

A GENERAL

- A1 STRUCTURAL WORK SHALL CONFORM TO THE NINTH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE-780 CMR (MSBC), AND APPENDIX "C" OF ACI-350.
- A2 EXAMINE ARCHITECTURAL, MECHANICAL, HVAC, PLUMBING, INSTRUMENTATION, AND ELECTRICAL DRAWINGS FOR VARIATIONS OF LOCATIONS AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, WASHES, DRIPS, REVEALS, DEPRESSIONS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- A3 VERIFY AND COORDINATE DIMENSIONS RELATED TO THIS PROJECT. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- A4 TYPICAL DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE BY CONTRACT DOCUMENTS.
- A5 DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION AS DETERMINED BY THE ENGINEER.

B DEMOLITION AND EXCAVATION

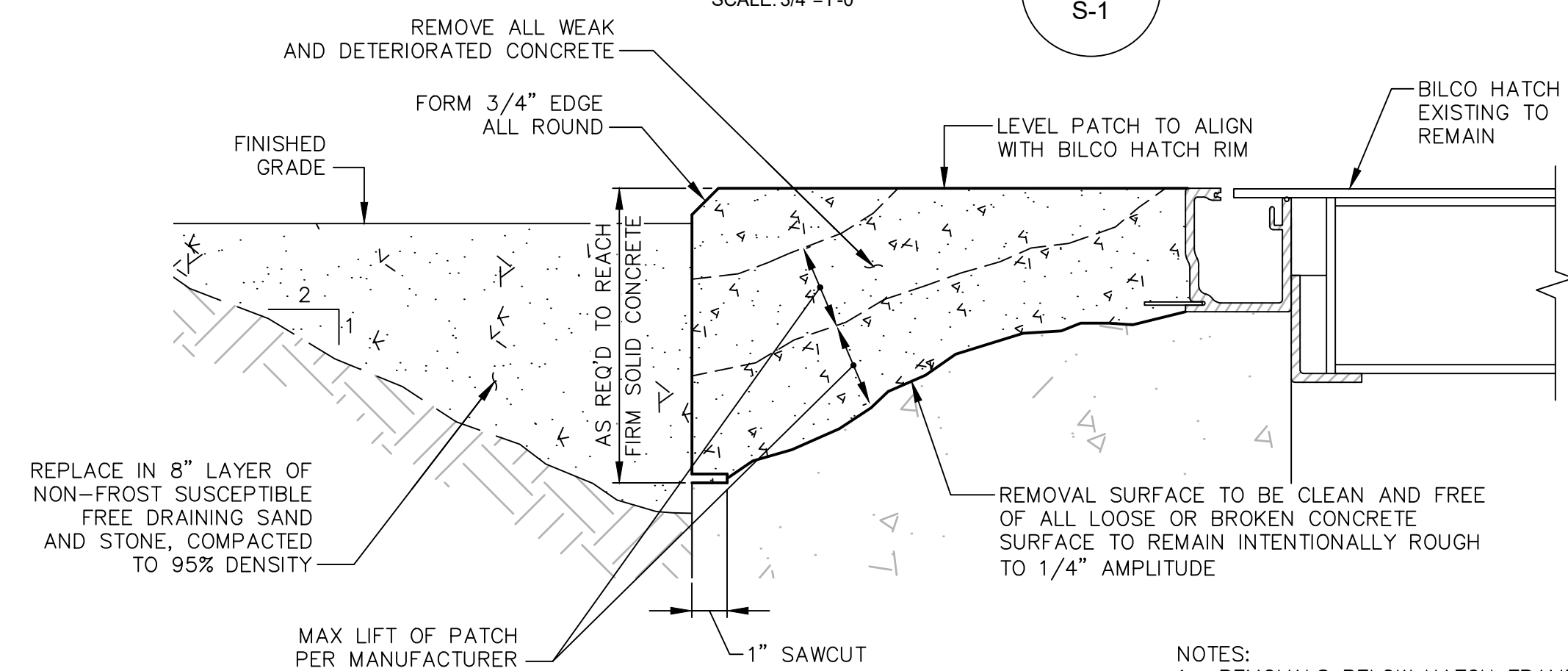
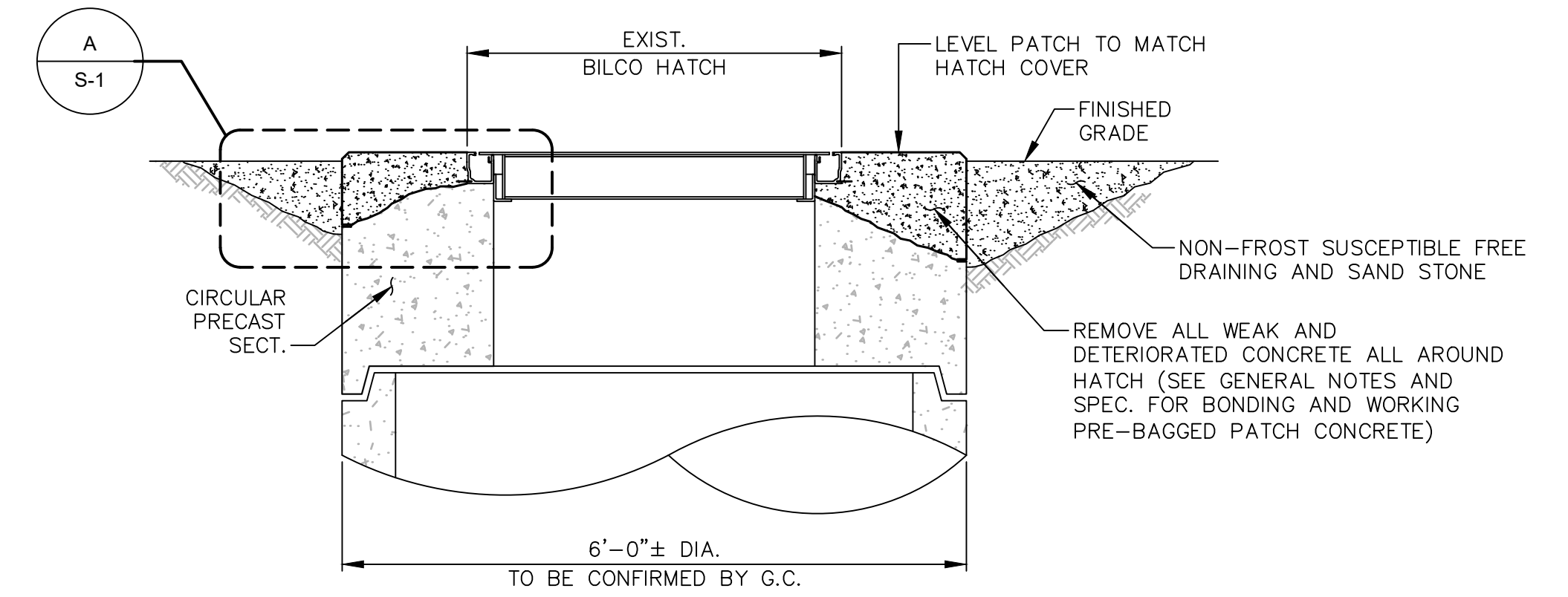
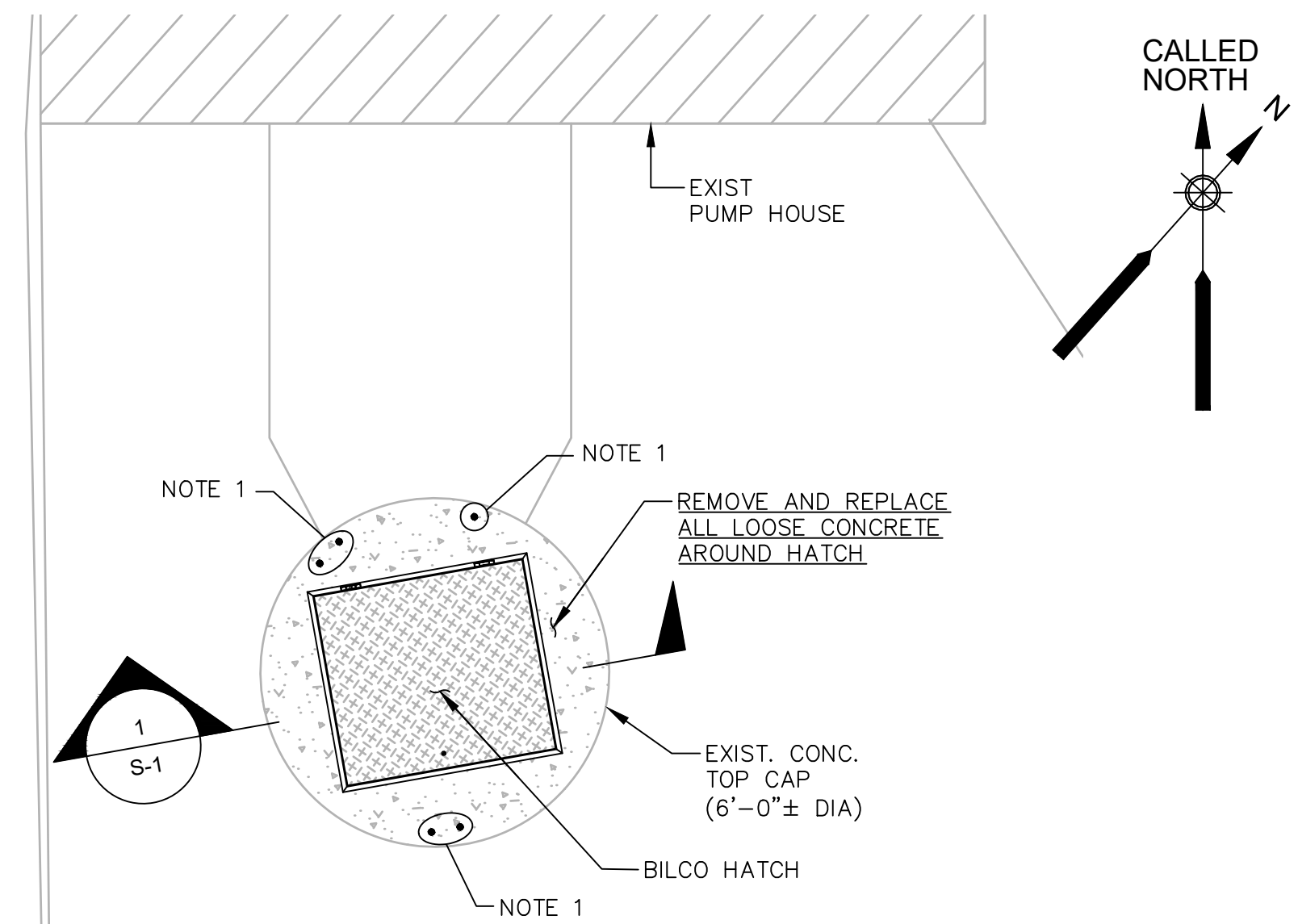
- B1 BEFORE PROCEEDING WITH ANY DEMOLITION, THE AREA MUST BE EVALUATED BY THE CONTRACTOR TO ENSURE THAT NO DAMAGE WILL BE IMPARTED TO ANY STRUCTURE BEYOND THE LIMITS OF THE DEMOLITION, INCLUDING ELECTRICAL AND PLUMBING BURIED IN THE SOIL.
- B2 PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED DURING DEMOLITION. SHORING MUST NOT DAMAGE THE STRUCTURE DURING THIS REMOVAL OPERATION. POSITION SHORING TO PROVIDE UNIFORM SUPPORT TO THE ELEMENTS BEING SUPPORTED. MAINTAIN ALL TEMPORARY SHORING AND CONSTRUCTION IN-PLACE UNTIL NEW WORK IS COMPLETE.
- B3 PROMPTLY REMOVE DEMOLISHED DEBRIS AND ITEMS OF REMOVAL FROM THE STRUCTURE AND LEGALLY STORE OR DISPOSE.
- B4 REMOVE SOIL FROM SUBSTRUCTURES AS REQUIRED, LEAVING THE THE REMAINING SOIL AT AN ANGLE OF REPOSE EQUAL TO A SLOPE OF 2H:1V AWAY FROM THE LIMIT OF SUBSTRUCTURE EXCAVATIONS.
- B5 DO NOT ALLOW DEBRIS TO FALL INTO WET WELL. PROVIDE SHORING WITHIN THE IMMEDIATE ZONE OF THE EXCAVATION OR REMOVAL OPERATION TO RETAIN DEBRIS.
- B6 PROCEED WITH CAUTION DURING REMOVAL OF SOIL AT EDGE OF WET WELL FOUNDATION. AVOID IMPACT LOADS FROM EXCAVATION EQUIPMENT. DO NOT POSITION OR RUN DUMP TRUCKS OR EXCAVATORS DIRECTLY OVER ANY SUBSTRUCTURE ELEMENT. KEEP A MINIMUM OF 10'-0" AWAY FROM EDGE OF SUBSTRUCTURE FOUNDATIONS.
- B7 PROTECT EXISTING FOUNDATIONS DURING EXCAVATION AS REQUIRED BY FIELD CONDITIONS.
- B8 CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY EXISTING SUBSOIL STRUCTURES OR ELEMENTS THAT ARE NOT SHOWN OR DESCRIBED WITHIN THESE PLANS. DO NOT PROCEED UNTIL WRITTEN PERMISSION IS OBTAINED FOR REMOVAL OR RELOCATION.
- B9 DO NOT "LIFT" ANY STRUCTURE DURING PLACEMENT OF SHORING OR BRACING. PLACE SHORING OR BRACING SNUG-TIGHT AGAINST THE STRUCTURE ENSURING THAT NO DEFLECTION IS IMPARTED OR THAT NON-UNIFORM SUPPORTS CAUSE POINT OVERLOADS AND DAMAGE TO THE STRUCTURE.
- B10 REMOVAL OF DISTRESSED PRECAST CONCRETE ON TOP OF WET WELL COVER MUST BE DONE WITH CARE. REMOVAL OPERATIONS MUST NOT FRACTURE OR DAMAGE CONCRETE THAT IS TO REMAIN. ELECTRICAL CONDUIT AND PLUMBING PIPES MAY RUN BELOW THE AREA OF REMOVAL. REINFORCING BARS AND OLD BURNED-OFF LIFTING LOOPS EXTENDING INTO THE REMOVED ELEMENT AND NOT COVERED WITH A MINIMUM OF 2" OF NEW CONCRETE, MUST BE REMOVED TO A DEPTH OF 2" BELOW THE FINISHED SURFACE. WHEN REMOVING WEAK CONCRETE, USE ONLY LIGHT IMPACT HAMMERS (15 POUND) TO REMOVE THE LAST INCH OF CONCRETE AROUND THE TOP SO AS TO AVOID FRACTURING THE CONCRETE THAT WILL REMAIN. CUT NO REINFORCING BARS THAT RUN WITHIN OR CONTINUE THROUGH THE WET WELL CAP.

C CONCRETE

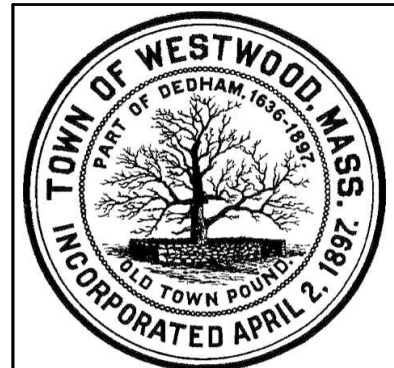
- C1 WHEN DISTRESSED CONCRETE IS SCHEDULED FOR REMOVAL IT SHALL BE DONE SO IN SUCH A MANNER AS TO LEAVE A SURFACE FREE OF FRACTURE CRACKS, FEATHERED EDGES, OR BACKSIDE SPALLS. USE ONLY LIGHT AIR HAMMERS (15 LB FOR FINAL REMOVAL, NO HEAVIER THAN 30 LB INITIAL DEMOLITION), POWER SAWS, HAND CHISELS, OR HYDRODEMOLITION (3,000 PSI TO 10,000 PSI) FOR THE FINAL ONE AND ONE HALF INCHES OF THE REMOVAL. SANDBLASTING WITH ADDED WATER WILL REDUCE AIRBORNE DEBRIS. NOTE WELL: THE REMOVAL EQUIPMENT IN USE, IN TERMS OF THE RESULTING DEBRIS BOTH WATER BASED AND AIRBORNE, MUST BE REVIEWED FOR ENVIRONMENTAL EFFECTS BY THE GC FOR COMPLIANCE WITH APPLICABLE CONTRACT DOCUMENTS. CUT NO EXISTING REINFORCING BARS THAT ARE TO REMAIN WITHIN THE ANCHORAGE ZONE OF THE EXISTING BILCO HATCH WHICH IS TO REMAIN.
- C2 ALTHOUGH ENCOUNTERING REBAR IN THIS RELATIVELY SHALLOW REPAIR IS NOT EXPECTED, IF REINFORCING IS FOUND THEN THE CONCRETE SURFACES TO BE BONDED TO MUST HAVE ANY AND ALL CRACKS, FRACTURED AREAS, OR HONEYCOMBING THAT PENETRATES UP AND IN-BETWEEN ANY GROUP OF EXPOSED REINFORCING BARS OR AROUND ANY SINGLE BAR, INCLUDING VERTICAL BARS, BY MORE THAN 50% OF THE BAR DIAMETER, SHALL HAVE ALL CONCRETE FURTHER REMOVED AROUND THE BAR FOR A DISTANCE ALONG THE BAR (AT A MINIMUM) EQUAL TO 4" OR UNTIL THE 50% CRITERIA IS NOT EXCEEDED. ANY REINFORCING BARS SO EXPOSED BY THIS REMOVAL OPERATION MUST HAVE THE CONCRETE TOTALLY REMOVED FROM AROUND THE SAID MENTIONED BARS BY AT LEAST 3/4". EXPOSED REINFORCING BARS THAT DO NOT EXCEED THE 50% CRITERIA, MAY BE LEFT IN A PARTIALLY EXPOSED CONDITION PROVIDED THE BAR IS FOUND TO BE CLEAN AND FREE OF EXTENSIVE CORROSION, THAT THE SURROUNDING CONCRETE IS FREE OF FRACTURES OR CRACKS, AND IS WELL BONDED TO THE BAR.

C CONCRETE (cont.)

- C3 ALL REINFORCING BARS WITHIN THE DESIGNATED ANCHORAGE OR SPLICE ZONE MUST BE WITHOUT DAMAGE FROM THE REMOVAL OPERATIONS. ANY BARS FOUND TO BE DAMAGED OR CUT THROUGH, MUST BE REPAIRED IN A MANNER ACCEPTABLE TO THE ENGINEER. ANY LOOSE REINFORCING BARS MUST BE SECURELY TIED TO PREVENT DISPLACEMENT DURING THE REPAIR. ANY REINFORCING BAR WITHIN THE SLAB EDGE THAT HAS LOST 15% OR MORE OF ITS CROSS SECTION, DUE TO CORROSION OR OTHER DAMAGE, MUST BE REPLACED OR REPAIRED. CORRODED REINFORCING BARS THAT ARE TO REMAIN WITHIN THE REPAIR MUST HAVE ALL EXPOSED SURFACES ABRADED OR BRUSHED CLEAN THAT IS FOUND TO BE DEFICIENT MUST BE REPLACED USING MECHANICAL SPLICE'S (MINIMUM COVER OF 2" MUST BE MAINTAINED TO SPLICER UNLESS IT IS GALVANIZED OR EPOXY COATED AND THE COVER MAY BE REDUCED TO 1-1/2"). NOTE WELL: WELD NO REINFORCING UNLESS IT CONFORMS TO ASTM A706. REINFORCING MAY BE ANCHORED IN SOUND CONCRETE WITH EPOXY. ALL MECHANICAL SPLICE'S MUST DEVELOP 125% OF THE BAR CAPACITY IN BOTH COMPRESSION AND TENSION. ANY LOOSE REINFORCING BARS MUST BE SECURELY TIED TO PREVENT DISPLACEMENT DURING THE REPLACEMENT OPERATION.
- C4 ALL REMAINING CONCRETE EDGES AT THE REMOVED AREAS SHALL PRESENT, AT A MINIMUM, A 1" PERPENDICULAR EDGE TO THE ORIGINAL PLANE OF THE CONCRETE, THAT IS, FOR VERTICAL EDGES OR HORIZONTAL, ENSURE THE SAW CUT IS PERPENDICULAR TO THAT SURFACE.
- C5 TAKE SPECIAL CARE NOT TO SPALL OUT BACK EDGES OF A REPAIR AREA, I.E. IF THE DISTRESSED OR CONCRETE EXTENDS INTO THE WET WELL CHAMBER BELOW THE HATCH TAKE CARE TO PREVENT SUCH DAMAGE BY BACKING OFF OF THE REMOVAL TOOL FORCE OR BACK PRESSURE APPLIED AGAINST A PLYWOOD BACKUP.
- C6 WHEN REMOVING CONCRETE FOR FULL DEPTH REPLACEMENT AREAS CARE MUST BE TAKEN TO SHAPE THE SLOPE OF THE REMAINING INTERFACE SO AS NOT TO ENTRAP AIR.
- C7 USE ONLY PREBAGGED MANUFACTURED REPAIR CONCRETE PER SPECIFICATIONS. FOLLOW MANUFACTURERS SPECIFICATIONS ESPECIALLY AS TO ENSURING A SATURATED SURFACE DRY SURFACE FOR THE AREA RECEIVING THE PATCH. BOND IS CRITICAL AND KEEPING A DAMP SURFACE IMPORTANT TO ENSURE THAT THE REPAIR IS ABLE TO WITHSTAND TIRE LOADING OF SERVICE VEHICLES TO THE PUMP STATION.
- C8 WHEN THE REPAIR THICKNESS PER MANUFACTURERS REQUIREMENTS IS EXCEEDED THEN SEVERAL LAYERS MUST BE INSTALLED. EACH LAYER TO BE PLACED AND CURED OUT PER MANUFACTURERS SPECIFICATIONS BEFORE THE NEXT LAYER IS PLACED. ENSURE THE PATCH MATERIAL BONDED SURFACE IS TOoled TO ENSURE BOND OF THE NEXT LAYER OF MATERIAL.
- C9 CURING OF THE PATCH IS CRITICAL AND MUST BE CAREFULLY OBSERVED AS TO ALL REQUIREMENTS. GENERALLY, THE PATCH IS COVERED WITH SEVERAL LAYERS OF WATER DAMPENED COTTON CLOTH AND THAT WET LAYER OF CLOTH IS THEN COVERED IN SHEET POLY THAT IS WEIGHTED OR TAPED IN PLACE TO RETAIN THE WATER FOR THE REQUIRED CURING PERIOD.

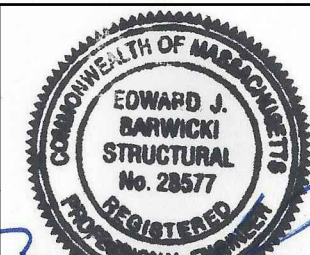


- NOTES:
1. REMOVALS BELOW HATCH FRAME ANCHORS MUST BE DONE WITH CARE TO AVOID DAMAGE TO HATCH. DO NOT LET DEBRIS FALL INTO WET WALL.
 2. PRIOR TO INSTALLING PRE-BAGGED NON-SHRINK CONCRETE PAINT EXPOSED PARTS OF HATCH THAT WILL BE IN CONTACT WITH THE PATCH CONCRETE WITH BITUMINOUS BASED PAINT (DAMP PROOFING).
 3. SEE GENERAL NOTES AND SPECIFICATIONS FOR BONDING AND WORKING PRE-BAGGED PATCH CONCRETE.



ENVIRONMENTAL PARTNERS

LIN ASSOCIATES, INC. CONSULTING ENGINEERS



Edward J. Sawinski
05/28/2020

MARK	DATE	DESCRIPTION

Scale	AS NOTED
Date	MAY 2020
Job No.	309-1902
Designed by	EJB
Drawn by	RWL
Checked by	EJB
Approved by	-

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

FAR REACH ROAD PUMP STATION UPGRADES
WESTWOOD MA

GENERAL NOTES, PLAN, SECTION AND DETAIL

FOR CONSTRUCTION
Sheet No.

S-1