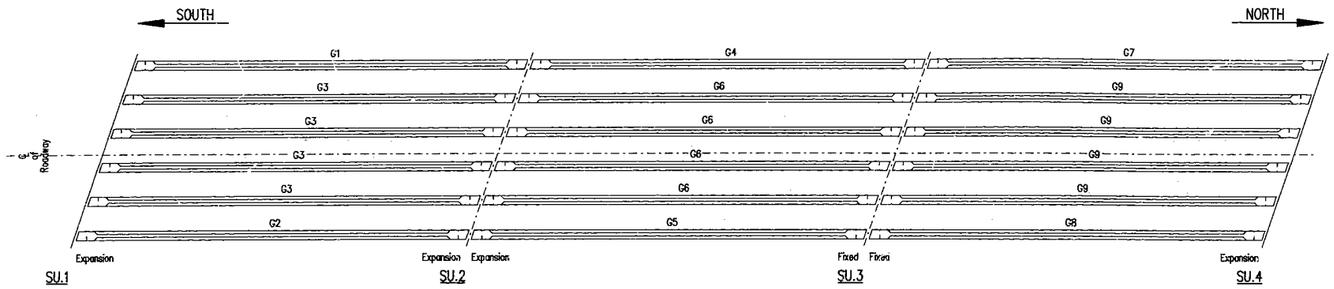
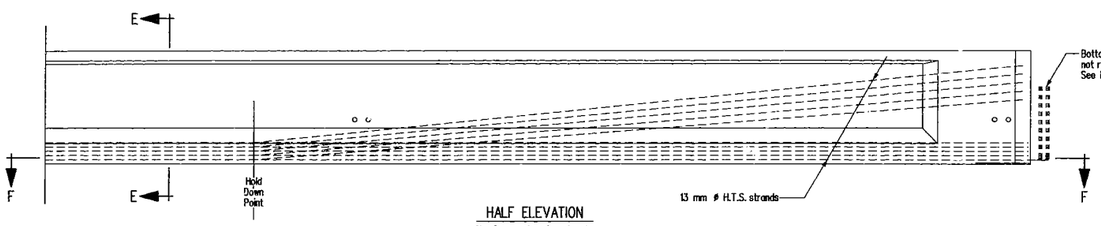


GIRDER LAYOUT

Scale 1:150

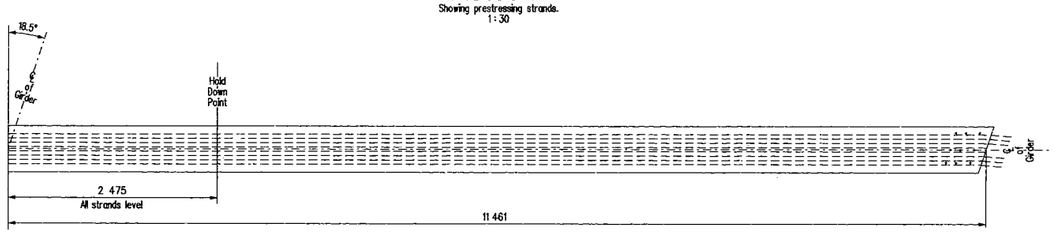
NOTES:

1. Concrete cover shall be 25 mm unless noted otherwise.
2. Bottom flanges of all precast I-girders shall be rounded to a 20 mm radius.
3. Design is in accordance with AASHTO LRFD 1998 (2nd Edition) & interims.
4. Live Load: Modified AASHTO-HSS25 (MSS 22.5).
5. The concrete shall have a minimum compressive strength as follows:
   At time of transfer of pre-tensioning forces f'ci = 30 MPa.
   At 28 days f'c = 40 MPa.
6. The prestressing steel shall consist of the following:
   13 mm ϕ low relaxation, seven wire, uncoated steel strands.
   Minimum ultimate strength f'u = 1 861.6 MPa.
   Jacking force per strand = 137.7 kN (after seating loss).
7. Girder dimensional tolerances: Length ±5 mm, cross section ±2 mm.
8. Minimum lap length - 10M bars = 390 mm
   - 15M bars = 550 mm
9. Girder Contractor shall label the "NORTH" & SOUTH" ends of each girder for hauling and erection purposes.
10. For Bill of Miscellaneous Material see Sheet No. 29.
11. Girder dimensions are based on 20°C after release.



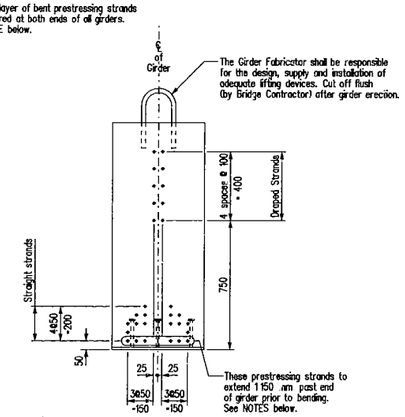
HALF ELEVATION

Showing prestressing strands.
1:30



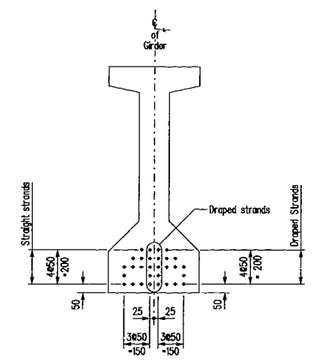
HALF PLAN

Showing prestressing strands.
1:30



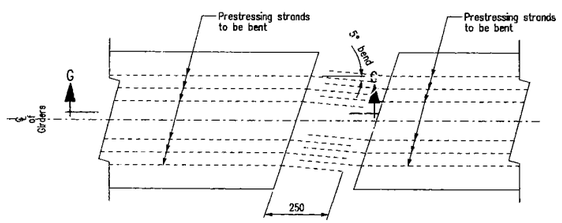
END ELEVATION

Showing layout of 30 - 13 mm ϕ L.R. strands.
Normal to ℄ of girder.
Scale 1:15



SECTION E-E

Showing layout of 30 - 13 mm ϕ L.R. strands.
Normal to ℄ of girder.
Scale 1:15

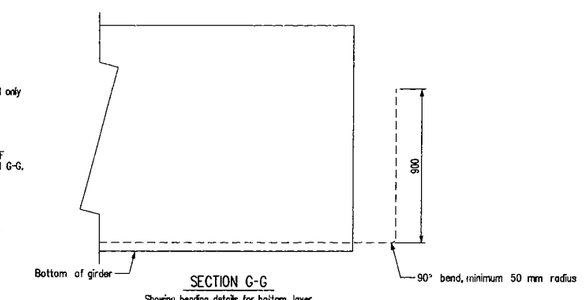


SECTION F-F

Showing bending details for bottom layer of 6 - 13 mm ϕ L.R. strands.
Typ. at pier locations.
Scale 1:10

NOTES: Re: Bent Prestressing Strands

1. Bent prestressing strands shown in bottom layer in HALF ELEVATION at pier locations to be located at North end only of girders Mk. "G1", "G2" & "G3", both ends of girders Mk. "G4", "G5" & "G6" and South end only of girders Mk. "G7", "G8" & "G9". See SECTIONS F-F & G-G for strand bending details. All other strands at the above mentioned locations to be cut off flush with ends of girders.
2. Provide 5° transverse shop bend as shown in SECTION F-F prior to performing 90° vertical bend as shown in SECTION G-G.
3. Field adjust bent strands during erection as required.
4. Strand ends at South end of girders Mk. "G1", "G2" & "G3" and at North end of girders Mk. "G7", "G8" & "G9" are to be recessed a minimum 19 mm from the face of the girder using expanded foam (doughnut) or equivalent. After the cutting of the strands and a thorough cleaning of the recess, the recess shall be patched with an approved mortar.



SECTION G-G

Showing bending details for bottom layer of 6 - 13 mm ϕ L.R. strands.
Typ. at pier locations.
Scale 1:15

TYPICAL GIRDER STRAND LAYOUT

REVISIONS		
OCT31/07	R.A	AS BUILT
DATE	BY	DESCRIPTION

PROVINCE OF MANITOBA — A. H. PANKRATZ — July 11, 2005 — REGISTERED PROFESSIONAL ENGINEER

GIRDER CONCRETE DETAILS

FOR PROPOSED 69 714 LONG R.C. BRIDGE
OVER SEINE RIVER DIVERSION
ON P.T.H. No. 59 SOUTH BOUND LANES, 10 900 ROADWAY
IN SEC. 28-8-4E

R.M. OF RITCHOT

Manitoba Transportation and Government Services
Bridges and Structures Branch

RELEASED FOR CONSTRUCTION BY:
July 12/05
DIRECTOR OF BRIDGES AND STRUCTURES — DATE

DESIGN	BY: A.H.P.	SCALE: As Shown
	CHECKED: J.B.L.	SHEET No. 27
DETAILS	BY: D.P.W.	
	CHECKED: A.H.P.	SITE No. 693-02

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