

TOTAL BILL OF MATERIAL

Table with 21 columns: PERMANENT STEEL CASING FOR 1066mm DIA. DRILLED PIER, 1066mm DIA. DRILLED PIERS IN SOIL, 1066mm DIA. DRILLED PIERS NOT IN SOIL, SID INSPECTION, SPT TESTING, CROSSHOLE SONIC LOGGING, CSL TUBES, REINFORCED CONCRETE DECK SLAB, GROOVING BRIDGE FLOORS, CLASS "A" CONCRETE, BRIDGE APPROACH SLABS, REINFORCING STEEL, SPIRAL COLUMN REINFORCING STEEL, MODIFIED 1600mm PRESTRESSED CONCRETE GIRDER, HP 310 X 79 STEEL PILES, CONCRETE BARRIER RAIL, PLAIN RIP RAP CLASS I (600mm THICK), FILTER FABRIC FOR DRAINAGE, ELASTOMERIC BEARINGS, EVAZOTE JOINT SEALS. Rows include SUPERSTRUCTURE, END BENT 1, BENT 1-5, END BENT 2, and TOTAL.

CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS - LUMP SUM

GENERAL NOTES

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE IN METERS. ASSUMED LIVE LOAD = MS 18 OR ALTERNATE LOADING. FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SNSM. FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS. THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO STANDARD SPECIFICATIONS. REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS. THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 300mm BELOW THE GROUND LINE. THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, 'EVALUATING SCOUR AT BRIDGES', NOVEMBER, 1995. THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC PERFORMANCE CATEGORY A. FOR TEMPORARY WORKBRIDGE, SEE CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS SPECIAL PROVISION.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

PILES AT END BENT NOS. 1 & 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 530 KN EACH.

WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

THE DRILLED PIERS AT BENT NOS. 1 THROUGH 5 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY IS 1400 kPa.

THE REQUIRED TIP BEARING AT BENT NOS. 1 THROUGH 5 SHALL BE VERIFIED.

DRILLED PIERS FOR BENT NOS. 1 THROUGH 5 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 2,983 KN AT THE TOP OF THE COLUMN.

PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT BENT NOS. 1 AND 5.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENT NOS. 2 THROUGH 4 AND THE CASING SHALL NOT EXTEND BELOW ELEVATION 58.0 m WITHOUT THE ENGINEER'S PERMISSION.

DRILLED PIERS AT BENT NO. 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 51.0 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 2 (LEFT AND CENTER) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 45.2 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 2 (RIGHT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 47.4 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 3 (LEFT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 52.0 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 3 (CENTER AND RIGHT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 50.2 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 4 (LEFT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 50.6 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 4 (CENTER AND RIGHT) SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 48.0 m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

DRILLED PIERS AT BENT NO. 5 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 50.6 m AND SATISFY REQUIRED TIP BEARING CAPACITY.

THE SCOUR CRITICAL ELEVATION FOR BENT NOS. 2 THROUGH 5 IS 60.0 m, 59.8 m, 59.6 m, AND 61.0 m, RESPECTIVELY. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

SPT TESTING IS REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NOS. 1, 2, AND 4.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NOS. 3 AND 5.

SID INSPECTIONS MAY BE REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NOS. 1, 2, 3, 4 OR 5.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT NOS. 1 THROUGH 5. SEE SPECIAL PROVISIONS FOR CROSSHOLE SONIC LOGGING.

THE CONTRACTOR HAS THE OPTION OF USING EITHER SLURRY CONSTRUCTION OR TEMPORARY CASING TO CONSTRUCT THE DRILLED PIERS.

DO NOT DEWATER THE DRILLED PIER EXCAVATIONS AT BENT NOS. 1, 2, 3, 4 OR 5. CLEAN THE BOTTOM OF THE EXCAVATION WITH A SUBMERSIBLE PUMP OR AN AIRLIFT. WET PLACEMENT OF CONCRETE IS REQUIRED. SEE DRILLED PIER SPECIAL PROVISION.

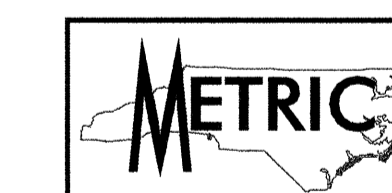
FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR METRIC STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

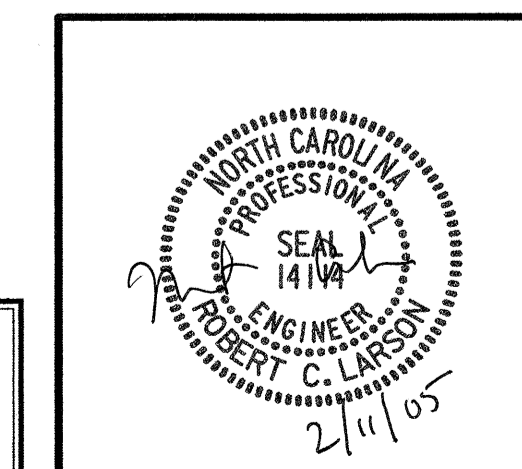
FOR FABRICATED METAL-STAY-IN-PLACE FORMS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.



PROJECT NO. R-2552AA  
WAKE - JOHNSTON COUNTY  
STATION: 14+38.000 -LREV- POT

SHEET 4 OF 4



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
TOTAL BILL OF  
MATERIAL &  
GENERAL NOTES  
(LEFT LANE)

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-143  
TOTAL SHEETS 429

DRAWN BY : W. B. ALLEN DATE : 12/04  
CHECKED BY : R. C. LARSON DATE : 12/04

REFERENCE NO. BL-4

02/11/2005 09:06:48 AM G:\proj\0204\2552A\Structure\Site\4\Leff.Lame\R2552AA-SD\_00\_03.dgn