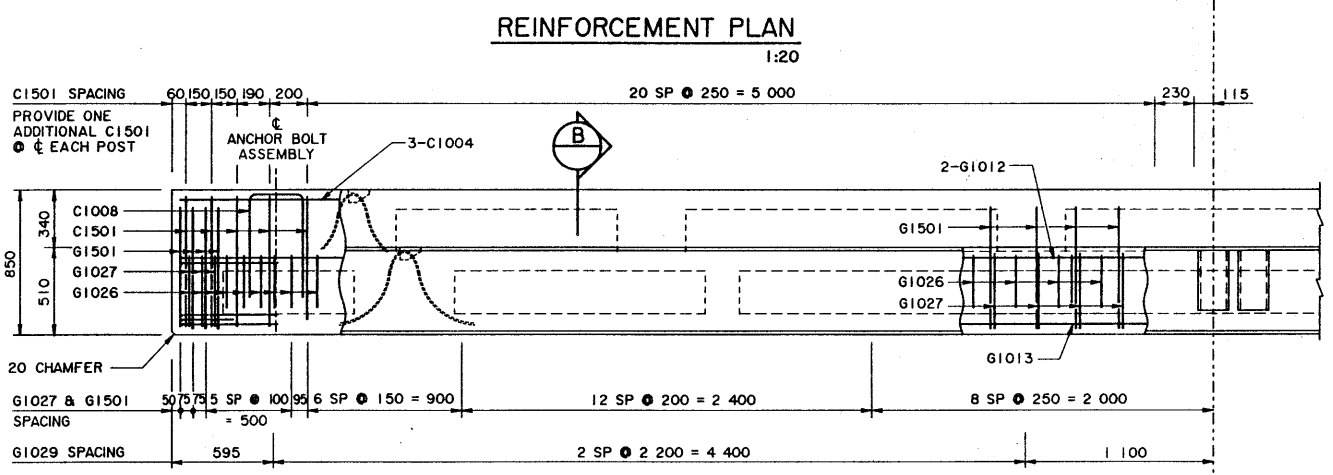
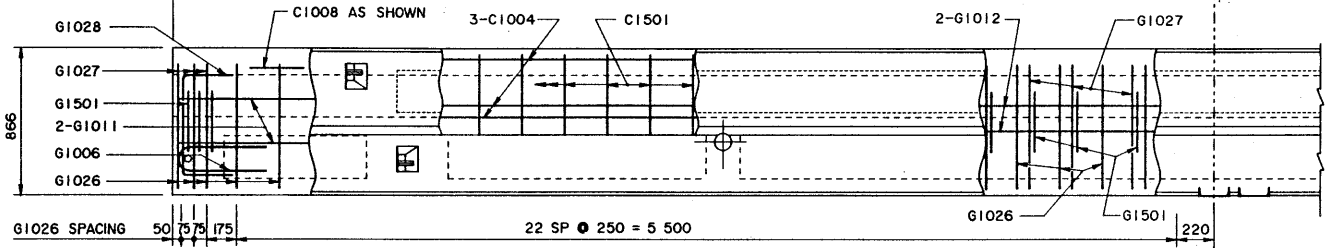
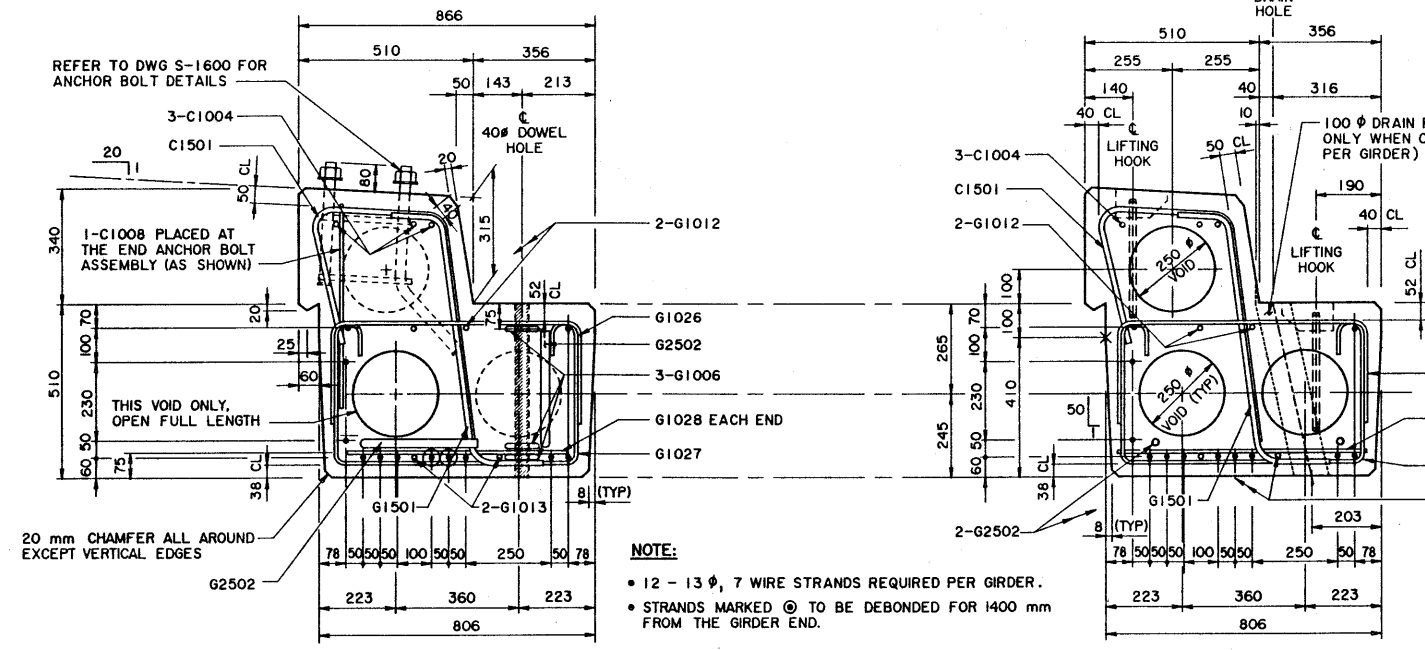


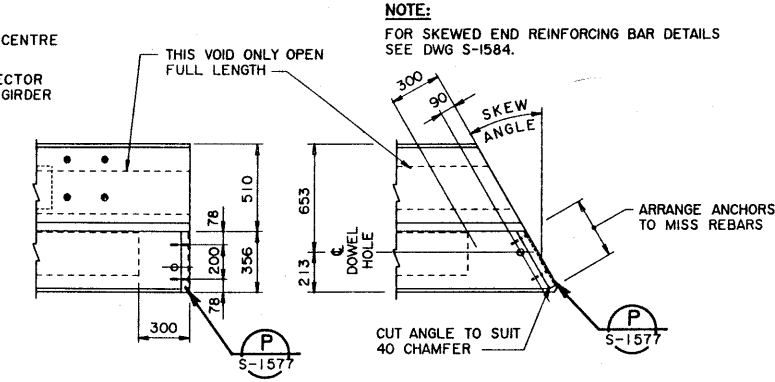
**NOTE:**  
BEND REINFORCING BAR WHERE NECESSARY TO ACCOMMODATE CHANNEL CONNECTORS. STIRRUP SPACING TO BE MAINTAINED.



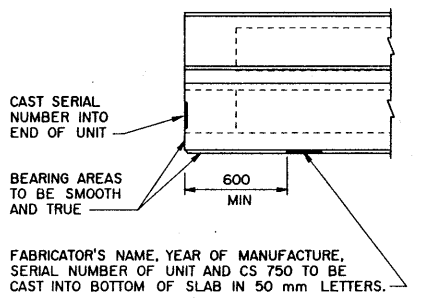
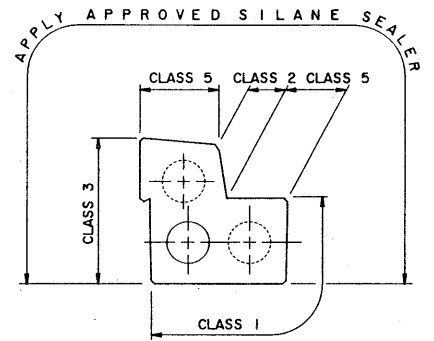
**ELEVATION**  
1:20



**NOTE:**  
• 12 - 13  $\phi$ , 7 WIRE STRANDS REQUIRED PER GIRDER.  
• STRANDS MARKED © TO BE DEBONDED FOR 1400 mm FROM THE GIRDER END.

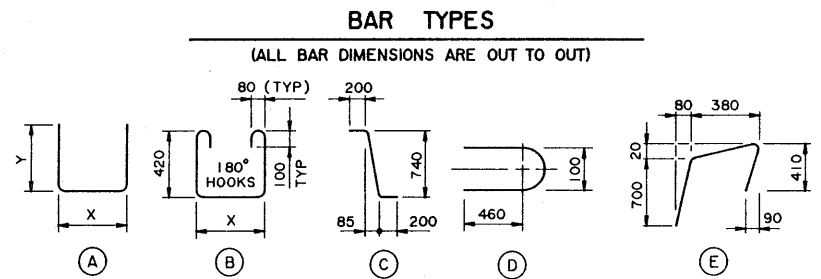


**NOTE:**  
FOR SKEWED END REINFORCING BAR DETAILS SEE DWG S-1584.



| BAR LIST: FOR SQUARE GIRDER |      |    |      |        |     |        |      |
|-----------------------------|------|----|------|--------|-----|--------|------|
| MARK                        | SIZE | NO | TYPE | X      | Y   | LENGTH | MASS |
| C1004                       | 10   | 3  | STR  |        |     | 12 090 | 28   |
| C1008                       | 10   | 2  | A    | 310    | 600 | 1 510  | 2    |
| C1501                       | 15   | 58 | E    |        |     | 1 455  | 132  |
| G1006                       | 10   | 6  | D    |        |     | 1 020  | 5    |
| G1012                       | 10   | 2  | STR  |        |     | 12 090 | 19   |
| G1013                       | 10   | 2  | STR  |        |     | 11 990 | 19   |
| G1026                       | 10   | 53 | A    | 725    | 300 | 1 325  | 55   |
| G1027                       | 10   | 69 | B    | 725    |     | 1 820  | 99   |
| G1028                       | 10   | 2  | A    | 600    | 300 | 1 200  | 2    |
| G1029                       | 10   | 6  | STR  |        |     | 700    | 3    |
| G1501                       | 15   | 69 | C    |        |     | 1 140  | 123  |
| G2502                       | 25   | 2  | A    | 12 040 | 350 | 12 740 | 100  |

TOTAL kg : 587



**GENERAL NOTES**

- ALL DRAWING REFERENCES ARE TO CURRENT DRAWINGS.
- DESIGN**
  - CAN/CSA-S6-88 SPECIFICATIONS EXCEPT AS MODIFIED BELOW:
    - ALLOWABLE TENSION AT MIDSPAN IS 40% OF MODULUS OF RUPTURE (SEVERE EXPOSURE CONDITIONS).
    - NO TENSION ALLOWED IN DECK SURFACE.
- LOADING:**
  - LIVE LOAD - CAN/CSA-S6-88; CS-750  
0.8 WHEEL LINES PER GIRDER
  - DEAD LOAD - GIRDER = 0.86 t/m
  - WEARING SURFACE = 0.09 t/m
- MATERIALS**
  - CONCRETE SHALL CONTAIN SILICA FUME AND BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND NATURAL SAND FINES. UNIT WEIGHT OF SEMI-LIGHTWEIGHT CONCRETE SHALL BE 1920 kg/m<sup>3</sup>.
  - 28 DAY CONCRETE STRENGTH - 40 MPa
  - RELEASE STRENGTH - 28 MPa
  - PRESTRESSING STEEL SHALL BE 13  $\phi$ , 7 WIRE LOW RELAXATION STRAND (fpu = 1860 MPa).
  - REINFORCING STEEL SHALL BE GRADE 400W (YIELD STRENGTH OF GRADE 300 USED IN DESIGN TO ALLOW TACK WELDING OF SHEAR REINFORCEMENT).
- FABRICATION**
  - GIRDERS SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE BRIDGE MATERIALS SPECIFICATION FOR THE MANUFACTURE OF PRESTRESSED CONCRETE BRIDGE UNITS (SPEC B190).
  - FORCE IN PRESTRESSING STEEL:
    - INITIAL TENSIONING LOAD = 129 kN/STRAND
    - DESIGN LOAD AFTER LOSSES = 109 kN/STRAND
  - CURB SHALL BE CAST MONOLITHICALLY WITH GIRDER.
  - ANCHOR BOLT ASSEMBLIES SHALL BE CAST IN GIRDER AT SPACINGS SHOWN ON DRAWING S-1579.
  - ALL GALVANIZING SHALL CONFORM TO ASTM SPEC A123 OR A153 AS APPLICABLE.
  - BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTORS AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING SHALL BE MAINTAINED. FOR CONNECTOR AND LIFTING HOOK LOCATIONS SEE DWG S-1579.
- ERECTION**
  - ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH STOP IN WASHERS.
  - CALCULATED MASS OF ONE GIRDER IS 11.0 t.

**SUPERSEDED**

|          |       |          |         |  |        |          |         |             |        |         |  |
|----------|-------|----------|---------|--|--------|----------|---------|-------------|--------|---------|--|
| APPROVED |       |          |         | EXECUTIVE DIRECTOR<br>BRIDGE ENGINEERING |        |          |         | DATE PRELIM |        |         |  |
| DESIGNED | DRAWN | DATE     | CHECKED | DATE                                     | STREAM | LOCATION | HIGHWAY | FILE        | SHEET  | DRAWING |  |
| LEA      | VMV   | 93-09-17 |         |  |        |          |         |             | 2 OF 4 | S-1578  |  |