

PLANS

OF PROPOSED

INSTALLATION OF NEW NAVIGATION LIGHTS ON EXISTING BRIDGE

OVER NAVIGATION CHANNEL

ON P.T.H. No. 8

TYPE PRECAST CONCRETE I-GIRDER BRIDGE

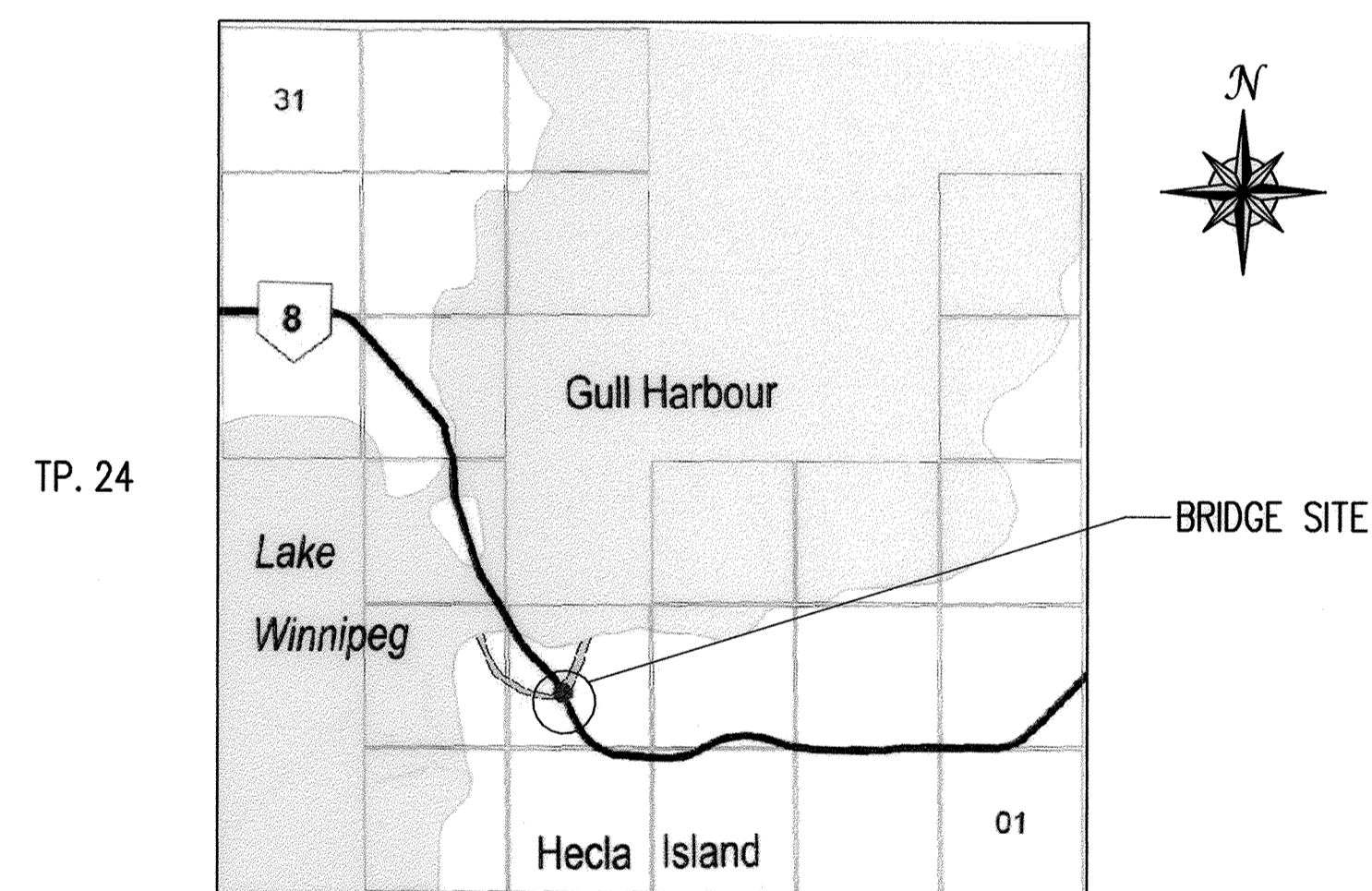
LENGTH 69 900 OUT TO OUT OF ABUTMENT BACKWALLS

ROADWAY WIDTH 9 750 ROADWAY WIDTH

LOCATION N.W. 1/4 SEC 9-24-5E
R.M. OF BIFROST

SHEET LEGEND

1. COVER SHEET
2. NAVIGATION LIGHT DETAILS



RGE. 5E
LOCATION PLAN
Not to Scale

MANITOBA INFRASTRUCTURE AND TRANSPORTATION

WATER CONTROL AND STRUCTURES MID-DIVISION

RELEASED FOR CONSTRUCTION BY :

Ruth Joden
DIRECTOR
STRUCTURES, DESIGN & CONSTRUCTION BRANCH
DATE Dec. 17, 2008

ENVIRONMENTAL APPROVALS	
<input type="checkbox"/>	MANITOBA ENVIRONMENT LICENCE RECEIVED LICENCE No. _____
<input type="checkbox"/>	FISHERIES AND OCEANS CANADA - LETTER OF ADVICE/ AUTHORIZATION TO HARMFULLY ALTER, DISRUPT OR DESTRUCT HABITAT SUBJECT TO CONDITIONS IN LETTER DATED _____ DFO FILE No. _____
<input type="checkbox"/>	TRANSPORT CANADA - LETTER OF APPROVAL SUBJECT TO CONDITIONS IN LETTER DATED _____ NWPA FILE No. _____
<input type="checkbox"/>	FISHERIES AND OCEANS CANADA - WORK SHALL BE COMPLETED IN ACCORDANCE WITH DFO'S OPERATIONAL STATEMENT, AS PER LETTER/MEMO DATED _____ FROM _____
<input checked="" type="checkbox"/>	NO ENVIRONMENTAL CLEARANCE REQUIRED
COMPLETED BY: <u>N. GONZALEZ</u> DATE: <u>Dec. 17/08</u>	

ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS
AND STATIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.

DRAWN BY: M.S. DATE: NOVEMBER 2008
CHECKED BY: H.R. DATE: NOVEMBER 2008

SHEET No. 1 of 2
SITE No. 2661-00

PLANS

OF PROPOSED

INSTALLATION OF NEW NAVIGATION LIGHTS ON EXISTING BRIDGE

OVER LAKE MANITOBA NARROWS

ON P.T.H. No. 68

TYPE PRECAST CONCRETE I-GIRDER BRIDGE

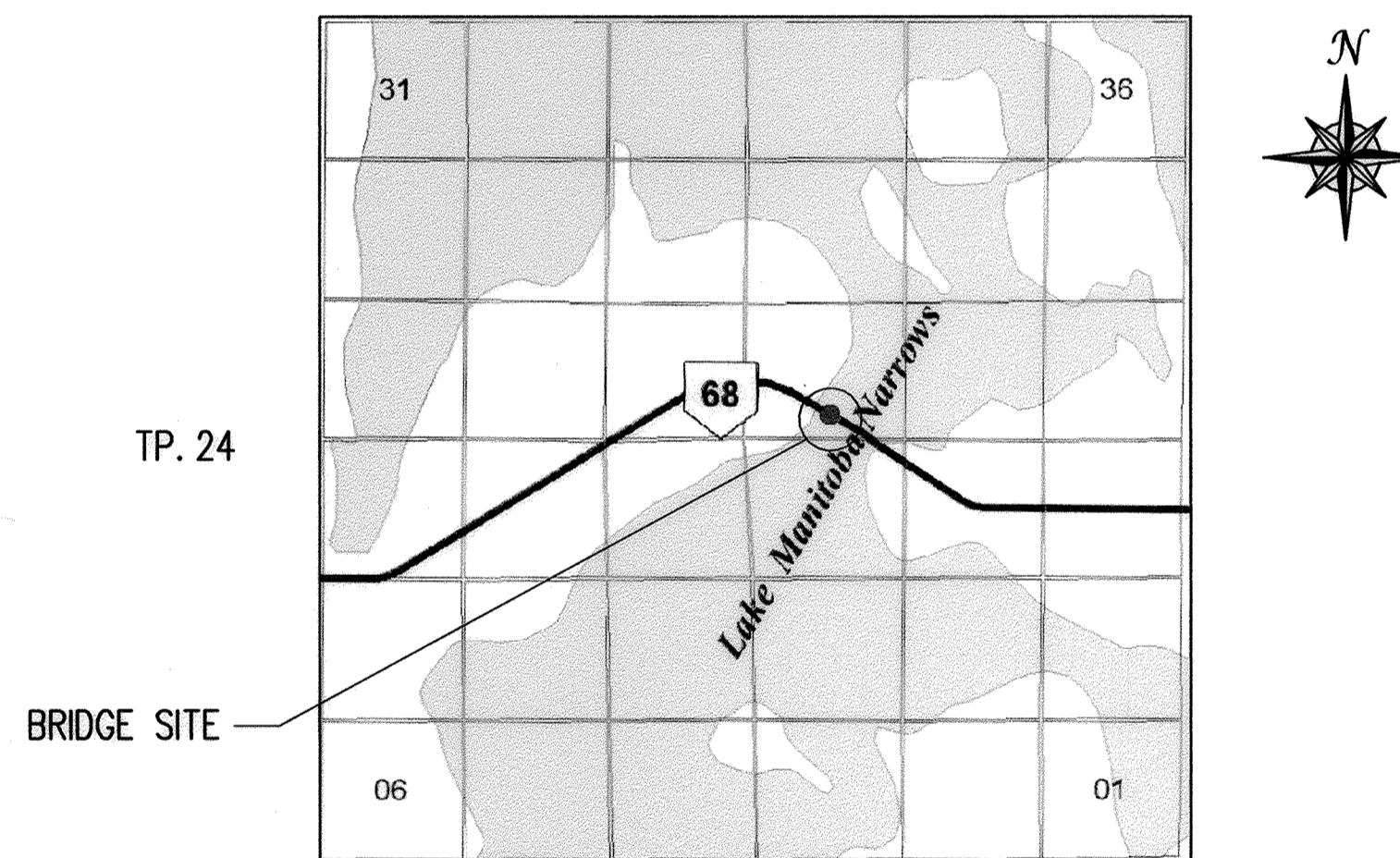
LENGTH 271 500 OUT TO OUT OF ABUTMENT BACKWALLS

ROADWAY WIDTH 7 300 ROADWAY WIDTH

LOCATION S. 1/2 SEC 22-24-10W
R.M. OF SIGLUNES

SHEET LEGEND

1. COVER SHEET
2. NAVIGATION LIGHT DETAILS



RGE. 10W
LOCATION PLAN
Not to Scale

MANITOBA INFRASTRUCTURE AND TRANSPORTATION

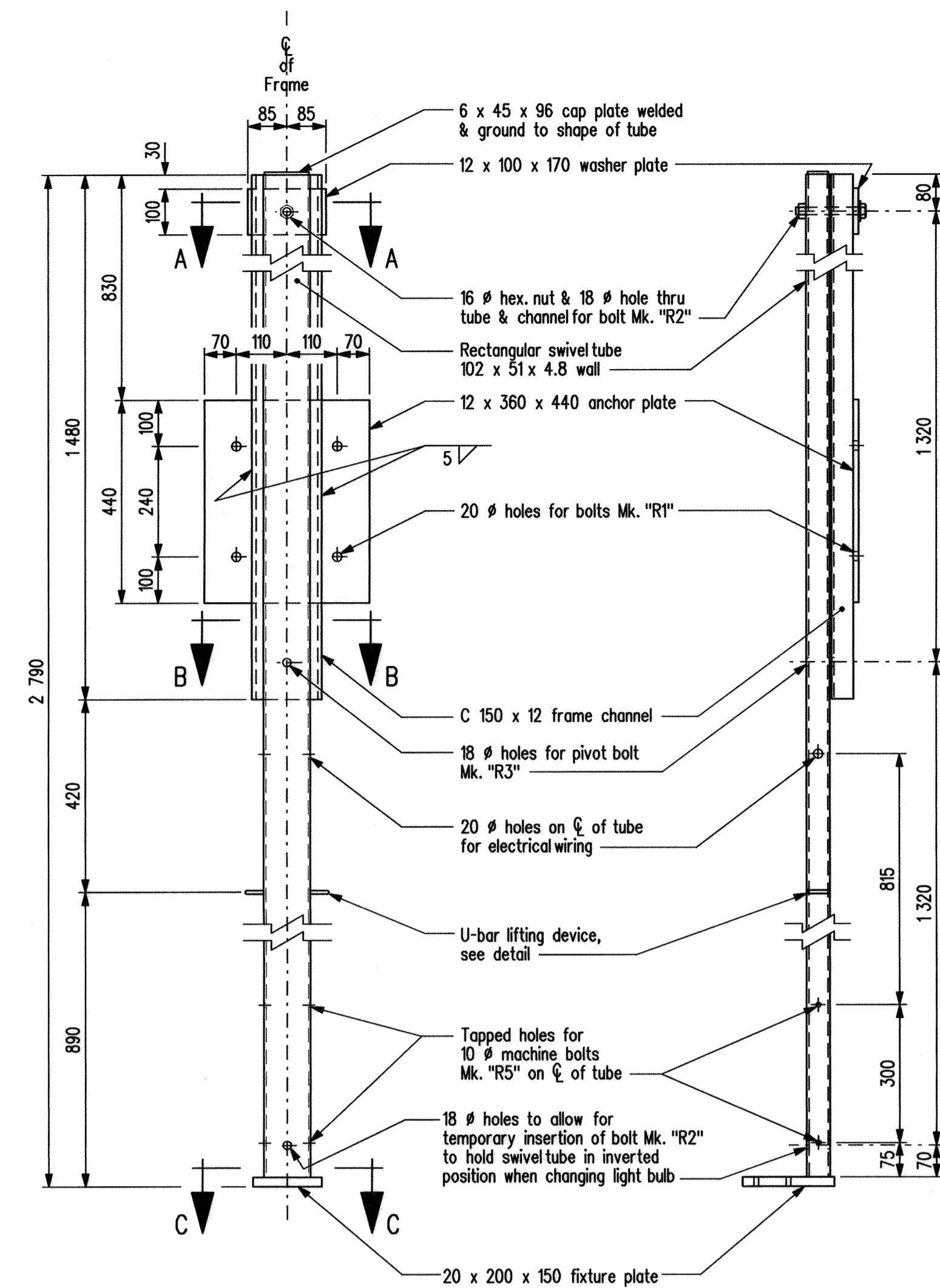
WATER CONTROL AND STRUCTURES MID-DIVISION

RELEASED FOR CONSTRUCTION BY : *Ruth Joden*
DIRECTOR
STRUCTURES, DESIGN & CONSTRUCTION BRANCH
DATE *Dec 16, 2008*

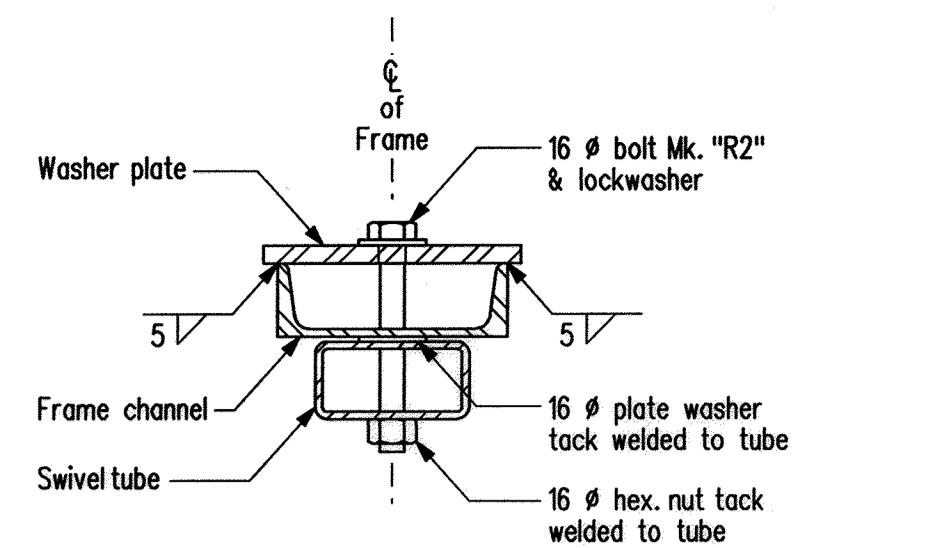
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<input type="checkbox"/>	FISHERIES AND OCEANS CANADA - LETTER OF ADVICE/ AUTHORIZATION TO HARMFULLY ALTER, DISRUPT OR DESTRUCT HABITAT SUBJECT TO CONDITIONS IN LETTER DATED _____ DFO FILE No. _____
<input type="checkbox"/>	TRANSPORT CANADA - LETTER OF APPROVAL SUBJECT TO CONDITIONS IN LETTER DATED _____ NWPA FILE No. _____
<input type="checkbox"/>	FISHERIES AND OCEANS CANADA - WORK SHALL BE COMPLETED IN ACCORDANCE WITH DFO'S OPERATIONAL STATEMENT, AS PER LETTER/MEMO DATED _____ FROM _____
<input checked="" type="checkbox"/>	NO ENVIRONMENTAL CLEARANCE REQUIRED
COMPLETED BY: <i>N. Gonzalez</i> DATE: <i>Dec. 15, 2008</i>	

ALL DIMENSIONS ARE IN MILLIMETRES (mm) AND ALL ELEVATIONS
AND STATIONS ARE IN METRES (m) UNLESS SHOWN OTHERWISE.

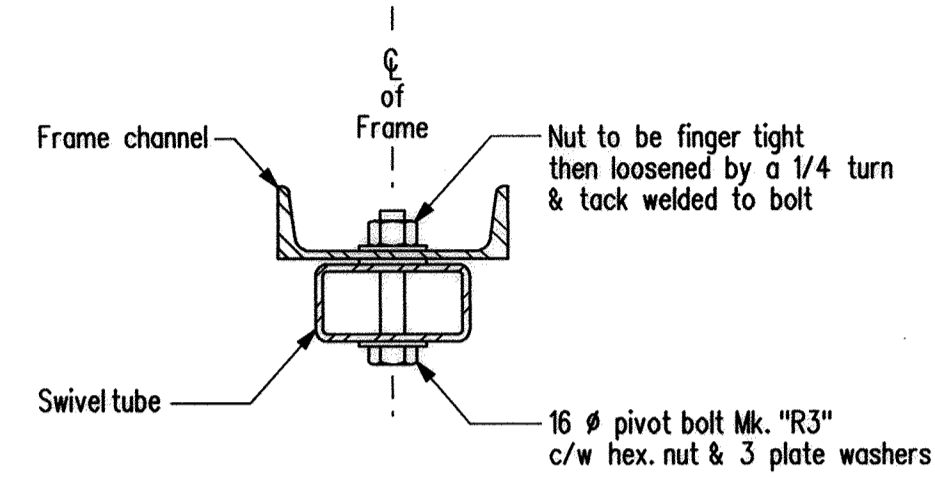
DRAWN BY: M.S. DATE: NOVEMBER 2008 SHEET No. 1 of 2
CHECKED BY: H.R. DATE: NOVEMBER 2008 SITE No. 3210-00



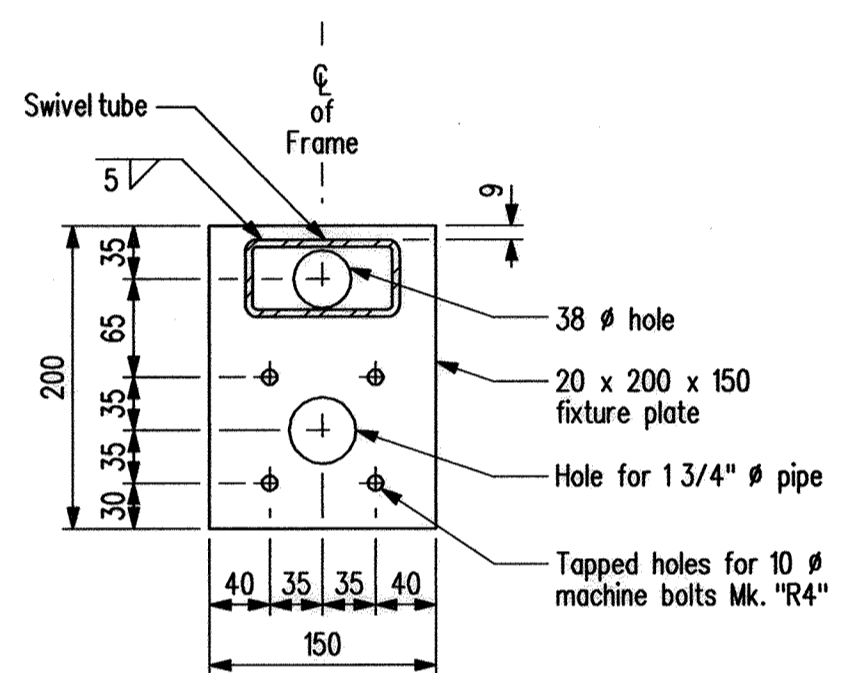
FRONT ELEVATION SIDE ELEVATION
LIGHT FIXTURE FRAME DETAILS



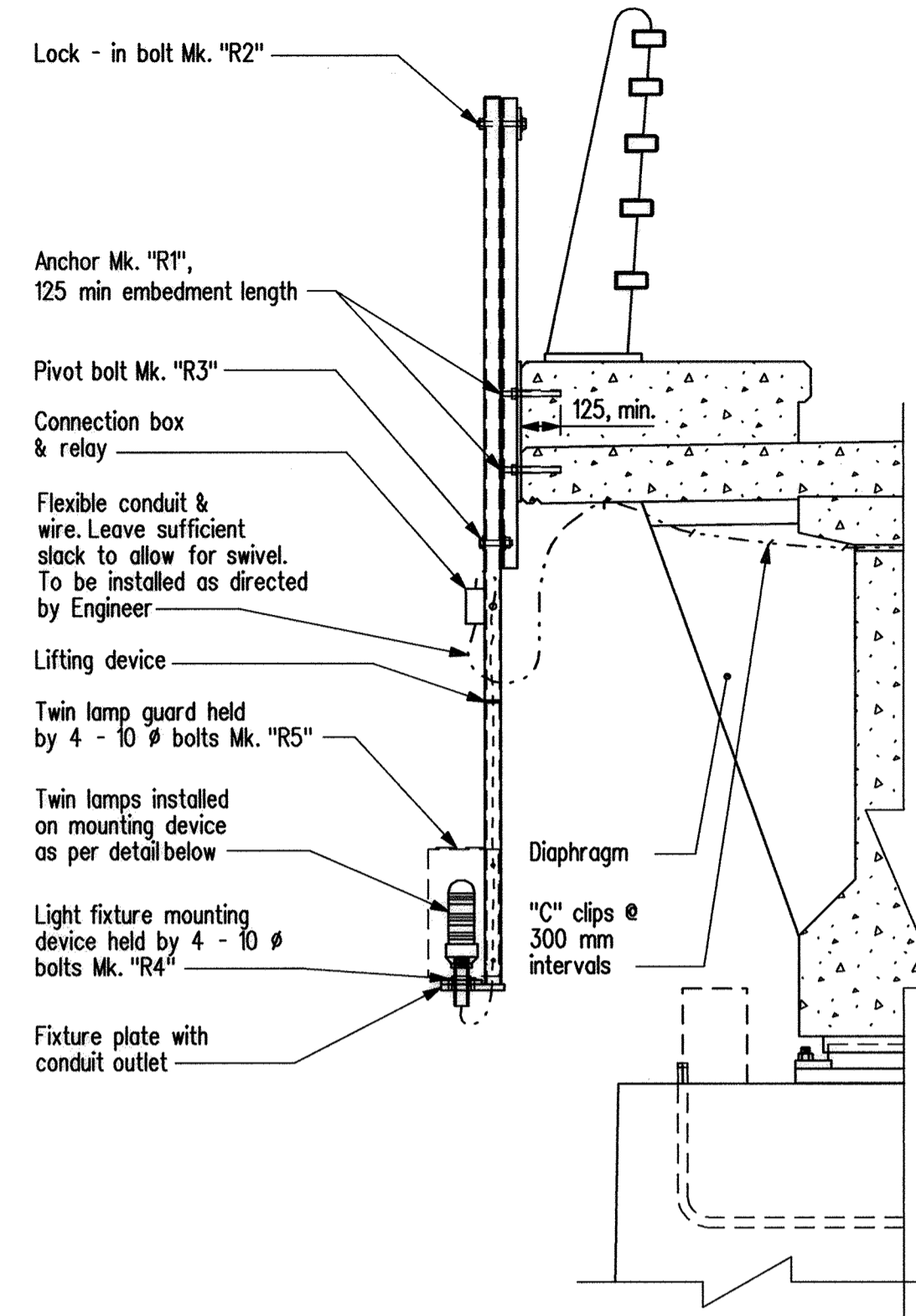
SECTION A-A
Scale: 1:5



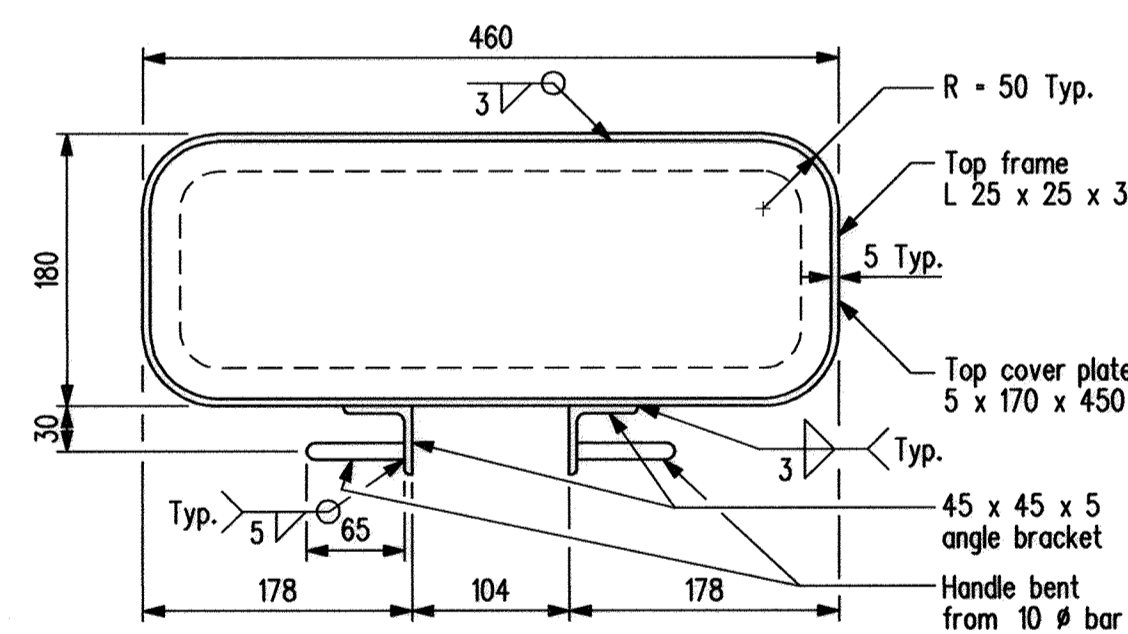
SECTION B-B
Scale: 1:5



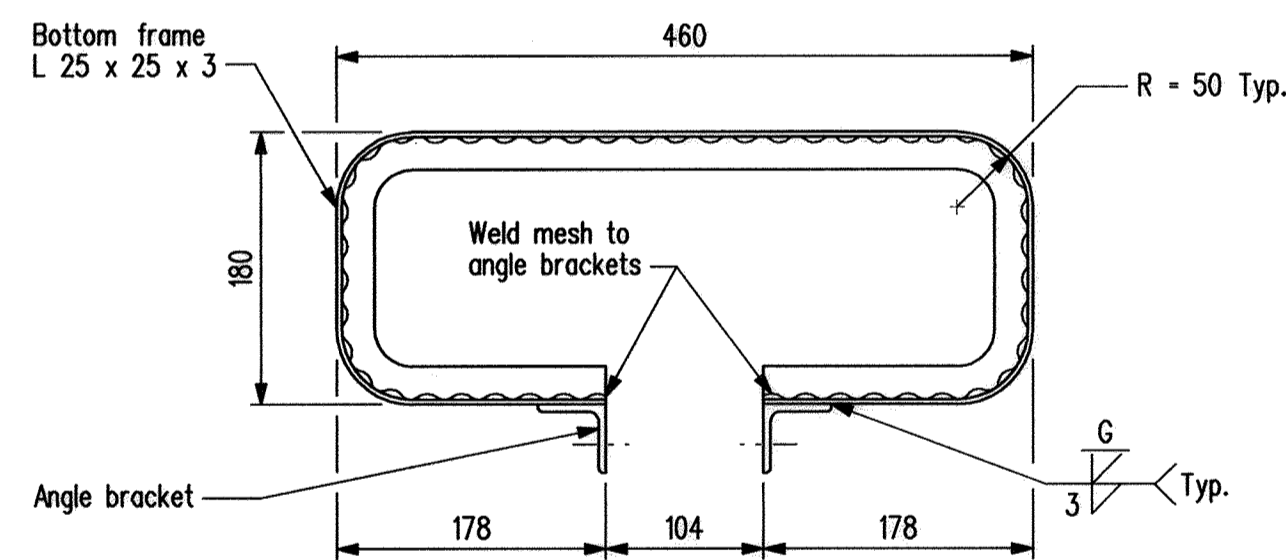
SECTION C-C
Scale: 1:5



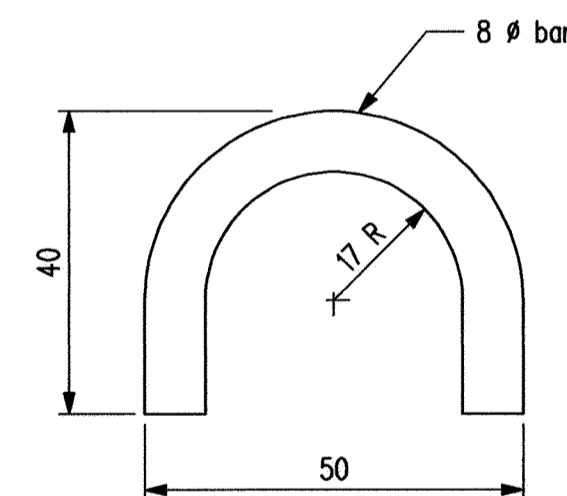
FRAME ASSEMBLY DETAILS
Scale: 1:20



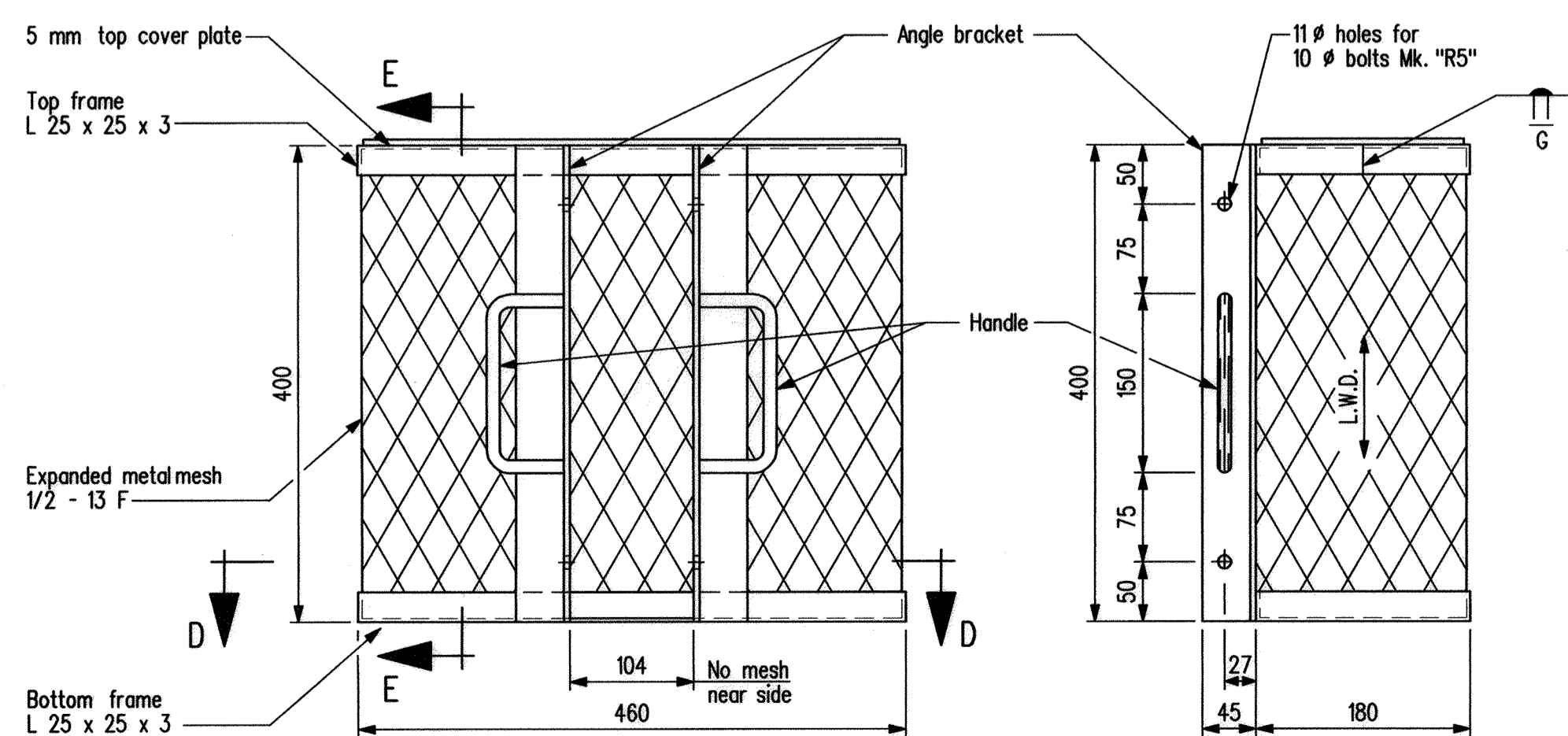
PLAN AT TOP



SECTION D-D

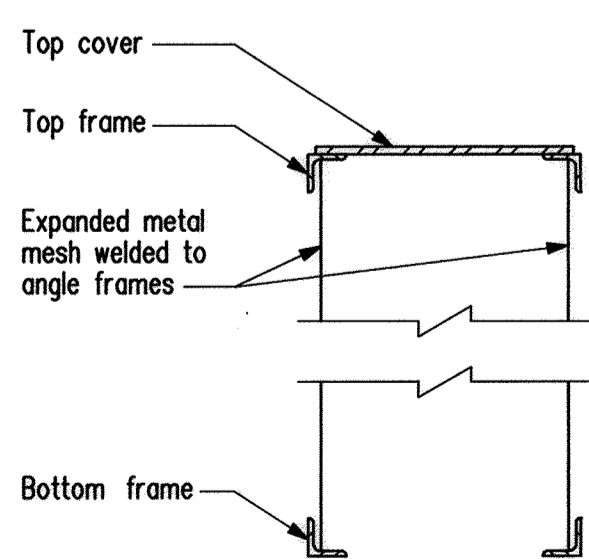


U-BAR LIFTING DEVICE
Scale: Full Size

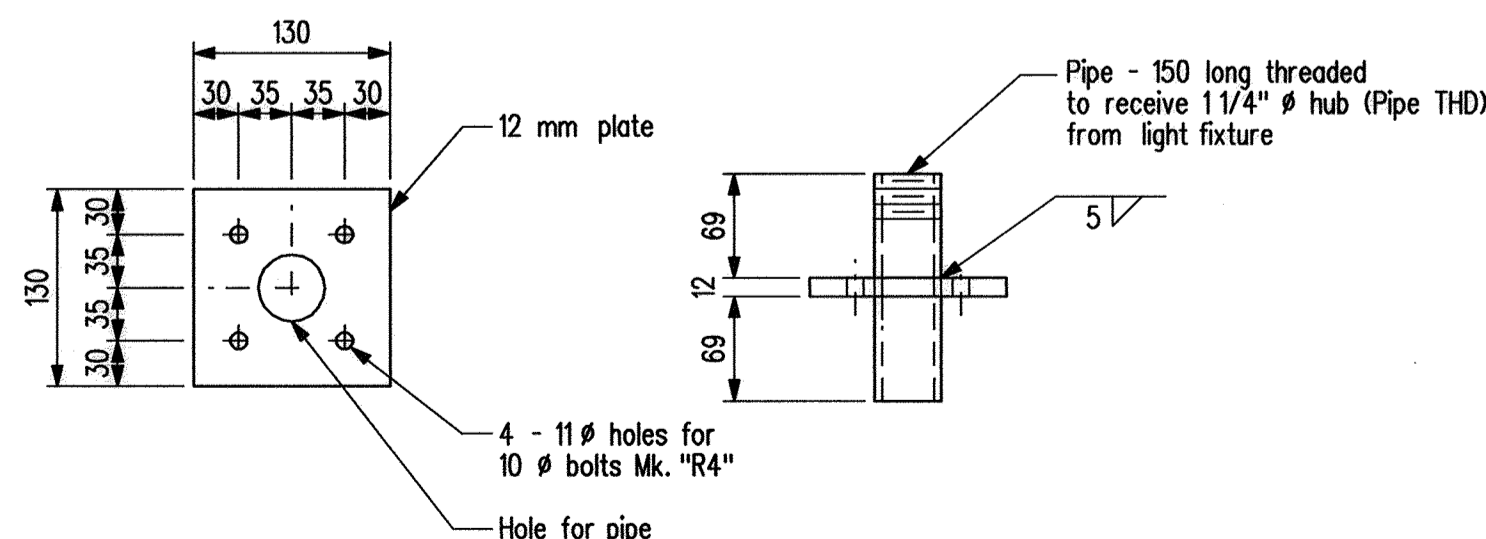


BACK ELEVATION SIDE ELEVATION

TWIN LAMP GUARD DETAILS
Scale: 1:5



SECTION E-E

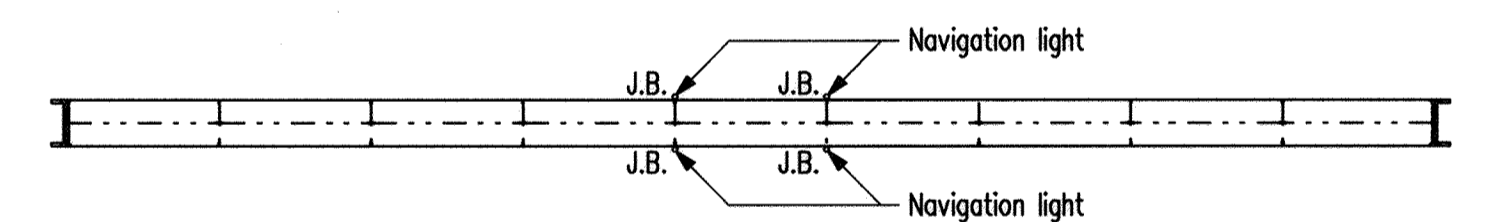


PLAN ELEVATION

LIGHT FIXTURE MOUNTING DEVICE
Scale: 1:5

BILL OF MISCELLANEOUS METAL FOR MARINE NAVIGATION LIGHTS						SITE No. 3210-00	
MARK	No.	DESCRIPTION	SIZE	COMPONENT MASS	MASS PER UNIT	TOTAL MASS	
4		Light fixture frame - completely galvanized	as detailed			272.04	
		Each unit to be fabricated from:					
		Swivel tube	1 Rectangular tube 102 x 51 x 4.8 x 2 790 long	28.74	28.74		
		Cover plate	1 Plate 6 x 45 x 96	0.20	0.20		
		Fixture plate	1 Plate 20 x 200 x 150	4.71	4.71		
		Lifting device	2 U-bars 8 # x 100 long	0.04	0.08		
		Frame channel	1 - C150 x 12 x 1480 long	17.76	17.76		
		Anchor plate	1 Plate 12 x 360 x 440	14.92	14.92		
		Washer plate	1 Plate 12 x 100 x 170	1.60	1.60		
					68.01		
4		Twin lamp guard - completely galvanized	as detailed			45.20	
		Each unit to be fabricated from:					
		Top angle frame	1 Angle 25 x 25 x 3 x 1194 long	1.33	1.33		
		Bottom angle frame	1 Angle 25 x 25 x 3 x 1190 long	1.21	1.21		
		Angle brackets	2 Angle 45 x 45 x 5 x 400 long	1.26	2.52		
		Handles	2 Round bars 10 # x 256 long	0.20	0.40		
		Cover plate	1 Plate 5 x 170 x 450	3.00	3.00		
		Expanded metal mesh	1 Sheet 1/2 - 13 F, 1.070 S.W.D., 390 L.W.D. @ 6.8 kg/m ²	2.84	2.84		
					11.30		
4		Mounting Device	As detailed	1.97		7.88	
R1	16	Anchor studs	Stainless Steel Hilti - Has rod M16 x 190 c/w Ht Hy 150 injection adhesive		0.33	5.28	
R2	4	Lock-in bolt	Mach. bolt 16 # x 140 long c/w hex. nut, 1 lock & 1 PL washer		0.33	1.32	
R3	4	Pivot bolt	Mach. bolt 16 # x 90 long c/w hex. nut & 3 plate washers		0.31	1.24	
R4	16	Light fixture mounting bolt	Mach. bolt 10 # x 32 long (no nut) c/w plate washer		0.03	0.48	
R5	16	Lamp guard mounting bolt	Mach. bolt 10 # x 25 long (no nut) c/w plate washer		0.03	0.48	
						TOTAL : 333.92 kg	

BILL OF NAVIGATION LIGHTS SUPPLIED BY THE MINISTER			SITE No. 3210-00	
MARK	No.	DESCRIPTION		
4		"APPLETON" Obstruction lights complete as follows: Cat. No. TVA 2490 C, 32 mm # bottom hub, double fixture complete with clear Fresnel lenses		
4		Cat. No. FDC 32 RI Transfer Relays		



PLAN

Showing layout for navigation lights
N.T.S.

GENERAL NOTES:

- Miscellaneous Metal Contractor is to fabricate navigation light mounting frame & lamp guard. Light fixture will be supplied by the Minister to the Miscellaneous Metal Contractor for a complete trial assembly before shipping to the Site.
- All electrical wiring shall be done by the Bridge Contractor.
- The Bridge Contractor shall supply all wire, conduit & required accessories.
- All wiring & required accessories are to be in accordance with Manitoba Hydro requirements.
- Flexible conduit to be secured to side of diaphragm with "C" clips at 300 mm intervals.
- All bolts to be galvanized or cadmium plated.

REVISIONS			NAVIGATION LIGHT DETAILS	
DATE	BY	DESCRIPTION	FOR INSTALLATION OF NEW NAVIGATION LIGHTS TO 271 500 LONG PRECAST CONCRETE I-GIRDER BRIDGE OVER LAKE MANITOBA NARROWS ON P.T.H. No. 68 IN S 1/2 SEC 22-24-10W	
			R.M. OF SIGLUNES	
			 Water Control & Structures Mid-Division RELEASED FOR CONSTRUCTION BY: <i>Ruth Eden</i> Dec 16/08 DIRECTOR STRUCTURES, DESIGN AND CONSTRUCTION BRANCH	
			DESIGN	BY: H.R. CHECKED: _____
			DETAILS	BY: M.S. CHECKED: H.R.
			SCALE: 1:10 or As Shown	SHEET No. 2 of 2 SITE No. 3210-00

