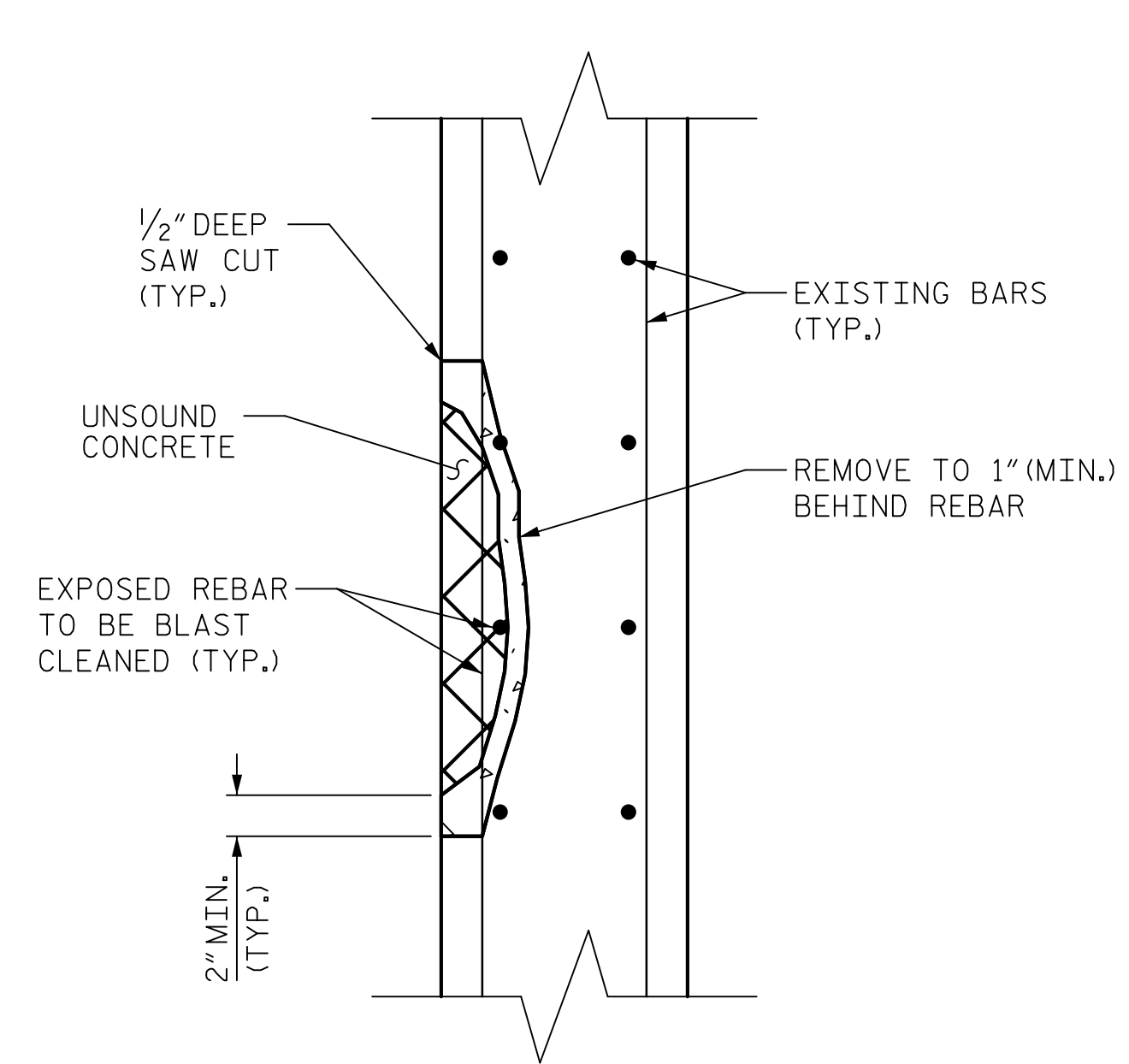


FACE REPAIR



SECTION A-A

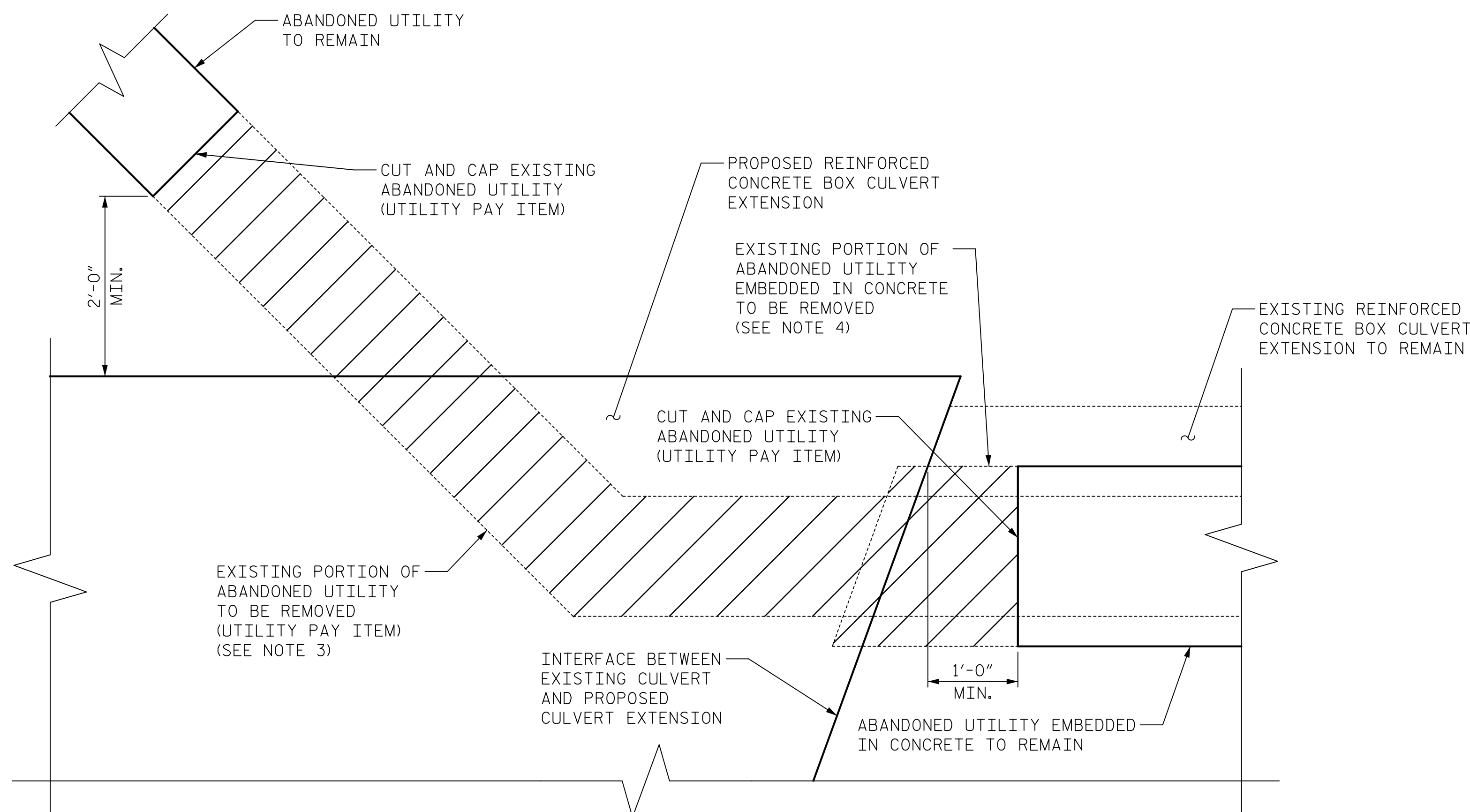
CULVERT REPAIR

NOTES:

- FOR SHALLOW REPAIRS THAT DO NOT ENGAGE REINFORCEMENT, ANCHOR PATCH MATERIAL USING 1/4" GALVANIZED BOLTS, EPOXY ANCHORED WITH 2" EMBEDMENT. PLACE IN A 6" GRID. USE A LATEX OR EPOXY PATCH MATERIAL FOR IMPROVED BOND.
- ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST.
- ENSURE NO CONTENTS INSIDE THE ABANDONED UTILITY PIPE EMPTY INTO THE WATERWAY DURING THE REMOVAL PROCESS.
- PAYMENT FOR REPAIR OF EXISTING CULVERT WALL AND SLAB AT LOCATION OF REMOVAL OF ABANDONED UTILITY EMBEDDED IN CONCRETE SHALL BE MADE UNDER CONCRETE REPAIRS.

REPAIR SEQUENCE:

- SOUND CONCRETE TO DETERMINE EXTENT OF REPAIR LOCATION.
- REMOVE SURFACE CONCRETE TO VERIFY SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A NOMINAL DEPTH OF 1/2".
- REMOVE CONCRETE WITHIN A SAW CUT AREA TO MINIMUM 1/2" DEPTH.
- ABRASIVE BLAST ALL EXPOSED EXISTING REINFORCING STEEL IN REPAIR AREAS TO REMOVE LOOSE CONCRETE, RUST SCALE, ETC. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED.
- REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
- PREPARE SURFACE AND PLACE APPROVED REPAIR MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.



UTILITY REMOVAL DETAIL

(UPSTREAM END OF BARREL 1)

**Mead & Hunt**  
 111 E. Hargett Street  
 Suite 300  
 Raleigh, NC 27601  
 919-714-8670  
 meadhunt.com  
 NC License No. F-1235



PROJECT NO. R-4707  
GUILFORD COUNTY  
 STATION: 56+34.85 -L-  
 SHEET 7 OF 7

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**CULVERT REPAIR DETAILS**

DRAWN BY : A.J. FORFA DATE : 03/06/19  
 CHECKED BY : J.S. HOBSON DATE : 04/17/19  
 DESIGN ENGINEER OF RECORD : J.S. HOBSON DATE : 04/26/19

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C1-08
1			3			TOTAL SHEETS
2			4			24