

PLAN OF ANCHORAGE

SCALE - 1 : 5

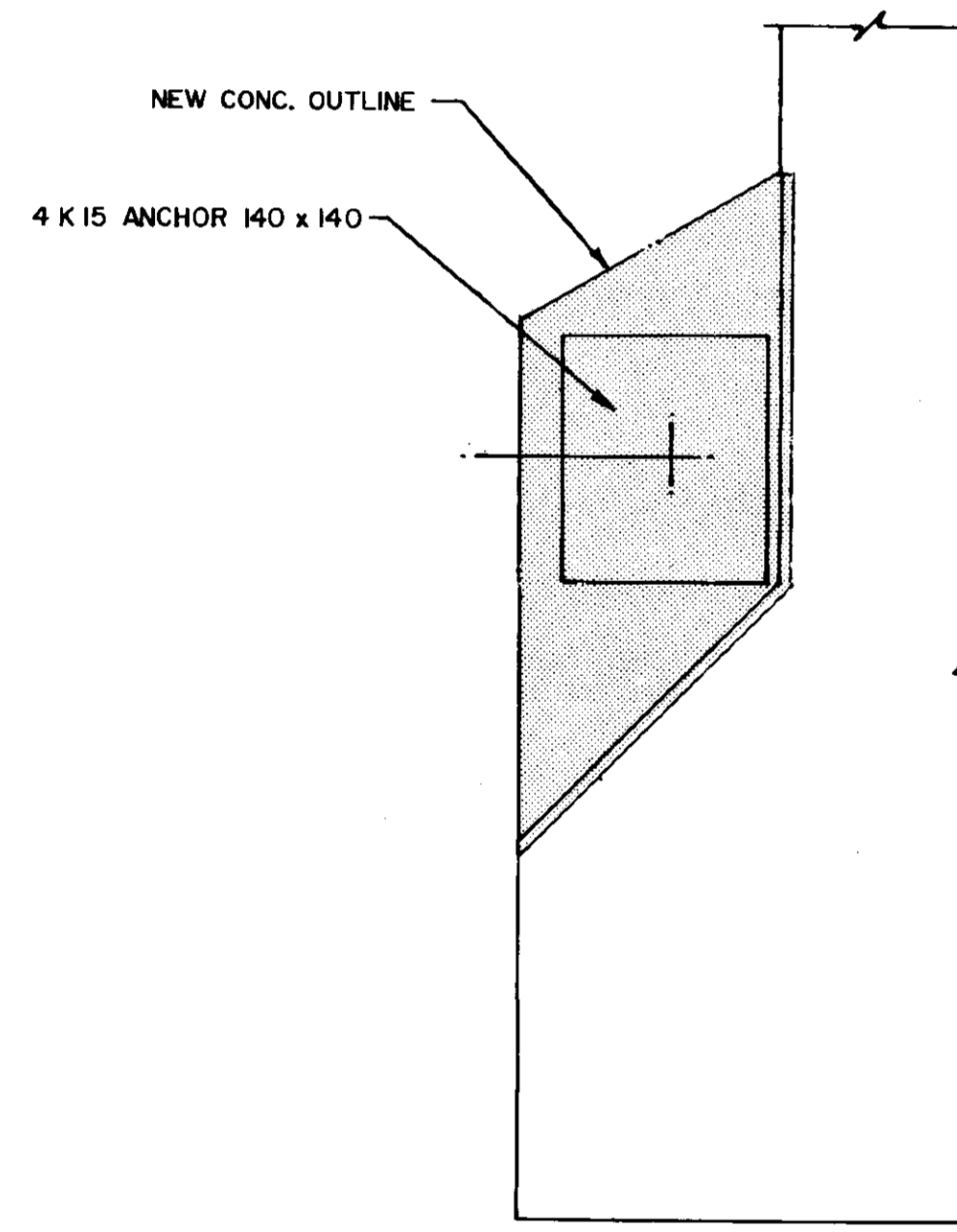
GIRDER	LENGTH
1A	20 785
1B, 3C, 9C	20 895
1C	21 000
1D	21 105
1E, 3E, 9E	21 210
1F	21 320
1G	21 425
1H, 10H	21 530
1J	21 640
2A	20 565
2B	20 720
2C	20 870
2D	21 020
2E	21 170
2F	21 325
2G	21 475
2H	21 630
2J	21 780
3A, 9A	20 585
3B, 9B	20 740
3D, 9D	21 050
3F, 9F	21 365

GIRDER	LENGTH
3G, 9G	21 520
3H, 9H	21 670
3J, 9J	21 830
4A, 8A	23 540
4B, 8B	23 715
4C, 8C	23 895
4D, 8D	24 070
4E, 8E	24 250
4F, 8F	24 425
4G, 8G	24 605
4H, 8H	24 780
4J, 8J	24 960
5A	23 500
5B	23 675
5C	23 855
5D	24 030
5E	24 210
5F	24 390
5G	24 565
5H	24 740
5J	24 920
6A, 7A	22 900
6B, 7B	23 075

GIRDER	LENGTH
6C, 7C	23 255
6D, 7D	23 430
6E, 7E	23 610
6F, 7F	23 785
6G, 7G	23 965
6H, 7H	24 145
6J, 7J	24 320
10A	20 700
10B	20 820
10C	20 940
10D	21 060
10E	21 175
10F	21 290
10G, 11H	21 405
10J	21 645
11A	20 965
11B	21 025
11C	21 090
11D	21 150
11E	21 215
11F	21 280
11G	21 340
11J	21 465

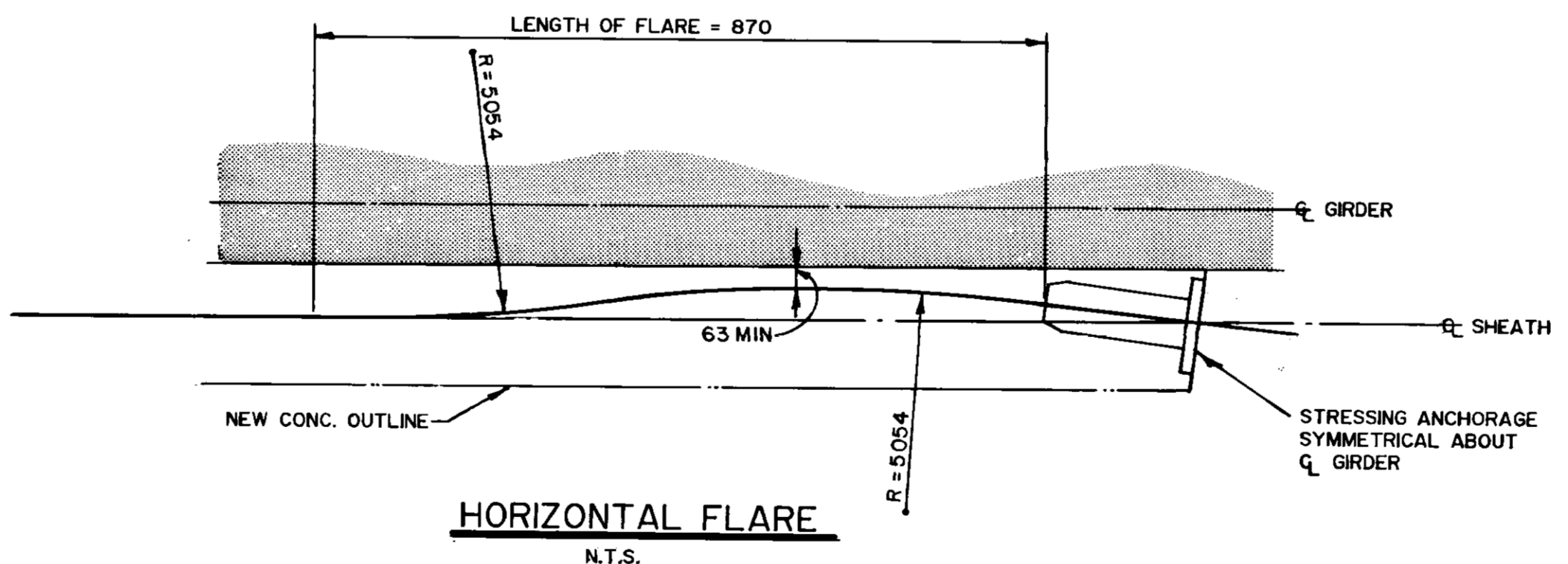
GIRDER POST-TENSIONING DATA							
GROUP	LOCATION	TYPE OF CABLES	No. OF CABLES	CABLE STRESSED	ELONGATION	CABLE TENSION	ANCHOR SET
A	GIRDER GROUPS 1A, 2A & 3A TO 1E, 2E & 3E GIRDER GROUPS 9A, 10A, & 11A TO 9E, 10E, & 11E	2/0.6	(2 PER GIRDER) 20	ONE END	410 mm	390kN	10 mm
B	GIRDER GROUPS 1F, 2F, & 3F TO 1J, 2J, & 3J GIRDER GROUPS 9F, 10F, & 11F TO 9J, 10J, & 11J	2/0.6	(2 PER GIRDER) 16	ONE END	430 mm	390 kN	10 mm
C	GIRDER GROUPS 4A & 5A TO 4E & 5E	3/0.6	(2 PER GIRDER) 10	ONE END	300 mm	587 kN	10 mm
D	GIRDER GROUPS 4F & 5F TO 4J & 5J	3/0.6	(2 PER GIRDER) 8	ONE END	320 mm	587 kN	10 mm
E	GIRDER GROUPS 6A, 7A & 8A TO 6E, 7E & 8E	3/0.6	(2 PER GIRDER) 10	BOTH ENDS	470 mm	600 kN	10 mm
F	GIRDER GROUPS 6F, 7F, & 8F TO 6J, 7J, & 8J	3/0.6	(2 PER GIRDER) 8	BOTH ENDS	500 mm	600 kN	10 mm

ASSUMED $\mu = 0.18 / \text{RAD}$ $K = 0.0023 / \text{M}$ $ES = 193\ 053 \text{ MPa}$



SECTION A

SCALE - 1 : 5



HORIZONTAL FLARE

N.T.S.

PRESTRESSING NOTES:

- FREYSSINET POST-TENSIONING SYSTEM.
- STRAND SHALL BE LOW RELAXATION STRAND WITH A NOMINAL DIAMETER OF 15mm AND A MINIMUM ULTIMATE STRENGTH OF 261 kN PER STRAND.
- CABLE SHEATHS SHALL BE BRIGHT, RIGID CORRUGATED TYPE (55mm O.D.) OR EQUIVALENT APPROVED BY THE ENGINEER.
- REQUIRED ELONGATION OF CABLES AND CABLE TENSION AT JACK (BEFORE ANCHORING) ARE SHOWN IN TABLE. ELONGATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER AFTER STRAND SAMPLES HAVE BEEN TESTED.
- SHEATH GROUTING VENTS SHALL BE PROVIDED AT HIGH POINTS AND AT BOTH ENDS OF ALL CABLES.
- WELDING WILL NOT BE PERMITTED WITHIN 3.0 M OF ANY CABLE SHEATH.
- MINIMUM CONCRETE CYLINDER STRENGTH AT 28 DAYS = 45MPa FOR ALL CONCRETE.
- MINIMUM CONCRETE CYLINDER STRENGTH BEFORE STRESSING = 30MPa.
- ALL CABLES SHALL BE STRESSED IN THE SEQUENCE SHOWN ON DRAWING NO. B121-85-07.
- CABLE SHEATHS SHALL BE SECURELY HELD AGAINST MOVEMENTS AT INTERVALS NOT EXCEEDING 1000 mm.
- FOR EACH GIRDER, CABLES ON EACH SIDE SHALL BE STRESSED SIMULTANEOUSLY. CABLES STRESSED FROM BOTH ENDS FOR GROUP E & F.

NOTE
THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG. B121-85-07

B-5574

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

RECORD DRAWING

NO	REVISIONS	DATE	APP
1	RECORD DRAWING	NOV.86	MB



the **uma** group
Underwood McLellan Ltd.
Consulting Engineers and Planners

DESIGNED BY: G J / K.U.
DRAWN BY: BH
CHECKED BY: J.T.
DATE: APRIL 1985
JOB No. 0265-216-01
APPROVED BY: [Signature] DATE: [Signature]

THE CITY OF WINNIPEG
WORKS & OPERATIONS DIVISION
STREETS & TRANSPORTATION DEPARTMENT

NAIN AVENUE OVERPASS
DECK REHABILITATION, STRUCTURAL STRENGTHENING AND RELATED WORKS

GIRDER STRENGTHENING - II

AUTHORIZED BY: [Signature] DATE: 1985-04-16
ACCEPTED BY: [Signature] DATE: 1985-04-16
SCALE: AS SHOWN
DRAWING NO. B121-85-08