUPPLYING THE MIXED ADHESIVE IN THE CORRECT PROPORTIONS.

TO ENSURE PROPER MIXING AND PROPORTIONING, SAMPLES SHALL BE TAKEN FROM THE INJECTOR HEAD. SAMPLES SHALL BE TAKEN AT THE START OF EACH WORKDAY AND EACH TIME THE ADHESIVE RESERVOIRS ARE REFILLED. THE SAMPLES SHALL BE IN A TEST CUP. THE SAMPLE SHALL BE MONITORED TO ENSURE THAT THE CURE TIME IS IN COMPLIANCE WITH THE MANUFACTURER'S DATA SHEETS. IF THE SAMPLES DO NOT CURE IN THE SPECIFIED TIME THEN THE EQUIPMENT USED TO PRODUCE THE SAMPLE SHALL NOT BE USED UNTIL THE PROBLEM IS CORRECTED.

CORE SAMPLES SHALL BE TAKEN AS VERIFICATION OF THE QUALITY OF WORK. THE CONTRACTOR SHALL TAKE ONE (1) TWO (2) INCH DIAMETER (FULL DEPTH OF CONCRETE AT LOCATION CORED) CORE SAMPLE STARTING WITH THE FIRST REPAIR LOCATION THEN EVERY TENTH REPAIR LOCATION AFTERWARDS. WORK SHALL NOT PROCEED UNTIL THE CORE SAMPLE IS TAKEN AND ACCEPTED. ALL CORE SAMPLES AND HOLES SHALL BE INDEXED FOR FUTURE REFERENCE. THE ENGINEER SHALL DESIGNATE ALL LOCATIONS TO BE CORED. IF ANY CORES SHOW UNACCEPTABLE RESULTS, ALL WORK SHALL BE STOPPED UNTIL THE CONTRACTOR SUBMITS A PROPOSAL FOR CORRECTING UNACCEPTABLE WORK.

THE INITIAL CORE WILL ALSO SERVE TO QUALIFY THE FOREMAN FOR THIS WORK. IF AT ANY TIME A NEW FOREMAN IS USED, HE SHALL BE QUALIFIED WITH A CORE SAMPLE.

THE CONTRACTOR, AT HIS EXPENSE, SHALL REPAIR ALL CORE HOLES WITH AN APPROVED CEMENTITIOUS PATCHING MATERIAL.

CORE SAMPLES SHALL BE VISUALLY INSPECTED TO CONFIRM THAT CRACKS ARE COMPLETELY FILLED WITH ADHESIVE. ANY CORE HAVING LESS THAN 95% OF THE CRACK FILLED WITH ADHESIVE SHALL BE CONSIDERED UNACCEPTABLE AND BE REJECTED.

CORE SAMPLES SHALL BE TESTED FOR BOND STRENGTH. SAMPLES MAY BE FRACTURED BY HAMMER BLOW TO CRACK AREA OR THROWN AT A HARD SURFACE. IF ADHESIVE FAILURE OCCURS BEFORE CONCRETE FAILURE, THE CORE SHALL BE CONSIDERED UNACCEPTABLE AND REJECTED.

PAYMENT FOR EPOXY INJECTION CRACK REPAIR SHALL BE MADE UNDER:

EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F. AND
EPOXY INJECTION (INJECTION), GAL

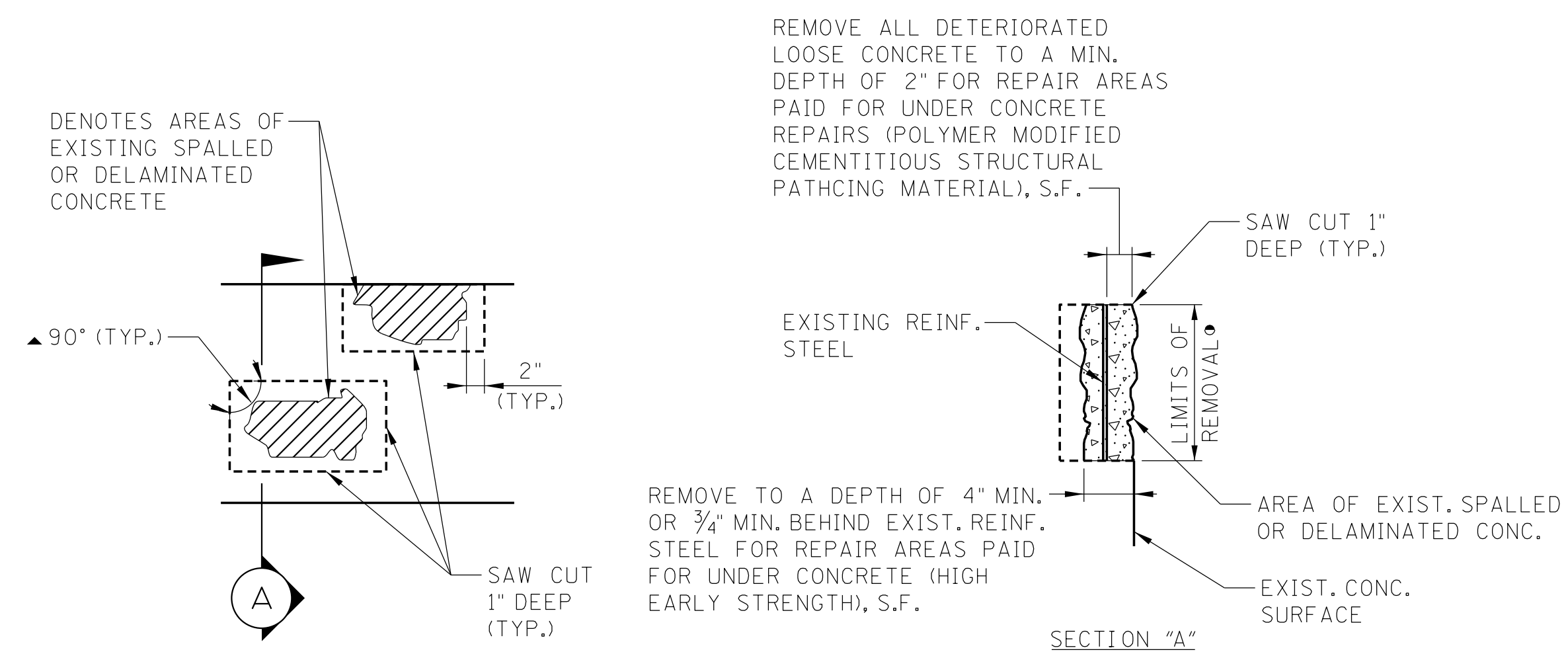
PRICE BID FOR EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F., SHALL INCLUDE COST OF ALL LABOR AND MATERIALS (EXCEPT ADHESIVE) FOR GRINDING FOR SURFACE PREPARATION, CRACK PREPARATION, CAPPING, INJECTION OF ADHESIVE, ALL SAMPLING AND TESTING, REMOVAL OF CAPPING MATERIAL AND PORTS, AND OTHER INCIDENTALS. CRACKS SHALL BE MEASURED FOR PAYMENT ALONG THE LENGTH OF THE VISIBLE SURFACE CRACK.

PRICE BID ALSO INCLUDES ALL COSTS ASSOCIATED WITH MAKING THE EXISTING INJECTION PORTS (FROM A PREVIOUS REPAIR PROJECT) SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACE.

PRICE BID FOR EPOXY INJECTION (INJECTION), GAL, SHALL INCLUDE COST FOR ADHESIVE MATERIAL INJECTED ONLY.

NO PAYMENT SHALL BE MADE FOR REWORK DEEMED NECESSARY BY FAILURE OF ADHESIVE SAMPLES OR CORE SAMPLES.

ALL WORK INCLUDING SAMPLING AND TESTING SHALL BE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE OR CONTRACT INSPECTORS. ANY WORK DONE WITHOUT INSPECTORS PRESENT SHALL NOT BE PAID FOR. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH WEEKLY SCHEDULES OF WORK TO BE PERFORMED. SCHEDULES SHALL BE SUBMITTED AT LEAST THREE (3) DAYS IN ADVANCE OF WORK TO BE DONE. THE ENGINEER SHALL BE NOTIFIED OF ANY CHANGE IN THE SCHEDULE A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE OF CHANGE.



DETAILS SHOWING AREAS OF EXIST. SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

- DENOTES: LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.
- ▲ DENOTES: SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS.

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED OR DELAMINATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED EXISTING REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALLED OR DELAMINATED AREA TO BE REPAIRED UNDER CONCRETE REPAIRS OR CONCRETE. PATCHING MATERIAL FOR CONCRETE SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR CONCRETE REPAIRS SHALL BE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL. SEE QUALIFIED PRODUCTS LIST (SECTION B, OPL 13.009).

COST OF SAW CUTTING, REMOVING SPALLED OR DELAMINATED CONCRETE, CLEANING, PATCHING MATERIAL, LABOR, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN CONCRETE REPAIRS (POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL), S.F. OR CONCRETE (HIGH EARLY STRENGTH), S.F.

THE ENGINEER SHALL DESIGNATE ALL SPALLED OR DELAMINATED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. CONCRETE REPAIRS OR CONCRETE MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1. PNEUMATIC HAMMERS HEAVIER THAN THE 35 LB. CLASS SHALL NOT BE USED.
2. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL.

PNEUMATICALLY PLACED CONCRETE IS NOT ALLOWED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONCRETE REPAIR DETAILS
INTERSTATE 440
DAVIDSON COUNTY
2018

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DRAWN BY	M.D. SIMPSON	DATE	2018
SUPERVISED BY	G.S. WILSON	DATE	2018
CHECKED BY	G.S. WILSON	DATE	2018