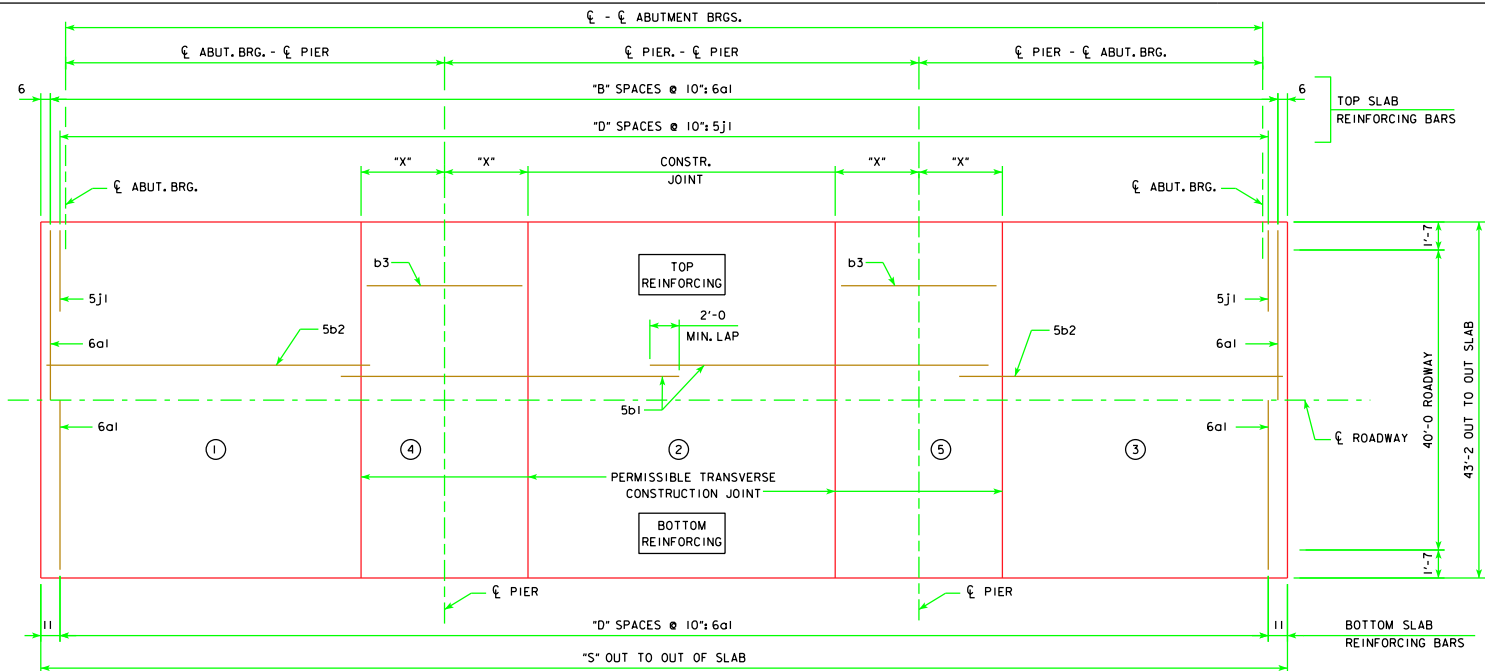


REVISED 07-10 - THE ESTIMATED QUANTITIES FOR STEEL BEAM CHANGED FOR THE OPEN RAIL ITEMS.



NOTE: CONCRETE DECK SLAB SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED. ALTERNATE PROCEDURES FOR PLACING SLAB CONCRETE MAY BE SUBMITTED FOR APPROVAL TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS.

| ESTIMATED QUANTITIES<br>(SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS) |                   | ℄-℄ ABUT. BRG. | 138'-10" | 151'-4" | 163'-10" | 176'-4" | 188'-10" | 201'-4" | 213'-10" | 226'-4" | 243'-0" |
|------------------------------------------------------------------|-------------------|----------------|----------|---------|----------|---------|----------|---------|----------|---------|---------|
| STRUCTURAL CONCRETE SUPERSTRUCTURE<br>(INCLUDES ABUTMENT WINGS)  | WITH BARRIER RAIL | C.Y.           | 213.7    | 227.6   | 250.1    | 264.2   | 278.3    | 304.5   | 318.6    | 333.1   | 352.1   |
|                                                                  | WITH OPEN RAIL    | C.Y.           | 216.2    | 230.3   | 253.1    | 267.4   | 281.8    | 308.0   | 322.3    | 337.1   | 356.3   |
| STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES)                    |                   | C.Y.           | 33.4     | 33.3    | 33.1     | 33.1    | 33.0     | -----   | -----    | -----   | -----   |
| STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES)                 |                   | C.Y.           | 35.0     | 35.0    | 35.0     | 35.0    | 35.0     | 43.0    | 43.0     | 43.0    | 43.0    |
| PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN              |                   | NO.            | 6-A50    | 6-A55   | 6-B59    | 6-B63   | 6-B67    | 6-C71   | 6-C75    | 6-C80   | 6-C80   |
| PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN                 |                   | NO.            | 12-A42   | 12-A46  | 12-B50   | 12-B55  | 12-B59   | 12-C63  | 12-C67   | 12-C71  | 12-C80  |
| CONCRETE RAIL (BARRIER OR OPEN)                                  |                   | L.F.           | 311.7    | 336.7   | 361.7    | 386.7   | 411.7    | 456.7   | 481.7    | 506.7   | 540.0   |
| STRUCTURAL STEEL (w/ PILE BENT PIERS & DRAINS)                   |                   | LB.            | 4823     | 4823    | 4911     | 4911    | 4911     | 4883    | 4883     | 4883    | 4883    |
| STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)                |                   | LB.            | 4255     | 4255    | 4255     | 4255    | 4255     | 4147    | 4147     | 4147    | 4147    |
| STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)                         |                   | LB.            | 5898     | 5898    | 5986     | 5986    | 5986     | 6153    | 6153     | 6153    | 6153    |
| STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)                      |                   | LB.            | 5330     | 5330    | 5330     | 5330    | 5330     | 5417    | 5417     | 5417    | 5417    |
| EPOXY COATED REINF. STEEL (w/ WOOD PILES & BARRIER RAIL)         |                   | LB.            | 62,023   | 66,285  | 71,036   | 75,938  | 80,308   | -----   | -----    | -----   | -----   |
| EPOXY COATED REINF. STEEL (w/ WOOD PILES & OPEN RAIL)            |                   | LB.            | 62,688   | 66,906  | 71,804   | 76,882  | 81,182   | -----   | -----    | -----   | -----   |
| EPOXY COATED REINF. STEEL (w/ STEEL H PILES & BARRIER RAIL)      |                   | LB.            | 62,033   | 66,208  | 70,851   | 75,753  | 79,948   | 87,396  | 92,678   | 96,944  | 102,747 |
| EPOXY COATED REINF. STEEL (w/ STEEL H PILES & OPEN RAIL)         |                   | LB.            | 62,698   | 66,829  | 71,619   | 76,697  | 80,822   | 89,240  | 94,431   | 98,894  | 104,743 |
| NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS                     |                   | NO.            | 28       | 30      | 32       | 32      | 34       | -----   | -----    | -----   | -----   |
| NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)              |                   | NO.            | 12       | 14      | 14       | 14      | 16       | 20      | 20       | 20      | 22      |
| PREBORED HOLES (w/ WOOD PILES)                                   |                   | L.F.           | 280      | 300     | 320      | 320     | 340      | -----   | -----    | -----   | -----   |
| PREBORED HOLES (w/ STEEL H-PILES)                                |                   | L.F.           | 120      | 140     | 140      | 140     | 160      | 200     | 200      | 200     | 220     |

| CONCRETE PLACEMENT QUANT.                              |                   | ℄-℄ ABUT. BRG. | 138'-10" | 151'-4" | 163'-10" | 176'-4" | 188'-10" | 201'-4" | 213'-10" | 226'-4" | 243'-0" |
|--------------------------------------------------------|-------------------|----------------|----------|---------|----------|---------|----------|---------|----------|---------|---------|
| SLAB INCLUDING HAUNCH, ABUT. DIAPHRAGM, & WINGWALLS**  | WITH BARRIER RAIL | C.Y.           | 118.2    | 126.2   | 139.6    | 147.8   | 155.8    | 173.2   | 181.6    | 190.2   | 209.2   |
|                                                        | WITH OPEN RAIL    | C.Y.           | 119.5    | 127.6   | 141.2    | 149.5   | 157.7    | 175.1   | 183.6    | 192.4   | 211.6   |
| SLAB INCLUDING HAUNCH, SECTION 2                       | WITH BARRIER RAIL | C.Y.           | 43.5     | 47.0    | 50.5     | 54.0    | 57.3     | 61.1    | 64.6     | 68.1    | 68.1    |
|                                                        | WITH OPEN RAIL    | C.Y.           | 44.2     | 47.8    | 51.3     | 54.9    | 58.3     | 62.1    | 65.6     | 69.2    | 69.2    |
| SLAB INCLUDING HAUNCH & PIER DIAPHRAGM, SECTIONS 4 & 5 | WITH BARRIER RAIL | C.Y.           | 44.8     | 47.2    | 52.4     | 54.8    | 57.6     | 61.8    | 64.0     | 66.4    | 66.4    |
|                                                        | WITH OPEN RAIL    | C.Y.           | 45.3     | 47.7    | 53.0     | 55.4    | 58.2     | 62.4    | 64.7     | 67.1    | 67.1    |
| ABUTMENT WINGS                                         |                   | C.Y.           | 7.2      | 7.2     | 7.6      | 7.6     | 7.6      | 8.4     | 8.4      | 8.4     | 8.4     |
| ABUTMENT FOOTINGS (w/ WOOD PILES)                      |                   | C.Y.           | 33.4     | 33.3    | 33.1     | 33.1    | 33.0     | -----   | -----    | -----   | -----   |
| ABUTMENT FOOTINGS (w/ STEEL H PILES)                   |                   | C.Y.           | 35.0     | 35.0    | 35.0     | 35.0    | 35.0     | 43.0    | 43.0     | 43.0    | 43.0    |

| GENERAL DATA                                           |                                                     | ℄-℄ ABUT. BRG. | 138'-10"                           | 151'-4"                             | 163'-10"                           | 176'-4"                            | 188'-10"                           | 201'-4"                            | 213'-10"                           | 226'-4"                            | 243'-0"                            |
|--------------------------------------------------------|-----------------------------------------------------|----------------|------------------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| VERTICAL                                               | TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG. | "U"            | 3'-8"                              | 3'-7 <sup>11</sup> / <sub>8</sub> " | 4'-2 <sup>1</sup> / <sub>8</sub> " | 4'-2 <sup>1</sup> / <sub>8</sub> " | 4'-2 <sup>1</sup> / <sub>8</sub> " | 4'-8 <sup>1</sup> / <sub>8</sub> " | 4'-8 <sup>1</sup> / <sub>8</sub> " | 4'-9 <sup>1</sup> / <sub>8</sub> " | 4'-9 <sup>1</sup> / <sub>8</sub> " |
| CURVE                                                  | TOP OF SLAB TO PIER TOP AT C.L. PIER#               | "U"            | 3'-6 <sup>1</sup> / <sub>8</sub> " | 3'-6 <sup>1</sup> / <sub>8</sub> "  | 4'-1 <sup>1</sup> / <sub>8</sub> " | 4'-1 <sup>1</sup> / <sub>8</sub> " | 4'-1 <sup>1</sup> / <sub>8</sub> " | 4'-7 <sup>1</sup> / <sub>8</sub> " | 4'-7 <sup>1</sup> / <sub>8</sub> " | 4'-7 <sup>1</sup> / <sub>8</sub> " | 4'-7 <sup>1</sup> / <sub>8</sub> " |
| STRAIGHT                                               | TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG. | "U"            | 3'-8 <sup>1</sup> / <sub>8</sub> " | 3'-7 <sup>11</sup> / <sub>8</sub> " | 4'-2 <sup>1</sup> / <sub>8</sub> " | 4'-2 <sup>1</sup> / <sub>8</sub> " | 4'-3                               | 4'-8 <sup>1</sup> / <sub>8</sub> " | 4'-8 <sup>1</sup> / <sub>8</sub> " | 4'-9 <sup>1</sup> / <sub>8</sub> " | 4'-9 <sup>1</sup> / <sub>8</sub> " |
| GRADE                                                  | TOP OF SLAB TO PIER TOP AT C.L. PIER#               | "U"            | 3'-6 <sup>3</sup> / <sub>8</sub> " | 3'-6 <sup>3</sup> / <sub>8</sub> "  | 4'-1 <sup>3</sup> / <sub>8</sub> " | 4'-1 <sup>3</sup> / <sub>8</sub> " | 4'-2 <sup>1</sup> / <sub>8</sub> " | 4'-7 <sup>1</sup> / <sub>8</sub> " | 4'-7 <sup>1</sup> / <sub>8</sub> " | 4'-8                               | 4'-8                               |
| D.L. PIER REACTION (D.L. + F.W.S.)                     |                                                     | KIPS           | 430.0                              | 464.6                               | 530.0                              | 566.5                              | 603.2                              | 722.1                              | 763.1                              | 804.5                              | 844.8                              |
| L.L. PIER REACTION (HL93) NO IMPACT                    |                                                     | KIPS           | 264.7                              | 274.5                               | 283.9                              | 293.1                              | 302.2                              | 311.0                              | 322.9                              | 341.9                              | 362.6                              |
| NO. OF SPACES FOR 6a1 BARS (TOP)                       |                                                     | "B"            | 169                                | 184                                 | 199                                | 214                                | 229                                | 244                                | 259                                | 274                                | 294                                |
| NO. OF SPACES FOR 6a1 BARS (BOTTOM) AND 5j1 BARS (TOP) |                                                     | "D"            | 168                                | 183                                 | 198                                | 213                                | 228                                | 243                                | 258                                | 273                                | 293                                |
| OUT TO OUT OF SLAB                                     |                                                     | "S"            | 141'-10"                           | 154'-4"                             | 166'-10"                           | 179'-4"                            | 191'-10"                           | 204'-4"                            | 216'-10"                           | 229'-4"                            | 246'-0"                            |
| SLAB TRANSVERSE CONSTR. JT. DISTANCE FROM C.L. PIER    |                                                     | "X"            | 6'-7"                              | 7'-1"                               | 7'-7"                              | 8'-1"                              | 8'-8"                              | 9'-2"                              | 9'-8"                              | 10'-2"                             | 10'-2"                             |

\* VALUES SHOWN ARE FOR FIXED PIERS ONLY AND ALLOW FOR 1/4 INCH DEFLECTION OF THE 1 INCH NEOPRENE BEARING PAD, AT EXPANSION PIER LOCATIONS ADD 3 1/8 INCHES TO "U" VALUES SHOWN.

\*\* WINGWALLS APPLY ONLY TO BRIDGES USING "C" BEAMS.

|                                                  |                      |                             |           |
|--------------------------------------------------|----------------------|-----------------------------|-----------|
| 07-10                                            | LATEST REVISION DATE | APPROVED BY BRIDGE ENGINEER |           |
| STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE |                      |                             |           |
| PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES   |                      |                             |           |
| AUGUST, 2009                                     |                      |                             |           |
| SUPERSTRUCTURE DETAILS                           |                      |                             | H40-09-06 |
| 0° SKEW                                          |                      |                             |           |