REINFORCING STEEL FOR 36° BR-1 TRANSITION MOUNTED ON WINGWALL

<table>
<thead>
<tr>
<th>MARK (X501)</th>
<th>LENGTH</th>
<th>TYPE</th>
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<tbody>
<tr>
<td>X501</td>
<td>13'-10&quot;</td>
<td>BENT</td>
</tr>
<tr>
<td>X502</td>
<td>12'-0&quot;</td>
<td>STR</td>
</tr>
<tr>
<td>X503</td>
<td>11'-8&quot;</td>
<td>STR</td>
</tr>
<tr>
<td>X504</td>
<td>10'-0&quot;</td>
<td>STR</td>
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<tr>
<td>Y501</td>
<td>6'-0&quot;</td>
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</tr>
<tr>
<td>Y502</td>
<td>3'-0&quot;</td>
<td>BENT</td>
</tr>
<tr>
<td>Y503</td>
<td>2'-8&quot;</td>
<td>BENT</td>
</tr>
</tbody>
</table>

LEGEND:
- BENT
- STR

I.F. = 1/2"

NOTE:
1. FOR ALL NEW JERSEY SHAPE CONCRETE BRIDGE RAILINGS INCLUDING THE 36° TRANSITION, PROJECT PLANS SHALL INCLUDE PLAN VIEW, ELEVATION VIEW, SECTIONS, REINFORCING MARY, REINFORCING BENDING DIAGRAM, AND REINFORCING WEIGHTS.
2. SEE APPROPRIATE STANDARD BRIDGE DRAWING FOR ARMATURE DETAILS.
3. FOR BRIDGE TERMINAL ASSEMBLY, SEE STD. CONNECT, DOWNS DOWS-3.1 AND DOWS-3.2.
4. FOR DEFLECTION JOINT DETAILS AND ADDITIONAL NOTES, SEE SHEET 025.

DETAIL A

SECTION A-A

NOTES:
1. FOR ALL NEW JERSEY SHAPE CONCRETE BRIDGE RAILINGS INCLUDING THE 36° TRANSITIONS, PROJECT PLANS SHALL INCLUDE PLAN VIEW, ELEVATION VIEW, SECTIONS, REINFORCING MARY, REINFORCING BENDING DIAGRAM, AND REINFORCING WEIGHTS.
2. SEE APPROPRIATE STANDARD BRIDGE DRAWING FOR ARMATURE DETAILS.
3. FOR BRIDGE TERMINAL ASSEMBLY, SEE STD. CONNECT, DOWNS DOWS-3.1 AND DOWS-3.2.
4. FOR DEFLECTION JOINT DETAILS AND ADDITIONAL NOTES, SEE SHEET 025.

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

PLAN VIEW

PLAN VIEW

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION A-A

SECTION A-A

SECTION A-A
NOTES:
1. FOR THE ENTIRE LENGTH OF NEW JERSEY SHAPE CONCRETE BRIDGE RAILINGS, PROJECT PLANS SHALL SHOW THE LOCATIONS OF DEFLECTION JOINTS.
2. DEFLECTION-JOINT SPACING SHALL NOT EXCEED 5'-0" ON CENTERS. FOR CONTINUOUS STRUCTURES, THE DEFLECTION JOINTS WITHIN THE DEAD LOAD COMPRESSION, NEGATIVE Moment REGIONS OVER THEIR LOCATIONS SHALL BE SPACED NOT LESS THAN 10'-0" OR MORE THAN 15'-0" ON CENTERS.
3. PAYMENT FOR 1/2" DIA. GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENT SHALL BE INCLUDED WITH CONTRACT PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL.
4. LIMITS OF SAWCUT IS SHOWN IN DETAIL A, SHEET 3 FOR 20" NEW JERSEY SHAPE CONCRETE BRIDGE RAILING AND DETAIL B, SHEET 3 FOR 42" NEW JERSEY SHAPE CONCRETE BRIDGE RAILING. THE 4" SAWCUT DEPTH SHOWN IN DETAIL A AND DETAIL B ARE THE MINIMUM REQUIRED. HOWEVER, THE CONTRACTOR HAS AN OPTION TO PERFORM FULL DEPTH SAWCUT.

DESIGN CRITERIA:

DESIGN DATA:
CONCRETE - COMpressive STRENGTH = 4,500 PSI REINFORCING STEEL - MINIMUM YIELD STRENGTH = 60,000 PSI AREA OF STANDARD 30" B1-1 CROSS SECTION = 0.492 SF. IN. VOLUME OF 30" B1-1 TRANSITION SECTION = 2.170 CU. YD.
AREA OF STANDARD 42" B1-1 CROSS SECTION = 0.820 SF. IN. VOLUME OF 42" B1-1 TRANSITION SECTION = 2.610 CU. YD.

DEFLECTION JOINTS FOR CONCRETE PARAPETS:
SAWCUT 1/2" INCH DEEP DEFLECTION JOINTS ALONG THE PERIMETER OF THE PARAPET WHEN THE PARAPET IS STILL GREEN OR AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.
AFTER THE CONCRETE CURING PERIOD SPECIFIED IN CMS N-1.5 HAS BEEN REACHED, PERFORM 1/2" SAWCUT THROUGH THE DRRP AS SHOWN IN DETAIL A, SHEET 3 FOR THE 30" NEW JERSEY SHAPE CONCRETE BRIDGE RAILINGS OR DETAIL B, SHEET 3 FOR THE 42" NEW JERSEY SHAPE CONCRETE BRIDGE RAILING.

THE CONTRACTOR HAS THE OPTION TO PERFORM FULL DEPTH SAWCUT. HOWEVER, THE SAWCUT SHOULD NOT BE LESS THAN 1/2" FROM THE TOP OF THE CONCRETE DECK SLABS.

USE A RULE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINTS ARE STRAIGHT, 1/4", AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHOULD BE THE WIDTH OF THE SAW BLADE, A MINIMUM WIDTH OF 1/2" INCH.

SEAL THE PERIMETER OF THE DEFLECTION JOINTS TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMER MATERIAL CONFORMING TO ASTM C930, TYPE 5. LEAVE THE BOTTOM 1/2" INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

AT EACH DEFLECTION JOINT LOCATION, USE GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCEMENT TO MAINTAIN THE RIGIDITY OF THE CASE ACROSS THE PROPOSED JOINTS AT THOSE TRANSITIONAL BARS AS SHOWN IN SECTIONS A-1 AND A-2 ABOVE. OTHER NON-DESTRUCTIVE REINFORCEMENT MAY BE PROPOSED FOR USE, SUBJECT TO APPROVAL BY THE ENGINEER.

FOR TRANSITION SECTION, PLACE A DEFLECTION JOINT AT THE BEGINNING OF THE M-0" TRANSITION. DEFLECTION JOINTS ARE NOT REQUIRED WITHIN THE M-0" TRANSITION SECTION.

MAXIMUM SPACING OF VERTICAL REINFORCING BARS FOR STANDARD 30" & 42" B1-1 PARAPETS:
THE MAXIMUM SPACING OF VERTICAL REINFORCING BARS FOR THE STANDARD 30" & 42" B1-1 PARAPET SHALL BE 7'-0" UNLESS NOTED OTHERWISE.

MAXIMUM SPACING OF VERTICAL REINFORCING BARS FOR 30" & 42" B1-1 TRANSITIONS:
THE MAXIMUM SPACING OF VERTICAL REINFORCING BARS FOR THE 30" B1-1 TRANSITION SECTION SHALL BE AS SHOWN ON SHEETS B1-1 (B1-2) OR B1-2.

THE MAXIMUM SPACING OF VERTICAL REINFORCING BARS FOR THE 42" B1-1 TRANSITION SECTION SHALL BE AS SHOWN ON SHEETS B1-1 (B1-2) OR B1-2.

MINIMUM ENRAINTMENT OF VERTICAL REINFORCING BARS:
IF THE MINIMUM ENRAINTMENT SHOWN FOR THE VERTICAL REINFORCING BARS INTO THE BRIDGE DECK, APPROACH SLABS, OR MASHzahl IBD BRIDGE DESIGN SPECIFICATIONS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.