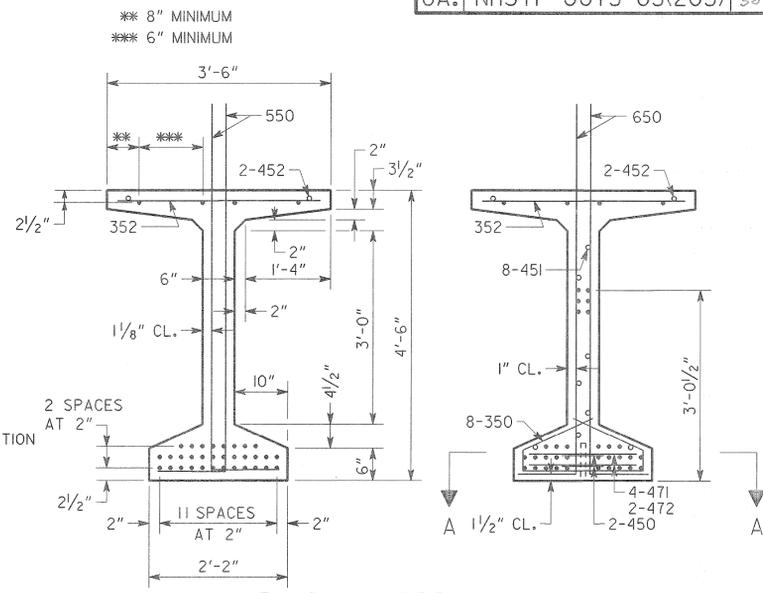


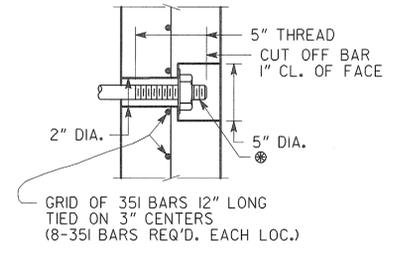
ELEVATION



SECTION AT MIDPOINT SECTION AT END

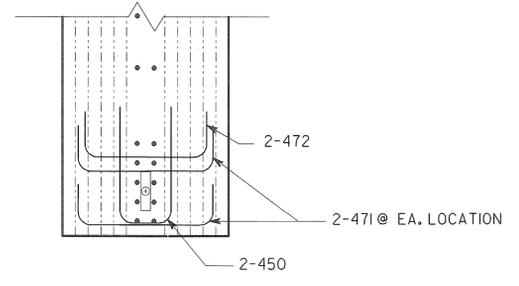
NOTES

- BEAMS SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES AND SHALL BE PICKED UP WITHIN 6'-9" FROM THEIR ENDS. DISREGARDING THIS REQUIREMENT COULD LEAD TO COLLAPSE OF THE BEAM. PICK-UPS SHALL BE EMBEDDED TO WITHIN 4" OF THE BOTTOM OF THE BEAM. DETAILS OF PICK-UPS SHALL BE INCLUDED IN THE SHOP DRAWINGS.
- CHAMFER EDGES OF BEAMS  $\frac{1}{2}"$ ,  $\frac{3}{4}"$  OR 1".
- HORIZONTAL DIMENSIONS ARE IN PLACE DIMENSIONS. THE BEAM LENGTH INCLUDES THE  $\frac{1}{8}"$  EPOXY MORTAR AT EACH END. SHOP DRAWINGS SHALL ADJUST HORIZONTAL DIMENSIONS FOR GRADE AND FABRICATION EFFECTS SUCH AS SHRINKAGE AND ELASTIC SHORTENING.
- AT  $\varnothing$  BEARING, FORM A  $\frac{1}{2}"$  DIAMETER X 7" DEEP HOLE AT THE FIXED ENDS AND A 6" X  $1\frac{1}{2}"$  X 7" DEEP SLOT AT THE EXPANSION ENDS FOR A  $1\frac{1}{4}"$  DIAMETER SMOOTH DOWEL. SEE PLAN AND ELEVATION SHEET FOR LOCATION OF FIXED AND EXPANSION ENDS.
- TOPS OF BEAMS SHALL BE ROUGH FLOATED AT APPROXIMATELY THE TIME OF INITIAL SET. ENTIRE TOP SHALL BE SCRUBBED TRANSVERSELY WITH A COARSE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGHENED SURFACE FOR BONDING TO THE SLAB. ROUGHENED SURFACE SHALL HAVE AN AMPLITUDE OF APPROXIMATELY  $\frac{1}{4}"$ . CONCRETE FINIS OR PROJECTIONS SHALL BE REMOVED TO PRODUCE A VERTICAL FACE AT THE EDGE OF THE BEAM.
- NON-COMPOSITE DEAD LOAD DEFLECTION ( $\Delta NC$ ) AT THE MIDPOINT IS DUE TO THE WEIGHT OF THE SLAB AND COPING.
- COMPOSITE DEAD LOAD DEFLECTION ( $\Delta C$ ) AT THE MIDPOINT IS DUE TO THE WEIGHT OF PARAPET AND SIDEWALK OR MEDIAN.
- STRANDS SHALL MEET ALL REQUIREMENTS OF ASTM A 416 GRADE 270.
- PRESTRESSING DATA IS AS FOLLOWS:
  - USE 36 - 0.6" DIAMETER LOW-RELAXATION ( $A = 0.217$  SQ IN) STRANDS. PRETENSION TOP FOUR (4) STRANDS TO 10,000 LBS EACH. PRETENSION BOTTOM STRANDS TO 43,943 LBS EACH.
  - PRETENSIONED STRANDS SHALL BE RELEASED AFTER THE CONCRETE HAS REACHED A MINIMUM STRENGTH ( $f'_c$ ) OF 6,800 PSI.
  - INCLUDING THE TOP STRANDS, THE TOTAL JACKING FORCE OF PRETENSIONING IS 1,446,176 LBS.
  - INCLUDING THE TOP STRANDS, THE NET PRESTRESSING FORCE OF THE STRANDS AFTER ALL LOSSES IS 988,588 LBS.
- CONCRETE STRENGTH ( $f'_c$ ) = 7,500 PSI.
- ALLOWABLE PSC BEAM TENSION = 520 PSI.

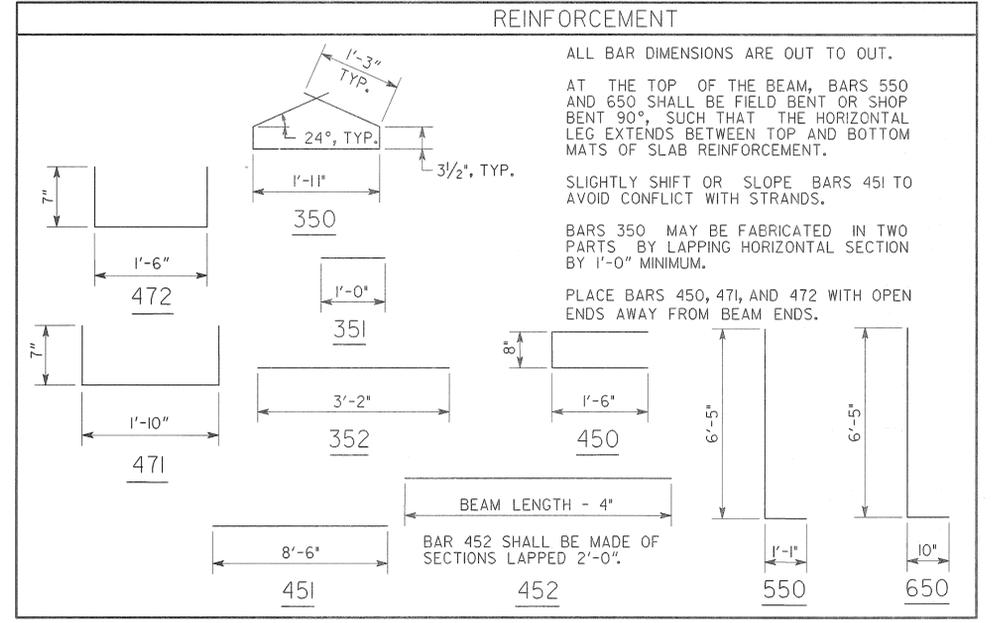


⊗ DIAPHRAGM BAR SHALL BE A 1" DIAMETER PLAIN BAR, THREADED 5" ON EACH END, WITH  $\frac{1}{4}"$  X  $3\frac{1}{2}"$  DIAMETER WASHERS AND HEX NUTS (ASTM A 709 GRADE 36).  
TIGHTEN DIAPHRAGM BAR AS PER SUB-SECTION 507.3.05.C OF THE GEORGIA DOT SPECIFICATIONS.  
AFTER EXCESS DIAPHRAGM BAR HAS BEEN CUT OFF, PAINT DIAPHRAGM BAR, WASHER, AND NUT EXPOSED IN RECESS WITH SPECIAL PROTECTIVE COATING NO. 2 P AS PER SECTION 535 OF THE GEORGIA DOT SPECIFICATIONS. AFTER PAINTING, FILL THE RECESS WITH AN APPROVED EPOXY GROUT.  
GALVANIZING OF THE DIAPHRAGM BAR AS PER SUB-SECTION 865.2.01.B.12 OF THE GEORGIA DOT SPECIFICATIONS IS NOT REQUIRED.

RECESS DETAIL FOR DIAPHRAGM BAR ENDS



SECTION A-A



BRIDGE NO. 1

**H&L Heath & Lineback Engineers INCORPORATED**  
2390 CANTON ROAD, BUILDING 200  
MARIETTA, GEORGIA 30066-5393  
(770)424-1668

GEORGIA  
**DEPARTMENT OF TRANSPORTATION**  
ENGINEERING DIVISION-OFFICE OF BRIDGES AND STRUCTURES

BULB TEE, 54 IN PSC BEAM  
CR 65 (UNION GROVE ROAD) OVER I-75  
GORDON COUNTY NHSTP-0075-03(203)

NO SCALE FEBRUARY 2011

DRAWING NO. 35 - 08  
BRIDGE SHEET 8 OF 15

DATE  
REVISIONS

DESIGNED: JRL	CHECKED: BKA / MS	REVIEWED: W.E.L./W.M.D.
DRAWN: JRL	DESIGN GROUP: EJC	APPROVED: BFR