



#### WALL TYPES

(W1)

PRE-FINISHED METAL CLADDING  
19x64 HORIZONTAL WOOD STRAPPING  
@ 610 O.C.  
VAPOUR PERMEABLE WEATHER BARRIER  
75 mm RIGID INSULATION - RSI 2.64 (R15) ON  
VERTICAL Z-GIRTS @ 610 mm O.C.  
38 x 38 HORIZ. WOOD STRAPPING  
@ 610 O.C.  
38 mm RIGID INSULATION - RSI 1.32 (R7.5)  
AIR / VAPOUR BARRIER MEMBRANE  
12.5 mm OSB SHEATHING  
2 - 38 x 140 STUDS @ 400 O.C.  
9.5 mm OSB SHEATHING  
PRE-FINISHED METAL LINER

(W2)

2 HOUR FIRE RATED WALL  
(NBC - DESIGN W24 NON-LOADBEARING)

PRE-FINISHED METAL LINER  
2 - 15.9 mm TYPE X GYPSUM BOARD\*\*\*  
9.5 mm OSB SHEATHING  
2 - 38 x 140 STUDS @ 400 O.C.  
9.5 mm OSB SHEATHING  
2 - 15.9 mm TYPE X GYPSUM BOARD\*\*\*  
PRE-FINISHED METAL LINER

(W3)

PRE-FINISHED METAL CLADDING  
19x64 HORIZONTAL WOOD STRAPPING  
@ 610 O.C.  
VAPOUR PERMEABLE WEATHER BARRIER  
75 mm RIGID INSULATION - RSI 2.64 (R15) ON  
VERTICAL Z-GIRTS @ 610 mm O.C.  
38 x 38 HORIZ. WOOD STRAPPING  
@ 610 O.C.  
38 mm RIGID INSULATION - RSI 1.32 (R7.5)  
AIR / VAPOUR BARRIER MEMBRANE  
12.5 mm OSB SHEATHING  
2 - 38 x 140 STUDS @ 400 O.C.  
9.5 mm OSB SHEATHING  
12 mm CEMENT-FIBRE BOARD

(W4)

PRE-FINISHED METAL LINER  
9.5 mm OSB SHEATHING  
2 - 38 x 140 STUDS @ 400 O.C.  
9.5 mm OSB SHEATHING  
12 mm CEMENT-FIBRE BOARD

\*\*\* THE JOINTS OF THE OUTER LAYER OF FINISH  
ON BOTH SIDES OF THE WALL SHALL BE TAPED  
AND FINISHED. FASTENERS TYPES AND SPACING  
SHALL CONFORM TO CSA A82.31-M, "GYPSUM  
BOARD APPLICATION"

1  
S1

175  
EQ. EQ.  
300  
40 TYP.  
100  
1 COLUMN AND SUPPORT  
BEAM  
200 WIDE  
CONCRETE BEAM

BASE PLATE 175 x 20 x 300 LONG  
C/W 2 A325 - 20mm Ø THREADED A. BOLTS  
C/W NUTS AND WASHERS

COL C1 - W150 x 30  
SCALE 1:10

#### DOOR TYPES

(D01)

TWO INSULATED METAL DOORS  
PAINTED, 900 x 2150 x45  
DOOR CLOSER  
1-1/2 PR. HEAVY DUTY HINGES  
ASTRAGAL  
WEATHER STRIPPING  
DOOR SWEEP  
ALUMINUM THRESHOLD  
FLUSH BOLTS  
PANIC HARDWARE  
THERMALLY BROKEN PRESSED STEEL FRAME PAINTED

(D02)

1-1/2 HR. FIRE RATED HOLLOW METAL DOOR  
PAINTED, 900 x 2150 x45  
DOOR CLOSER  
1-1/2 PR. HEAVY DUTY HINGES  
WEATHER STRIPPING  
ALUMINUM THRESHOLD  
LEVERED PASSAGE SET  
1-1/2 HR. FIRE RATED PRESSED STEEL FRAME PAINTED

(D03)

INSULATED METAL DOOR  
PAINTED, 900 x 2150 x45  
DOOR CLOSER  
1-1/2 PR. HEAVY DUTY HINGES  
WEATHER STRIPPING  
ALUMINUM THRESHOLD  
PANIC HARDWARE  
LEVERED LOCKSET  
THERMALLY BROKEN PRESSED STEEL FRAME PAINTED

#### WINDOW TYPES

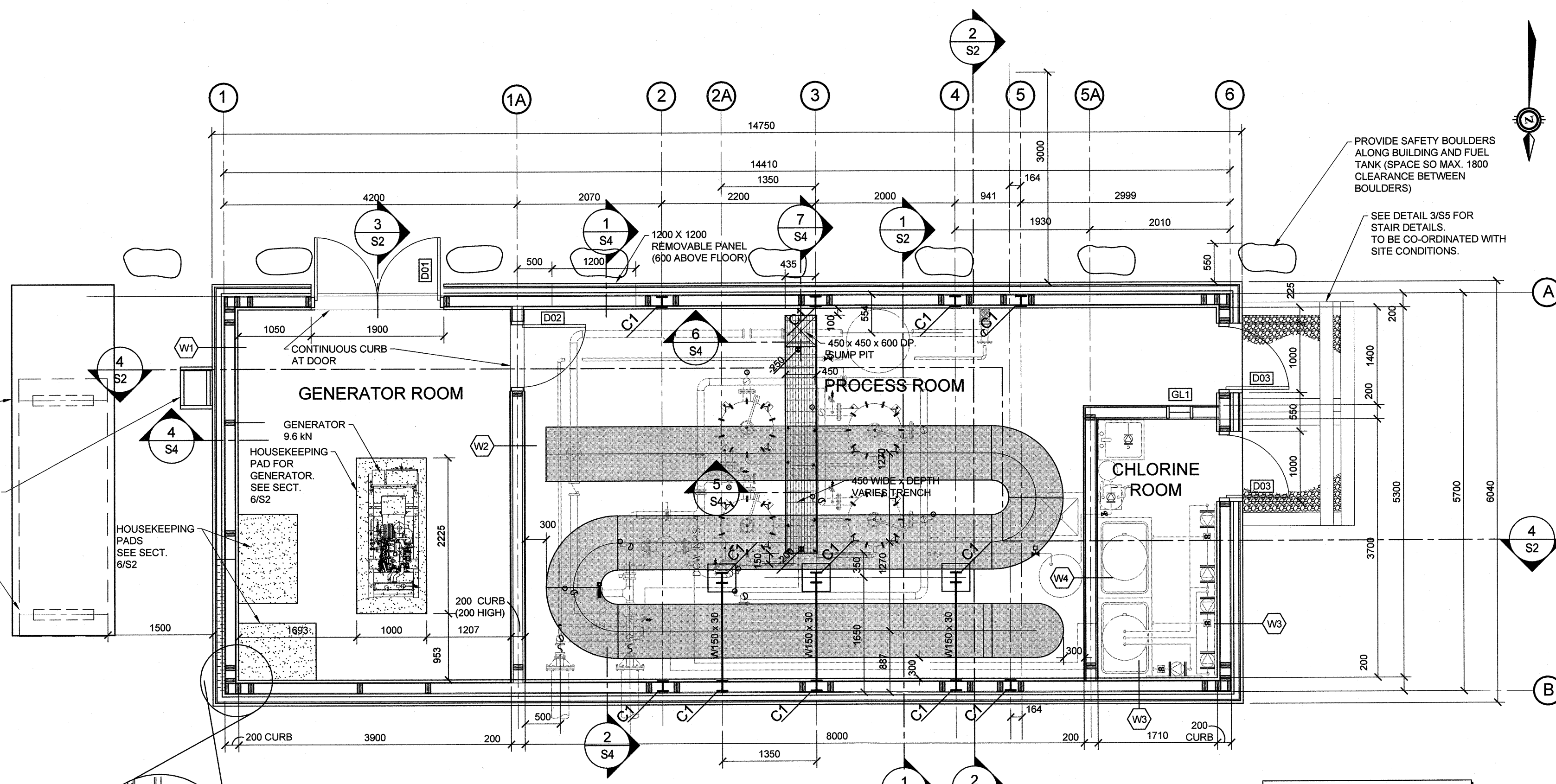
(GL1)

300 mm WIDE X 600 mm HIGH WINDOW  
C/W GEORGIAN WIRE GLASS  
METAL FRAME  
BOTTOM OF WINDOW AT 1200 mm ABOVE FINISHED  
FLOOR

A/B

100  
500  
28 GROUT  
2 A325 - 20mm Ø THREADED  
A. BOLTS C/W NUTS AND  
WASHERS  
300

SECTION 1  
SCALE 1:10  
S1



#### GROUND FLOOR PLAN

SCALE 1:10

ALL OPENINGS IN WALL TO BE  
COORDINATED BY GENERAL  
CONTRACTOR

VERIFY SIZE AND LOCATION OF ALL MECHANICAL  
OPENINGS, CURBS, EQUIPMENT PADS WITH  
MECHANICAL DRAWINGS AND MECHANICAL  
CONTRACTOR. (MAJOR OPENINGS NOT SHOWN TO BE  
VERIFIED WITH ENGINEER)

GENERAL NOTE:  
LAYOUT OF CHEMICAL FEED PIPING IS  
SHOWN SCHEMATICALLY FOR CLARITY.  
CO-ORDINATE FINAL LAYOUT ON SITE.

#### GENERAL NOTES

- Check all dimensions on structural drawings with other drawings. Report any inconsistencies before proceeding with the work. DO NOT SCALE THESE DRAWINGS.
- All work shall comply with current provisions of the National Building Code, the Workplace Safety and Insurance Board and best trade practices. Work shall comply with all local and provincial regulations and with applicable C.S.A. standards. In all cases, the latest editions of codes and standards shall apply.
- Structural design complies with the minimum standards of Part 9 of the National Building Code 2010.
- Before submitting tenders contractors shall carefully examine existing conditions to establish the extent of the work.
- Locate all buried services prior to excavation. The contractor shall be responsible for all temporary bracing, shoring and dewatering necessary to undertake the work.
- The contractor is responsible for removing excess materials and cleaning up on completion of the work.
- The contractor shall verify dimensions before construction and report discrepancies before proceeding with the work.

#### MATERIALS SPECIFICATIONS

- Concrete - materials to CSA-A23.1-14. Compressive strength minimum 35 MPa. 6% +/- 1% entrained air for concrete. Slump 70 +/- 20mm. Maximum water/cement ratio: 0.43. Maximum aggregate size 20 mm. Type GU cement. Exposure Class - C1
- Formwork - to CSA-A23.1-14. Use only new forming materials for architecturally exposed surfaces. Form release agent shall be nonstaining, compatible with finishes where applicable.
- Rebar - deformed billet steel bars to CSA G30.18M-09, Grade 400. Type W for welded rebar.
- Mesh - welded wire fabric to ASTM A1064/A1064M-14.
- Rolled structural steel shapes - General requirements to CSA S16-14, rolled shapes to CSA G40.21, 350W minimum. Channels, angles and plates 300W.
- Hollow structural sections - to CSA-G40.20-13/G40.21-13, 350W, Class H.

- Bolts, nuts and washers - General requirements to CSA-S16-14, ASTM A325M-09. Hot dipped galvanized as required.
- Welding - to CSA W59-13, E480XXCH or LH basic electrodes conforming to CSA W48-14. Welding shall be performed only by companies certified by Canadian Welding Bureau as follows: Fusion Welding - certified to CSA W47.1-09(2014); Resistance Welding - certified to CSA W55.3-08 (2013). Workmanship to best trade practices for cold weather installations.
- Prime paint to Structural Steel - to CISC/CPMA STANDARD 2-75, one shop coat, one touch up field coat.
- Wood Framing Material - SPF Grade No. 1 or 2. All lumber in direct contact with concrete, soil or moisture to be pressure treated.
- Rough Carpentry - Timber Construction shall conform to Part 9 of NBC 2010 and CSA 086-14.
- Nails and Staples - materials to ASTM F1667-13. Common and spiral ardox nails to be galvanized.
- Prefinished Metal Roofing - Sheet steel to ASTM A653/A653M-13, commercial quality, galvanized, Z275 coating, designation, factory precoated with paint finish.

Colour: White White QC8317  
Profile: Ideal Roofing Pocket Rib  
Class: FIS  
Thickness: 0.53 mm base metal thickness

- Prefomed Cladding/Siding - Sheet steel to ASTM A653/A653M-13, grade A, galvanized, Z275 coating designation, factory precoated with paint finish, 2 coat system dry paint film thickness of 0.025 mm +/- 0.005 mm both faces conforming to film test procedures described in CSSBI Bulletin No. 5 and ASTM D1005-95 (2013), Stelco 10000 Series or equal.  
Colour: White White QC16076  
Profile: 36 mm deep x 190 mm flute spaces, preformed interlocking joints, acceptable material  
Vic West CL622R with rib profile or equal  
Thickness: 0.61 mm base metal thickness  
Fascia and Trims: same colour and thickness as cladding

- Wall and Roof Insulation: Rigid Closed Cell polystyrene: to CAN/ULC-S701-11, type 4, compressive strength at 5% deformation 275 kPa, thermal resistance of 0.87 RSI/25 mm, thicknesses as specified, square shipped edges. Acceptable material Styrofoam SM or approved

equal.

- Underside Rigid Insulation: Extruded polystyrene foam insulation CAN/ULC-S701-11, type 4, rigid, closed cell type. Standard of Acceptance Styrofoam High Load 60 by Dow Chemical or approved equivalent.
- Girts: "Z" profile, minimum 1.3 mm thick, height to suit insulation thickness, formed from galvanized sheet steel to ASTM A653/A653M-13, Grade A, with zinc coating designation Z275, with 50 mm wide bottom flange and 64 mm wide top flange. Terminations: perimeter framing of "L" or "C" profiles to match "Z" girts.
- Fasteners for girts: epoxy coated 4mm dia. steel screws of sufficient length to penetrate through deck.
- Fasteners for metal roofing: self-drilling cadmium plated steel purpose made, head colour same as exterior steel roofing, neoprene washer exposure.
- Fasteners for metal cladding: cadmium plated steel purpose made, head colour same as exterior sheet, dished steel/neoprene.
- Sealants: single component acrylic, colour to match roofing/cladding.
- Polyethylene Sheets - 0.25 mm (10 mil) clear polyethylene film.

#### REINFORCEMENT PLACEMENT

- Minimum clear cover  
- For concrete placed against earth.....75 mm  
- For concrete placed in forms but in contact with earth and weather.....50 mm  
- Interior slabs and walls.....40 mm  
- Curb .....40 mm
- Laps  
- lap all bars 36 bar diameters or 450 mm minimum, whichever is greater, unless otherwise indicated.
- Chairs for support of slab reinforcing spaced at maximum of 1.0 m in either direction. Supply support bars, chairs and carriers.

#### DESIGN SERVICE LOADS

##### DEAD LOADS

FLOOR 4.8 kPa  
ROOF (Self weight) 1.35 kPa  
Superimposed Loads (Mech. Allowance) 0.5 kPa

#### LIVE LOADS

FLOOR 7.2 kPa

##### ROOF SNOW LOAD

Ss = 3.8 kPa  
Sr = 0.2 kPa  
Is = 1.25 ULS  
Is = 0.9 SLS

S = [Ss (Cb Cw Cs Ca) + Sr]  
= 1.25 [ 3.8 (0.8)(1.0)(1.0)(1.0) + 0.2 ]  
= 4.05 kPa

##### LATERAL LOADING

WIND LOAD (Governs)  
q(1.50) = 0.69 kPa  
Cp Cg = 1.95 for walls  
Cp Cg = 2.00 for roof  
Ce = 0.9  
Iw = 1.25 ULS Iw = 0.75 SLS

WIND EAST - WEST  
= 24 kN

WIND NORTH - SOUTH  
= 58 kN

##### EARTHQUAKE LOAD

Site Classification C  
Sa (0.2) = 0.240  
Sa (0.5) = 0.110  
Sa (1.0) = 0.051  
Sa (2.0) = 0.013  
Fa = 1.0  
Fv = 1.0  
S (T = 0.2) = 0.24  
S (T = 0.5) = 0.11  
S (T = 1.0) = 0.051  
S (T = 2.0) = 0.013  
S (T > 4.0) = 0.0065  
Ro = 1.7  
Rd = 3.0  
Ie = 1.5 No Irregularities  
V = 1/3 S(0.2) Ie W Rd Ro  
= 2/3 (0.24)(1.5) W(3.0)(1.7)  
= 0.0471W

NORTH - SOUTH or EAST - WEST  
V = 14.75 kN

#### ROOF & WALL SHEATHING

##### Plywood / OSB Nailing Requirements

Wall sheathing (OSB, thickness as indicated)  
Walls along Grid Lines (A) and (B) 1 (1A), 5A and 6  
Wall Sheathing (Both Faces)  
@ Panel Edges 150 mm O.C.  
@ Intermediate Framing 300 mm O.C.

Roof Sheathing (Douglas Fir Plywood, thickness as indicated.  
Use H-clips as required).  
@ Panel Edges 150 mm O.C.  
@ Intermediate Framing 300 mm O.C.

76 mm (3") Long Common Wire Nails 3.66 mm (Diameter)

NOTES: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS  
WITH FINAL ARCHITECTURAL AND MECHANICAL DRAWINGS.  
NOTIFY THE ENGINEERS OF ANY ERRORS AND/OR  
OMISSIONS PRIOR TO CONSTRUCTION FOR DIRECTION.  
DO NOT SCALE THIS DRAWING.

No.	DESCRIPTION	DATE	BY	APPD
1	ISSUED FOR TENDER	11/12/2014	M.N.	K.A.B.

#### REVISIONS

PERMIT OF PRACTICE EXP SERVICES INC.	
Signature	<i>John A. Baker</i>
Date	2014/12/16
PERMIT NUMBER: P483 NTNU Association of Professional Engineers and Geoscientists	

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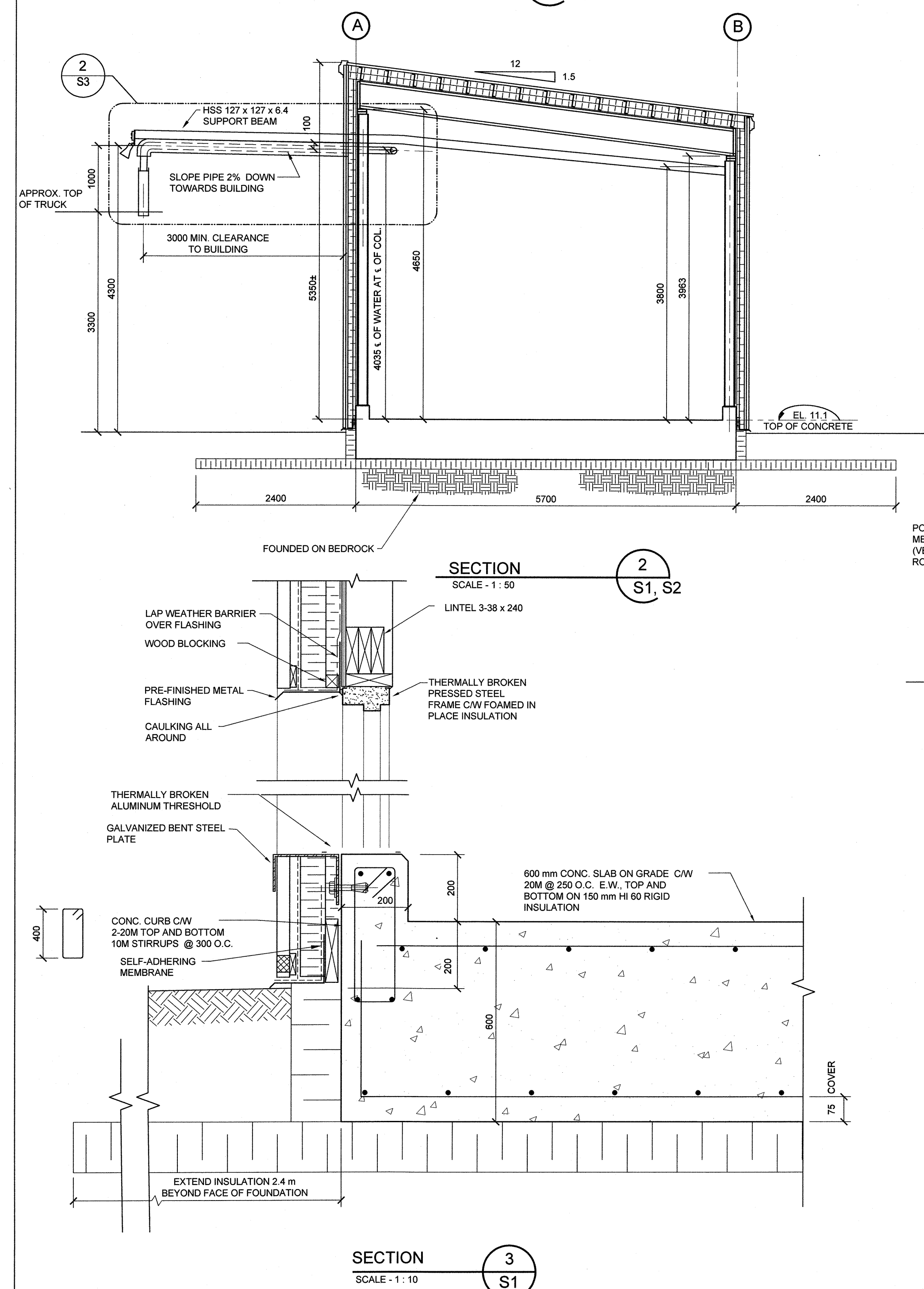
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TITLE	GROUND FLOOR PLAN, SECTIONS AND GENERAL NOTES
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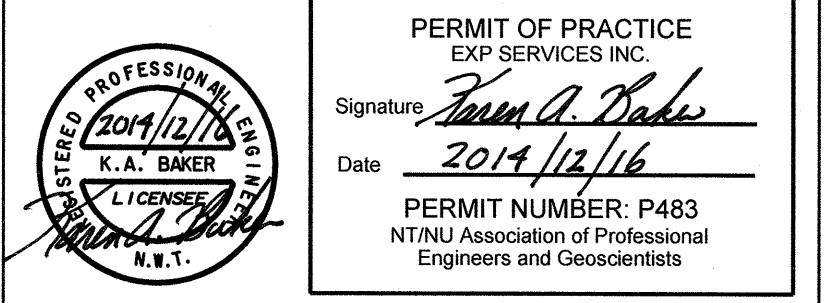
design by	K.A. BAKER	project no.	OTT-00203694-A0
dwn by	M. NUGENT	dwn by	
checked by	K.A. BAKER		
date	NOV. 2013		
scale	AS NOTED		

S1





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PROJECT CORAL HARBOUR, NUNAVUT  
WATER TRUCK FILL STATION  
PROJECT: 11-3018

TITLE

ROOF FRAMING PLAN  
AND SECTIONS

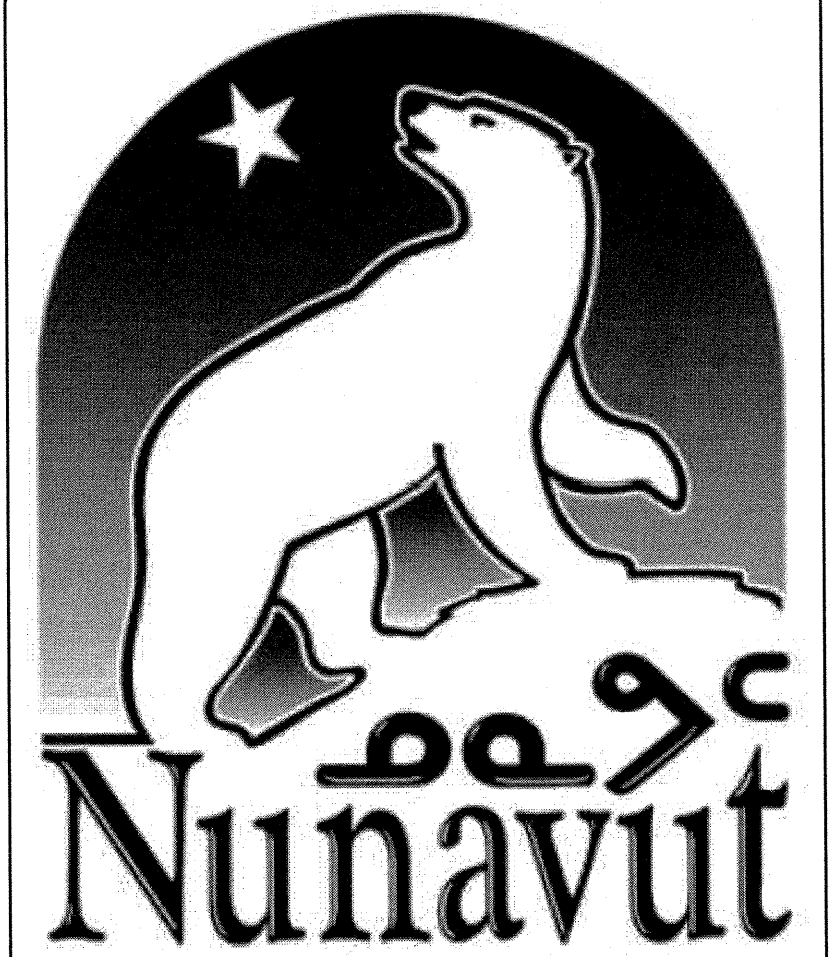
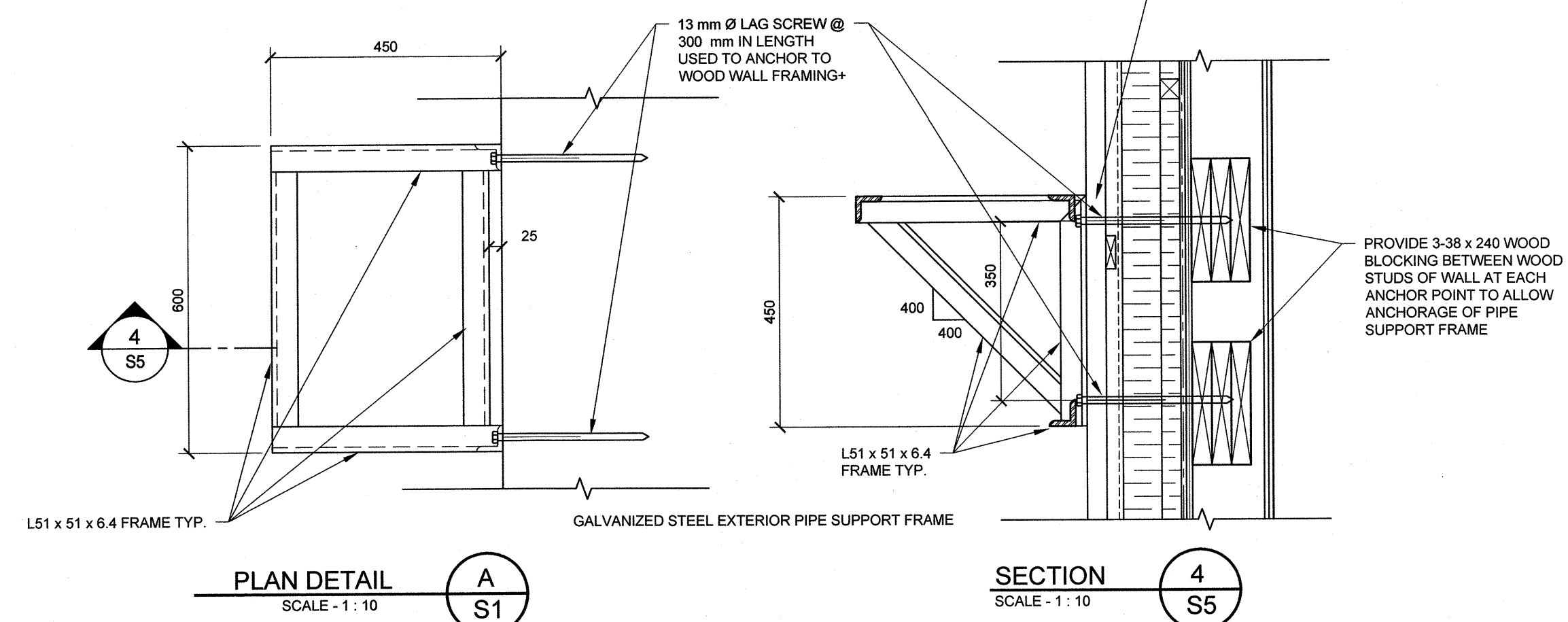
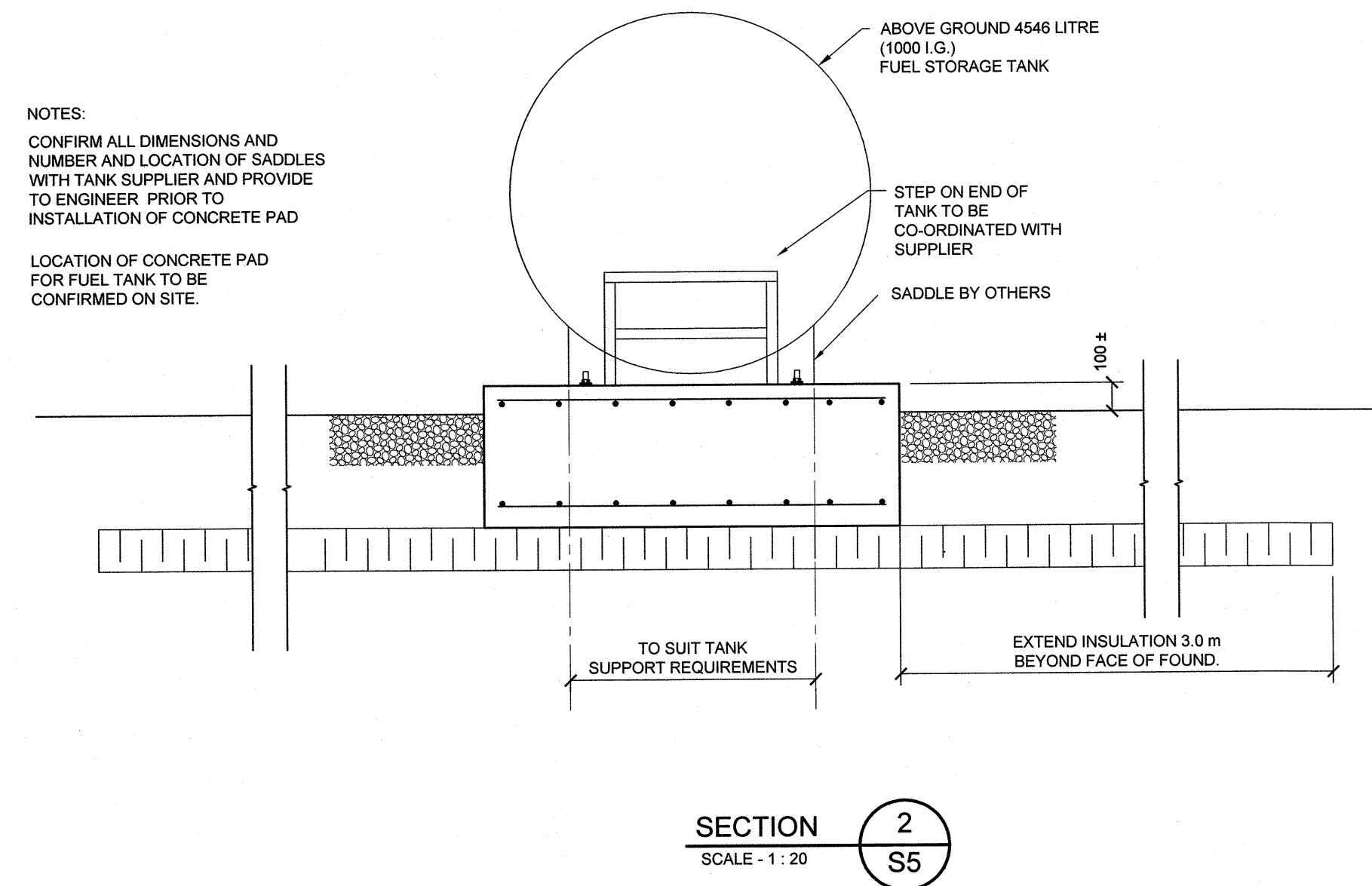
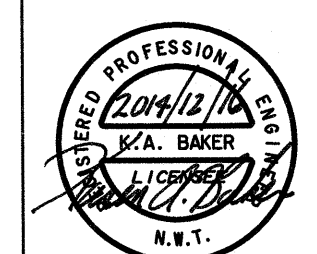
design by	K.A. BAKER	project no. OTT-00203694-A0  drawing no.  <div style="font-size: 2em; text-align: center;">S2</div>
drawn by	M. NUGENT	
checked by	K.A. BAKER	
date	NOV. 2013	
scale	AS NOTED	









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PROJECT  
**CORAL HARBOUR, NUNAVUT**  
WATER TRUCK FILL STATION  
PROJECT: 11-3018

## FUEL STORAGE TANK PLAN AND SECTIONS

design by	K.A. BAKER	project no.	OTT-00203694-A0
drawn by	M. NUGENT	drawing no.	S5
checked by	K.A. BAKER		
date	NOV. 2013		
scale	AS NOTED		

S5