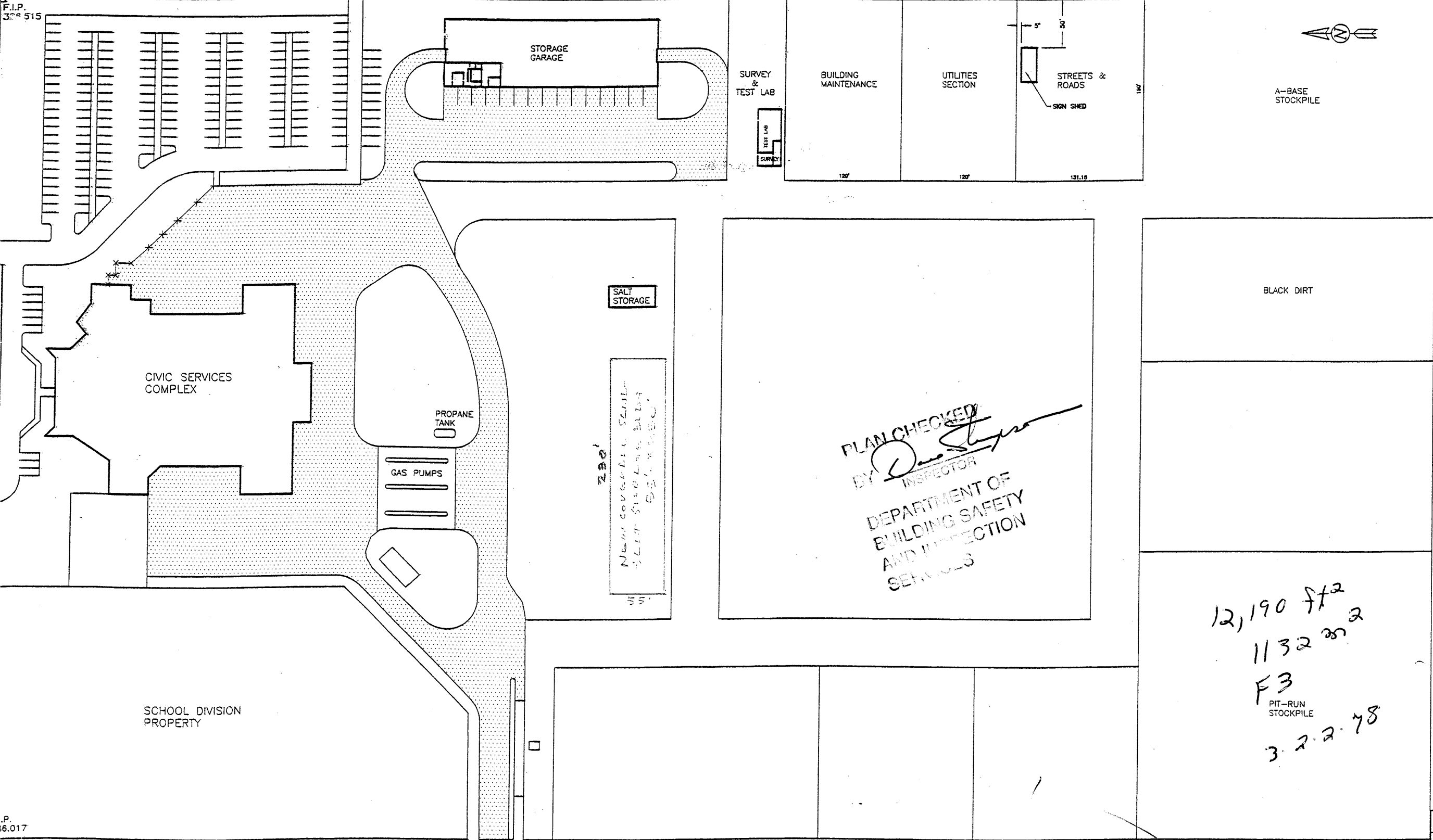


F.I.P.
304 515



LEGAL:
LOT 1, PLAN 2070
EXCLUDING
PORTION TAKEN
FOR PLAN 2223

P.
16.017

DOUGLAS STREET

CIVIC WORKS COMPLEX - SITE PLAN				
DESIGNED	CITY OF BRANDON			
DRAWN R.B.S.	DEPARTMENT OF ENGINEERING AND OPERATIONS			
CHECKED	DATE	MARCH 28, 1997	DWG. NO.	B1115A
APPROVED	FILE NO.		SHEET 1 OF 3	REV.
SCALE	HOR. 1:500	VERT. 1:500	FILE NO.	

14 1/2" x 1 1/2" BASE PL

INSIDE OF BLDG.

L BOLTED TO RM.
TRUSS BOLTED TO L
COVER ALL 12.50Z FABRIC
P.W.F. WOOD NAILER
L.W. FABRIC FASTENED
TO VTS

TYP. SECTION AT TRUSSES
3/4" = 1'-0"

INSIDE
OF
BUILDING

TYPICAL BASE PL DETAIL
1 1/2" = 1'-0"

COVER ALL 12.50Z
FABRIC EXT. BLDG.

230'-0" BLDG

200'-0" BLDG

TOP OF FOUNDATION WALL EL = 106.00
ELEVATION TOP BLACK FILL EXT. FOUNDATION WALL = 98.00

FINISHED GRADE / TOP OF FOOTING ELEVATION = 100.00

EXIST. GRADE
EL = 99'-6" ±

EL. V/S PTS
99.00

LOWER GRADE EL. APPROX. 70'-0" EXISTING GRADE

LOWER GRADE ELEVATION
APPROXIMATELY 100'-0"

SECTION THROUGH SITE / BLDG - SHOWING EXIST. / PROPOSED ELEVATIONS.
SCALE: 1/16" = 1'-0"

GENERAL NOTES:

EXIST. GRADE TO V/S FOOTING TO BE GRANULAR FILL - COMPACTED.
INT. BLDG EXIST. GRADE TO TOP FOOTING TO BE GRANULAR FILL - COMPACTED.
RETAINING WALL, EXT. BLDG TO BE CLEAN NON ORGANIC FILL - COMPACTED.

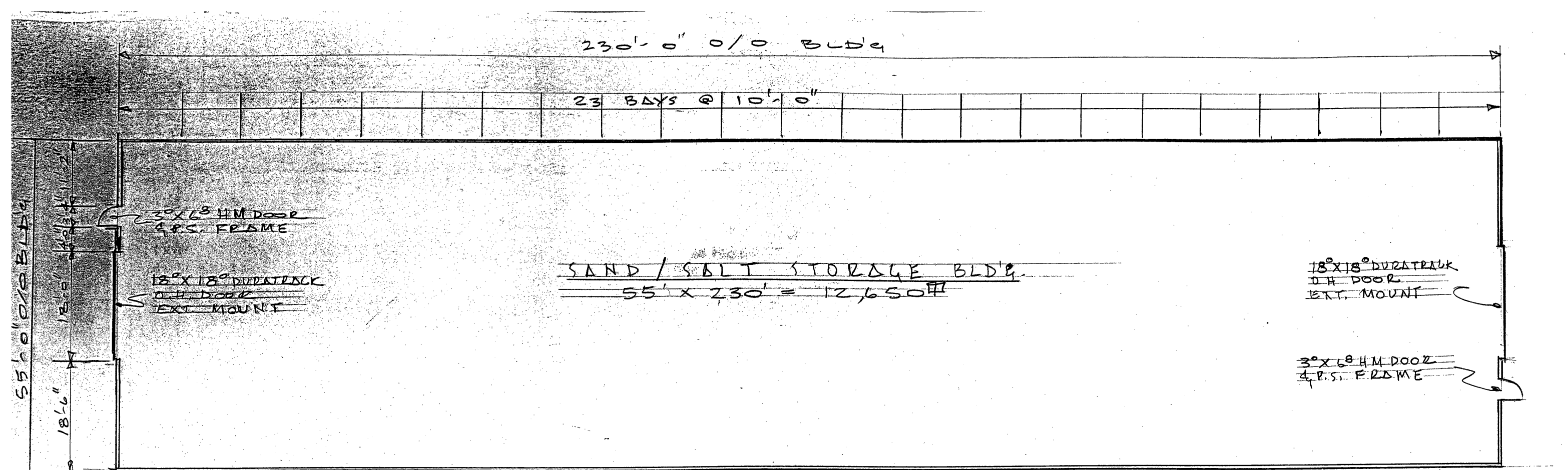
PRELIMINARY: NOT FOR
CONSTRUCTION.

PROP SAND/SALT STORAGE			
BLDG. CITY OF BRANDON			
REV	REVISIONS DESCRIPTION	BY	DATE

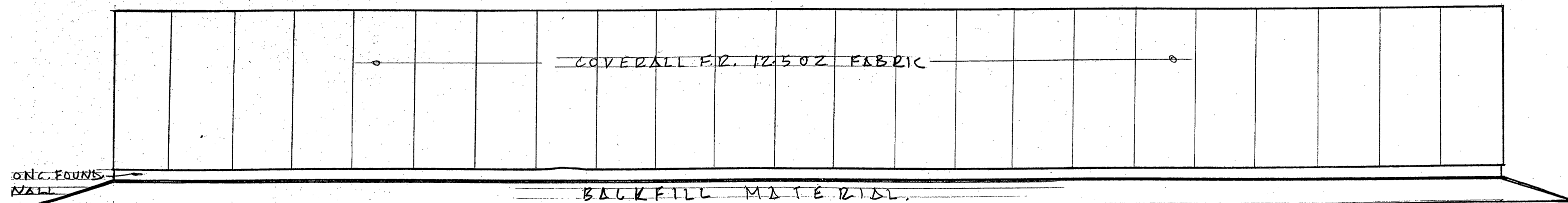
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DRAWN BY: LH DATE: MAR 8/01
CHECKED BY: DATE:
SCALE: 1/16" = 1'-0" ORDER #:

COVER-ALL
BUILDING SYSTEMS
5101 PORTAGE AVENUE
HEADINGLY, MB R4H1E1
PH-481 6675 FAX 4883922
FILE: SHEET: ONE



FLOOR PLAN
1/16" = 1'-0"



TYPICAL SIDE ELEVATION
1/16" = 1'-0"

PRELIMINARY: NOT FOR CONSTRUCTION

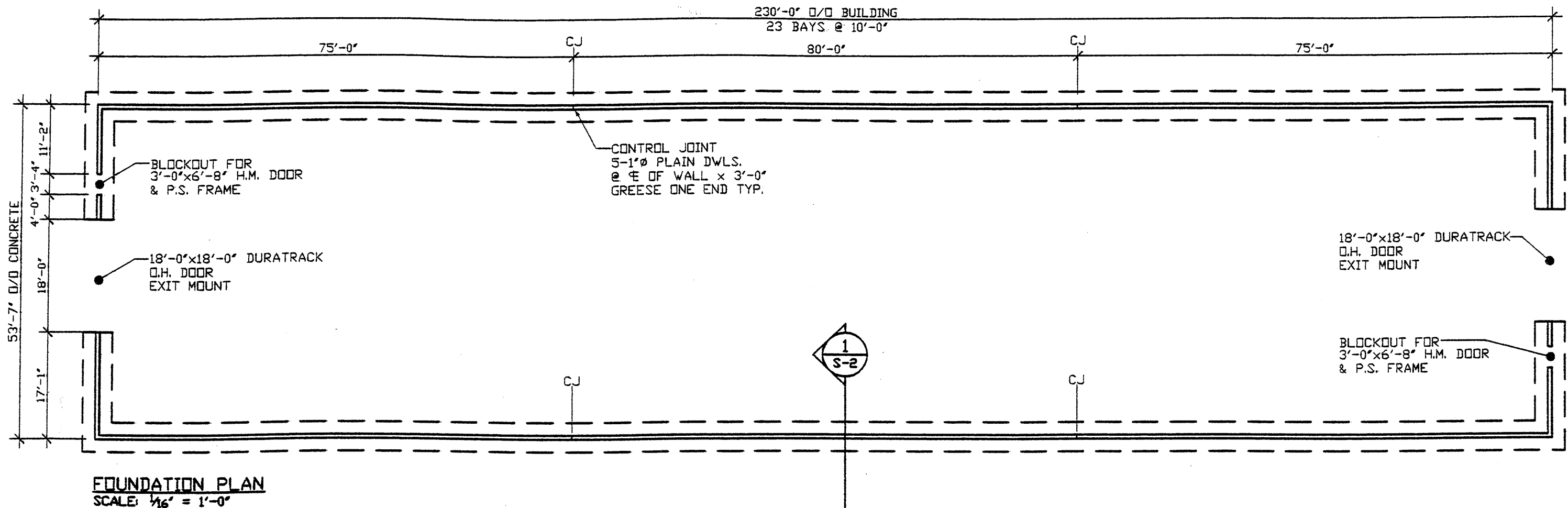
PROPOSED SAND / SALT STOR.			
BLDG. CITY OF BRANDON			
REV	REVISIONS DESCRIPTION	BY	DATE


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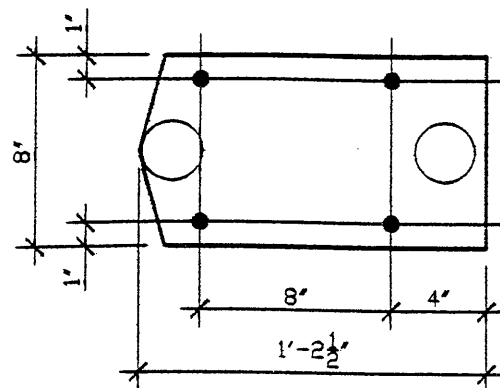
DRAWN BY:	L. H.	DATE:	MAR 5, 2001
CHECKED BY:		DATE:	
SCALE:	1/16" = 1'-0"	ORDER #:	

COVER-ALL
BUILDING SYSTEMS
5101 PORTAGE AVENUE
HEADQUARTERS
PH. 487 6675 FAX 4883922
FILE: FLOOR PLAN
TYP. SIDE ELEVATION

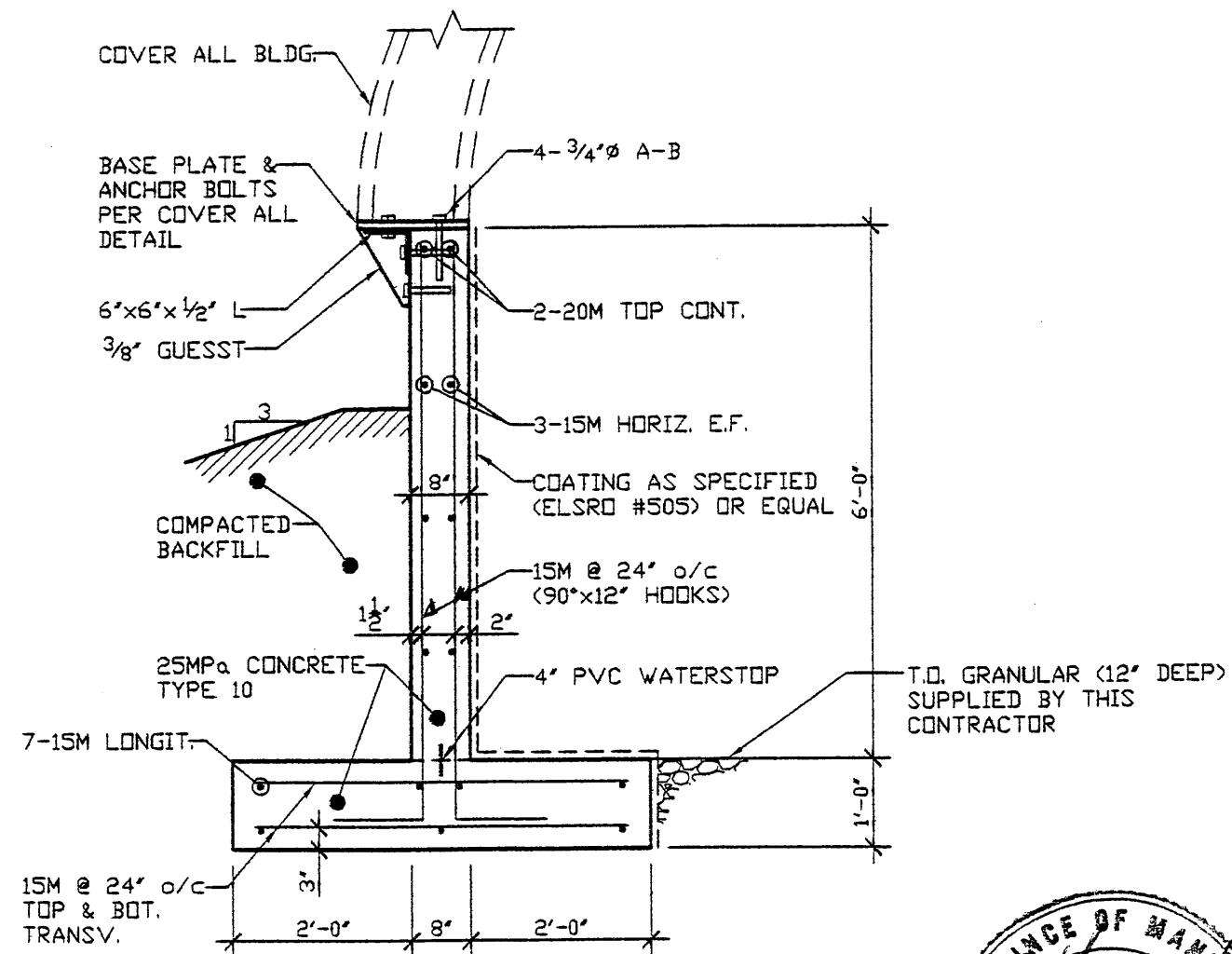
SHEET	3	REVISION	
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COVER-ALL SAND/SALT STORAGE BLDG. - BRANDON				
DESIGN BY W.H.	DRAWING BY T.M.K.		Hanuschak Consultants Incorporated Consulting Structural Engineers	26 EDMONTON ST. WINNIPEG, MB. CANADA, R3C 1P7 PH.: 204-956-2200 FAX.: 204-956-1671 E-MAIL: hci@hanuschak.com
JOB NO. 01-149	DATE APRIL 17, 2001			
				DRAWING NO. S-1




TYPICAL BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



1 TYPICAL CROSS SECTION
SCALE: 1/2" = 1'-0"



COVER-ALL SAND/SALT STORAGE BLDG. - BRANDON			
DESIGN BY W.H.	DRAWING BY T.M.K.	 Hanuschak Consultants Incorporated Consulting Structural Engineers	26 EDMONTON ST. WINNIPEG, MB. CANADA, R3C 1P7 PH.: 204-956-2200 FAX.: 204-956-1671 E-MAIL: hci@hanuschak.com
JOB NO. 01-149	DATE APRIL 17, 2001		DRAWING NO. S-2

CERTIFICATE OF DESIGN AND MANUFACTURING CONFORMANCE
FOR COVER-ALL BUILDING SYSTEMS

All components of the steel and fabric building system described below
have been or will be designed and fabricated in accordance with the
standards and loads listed below

1. DESCRIPTION

AP / Ref Number: GA3314/ENG456
Building Type and Size: TAS 55' X 230' @ 10' OC
Intended Use and Occupancy: F3 LOW HAZARD INDUSTRIAL SALT STORAGE
Importance Factor: 0.8
Site Location: BRANDON, MB
Exposure Factor, Cw: 0.75
Building Category: 2 (PARTIALLY ENCLOSED)
Applicable Building Code: BMHA 98
Builder's Name and Address: COVER-ALL MANITOBA HEADINGLEY, MB
Owner's Name and Address: BRANDON SALT STORAGE BRANDON, MB
Building Legal Address: LOT 1
PLAN 2070 EXCLUDED PORTION
TAKEN FROM PLAN 2223
BRANDON, MB

2. DESIGN STANDARDS

Buildings and Mobile Homes Act, Part 4: Structural Design,
CAN/CSA-S16.1, Steel Structures for Buildings
CAN/CSA-S136, Cold Formed Steel Structural Members,
Other -

edition dated: 1998
edition dated: 1994
edition dated: 1994

Engineer's
Initials

3. MANUFACTURING STANDARDS

- (a) Fabrication has been or will be in accordance with CAN/CSA-S16.1 and
CAN/CSA-S136, as applicable.
(b) Welding has been or will be performed in accordance with CSA-W59 and
CAN/CSA-S136, as applicable.
(c) The Manufacturer has been certified in accordance with CSA-W47.1, for Division 2.1
(d) Welders have been certified in accordance with CSA-W47.1

4. LOADS

(a) Snow, Ice and Rain Loads 40.0 (psf)
Ground snow load, S_g 4.18 (psf)
Associated Rain load, S_r

(b) Wind Load
reference velocity pressure for q 1/10 7.73 (psf)
reference velocity pressure for q 1/30 9.40 (psf)

- (a) Wind Load Application
(i) applied as per BMHA Act Part 4, Section
(ii) pressure coefficients as per Supplement to NBC, Commentary on Wind Loads,
Figures B6 thru B8 and B11

(d) Earth quake loads as per BAMH Act Part 4, Section
4.1.9

5. Engineer

I, Marcel Regnier, a Professional Engineer registered or licensed to practice in the Province
or Territory of MANITOBA, hereby certify that I have reviewed the design and
manufacturing process for the Steel and Fabric Building System described. I certify that the
foregoing statements, initiated by myself, are true.

Signature: Marcel Regnier

Name: Marcel Regnier

Member: 21137

Affiliation: Consultant

Date: APR 26/01

* Initial each true statement. Mark N/A if statement does not apply.

GENERAL

THIS DRAWING INCLUDING INFORMATION HEREON, REMAINS THE PROPERTY
OF COVER-ALL BUILDINGS. IT IS PROVIDED SOLELY FOR ERECTING THE
BUILDING DESCRIBED IN THE SALES ORDER AND SHALL NOT BE MODIFIED,
REPRODUCED OR USED FOR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN
APPROVAL OF COVER-ALL BUILDING SYSTEMS.

THE GENERAL CONTRACTOR AND/OR ERECTOR IS SOLELY RESPONSIBLE FOR
ACCURATE, GOOD QUALITY WORKMANSHIP IN ERECTING THIS BUILDING IN
CONFORMANCE WITH THIS DRAWING, DETAILS REFERENCED IN THIS DRAWING
AND INDUSTRY STANDARDS PERTAINING TO PROPER ERECTION INCLUDING
THE PROPER USE OF TEMPORARY BRACING.

COVER-ALL BUILDINGS IS NOT RESPONSIBLE FOR ERRORS, OMISSIONS OR
DAMAGES INCURRED IN THE ERECTION OF THE COMPONENTS SHOWN ON
THIS DRAWING, NOR FOR THE INSPECTION OF ERECTED COMPONENTS TO
DETERMINE SAME.

THIS CERTIFICATION AND ENGINEERING SEAL APPLIES ONLY TO PRODUCTS
DESIGNED AND FABRICATED BY COVER-ALL BUILDINGS FOR THE LOADING
CONDITIONS DESIGNATED ON THESE DRAWINGS. CONCRETE FOUNDATIONS,
STEEL COMPONENTS BY OTHERS AND ERECTION SUPERVISION ARE NOT THE
RESPONSIBILITIES OF COVER-ALL BUILDINGS SYSTEMS OR THE CERTIFYING
ENGINEER.

ANCHOR BOLTS

ANCHOR BOLT DIAMETERS ARE DETERMINED IN ACCORDANCE WITH CSA
STANDARD CAN3-S16.1 USING F_y = 36 KSI (248 MPa). ANCHOR BOLT
LENGTHS AND LOAD TRANSFER TO THE FOUNDATION ARE TO BE
DETERMINED BY OTHERS.

ANCHOR BOLT PROJECTIONS BASED ON NO GROUT ARE AS FOLLOWS:

SERIES 2: MIN. 1 3/4" MAX. 2 1/2"
SERIES 3: MIN. 2" MAX. 3 1/2"
SERIES 4: MIN. 2" MAX. 3 1/2"
TAS/AS GROUND MOUNT: MIN. 2 1/2" MAX. 3 1/2"

FOUNDATION MUST BE LEVEL, SQUARE AND SMOOTH. ANCHOR BOLTS
MUST BE ACCURATELY PLACED AS SHOWN ON THE DRAWINGS.

FINISHED FLOOR ELEVATIONS AND UNDERSIDE OF BASE PLATE IS 100'-0"
(1000.000mm) UNLESS NOTED.

ERECTION

THE ERECTOR MUST PROVIDE SAFE WORKING CONDITIONS AND PRACTICES
CONFORMING TO ALL SAFETY REGULATIONS. ALL LIFTING DEVICES ARE TO
BE SPECIFICALLY DESIGNED TO LIFT THE VARIOUS BUILDING COMPONENTS.
SLINGS AND SPREADER BARS ARE TO BE USED TO PREVENT PERMANENT
DEFORMATION OF ALL STRUCTURAL COMPONENTS.

ERECTION SHOULD START AT A BRACED BAY. ERECT AND TEMPORARILY
SUPPORT TRUSSES. USE TEMPORARY BRACING AS REQUIRED TO ENSURE
STABILITY OF THE FRAMES. INSTALL PURLINS AND CROSS BRACING.
PLUMB AND SQUARE TRUSSES IN ACCORDANCE WITH CAN3-S16.1

ENSURE ALL PURLINS REMAIN PARALLEL.

STRUCTURAL FRAMING MEMBERS ARE CONSIDERED PLUMB, LEVEL, AND
ALIGNED WHEN THE VARIANCE DOES NOT EXCEED 1:300

STRUCTURAL BOLTS

BOLTS IN CONNECTIONS NOT SUBJECT TO TENSION LOADS, OR WHERE
LOOSENING DUE TO VIBRATION OR LOAD FLUCTUATIONS ARE NOT DESIGN
CONSIDERATIONS NEED ONLY BE SNUG TIGHTENED, WHICH IS DEFINED AS
THE TIGHTNESS THAT EXISTS WHEN ALL PILES IN A JOINT ARE IN FIRM
CONTACT.

ALL BOLTS LARGER THAN 1" DIA CONFORM TO ASTM A325.
ALL OTHER DIA BOLTS CONFORM TO SAE GR.5 OR EQUIVALENT.
ALL BOLTS SHALL BE PLATED / GALVANIZED OR SUNSEAL COATED.

BOLTS IN CONNECTIONS SUBJECT TO TENSION LOADS REQUIRE PRE
TENSIONING TO MINIMUM TENSION
-VALUES AS SHOWN IN THE TABLE BELOW-

TABLE A		BOLT TENSION	
SIZE		Gr 5/A325	
In	mm	kips	kN
5/8	16	18	80
3/4	19	28	125
7/8	22	39	174
1.0	25	51	227
1 1/8	29	58	249
1 1/4	32	71	316

STRUCTURAL BOLT TORQUE VALUES

TABLE B LISTS THE BOLT CLAMP LOADS WITH A SUGGESTED ASSEMBLY TORQUE
VALUES

TABLE B		Gr 5/A325	
SIZE		Torque	
Dia. (Inch)	Threads Per Inch	Tensile Load lbs	Clamp Load lbs
3/8	18	120	8800
7/16	14	120	9050
1/2	13	120	12100
5/8	11	120	19200
3/4	10	120	28400
1 1/4	7	105	71700

MATERIAL SPECIFICATIONS

ROLLED STRUCTURAL SECTIONS CONFORM TO CSA G40.21-44W (300W).

STRUCTURAL PLATE CONFORMS TO THE FOLLOWING SPECIFICATIONS:

PLATES G40.21 44W G40.21/ASTM A572 GR 44 (300W)
H.S.S. G40.21 50W G40.21/ASTM A572 GR 50 (350W)

COATINGS OF TUBES ARE DONE IN-LINE, HOT-DIPPED GALVANIZED TO A NOMINAL
COATING ZINC WEIGHT OF 0.8 oz/ft² (180 g/m²) (1.0mil)

CHROMATE CONVERSION COATING APPLIED OVER THE GALVANIZED SURFACE TO
PROVIDE ADDITIONAL CORROSION PROTECTION.

CLEAR ORGANIC POLYMER APPLIED AS THE TOP SURFACE COAT TO RETARD
OXIDATION, ENHANCE SURFACE APPEARANCE AND PROVIDE A PRIMER BASE FOR
SUBSEQUENT MOLTEN ZINC APPLIED TO ALL WELDS.

ALL VIBERSTEEL WITH ZINCORSHIELD WILL DEMONSTRATE THE ABILITY TO WITHSTAND
A MINIMUM OF 1000 HOURS OF ACCELERATED SALT FOG TESTING TO THE
CONDITION OF 5% SURFACE RED RUST, WHEN TESTED IN ACCORDANCE WITH ASTM
B117 STANDARDS.

DIAGONAL BRACE ROD STEEL MINIMUM YIELD STRESS 36 KSI (248 MPa).

DIAGONAL BRACE ROD (CROSS ROD) - #5/8" TYP. U/N

DIAGONAL BRACE STEEL CABLE EXTRA HIGH STRENGTH PER ASTM A475.

CROSS CABLES - #5/16" TYP. U/N

SWAY CABLES - #3/16" TYP. U/N PERPENDICULAR TO THE TOP AND BOTTOM

CHORDS U/N

STRUCTURAL COMPONENTS OF THE TITAN SERIES ARE AS FOLLOWS:

SERIES 2: 3 1/2" TUBES - 24" C-C USING 1.66" DIAMETER WEBS

SERIES 3: 4" TUBES - 32" C-C USING 1.9" DIAMETER WEBS

SERIES 4: 5" TUBES - 42" C-C USING 2.375" DIAMETER WEBS

STRUCTURAL COMPONENTS OF THE ARCH SERIES ARE AS FOLLOWS:

SAS: 2 3/8" TUBES

TAS: 2 3/8" TUBES - 12" C-C USING #1" WEB

IAS: ARCH: 2 7/8" TUBES - 24" C-C USING #1" WEB

LEG: 2 7/8" TUBES - 24" C-C USING #1" WEB

FABRIC / LINER NOTES:

EXTERIOR FABRIC IS AN INTEGRAL PART OF THE STRUCTURAL SYSTEM, REMOVAL OR
ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED. ALL TEARS MUST BE
PATCHED IMMEDIATELY TO AVOID WARRANTY PROBLEMS.

FABRIC SPECIFICATIONS

ALL DURAWEAVE 811X MEMBRANES WILL POSSESS THE FOLLOWING MINIMUM
SPECIFICATIONS:

BASE TYPE: DURAWEAVE 2 811X POLYETHYLENE
WEAVE: NOMINAL 18 BY 22PP WOVEN CLEAR HDPE
SCRIM USING 1800 DENIER TAPES
(63 x 87 TAPES PER CM)

11 ounces/yd² (373 g/m²) +/- 5%

2.5 MILS AVERAGE EACH SIDE

MODIFIED LDPE COATING WITH UV PROTECTION

25 MILS (0.63 mm) ASTM D5199

PASS @ MINUS 30 DEGREES C ASTM D751A

>300 psi (2070 kPa) ASTM D5034

WARP: 325 lbs (1445 N) ASTM D5034

WEFT: 450 lbs (2000 N) ASTM D2281

WARP: 145 lbs (645 N) ASTM D2281

WEFT: 140 lbs (622 N) ASTM D4533

WARP: 110 lbs (444 N) ASTM D4533

WEFT: 150 lbs (667 N) ASTM D3786

730 psi (5037 kPa) ASTM G53

COLOR - >90% STRENGTH

RETENTION AFTER 2000 HRS

CLEAR - >80% STRENGTH

RETENTION AFTER 2000 HRS

DRAWING SCHEDULE

DRAWING SCHEDULE		REVISIONS			
DWG #	DRAWING TITLE	REV.	DATE	REV.	DATE
1	COVERPAGE	1	24 APR 01		
2	BASE PLATE LAYOUT	1	24 APR 01		
3	DESIGN CRITERIA	1	24 APR 01		
4	BUILDING PROFILE	1	24 APR 01		
5	BRACING LAYOUT	1	24 APR 01		
6	FABRIC DETAILS	1	24 APR 01		
7	ENDWALL - GROUNDLINE 1	1	24 APR 01		
8	ENDWALL - GROUNDLINE 24	1	24 APR 01		
9	STANDARD DETAILS 1	1	24 APR 01		
10	STANDARD DETAILS 2	1	24 APR 01		
11	STANDARD DETAILS 3	1	24 APR 01		
12	END DETAILS	1	24 APR 01		

DURAWEAVE FR FABRIC

DURAWEAVE FR FABRIC MEETS OR EXCEEDS THE FOLLOWING TEST STANDARDS.

NFPA 701

CAN / ULC-S102.2-M88

ASTM E 84

CAN / ULC-S109-M87

UBC 31-1

FA-51403

ROOF PLAN NOTES:

UNLESS NOTED, USE 5/8" DIA. BOLTS FOR PURLIN TO TRUSS, CABLE OR ROD

BRACING TO TRUSS AND ANGLES TO TRUSS FOR ALL CONNECTIONS.

CABLE / ROD AND PURLIN BRACING ARE AN INTEGRAL PART OF THE TRUSSES
STRUCTURAL SYSTEM AND SHOULD BE PROPERLY INSTALLED PRIOR TO ERECTION
OF FABRIC ROOF AND ENDWALL PANELS. REMOVAL OR ALTERATION OF ANY BRACING
WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.

ELEVATION NOTES:

HOLES REQUIRED IN HSS COLUMNS, HEADERS OR PURLINS FOR FRAMED OPENINGS,
DOOR OR WINDOW POST CONNECTION TO BE BY ERECTOR.

WALK DOOR, WINDOW AND FRAMED OPENING POSTS TO BE FIELD ANCHORED TO
CONCRETE WITH 1/2" DIA. "HILTI KWIK-BOLTS" OR SIMILAR.

PARTITION WALL NOTE:

FIELD INSTALLATION OF PARTITION WALL TO UNDERSIDE OF ANY ARCH FRAMING
MEMBERS MUST ALLOW FOR VERTICAL BUILDING DEFLECTION. CONTACT COVER-ALL
BUILDING SYSTEMS FOR REQUIRED CLEARANCES.

MATERIAL STORAGE:

GALVANIZED, ALUMINIZED, AND COLORED MATERIALS ARE SUBJECT TO CORROSION
AND DISCOLORATION IF THEY ARE IMPROPERLY STORED. SHORT TERM JOB SITE
STORAGE OF STEEL COMPONENTS MAY BE TOLERATED, PROVIDED CARE IS TAKEN
TO KEEP THE MATERIALS DRY AT ALL TIMES. WHEN TRUSSES ARE TO BE STORED
OUTDOORS, THEY SHOULD BE PLACED AT AN ANGLE SUFFICIENT TO PROMOTE GOOD
DRAINAGE. IN ADDITION, SEVERAL INCHES OF CLEARANCE MUST BE PROVIDED
BETWEEN THE LOWER END AND THE GROUND TO ALLOW VENTILATION.

NOTE: COVER-ALL BUILDINGS SYSTEMS WILL NOT BE HELD RESPONSIBLE FOR
MATERIALS WHICH ARE IMPROPERLY PROTECTED AFTER DELIVERY.

COVER-ALL IS A CERTIFIED DIVISION 2.1 MANUFACTURER OF TRUSSES. ALL WELDS
ARE COMPLETED IN SHOP AS PER CWB STANDARD CSA W47.1 AND W59. THIS
CERTIFICATION MEETS WITH AWS D1.1, CRITERIA. AS PART OF OUR CWB
CERTIFICATION (AN INDEPENDENT 3RD PARTY) TESTS OUR WELDERS AND
PROCEDURES AND AUDITS OUR FACILITIES.

DEALER: COVER-ALL MANITOBA
HEADINGLEY, MB

CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

PROJECT: SALT STORAGE BUILDING
BRANDON, MB

PROJECT ID:

GA3314/ENG456

ORDER ID:

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DRAWN BY:

N MARKHAM

DATE:

24 APR 01

CHECKED BY:

7/24 JPR

DATE:

25 APR 01

SCALE:

N.T.S.

COVER-ALLTM

BUILDING SYSTEMS

2201 SPEERS AVE, SASKATOON, SASKATCHEWAN, S7L 5X6

PH: 1-306-664-4777

WEBSITE: www.coverall.net,

E-MAIL: tech@coverall.net

FILE:

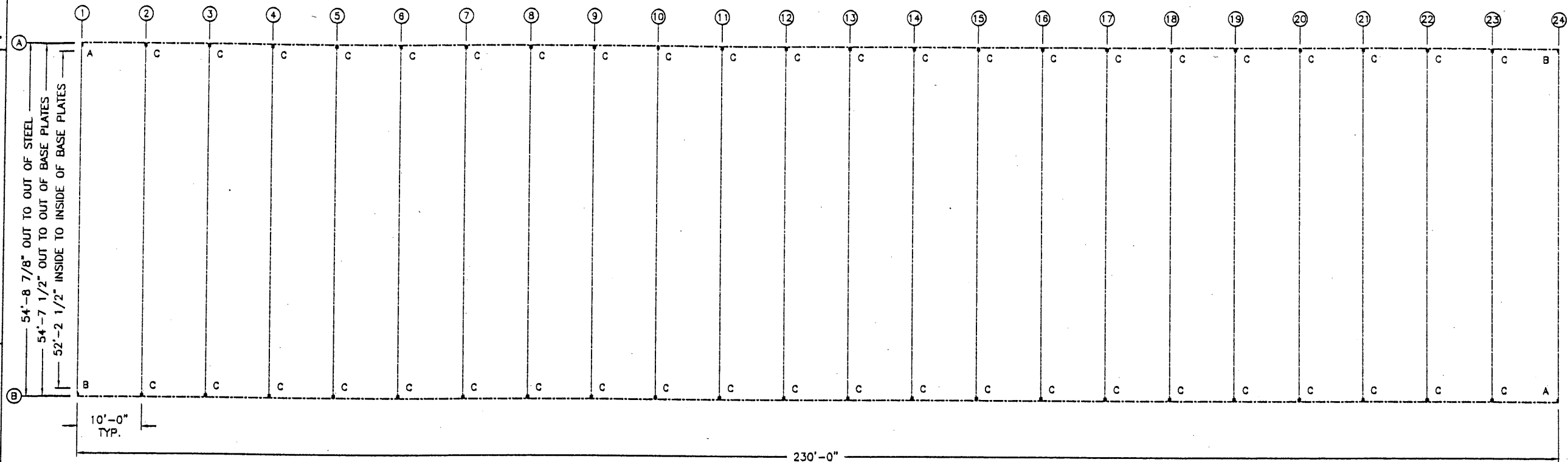
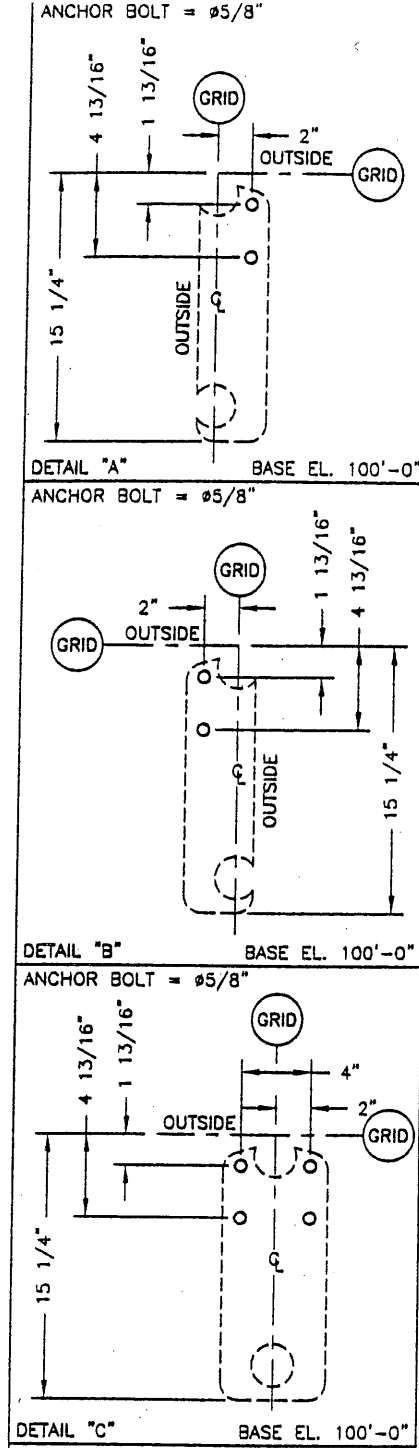
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SHEET

1 of 12

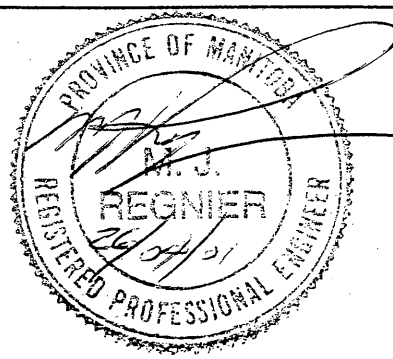
REVISION

1



BASE PLATE LAYOUT

REV.	DESCRIPTION	BY	DATE
1	RELEASED	NM	24 APR 01



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CUSTOMER: BRANDON SALT STORAGE BRANDON, MB		
PROJECT: SALT STORAGE BUILDING BRANDON, MB		
PROJECT ID: GA3314/ENG456	ORDER ID:	25 APR 01
SCALE: N.T.S.		FILE: BASE PLATE LAYOUT

2201 SPEERS AVE, SASKATOON, SASKATCHEWAN, S7L 5X6 PH: 1-306-664-4777 WEBSITE: www.coverall.net	S7L 5X6 FAX: 1-306-664-1752 E-MAIL: tech@coverall.net
SHEET 2 of 12	REVISION 1

SNOW AND WIND LOAD LIMITATIONS OF 55 FOOT TRUSS ARCH
STRUCTURES FOR LOW HUMAN OCCUPANCY APPLICATIONS FOR
EXPOSED LOCATIONS (Cw = 0.75 AS DEFINED BY CLAUSE 4.1.7 OF THE
BMHA 98)

In the course of the design, an S-Frame analysis and component tests were performed to develop allowable snow and wind load criteria. The summary of the results of the analysis are shown in the table below:

SPACING OF ARCH (FT)	ALLOWABLE WIND PRESSURE (LBS/FT ²)	MEAN HOURLY WIND VELOCITY (MPH)	ALLOWABLE GROUND SNOW LOAD (S _s + S _R) (LBS/FT ²)	MINIMUM ANCHOR POINT REQUIREMENTS (LBS)		
				HORIZ.	DOWN	UP
10	10.0	60.9	50.0	2,800	3,760	2,450

These numbers are generated based on the Buildings and Mobile Homes Act 1998 (BMHA 98) for low human occupancy as defined by A-4.1.3.2.(7). The factors that have been applied from these codes are as follows:

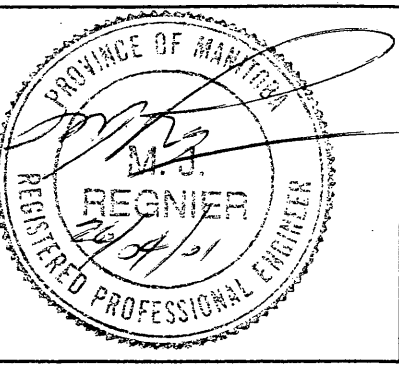

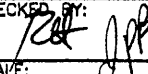
GENERAL:
Y = 0.8 (importance factor)

WIND LOAD:
C_e = 0.9 (exposure factor)
C_g = 2.0 (gust factor)
C_{pe} = * (external pressure coefficient)

SNOW LOAD:
C_w = 0.75 (wind exposure factor)
C_s = 0.80 (basic snow load factor)
C_d = $\frac{(60^\circ - \alpha)}{45^\circ}$ (slope factor)
C_a = 1.00 (accumulation factor)

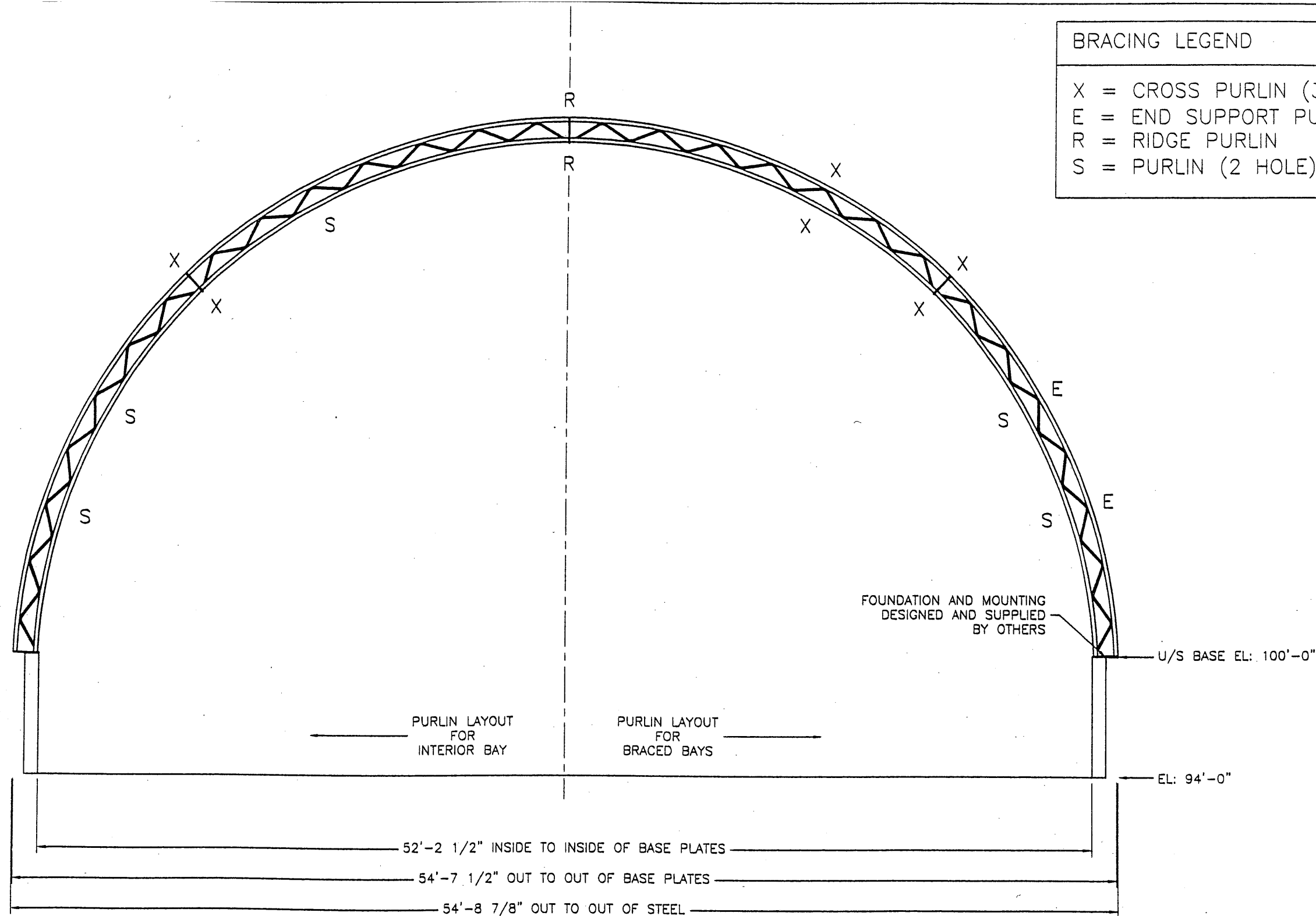
* C_{pe} values were developed based on a model developed by the University of Saskatchewan to analyze an arch type storage unit. The values closely follow those of Figure B-20 of the NBC 1995.

Because the BMHA 98 requires evaluation of each site and its surroundings, each installation must be individually evaluated. This assessment must be completed by a qualified engineer, including assurance that the building is not sheltered. As well, the owner of the building must ensure adequate foundation restraint (including any engineering required).

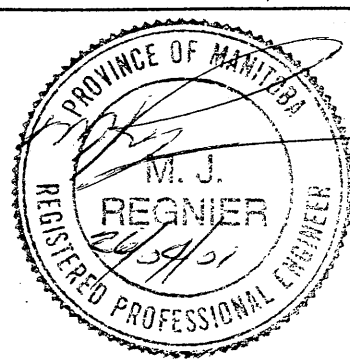
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					CUSTOMER: BRANDON SALT STORAGE BRANDON, MB				
					PROJECT: SALT STORAGE BUILDING BRANDON, MB				
					PROJECT ID: ORDER ID:				
					GA3314/ENG456				
1	RELEASED	NM	24 APR 01			DRAWN BY: N MARKHAM	DATE: 24 APR 01	2201 SPEERS AVE, SASKATOON, SASKATCHEWAN, S7L 5X6 PH: 1-306-664-4777 WEBSITE: www.coverall.net, E-MAIL: tech@coverall.net	
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						SCALE: N.T.S.			DESIGN CRITERIA
								SHEET 3of12	REVISION 1

BRACING LEGEND

- X = CROSS PURLIN (3 HOLE)
- E = END SUPPORT PURLIN (3 HOLE)
- R = RIDGE PURLIN
- S = PURLIN (2 HOLE)

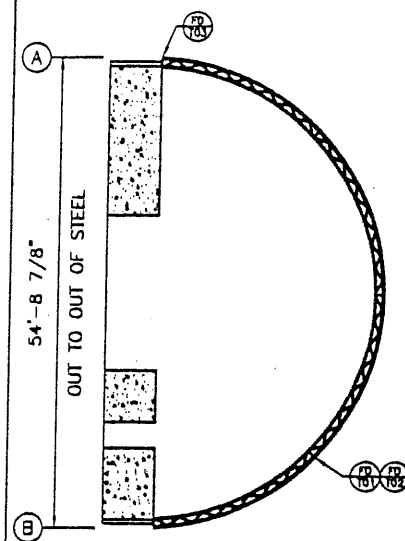


REV.	DESCRIPTION	BY	DATE
1	RELEASED	NM	24 APR 01

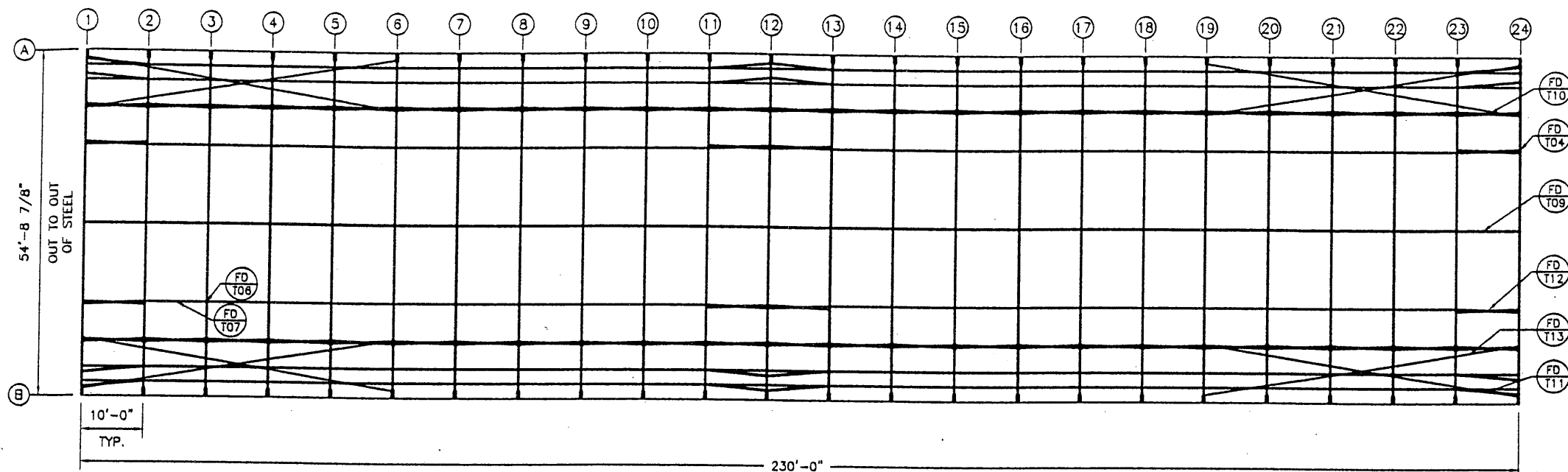


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CUSTOMER: BRANDON SALT STORAGE BRANDON, MB			
PROJECT: SALT STORAGE BUILDING BRANDON, MB			
PROJECT ID: GA3314/ENG456	ORDER ID:	DRAWN BY: N MARKHAM	DATE: 24 APR 01
		CHECKED BY: <i>[Signature]</i>	DATE: 25 APR 01
		SCALE: N.T.S.	FILE: BUILDING PROFILE
		SHEET 4 of 12	
		REVISION 1	

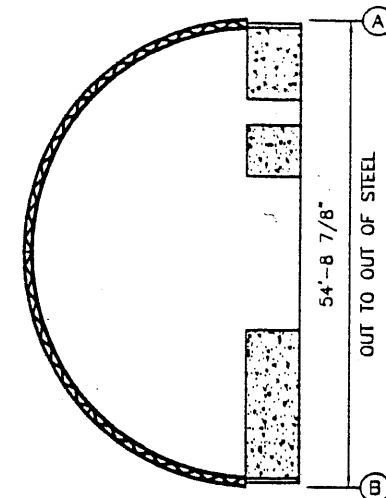
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LEFT ELEVATION

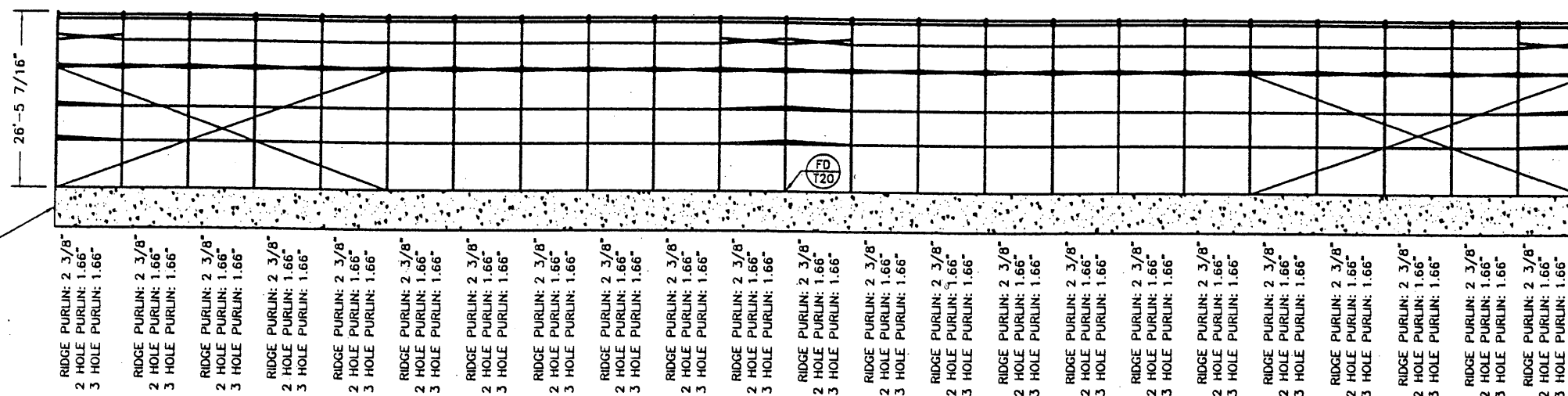


PLAN



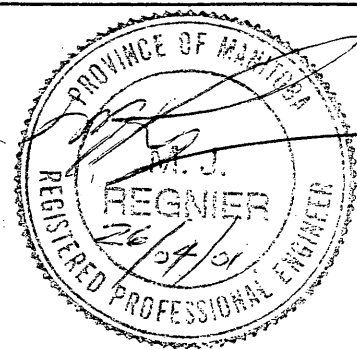
RIGHT ELEVATION

6" WALL DESIGNED
AND SUPPLIED BY OTHERS



SIDE ELEVATION

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1	RELEASED	NM	24 APR 01



DEALER: COVER-ALL MANITOBA
HEADINGLEY, MB

CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

PROJECT: SALT STORAGE BUILDING
BRANDON, MB

PROJECT ID: GA3314/ENG456

ORDER ID:

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DATE: 24 APR 01

DATE: 24 APR 01

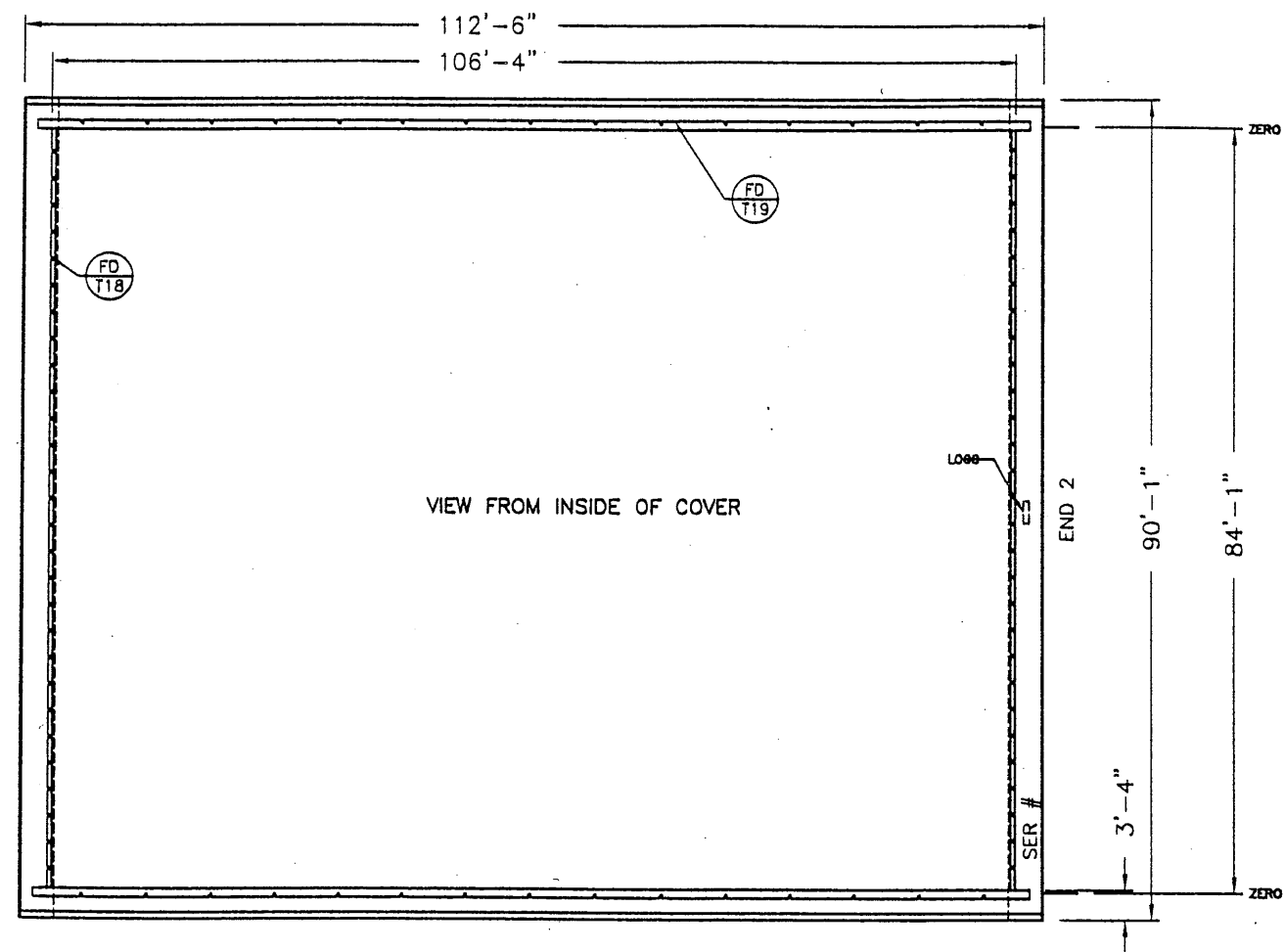
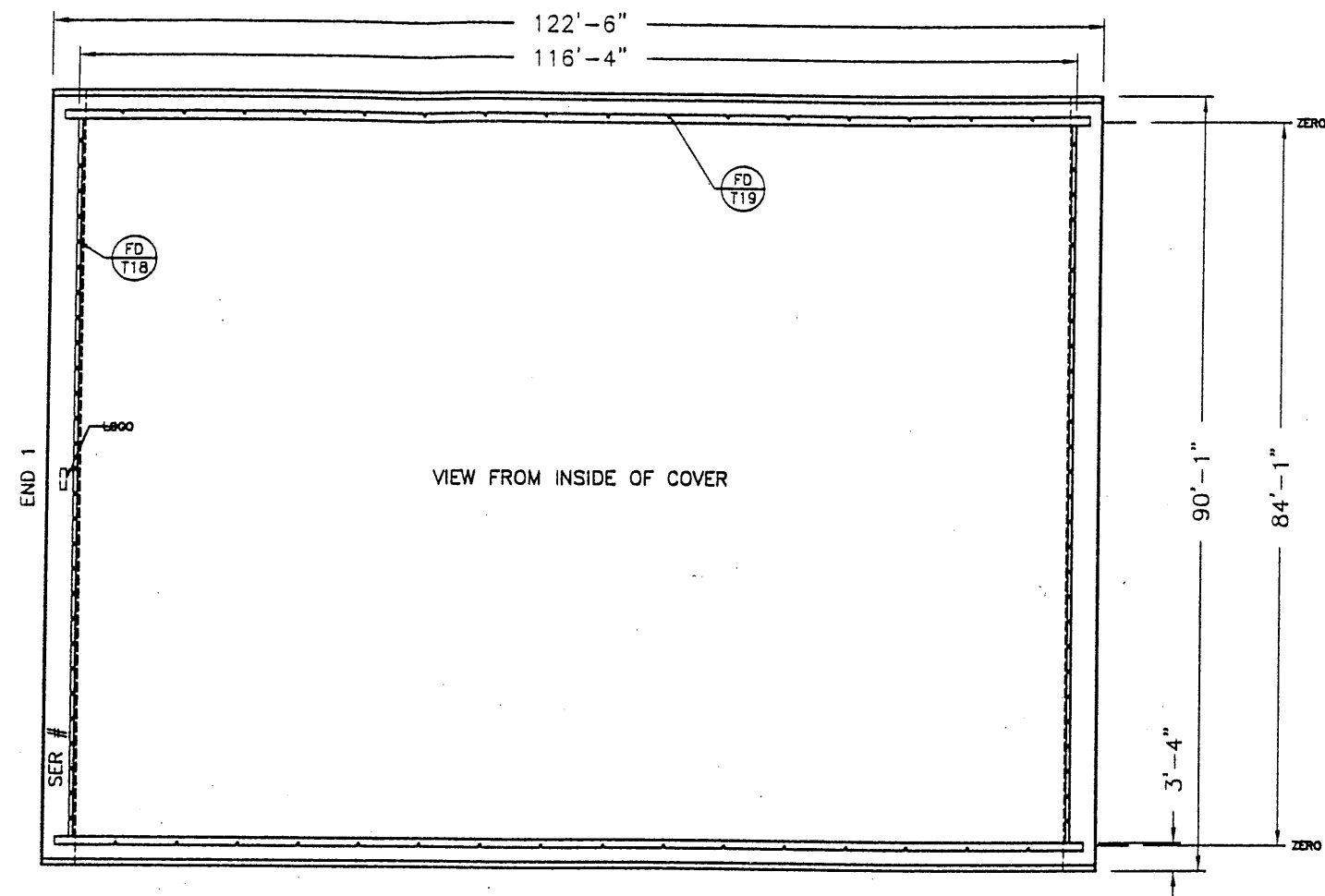
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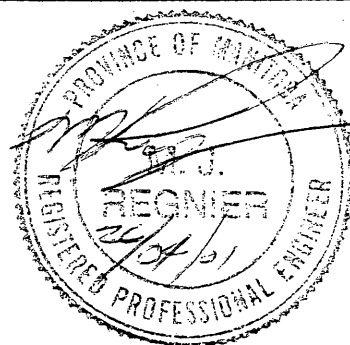
FILE: BRACING LAYOUT

SHEET 5 of 12

REVISION 1



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DEALER: COVER-ALL MANITOBA
HEADINGLEY, MB

CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

LOCATION: SALT STORAGE BUILDING
BRANDON, MB

PROJECT:
GA3314/ENG456

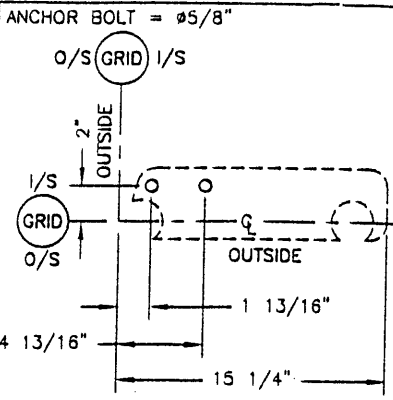
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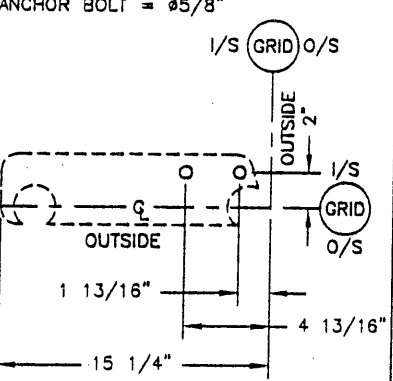
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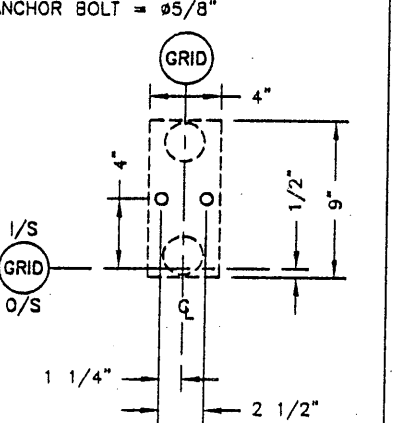
FILE: FABRIC DETAILS	SHEET 6 of 12	REVISION 1
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DETAIL "A" BASE EL. 100'-0"



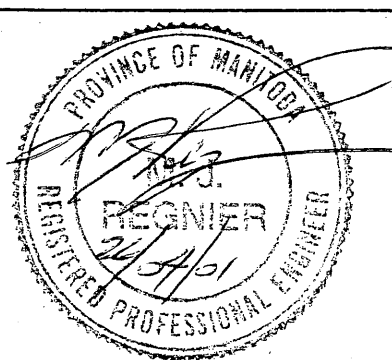
DETAIL "B" BASE EL. 100'-0"



DETAIL "D" BASE EL. 100'-0"

I/S = INSIDE OF BUILDING.
O/S = OUTSIDE OF BUILDING.

REV.	DESCRIPTION	BY	DATE
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DEALER: COVER-ALL MANITOBA
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CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

PROJECT: SALT STORAGE BUILDING
BRANDON, MB

PROJECT ID: GA3314/ENG456

ORDER ID:

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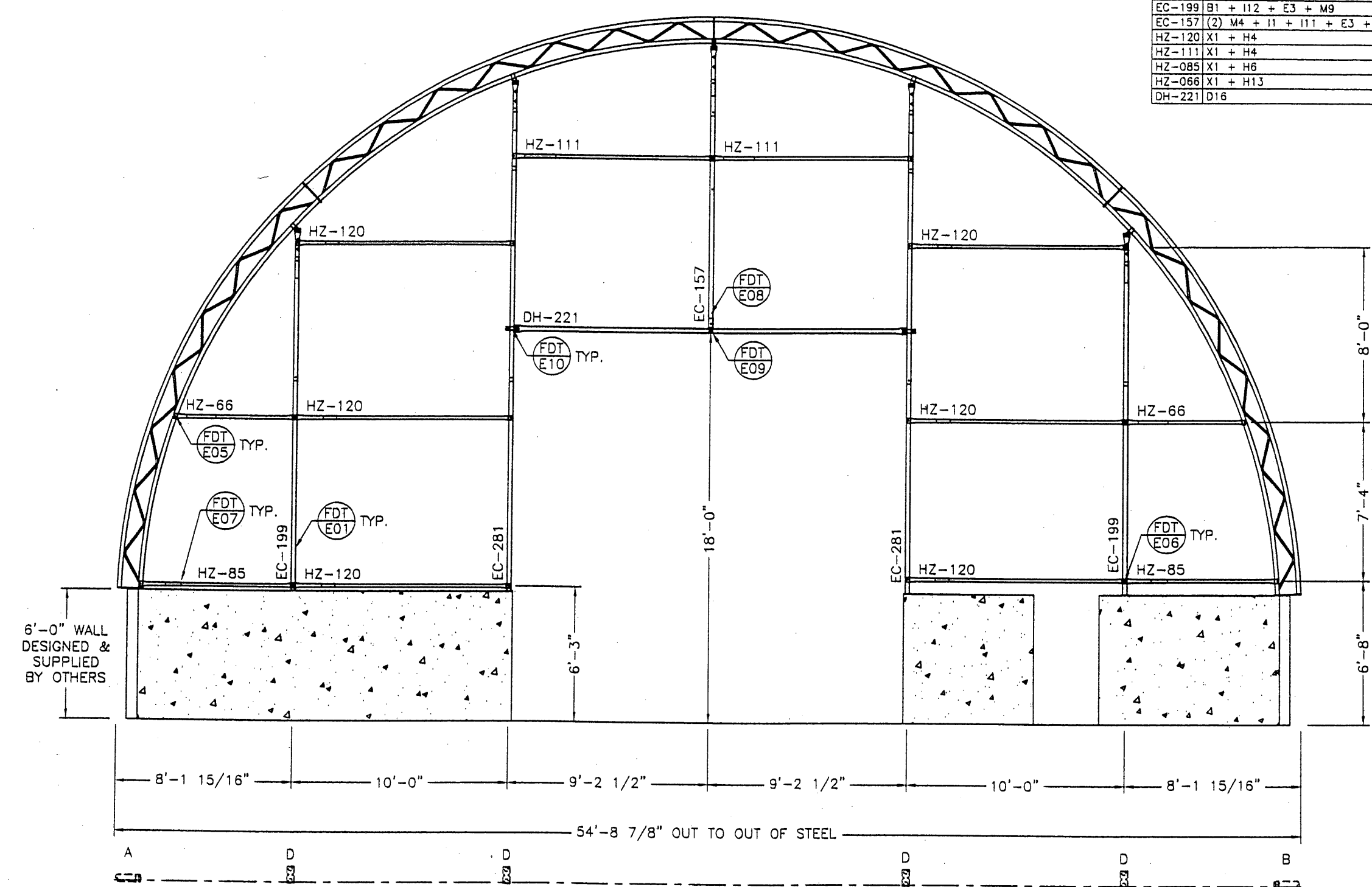
COVER-ALL
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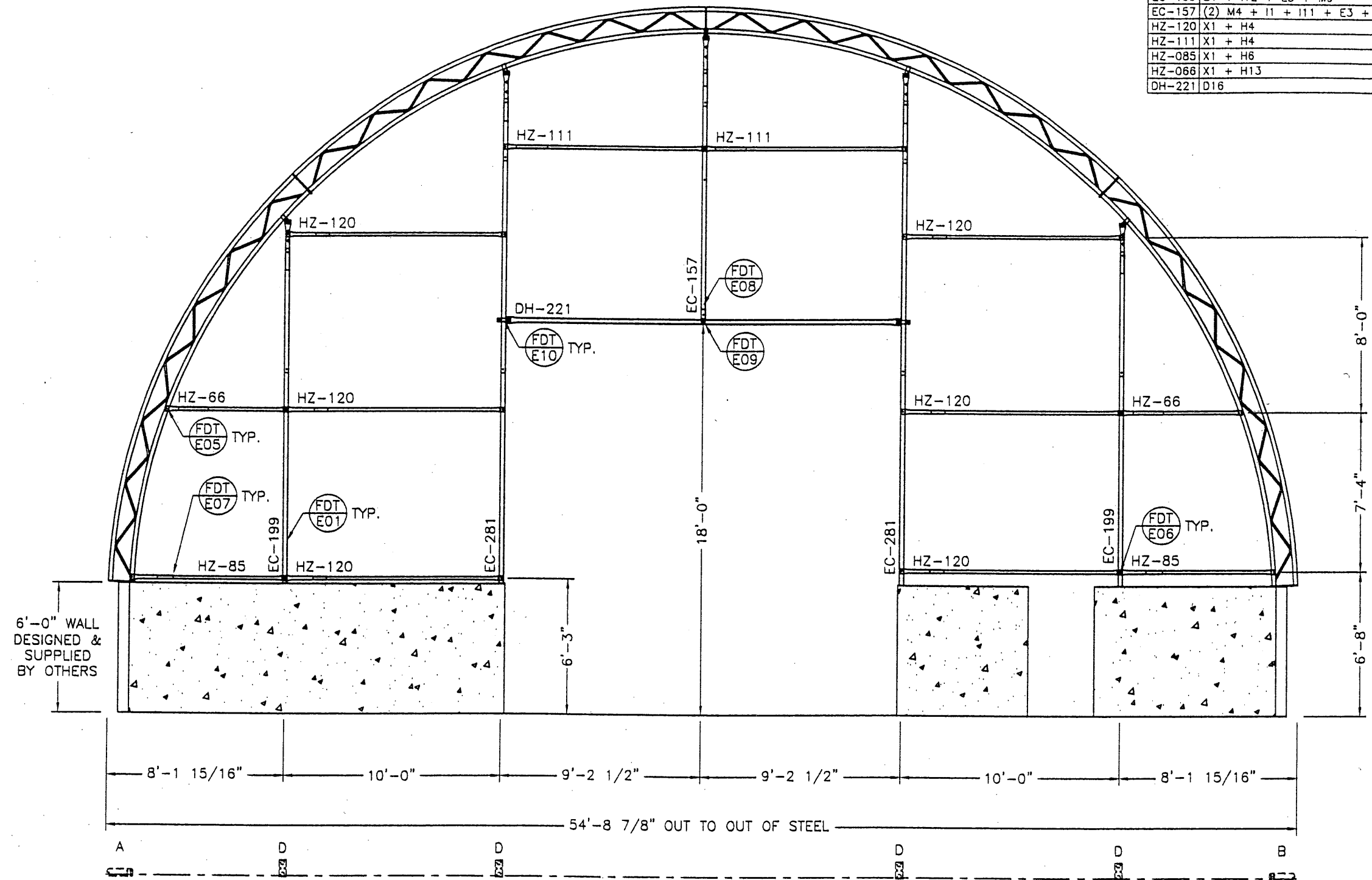
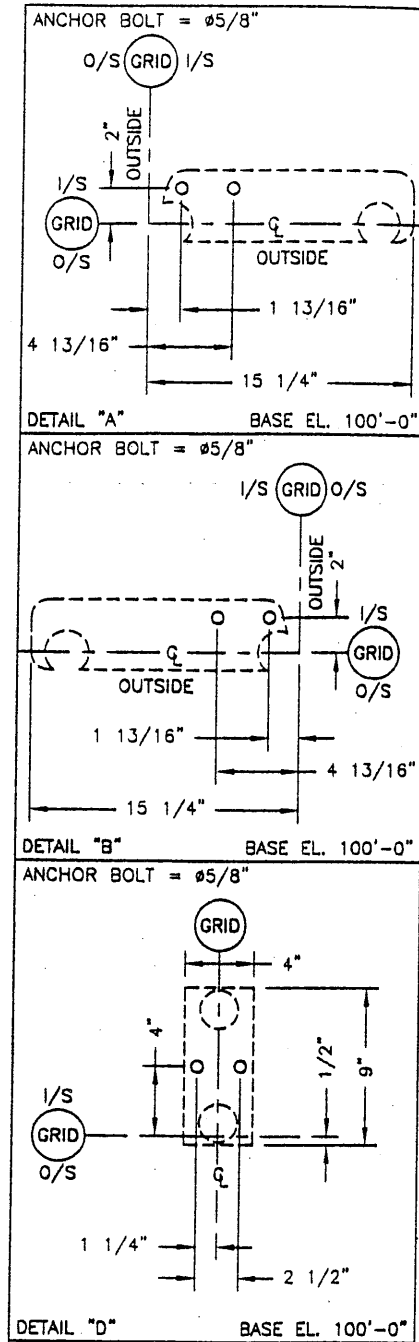
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FILE: ENDWALL - GRIDLINE 1
SHEET: 7 of 12
REVISION: 1

NOTE: VERTICAL COMPONENTS LABELLED
FROM GROUND UP

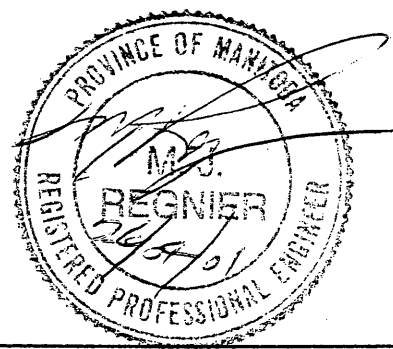
MARK#	COMPONENTS	WEIGHT
EC-281	B1 + I1 + I10 + E3 + M9	114.14
EC-199	B1 + I12 + E3 + M9	83.58
EC-157	(2) M4 + I1 + I11 + E3 + M9	67.66
HZ-120	X1 + H4	15.93
HZ-111	X1 + H4	15.93
HZ-085	X1 + H6	11.97
HZ-066	X1 + H13	10.68
DH-221	D16	77.16





MARK#	COMPONENTS	WEIGHT
EC-281	B1 + I1 + I10 + E3 + M9	114.14
EC-199	B1 + I12 + E3 + M9	83.58
EC-157	(2) M4 + I1 + I11 + E3 + M9	67.66
HZ-120	X1 + H4	15.93
HZ-111	X1 + H4	15.93
HZ-085	X1 + H6	11.97
HZ-066	X1 + H13	10.68
DH-221	D16	77.16

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-CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

PROJECT: SALT STORAGE BUILDING
BRANDON, MB

PROJECT ID: GA3314/ENG456

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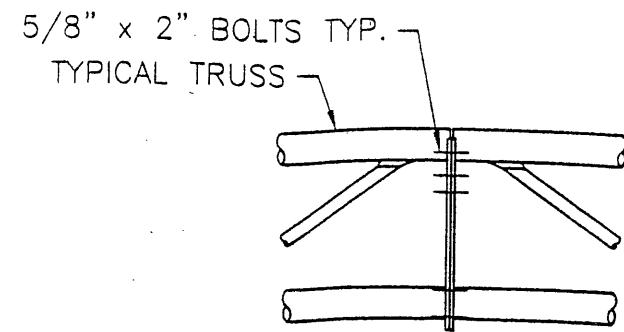
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ENDWALL - GRIDLINE 24

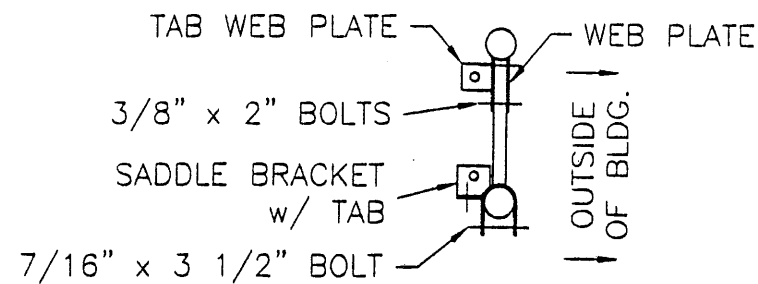
SHEET 8 of 12

REVISION 1



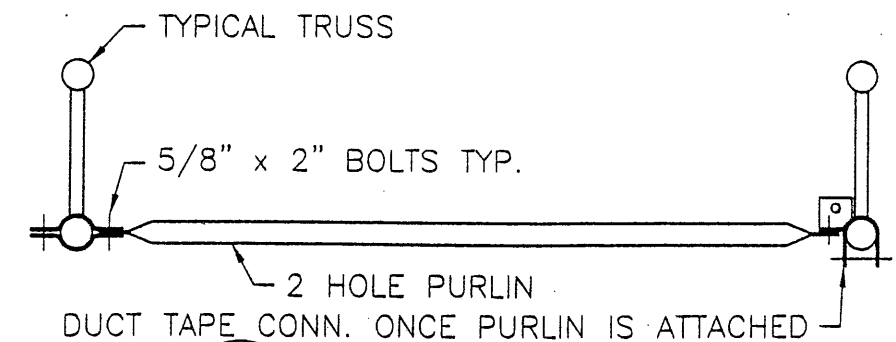
FD
T01

COUPLER CONNECTION
DETAIL



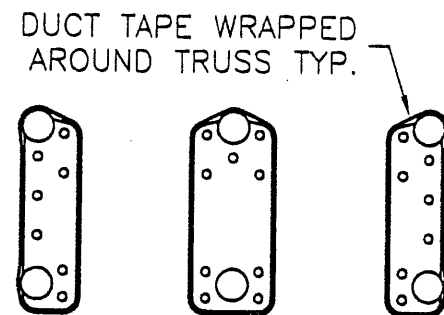
FD
T04

WEB PLATE & SADDLE BRACKET
CONNECTION AT END ARCH



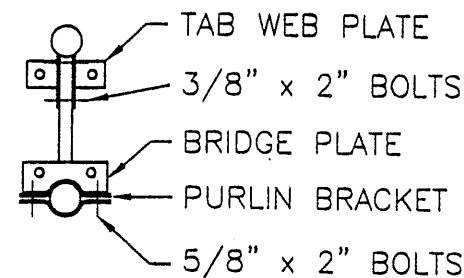
FD
T07

2-HOLE PURLIN
CONNECTION



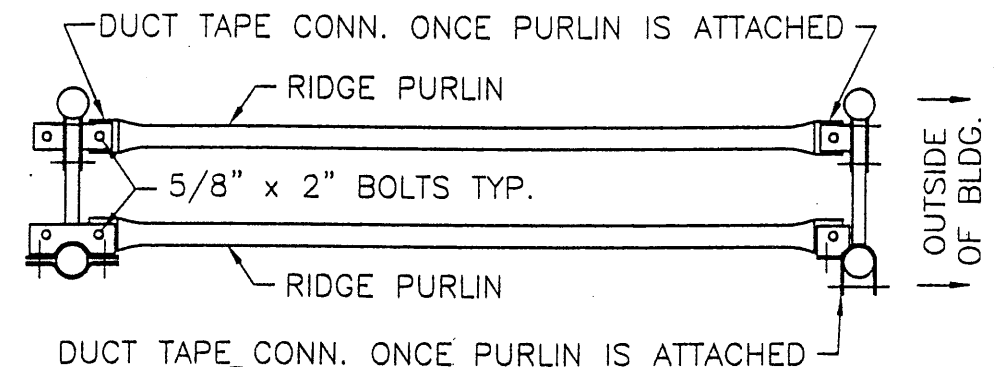
FD
T02

DUCT TAPE APPLICATION
TO PROTECT FABRIC



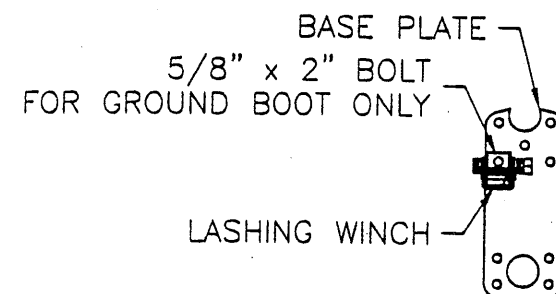
FD
T05

WEB PLATE & PURLIN BRACKET
CONNECTION AT INTERIOR ARCH



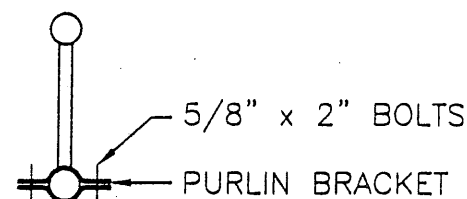
FD
T08

RIDGE PURLIN WEB
CONNECTION



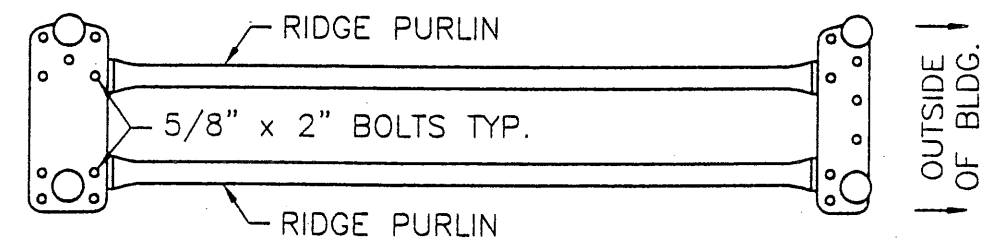
FD
T03

LASHING WINCH ATTACHMENT
FOR GROUND MOUNT BLDG.



FD
T06

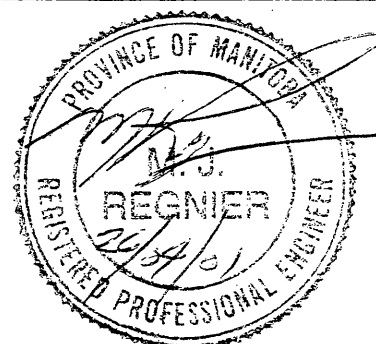
PURLIN BRACKET
CONNECTION



FD
T09

RIDGE PURLIN COUPLER
CONNECTION

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CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

PROJECT: SALT STORAGE BUILDING
BRANDON, MB

PROJECT ID: GA3314/ENG456

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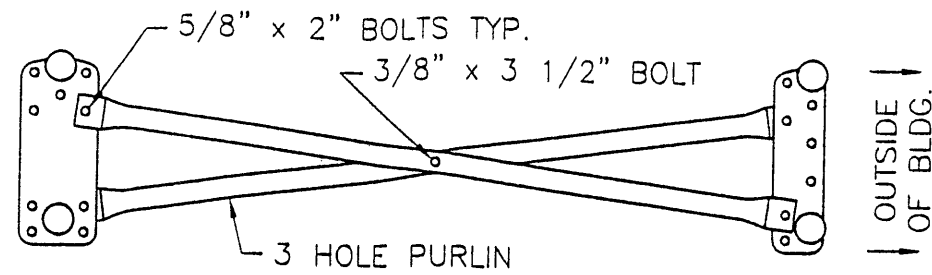
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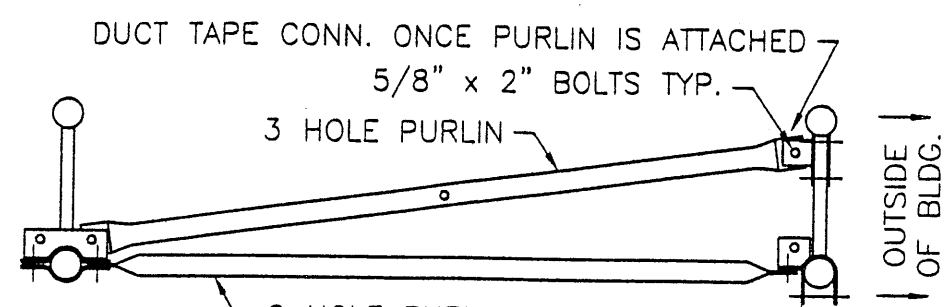
STANDARD DETAILS 1

SHEET 9 of 12

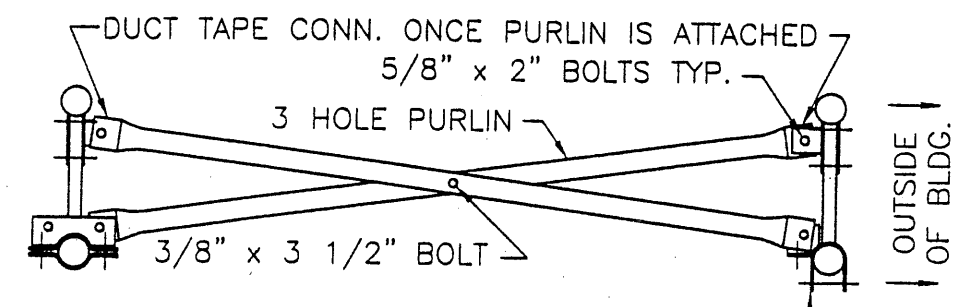
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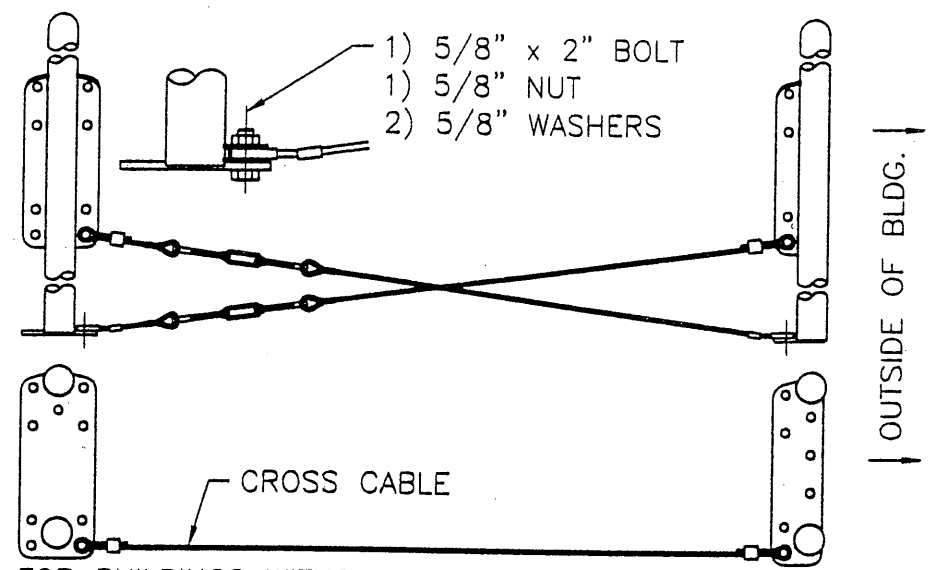
FD T10 BRACING PURLIN CONNECTION



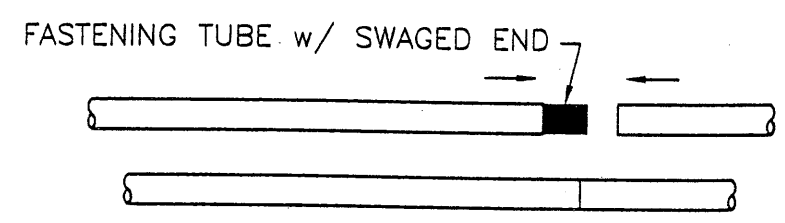
FD T11 END SUPPORT PURLIN WEB CONNECTION



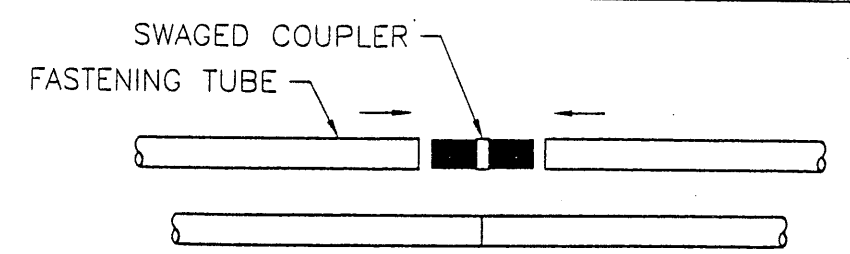
FD T12 END SUPPORT BRACE PURLIN AT WEB CONN.



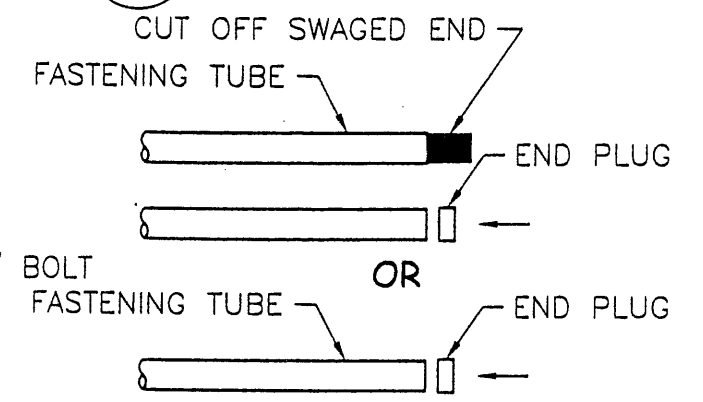
FD T13 CROSS CABLE CONNECTION FOR Ø3/16\" CABLES



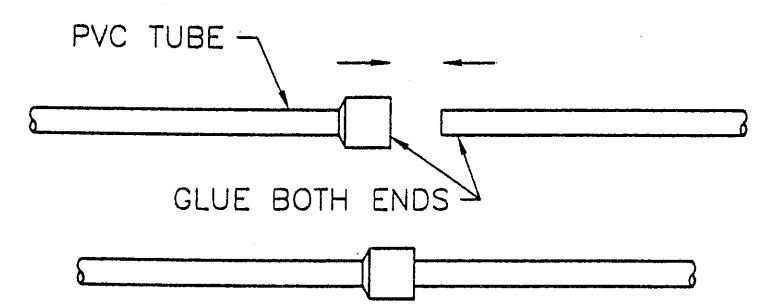
FD T14 FASTENING TUBE CONNECTION



FD T15 FASTENING TUBE SPLICE CONNECTION

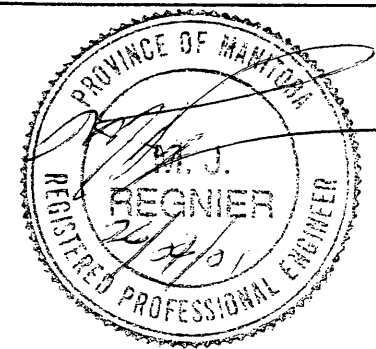


FD T16 FASTENING TUBE CAP



FD T17 PVC TUBE CONNECTION

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DEALER: COVER-ALL MANITOBA
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PROJECT: SALT STORAGE BUILDING
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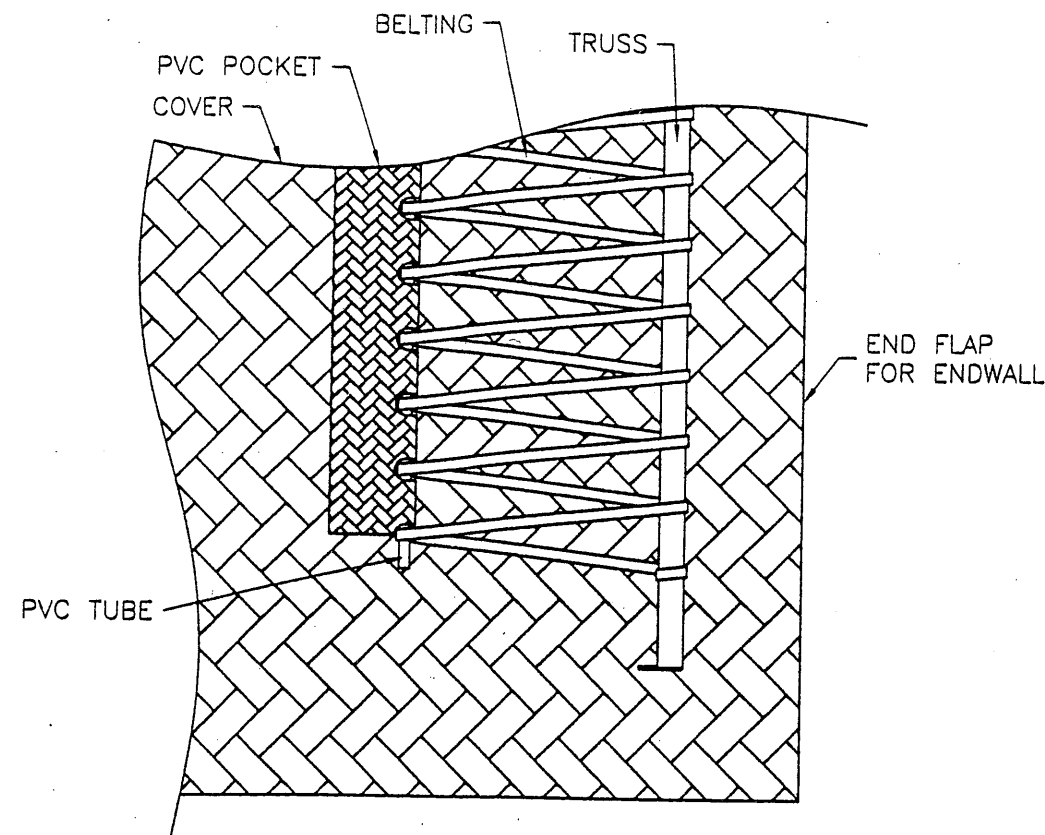
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SCALE: N.T.S.

DATE: 24 APR 01
DATE: 24 APR 01

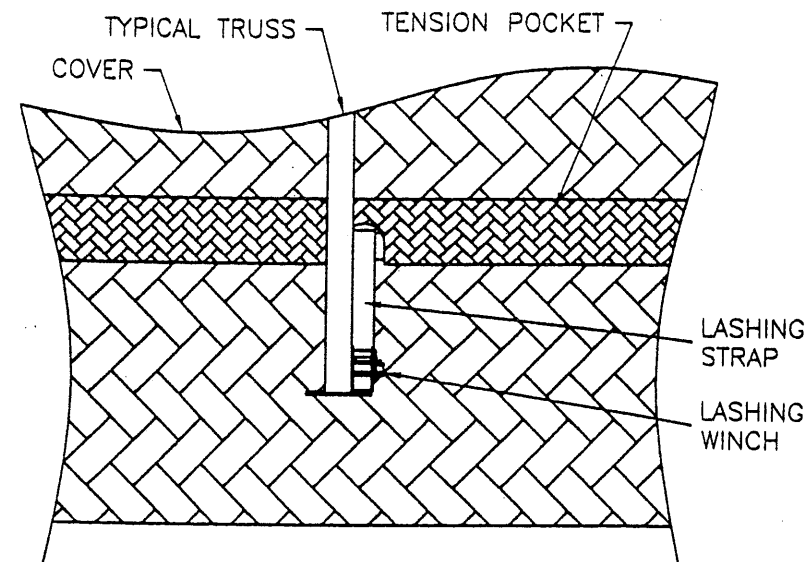
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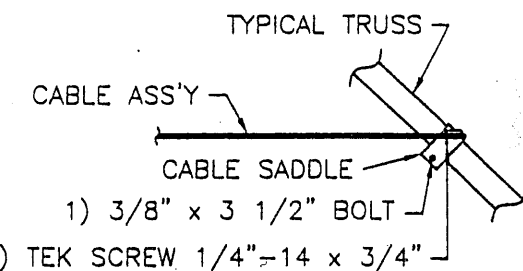
FILE: STANDARD DETAILS 2	SHEET 10of12	REVISION 1
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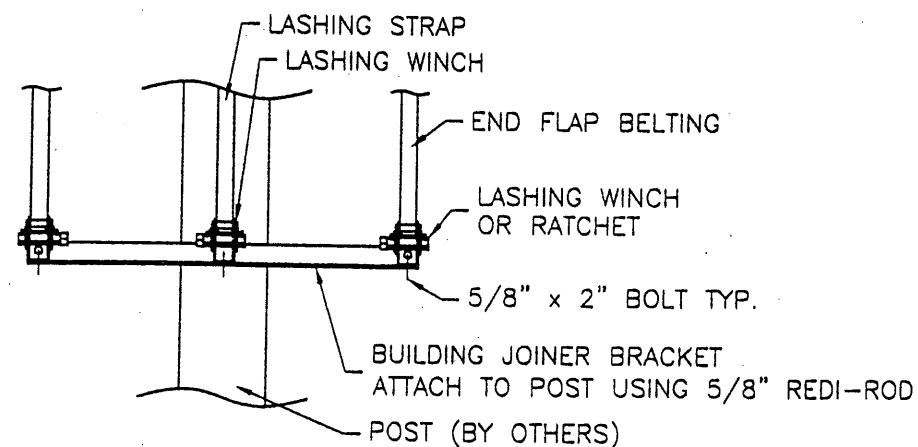
FD PVC TUBE CONNECTION
T18 TO BUILDING



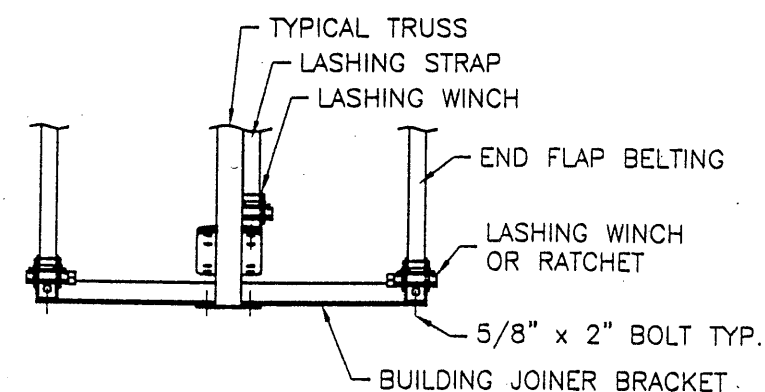
FD FASTENING TUBE CONNECTION
T19 TO BUILDING



FD ARCH CABLE CONNECTION
T22 TO BUILDING - Ø5/16" CABLE

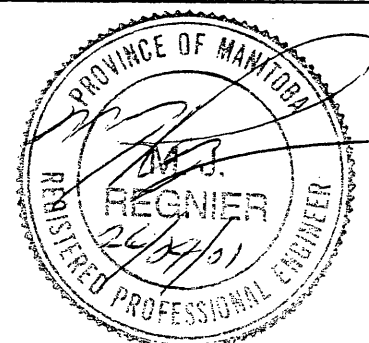


FD JOINER BRACKET CONNECTIONS
T20 TO WALL MOUNT BUILDING



FD JOINER BRACKET CONNECTIONS
T21 TO GROUND MOUNT BUILDING

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CUSTOMER: BRANDON SALT STORAGE
BRANDON, MB

PROJECT: SALT STORAGE BUILDING
BRANDON, MB

PROJECT ID: GA3314/ENG456

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FILE: STANDARD DETAILS 3

SHEET 11 of 12

REVISION 1

[illegible]