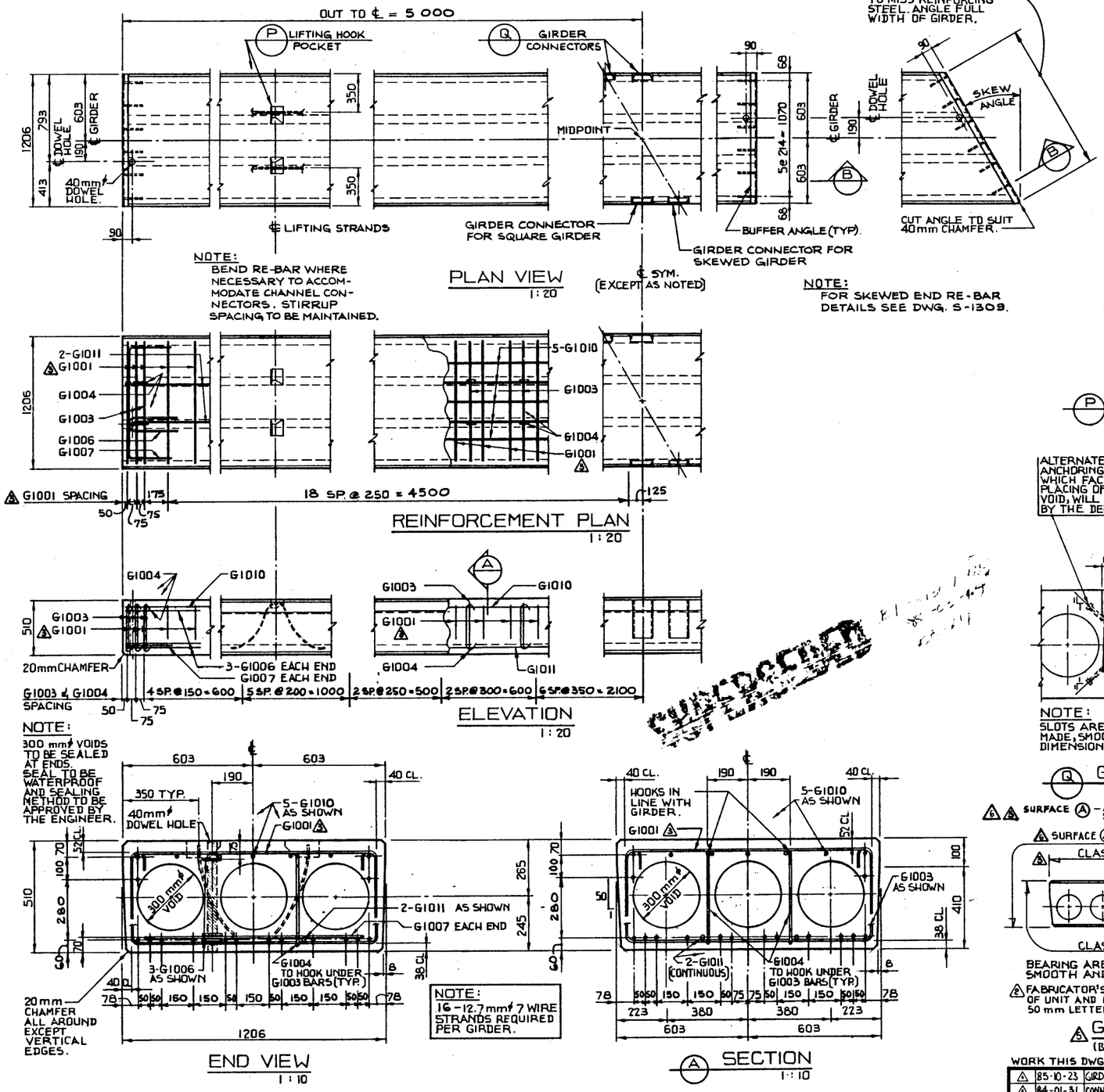
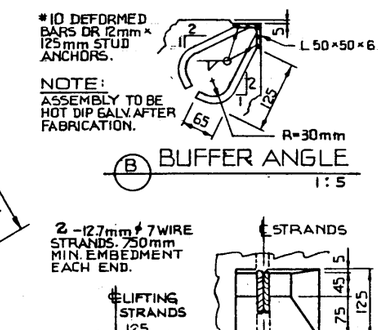
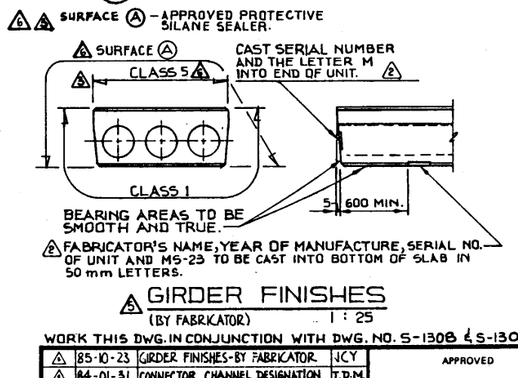


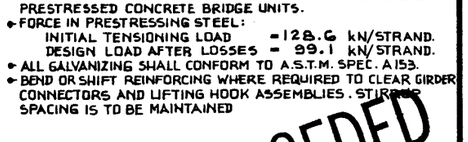




BAR LIST: FOR SQUARE GIRDER							
MARK	SIZE	NO.	TYPE	X	Y	LENGTH	MASS
G1001	10	44	A	1125	300	1725	60
G1010	10	5	STR.			9900	39
G1003	10	43	B			2220	75
G1004	10	84	C			620	41
G1011	10	2	STR.			9800	15
G1006	10	6	D			1020	5
G1007	10	2	A	1000	300	1600	3

TOTAL kg: 232
△3 238

BAR TYPES: N.T.S.
(ALL BAR DIMENSIONS ARE OUT TO OUT)



GENERAL NOTES:

DESIGN:
- A.A.S.H.T.O. 1973 SPECIFICATIONS PLUS INTERIMS TO 1976 EXCEPT AS MODIFIED BELOW:
  - ALLOWABLE TENSION AT MIDSPAN IS 80% OF MODULUS OF RUPTURE.
  - NO TENSION ALLOWED IN DECK SURFACE.
  - WEB REINFORCEMENT – ACCORDING TO A.C.I. 318-71, BUT NOT LESS THAN A.A.S.H.T.O. MINIMUM.
  - CAPACITY REDUCTION FACTORS ACCORDING TO C.S.A. S6-1974.
- LOADING:
  - LIVE LOAD — BRIDGE BRANCH MS-23 ONE WHEEL LINE PER GIRDER.
  - DEAD LOAD — GIRDER ——— = 0.780 t/m
    WEARING SURFACE = 0.150 t/m

MATERIALS:
- CONCRETE IN GIRDER SHALL BE MADE OF LIGHTWEIGHT COARSE AGGREGATE AND SAND FINES.
- 28 DAY CONCRETE STRENGTH ——— 35 MPa
- RELEASE STRENGTH ——— 28 MPa
- UNIT WEIGHT OF SEMI-LIGHT WEIGHT CONCRETE 1920 kg/m³
- PRESTRESSING STEEL SHALL BE 12.7mm ϕ 7 WIRE STRESS-RELIEVED STRAND (f'_s = 1860 MPa). 12.7mm ϕ 7 WIRE LOW RELAX. STRAND (f'_s = 1860 MPa) MAY BE SUBSTITUTED FOR STRESS-RELIEVED STRAND ON A ONE FOR ONE BASIS AT THE SAME INITIAL STRESS. THE ENGINEER SHALL BE NOTIFIED IF SUBSTITUTION IS MADE.

FABRICATION:
- GIRDERS SHALL CONFORM TO THE REQUIREMENTS OF THE ALBERTA BRIDGE BRANCH SPECIFICATION FOR THE MANUFACTURE OF PRESTRESSED CONCRETE BRIDGE UNITS.
- FORCE IN PRESTRESSING STEEL:
  - INITIAL TENSIONING LOAD = 128.6 kN/STRAND.
  - DESIGN LOAD AFTER LOSSES = 99.1 kN/STRAND.
- ALL GALVANIZING SHALL CONFORM TO A.S.T.M. SPEC. A153.
- BEND OR SHIFT REINFORCING WHERE REQUIRED TO CLEAR GIRDER CONNECTORS AND LIFTING HOOK ASSEMBLIES. STIRRUP SPACING IS TO BE MAINTAINED

ERECTION:
- ANY FREE SPACE BETWEEN CONNECTORS SHALL BE FILLED WITH WASHERS.
- CALCULATED MASS OF ONE GIRDER IS 7.88t.

SUPERSEDED

DIMENSIONS ARE GIVEN IN mm

WORK THIS DWG. IN CONJUNCTION WITH DWG. NO. S-1308 & S-1309

NO.	DATE	DESCRIPTION	BY
△5			
△4			
△3	88-03-04	SUPERSEDED BY S-1307-88	DHQ
△2	87-10-15	GIRDER FINISHES	TJS
△1	85-10-23	GIRDER FINISHES-BY FABRICATOR	JCY
△1	84-01-31	CONNECTOR CHANNEL DESIGNATION	T.D.M.
△1	79 03 20	4-G1001 ADDED & GIRDER FINISHES	R.G.Q.
△1	78 07 20	CONNECTOR SLOTS & GIRDER MARKINGS.	R.G.Q.
△1	78 05 11	DIMENSION ADDED	R.W.L.

REVISIONS

APPROVED
CHIEF BRIDGE ENGINEER
DATE MAR 23/78

Alberta TRANSPORTATION BRIDGE BRANCH METRIC

PRESTRESSED CONCRETE 10 m TYPE SM-510 INTERIOR GIRDER

DESIGNED	DRAWN BY	DATE	CHECKED BY	DATE	STREAM	LOCATION	HWY. NO.	SCALE	FILE NO.	SHEET	DWG. NO.
R.W.L.	V.G.B.	78 02 15								...OF...	S-1307

M.P. 236 DESIGN: R.W.L. DRAWN: M.M.F. 78 02 10