

CUSTOMER INFORMATION

CUSTOMER NAME JERRY ZEPP
 ADDRESS: 6365 KELL LANE
 LAS VEGAS, NV 89156

PROJECT NAME HANGAR
 PROJECT LOCATION: RAPID CITY, SD

GENERAL NOTES

1 MATERIALS

	ASTM DESIGNATION	
STRUCTURAL STEEL PLATE	A529 OR A572 OR A1011SS	GRADE 55
FLANGE MATERIAL	A331	GRADE 55
COLD FORMED LIGHT GAUGE SHAPES	A1011SS	GRADE 55
STRUCTURAL CABLES	A475	GRADE EHS
HOT ROLLED MILL SHAPE	A392	GRADE 50
HOLLOW STRUCTURAL SECTIONS	A500	GRADE B
PBR36 ROOF AND WALL PANELS	A653 OR A792	GRADE 80
STANDING SEAM ROOF	A653 OR A792	GRADE 50
BOLTS	A325	A325

2 DESIGN

- A. ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBER ARE DESIGNED IN ACCORDANCE WITH THE AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATING AND ERECTION OF STRUCTURAL STEEL BUILDING" ALLOWABLE STRESS DESIGN 9TH EDITION
- B. ALL COLD FORMED MEMBERS ARE DESIGNED IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" LATEST EDITION
- C. ALL WELDING OF STRUCTURAL STEEL IS BASED ON AWS D1.1 "STRUCTURAL WELDING CODE" LATEST EDITION

3 A325 BOLT TIGHTENING REQUIREMENTS

ALL HIGH STRENGTH BOLTED CONNECTIONS ARE SUBJECT TO AXIAL TENSION AND OR SLIP CRITICAL AS SUCH THE BOLTS MUST BE FULLY PRE-TENSIONED AND INSPECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS AND THE APPLICABLE BUILDING CODE WASHERS ARE NOT REQUIRED WHEN THE "TURN OF THE NUT" TIGHTENING PROCEDURE IS USED IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PROPER BOLT TIGHTNESS

4 BUILDER / CONTRACTOR RESPONSIBILITIES

R & M STEEL COMPANY STANDARD PRODUCT SPECIFICATIONS APPLY AND R & M STEEL COMPANY DESIGN, FABRICATION, QUALITY CONTROL STANDARDS AND TOLERANCE WILL GOVERN IN CASE OF DISCREPANCIES BETWEEN R & M STEEL COMPANY'S PLANS AND PLANS FOR OTHER TRADES R & M STEEL PLANS SHALL GOVERN (SECTION 3.3 AISC CODE OF STANDARD PRACTICES, 9TH EDITION)

IT IS THE RESPONSIBILITY OF THE BUILDER / CONTRACTOR TO OBTAIN APPROPRIATE APPROVALS AND NECESSARY PERMITS FROM CITY, COUNTY, STATE OR FEDERAL AGENCIES AS REQUIRED

APPROVAL OF R & M STEEL COMPANY'S DRAWINGS CONSTITUTES THE BUILDER / CONTRACTOR'S ACCEPTANCE OF R & M STEEL COMPANY'S INTERPRETATION OF THE PURCHASE ORDER (SECTION 4.2.1 AISC CODE OF STANDARD PRACTICES, 9TH EDITION)

THE BUILDER / CONTRACTOR OR A/E FIRM IS RESPONSIBLE FOR THE OVERALL PROJECT ALL INTERFACE AND COMPATIBILITY CONCERNING ANY MATERIAL NOT FURNISHED BY R & M STEEL COMPANY ARE TO BE CONSIDERED AND COORDINATED BY THE BUILDER / CONTRACTOR OR A/E FIRM UNLESS SPECIFIC DESIGN CRITERIA CONCERNING THIS INTERFACE BETWEEN MATERIALS IS FURNISHED AS PART OF THE PURCHASE ORDER R & M STEEL COMPANY ASSUMPTIONS WILL GOVERN

THE BUILDER / CONTRACTORS RESPONSIBLE FOR SETTING OF ANCHOR BOLTS AND ERECTION OF STEEL BUILDING COMPONENTS IN ACCORDANCE WITH R & M STEEL COMPANY'S BUILDING "FOR CONSTRUCTION" DRAWINGS TEMPORARY SUPPORTS OR BRACING REQUIRED FOR THE BUILDING ERECTION WILL BE THE RESPONSIBILITY OF THE ERECTOR TO DETERMINE, FURNISH AND INSTALL (SECTION 7.9.1 AISC CODE OF STANDARD PRACTICES, 9TH EDITION)

BUILDING LOADS / DESCRIPTION

WIDTH 70 LENGTH 80 HEIGHT 24 / 24
 ROOF PITCH 10.12 / 10.12

THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY IBC 03

THE CONTRACTOR / BUILDER IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT

ROOF DEAD LOAD:	1.84	PSF (ROOF PANELS & PURLINS)
COLLATERAL LOAD	1	PSF
ROOF LIVE LOAD:	20	PSF
GROUND SNOW LOAD	45	PSF
ROOF SNOW LOAD	31.5	PSF
BASIC WIND SPEED	100	MPH
SEISMIC COEFFICIENT	0.280	

IMPORTANCE FACTORS.

WIND LOAD	1.00
SNOW LOAD	1.0
SEISMIC	1.00

OTHER LOADS

Pf = 0.7CeCtIpG
 Ce = 1
 Ct = 1
 I = 1
 Pg = 45 psf
 Pf = 31.5 psf
 UNBALANCED LOAD = 47 psf

ROOF PANELS.

COLOR Pacific White

WALL PANELS:

COLOR Pacific White

TRIM COLORS:

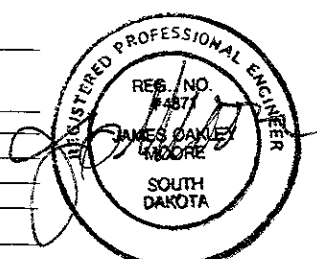
GABLE	Light Blue
EAVE	
CORNER	Light Blue
DOOR & WINDOW	Copper
GUTTER	Light Blue
DOWNSPOUTS	Light Blue

SOFFIT COLOR.


GABLE EXT	
EAVE EXT	
CANOPY	

LINER PANEL COLOR TRIM COLOR

LEFT	
RIGHT	
FRONT	
BACK	
ROOF	



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 R & M STEEL COMPANY P.O. Box 520 Casper, Wyo. 82406 308-454-1800 Fax 308-454-1801		
SCALE	JOB LOCATION	REVISION
DATE 2/6/06	RAPID CITY, SD	
JERRY ZEPP		
HANGAR		DRAWING NUMBER 2 of 17

GENERAL NOTES

- CONCRETE DESIGN BY OTHERS
- FIELD LOCATE WALK DOORS
- DELETE PANEL NOTCH AT ALL OPENINGS
- MATERIAL SPECIFICATIONS
 - ALL FLANGE MATERIAL IS ASTM A-529-GR55
FY=55 KSI (MIN)
 - ALL WEB MATERIAL IS ASTM A-570-GR55 OR A-572-GR55
FY=55 KSI (MIN)
 - ALL BASE AND SPLICE MATERIAL IS ASTM A-529-GR55
FY=55 KSI (MIN)
 - ALL ROLLED MILL SHAPE MATERIAL IS ASTM A-572-GR50
FY=50 KSI (MIN)
 - ALL COLD-FORM MATERIAL IS ASTM A-570-GR55
FY=55 KSI (MIN)
 - ALL 25 GA. (MIN) PANELING MATERIAL IS ASTM A-525 GRADE E
FY=80 KSI (MIN)

ANCHOR BOLT SUMMARY

Ont	Loc	Dia (in)	Total Len (in)	Bend Len (in)	Prog (in)
18	EW	3/4"	16.00	4.00	2.00
32	RF	3/4"	16.00	4.00	2.00

ENDWALL COLUMN REACTIONS ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Column Reactions (k)						Out-Of-Plane		Anc. Bolt No D(n)	Base Plate (in)			Groat (in)		
		Dead Vert	Coll Vert	Lve Vert	Wind-Left Horiz	Wind-Right Horiz	Wind-Right Horiz	Wid P	Wid S		Wid	Len	Thk			
1	B	1.1	0.0	0.0	0.0	0.0	0.0	0.0	-5.7	7.3	4	0.750	8.000	8.000	0.375	0.0
1	F	1.1	0.0	0.0	0.0	0.0	0.0	0.0	-5.7	7.3	4	0.750	8.000	8.000	0.375	0.0
5	A	0.3	0.1	2.3	0.0	-1.8	0.0	-1.1	0.0	0.0	2	0.750	3.250	8.000	0.125	0.0
5	C	0.3	0.2	6.2	2.5	-8.5	0.0	-2.7	-3.6	4.0	2	0.750	3.250	12.00	0.125	0.0
5	D	0.8	0.2	5.3	0.0	3.2	2.5	-6.7	-3.9	4.3	2	0.750	3.250	12.00	0.125	0.0
5	E	0.9	0.2	6.2	0.0	2.7	0.0	-5.0	-3.6	4.0	2	0.750	3.250	12.00	0.125	0.0
5	G	0.3	0.1	2.3	0.0	-1.1	0.0	-1.8	0.0	0.0	2	0.750	3.250	8.000	0.125	0.0

ENDWALL COLUMN MAXIMUM REACTIONS ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column Reactions (k)						Anc. Bolt No D(n)	Base Plate (in)			Groat (in)	
		Load Id	Hmax	V	Load Id	Hmin	V		Wid	Len	Thk		
1	F	14	7.3	0.7	15	-6.7	0.7	4	0.750	8.000	9.000	0.375	0.0
1	B	14	7.3	0.7	15	-6.7	0.7	4	0.750	8.000	8.000	0.375	0.0
5	A	15	0.0	-1.7	15	0.0	-1.7	2	0.750	3.250	8.000	0.125	0.0
5	C	17	0.0	10.8	18	4.0	-4.5	2	0.750	3.250	12.00	0.125	0.0
5	D	18	4.0	-2.7	15	-3.9	-3.6	2	0.750	3.250	12.00	0.125	0.0
5	E	14	4.0	-4.5	15	3.6	-4.4	2	0.750	3.250	12.00	0.125	0.0
5	G	15	0.0	-1.7	15	0.0	-1.7	2	0.750	3.250	8.000	0.125	0.0

BRACING REACTIONS, PANEL SHEAR

Wall- Loc	Col Line	Reactions (k)	Panel Shear (lb/ft)				
Line	Line	Horz	Vert	Horz	Vert		
L_EW	1	Rigid Frame At Endwall					
F_SW	2	3	7.5	8.5	2.5	2.8	
R_EW	5	C	D	1.9	2.6	0.5	0.7
B_SW	G	3	2	7.5	8.3	2.5	2.8

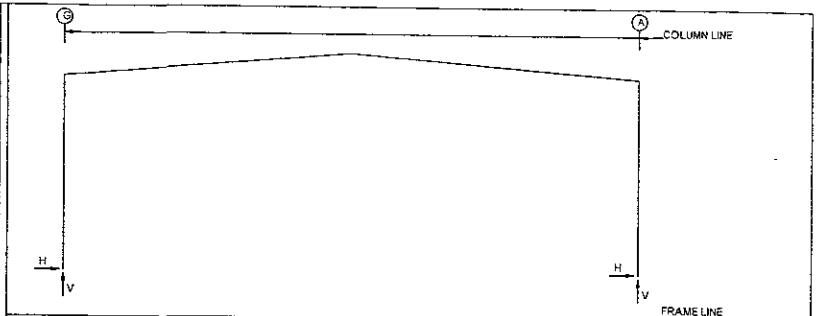
NOTES FOR REACTIONS

- All loading conditions are examined and only maximum/minimum H or V are reported corresponding H or V are reported
- Positive reactions are as shown in the sketch. Foundation loads are in opposite directions
- Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward
- Building reactions are based on the following building data:
 - Width (ft) = 70.0
 - Length (ft) = 80.0
 - Eave Height (ft) = 24.024
 - Roof Slope (rise/run) = 1/12
 - Dead Load (psf) = 1.8
 - Collateral Load (psf) = 1.0
 - Lve Load (psf) = 20.0
 - Ground Snow Load (psf) = 45.0
 - Roof Snow Load (psf) = 31.5
 - Wind Speed (mph) = 100.0
 - Wind Code = IBC 03
 - Exposure = C
 - Closed/Open = C
 - Importance - Wind = 1.00
 - Importance - Seismic = 1.00
 - Seismic Zone = D
 - Seismic Coeff (Far/Sa) = 0.26

Loading conditions are

- DL+CL+LL
- DL+CL+0.75LL+0.75WL1
- DL+CL+0.75LL+0.75WL1
- 0.60DL+WL1
- 0.60DL+WR1
- 0.60DL+WL2
- 0.60DL+WR2
- 0.60DL+LnWindL
- 0.60DL+LnWindR
- DL+CL+F1UNB_SL1
- DL+CL+F1UNB_SL2
- DL+CL+F2UNB_SL1
- DL+CL+F2UNB_SL2
- 0.60DL+WR1+WS
- 0.60DL+WR1+LnWindL
- 1.03DL+1.03CL+0.75LL+1.05Sest
- DL+CL+E2UNB_SL2
- 0.60DL+WL1+WS
- DL+CL+E2UNB_SL1

Pf = 0.7CeCtPg
 Ce = 1
 Ct = 1
 I = 1
 Pg = 45 psf
 Pf = 31.5 psf
 UNBALANCED LOAD = 47 psf



RIGID FRAME MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

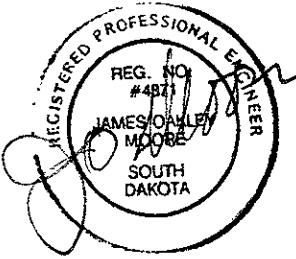
Frm Line	Col Line	Column Reactions (k)						Anc. Bolt No D(n)	Base Plate (in)			Groat (in)	
		Load Id	Hmax	V	Load Id	Hmin	V		Wid	Len	Thk		
1	G	3	7.4	12.1	6	-4.0	-0.6	4	0.750	6.000	10.63	0.500	0.0
1	A	7	4.0	-0.6	2	-7.4	12.1	4	0.750	6.000	10.63	0.500	0.0

RIGID FRAME MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES THE VERTICAL COMPONENT OF BRACING REACTION IS INCLUDED IN VERTICAL REACTIONS

Frm Line	Col Line	Column Reactions (k)						Anc. Bolt No D(n)	Base Plate (in)			Groat (in)	
		Load Id	Hmax	V	Load Id	Hmin	V		Wid	Len	Thk		
2*	G	1	10.7	25.5	4	-6.3	-10.7	4	0.750	6.000	10.63	0.500	0.0
2*	A	5	6.3	10.7	1	-10.7	25.5	4	0.750	6.000	10.63	0.500	0.0

RIGID FRAME BASIC COLUMN REACTIONS (k)

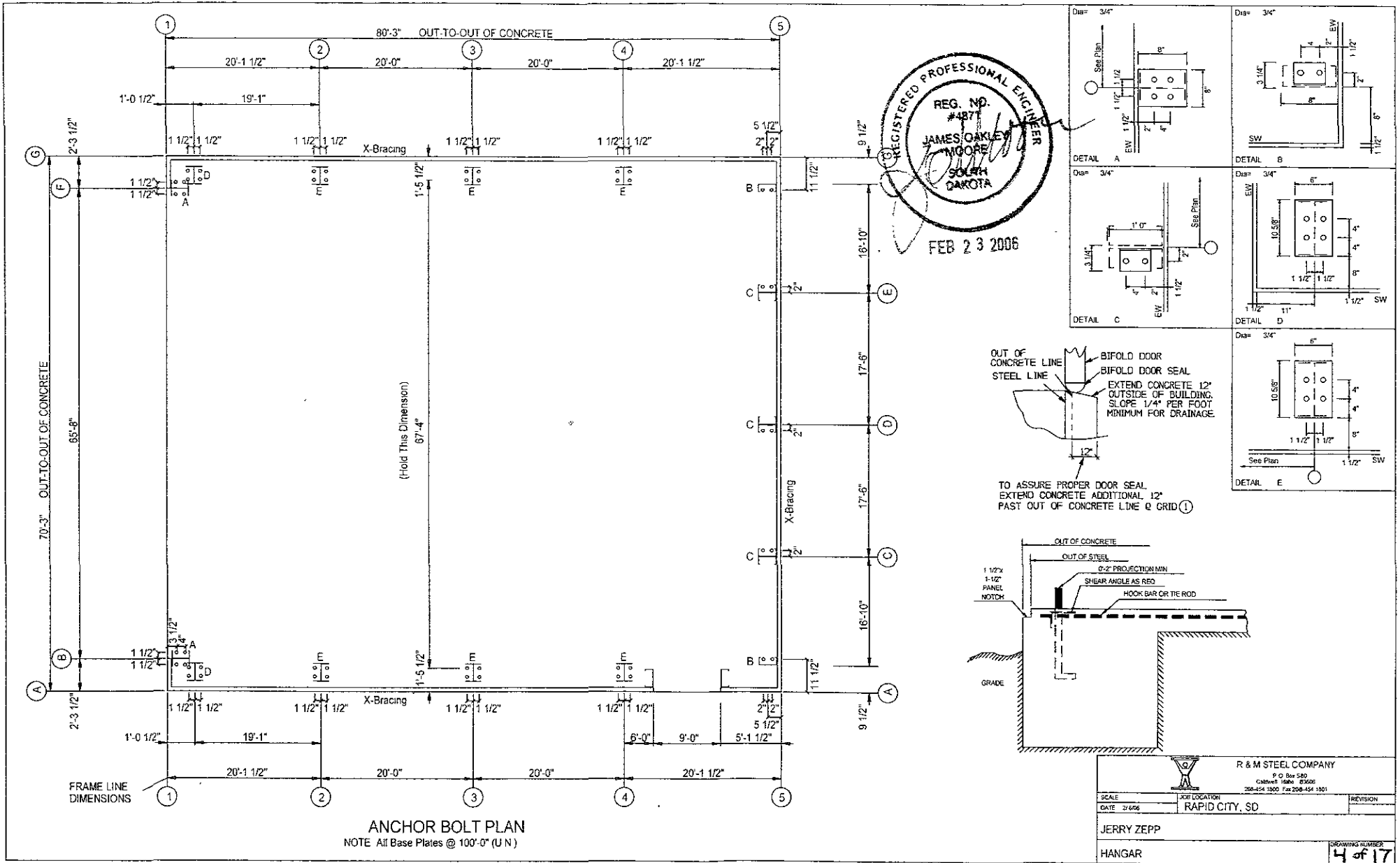
Frame Line	Column Line	Dead		Collateral		Live		Wind_L1		Wind_R1		Wind_L2	
		Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert	Horz	Vert
1	G	2.41	5.95	0.15	0.35	4.73	11.00	-4.84	-6.74	1.69	-3.32	-5.41	-4.18
1	A	2.41	5.95	-0.15	0.35	-4.73	11.00	-1.69	-3.32	4.84	-6.74	-1.12	-0.77



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R & M STEEL COMPANY
 P.O. Box 540
 Colwell, Idaho 83606
 208-454-1900 Fax 208-454-1901

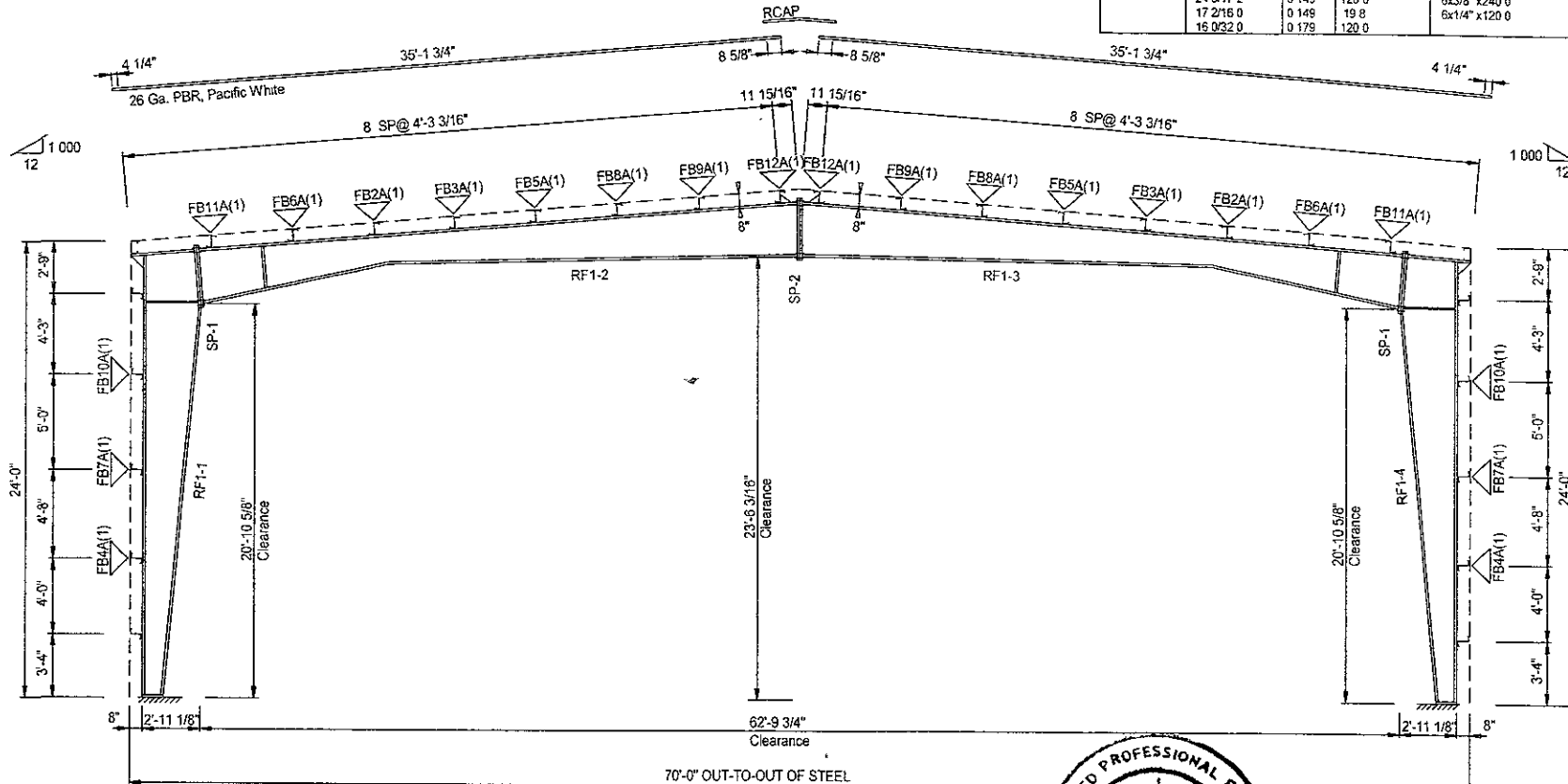
SCALE	JOB LOCATION	REVISION
DATE 2/6/06	RAPID CITY, SD	
JERRY ZEPP		
HANGAR		DRAWING NUMBER
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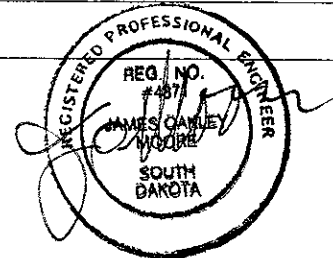
SPlice PLATES & BOLTS									
Splice Mark	Quan	Top/Bot	Int Type	Dia	Len	Plate Size			
						Wid	Thick	Length	
SP-1	4	4	0	A325	0.750	2.50	6"	5/8"	3'-3"
SP-2	4	4	0	A325	0.750	2.00	6"	1/2"	3'-2 13/16"

FLANGE BRACES Both Sides(U N)
 FBxxx(A)(1)
 A - L 1 5x1/8

PIECE	WEB DEPTH		WEB PLATE		OUTSIDE FLANGE W x T x LEN	INSIDE FLANGE W x T x LEN
	START	END	THICK	LENGTH		
RF1-1 / RF1-4	10.0	14.2	0.175	42.3	6x1/4" x240.0	6x3/8" x236.1
	14.2	26.1	0.175	120.0	6x1/4" x39.6	6x3/8" x12.0
RF1-2	26.1	34.5	0.175	120.0	6x1/2" x39.9	6x1/4" x12.0
	32.0	16.0	0.175	120.0	6x1/4" x120.0	6x5/16" x121.0
RF1-3	16.0	17.2	0.149	19.8	6x3/8" x240.0	6x1/4" x240.0
	17.2	24.6	0.149	120.0	6x3/8" x19.8	6x1/4" x17.6
	24.6	31.9	0.149	120.0	6x3/8" x19.8	6x1/4" x17.6
	31.9	24.6	0.149	120.0	6x3/8" x240.0	6x1/4" x17.6
	17.2	16.0	0.149	19.8	6x1/4" x120.0	6x5/16" x121.0
	16.0	32.0	0.175	120.0		



RIGID FRAME CROSS SECTION
 FOR FRAME LINE 1



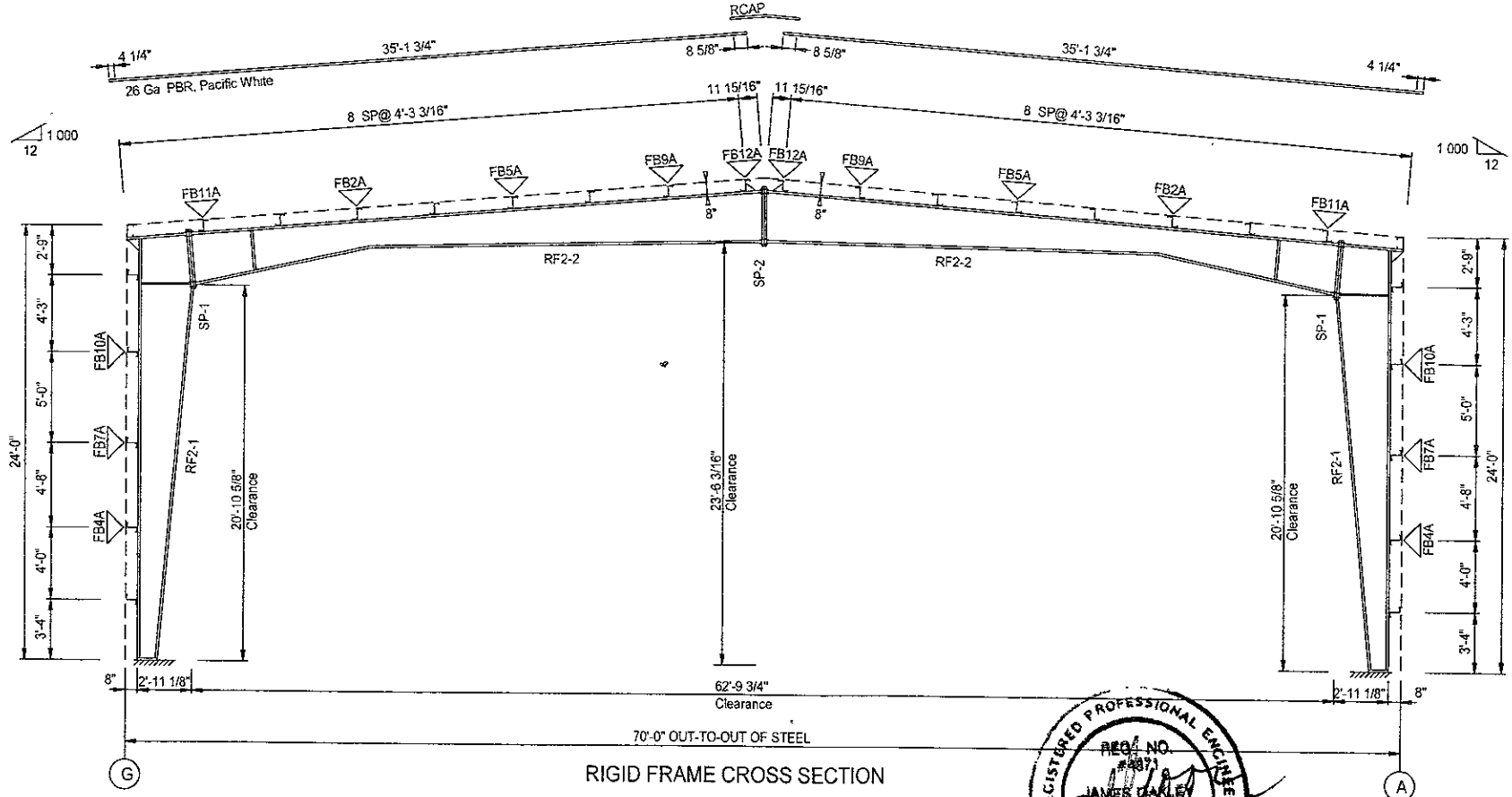
R & M STEEL COMPANY		
P.O. Box 569 Chamberlain, South Dakota 57626 228-64-1800 Fax 228-64-1801		
SCALE	JOB LOCATION	REVISION
DATE 2/20/06	RAPID CITY, SD	
JERRY ZEPP		
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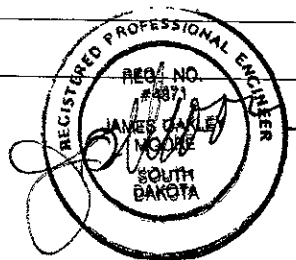
SPlice PLATES & BOLTS						
Splice Mark	Quan	Top/Bottom	Type	Bolt		
				Dia	Len	
Plate Size		Wid	Thick	Length		
SP-1	4			0	A325	0.750
SP-2	4	0	A325	0.750	2.00	
				6"	5/8"	3'-3"
				6"	1/2"	3'-2 13/16"

PIECE	WEB DEPTH		WEB PLATE		OUTSIDE FLANGE W x T x LEN	INSIDE FLANGE W x T x LEN
	START/END	THICK	THICK	LENGTH		
RF2-1	10 0/14 2	0.179	42.3		6x14" x240.0	6x3/8" x235.1
	14 2/26 1	0.179	120.0		6x14" x 39.6	6x3/8" x 12.0
	26 1/34 5	0.179	120.0		6x12" x 39.9	
RF2-2	32 0/16 0	0.179	120.0		6x14" x120.0	6x5/16" x121.0
	16 0/17 2	0.149	19.9		6x3/8" x240.0	6x1/4" x240.0
	17 2/24 6	0.149	120.0		6x3/8" x 19.8	
	24 6/31 9	0.149	120.0			

FLANGE BRACES Both Sides(U N)
 FBxA(1)
 A - L1 5x1/8

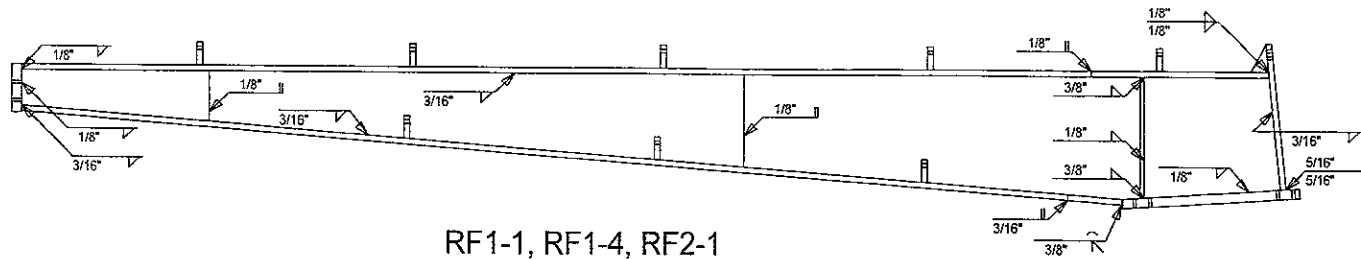


RIGID FRAME CROSS SECTION
 FOR FRAME LINE 2 3 4

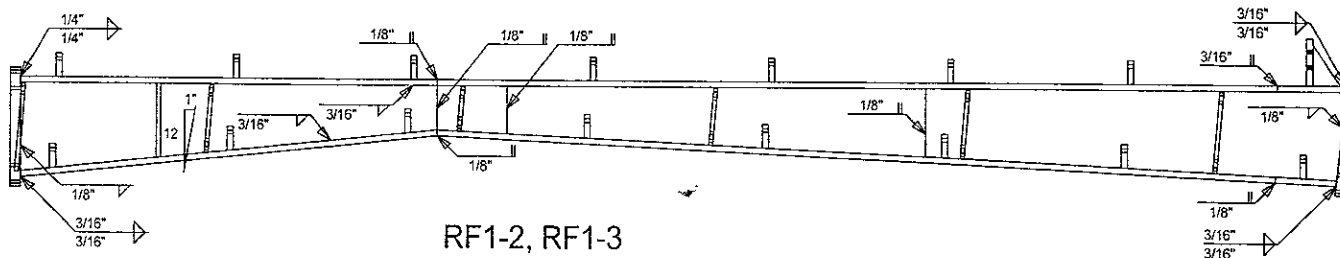


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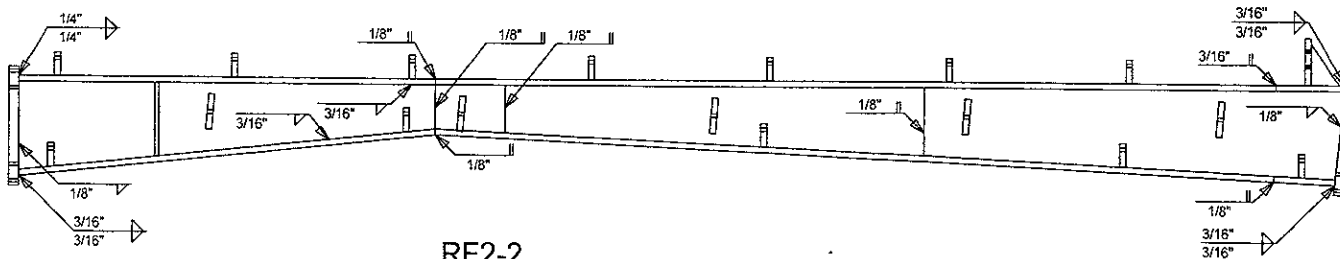
R & M STEEL COMPANY		
P.O. Box 580 Caswell 5876 R3006 205-454-1920 Fax 205-454-1931		
SCALE	JOB LOCATION	REVISION
DATE 2/6/06	RAPID CITY, SD	
JERRY ZEPP		
DRAWING NUMBER		
HANGAR		6 of 17



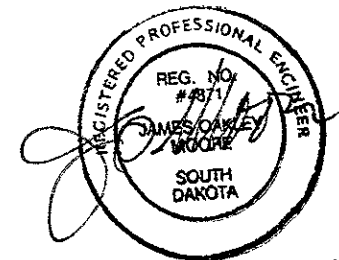
RF1-1, RF1-4, RF2-1




RF1-2, RF1-3

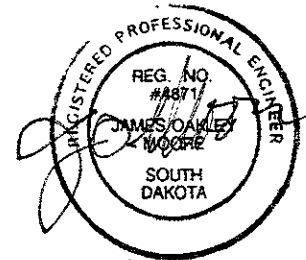
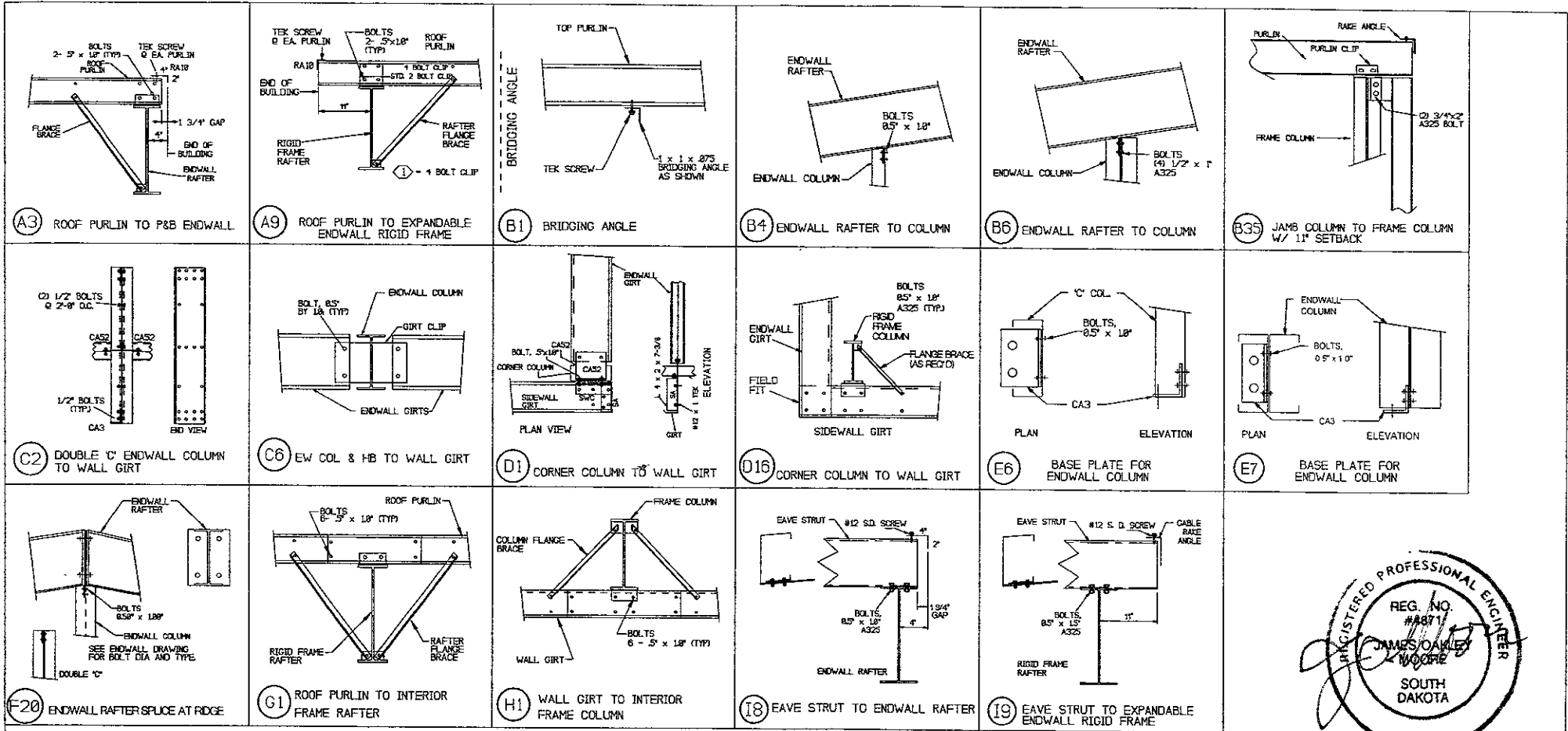


RF2-2




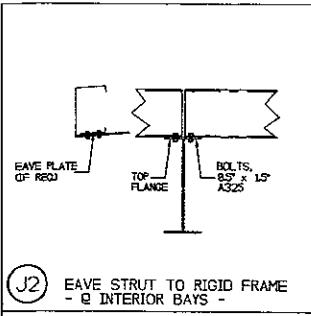
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 R & M STEEL COMPANY P.O. Box 250 Calverton, Idaho 83008 208-454-1800 Fax 208-454-1801		
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DATE 2/6/06	RAPID CITY, SD	
JERRY ZEPP		
HANGAR		DRAWING NUMBER 7 of 17

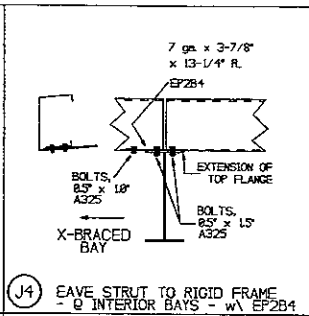


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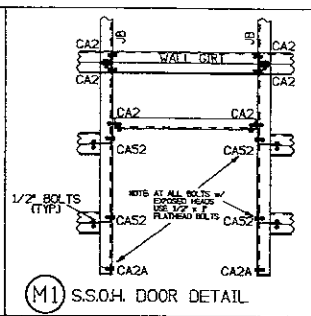
 R & M STEEL COMPANY P O Box 580 Caldwell Idm: 53006 208-454-1800 Fax: 208-454-1301		
SCALE	JOB LOCATION	REVISION
DATE 2/06	RAPID CITY, SD	
JERRY ZEPP		
HANGAR	DRAWING NUMBER 8 of 17	



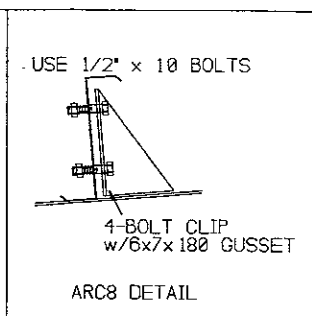
J2 EAVE STRUT TO RIGID FRAME
- INTERIOR BAYS -



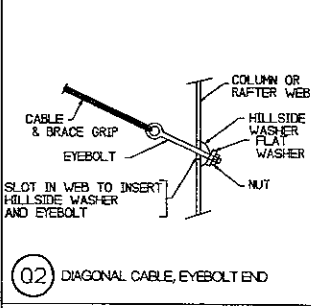
J4 EAVE STRUT TO RIGID FRAME
- INTERIOR BAYS - w/ EP2B4



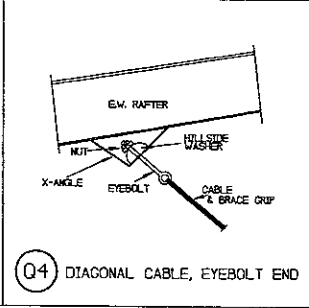
M1 S.S.O.H. DOOR DETAIL



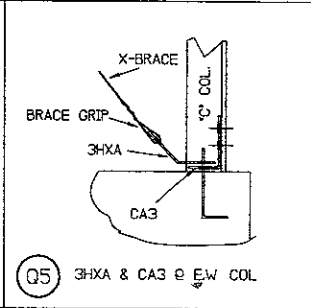
USE 1/2" x 10 BOLTS
ARC8 DETAIL



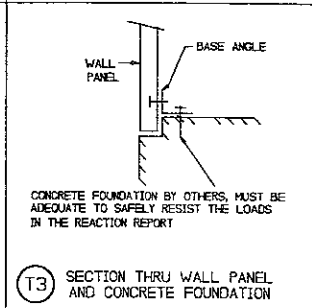
Q2 DIAGONAL CABLE, EYEBOLT END



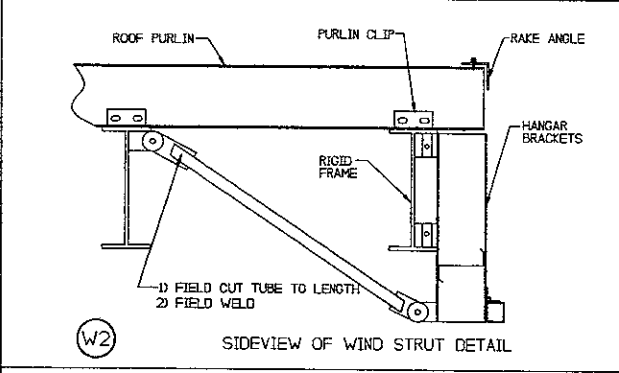
Q4 DIAGONAL CABLE, EYEBOLT END



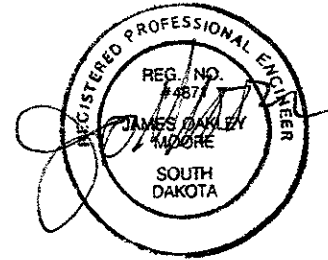
Q5 3HXA & CA3 @ E.W. COL




T3 SECTION THRU WALL PANEL AND CONCRETE FOUNDATION



W2 SIDEVIEW OF WIND STRUT DETAIL



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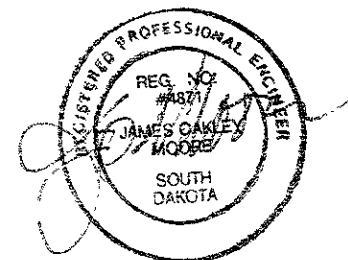
 R & M STEEL COMPANY P.O. Box 590 Chadwell, South Dakota 57006 205-454-1800 Fax 205-454-1801		
SCALE	JOB LOCATION	REVISION
DATE 2/6/06	RAPID CITY, SD	
JERRY ZEPP		DRAWING NUMBER
HANGAR		9 of 17

SPECIAL BOLTS					
ROOF PLAN					
Q ID	QUAN	TYPE	DIA	LENGTH	WASH
1	4	A325	1/2"	1"	0

MEMBER TABLE		
ROOF PLAN		
MARK	PART	LENGTH
P-1	6x25Z15	22'-8 1/4"
P-2	6x25Z15	24'-0 1/4"
P-3	6x25Z14	22'-6 1/2"
E-1	80x5E14	19'-11 3/4"
E-2	80x5E14	19'-11 1/2"
E-3	80x5E14	19'-10"
CB-4	3/8EHS	25'-0"
CB-5	5/16EHS	26'-0"

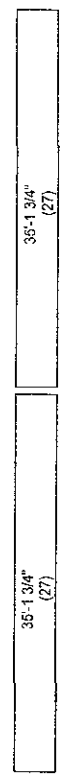
CONNECTION PLATES		
ROOF PLAN		
Q ID	MARK/PART	
1	EP2B4	

INSTALL ROOF FLANGE BRACE AS PER RIGID FRAME CROSS SECTION



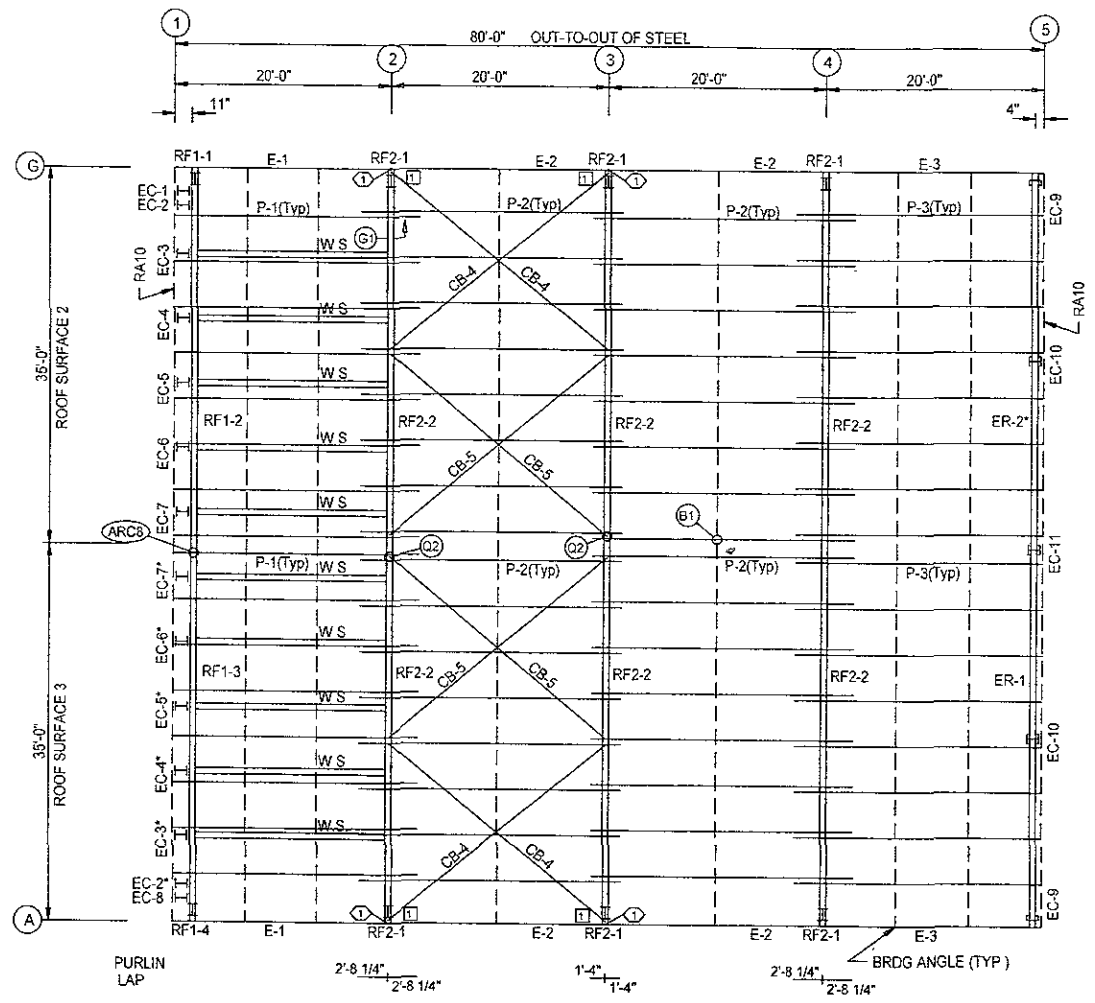
FEB 23 2006

GENERAL NOTES			
DESIGN NOTES			
1 EAVE STRUTS (SEE MEMBER TABLE)			
2 PURLINS (SEE MEMBER TABLE) w/LAP & GA AS SHOWN			
3 5/8" E H S CABLE WITH 1-1/4" EYEBOLT			
4 1/2" E H S CABLE WITH 7/8" EYEBOLT			
5 3/8" E H S CABLE WITH 3/4" EYEBOLT			
6 5/16" E H S CABLE WITH 5/8" EYEBOLT			
7 PURLINS & FLANGE BRACE BOLTS 1/2"x1" A325			
FIELD NOTES			
1 FIELD CUT X-BRACE TO LENGTH AS REQ			
2 FIELD CUT, WELD & BOLT WINDSTRUTS w/3/4" BOLTS			
SCALE		JOB LOCATION	
DATE 2/6/06		RAPID CITY, SD	
JERRY ZEPP		R & M STEEL COMPANY	
HANGAR		P.O. Box 580 Rapid City, SD 57702 208-454-1800 Fax 208-454-1801	
		DRAWING NUMBER	
		10 of 17	



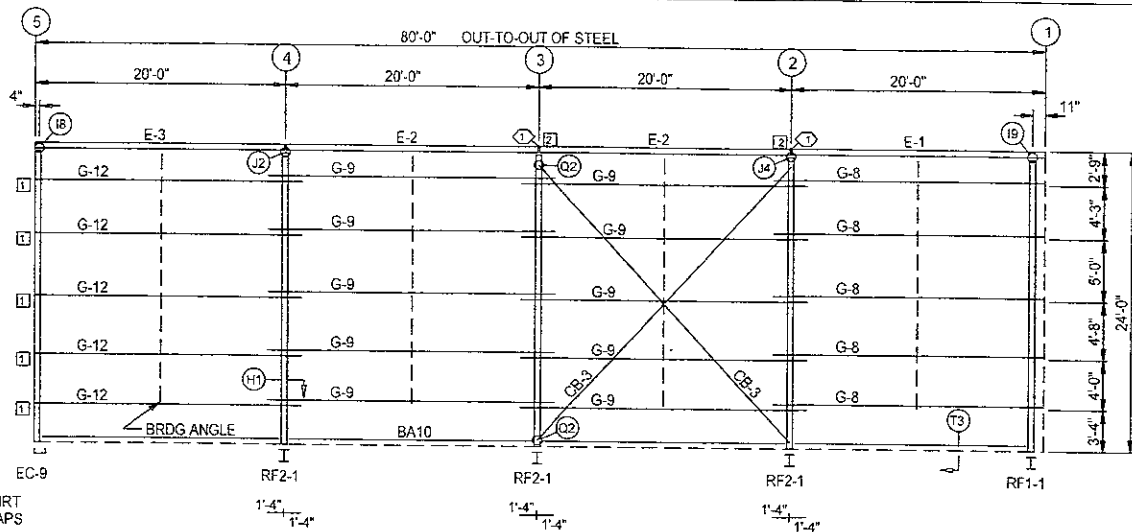
ROOF SHEETING
PANELS, 26 Ga PBR
Pacific White

ROOF FRAMING PLAN

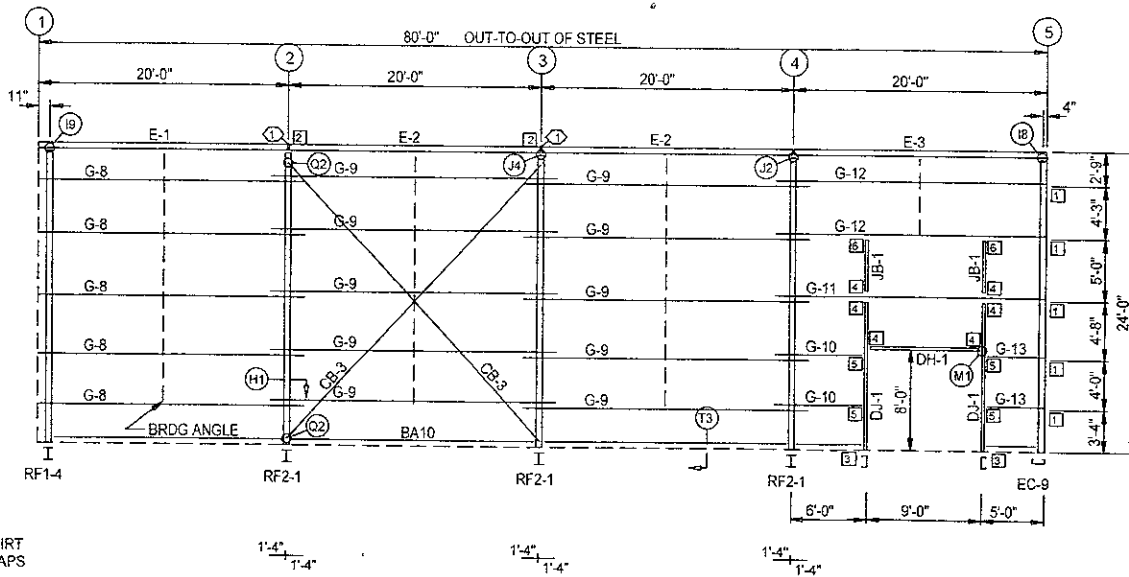


PURLIN LAP

BRDG ANGLE (TYP)



SIDEWALL FRAMING: GRID G



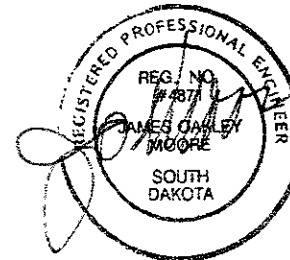
SIDEWALL FRAMING: GRID A

SPECIAL BOLTS					
Q ID	QUAN	TYPE	DIA	LENGTH	WASH
1	4	A325	1/2"	1"	0

MEMBER TABLE GRID A & G		
MARK	PART	LENGTH
DJ-1	8x25C16	12'-0"
DH-1	8x25C16	9'-0"
JB-1	8x25C16	5'-0"
E-1	80x5E14	19'-11 3/4"
E-2	80x5E14	19'-11 1/2"
E-3	80x5E14	19'-11 1/2"
G-8	8x25Z16	21'-4"
G-9	8x25Z16	22'-8"
G-10	8x25Z16	7'-0"
G-11	8x25Z15	21'-4"
G-12	8x25Z16	21'-4"
G-13	8x25Z16	4'-8"
CB-3	1/2EHS	30'-0"

CONNECTION PLATES GRID A & G	
ID	MARK/PART
1	SWC
2	EP2B4
3	CA2A
4	CA2
5	CA52
6	CA7

INSTALL SIDEWALL FLANGE BRACE
AS PER RIGID FRAME CROSS SECTION



FEB 23 2006

GENERAL NOTES:

DESIGN NOTES

- GIRTS 5x2 5/2 W/LAP & GA AS SHOWN
- 5/8" E H S CABLE WITH 1 1/4" EYEBOLT
- 1/2" E H S CABLE WITH 7/8" EYEBOLT
- 3/8" E H S CABLE WITH 3/4" EYEBOLT
- 5/16" E H S CABLE WITH 5/8" EYEBOLT
- GIRTS, JAMBS AND HEADER BOLTS 1/2"x1" A325

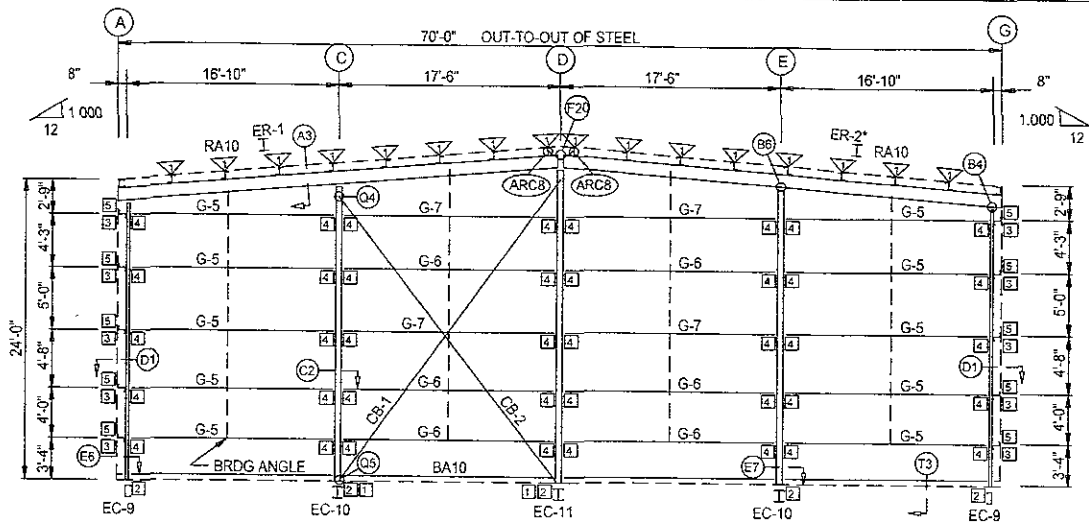
FIELD NOTES

- FIELD CUT X-BRACE THRU GIRTS (AS REQ'D)
- FIELD CUT X-BRACE TO LENGTH (AS REQ'D)
- FIELD FIT CUT AND DRILL GIRTS @ CORNER COLUMN (AS REQ'D)
- FIELD LOCATE WALK DOORS, WINDOWS, & LOUVERS (AS REQ'D)
- FIELD CUT AND WELD WS (AS REQ'D)
- FIELD CUT 3'-4" GIRTS, TEK TO 8-1/4" DOOR JAMB
- FIELD FIT FLANGE BRACES AS REQ



R & M STEEL COMPANY
P.O. Box 150
Caledonia, MI 49606
268-454-1800 Fax 268-454-1801

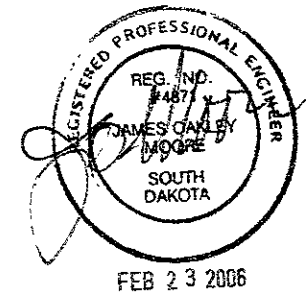
SCALE	JOB LOCATION	REVISION
DATE 2/6/06	RAPID CITY, SD	
JERRY ZEPP		
HANGAR		DRAWING NUMBER
		11 of 17



ENDWALL FRAMING GRID 5

BOLT TABLE				
FRAME LINE 1 & 5				
LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-2*	4	A325	5/8"	1 3/4"
JAMB COLUMN	2	A325	3/4"	2"
HINGE BRACKET	4	A325	1/2"	1"
CEE COLUMN	4	A325	1/2"	1"
Back Braces	2	A325	3/4"	2"

MEMBER TABLE		
FRAME LINE 1 & 5		
MARK	PART	LENGTH
BB-1	TSS3x120	20'-0"
EC-1	W8x31	23'-4 7/8"
EC-2	W8x10	2'-8 3/4"
EC-3	W8x10	2'-3"
EC-4	W8x10	3'-3"
EC-5	W8x10	3'-9"
EC-6	W8x10	4'-3"
EC-7	W8x10	4'-9"
EC-8	W8x31	23'-4 7/8"
EC-9	8x25C12	22'-6 3/4"
EC-10	D12x5C12	23'-11 9/16"
EC-11	D12x5C12	25'-5 1/16"
ER-1	W10x12	35'-1 7/16"
ER-2*	W10x12	35'-1 7/16"
G-1	8x25Z16	1'-10"
G-2	8x25Z16	0'-8"
G-3	8x25Z16	3'-10"
G-4	8x25Z16	5'-4"
G-5	8x25Z16	16'-2"
G-6	8x25Z16	16'-10"
G-7	8x25Z16	16'-10"
CB-1	5/16EHS	30'-0"
CB-2	5/16EHS	28'-0"

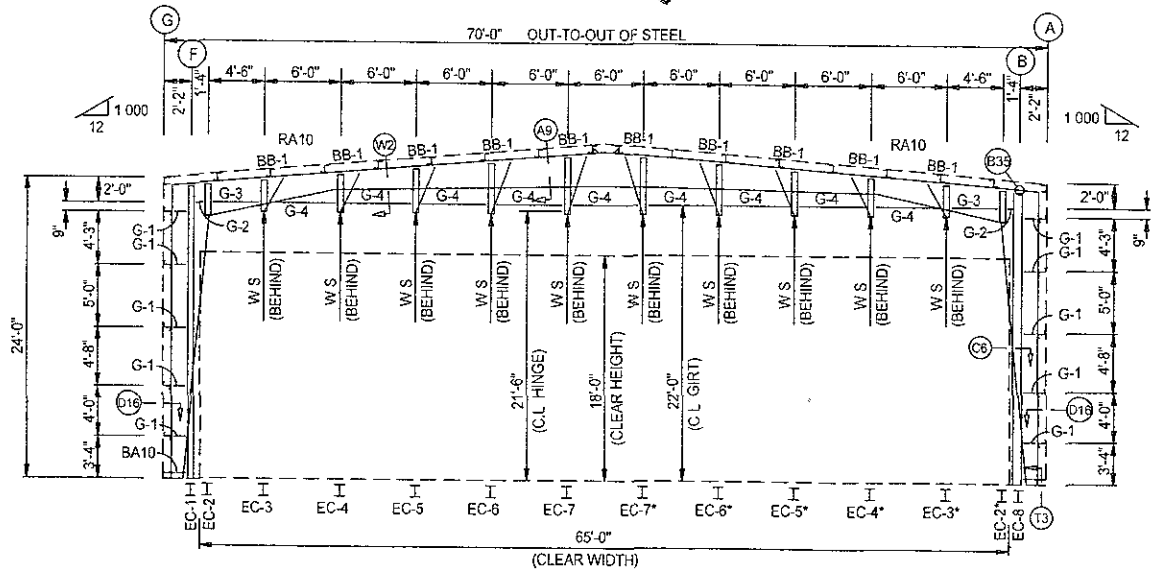


FLANGE BRACE TABLE	
FRAME LINE 1 & 5	
ID	LENGTH
1 FB1A	1'-5 7/8"

BIFOLD DOOR NOTE

- 1) ADJUST BIFOLD DOOR JAMB WHEEL TO APPROXIMATE CENTER OF JAMB COLUMN (1/2" LESS)
- 2) FIELD DRILL & BOLT HINGE TO HB
- 3) FIELD WELD HINGE TO HB

CONNECTION PLATES	
FRAME LINE 1 & 5	
ID	MARK/PART
1	3HA
2	CA3
3	SWC
4	CA52
5	SA



ENDWALL FRAMING GRID 1

GENERAL NOTES:

DESIGN NOTES

- 1) GIRTS 8x2 5Z w/LAP & GA AS SHOWN
- 2) 5/8" E H S CABLE WITH 1-1/4" EYEBOLT
- 3) 1/2" E H S CABLE WITH 7/8" EYEBOLT
- 4) 3/8" E H S CABLE WITH 3/4" EYEBOLT
- 5) 5/16" E H S CABLE WITH 5/8" EYEBOLT
- 6) GIRTS, JAMBS AND HEADER BOLTS 1/2"x1" A325

FIELD NOTES

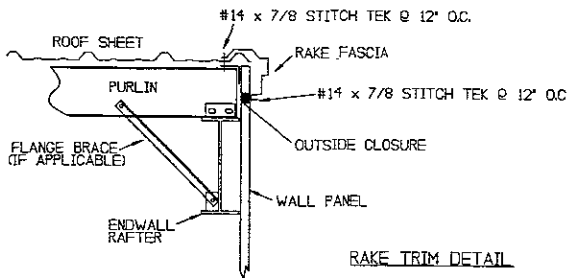
- 1) FIELD CUT X-BRACE THRU GIRTS (AS REQ'D)
- 2) FIELD CUT X-BRACE TO LENGTH (AS REQ'D)
- 3) FIELD FIT DRILL AND BOLT CORNER COLUMN GIRTS (AS REQ'D)
- 4) FIELD LOCATE WALK DOORS, WINDOWS, & LOUVERS (AS REQ'D)
- 5) FIELD CUT AND WELD WS (AS REQ'D)
- 6) FIELD CUT 3'-4" GIRT, TEK TO 8-1/4" DOOR JAMB

R & M STEEL COMPANY
 P.O. Box 580
 Caldwell, Idaho 83406
 208-454-1800 Fax 208-454-1811

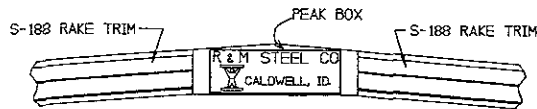
SCALE	JOB LOCATION	REVISION
DATE 3/5/00	RAPID CITY, SD	

JERRY ZEPP
 HANGAR

DRAWING NUMBER
 13 of 16

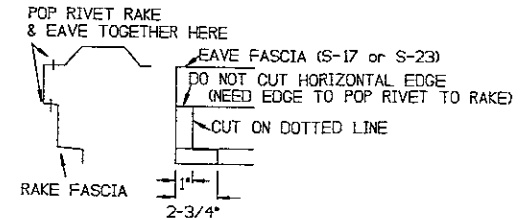


RAKE TRIM DETAIL

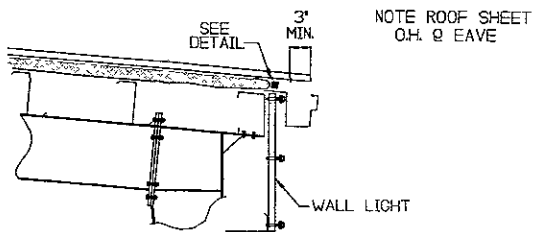


PEAK BOX DETAIL

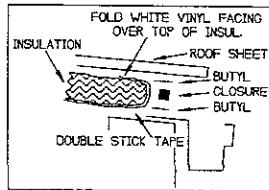
- NOTE:
- 1) MITER S-188 RAKE TRIM @ PEAK & SEAL.
 - 2) INSTALL PEAKBOX & SEAL.
 - 3) MITER S-188 AND S-17 @ CORNERS & SEAL.



MITER DETAIL: EAVE-TO-RAKE



NOTE ROOF SHEET O.H. @ EAVE

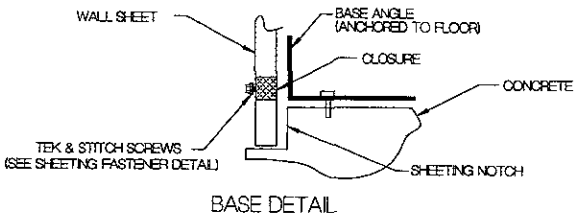


Stitch TEK (TYP.)

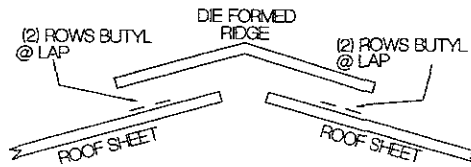
BASE ANGLE INSIDE CLOSURE

FOLD VINYL FACING OVER INSULATION

S-23 EAVE CUTTER DETAIL & WALL STITCH TEK LAYOUT

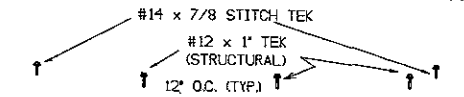


BASE DETAIL

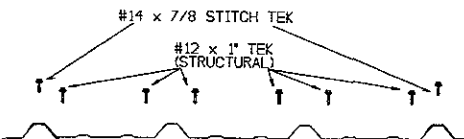


DETAIL @ DIE FORMED RIDGE CAP

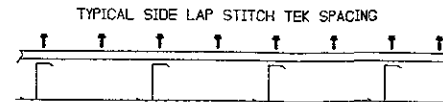
TYPICAL TEK SPACING FOR HIGH RIB PANELS



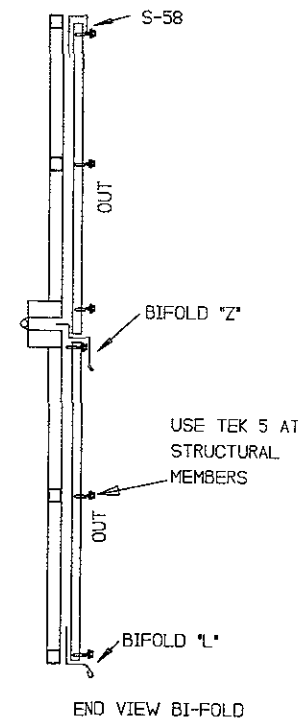
I. TYPICAL SPACING AT INTERMEDIATE PURLINS & GIRTS



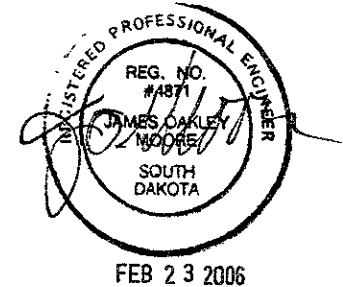
- II. TYPICAL SPACING AT PANEL ENDS
- 1) TYPICAL SPACING AT EAVE STRUT
 - 2) TYPICAL SPACING AT RIDGE CAP.
 - 3) TYPICAL SPACING AT RAKE ANGLE.
 - 4) TYPICAL SPACING AT PANEL LAP.
 - 5) TYPICAL SPACING AT BASE ANGLE.



- III. TYPICAL STITCH TEK SPACING (SIDE LAP ONLY)
- 1) TYPICAL SPACING AT PURLIN.
 - 2) TYPICAL SPACING MIDSPAN BETWEEN PURLIN.

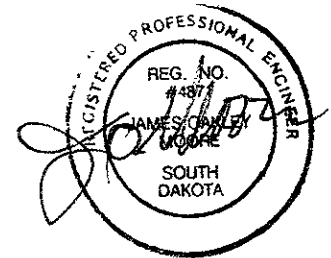
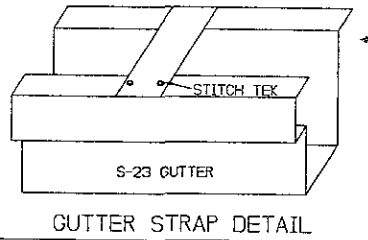
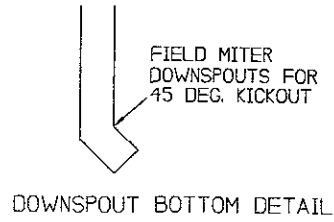
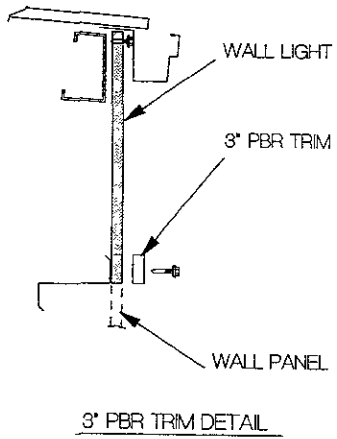
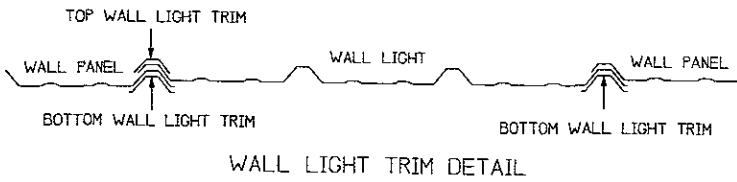


END VIEW BI-FOLD




R & M STEEL COMPANY
 P.O. Box 288
 Caldwell, Idaho 83406
 209-151-1800 Fax 209-151-1801

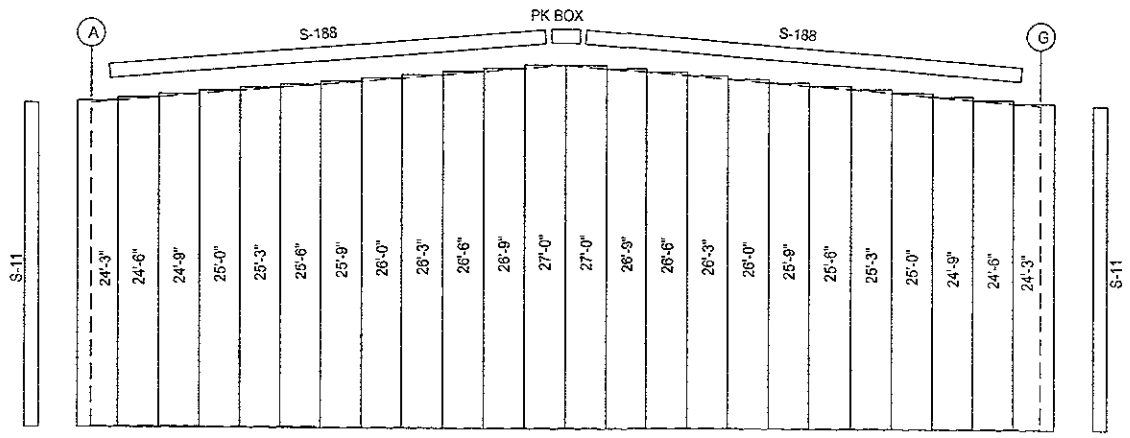
SCALE:	JOB LOCATION:	REVISION:
DATE: 2/5/08	RAPID CITY, SD	
JERRY ZEPP		
HANGAR	DRAWING NUMBER: 14 of 17	



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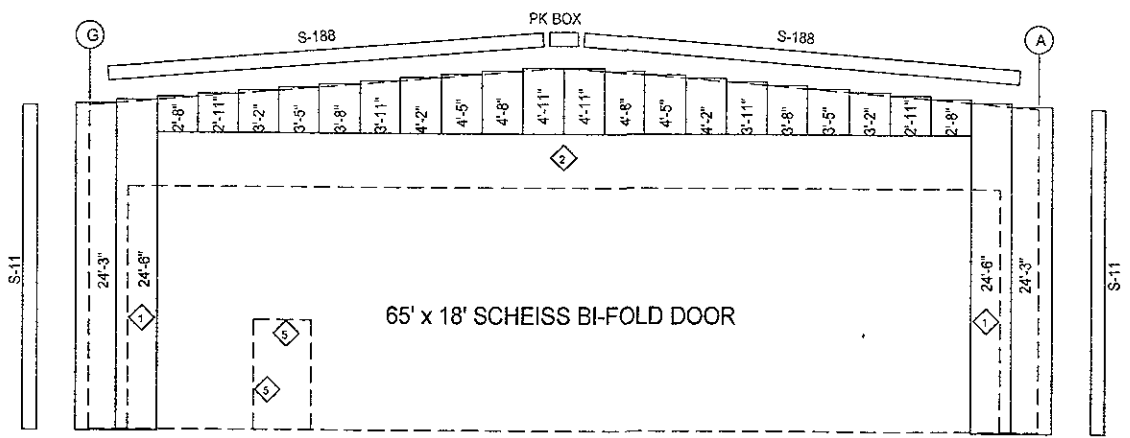
 R & M STEEL COMPANY P.O. Box 559 Caldwell, Idaho 83208 208-254-1800 Fax 208-254-1601		
SCALE	JOB LOCATION	REVISION
DATE 2/8/06	RAPID CITY, SD	
JERRY ZEPP		
HANGAR		DRAWING NUMBER 15 of 17

TRIM TABLE FRAME LINE 1 & 5			
ID	MARK	LENGTH	COLOR
	S-188	18'-6"	LIGHT BLUE
	PK BOX	2'-6"	LIGHT BLUE
1	S-58	22'-6"	COPPER
2	S-58	22'-6"	COPPER
3	BI-FOLD Z	22'-6"	COPPER
4	BI-FOLD L	22'-6"	COPPER
5	S-58	12'-6"	COPPER



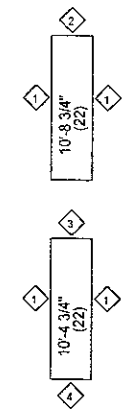
ENDWALL SHEETING GRID LINE 5

PANELS 26 Ga PBR - Pacific White

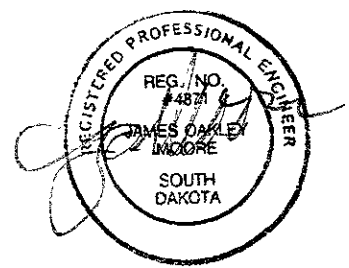


ENDWALL SHEETING GRID LINE 1


PANELS 26 Ga PBR - Pacific White

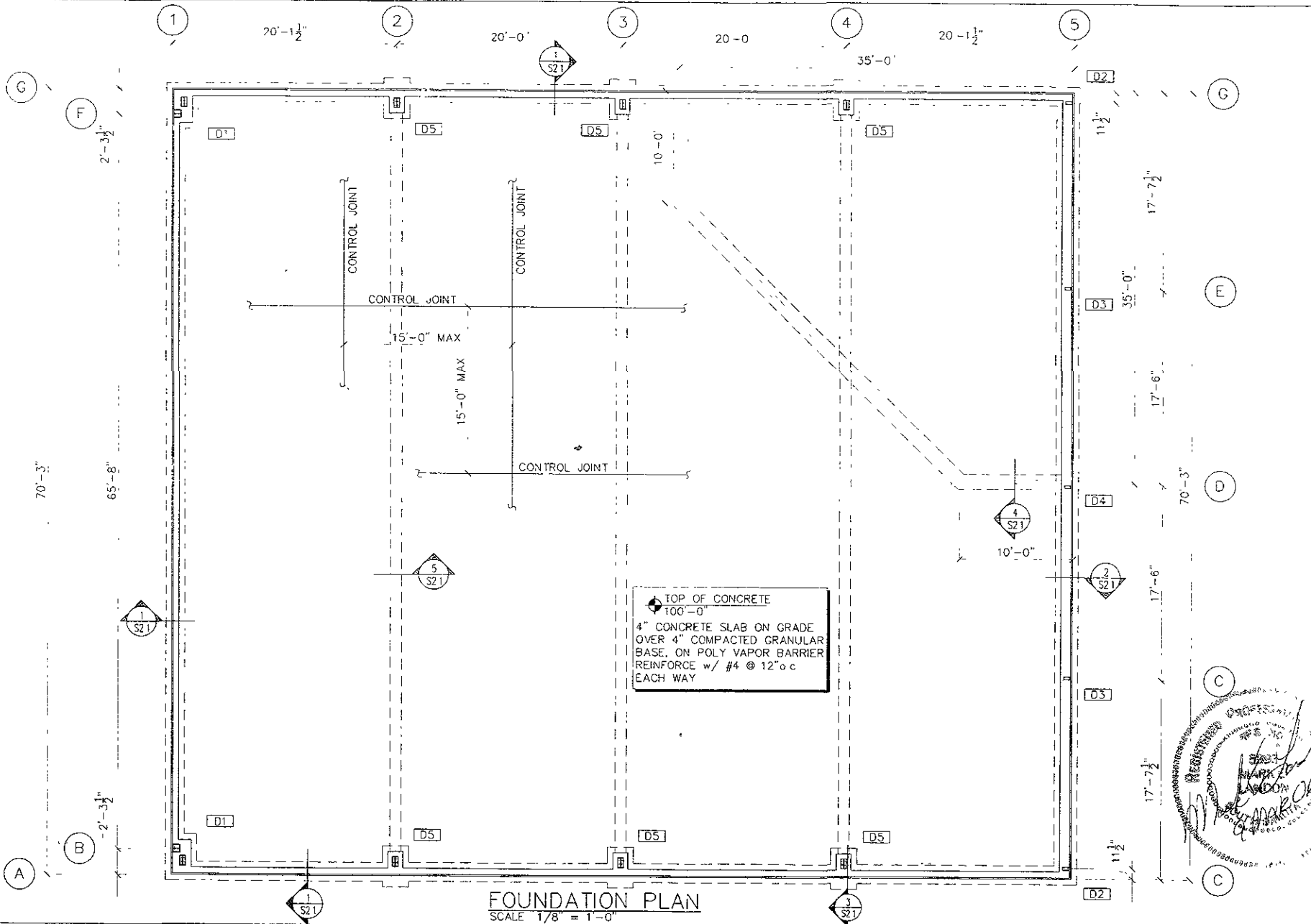


PANELS 26 Ga PBR
Pacific White



FEB 23 2006

GENERAL NOTES:		
DESIGN NOTES		
1. SEE ERECTOR MANUAL FOR SCREW PLACEMENT		
2. SEE ERECTOR MANUAL FOR TRIM DETAIL		
FIELD NOTES		
1. ALIGN ROOF PANEL HI-RIBS WITH WALL PANEL HI-RIBS		
2. TRIM ALL FRAMED OPENINGS W/S-58 PANEL CAP		
3. MITER RAKE (S-188) AND EAVE TRIM (S-17 OR S-23)		
4. FIELD PAINT EXPOSED BI-FOLD STRUCTURAL STEEL (BY OTHERS)		
5. FIELD LOCATE AND TRIM ALL WALK DOORS (AS REQ'D)		
 R & M STEEL COMPANY P.O. Box 1409 Caldwell, Idaho 83208 208-454-1800 Fax 208-424-1801		
SCALE	JOB LOCATION	REVISION
DATE 2/2006	RAPID CITY, SD	
JERRY ZEPP		
HANGAR		DRAWING NUMBER
		17 of 17



FOUNDATION PLAN
SCALE 1/8" = 1'-0"

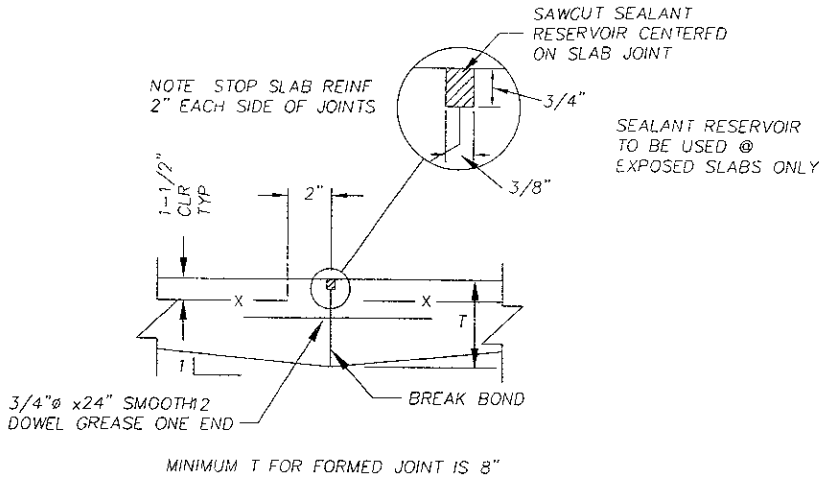
PARKSIDE DESIGN, INC.
730 SOUTH STREET
RAPID CITY, SD 57701
PH (605) 348-9171
FAX (605) 348-4878

Project Title
**JERRY ZEPP HANGER LN.
3913 COOK HANGER LN.
R.C. REGIONAL AIRPORT**
RAPID CITY, SOUTH DAKOTA

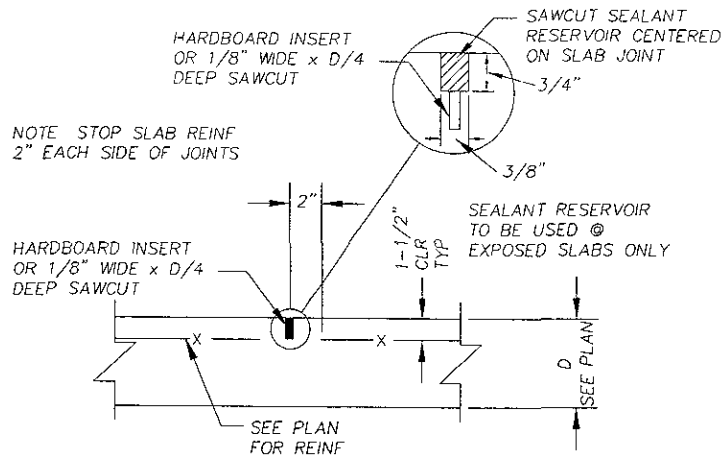
Sheet Title
FOUNDATION PLAN

Date 3/9/06
Designed MSJ
Drawn RUT
Checked NCL
Project Number PD08013
File Name 08013s1 DWG

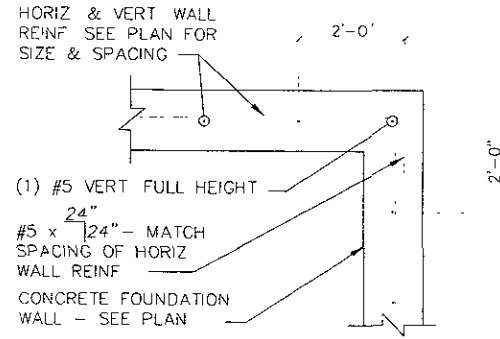
Sheet
S11



TYPICAL CONSTRUCTION JOINT DETAIL (CSJ)
SCALE NONE WITH REMOVABLE FORMS



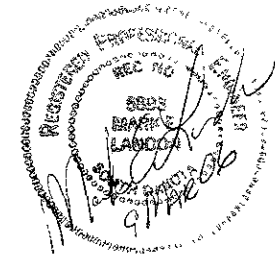
TYPICAL CONTROL JOINT DETAIL (CJ)
SCALE NONE



TYPICAL CORNER DETAIL
SCALE NONE

REBAR LAP SCHEDULE	
BAR SIZE	LAP
#3	18"
#4	24"
#5	30"
#6	36"
#7	42"

TYPICAL REBAR LAP SCHEDULE
SCALE NONE



PARKSIDE DESIGN, INC.
730 SOUTH STREET
RAPID CITY, SD 57701
PH: (605) 348-8171
FAX: (605) 348-4978

Project title
**JERRY ZEPPE HANGER LN.
3913 COOK HANGER LN.
R.C. REGIONAL AIRPORT**
RAPID CITY, SOUTH DAKOTA

Sheet title
TYPICAL DETAILS

Date
3/3/06
Designed
MEL
Drawn
RJT
Checked
MEL
Project Number
P006013
File Name
06013s1.DWG

Sheet
S3.1

GENERAL NOTES

CONCRETE AND REINFORCING

GENERAL

- 1 THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (2003 EDITION)
- 2 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES FOUND
- 3 VERIFY SIZE, LOCATION AND NUMBER OF ROOF AND FLOOR OPENINGS WITH MECHANICAL AND ELECTRICAL CONTRACTORS
- 4 DESIGN LOADS:
 - A LIVE LOAD -
 - OFFICE = 50 PSF
 - B. WIND----- 80 MPH (EXPOSURE C)
 - C. SEISMIC----- ZONE 0
- 5 SOILS INFORMATION
AMERICAN ENGINEERING TESTING, INC
AET NO 18-02097
DATE ISSUED FEBRUARY 8, 2006

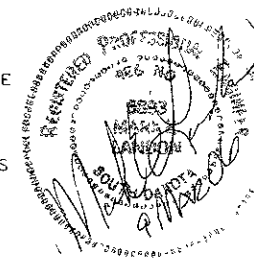
EXCAVATION

- 1 ARCHITECT/ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY OF TEST BORINGS
- 2 CONTRACTOR SHALL BE AWARE OF AND VERIFY LOCATION OF ALL UNDERGROUND UTILITIES, TANKS, ETC
- 3 DUE CARE SHALL BE EXERCISED DURING EXCAVATION SUCH THAT EXISTING UTILITIES ARE NOT DAMAGED
- 4 ANY BROKEN OR DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE

FOUNDATIONS

- 1 BEARING CAPACITY 3,000 PSF
- 2 ALL FOOTINGS ARE CENTERED UNDER WALLS AND/OR COLUMNS UNLESS DETAILED OTHERWISE

- 1 ULTIMATE STRENGTH DESIGN
A C I MANUAL OF CONCRETE PRACTICE (1984)
BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (A C I 318-83)
DETAILS AND DETAILED OF CONCRETE REINFORCEMENT (A C I 318-80)
- 2 ALL CONCRETE U N D ----- 3 500 PSI
CONCRETE IN CONTACT w/ WEATHER ----- 3,500 PSI
REINFORCING ----- 60,000 PSI (ASTM A615 GRADE 60)
- 3 ALL SLAB AND/OR WALL OPENINGS SHALL BE REINFORCED WITH 2 - #5 BARS EACH SIDE AND EXTEND 2'-0" BEYOND SAID OPENING
- 4 ALL PLUMBING, HEATING AND ELECTRICAL OPENINGS NOT SHOWN ON THE PLANS SHALL BE SLEEVED (MINIMUM SPACING OF 3 SLEEVE DIAMETERS ON CENTER)
- 5 ALL 4" SLABS ON GRADE SHALL BE REINFORCED WITH #4 @ 18 o c UNLESS NOTED OTHERWISE
- 6 SPLICES IN REINFORCEMENT SHALL BE 48 BAR DIAMETERS OR ACCORDING TO LAP SCHEDULE (THIS SHEET)
- 7 IN ADDITION TO THE SCHEDULED REINFORCING, ADD 3-#4 TIES (OR SETS OF TIES @ 3" ON CENTER AT TOP AND BOTTOM OF ALL CONCRETE COLUMNS, PIERS OR PEDESTALS)
- 8 A&L CONCRETE GRADE BEAMS SHALL HAVE INSIDE AND OUTSIDE CORNER BARS WITH SIZE AND SPACING TO MATCH HORIZONTAL REINFORCING (UNLESS NOTED OTHERWISE) SEE DETAIL THIS SHEET
- 9 CONTROL JOINTS IN SLABS SHALL BE PLACED A MAXIMUM OF 15'-0" ON CENTER EACH WAY
CONTRACTOR SHALL SUBMIT A SKETCH TO THE ENGINEER SHOWING CONTROL JOINT LOCATIONS PRIOR TO FLOOR SLAB CONSTRUCTION FOR APPROVAL
FLOOR PANELS FORMED BY JOINTS SHALL BE APPROXIMATELY SQUARE
PANEL LENGTH TO WIDTH RATIO SHALL NOT EXCEED 1.2
- 10 USE TYPE I-II PORTLAND CEMENT FOR ALL CONCRETE WORK
- 11 ALL CONCRETE EXPOSED TO FREEZING SHALL BE 4% TO 6% AIR ENTRAINED, 4,000 PSI
- 12 WIRE CHAIRS SHALL BE USED TO PROVIDE CLEAR COVER AND SPACING REQUIREMENTS FOR PLACEMENT OF REINFORCING STEEL IN CONCRETE (ROCK, BRICK, ETC WILL NOT BE ALLOWED)
- 13 CORNERS OF ALL JOINTS IN SLABS SHALL MEET AT A COMMON POINT WITH OTHER JOINTS SO FAR AS PRACTICAL WHERE STAGGERED JOINTS CANNOT BE AVOIDED, (2) #4X4'-0" WILL BE PLACED PARALLEL TO THE EDGE OPPOSITE THE END OF THE DISCONTINUED JOINT BARS WILL BE AT MID DEPTH AND PLACED 4" APART STARTING 2" FROM THE EDGE OF THE SLAB EXCEPT FOR OPENINGS LESS THAN 12"X 12", CORNERS OF OPENINGS AND REENTRANT CORNERS IN SLABS WILL BE REINFORCED WITH (2) #4X4'-0", PLACED DIAGONALLY TO THE CORNER THE CONTRACTOR SHALL SUBMIT A SKETCH TO THE ENGINEER SHOWING THE LOCATIONS OF THE #4 BARS PRIOR TO FLOOR SLAB CONSTRUCTION
- 14 PROVIDE MECHANICAL AND ELECTRICAL EQUIPMENT PADS COORDINATE SIZE, LOCATION, AND QUANTITY WITH MECHANICAL AND ELECTRICAL CONTRACTORS
- 15 MAXIMUM LENGTH OF CAST IN PLACE CONCRETE WALL TO BE PLACED AT ONE TIME SHALL NOT EXCEED 40'-0", OR 20 CUBIC YARDS WHICH EVER IS LESS



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GENERAL NOTES

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