# GENERAL NOTES

**DESIGN CRITERIA**

For AASHTO Standard Specifications for Highway Bridges.

**SPECIFICATIONS**

Materials and workmanship shall conform to the "Delaware Department of Transportation Standard Specifications" dated July 10, 1988, with current modifications, additions and special provisions.

**ELEVATIONS**

All elevations are taken from existing plans.

---

# PROJECT NOTES

**LOCATION**

Replacement of Bridge 1-112 on N.L. 257 over Red Clay Creek, New Castle County, Delaware.

**LOADING**

Achitect load or Delaware legal load for live load. 50 P.C.F. for timber dead load.

**STRESS GRAD**

All steel laminated timber shall be 2,400 psi, minimum allowable bending stress.

**PORT AND CLOSET CONCRETE**

Structural elements of Portland cement concrete shall be as noted:

- Class A: A-100 (1" x 6" O.C. Composed of Concrete)
- Class B: Footing 12" x 12" x 12" (500 P.C.F.)

**REQUIREMENTS FOR ON SITE SPECIALITY**

All exposed edges shall be chamfered 1/4" unless otherwise noted.

**REINFORCED STEEL**

Reinforced steel shall conform to AASHTO M166. 60,000 PSI. Reinforced steel clean cover shall be 2" above footing and 5" in the footing, unless otherwise noted.

**STAINLESS STEEL**

All stainless steel is to be 304L and shall conform to ASME A403.

**STEEL STRUCTURE**

After removal, all steel as shown on the plan sheets shall be cleaned of the remaining steel. A visual inspection shall be conducted to determine that all remaining steel is removed. Steel plates placed in this manner shall be paid for under contract bid 17th section.

**UTILITIES**

Before excavation is started in areas of underground utilities, the contractor shall be notified by telephone by calling "Miss Utility".

**DIMENSIONS**

All utilities plotted on plan sheets are from the nearest available information. Any conflicts of these utilities with proposed construction shall be coordinated by the contractor with the engineer and the utility company involved.
EXISTING TYPICAL SECTION (WORK TO BE PERFORMED)
LEGEND:

1. All existing stringers (all spans) shall be removed and not replaced.
2. All existing floor beams and connecting angles shall be removed and replaced with new W21×75 floor beams and connecting angles marked "751.00 x F36".
3. Subset plates at the abutment ends shall be removed and replaced with new plates.
4. The existing chord bracing (diagonals) shall be removed and replaced with new diagonal members "1.0 x F36".
5. The existing truss shall remain in place.
6. The existing rodger beams shall be removed and replaced with new rodger beams with stainless steel pads.
7. The existing truss subset plates shall be removed and replaced with new plates (S-82).
8. The existing decking anchor bolts shall be cut flush with the top of the existing bedding and new H Fremont anchor bolts shall be installed. Typical All Drop.

NOTE:

After all necessary removals, all existing bridge steel shall be cleaned. To be paid for under Item No. 405 02.

All new and existing steel on the existing bridge shall be painted, to be paid for under Item No. 405 03.

All deck plates shall be painted, to be paid for under Item No. 405 02.

All additional integrated steel as shown,shall be painted. To be paid for under Item No. 405 02.

All existing rivets that are removed, due to the removal of all existing steel, listed above, shall be paid for under Item No. 405 02.

The new bolts used to incorporate the new steel, with the existing, as shown on sketch No. 2, shall be paid for under Item No. 405 02.

All other bolts that are removed, due to replacing the existing steel, shall be paid for under Item No. 405 02.
PLATE TUBER TREATED BLOCK PLATED BACK TO BEAM, TOP RAIL AND WHEEL RAIL (TYP.)

NOTES:
- ALL HARDWARE SHALL BE GALVANIZED EXCEPT FOR WASHERS WHICH MAY BE CAST IRON OR WAXED.
- 20 STEEL PLATES SHALL CONFORM TO ASTM A466 STEEL AND SHALL BE GALVANIZED.
- ALL HOLES FOR BOLT CONNECTIONS TO THE RAIL POSTS SHALL BE RECESSED.
- SEE SHEET NO. 9 PLAN DETAIL, FOR SCREWS, WHEELS, RAIL, SPACING, HAND RAIL, SPACER, AND STIFFENER LOCATIONS.
- THE CONTRACTOR SHALL NOTIFY HIS SUPPLIERS WHETHER TO DRILL THE HOLES IN THE SHAP OR TO FIELD DRILL THEMSELVES.
- ALL HOLES FOR 3/8" BOLTS SHALL BE 3/8" TIP.
- THE GLUED LAMINATED DECK PANEL SHALL BE PAID FOR UNDER ITEM NO. 60030.
- THE TOP HAND RAIL AND STIFFENERS SHALL BE PAID FOR UNDER ITEM NO. 60030.

ELEVATION - TYPICAL BETWEEN PANEL MEMBERS

GUARDRAIL TO DECK TO STIFFENER ATTACHMENT DETAIL

GUARDRAIL SPLICE DETAIL

HAND RAIL SPLICE DETAIL
### Reinforcing Bar List

<table>
<thead>
<tr>
<th>Bar</th>
<th>Length (mm)</th>
<th>Grade</th>
<th>Bend Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>1500</td>
<td>500</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>1800</td>
<td>600</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>2000</td>
<td>700</td>
<td>Z</td>
<td></td>
</tr>
<tr>
<td>B4</td>
<td>2200</td>
<td>800</td>
<td>AA</td>
<td></td>
</tr>
<tr>
<td>B5</td>
<td>2400</td>
<td>900</td>
<td>BB</td>
<td></td>
</tr>
</tbody>
</table>

### Standard Bar Bends

**Types:**
- X: Simple Bend
- Y: Double Bend
- Z: Triple Bend
- AA: Quadruple Bend
- BB: Quintuple Bend

---

**Notes:**
- Bar lengths are approximate and may vary.
- Grades indicate the bar's strength and grade.
- Bend types refer to the number of 90° bends in the bar.
- End of bars may require additional bends or extensions.

---

**Diagram:**

- Simple Bend (X)
- Double Bend (Y)
- Triple Bend (Z)
- Quadruple Bend (AA)
- Quintuple Bend (BB)
NOTES:
1. SEE PAGE #91 OF THE "DELAWARE TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS"
   REVISED DECEMBER 1987 FOR EXAMPLE OF DETOUR SET UP.
2. SIGNS E, D, F, WILL BE INSTALLED AND MAINTAINED BY TRAFFIC FORCES.
3. ALL LIGHTS TYPE "B" HIGH-INTENSITY FLASHING AMBER OR RED.
4. USE OF TYPE IUII, BARRICADES SHALL COMPLY WITH PAGE 44, SECTION A & B OF THE MANUAL.
DETAIL TYPICAL RAIL SECTION

STANDARD TERMINAL SECTION MODIFIED
ONLY TO BE USED WHEN CONNECTING TO EXISTING STRUCTURE.

NOTE:
RAIL ELEMENTS INCLUDE THE BASIC RAIL ELEMENTS,
SPlices, AND SPECIAL RAIL SECTION SUCH AS
TERMINALS FOR "H" BEAM GUARDRAIL AND "H"
BEAM MEDIAN BARRIER SYSTEMS.

USE 10 GAUGE UNLESS OTHERWISE SPECIFIED.

SEE STANDARD SHEET 8-4 FOR ALTERNATE 6" C STRONG
POST DETAIL.

BEAM SPlice
BACK-UP PLATE
BACK-UP PLATE SHALL BE PLACED BEHIND GUARDRAIL AT NON-SPlice POSTS.