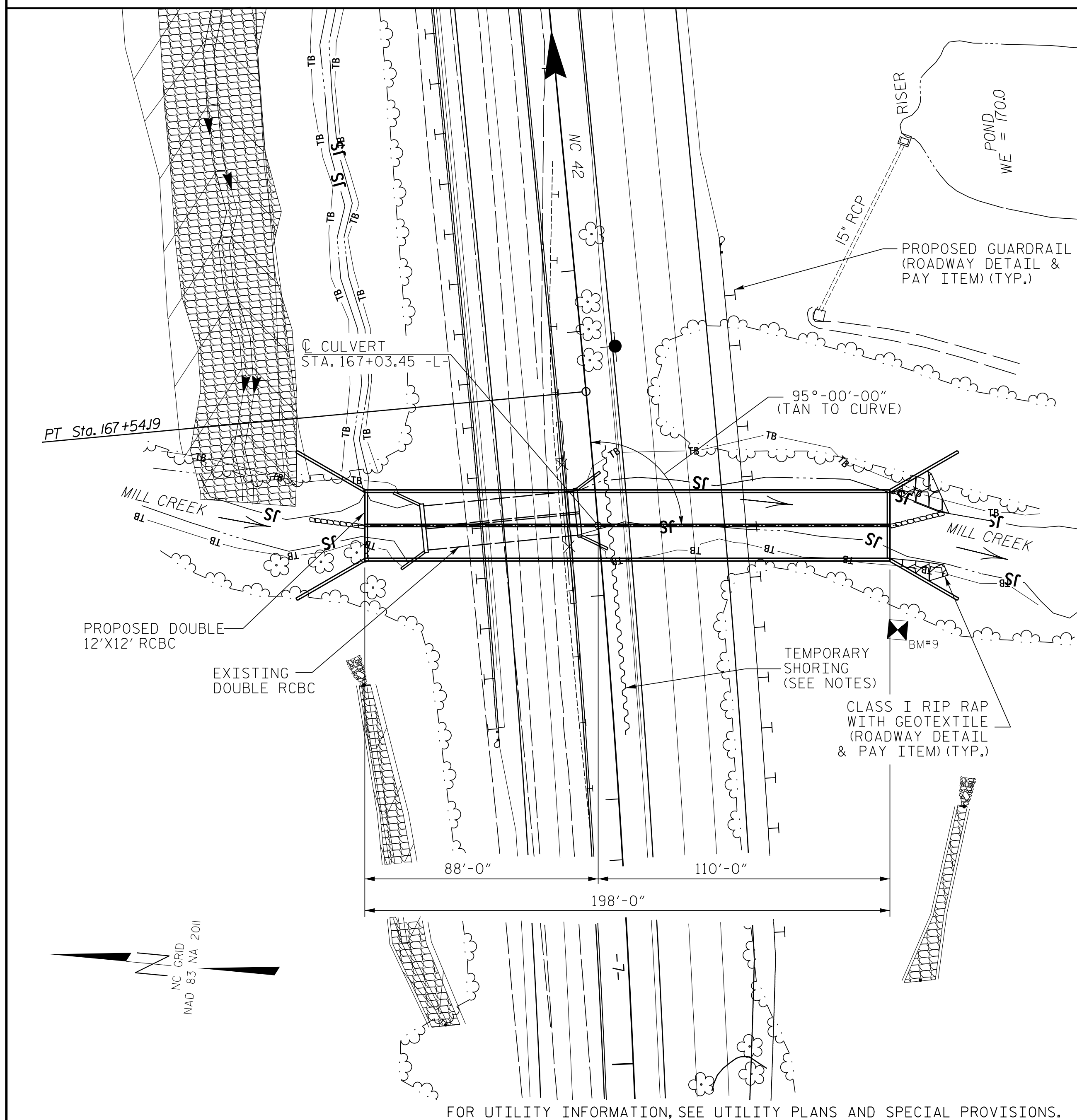
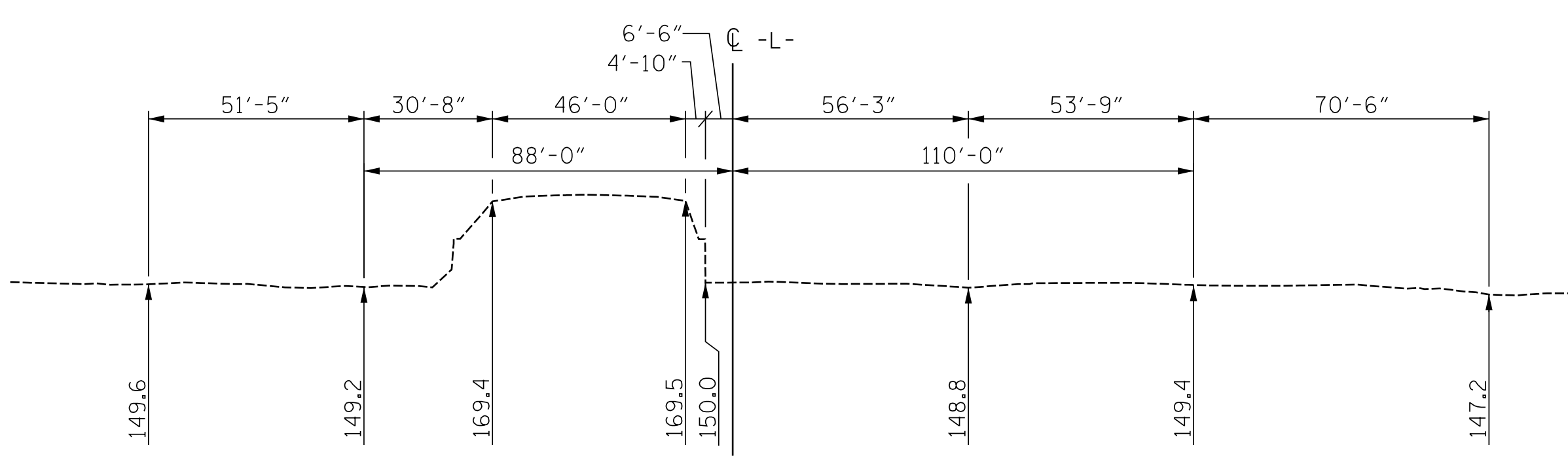


BM #9: RAILROAD SPIKE SET IN 15" PINE TREE
 118.27' RT OF -BL- STA. 176+57.72 N 691,918.76 E 2,186,774.25 EL. 156.10



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH



PROFILE ALONG C CULVERT

NOTES

- ASSUMED LIVE LOAD -----HL-93 OR ALTERNATE LOADING.
- DESIGN FILL-----MAX. = 16.4' MIN. = 14.1'
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER: (SEE ALSO "STAGING DIAGRAM", SHEET C3).
 - FOR STAGE 1A, WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
 - THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.
 - REPEAT SEQUENCE ABOVE FOR STAGES 1B, 2A, AND 2B.
- THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.
- DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.
- MAIN TRANSVERSE STEEL IN THE TOP AND BOTTOM SLABS SHALL BE CONNECTED ALONG THE LONGITUDINAL CONSTRUCTION JOINT EITHER VIA DOWELS OR MECHANICAL COUPLERS. IF ADEQUATE SPACE DOESN'T EXIST DURING STAGING, MECHANICAL COUPLERS HAVE BEEN DETAILED AND SHALL BE USED INSTEAD OF THE DOWELS. MECHANICAL COUPLERS SHALL BE IN ACCORDANCE WITH SECTION 1070-9 OF THE STANDARD SPECIFICATIONS.
- FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION ACTIVITIES, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC MANAGEMENT PLAN.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- THE EXISTING STRUCTURE, CONSISTING OF 2 @ 8' X 11.5' RCBC, LENGTH 59'-3" ALONG C/L W/ NATURAL BOTTOM AND LOCATED AT THE PROPOSED STRUCTURE, SHALL BE REMOVED.
- THE EXISTING STRUCTURE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING STRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE, THE EXISTING STRUCTURE IS PRESENTLY POSTED FOR LOAD LIMIT.

REMOVAL OF THE EXISTING STRUCTURE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE STRUCTURE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

EXCAVATE 1'-0" MIN. BENEATH CULVERT & WING FOOTING ELEVATIONS. REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414-4 OF THE STANDARD SPECIFICATIONS.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

| TOTAL STRUCTURE QUANTITIES | |
|----------------------------------|--------------|
| REMOVAL OF EXISTING STRUCTURE | LUMP SUM |
| ASBESTOS ASSESSMENT | LUMP SUM |
| CULVERT EXCAVATION | LUMP SUM |
| FOUNDATION CONDITIONING MATERIAL | 430 TONS |
| CLASS A CONCRETE | |
| BARREL & SILLS @ 4.1 CY/FT | 815.8 C.Y. |
| WINGS ETC. | 90.7 C.Y. |
| TOTAL | 906.5 C.Y. |
| REINFORCING STEEL | |
| BARREL & SILLS | 149,670 LBS. |
| WINGS ETC. | 6,256 LBS. |
| TOTAL | 155,926 LBS. |

GRADE DATA

GRADE POINT ELEV. @ -L- STA. 167+03.45 = 176.60'
 BED ELEV. @ -L- STA. 167+03.00 = 147.90'
 ROADWAY SLOPES 3:1

HYDRAULIC DATA

| | | |
|-------------------------------|---------|-------|
| DESIGN DISCHARGE | = 1900 | CFS |
| FREQUENCY OF DESIGN DISCHARGE | = 50 | YRS |
| DESIGN HIGH WATER ELEVATION | = 160.4 | FT |
| DRAINAGE AREA | = 3.6 | SQ MI |
| BASE DISCHARGE (Q100) | = 2100 | CFS |
| BASE HIGH WATER ELEVATION | = 161.0 | FT |

OVERTOPPING DATA

| | | |
|--------------------------|------------|-----|
| OVERTOPPING DISCHARGE | = 2700 (+) | CFS |
| FREQUENCY OF OVERTOPPING | = 500 (+) | YRS |
| OVERTOPPING ELEVATION | = 177.5 | FT |

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PROJECT NO. R-3825B
 JOHNSTON COUNTY
 STATION: 167+03.45 -L-

SHEET 1 OF 10

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DOUBLE 12'X12'
 CONCRETE BOX CULVERT
 ON MILL CREEK
 UNDER NC 42 BETWEEN
 SR 2677 AND SR 1704



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| DSG. ENG. OF RECORD.: CDB | | REVISIONS | | | | | | SHEET NO. |
|---------------------------|-----|-----------|-----|-----|-------|--|--------------|-----------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | | C1-1 | |
| 1 | MAF | 12/17 | 3 | | | | TOTAL SHEETS | |
| 2 | HLW | 12/17 | 4 | | | | 10 | |

V & M PROJECT NO.: 31740-03

7/17/2018 8:24:14 AM EDT