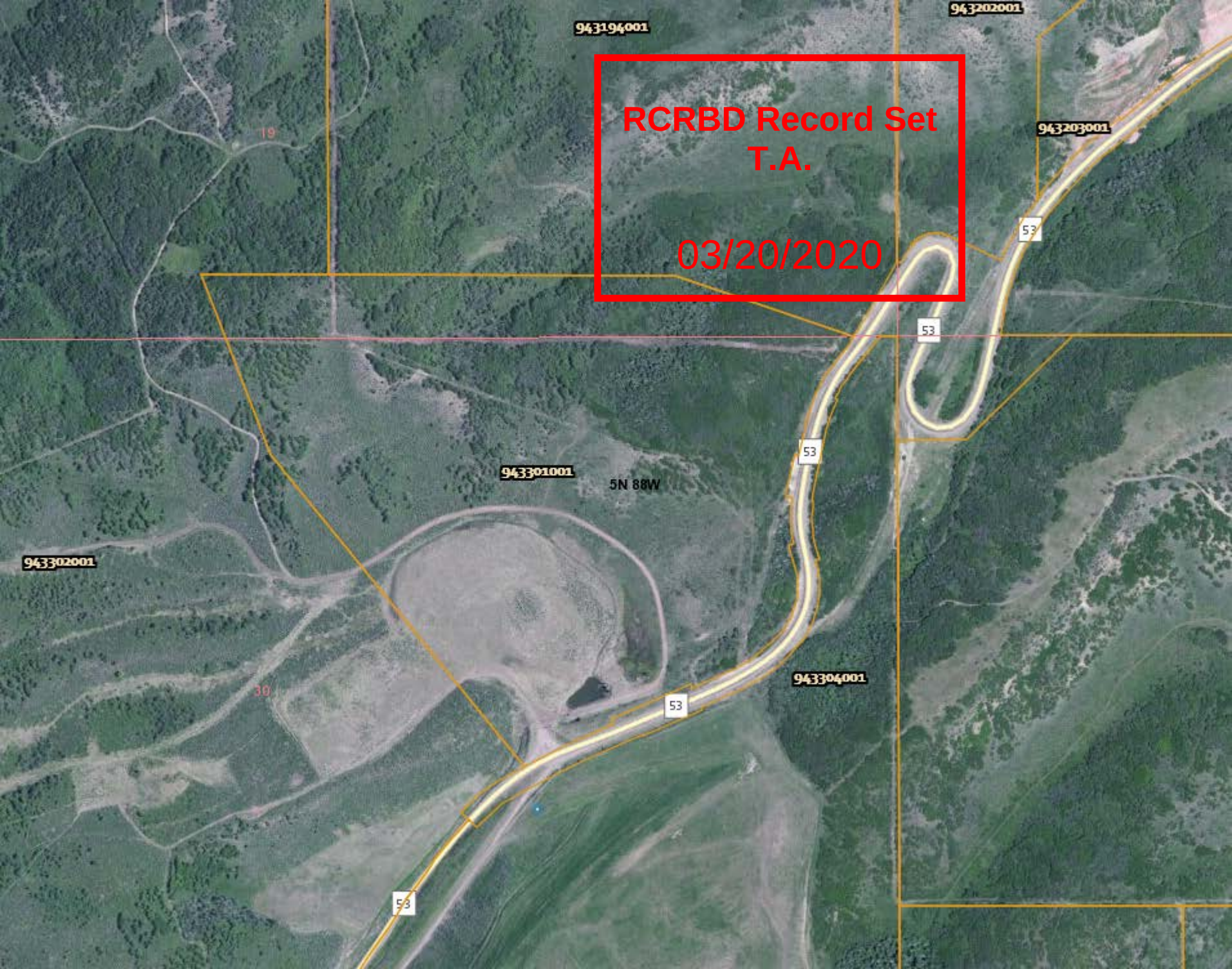
RCRBD Record Set
T.A.
03/20/2020
943194001
943202001
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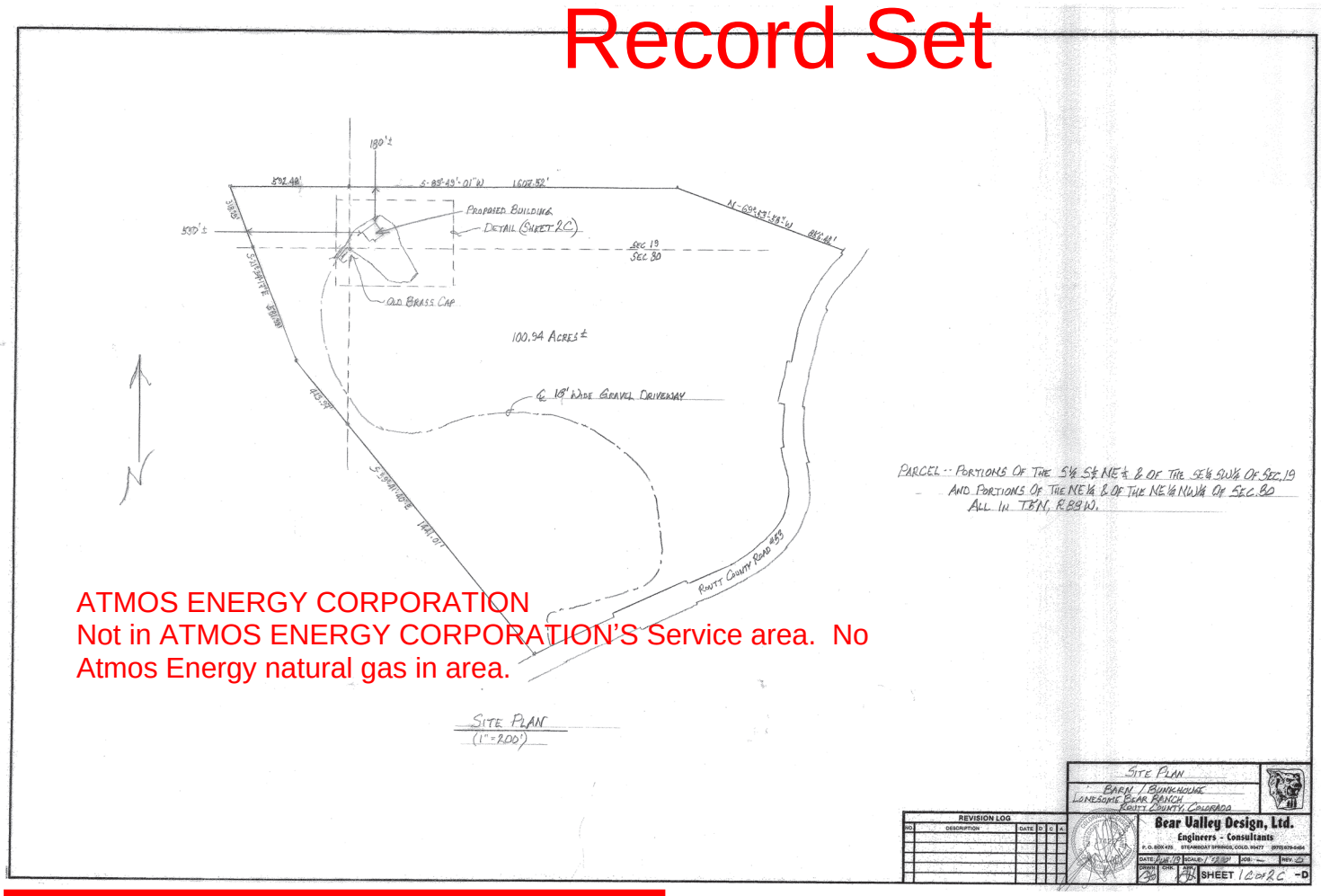
943301001
5N 88W
943302001
943304001
19
30
53
53
53
53

RCRBD
Record Set

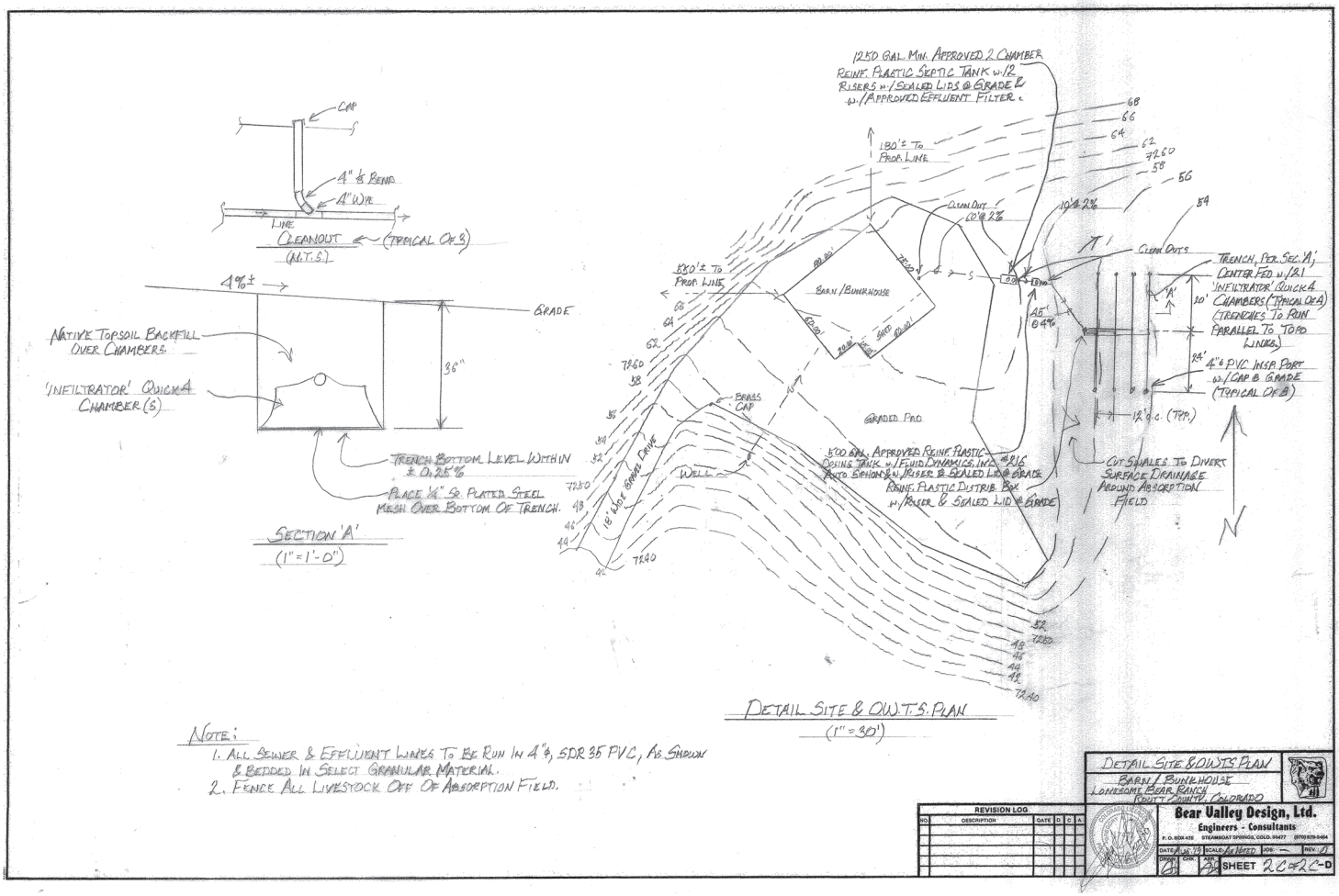


ATMOS ENERGY CORPORATION
Not in ATMOS ENERGY CORPORATION'S Service area. No Atmos Energy natural gas in area.

Meter Location will be determined after on site visit with YVEA Craig Field Representative.
Meter & meter pedestal are to be located as described by YVEA.
They shall not be enclosed, covered or concealed
Violation shall result in termination of service.

Yampa Valley Electric Assn. INC
This Approval addresses only the meter and service location
Approved: Scott Flowers - YVEA 10/01/19

RCRBD
Record Set



NOTE:
1. ALL SEWER & EFFLUENT LINES TO BE RUN IN 4" ϕ, SDR 35 PVC, AS SHOWN & BEDDED IN SELECT GRANULAR MATERIAL.
2. FENCE ALL LIVESTOCK OFF OF ABSORPTION FIELD.

DETAIL SITE & O.W.T.S. PLAN
BARN / BUNKHOUSE
LONESOME BEAR RANCH
ROUTT COUNTY, COLORADO

REVISION LOG

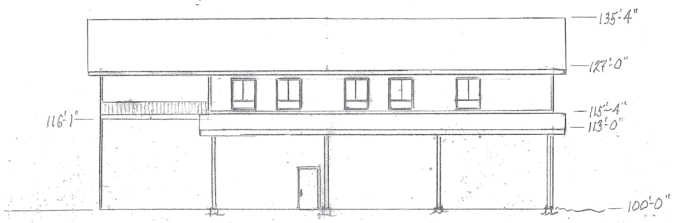
NO.	DESCRIPTION	DATE	D	C	A

Bear Valley Design, Ltd.
Engineers - Consultants
P.O. BOX 420 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5404

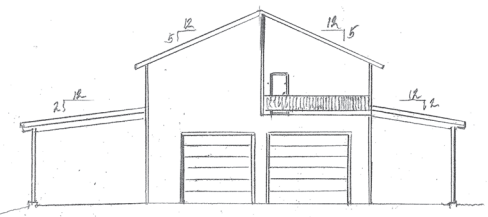
DATE: AUG '15 | SCALE: As Noted | JOB: — | REV: 0
DRWN: | CHK: | APP:
SHEET 2 OF 2 C-D

RCRBD Record Set
T.A.

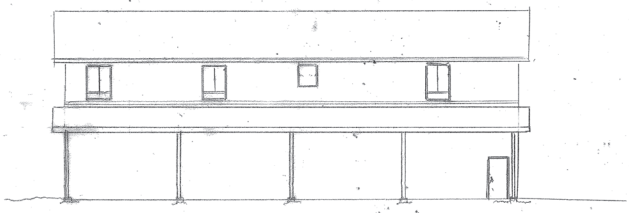
03/20/2020



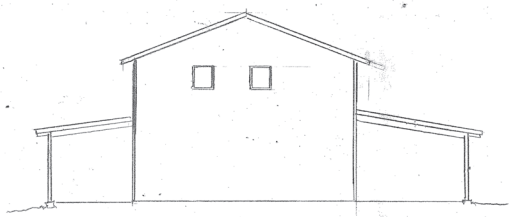
EAST ELEVATION
(⅛"=1'-0")



SOUTH ELEVATION
(⅛"=1'-0")



WEST ELEVATION
(⅛"=1'-0")



NORTH ELEVATION
(⅛"=1'-0")

ELEVATIONS
BARN / BUNKHOUSE
LONESOME BEAR RANCH
ROUTT COUNTY, COLORADO

REVISION LOG

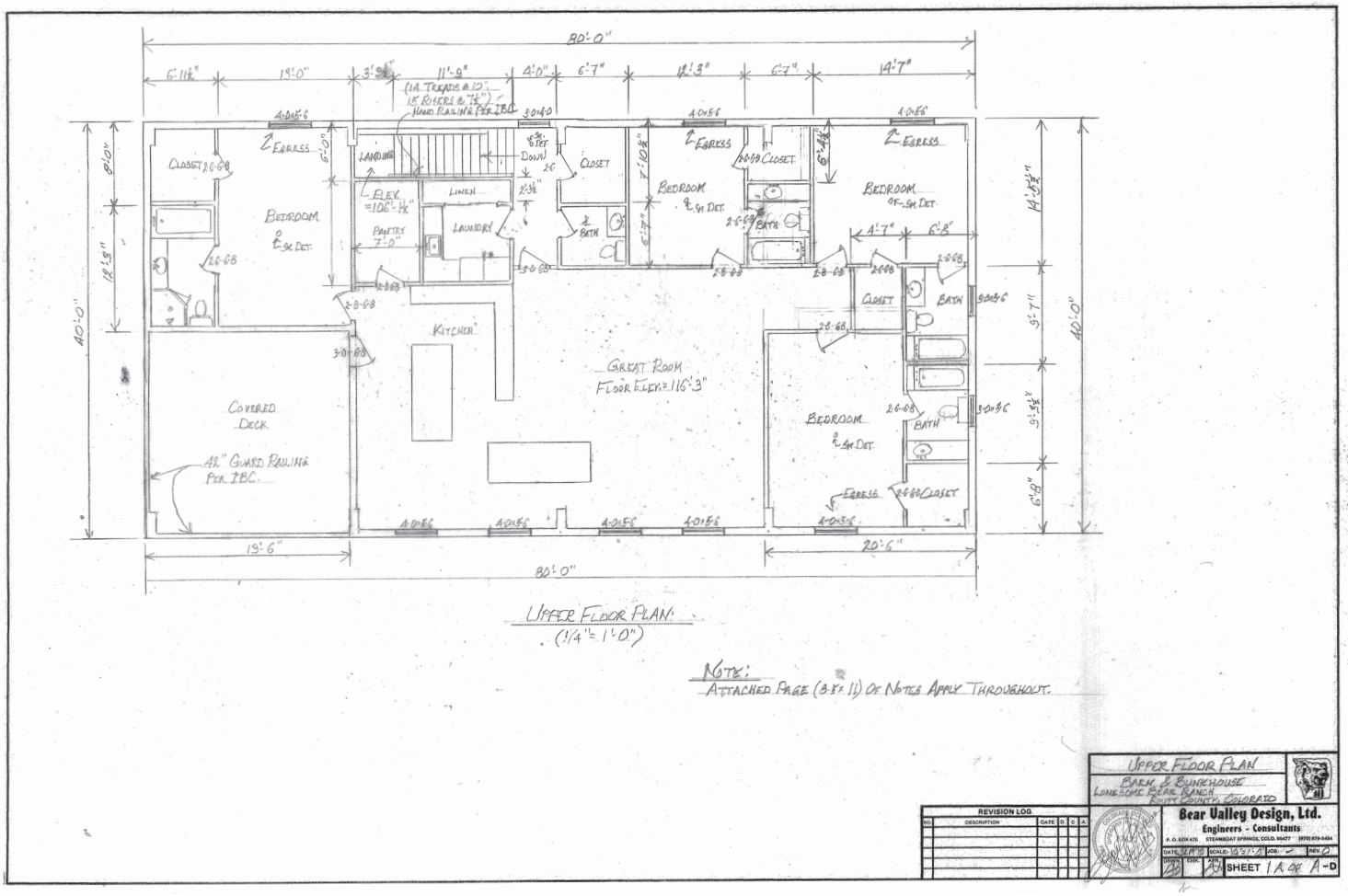
NO.	DESCRIPTION	DATE	D.	C.	A.

Bear Valley Design, Ltd.
Engineers - Consultants
P. O. BOX 475 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5484

DATE: 3/20/20 SCALE: ⅛"=1'-0" JOB: — REV.: 0
DRAWN: CHK: APP:
SHEET 3A OF 3A-D

RCRBD Record Set
T.A.

03/20/2020



UPPER FLOOR PLAN
(1/4"=1'-0")

NOTE:
ATTACHED PAGE (8.5"x11") OF NOTES APPLY THROUGHOUT.

UPPER FLOOR PLAN
BARN & BUNKHOUSE
LONESOME BEAR RANCH
PITKIN COUNTY, COLORADO

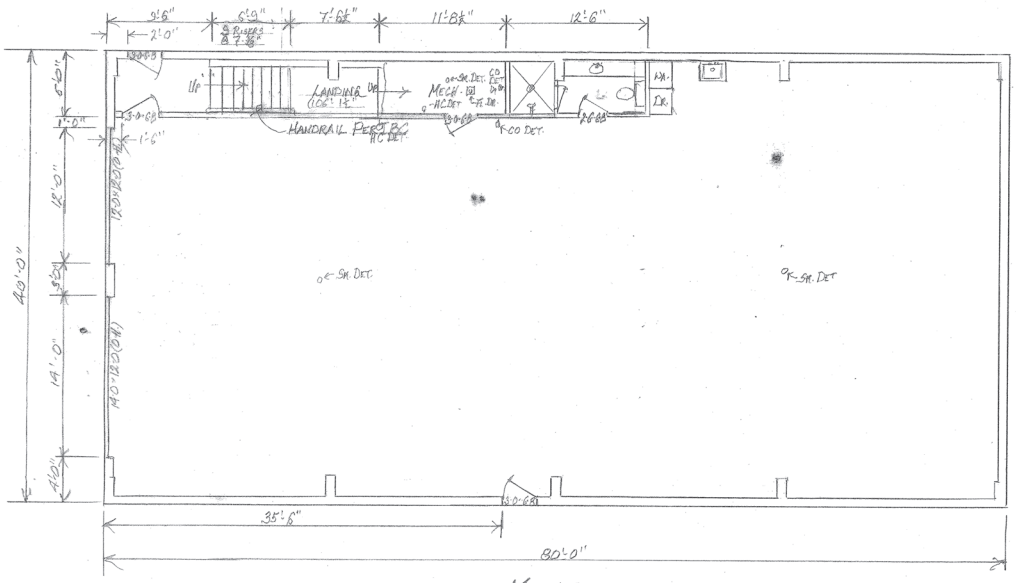
REVISION LOG

Bear Valley Design, Ltd.
Engineers - Consultants
P.O. BOX 475 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5494

SHEET 1 A OF A-D

RCRBD Record Set
T.A.

03/20/2020



MAIN FLOOR PLAN
(¼"=1'-0")

MAIN FLOOR PLAN
BARN & BUNK HOUSE
LONESOME BEAR RANCH
ROUTT COUNTY, COLORADO

REVISION LOG

NO.	DESCRIPTION	DATE	D	C	A

Bear Valley Design, Ltd.
Engineers - Consultants
P. O. BOX 475 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5464

DATE: 3/20/19 SCALE: ¼"=1'-0" JOB: — REV. 0
DRWN. CHK. SHEET RACKBA-D

GENERAL NOTES

1. THE SEAL THAT APPEARS ON THESE DRAWINGS IS THE SEAL OF THE ENGINEER FOR THIS BUILDING MANUFACTURER WHO IS NOT THE ENGINEER OF RECORD.
2. CERTIFICATION RESTRICTION:
   ENGINEER'S CERTIFICATION IS STRICTLY LIMITED TO THE DESIGN OF STRUCTURAL COMPONENTS DESIGNED AND MANUFACTURED BY THIS BUILDING MANUFACTURER. CERTIFICATION EXTENDS ONLY TO THE DESIGN LOADS AND STANDARDS INDICATED ON THESE PLANS. CERTIFICATION DOES NOT EXTEND TO FOUNDATION, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, CIVIL WORK, ARCHITECTURAL RESPONSIBILITIES, OVERALL PROJECT COORDINATION, OR OTHER ASPECTS OF CODE COMPLIANCE NOT SPECIFICALLY REFERENCED BY THE MANUFACTURER'S ORDER DOCUMENTS. CERTIFICATION SHALL NOT EXTEND TO BUILDING ERECTION SUPERVISION OR INSPECTION.
3. ANCHOR RODS ARE ASSUMED TO CONFORM TO ASTM STANDARD F1554 GRADE 36, THE PREFERRED MATERIAL PER AISC SPECIFICATIONS. ANCHOR ROD DIAMETERS ARE DETERMINED BY ALLOWABLE SHEAR AND TENSION PER AISC SPECIFICATIONS. LENGTHS, EMBEDMENTS, HEAD STYLES, METHODS OF TRANSFERRING FORCES FROM THE ANCHOR RODS TO THE FOUNDATION, AND/OR OTHER ASSOCIATED ITEMS OF THE FOUNDATION ARE NOT BY BEHLEN BUILDING SYSTEMS.
4. FOUNDATIONS MUST BE DESIGNED FOR LOCAL SOIL CONDITIONS BY A QUALIFIED FOUNDATION ENGINEER TO SAFELY SUPPORT COLUMN LOADS.
5. THIS BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR ERRORS, OMISSIONS OR DAMAGES INCURRED IN THE ERECTION OF BUILDING COMPONENTS NOR FOR THE INSPECTION OF ERECTED COMPONENTS TO ASCERTAIN SAME.
6. TEMPORARY BRACING MUST BE INSTALLED BY ERECTOR TO PROVIDE ADEQUATE STABILITY DURING ERECTION. BRACING INDICATED ON THE ERECTION DRAWINGS IS CRITICAL TO THE STABILITY OF THE COMPLETED STRUCTURE AND SHALL NOT BE REMOVED.
7. WALL & LINER PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. UNAUTHORIZED REMOVAL OF PANELS IS PROHIBITED.
8. FOR ALL BUILDINGS EXCEPT THOSE SITED IN CANADA, ALL FIELD WELDING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) D1.1 OR D1.3 AS APPLICABLE BY AWS CERTIFIED WELDERS QUALIFIED TO PERFORM THE WELDING AS DIRECTED BY THE APPLICABLE WELDING PROCEDURE SPECIFICATION (WPS); FOR BUILDINGS SITED IN CANADA, ALL FIELD WELDING SHALL BE DONE IN ACCORDANCE WITH CSA (CANADIAN STANDARDS ASSOCIATION) WELD STANDARDS BY CWB (CANADIAN WELDING BUREAU) CERTIFIED WELDERS QUALIFIED TO PERFORM THE WELDING AS DIRECTED BY THE APPLICABLE WELDING PROCEDURE SPECIFICATION (WPS). A WPS SHALL BE PREPARED BY THE CONTRACTOR FOR EACH WELDING VARIATION SPECIFIED. UNLESS OTHERWISE APPROVED, USE E70I8 ELECTRODES. THE CONTRACTOR SHALL PROVIDE FOR ANY SPECIAL WELDING INSPECTION AS REQUIRED BY CODE.
9. ERECTION OF THIS METAL BUILDING SYSTEM SHALL COMPLY, AT A MINIMUM, WITH THE APPLICABLE ERECTION TOLERANCES STIPULATED IN SECTION 7 OF AISC 303 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, SECTION 29 OF CSA S16 DESIGN OF STEEL STRUCTURES, AND SECTION 6 OF MBMA COMMON INDUSTRY PRACTICES.
10. BEHLEN BUILDING SYSTEMS IS QUALITY ACCREDITED OR CERTIFIED AS FOLLOWS: INTERNATIONAL ACCREDITATION SERVICES (IAS) AC-472 INSPECTION PROGRAM FOR THE MANUFACTURE OF METAL BUILDING SYSTEMS CERTIFICATE NUMBER MB-102; CAN/CSA A660-10 CERTIFICATION OF MANUFACTURERS OF STEEL BUILDING SYSTEMS CERTIFIED BY QUASAR, CERTIFICATE NUMBER BEHMFG.
11. FOR ALL BUILDINGS EXCEPT THOSE SITED IN CANADA, ALL WELDING PERFORMED BY BEHLEN HAS BEEN DONE IN ACCORDANCE WITH AWS WELD PROCEDURES BY AWS CERTIFIED WELDERS OR WITH CSA WELD PROCEDURES BY CWB CERTIFIED WELDERS. FOR ALL BUILDINGS SITED IN CANADA, ALL WELDING PERFORMED BY BEHLEN HAS BEEN DONE IN ACCORDANCE WITH CSA WELD PROCEDURES BY CWB CERTIFIED WELDERS.
12. THE PREFERRED ATTACHMENT DETAIL FOR A PURLIN HANGER IS AN ATTACHMENT TO THE BACK OF THE WEB OF THE PURLIN. PROVIDING THIS METHOD OF ATTACHMENT WILL ENABLE COMPLIANCE WITH THE HANGING LOAD REQUIREMENTS OF NFPA 13:9.2.1.3.1. C-CLAMPS SHALL NEVER BE DIRECTLY ATTACHED TO THE LIP OF THE PURLIN FLANGE AND MUST NEVER CAUSE DEFORMATION OF ANY PART OF THE PROFILE OF THE PURLIN.

MATERIAL PROPERTIES

1. STRUCTURAL WELDED SECTIONS	ASTM A572, A529 OR A1011, GR. 55
2. HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GR. B
3. STEEL PIPE	ASTM A501 OR A53, GR. B. Fy=36 KSI
4. HOT ROLLED SECTIONS	ASTM A572, A529 OR A992, GR. 50
5. HOT ROLLED ANGLE	ASTM A36, Fy=36 KSI OR A572, GR. 50
6. HOT ROLLED ROD	ASTM A572, Fy=50 KSI OR Fy=60 KSI
7. CABLE BRACING	ASTM A475, EXTRA HIGH STRENGTH
8. COLD FORMED ROLLED SECTIONS	ASTM A1011 SS GR. 55 OR HSLAS GR. 55 CLASS 1, ASTM A653 SS GR. 55 OR HSLAS GR. 55 CLASS 1 (040 GALV.), OR ASTM A653 SS GR. 50 CLASS 1 (G90 GALV.)
9. ROOF AND WALL SHEETING	ASTM A792, GR. 50 OR GR. 80
10. HIGH-STRENGTH BOLTS	ASTM A325, ASTM A325T
11. SECONDARY MEMBER CONNECTIONS	ASTM A307, ASTM A325, ASTM A325T
12. WASHERS	ASTM F436

IMPORTANT TRIM & PANEL INFORMATION

WHEN HANDLING LONG TRIM OR PANELS, CARE SHOULD BE TAKEN TO AVOID DAMAGE CAUSED BY BUCKLING.
ALL TRIM COMPONENTS HAVE A PROTECTIVE FILM ON THE COLORED SURFACE THAT MUST BE REMOVED PRIOR TO INSTALLATION. PROLONGED EXPOSURE TO RAIN AND/OR SUNLIGHT WILL ADVERSELY EFFECT THE PROTECTIVE FILM MAKING REMOVAL DIFFICULT. THIS BUILDING MANUFACTURER WILL ACCEPT NO RESPONSIBILITY FOR TRIM WHOSE PROTECTIVE FILM HAS BEEN EXPOSED FOR MORE THAN 3 WEEKS.

TRIM\PANELS ARE MADE OF THIN GAUGE METAL AND HAVE LARGE FLAT SURFACES WHICH CAN CAUSE THE TRIM/PANEL TO HAVE A WAVINESS ACROSS THE FLAT AREAS. THIS NATURALLY OCCURING CONDITION IS OFTEN REFFERED TO AS OIL CANNING AND IS NOT A CAUSE FOR REJECTION.

INSULATION

	NONE	BY OTHERS	BY BEHLEN	THICKNESS OVER ZEE	VAPOR BARRIER FLANGE BR. CLIP	RIGID BOARD
ROOF:	____	▬▬	____	3 1/2"	▬▬	____
WALL:	____	▬▬	____	THERMAL TAPE	____	____
THERMAL BLOCKS:	▬▬	____	____			

BEHLEN BUILDING SYSTEMS
DIVISION OF BEHLEN MFG. CO.
P.O. BOX 569
4025 EAST 23RD STREET
COLUMBUS, NEBRASKA USA 68602-0569
E-MAIL: behlen@behlenmfg.com
PHONE: 402-564-3111
ENG. FAX: 402-563-7286
www.behlenbuildingsystems.com

BUILDING INFORMATION

JOB NUMBER: X2212
NAME: MORAN
ADDRESS:
CITY, STATE: HAYDEN, COLORADO 81639
BUILDER: CHARCHALIS CONSTRUCTION AND INSULATION

RCRBD Record Set
T.A.
03/20/2020

HAYDEN, COLORADO 81639 — JOB NO. X2212

PANEL, TRIM AND FRAMING INFORMATION

ROOF PANELS

TYPE: ZL16 GAUGE: 24 COLOR: ____
UL90 CERTIFICATION: NO

IF ZL-16: FLOATING PANEL CLIPS
CLIP HEIGHT:
SHORT (3/8")
(1 1/2" TO 4" INSULATION)
NO THERMAL BLOCKS

WALL PANELS

TYPE: ADP2 GAUGE: 26 COLOR: ____

SOFFIT PANELS

TYPE: ADP2 GAUGE: 26 COLOR: ____

TRIM

RAKE:	GAUGE: 26	COLOR: ____
EAVE:	GAUGE: 26	COLOR: ____
HEADER:	GAUGE: 26	COLOR: ____
SILL:	GAUGE: 26	COLOR: ____
JAMB:	GAUGE: 26	COLOR: ____
COPED FLASHING:	GAUGE: 26	COLOR: ____
BASE SEAL:	GAUGE: 26	COLOR: ____
CORNER:	GAUGE: 26	COLOR: ____
SOFFIT:	GAUGE: 26	COLOR: ____

PRIMARY FRAMING

MAIN FRAMES — DARK GRAY PRIMER
ENDWALL FRAMES
WIND COLUMNS & BENTS — DARK GRAY PRIMER

NOTE: SINGLE CEE & DOUBLE CEE ENDWALL COLUMNS ARE GALVANIZED

SECONDARY FRAMING

GIRTS, EAVE STRUTS, PURLINS — GALVANIZED
DOOR/FRAMED OPNG. — GALVANIZED
CLIPS — DARK GRAY PRIMER

A1 = ADP1 PANEL A2 = ADP2 PANEL

BUILDING DESIGN CRITERIA

DESIGN LOADS ARE APPLIED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE BUILDING CODE LISTED BELOW.

BUILDING CODE : IBC 15

GRAVITY LOAD DATA

ROOF LIVE LOAD (psf,*)	: 20.00
UNIFORM ROOF SNOW LOAD (psf)(MAIN)	: 97.30
UNIFORM ROOF SNOW LOAD (psf)(A&B)	: 97.30
SNOW IMPORTANCE FACTOR	: 1.00
RAIN ON SNOW (psf)	: 0.00
Pg (psf)	: 139.0
Pf (psf)(MAIN BUILDING)	: 97.3
Pf (psf)(BUILDING "A"&"B")	: 116.8
Ce	: 1.00
Ct(MAIN BUILDING)	: 1.00
Ct(BUILDING "A"&"B")	: 1.20
COLLATERAL LOAD (psf)	: 3.0

*Non-Reducible

WIND LOAD DATA

BASIC WIND SPEED (mph)	: 115
WIND EXPOSURE	: C
WIND IMPORTANCE FACTOR	: 1.00
GCpi (MAIN BUILDING)=	: ±0.18
GCpi (BUILDING "A"&"B")=	: ±0.55
RISK CATEGORY	: II

EARTHQUAKE LOAD DATA

SITE CLASS	: D		
Ss (%g)	: 27.1	Sds:	: 0.286
S1 (%g)	: 7.5	Sd1:	: 0.120
SEISMIC DESIGN CATEGORY			: B
SEISMIC IMPORTANCE FACTOR			: 1.00
R			: 3.00 &
Cs			: I x Sds / R
BASIC STRUCTURAL SYSTEM			: NDFS
ANALYSIS PROCEDURE			: Equivalent Lateral Force

MEZZANINE LOADING

FLOOR DEAD LOAD (psf) : 3.375 (1.125" OF PLYWOOD ONLY)
FLOOR LIVE LOAD (psf) : 75.0
FLOOR COLLATERAL LOAD (psf): 13.0
FLOOR PARTITION (psf) : 20.0

MEZZANINE LOADING

FLOOR DEAD LOAD (psf) : 43.0 (4" OF CONCRETE ONLY)
FLOOR LIVE LOAD (psf) : 75.0
FLOOR COLLATERAL LOAD (psf): 13.0
FLOOR PARTITION (psf) : 20.0

KEY PLAN

TO ENSURE PROPER ERECTION OF THIS BUILDING THE FOLLOWING ERECTION GUIDE(S) ARE REQ'D.

BEHLEN WALL PANEL: ADP2
BEHLEN ROOF PANEL: ZL16
BEHLEN LINER PANEL:

IF THIS SET OF DRAWINGS WERE SENT VIA E-MAIL, THEY ARE COPIES OF THE ORIGINALS THAT ARE PRINTED AND ON FILE AT THE HOME OFFICE OF BEHLEN MFG. CO. COLUMBUS, NE. THE ORIGINALS WITH THE ENGINEERS SEAL ARE CONSIDERED THE LEGAL DOCUMENTS.

DRAWING SUBMITTAL STATUS

( ) FOR CONSTRUCTION
(X) FOR APPROVALS
( ) FOR PERMIT ONLY
( ) FOR PRELIMINARY USE ONLY
( ) NOT FOR CONSTRUCTION
( ) FOR REVIEW ONLY

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE
0									
0									
0									

SCALE : NONE
DRAWN BY C.W.QUAIL DATE 09-13-19
CHECKED BY CHARLIE DATE 9-13-2019
APPROVED BY NRD DATE 9/13/19
REVIEWED BY DATE

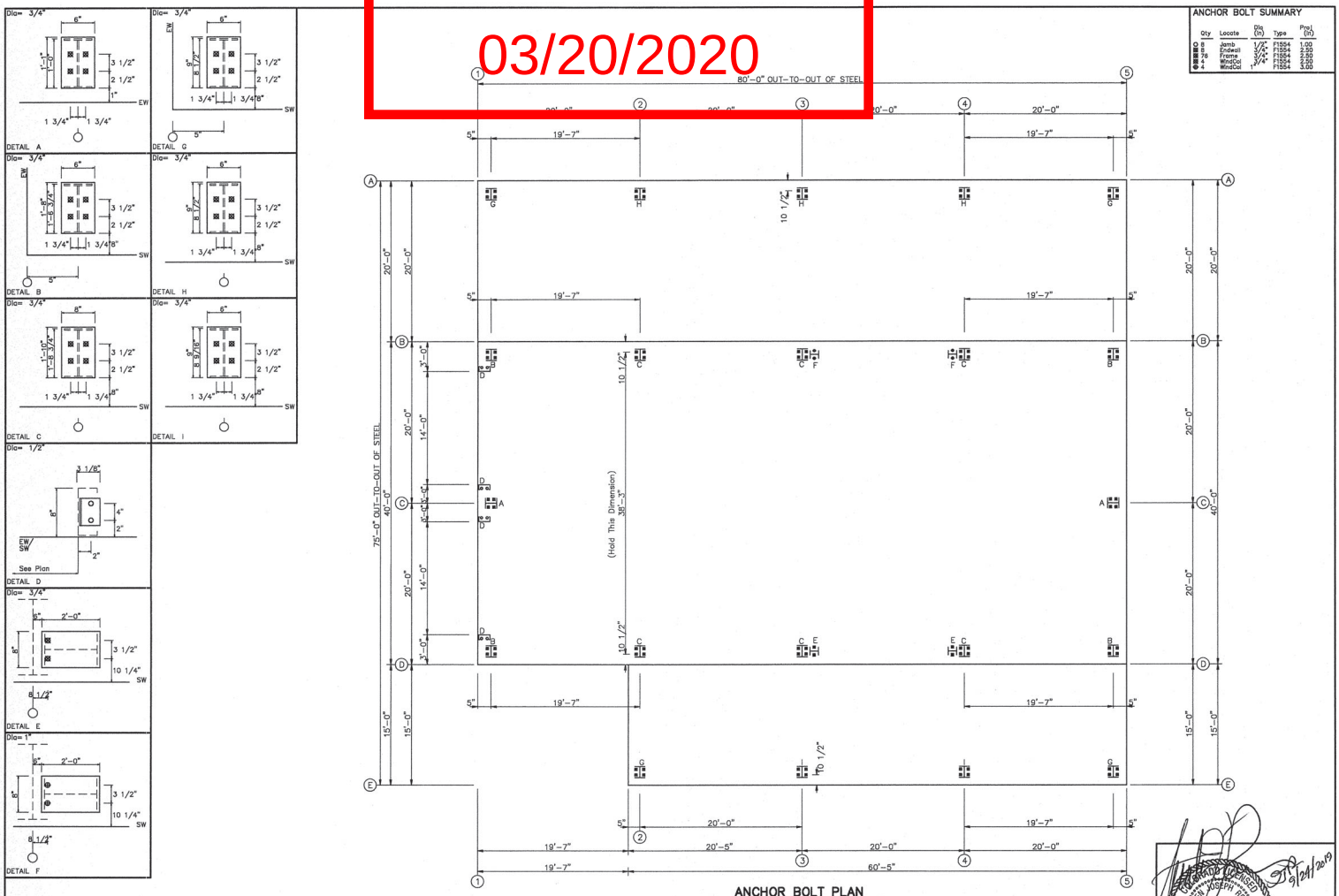
MORAN
HAYDEN, COLORADO
GENERAL INFORMATION

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA
JOB NO. X2212 SHT. 1 OF 39

CWQ

RCRBD Record Set
T.A.

03/20/2020



REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE
SCALE : NONE								
DRAWN BY C.W.QUAIL	DATE 09-13-19							
CHECKED BY CHARLIE	DATE 9-13-2019							
APPROVED BY NRD	DATE 9/13/19							
REVIEWED BY	DATE							

MORAN
HAYDEN, COLORADO

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

ANCHOR BOLT PLAN

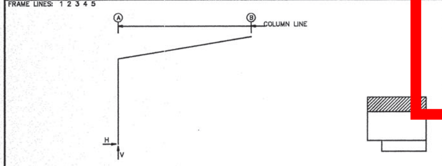
JOB NO. X2212

SHT. 2 OF 32

CWQ

RCRBD Record Set
T.A.
03/20/2020

FRAME LINES: 1 2 3 4 5



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick	Base Elev (in)
1*	A	6	1.1	-1.8	3	-1.2	0.4	4	0.750	6.000	9.000	0.375	0.0
		2	-0.2	23.0	5	-0.1	-2.9						

1* Frame lines: 1 5

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick	Base Elev (in)
2*	A	8	1.6	-3.1	3	-1.6	1.9	4	0.750	6.000	9.000	0.375	0.0
		2	-0.3	38.8	5	0.2	-3.5						

2* Frame lines: 2 3 4

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Snow_Drift Horiz	Snow_Drift Vert	Slide_Snow Horiz	Slide_Snow Vert
1*	A	0.0	1.3	0.0	0.5	0.0	3.0	-0.2	17.7	0.0	2.0	0.1	3.6

Frame Line	Column Line	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert
1*	A	-0.1	-6.2	1.8	-4.3	-2.0	-2.3	-0.1	-0.4	1.7	-5.6	1.7	-5.6

Frame Line	Column Line	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	MIN_SNOW Horiz	MIN_SNOW Vert
1*	A	0.0	0.1	0.0	-0.1	0.2	14.9

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Snow_Drift Horiz	Snow_Drift Vert	Slide_Snow Horiz	Slide_Snow Vert
2*	A	0.0	2.0	0.0	0.8	-0.1	5.0	-0.4	28.9	0.1	3.9	0.2	7.1

Frame Line	Column Line	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert
2*	A	0.4	-7.9	2.5	-5.9	-2.6	-1.5	-0.6	0.5	2.7	-7.0	2.7	-7.2

Frame Line	Column Line	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	Seismic_Long Horiz	Seismic_Long Vert	MIN_SNOW Horiz	MIN_SNOW Vert
2*	A	0.0	0.1	0.0	-0.1	0.0	0.3	0.4	24.4

1* Frame lines: 1 5
2* Frame lines: 2 3 4

LOAD COMBINATIONS

ID	Description
1	Dead+Collateral+Snow+Snow_Drift
2	Dead+Collateral+Snow+Slide_Snow
3	Dead+Collateral+0.6Wind_Left2
4	Dead+Collateral+0.6Wind_Long2R
5	0.6Dead+0.6Wind_Left1
6	0.6Dead+0.6Wind_Right1
7	0.6Dead+0.6Wind_Left2
8	0.6Dead+0.6Wind_Long2R
9	0.56Dead+0.7Seismic_LongL

BUILDING BRACING REACTIONS

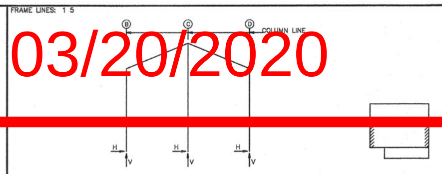
Wall Loc	Wall Line	Col Line	± Reactions(k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Sels	Note
L_EW	1								(h)
R_EW	5								(h)
B_SW	A	Torsional Bracing Used							

(h)Rigid frame at endwall

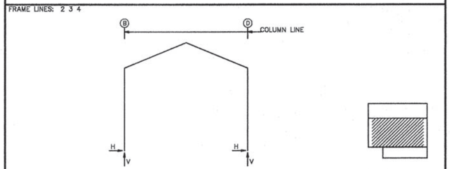
REACTION VALUES SHOWN ARE UNFACTORED.
MAXIMUM LOAD COMBINATION FACTORS ARE:
WIND : 0.60
SEISMIC : 0.70

KEY PLAN

FRAME LINES: 1 5



FRAME LINES: 2 3 4



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick	Base Elev (in)
1*	B	8	4.5	4.8	3	-4.8	6.3	4	0.750	6.000	20.00	0.375	0.0
		10	0.7	47.5	7	-4.1	-3.2						
1*	D	4	4.9	6.3	7	-4.4	5.1	4	0.750	6.000	20.00	0.375	0.0
		9	-0.8	45.0	8	4.2	-2.7						
1*	C	8	0.1	-1.1	7	0.0	-1.1	4	0.750	6.000	12.00	0.375	0.0
		1	0.0	31.4	8	0.1	-1.1						

1* Frame lines: 1 5

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick	Base Elev (in)
2*	B	6	7.3	96.6	3	-6.8	17.6	4	0.750	8.000	22.00	0.500	0.0
		1	4.1	106.2	7	-4.1	-1.7						
2*	D	4	6.9	17.1	5	-7.2	92.8	4	0.750	8.000	22.00	0.500	0.0
		1	-4.1	98.2	8	4.3	-1.0						

2* Frame lines: 2 3 4

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Floor Horiz	Floor Vert	Snow Horiz	Snow Vert	Snow_Drift Horiz	Snow_Drift Vert
1*	B	-0.2	8.9	-0.1	3.4	-0.1	5.1	-0.3	14.7	-0.7	29.5	-0.2	5.7
1*	D	0.2	8.8	0.1	3.3	0.1	4.5	0.3	15.1	0.6	25.9	0.2	5.0
1*	C	0.0	3.5	0.0	1.4	0.0	5.2	0.0	2.9	0.0	25.7	0.0	0.9

Frame Line	Column Line	Slide_Snow Horiz	Slide_Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert
1*	B	-0.2	5.5	-6.7	-14.3	7.7	-1.0	-7.7	-10.0	6.7	3.3	2.2	-8.3
1*	D	0.2	4.2	-7.5	-0.3	6.9	-13.4	-6.5	3.2	7.8	-9.8	-1.3	-7.2
1*	C	0.0	0.8	-0.1	-5.3	0.1	-5.3	-0.1	-3.7	0.1	-3.7	0.0	-5.2

Frame Line	Column Line	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	Seismic_Long Horiz	Seismic_Long Vert	MIN_SNOW Horiz	MIN_SNOW Vert	F1UNB_SL_L Horiz	F1UNB_SL_L Vert
1*	B	0.7	-8.9	-3.1	-3.2	3.1	3.2	0.7	0.7	-0.4	11.8	-0.3	13.5
1*	D	-2.8	-6.6	-3.1	3.2	3.1	-3.2	0.8	-0.7	0.4	11.8	0.3	3.5
1*	C	0.0	-5.2	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	24.0	0.0	20.6

Frame Line	Column Line	F1UNB_SL_R Horiz	F1UNB_SL_R Vert
1*	B	-0.3	3.5
1*	D	0.3	13.5
1*	C	0.0	20.6

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Floor Horiz	Floor Vert	Snow Horiz	Snow Vert	Snow_Drift Horiz	Snow_Drift Vert
2*	B	-0.1	17.7	0.0	7.1	1.1	12.7	-0.9	29.5	4.8	69.4	-0.6	12.0
2*	D	0.1	17.5	0.0	7.1	-1.1	11.6	0.9	30.4	-4.8	63.1	0.6	10.4

Frame Line	Column Line	Slide_Snow Horiz	Slide_Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert
2*	B	-0.5	11.5	-6.7	-20.5	10.0	-5.3	-11.3	-12.1	5.4	3.1	7.5	-12.6
2*	D	0.6	8.7	-9.6	-4.4	7.1	-19.2	-5.3	2.8	11.4	-12.5	-5.1	-12.3

Frame Line	Column Line	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	Seismic_Long Horiz	Seismic_Long Vert	MIN_SNOW Horiz	MIN_SNOW Vert	F2UNB_SL_L Horiz	F2UNB_SL_L Vert
2*	B	6.0	-13.2	-2.6	-3.0	2.6	3.0	-1.5	-11.5	6.1	39.0	4.0	32.2
2*	D	-6.6	-11.7	-2.4	2.9	2.4	-2.9	-0.3	-9.7	-6.1	39.0	-4.0	18.4

Frame Line	Column Line	F2UNB_SL_R Horiz	F2UNB_SL_R Vert
2*	B	4.0	18.4
2*	D	-4.0	32.2

1* Frame lines: 1 5
2* Frame lines: 2 3 4

ENDWALL COLUMN REACTIONS(k)

MAXIMUM HORIZONTAL = 5.4
SEE RIGID FRAME REACTIONS TABLES FOR VERTICAL REACTIONS AT ENDWALL COLUMNS

BUILDING BRACING REACTIONS

Wall Loc	Wall Line	Col Line	± Reactions(k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Sels	Note
L_EW	1								(h)
F_SW	D	3,4							(a)
R_EW	5								(h)
B_SW	B	3,4							(a)

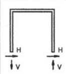
(a)Wind bent in bay
(h)Rigid frame at endwall

REACTION VALUES SHOWN ARE UNFACTORED.
MAXIMUM LOAD COMBINATION FACTORS ARE:
WIND : 0.60
SEISMIC : 0.70

LOAD COMBINATIONS

ID	Description
1	Dead+Collateral+Snow+Snow_Drift
2	Dead+Collateral+MIN_SNOW
3	Dead+Collateral+0.6Wind_Left2
4	Dead+Collateral+0.6Wind_Right2
5	Dead+Collateral+0.75Snow+0.45Wind_Left1+0.75Floor_Live
6	Dead+Collateral+0.75Snow+0.45Wind_Right1+0.75Floor_Live
7	0.6Dead+0.6Wind_Left1
8	0.6Dead+0.6Wind_Right1
9	1.03Dead+1.03Collateral+0.75Snow+0.52Seismic_Left+0.75Floor_Live
10	1.03Dead+1.03Collateral+0.75Snow+0.52Seismic_Right+0.75Floor_Live
11	0.6Dead+0.6Wind_Right1+0.6Wind_Suction
12	0.6Dead+0.6Wind_Pressure+0.6Wind_Long2L
13	0.6Dead+0.6Wind_Right2+0.6Wind_Suction
14	0.6Dead+0.6Wind_Pressure+0.6Wind_Long1L

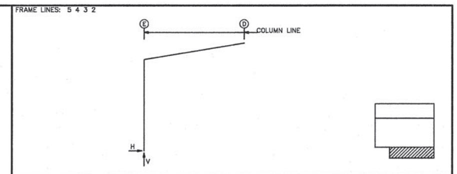
WIND BENT REACTIONS



Wall Loc	Wall Line	Col Line	± Reactions Wind(k) Horz	Wind(k) Vert	Seismic(k) Horz	Seismic(k) Vert	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Thick
F_SW	D	3	4.5	13.1	7.5	21.9	2	0.750	8.000	24.000	0.375
F_SW	D	4	4.5	13.1	7.5	21.9	2	0.750	8.000	24.000	0.375
B_SW	B	4	4.8	14.0	8.7	25.4	2	1.000	8.000	24.000	0.375
B_SW	B	3	4.8	14.0	8.7	25.4	2	1.000	8.000	24.000	0.375

REACTION VALUES SHOWN ARE UNFACTORED.
MAXIMUM LOAD COMBINATION FACTORS ARE:
WIND : 0.60
SEISMIC : 0.70

FRAME LINES: 5 4 3 2



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick	Base Elev (in)
5*	E	6	1.2	-1.5	3	-1.3	0.3	4	0.750	6.000	9.000	0.375	0.0
		2	-0.3	20.7	5	-0.1	-2.4						

5* Frame lines: 5 2

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick	Base Elev (in)
4*	E	8	1.8	-2.4	3	-1.7	1.4	4	0.750	6.000	9.000	0.375	0.0
		2	-0.3	34.9	5	0.3	-2.9						

4* Frame lines: 4 3

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Snow_Drift Horiz	Snow_Drift Vert	Slide_Snow Horiz	Slide_Snow Vert
5*	E	0.0	1.0	0.0	0.4	-0.1	2.5	-0.3	14.3	0.1	2.8	0.1	5.0

Frame Line	Column Line	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert
5*	E	-0.1	-5.0	2.0	-3.6	-2.2	-1.9	-0.1	-0.4	1.9	-4.3	1.9	-4.5

Frame Line	Column Line	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	Seismic_Long Horiz	Seismic_Long Vert	MIN_SNOW Horiz	MIN_SNOW Vert
5*	E	0.0	0.1	0.0	-0.1	0.0	0.1	0.2	11.5

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Snow_Drift Horiz	Snow_Drift Vert	Slide_Snow Horiz	Slide_Snow Vert
4*	E	0.0	1.6	0.0	0.6	-0.1	4.0	-0.4	23.1	0.1	5.4	0.2	9.6

Frame Line	Column Line	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert
4*	E	0.5	-6.4	2.7	-4.7	-2.8	-1.3	-0.6	0.3	3.0	-5.5	3.0	-5.6

Frame Line	Column Line	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	Seismic_Long Horiz	Seismic_Long Vert	MIN_SNOW Horiz	MIN_SNOW Vert
4*	E	0.0	0.1	0.0	-0.1	0.0	0.1	0.3	18.5

5* Frame lines: 5 2
4* Frame lines: 4 3

ENDWALL COLUMN REACTIONS(k)

MAXIMUM DOWN = 0.1
MAXIMUM UP = 0.0
MAXIMUM HORIZONTAL = 1.1

LOAD COMBINATIONS

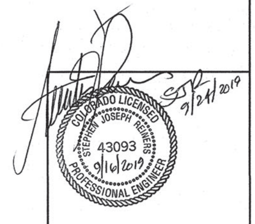
ID	Description
1	Dead+Collateral+Snow+Snow_Drift
2	Dead+Collateral+Snow+Slide_Snow
3	Dead+Collateral+0.6Wind_Left2
4	Dead+Collateral+0.6Wind_Long2R
5	0.6Dead+0.6Wind_Left1
6	0.6Dead+0.6Wind_Right1
7	0.6Dead+0.6Wind_Left2
8	0.6Dead+0.6Wind_Long2R
9	0.6Dead+0.6Wind_Right2+0.6Wind_Suction
10	0.6Dead+0.6Wind_Pressure+0.6Wind_Long2L
11	Dead+Collateral+0.6Wind_Right2+0.6Wind_Suction

BUILDING BRACING REACTIONS

Wall Loc	Wall Line	Col Line	± Reactions(k) Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Sels	Note
R_EW	5								(h)
L_EW	2								(h)
F_SW	E	Torsional Bracing Used							

(h)Rigid frame at endwall

REACTION VALUES SHOWN ARE UNFACTORED.
MAXIMUM LOAD COMBINATION FACTORS ARE:
WIND : 0.60
SEISMIC : 0.70



LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE	
DRAWN BY C.W.QUAIL	DATE 09-13-19
CHECKED BY CHARLIE	DATE 9-13-2019
APPROVED BY NRD	DATE 9/13/19
REVIEWED BY	DATE

MORAN
HAYDEN, COLORADO

ANCHOR BOLT REACTIONS

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 3 OF 32

CWQ

RCRBD Record Set
T.A.

03/20/2020

WALL FRAMED OPENINGS

* TYPE OF OPENING

OHD = OVERHEAD DOOR
RU = ROLL-UP
OWS = ONE WAY SLIDE
TWS = TWO WAY SLIDE
SF = STORE FRONT
BF = BI-FOLD/HYDRAULIC
WK = WALK DOOR
FOS = FRAMED OPENING W/ SILL

PLAN I.D.	QTY	SIZE (WIDTH X HEIGHT)	SILL HEIGHT (IF REQUIRED)	TYPE OF OPENING *	LOCATION SW, EW OR PW	JAMB COVER	TORSION SPRING SUPPORT	OTHER INFORMATION
	2	14'-0" X 12'-0"		OHD	EW	X		
A	1	10'-0" X 5'-0"	17'-6"	FOS	EW			
B	1	3'-4" X 7'-2"		WK	SW			
C	1	3'-0" X 5'-0"	17'-6"	FOS	SW			
D	5	5'-0" X 5'-0"	17'-6"	FOS	SW			
E	10	4'-0" X 5'-0"	17'-6"	FOS	SW, EW			
F	4	4'-0" X 4'-0"	18'-6"	FOS	SW, EW			
G	1	3'-4" X 7'-2"	16'-0"	WK	EW			

NOTES:
1. FOR BUILDINGS DESIGNED AS ENCLOSED, ALL WINDOWS, DOORS, AND LOUVERS SHALL BE RATED TO COMPLY WITH THE WIND DESIGN CRITERIA IDENTIFIED ON SHEET 1 OF THESE PLANS.
2. ALL FIELD LOCATED FRAMED OPENINGS WILL REQUIRE FIELD CUTTING OF GIRTS, PURLINS, AND SHEETING.

"X" DENOTES OPTION SUPPLIED BY BUILDING MANUFACTURER

COLORADO LICENSED
STEPHEN JOSEPH ROMERO
43093
9/23/2019
PROFESSIONAL ENGINEER

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/16/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/23/19
REVIEWED BY DATE

MORAN
HAYDEN, COLORADO 81639

BUILDING ACCESSORIES

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212

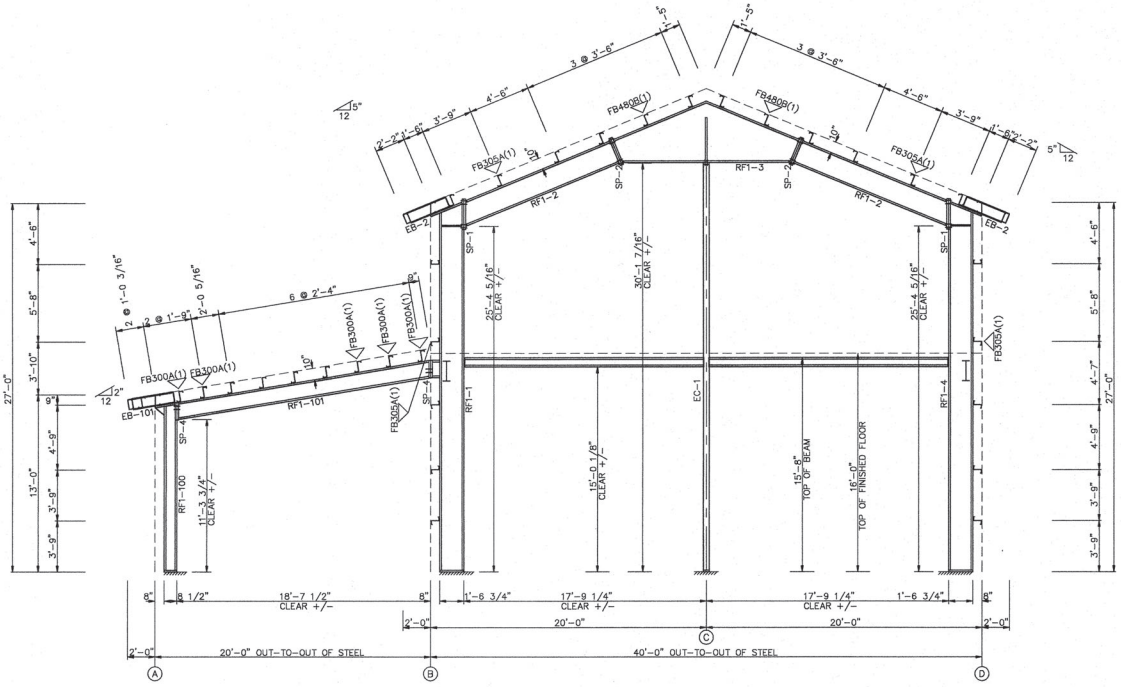
SHT 4 OF 32

RCRBD Record Set
T.A.

03/20/2020

SPLICE PLATE & BOLT TABLE										CAP PLATE & BOLTS				
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length	Mark	Qty	Type	Dia	Length
SP-1	4	4	0	A325	0.750	2.50	6"	1/2"	2'-2 1/2"	EC-1	4	A325	0.500	1.50
SP-2	4	4	0	A325	0.750	2.50	8"	3/8"	2'-0 7/8"					
SP-4	4	0	0	A325	0.750	2.50	6"	3/8"	1'-1"					

FLANGE BRACES: Both Sides(U.N.)
A – L1.5x16G
B – L3.0x12G



RIGID FRAME ELEVATION: FRAME LINE 1

COLORADO LICENSED
STEPHEN JOSEPH NELSON
43093
PROFESSIONAL ENGINEER

ERECTION NOTES:

1. THE "APPLICABLE WALL PANEL ERECTION GUIDE" IS TO BE USED IN CONJUNCTION WITH THESE DRAWINGS TO DETERMINE COMPLETE ERECTION REQUIREMENTS.
2. ALL FLANGE BRACING MUST BE INSTALLED AT FRAME LINES AS SHOWN.

RIGID FRAMES BY THIS MANUFACTURER ARE DESIGNED TO BE FASTENED USING A-325 HIGH STRENGTH BOLTS BY THE "SNUG-TIGHTENED" METHOD, AS DEFINED AND DESCRIBED IN THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION (RCSC, 12-31-2009), SECTION 4.1, "SNUG-TIGHTENED JOINTS" (REFERENCE SECTION 8.1)

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/16/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/20/19
REVIEWED BY DATE

MORAN HAYDEN CO 81639

RIGID FRAME ELEVATION

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 5 OF 32

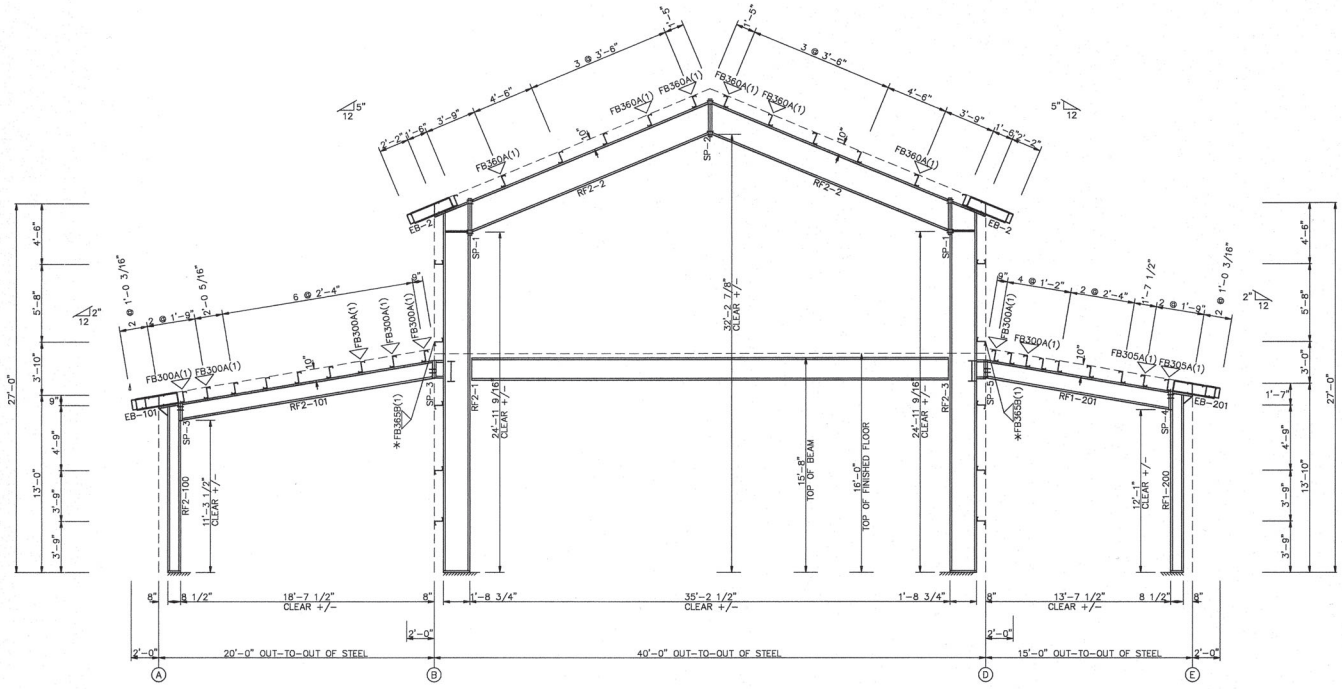
RCRBD Record Set
T.A.

03/20/2020

SPLICE PLATE & BOLT TABLE										
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	1.000	3.00	8"	5/8"	2'-8 1/2"
SP-2	4	4	0	A325	1.250	4.00	10"	5/8"	2'-9 7/8"
SP-3	4	0	0	A325	0.750	2.50	8"	3/8"	1'-1 1/4"
SP-4	4	0	0	A325	0.750	2.50	9"	3/8"	1'-1 3/4"
SP-5	4	0	0	A325	0.750	2.50	9"	3/8"	1'-0 3/4"

FLANGE BRACES: Both Sides(U.N.)
B – L2x14Ga
A – L1.5x16G

∗ – INDICATES BOLTED FLANGE BRACE CLIP CONNECTION.
(ALL OTHERS ARE SCREWED FLANGE BRACE CLIP CONNECTION)



RIGID FRAME ELEVATION: FRAME LINE 2

ERECTION NOTES:

1. THE "APPLICABLE WALL PANEL ERECTION GUIDE" IS TO BE USED IN CONJUNCTION WITH THESE DRAWINGS TO DETERMINE COMPLETE ERECTION REQUIREMENTS.
2. ALL FLANGE BRACING MUST BE INSTALLED AT FRAME LINES AS SHOWN.

RIGID FRAMES BY THIS MANUFACTURER ARE DESIGNED TO BE FASTENED USING A-325 HIGH STRENGTH BOLTS BY THE "SNUG-TIGHTENED" METHOD, AS DEFINED AND DESCRIBED IN THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION (RCSC, 12-31-2009), SECTION 4.1, "SNUG-TIGHTENED JOINTS" (REFERENCE SECTION 8.1)

COLORADO LICENSED
TIMOTHY JOSEPH REINERT
43093
9/24/2019
PROFESSIONAL ENGINEER

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LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/16/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/20/19
REVIEWED BY DATE

MORAN HAYDEN CO 81639

RIGID FRAME ELEVATION

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 6 OF 32

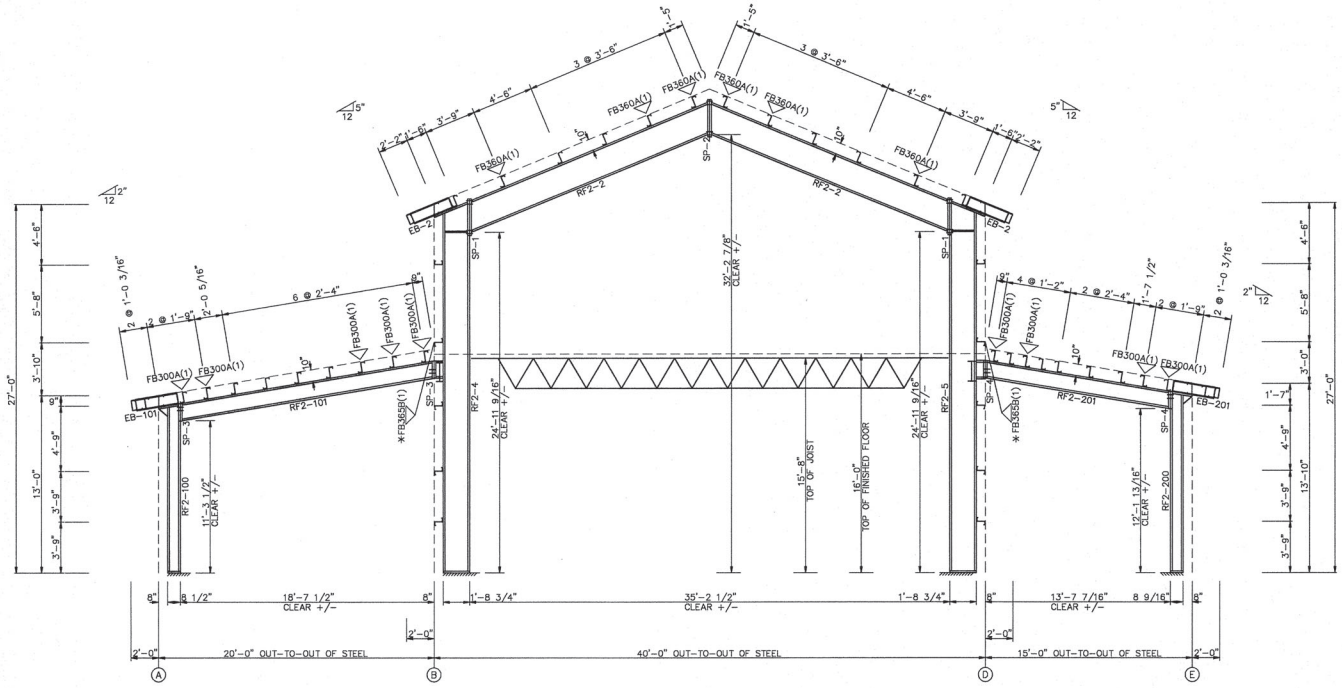
RCRBD Record Set
T.A.

03/20/2020

SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	1.000	3.00	8"	5/8"	2'-8 1/2"
SP-2	4	4	0	A325	1.250	4.00	10"	5/8"	2'-9 7/8"
SP-3	4	0	0	A325	0.750	2.50	8"	3/8"	1'-1 1/4"
SP-4	4	0	0	A325	0.750	2.50	6"	3/8"	1'-1"

▽FLANGE BRACES: Both Sides(U.N.)
B – L2x14Ga
A – L1.5x16G

∗ – INDICATES BOLTED FLANGE BRACE CLIP CONNECTION.
(ALL OTHERS ARE SCREWED FLANGE BRACE CLIP CONNECTION)



RIGID FRAME ELEVATION: FRAME LINES 3 & 4

COLORADO LICENSED
JOSEPH REIMERS
43093
9/27/2019
PROFESSIONAL ENGINEER

ERECTION NOTES:

1. THE "APPLICABLE WALL PANEL ERECTION GUIDE" IS TO BE USED IN CONJUNCTION WITH THESE DRAWINGS TO DETERMINE COMPLETE ERECTION REQUIREMENTS.
2. ALL FLANGE BRACING MUST BE INSTALLED AT FRAME LINES AS SHOWN.

RIGID FRAMES BY THIS MANUFACTURER ARE DESIGNED TO BE FASTENED USING A-325 HIGH STRENGTH BOLTS BY THE "SNUG-TIGHTENED" METHOD, AS DEFINED AND DESCRIBED IN THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION (RCSC, 12-31-2009), SECTION 4.1, "SNUG-TIGHTENED JOINTS" (REFERENCE SECTION 8.1)

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/16/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/20/19
REVIEWED BY DATE

MORAN HAYDEN CO 81639

RIGID FRAME ELEVATION

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

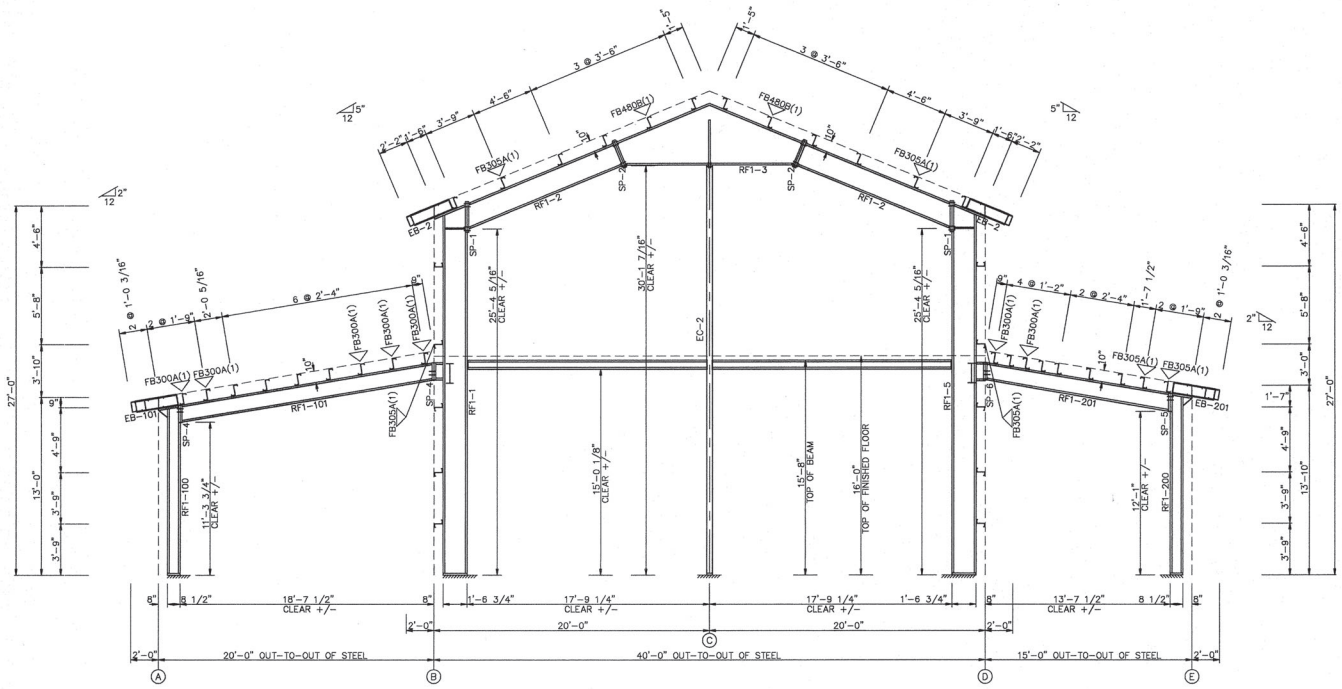
JOB NO. X2212 SHT. 7 OF 32

RCRBD Record Set
T.A.

03/20/2020

SPLICE PLATE & BOLT TABLE										CAP PLATE BOLTS				
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length	Mark	ty	Type	Dia	Length
SP-1	4	4	0	A325	0.750	2.50	8"	1/2"	2'-2 1/2"	EC-1	4	A325	0.500	1.50
SP-2	4	4	0	A325	0.750	2.50	8"	3/8"	2'-0 7/8"					
SP-4	4	0	0	A325	0.750	2.50	6"	3/8"	1'-1"					
SP-5	4	0	0	A325	0.750	2.50	5"	3/8"	1'-1 3/4"					
SP-6	4	0	0	A325	0.750	2.50	5"	3/8"	1'-0 3/4"					

FLANGE BRACES: Both Sides(U.N.)
A - L1.5x16G
B - L3.0x12G



RIGID FRAME ELEVATION: FRAME LINE 5

COLORADO LICENSED
STEPHEN JOSEPH REIMERS
43093
9/17/2019
PROFESSIONAL ENGINEER

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MORAN HAYDEN CO 81639

RIGID FRAME ELEVATION

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 8 OF 32

RCRBD Record Set
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03/20/2020

EXTENSION/CANOPY BOLTS
ROOF PLAN

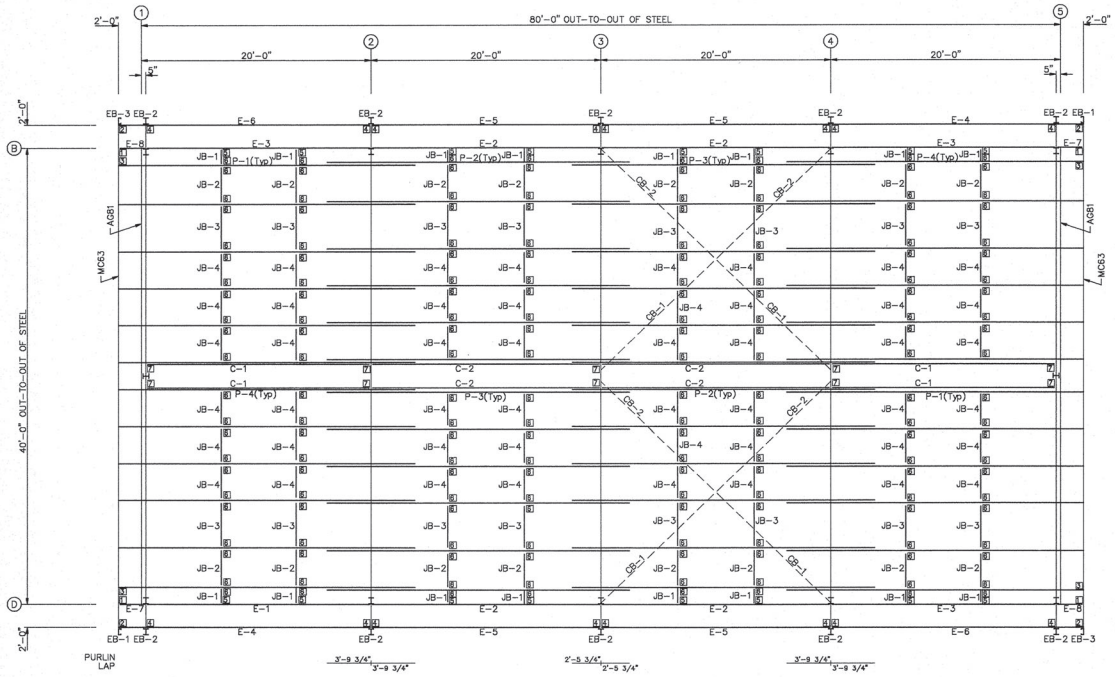
MARK	QUAN	TYPE	DIA	LENGTH
EB-2	8	A325	7/8"	1 1/2"

MEMBER TABLE
ROOF PLAN

MARK	PART	LENGTH
EB-1	10C14	3'-0"
EB-2	W10X12	3'-0 5/16"
EB-3	10C14	3'-0"
P-1	10Z12	25'-9 5/8"
P-2	10Z14	26'-3 1/2"
P-3	10Z14	26'-3 1/2"
P-4	10Z12	25'-9 5/8"
E-1	10E14	18'-10 1/2"
E-2	10E14	19'-3 1/2"
E-3	10E14	18'-10 1/2"
E-4	10C12	21'-11 3/8"
E-5	10C12	19'-11"
E-6	10C12	21'-11 3/8"
E-7	10E14	11'-9"
CB-1	WR4	9'-0"
CB-2	WR4	20'-0"
775...	10C12	.
775...	10C12	.
JB-1	BC16	.
JB-2	BC16	.
JB-3	BC16	.
JB-4	BC16	.

CONNECTION PLATES
ROOF PLAN

QTY	MARK/PART
1	CP217
2	CP215
3	CP216
4	CP179
5	776...
6	CP96
7	775...



ROOF FRAMING PLAN

NOTE: JB-1 THRU JB-4 @ 1/3 POINTS.

BACK SIDE
LEFT END
RIGHT END
FRONT SIDE
ORIENTATION

EB- DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

TO FACILITATE THE PROPER ORIENTATION OF PURLINS/BUNDLES WHEN UNLOADING OR PLACING ON THE ROOF, POSITION THE END OF THE PURLIN/BUNDLE THAT IS TAGGED WITH A BAR CODE LABEL TO THE LEFT WHEN STANDING ON THE OUTSIDE OF THE BUILDING LOOKING IN; THE TOP FLANGE OF ZEE PURLINS SHOULD FACE UPHILL UNLESS DETAILS INDICATE OTHERWISE.

THE ARROW ON THE BARCODE LABEL POINTS TO THE NARROWER FLANGE FOR 8" ZEES; ON ALL OTHER PROFILES, THE ARROW TYPICALLY POINTS TO THE OUTSIDE FLANGE UNLESS DETAILS INDICATE OTHERWISE.

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STEPHEN JOSEPH ENGINEER
43093
9/24/2019
PROFESSIONAL ENGINEER

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MORAN HAYDEN CO 81639

ROOF FRAMING

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 9 OF 32

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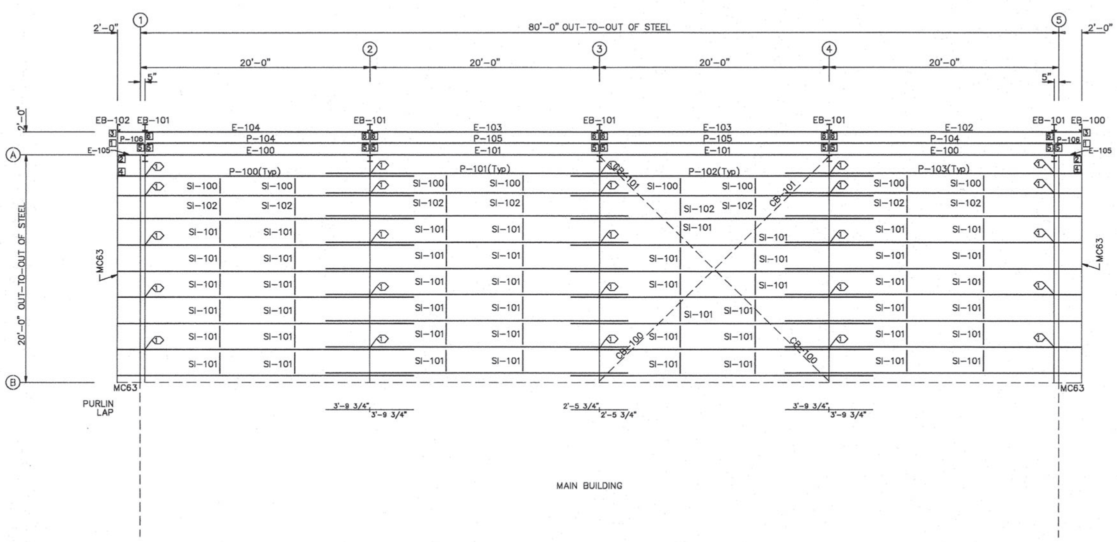
03/20/2020

SPECIAL BOLTS & WASHERS ROOF PLAN					
ID	QUAN	TYPE	DIA	LENGTH	W/BT
1	4	A325	1/2"	1 1/2"	0
	W/MP206 BACK-UP PLATE				

EXTENSION/CANOPY BOLTS ROOF PLAN				
MARK	QUAN	TYPE	DIA	LENGTH
EB-101	4	A325	1/2"	1 1/2"

MEMBER TABLE ROOF PLAN		
MARK	PART	LENGTH
EB-100	10C14	3'-1 5/16"
EB-101	W10X12	3'-0 5/8"
EB-102	10C14	3'-1 5/16"
P-100	10Z12	25'-9 5/8"
P-101	10Z14	26'-3 1/2"
P-102	10Z14	26'-3 1/2"
P-103	10Z12	25'-9 5/8"
P-104	10Z14	18'-10 1/4"
P-105	10Z14	19'-3 1/4"
P-106	10Z14	1'-8 7/8"
E-100	10E14	18'-10 1/2"
E-101	10E14	19'-3 1/2"
E-102	10C14	21'-11 3/8"
E-103	10C14	19'-11"
E-104	10C14	21'-11 3/8"
E-105	10E14	1'-9"
CB-100	WR4	6'-10"
CB-101	WR4	20'-0"
SI-100	SU6?	
SI-101	SU6?	
SI-102	SU6?	

CONNECTION PLATES ROOF PLAN	
ID	MARK/PART
1	CP102
2	CP217
3	CP215
4	CP216
5	CP167
6	CP179



ROOF FRAMING PLAN

BACK SIDE / LEFT END / RIGHT END / FRONT SIDE
ORIENTATION

– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

TO FACILITATE THE PROPER ORIENTATION OF PURLINS/BUNDLES WHEN UNLOADING OR PLACING ON THE ROOF, POSITION THE END OF THE PURLIN/BUNDLE THAT IS TAGGED WITH A BAR CODE LABEL TO THE LEFT WHEN STANDING ON THE OUTSIDE OF THE BUILDING LOOKING IN; THE TOP FLANGE OF ZEE PURLINS SHOULD FACE UPHILL UNLESS DETAILS INDICATE OTHERWISE.

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SCALE : NONE		MORAN HAYDEN CO 81639	BEHLEN MFG. CO. COLUMBUS, NEBRASKA
DRAWN BY J. NELSON	DATE 9/16/19		
CHECKED BY J. NELSON	DATE 9/20/19		
APPROVED BY NRD	DATE 9/23/19	ROOF FRAMING	JOB NO. X2212
REVIEWED BY	DATE		SHT. 10 OF 32

RCRBD Record Set
T.A.

03/20/2020

SPECIAL BOLTS & WASHERS
ROOF PLAN

ID	QUAN	TYPE	DIA	LENGTH	W/BT
1	4	A325	1/2"	1 1/2"	D
		W/MP206 BACK-UP PLATE			

EXTENSION/CANOPY BOLTS
ROOF PLAN

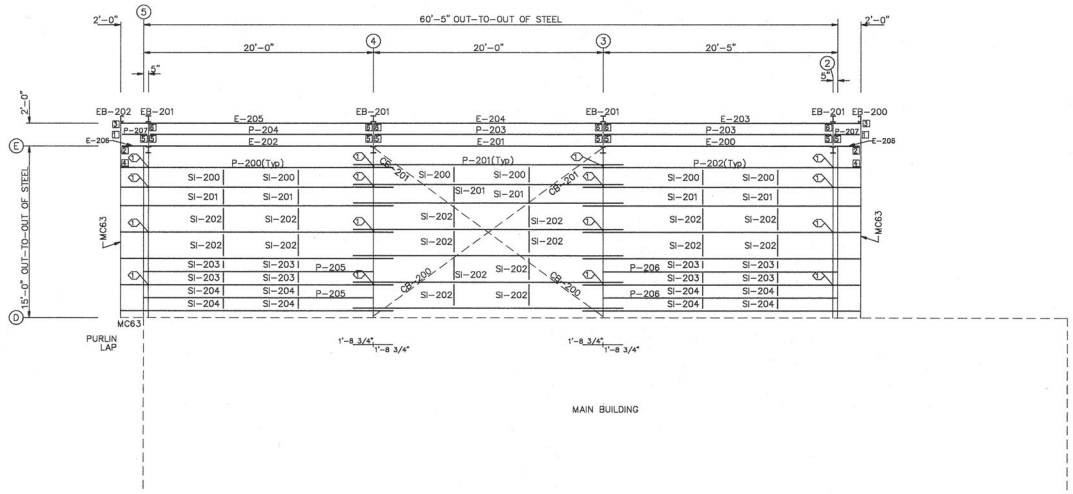
MARK	QUAN	TYPE	DIA	LENGTH
EB-201	4	A325	1/2"	1 1/2"

MEMBER TABLE
ROOF PLAN

MARK	PART	LENGTH
EB-200	10C14	3'-1 5/16"
EB-201	W10X12	3'-0 5/8"
EB-202	10C14	3'-1 5/16"
P-200	10Z12	23'-8 5/8"
P-201	10Z12	23'-5 1/2"
P-202	10Z12	24'-1 5/8"
P-203	10Z14	19'-3 1/4"
P-204	10Z14	18'-10 1/4"
P-205	10Z12	22'-1 7/8"
P-206	10Z12	22'-6 7/8"
P-207	10Z14	1'-8 7/8"
E-200	10E12	19'-3 1/2"
E-201	10E12	19'-3 1/2"
E-202	10E12	18'-10 1/2"
E-203	10C14	22'-4 3/8"
E-204	10C14	19'-11"
E-205	10C14	21'-11 3/8"
E-206	10E12	1'-9"
CB-200	WR4	3'-11"
CB-201	WR4	20'-0"
SI-200	SU6?	
SI-201	SU6?	
SI-202	SU6?	
SI-203	SU6?	
SI-204	SU6?	

CONNECTION PLATES
ROOF PLAN

ID	MARK/PART
1	CP102
2	CP217
3	CP215
4	CP216
5	CP167
6	CP179



ROOF FRAMING PLAN

BACK SIDE
LEFT END
RIGHT END
FRONT SIDE
ORIENTATION

EB- DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

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JOSEPH REIMERS
43093
3/24/2019
PROFESSIONAL ENGINEER

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MORAN HAYDEN CO 81639

ROOF FRAMING

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 11 OF 32

RCRBD Record Set
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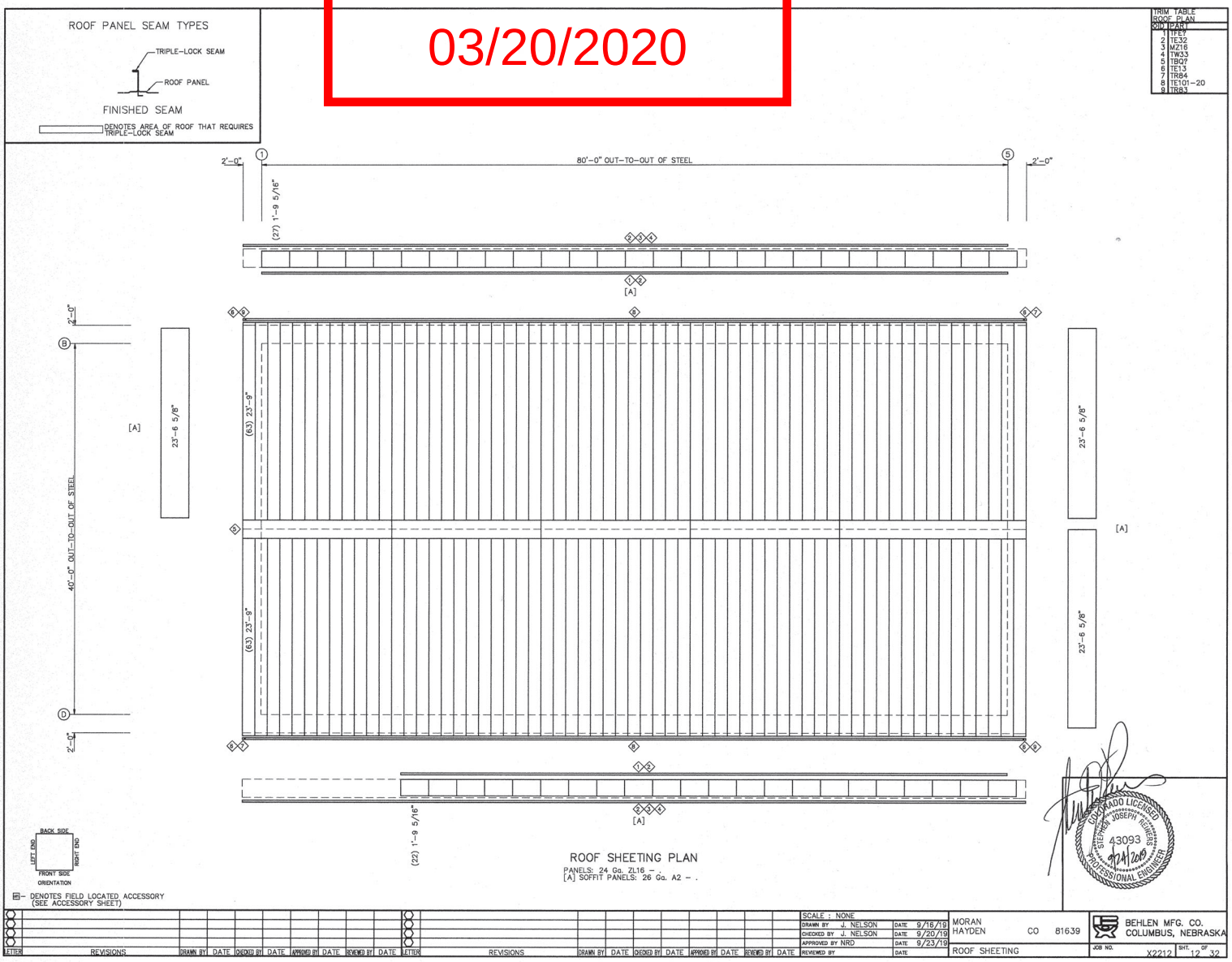
03/20/2020



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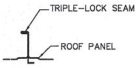
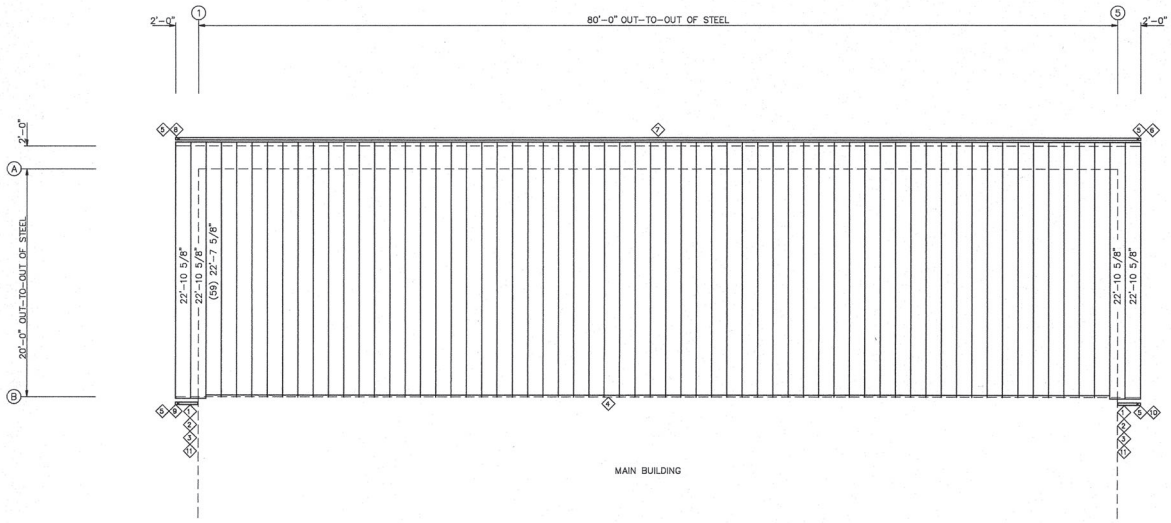
ROOF PANEL SEAM TYPES



FINISHED SEAM

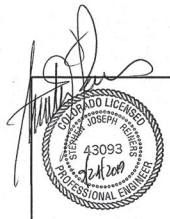
DENOTES AREA OF ROOF THAT REQUIRES TRIPLE-LOCK SEAM

TRIM TABLE ROOF PLAN
QTY	PART
1	MZ18
2	TE32
3	TW33
4	TCU?
5	TE13
6	TR84
7	TE101-20
8	TR83
9	TR85
10	TR86
11	TE105-20



ROOF SHEETING PLAN
PANELS: 24 Ga. ZL16 - .

(AS) - DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)



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MORAN HAYDEN CO 81639

ROOF SHEETING

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 13 OF 32

RCRBD Record Set
T.A.

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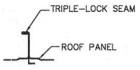
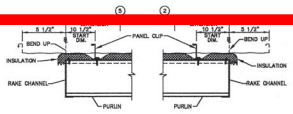
ROOF PANEL SEAM TYPES



FINISHED SEAM

DENOTES AREA OF ROOF THAT REQUIRES TRIPLE-LOCK SEAM

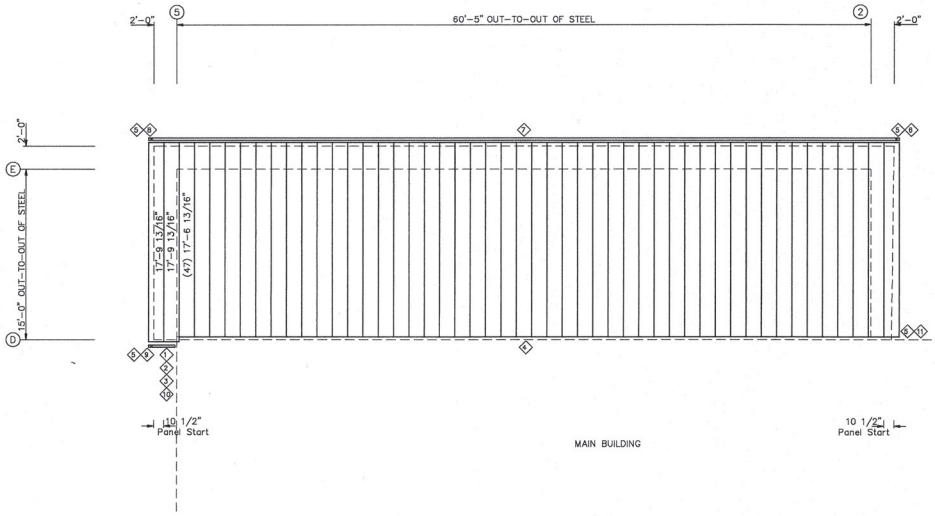
TRIM TABLE ROOF PLAN	
QTY	PART
1	MZ16
2	TE32
3	TW33
4	TCU?
5	TE13
6	TR84
7	TE101-20
8	TR83
9	TR85
10	TE105-20
11	TGX?



LEFT END RIGHT END

STARTING DIMENSION

SLIDING RAKE PLATE NOT SHOWN FOR CLARITY



ROOF SHEETING PLAN

PANELS: 24 Ga. ZL16 - .

DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

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ROOF SHEETING

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 14 OF 32

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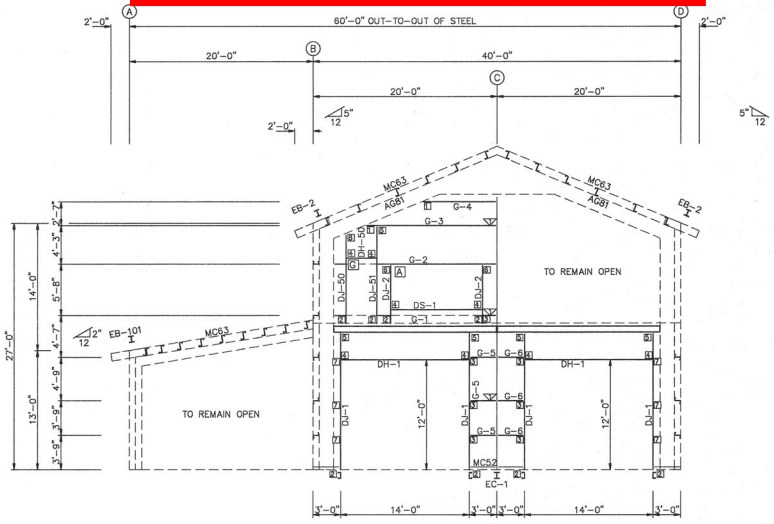
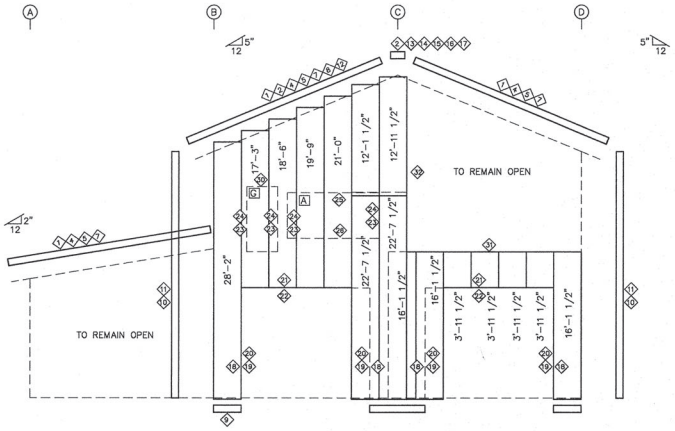


ENDWALL FRAMING: FRAME LINE 1



ENDWALL SHEETING & TRIM: FRAME LINE 1
PANELS: 26 Ga. A2 – .

HS– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

BOLT TABLE
FRAME LINE 1

LOCATION	QUAN	TYPE	DIA	LENGTH
ASSY.				
Columns/Rafter	4	A325	1/2"	1 1/2"

MEMBER TABLE
FRAME LINE 1

MARK	PART	LENGTH
COLD		
EB-2	W10X12	3'-9 5/16"
EC-1	B1250413	30'-1 1/2"
DJ-1	BC14	14'-7 3/4"
DJ-2	BC16	9'-3 1/4"
DJ-50	BC18	
DJ-51	BC16	
DH-1	BC18	13'-11 3/4"
DJ-50	BC18	
DS-1	BC18	9'-11 3/4"
G-1	BZ16	17'-4 1/2"
G-2	BC14	17'-4 1/2"
G-3	BZ16	12'-11 11/16"
G-4	BZ16	7'-8 9/16"
G-5	BZ16	2'-3 1/2"
G-6	BZ16	2'-3 1/2"
COLD		
EB-101	W10X12	13'-0 1/2"

FLANGE BRACE TABLE
FRAME LINE 1

MARK	LENGTH
NO FLANGE BRACES	

CONNECTION PLATES
FRAME LINE 1

QTY	MARK/PART
1	10
2	CP146
3	CP86
4	CP148
5	CP148
6	CP42
7	778...
8	778...

TRIM TABLE
FRAME LINE 1

QTY	MARK
1	M218
2	TE32
3	TR82–20
4	TR65–20
5	TW29
6	TM18–12
7	TW11–20
8	TW2–12
9	TW2–16
10	TM33–12
11	TR88
12	18861086
13	TR87
14	MZ34
15	TDE7
16	TW18–12
17	TW24–12
18	TW23–12
19	TW18–16
20	TW21–16
21	TW16
22	TW15
23	TW21–12
24	TW36–12
25	TW13
26	TM33–20
27	TW2–20

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STEPHEN JOSEPH REIMERS
43093
9/24/2019
PROFESSIONAL ENGINEER

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LETTER								

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MORAN HAYDEN CO 81639

ENDWALL FRAMING

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

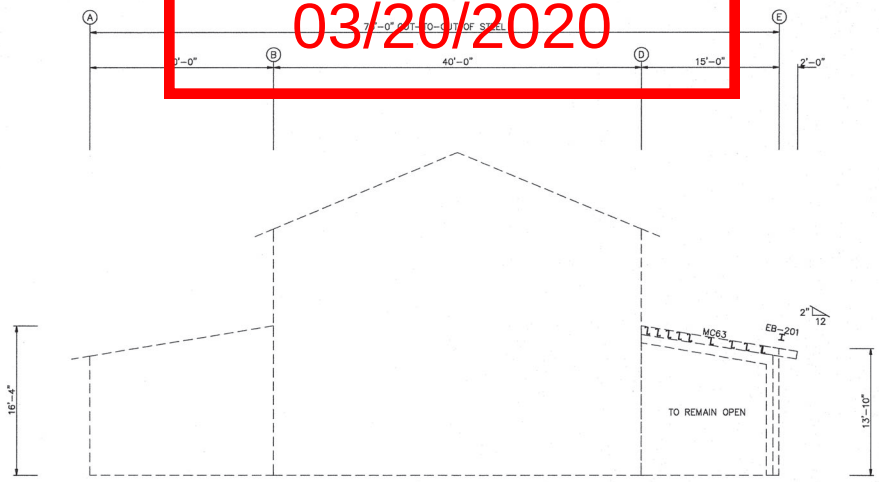
JOB NO. X2212 SHT. 15 OF 32

RCRBD Record Set
T.A.

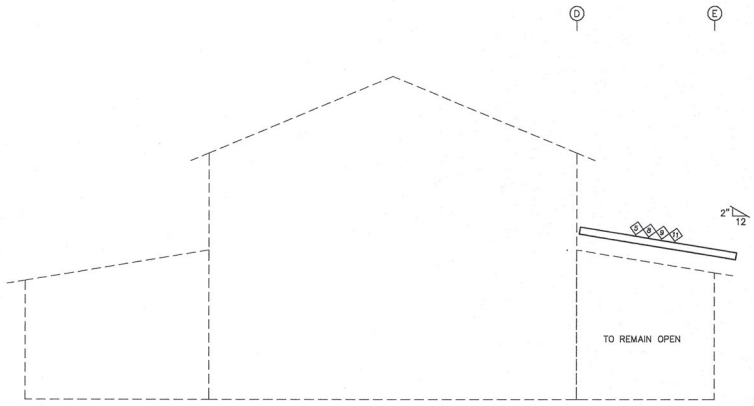
03/20/2020

MEMBER TABLE FRAME LINE 2		
MARK	PART	LENGTH
EB-201	W10X12	X'-0 5/8"

TRIM TABLE FRAME LINE 2	
QTY	PART
5	MZ16
8	TR82-20
9	TR66-20
11	TW29



ENDWALL FRAMING: FRAME LINE 2



ENDWALL TRIM: FRAME LINE 2

XX— DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

STEPHEN JOSEPH REIMERS
COLORADO LICENSED
43093
9/24/2019
PROFESSIONAL ENGINEER

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REVIEWED BY	DATE	

MORAN
HAYDEN CO 81639

ENDWALL FRAMING

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 16 OF 32

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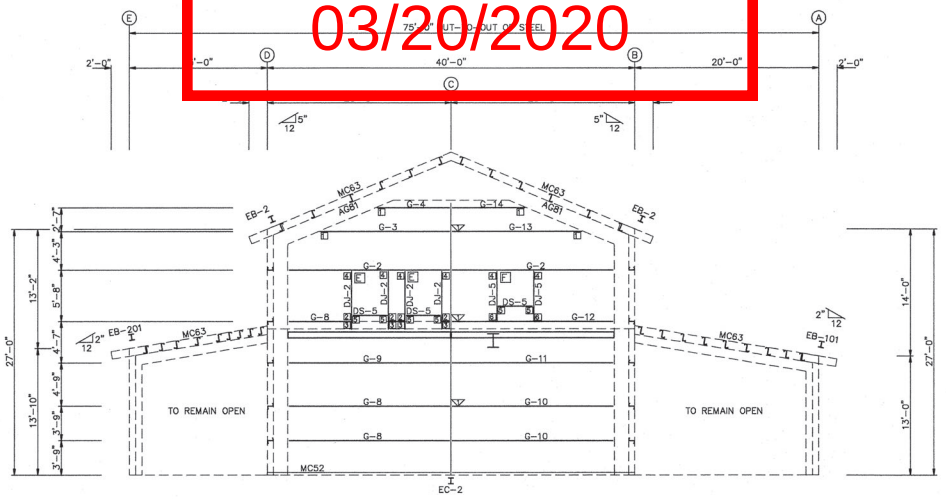
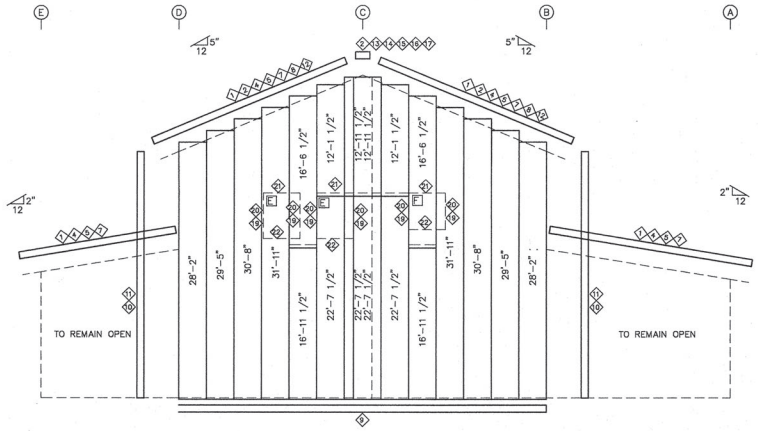
03/20/2020



ENDWALL FRAMING: FRAME LINE 5



ENDWALL SHEETING & TRIM: FRAME LINE 5

PANELS: 26 Ga. A2 – .

– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

COLORADO LICENSED
STEPHEN JOSEPH REGNERS
43093
PROFESSIONAL ENGINEER
9/24/2019

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/16/19
CHECKED BY J. NELSON DATE 9/20/19
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MORAN HAYDEN CO 81639

ENDWALL FRAMING

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 17 OF 32

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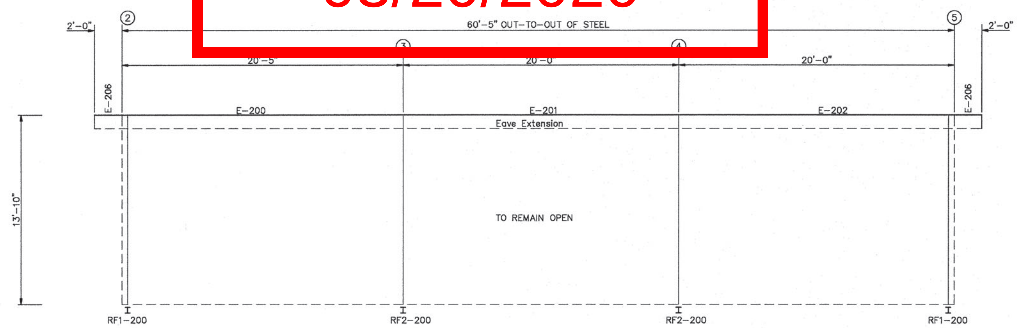
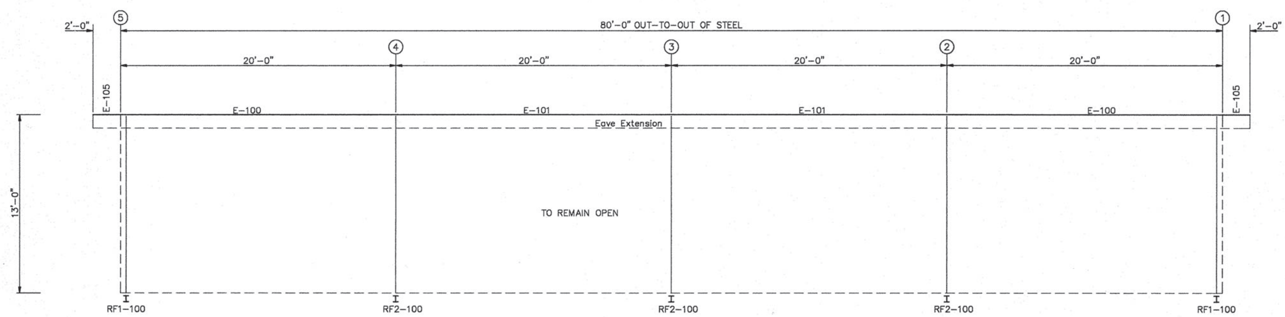
MEMBER TABLE FRAME LINE E		
MARK	PART	LENGTH
E-200	10E12	19'-3 1/2"
E-201	10E12	19'-3 1/2"
E-202	10E12	18'-10 1/2"
E-206	10E12	1'-9"
E-100	10E14	18'-10 1/2"
E-101	10E14	19'-3 1/2"
E-105	10E14	1'-9"



SIDEWALL FRAMING: FRAME LINE E



SIDEWALL FRAMING: FRAME LINE A

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[AF]– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

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SIDEWALL FRAMING

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 18 OF 32

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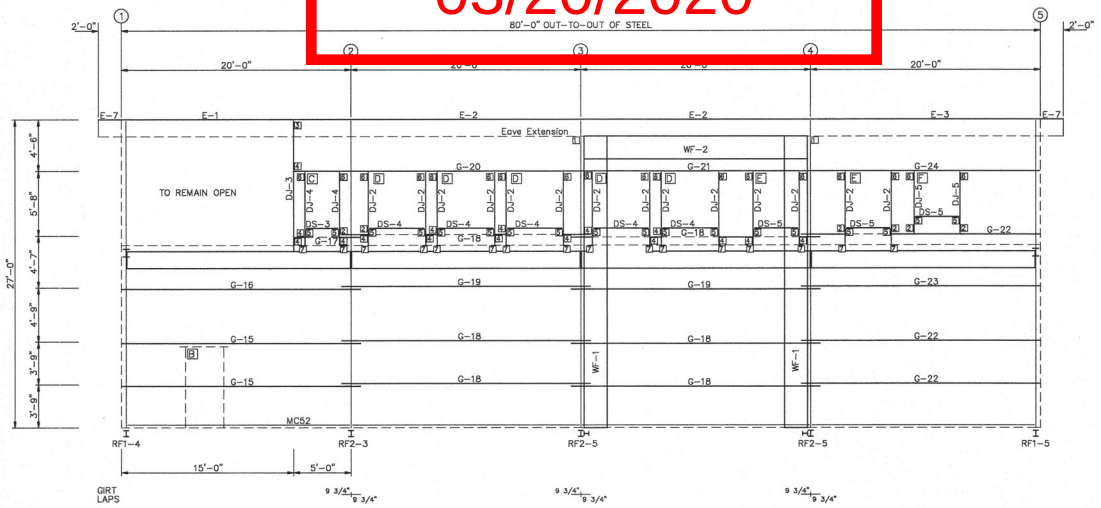
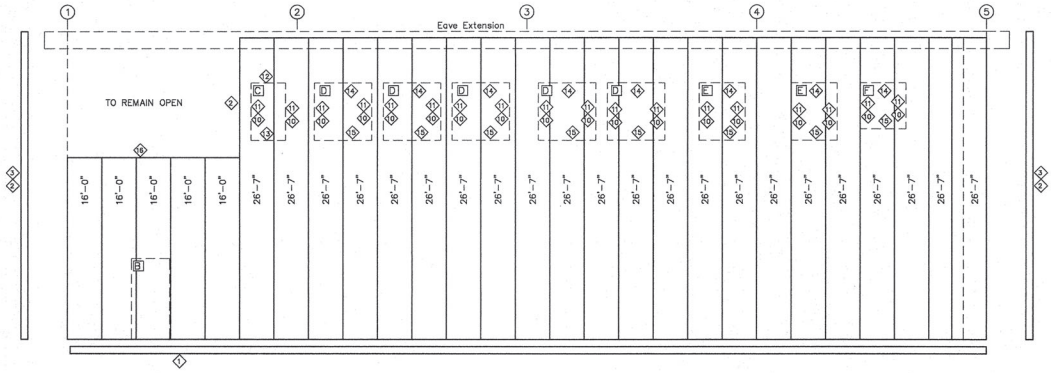


SIDEWALL FRAMING: FRAME LINE D



SIDEWALL SHEETING & TRIM: FRAME LINE D

PANELS: 26 Ga. A2 – .

DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

BOLT TABLE
FRAME LINE D

LOCATION	QUAN	TYPE	DIA	LENGTH
WF-1 – WF-2	8	A325	3/4"	2 1/2"
WF-1 – RF2-5	4	A325	1/2"	1 1/2"

MEMBER TABLE
FRAME LINE D

MARK	PART	LENGTH
WF-1	B2481016	25'-10"
WF-2	B2480519	15'-0"
DJ-2	BC16	5'-3 1/4"
DJ-3	BC14	13'-4 3/8"
DJ-4	BC16	4'-11 1/4"
DJ-5	BC16	5'-3 1/4"
DH-2	BC14	15'-0 3/8"
DS-2	BC14	15'-0 3/8"
DS-3	BC16	2'-11 3/4"
DS-4	BC16	4'-11 3/4"
DS-5	BC16	3'-11 3/4"
E-1	10E14	18'-10 1/2"
E-2	10E14	19'-3 1/2"
E-3	10E14	18'-10 1/2"
E-7	10E14	1'-9"
G-15	BZ16	20'-9 5/8"
G-16	BZ14	20'-9 5/8"
G-17	BZ16	5'-5 1/2"
G-18	BZ16	21'-7 1/2"
G-19	BZ14	21'-7 1/2"
G-20	BC12	24'-1 5/8"
G-21	BC12	19'-11 3/4"
G-22	BZ16	20'-9 5/8"
G-23	BZ15	20'-9 5/8"
G-24	BC12	19'-11 3/4"

CONNECTION PLATES
FRAME LINE D

ID	MARK/PART
1	CP150
2	CP149
3	e1
4	CP96
5	CP148
6	CP42
7	CP146

TRIM TABLE
FRAME LINE D

QTY	PART
1	TW7–20
2	TW2–12
3	TW2–16
10	TW16
11	TW15
12	TW13
13	TW71
14	TW14
15	TW72
16	TM33–16

FRAMED OPENING PARTS
(WALK DOOR BELOW 7'–6" GIRT)

QTY	MARK	PART	LENGTH
8	MC52	JAMB BC18	7'-9 7/8"
	MT310	HEADER	4'-2"
	CP148	BASE CLIP	
	CP183	TOP CLIP	
	CP96	GRT CLIP	
	TW16	JAMB TRIM	7'-3 1/4"
	TW15	JAMB TRIM STIFFENER	7'-3 1/4"
	TW13	DRIP CAP	3'-11"

COLORADO LICENSED JAMES JOSEPH ALBERS 43093 PROFESSIONAL ENGINEER 3/24/2020

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MORAN HAYDEN CO 81639

SIDEWALL FRAMING

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 19 OF 32

RCRBD Record Set
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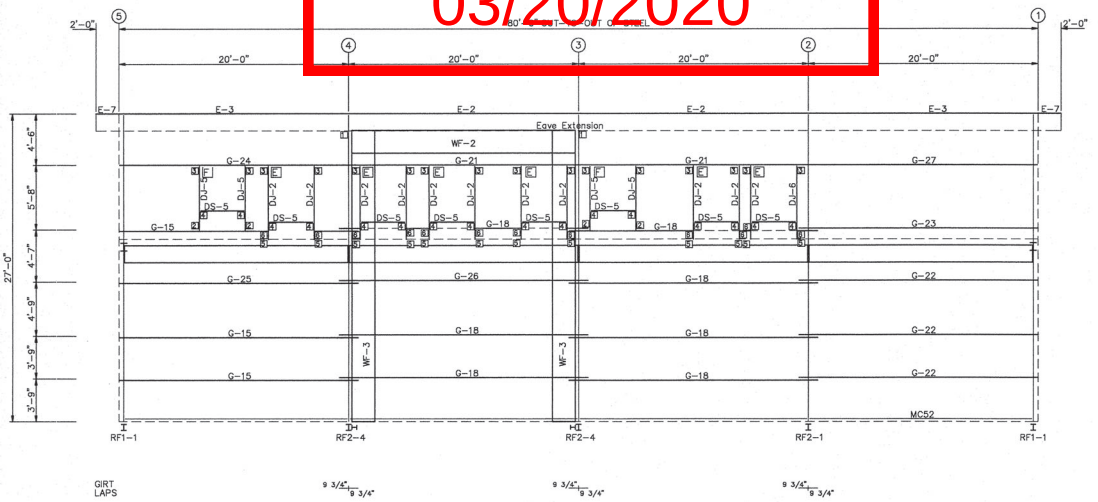
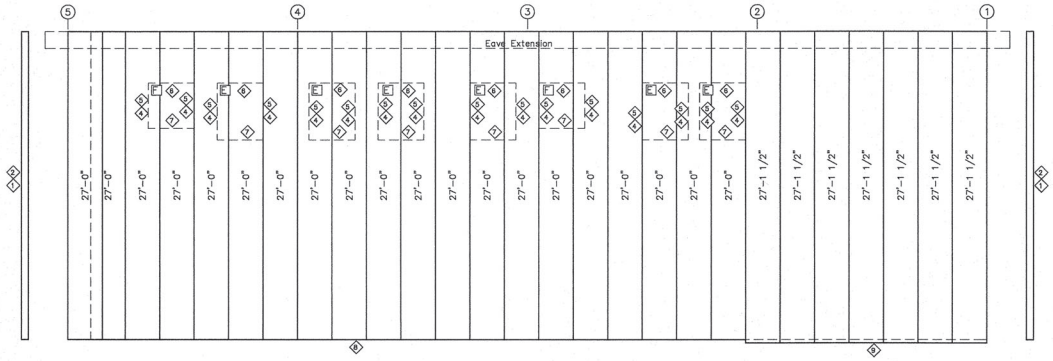
03/20/2020



SIDEWALL FRAMING: FRAME LINE B



SIDEWALL SHEETING & TRIM: FRAME LINE B
PANELS: 26 Ga. A2 – .

BOLT TABLE
FRAME LINE B

LOCATION	QUAN	TYPE	DIA	LENGTH
WF-3 – WF-2	8	A325	3/4"	2 1/2"
WF-3 – RF2-4	4	A325	1/2"	1 1/2"

MEMBER TABLE
FRAME LINE B

MARK	PART	LENGTH
WF-2	B2480519	15'-0"
WF-3	B2481016	25'-10"
DJ-2	BC16	5'-3 1/4"
DJ-5	BC16	5'-3 1/4"
DJ-6	BC14	5'-3 1/4"
DS-5	BC16	3'-11 3/4"
E-2	10E14	19'-3 1/2"
E-3	10E14	18'-10 1/2"
E-7	10E14	1'-9"
G-15	BZ16	20'-9 5/8"
G-18	BZ16	21'-7 1/2"
G-21	BC12	19'-11 3/4"
G-22	BZ16	20'-9 5/8"
G-23	BZ15	20'-9 5/8"
G-24	BC12	19'-11 3/4"
G-25	BZ15	20'-9 5/8"
G-26	BZ15	21'-7 1/2"
G-27	BC13	19'-11 3/4"

CONNECTION PLATES
FRAME LINE B

ID	MARK/PART
1	CP150
2	CP149
3	CP42
4	CP148
5	CP146
6	CP96

TRIM TABLE
FRAME LINE B

ID	PART
1	TW2-12
2	TW2-16
4	TW16
5	TW15
6	TW14
7	TW72
8	TW17-20
9	TW11-20

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9/24/2019
PROFESSIONAL ENGINEER

– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

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SIDEWALL FRAMING

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 20 OF 32

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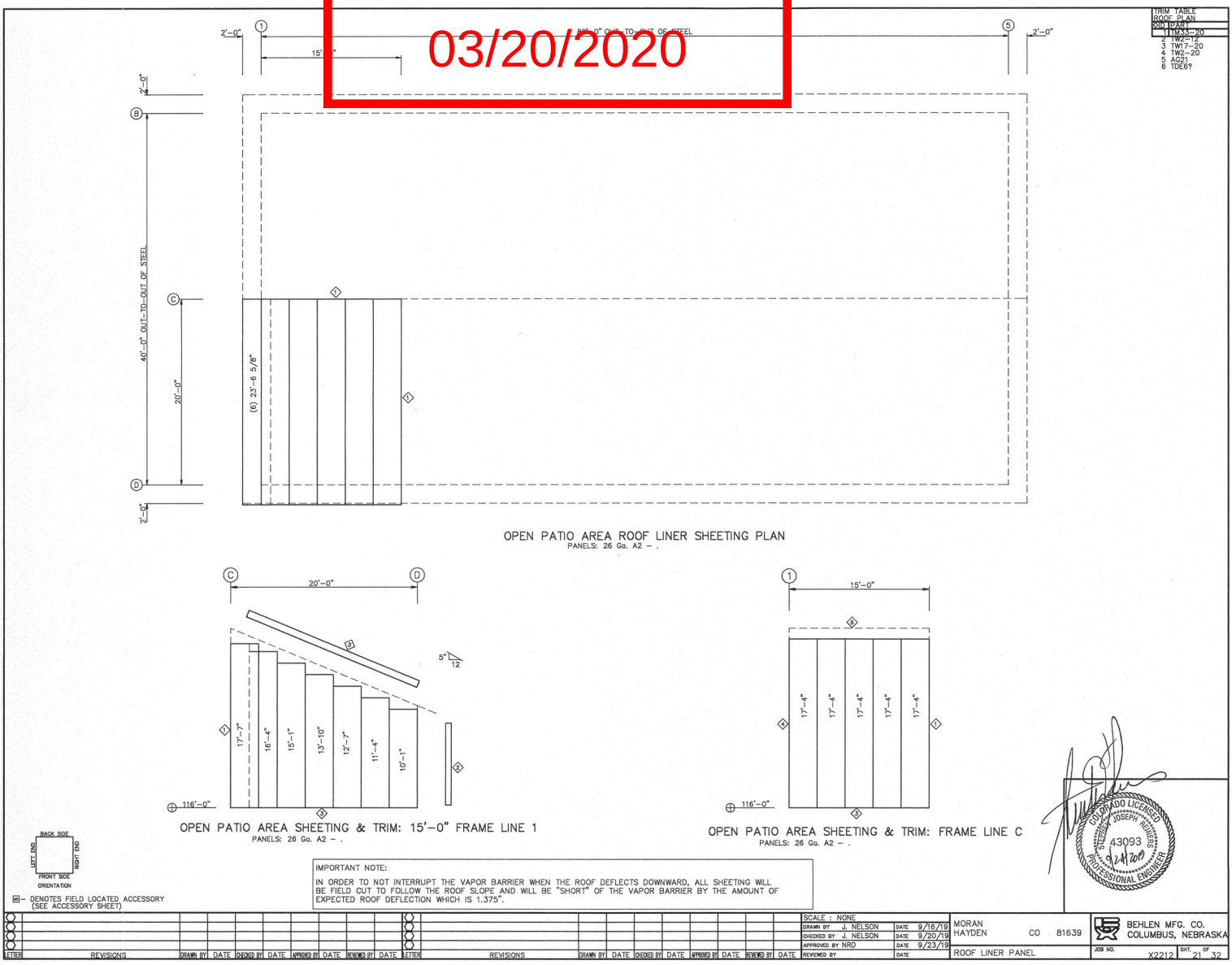

OPEN PATIO AREA ROOF LINER SHEETING PLAN
PANELS: 26 Ga. A2 – .

OPEN PATIO AREA SHEETING & TRIM: 15'-0" FRAME LINE 1
PANELS: 26 Ga. A2 – .

OPEN PATIO AREA SHEETING & TRIM: FRAME LINE C
PANELS: 26 Ga. A2 – .

– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

IMPORTANT NOTE:
IN ORDER TO NOT INTERRUPT THE VAPOR BARRIER WHEN THE ROOF DEFLECTS DOWNWARD, ALL SHEETING WILL BE FIELD CUT TO FOLLOW THE ROOF SLOPE AND WILL BE "SHORT" OF THE VAPOR BARRIER BY THE AMOUNT OF EXPECTED ROOF DEFLECTION WHICH IS 1.375".

REGISTERED COLORADO LICENSED STRUCTURAL ENGINEER JOSEPH REDDEN 43093 9/24/2019 PROFESSIONAL ENGINEER

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MORAN HAYDEN CO 81639

ROOF LINER PANEL

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 21 OF 32

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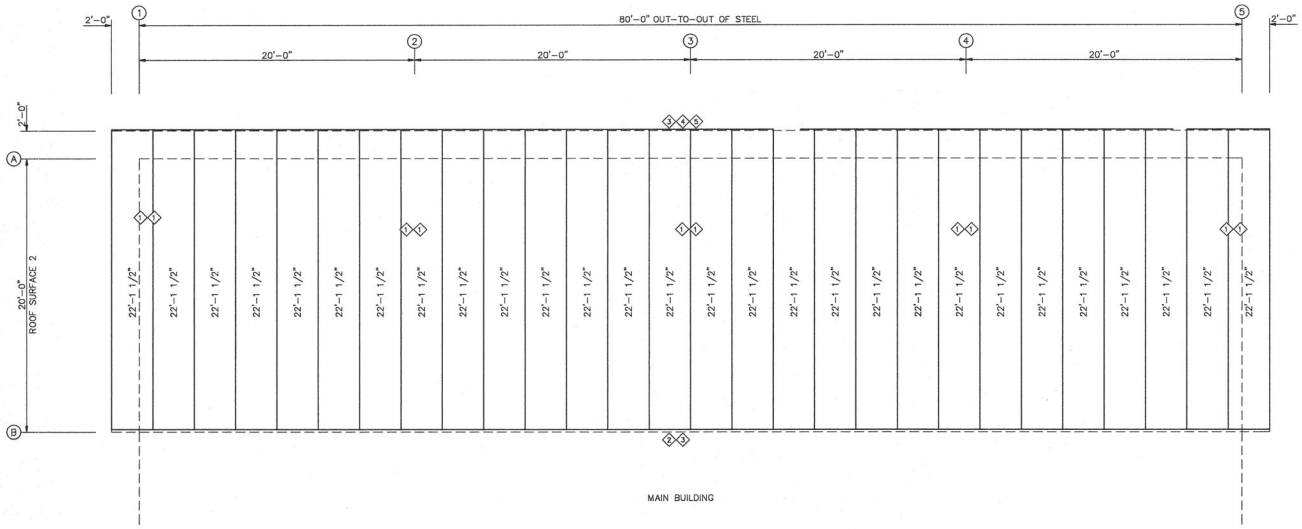
03/20/2020

TRIM TABLE ROOF
SIM. PART
1 TM33-20
2 TM16-12
3 TE32
4 MZ16
5 TW33



ROOF LINER SHEETING PLAN
PANELS: 26 Ga. A2 – .

COLORADO LICENSED
GEORGE JOSEPH REGNERS
43093
PROFESSIONAL ENGINEER
9/24/2019

– DENOTES FIELD LOCATED ACCESSORY (SEE ACCESSORY SHEET)

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ROOF LINER PANEL

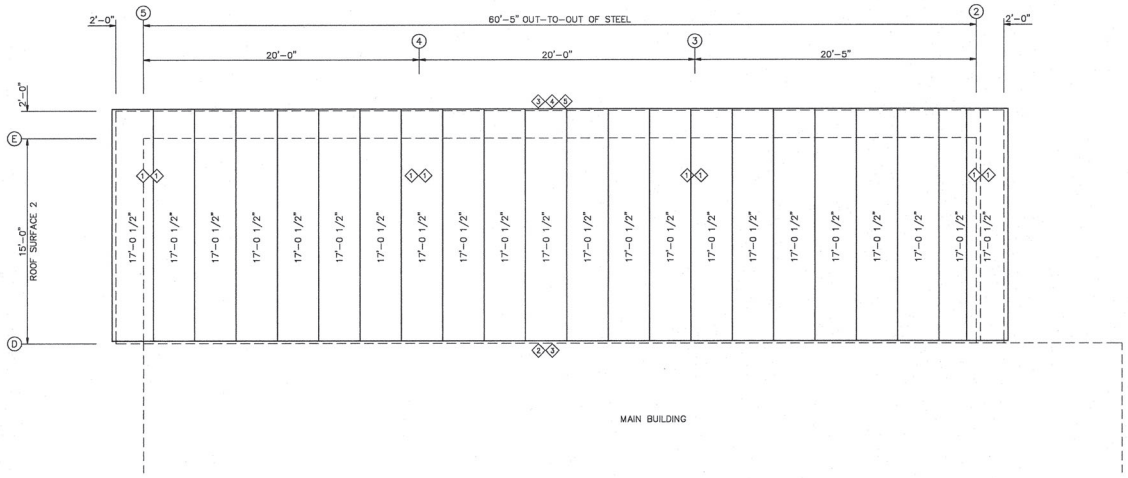
BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 22 OF 32

RCRBD Record Set
T.A.

03/20/2020

TRIM TABLE	
ROOF	
SYM	PART
1	TM33-20
2	TM16-12
3	TE32
4	MZ16
5	TW33



ROOF LINER SHEETING PLAN
PANELS: 26 Ga. A2 - .

COLORADO LICENSED
STEPHEN JOSEPH REINERTS
43093
9/24/2019
PROFESSIONAL ENGINEER

DENOTES FIELD LOCATED ACCESSORY
(SEE ACCESSORY SHEET)

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ROOF LINER PANEL

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 23 OF 32

MEMBER TABLE		
MARK	PART	LENGTH
MB-1	W18X40	19'-5 3/4"
MB-2	W18X50	19'-10 3/4"
MB-3	W18X40	19'-10 3/4"
MB-4	W18X40	19'-10 3/4"
MB-5	W8X10	17'-8 1/8"
MB-6	W8X10	17'-8 1/8"
MB-7	W16X26	38'-0 3/4"
MB-8	W16X26	16'-0 3/4"
MJ-1	28K6	39'-10 1/2"
MJ-2	28K6	33'-4 3/4"
MJ-3	28K9	33'-4 3/4"

CONNECTION PLATES MEZZANINE	
ID	MARK/PART
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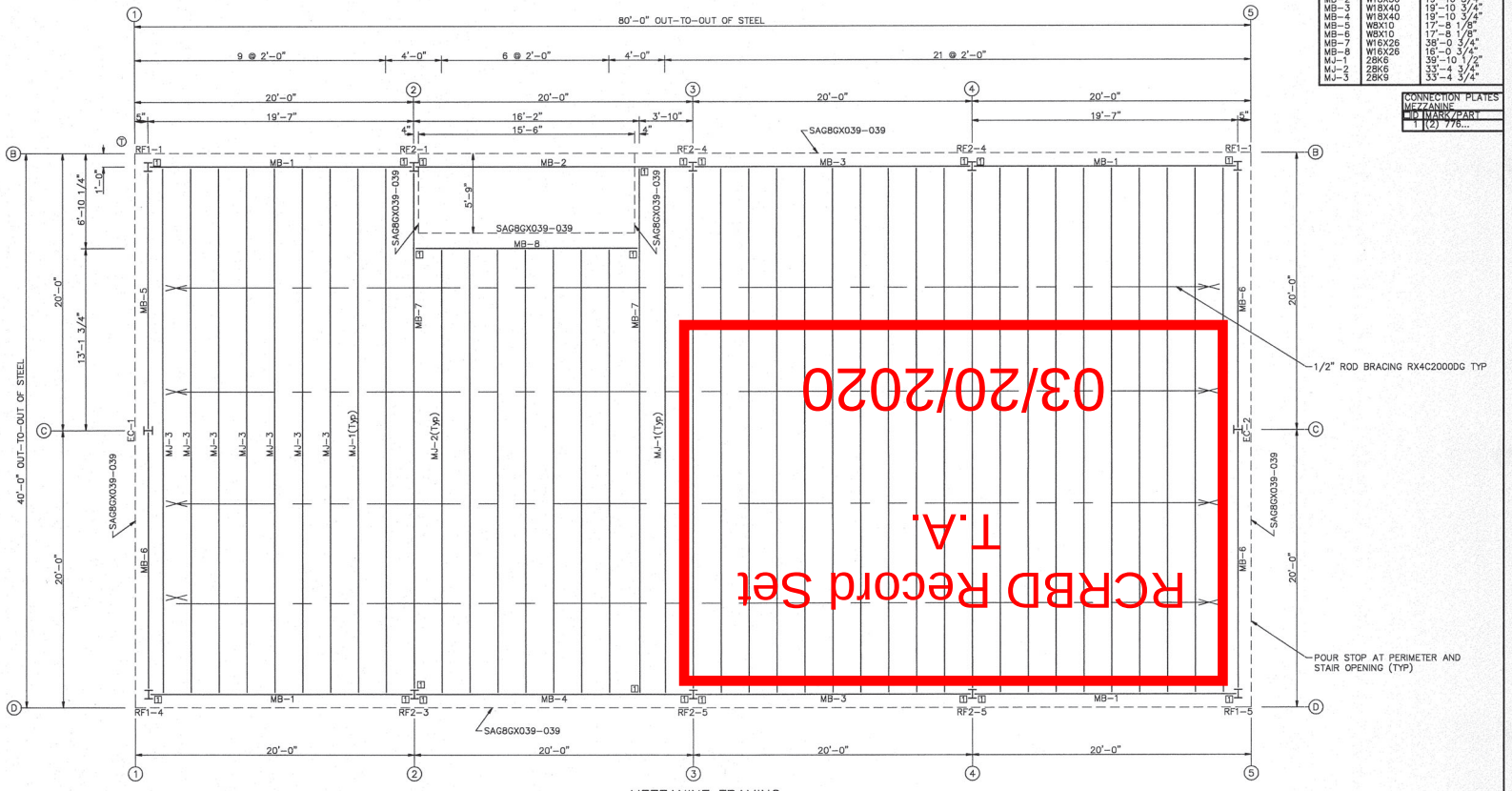

MEZZANINE FRAMING

MEZZAININE INFORMATION:

MAIN FRAME COLUMNS, ENDWALL COLUMNS, AUXILIARY COLUMNS, BAR JOISTS, FLOOR BEAMS AND / OR DECKING ARE DESIGNED TO ADEQUATELY HANDLE A MEZZANINE IN THE AREA SHOWN ON THE PLANS, BASED ON THE MEZZANINE LOADS ON THE COVER PAGE.

JOIST ERECTION:

CARE SHALL BE EXERCISED AT ALL TIMES TO AVOID DAMAGE TO THE JOISTS AND ACCESSORIES THROUGH CARELESS HANDLING DURING UNLOADING, STORING, AND ERECTING.

** IMPORTANT ** UNDER NO CIRCUMSTANCES SHALL ANY PERSONNEL ATTEMPT TO WALK ON UNBRIDGED JOISTS. AS SOON AS THE JOISTS ARE ERECTED, ALL BRIDGING SHALL BE COMPLETELY INSTALLED AND ANCHORED, THEN THE JOIST SHOULD BE PERMANENTLY FASTENED INTO PLACE. UNTIL THIS IS DONE, NO CONSTRUCTION LOADS SHALL BE APPLIED TO THE JOISTS.

WHERE BOLTED DIAGONAL BRIDGING IS REQUIRED, THE HOISTING CABLES SHALL NOT BE RELEASED UNTIL THE DIAGONAL BRIDGING IS COMPLETELY INSTALLED. EACH JOIST SHALL BE STRAIGHTENED AND PLUMBED PRIOR TO CONNECTING THE BRIDGING TO THE JOIST. WHEN IT IS NECESSARY FOR THE ERECTOR TO CLIMB ON THE JOISTS TO INSTALL THE BRIDGING, EXTREME CAUTION MUST BE EXERCISED SINCE UNBRIDGED JOISTS MAY EXHIBIT SOME DEGREE OF INSTABILITY UNDER THE ERECTOR'S WEIGHT.

AFTER THE BRIDGING IS COMPLETELY INSTALLED AND ANCHORED, THE ENDS OF THE JOISTS SHALL BE FULLY CONNECTED TO THE SUPPORT. ALL FIELD WELDING SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO INSURE THAT THE JOISTS ARE NOT DAMAGED BY SUCH WELDING.

ENDS OF K-SERIES JOISTS RESTING ON STEEL SHALL BE ATTACHED THERETO WITH A MINIMUM OF TWO 1/8 INCH FILLET WELDS 2 1/2 INCHES LONG, OR WITH A 1/2 INCH BOLT. IN STEEL FRAMES, WHERE COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH STRUCTURAL STEEL MEMBERS, JOISTS AT COLUMN LINES SHALL BE FIELD BOLTED AT THE COLUMNS TO PROVIDE LATERAL STABILITY DURING CONSTRUCTION.

ON COLD-FORMED MEMBERS WHOSE YIELD STRENGTH HAS BEEN ATTAINED BY COLD WORKING, AND WHOSE AS-FORMED STRENGTH IS USED IN THE DESIGN, THE TOTAL LENGTH OF WELD AT ANY ONE POINT SHALL NOT EXCEED 50 PERCENT OF THE OVERALL DEVELOPED WIDTH OF THE COLD-FORMED SECTION.

GENERAL NOTES:

1. THIS BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR ERRORS, OMISSIONS OR DAMAGES INCURRED IN THE ERECTION OF BUILDING COMPONENTS NOR FOR THE INSPECTION OF ERECTED COMPONENTS TO ASCERTAIN SAME.
2. TEMPORARY BRACING MUST BE INSTALLED BY ERECTOR TO PROVIDE ADEQUATE STABILITY DURING ERECTION. BRACING INDICATED ON THE ERECTION DRAWINGS IS FOR THE STABILITY OF THE COMPLETED STRUCTURE AND SHALL NOT BE REMOVED
3. ALL TOP OF BAR JOIST @ ELEV. = 115'-8"
4. TOP OF FLOOR ELEV. = 16'-0" @ CONCRETE, 15'-11 5/8" AT PLYWOOD
5. Ⓣ INDICATES TAGGED END OF BAR JOISTS.
6. * INDICATES BOLTED BAR JOISTS
7. X INDICATES DIAGONAL 1/2" DIA. ROD BRIDGING LOCATIONS
8. - - - INDICATES TOP & BOTTOM 1/2" DIA. ROD BRIDGING LOCATIONS

FLOOR VIBRATION NOTE

MEZZANINE FLOORS CONSTRUCTED WITH HIGH STRENGTH STRUCTURAL BEAMS, BAR JOISTS, METAL DECK AND A THIN CONCRETE COVERING PROVIDE A LIGHT WEIGHT AND RELATIVELY LOW COST ALTERNATIVE FOR OFFICE SPACE, DISPLAY AREAS AND SIMILAR USES. A POTENTIAL PROBLEM WITH SUCH FLOORS IS THAT THE NATURAL FREQUENCY OF THE FLOOR SYSYEM MAY FALL WITH THE RANGE OF COMMON EXCITING FORCES SUCH AS FOOT TRAFFIC, WHEN THIS OCCURS, THE OCCUPANT MAY OBJECT TO THE RESULTING VIBRATION EVEN THOUGH THE FLOOR IS STRUCTURALLLY SOUND.

DAMPING, IN THE FORM OF PARTITIONS AND MASS FROM DESKS AND EQUIPMENT, MAY BE ENOUGH TO ELIMINATE OBJECTIONABLE MOVEMENT. HOWEVER, IN "OPEN SPACE" ARRANGEMENTS WITHOUT SIGNIFICANT FLOOR LOADING, SOME VIBRATION CAN BE EXPECTED.

AS A DESIGNER AND SUPPLIER OF STRUCTURAL COMPONENTS, THIS BUILDING MANUFACTURER HAS LITTLE OR NO KNOWLEDGE CONCERNING THE DAMPING AND SPECIAL NEEDS OF THE OCCUPANTS, WE ONLY DESIGN FOR THE LOADS AND SPANS DESCRIBED ON THE ORDER FORM TO MEET STRESS AND DEFLECTION LIMITS OF THE APPLICABLE CODE. THE CODES DO NOT SPECIFY REQUIREMENTS FOR NATURAL FREQUENCY. IT IS IMPORTANT FOR ARCHITECT OR DESIGN/BUILD CONTRACTOR TO TAKE FLOOR VIBRATION REQUIREMENTS INTO CONSIDERATION WHEN SPECIFYING SPANS AND CONCRETE THICKNESS

THIS BUILDING MANUFACTURER WILL NOT ACCEPT RESPONSIBILITY FOR FLOOR VIBRATION.

COLORADO LICENSED STEPHEN JOSEPH REINERS 43093 PROFESSIONAL ENGINEER 9/23/2019

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MORAN HAYDEN CO 81639

FLOOR FRAMING

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 24 OF 32

RCRBD Record Set
T.A.

03/20/2020

DECK : 1.5C22

DECK ERECTION:

PLACE DECK SHEETS SIDE TO SIDE BEGINNING AT THE CORNER OF THE MEZZANINE, MAINTAINING ALIGNMENT. WHEN LAPPING, MAKE ALIGNMENT ADJUSTMENTS IF NECESSARY. PLACE SHEETS WITH EDGES UP, MAKE SIDE LAPS ONE-HALF CORRUGATION. DO NOT STAGGER END LAPS. MINIMUM BEARING OF THE SHEETS SHALL BE 1 1/2".

SHEETS SHALL BE ATTACHED TO SUPPORTS WITH SCREWS.. MINIMUM SCREW REQUIREMENTS ARE AS FOLLOWS:

A) END OF SHEETS:
SCREW EACH END TO EACH SIDE LAP PLUS ONE INTERMEDIATE LOCATION. ((4) #12 SCREWS PER SHEET.)

B) END LAPS:
SCREW EACH END LAP AT EACH SIDE LAP PLUS ONE INTERMEDIATE LOCATION. ((4) #12 SCREWS PER SHEET.)

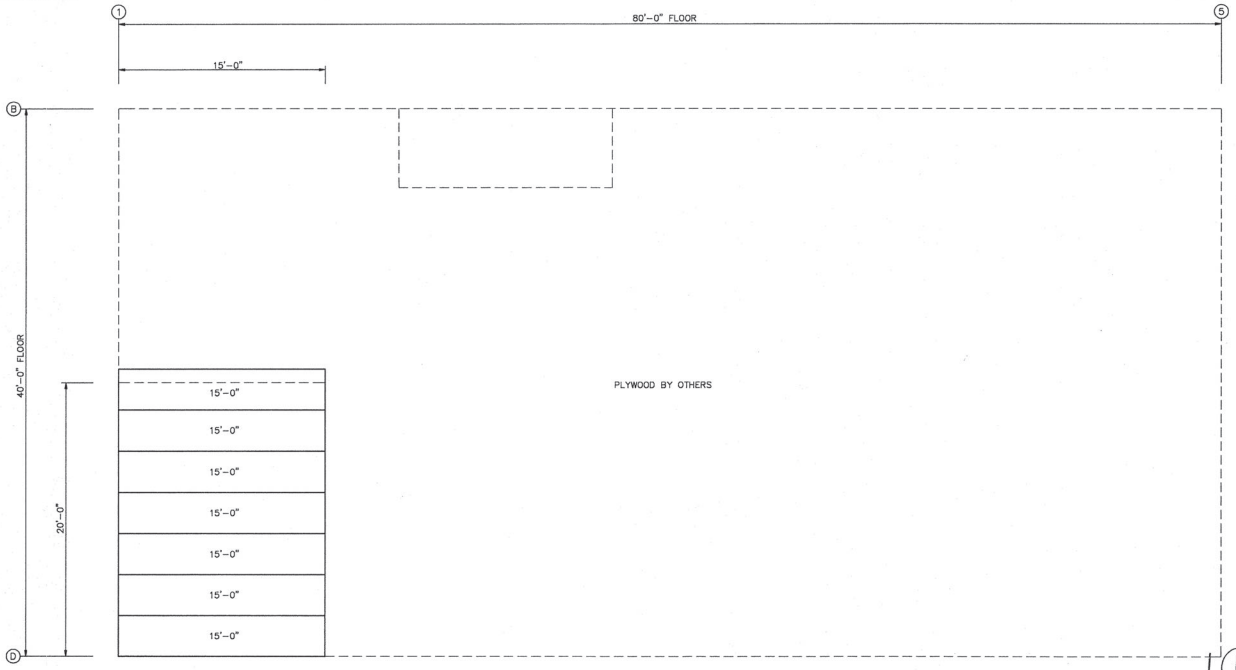
C) SIDE LAPS:
USE (1) #12 SCREW AT EACH SUPPORT

FIELD CUT DECKING AS REQUIRED.

DECK : PLYWOOD BY OTHERS

DECK ERECTION:

DESIGN AND SUPPLY ATTACHMENT OF WOOD DECK TO JOIST BY OTHERS.
SHEAR TO BE RESISTED BY SCREWS IS 110#/FT (0.7E)



MEZZANINE DECKING PLAN
DECK: 1.5C22
NOTE :- FIELD CUT DECK AT OPENING AS REQ'D

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9/24/2019
PROFESSIONAL ENGINEER

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FLOOR SHEETING & TRIM

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

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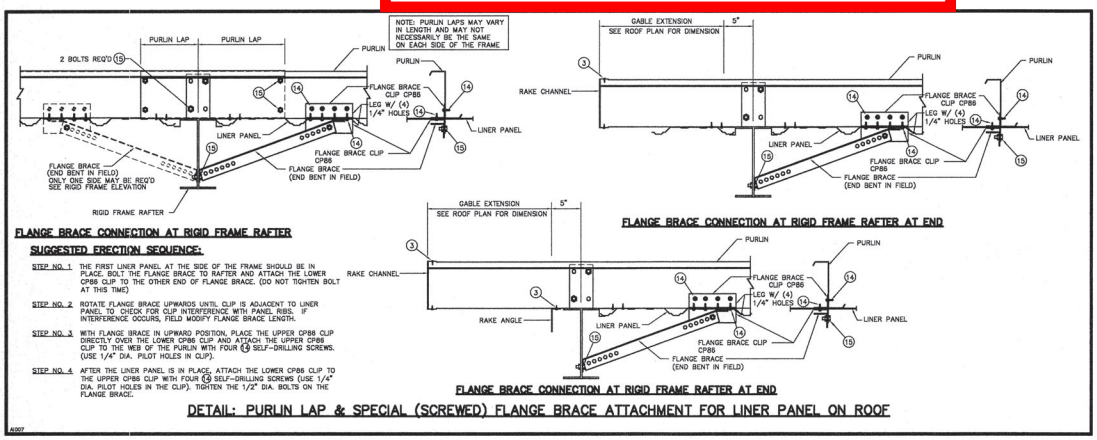

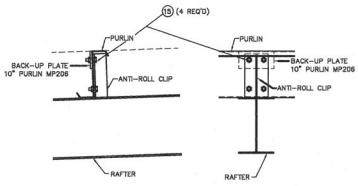

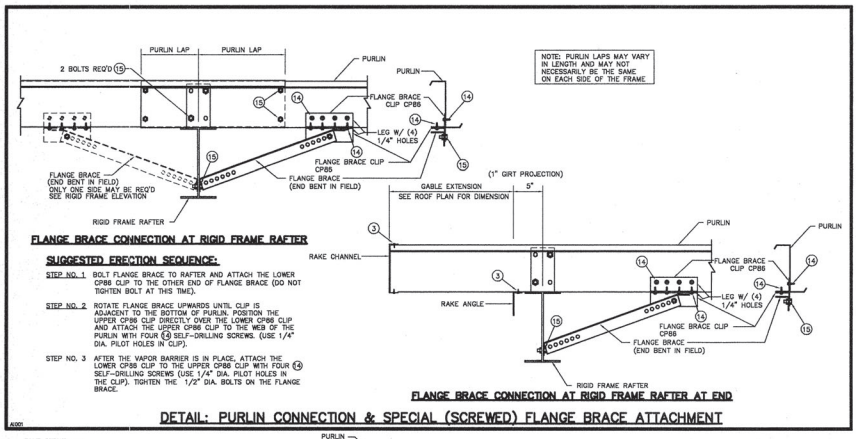

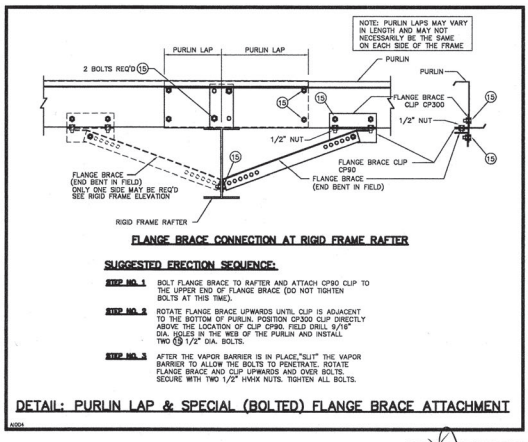

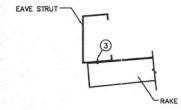

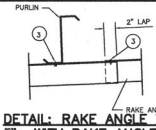

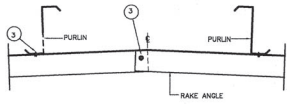

FASTENER SCHEDULE

LOC.	PART NUMBER	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION
(2)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADP1 ROOF
(3)	3228084	SCREW 12 X 1 HWH SD NW
(4)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW
(5)	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW
(6)	3228098	SCREW 8 X 1/2 HWH SD NW
(7)	3188333	BOLT 1/2 X 2 HVHX ASSST GALV & NUT (1328191)
(8)	1328189	BOLT 5/8 X 1 1/4 HVHX ASSST GALV & NUT (1328193)
(9)	1328187	BOLT 3/4 X 1 1/2 HVHX ASSST GALV & NUT (1328192)
(10)	1328180	BOLT 3/4 X 2 1/2 HVHX ASSST GALV & NUT (1328192)
(11)	3228106	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADP1 ROOF
(12)	3228103	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR
(13)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW FOR ADP1 ROOF
	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR

LOC.	PART NUMBER	DESCRIPTION
(14)	3228092	SCREW 12 X 1 1/4 HWH SD #3 PT NW
(15)	1328183	BOLT 1/2 X 1 1/2 HVHX ASSST GALV & NUT (1328191)
(16)	3208170	BOLT 1 1/2 X 1 PLT RD HD A307 PLTD & NUT (2888007)
(17)	3228102	SCREW 12 X 2 FL-TP SD WW
(18)	998011	BOLT 3/8 X 7/8 PHPS HS (W/O WASHER) & NUT (1888008)
(19)	3188003	BOLT 3/8 X 7/8 HEX HS (W/O WASHER) & NUT (2888008)
(20)	3228122	SCREW 1/4 X 1 1/2 HWH SD NW
(21)		SEE WALL PANEL ERECTION GUIDE FOR SCREW & SPACING
(22)	3228124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(23)	3228128	SCREW 12 X 1 LG-LF ST WW
(24)	3228138	SCREW 1/4 X 1 HWH SD NW
(25)	3208084	SCREW 10 X 1 1/2 HWH WOODTITE WW

ABBREVIATIONS

HD	= HEAD
SD	= SELF DRILLING
TP	= TAPPING
SS	= STAINLESS STEEL
ST	= SCREW
RD	= ROUND
WW	= WITH WASHER
NW	= NO WASHER
HX	= HEX
HVHX	= HEAVY HEX
UNPL	= UNPLATED
PLTD	= PLATED
HWH	= HEX WASHER HEAD
FL-TP	= FLAT TOP
LG-LF	= LONG LIFE
PHPS	= PHILLIPS

UNLESS OTHERWISE NOTED, CONNECTIONS BY THIS MANUFACTURER USING A-325 HIGH STRENGTH BOLTS ARE DESIGNED TO BE FASTENED USING THE "SNUG TIGHTENED" METHOD, AS DEFINED AND DESCRIBED IN THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION (RCSC, 6-23-2000), SECTION 4.1 "SNUG-TIGHTENED JOINTS" (REFERENCE SECTION 8.1).

NOTES:
1. FOR SEQUENCE OF ERECTION – SEE APPLICABLE WALL PANEL ERECTION GUIDE.
2. FOR FLANGE BRACE LOCATIONS – SEE FRAME CROSS SECTION AND ROOF FRAMING PLANS.
3. SOME FIELD DRILLING AND/OR FIELD CUTTING OF STEEL COMPONENTS MAY BE REQUIRED DURING THE ERECTION OF THIS BUILDING.
4. THE LENGTH OF THE FLANGE BRACE SUPPLIED AT EACH LOCATION WILL DETERMINE WHICH STANDARD LAP HOLE LOCATION (9, 1'-8, 2'-5 OR 3'-9) IS TO BE USED.
5. ATTACH FLANGE BRACE TO HOLE IN GIRT WHICH BEST FITS THE FLANGE BRACE LENGTH SUPPLIED FOR THE LOCATION.

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/23/19
REVIEWED BY DATE

MORAN
HAYDEN, CO 81639

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

ERECTION DETAILS

JOB NO. X2212 SHT. 26 OF 32

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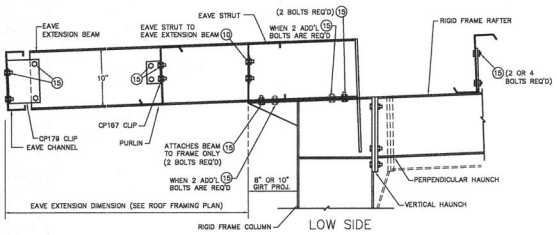
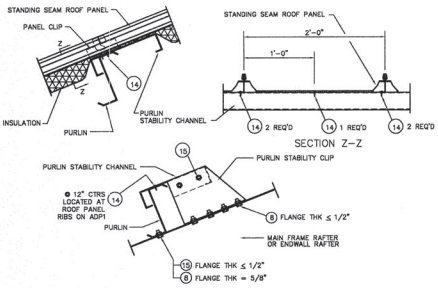
T.A.

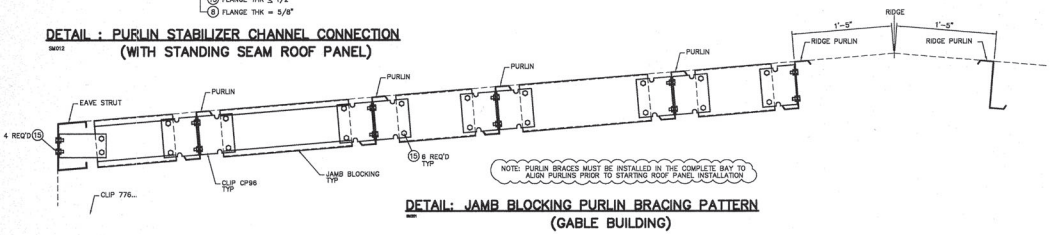
03/20/2020



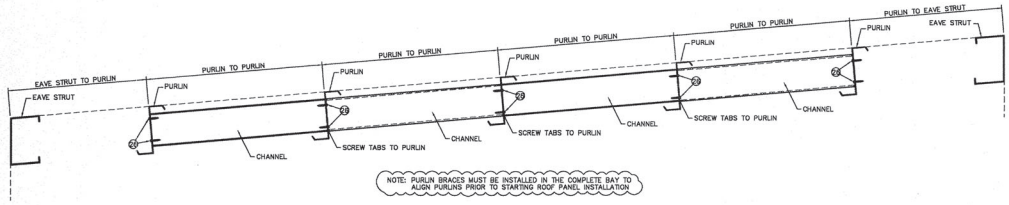
DETAIL: EAVE EXT BEAM CONNECTION @ RIGID FRAME



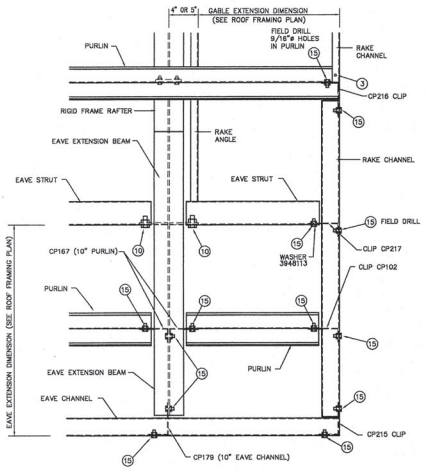
DETAIL : PURLIN STABILIZER CHANNEL CONNECTION
(WITH STANDING SEAM ROOF PANEL)



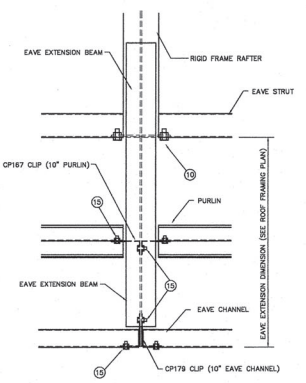
DETAIL: JAMB BLOCKING PURLIN BRACING PATTERN
(GABLE BUILDING)



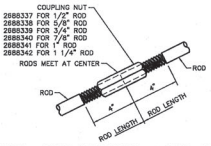
DETAIL: CONTINUOUS CHANNEL PURLIN BRACING PATTERN
(SINGLE SLOPE BUILDING)



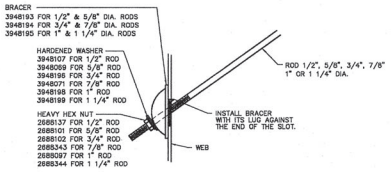
DETAIL: EAVE EXTENSION @ END W/ GABLE EXTENSION
(ENDWALL RAFTER FLUSH PURLINS)



DETAIL: EAVE EXTENSION @ RIGID FRAME (FLUSH PURLINS)



DETAIL: WIND BRACING – ROD SPLICING



DETAIL : WIND BRACING

FASTENER SCHEDULE

LOC.	PART NAME2	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION
(2)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW
(3)	3228084	SCREW 12 X 1 HWH SD NW
(4)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW
(5)	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW
(6)	3225099	SCREW 8 X 1/2 HWH SD NW
(6)	3180333	BOLT 1/2 X 2 HWH A325T GALV & NUT (1328191)
(6)	1328199	BOLT 5/8 X 2 1/4 HWH A325T GALV & NUT (1328193)
(6)	1328187	BOLT 3/4 X 1 1/2 HWH A325T GALV & NUT (1328192)
(6)	1328180	BOLT 3/4 X 2 1/2 HWH A325T GALV & NUT (1328192)
(7)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADJ'T ROOF
(7)	3228103	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR
(7)	3228101	SCREW 1/4 X 1 1/4 FL-TP SD WW FOR ADJ'T ROOF
(7)	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR
(8)	3228087	SCREW 12 X 1 1/4 HWH SD #5 PT NW
(9)	1328193	BOLT 1/2 X 1 1/2 HWH A325T GALV & NUT (1328191)
(9)	3228107	BOLT 1/2 X 1 1/2 HWH A325T GALV & NUT (2888007)
(9)	3228109	SCREW 12 X 2 FL-TP SD WW
(10)	988011	BOLT 3/8 X 7/8 PHPS HG (W/O WASHER) & NUT (2888008)
(10)	5188004	BOLT 3/8 X 7/8 HEX HD (W/O WASHER) & NUT (2888008)
(10)	3228122	SCREW 1/4 X 1 1/2 HWH SD NW
(11)		SEE WALL PANEL ERECTION GUIDE FOR SCREW & SPACING
(12)	3228124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(13)	3228128	SCREW 17 X 1 LG-LF ST WW
(13)	3228136	SCREW 1/4 X 1 HWH SD NW
(13)	3228084	SCREW 10 X 1 1/2 HWH WOODSITE WW

ABBREVIATIONS

HD	= HEAD
SD	= SELF DRILLING
ST	= SELF TAPPING
SS	= STAINLESS STEEL
RD	= ROUND
SQ	= SQUARE
WW	= WITH WASHER
NW	= NO WASHER
FLT	= FLAT
HWH	= HEXAGON HEAD
UNPL	= UNPLATED
PLTD	= PLATED
HWH	= HEX WASHER HEAD
FL-TP	= FLAT TOP
LG-LF	= LONG LIFE
PHPS	= PHILLIPS

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NOTES:

1. FOR SEQUENCE OF ERECTION – SEE APPLICABLE WALL PANEL ERECTION GUIDE.
2. FOR FLANGE BRACE LOCATIONS – SEE FRAME CROSS SECTION AND ROOF FRAMING PLANS.
3. SOME FIELD DRILLING AND/OR FIELD CUTTING OF STEEL COMPONENTS MAY BE REQUIRED DURING THE ERECTION OF THIS BUILDING.
4. THE LENGTH OF THE FLANGE BRACE SUPPLIED AT EACH LOCATION WILL DETERMINE WHICH STANDARD LAP HOLE LOCATION (9, 1'-8, 2'-5 OR 3'-9) IS TO BE USED.
5. ATTACH FLANGE BRACE TO HOLE IN GIRT WHICH BEST FITS THE FLANGE BRACE LENGTH SUPPLIED FOR THE LOCATION.

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/23/19
REVIEWED BY DATE

MORAN
HAYDEN, CO 81639

ERECTION DETAILS

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 27 OF 32

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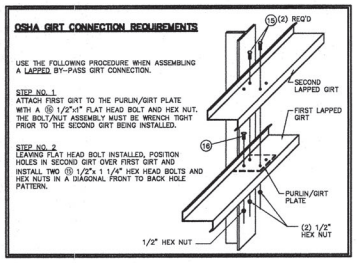
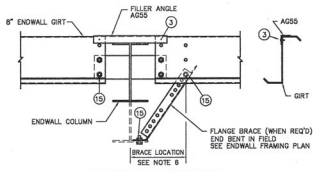
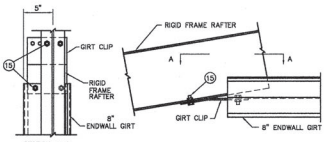
03/20/2020

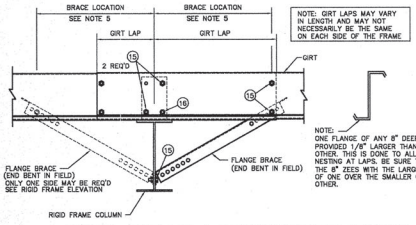




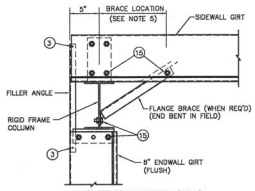
DETAIL: GIRT TO ENDWALL COLUMN W/ 1" GIRT PROJECTION



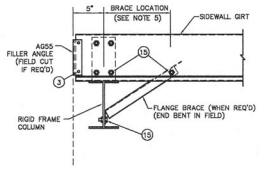
DETAIL: GIRT TO ENDWALL RAFTER



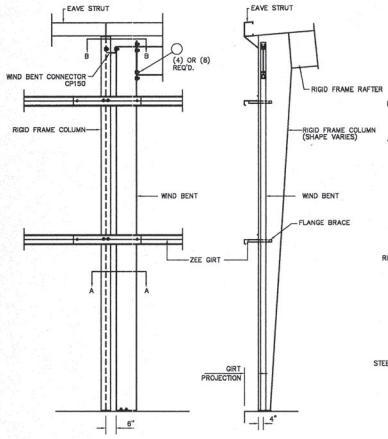
DETAIL: GIRT LAP & FLANGE BRACE PLACEMENT



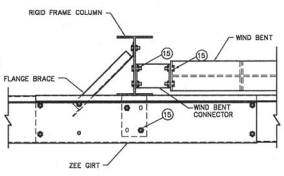
DETAIL: GIRT CONNECTION AT CORNER



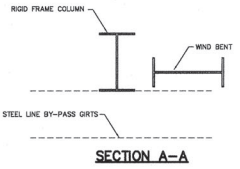
DETAIL: GIRT CONNECTION AT CORNER



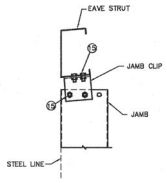
DETAIL: WIND BENT AT RIGID FRAME COLUMN W/ BY-PASS GIRTS W/ 2 BOLT STANDARD WIND BENT CONNECTOR



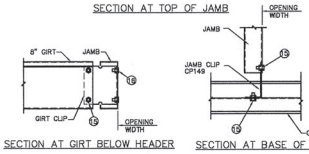
SECTION B-B



SECTION A-A



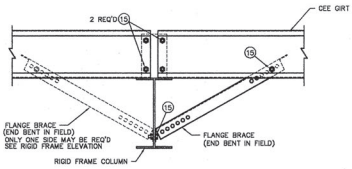
SECTION AT TOP OF JAMB



SECTION AT GIRT BELOW HEADER SECTION AT BASE OF JAMB

IF OPENING IS TO BE FIELD LOCATED, FIELD CUTTING & DRILLING IS REQ'D

DETAIL: JAMB CONNECTIONS FOR OPEN PATIO AREA



DETAIL: CEE GIRT CONNECTION & FLANGE BRACE PLACEMENT

FASTENER SCHEDULE

LOC.	PART NAME	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION
(2)	13228100	SCREW 1/4 X 3/4 FL-TP SD WW
(3)	13228084	SCREW 12 X 1 HWH SD NW
(4)	13228101	SCREW 12 X 1 1/4 FL-TP SD WW
(5)	13228105	SCREW 1/4 X 1 1/4 LG-LF SD WW
(6)	13228095	SCREW 8 X 1/2 HWH SD NW
(7)	13181333	BOLT 1/2 X 2 HWH ASSET GALV & NUT (13281811)
(8)	13281891	BOLT 5/8 X 2 1/4 HWH ASSET GALV & NUT (13281810)
(9)	13281827	BOLT 3/4 X 1 1/2 HWH ASSET GALV & NUT (13281812)
(10)	13281828	BOLT 3/4 X 2 1/2 HWH ASSET GALV & NUT (13281812)
(11)	13228100	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADPI ROOF
(12)	13281031	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR
(13)	13228101	SCREW 1/4 X 1 1/4 FL-TP SD WW FOR ADPI ROOF
(14)	13228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR

LOC.	PART NAME	DESCRIPTION
(15)	13228084	SCREW 12 X 1 1/4 HWH SD #5 PT NW
(16)	13281813	BOLT 1/2 X 1 1/2 HWH ASSET GALV & NUT (13281811)
(17)	13281707	BOLT 1/2 X 1 FLT RD HD A307 PLTD & NUT (13281007)
(18)	13228102	SCREW 12 X 2 FL-TP SD WW
(19)	13281811	BOLT 3/8 X 7/8 PHPS HD (W/D WASHER) & NUT (13281809)
(20)	13180003	BOLT 3/8 X 7/8 HEX HD (W/D WASHER) & NUT (13281809)
(21)	13228122	SCREW 1/4 X 1 1/2 HWH SD NW
(22)		SEE WALL PANEL ERECTION GUIDE FOR SCREW & SPACING
(23)	13228124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(25)	13228128	SCREW 17 X 1 LG-LF ST WW
(26)	13281836	SCREW 1/4 X 1 HWH SD NW
(27)	13180804	SCREW 10 X 1 1/2 HWH WOODSITE WW

ABBREVIATIONS	
HD	= HEAD
SD	= SELF DRILLING
ST	= SELF TAPPING
SS	= STAINLESS STEEL
RD	= ROUND
SQ	= SQUARE
WW	= WITH WASHER
NW	= NO WASHER
FLT	= FLAT
HVHX	= HEAVY HEX
UNPL	= UNPLATED
PLTD	= PLATED
PHPS	= PHILLIPS PAN WASHER HEAD
FL-TP	= FLAT TOP
LG-LF	= LONG LIFE
PHPS	= PHILLIPS

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4. THE LENGTH OF THE FLANGE BRACE SUPPLIED AT EACH LOCATION WILL DETERMINE WHICH STANDARD LAP HOLE LOCATION (9, 1'-8, 2'-5 OR 3'-9) IS TO BE USED.
5. ATTACH FLANGE BRACE TO HOLE IN GIRT WHICH BEST FITS THE FLANGE BRACE LENGTH SUPPLIED FOR THE LOCATION.

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/23/19
REVIEWED BY DATE

MORAN
HAYDEN, CO 81639

ERECTION DETAILS

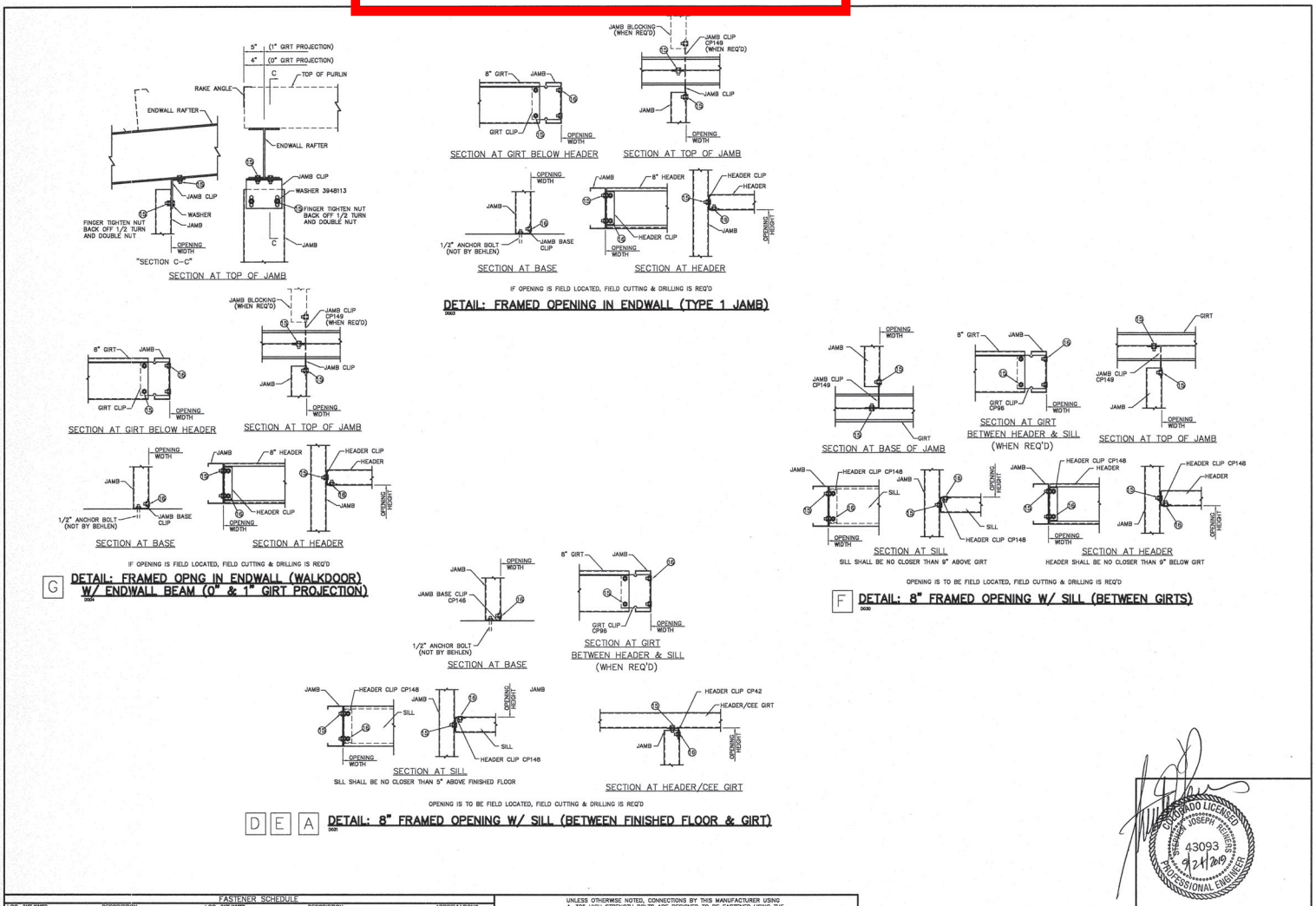
BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 28 OF 32

COMMONWEALTH OF KENTUCKY LICENSED STEPHEN JOSEPH REDDING 43093 PROFESSIONAL ENGINEER

RCRBD Record Set
T.A.

03/20/2020



FASTENER SCHEDULE

LOC.	PART NAME#	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION
(2)	13228106	SCREW 1/4 X 3/4 FL-TP SD WW
(3)	13228084	SCREW 12 X 1 HWH SD NW
(4)	13228101	SCREW 12 X 1 1/4 FL-TP SD WW
(5)	13228105	SCREW 1/4 X 1 1/4 LG-LF SD WW
(6)	13225092	SCREW 8 X 1/2 HWH SD NW
(7)	13180333	BOLT 1/2 X 2 HWH A325T GALV & NUT (13281B1)
(8)	13281B9	BOLT 5/8 X 2 1/4 HWH A325T GALV & NUT (13281B1)
(9)	13281B7	BOLT 3/4 X 1 1/2 HWH A325T GALV & NUT (13281B2)
(10)	13281B6	BOLT 3/4 X 2 1/2 HWH A325T GALV & NUT (13281B2)
(11)	13228103	SCREW 1/4 X 3/4 FL-TP SD WW FOR ASP1 ROOF
	13228103	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR
(12)	13228101	SCREW 12 X 1 1/4 FL-TP SD WW FOR ASP1 ROOF
	13228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR

LOC.	PART NAME#	DESCRIPTION
(13)	13228084	SCREW 12 X 1 1/4 HWH SD #3 PT NW
(14)	13281B1	BOLT 1/2 X 1 1/2 HWH A325T GALV & NUT (13281B1)
(15)	13281705	BOLT 1/2 X 1 PLT RD HD A307 PLTD & NUT (2688007)
(16)	13228102	SCREW 12 X 2 FL-TP SD WW
(17)	999011	BOLT 3/8 X 7/8 PHPS HD (W/D WASHER) & NUT (2680008)
(18)	5180003	BOLT 3/8 X 7/8 HEX HD (W/D WASHER) & NUT (2680008)
(20)	13228122	SCREW 1/4 X 1 1/2 HWH SD NW
(21)		SEE WALL PANEL ERECTION GUIDE FOR SCREW & SPACING
(23)	13228124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(24)	13228126	SCREW 17 X 1 LG-LF ST WW
(25)	13228138	SCREW 1/4 X 1 HWH SD NW
(27)	13228084	SCREW 10 X 1 1/2 HWH WOODITE WW

ABBREVIATIONS

HD	= HEAD
SD	= SELF DRILLING
ST	= SELF TAPPING
SS	= STAINLESS STEEL
RD	= ROUND
SQ	= SQUARE
WW	= WITH WASHER
NW	= NO WASHER
FLT	= FLAT
HWH	= HEAVY HEX
UNPL	= UNPLATED
PLTD	= PLATED
HWH	= HEX WASHER HEAD
FL-TP	= FLAT TOP
LG-LF	= LONG LIFE
PHPS	= PHILLIPS

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NOTES:

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4. THE LENGTH OF THE FLANGE BRACE SUPPLIED AT EACH LOCATION WILL DETERMINE WHICH STANDARD LAP HOLE LOCATION (9, 1'-8, 2'-3 OR 3'-9) IS TO BE USED.
5. ATTACH FLANGE BRACE TO HOLE IN GIRT WHICH BEST FITS THE FLANGE BRACE LENGTH SUPPLIED FOR THE LOCATION.

COLORADO LICENSED
JOSEPH
43093
9/24/2019
PROFESSIONAL ENGINEER

LETTER	REVISIONS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE

SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
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MORAN
HAYDEN, CO 81639

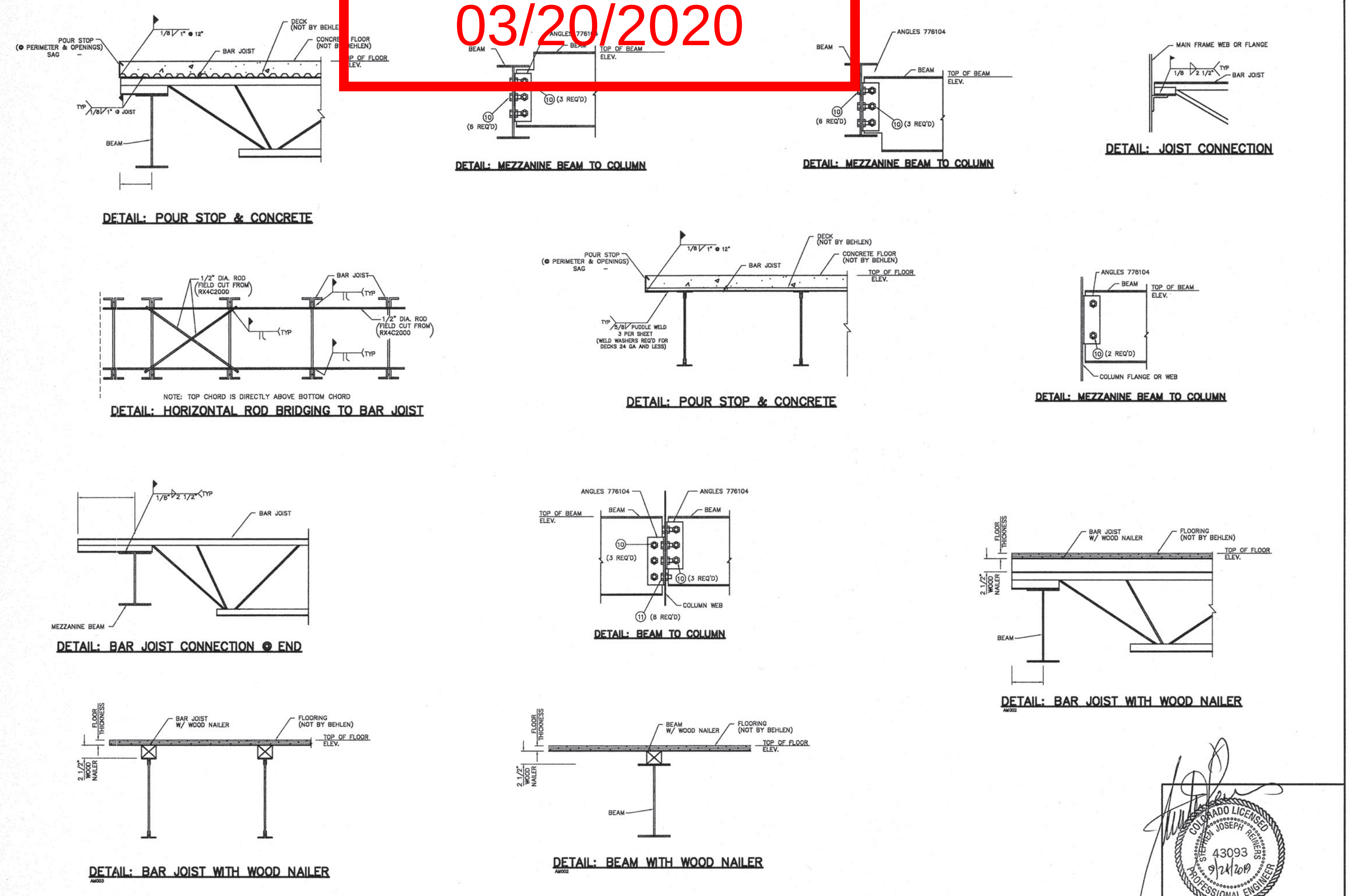
ERECTION DETAILS

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 29 OF 32

RCRBD Record Set
T.A.

03/20/2020



FASTENER SCHEDULE

LOC.	PART NUMBER	DESCRIPTION	LOC.	PART NUMBER	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION	(14)	3228087	SCREW 12 X 1 1/4 HWH SD #5 PT NW
(2)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW	(15)	1328193	BOLT 1/2 X 1 1/2 HVHX A325T GALV & NUT (1328191)
(3)	3228084	SCREW 12 X 1 HWH SD NW	(16)	3208170	BOLT 1/2 X 1 FLT RD HD A307 PLTD & NUT (2688007)
(4)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW	(17)	3228102	SCREW 12 X 2 FL-TP SD WW
(5)	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW			
(6)	3228099	SCREW 8 X 1/2 HWH SD NW	(19)	996011	BOLT 3/8 X 7/8 PHPS HD (W/O WASHER) & NUT (2688008)
			(20)	3188003	BOLT 3/8 X 7/8 HEX HD (W/O WASHER) & NUT (2688008)
(8)	3188333	BOLT 1/2 X 2 HVHX A325T GALV & NUT (1328191)	(21)	3228122	SCREW 1/4 X 1 1/2 HWH SD NW
(9)	1328199	BOLT 5/8 X 2 1/4 HVHX A325T GALV & NUT (1328195)	(22)		SEE WALL PANEL ERECTION GUIDE FOR SCREW & SPACING
(10)	1328187	BOLT 3/4 X 1 1/2 HVHX A325T GALV & NUT (1328192)	(23)	3228124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(11)	1328190	BOLT 3/4 X 2 1/2 HVHX A325T GALV & NUT (1328192)			
(12)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADP1 ROOF	(25)	3228126	SCREW 17 X 1 LG-LF ST WW
	3228103	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR	(26)	3228138	SCREW 1/4 X 1 HWH SD NW
(13)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW FOR ADP1 ROOF	(27)	3208084	SCREW 10 X 1 1/2 HWH WOODTITE WW
	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR			

ABBREVIATIONS

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SD = SELF DRILLING
ST = SELF TAPPING
SS = STAINLESS STEEL
PT = POINT
RD = ROUND
WW = WITH WASHER
NW = NO WASHER
FLT = FLAT
HVHX = HEAVY HEX
UNPL = UNPLATED
PLTD = PLATED
HWH = HEX WASHER HEAD
FL-TP = FLAT TOP
LG-LF = LONG LIFE
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SCALE : NONE
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COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 30 OF 32

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T.A.

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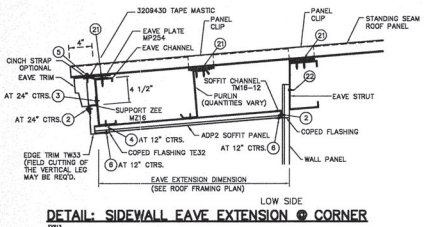
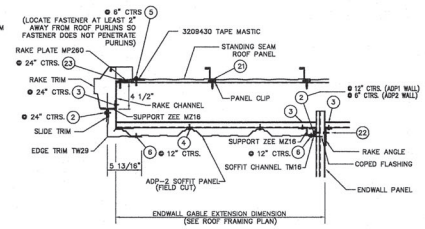
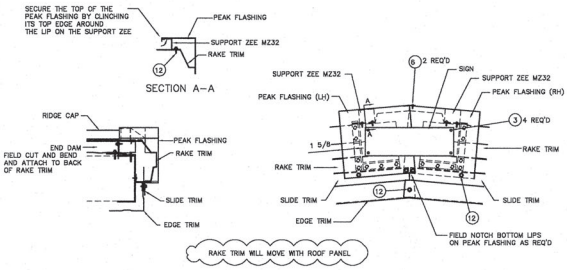


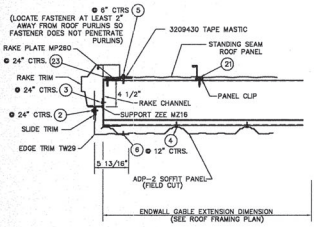
DETAIL: SIDEWALL EAVE EXTENSION @ CORNER



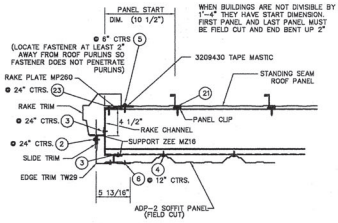
DETAIL: ENDWALL GABLE EXTENSION



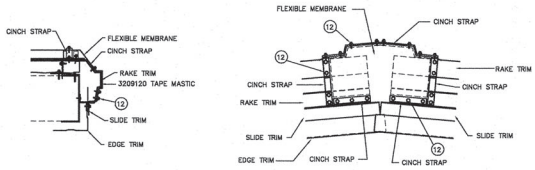
STEP 3 PEAK FLASHING CONNECTION



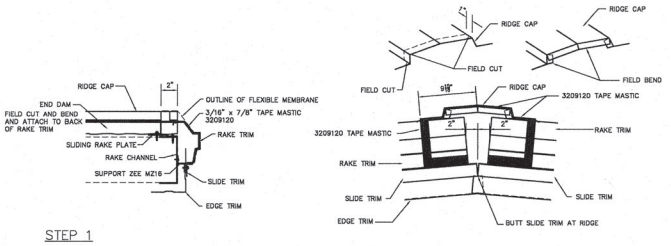
DETAIL: ENDWALL GABLE EXTENSION



DETAIL: ENDWALL GABLE EXTENSION

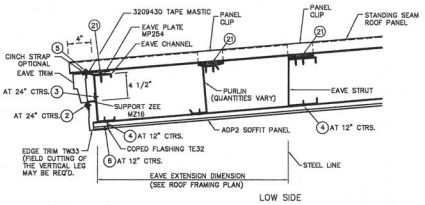


STEP 2 FLEXIBLE MEMBRANE & CINCH STRAP CONNECTION



STEP 1

DETAIL: RAKE TRIM ATTACHMENT AT BUILDING PEAK (GABLE EXTENSION)



DETAIL: SIDEWALL EAVE EXTENSION @ CORNER W/ ENDWALL GABLE EXTENSION

FASTENER SCHEDULE

LOC.	PART NUMBER	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION
(2)	13228100	SCREW 1/4 X 3/4 FL-TP SD WW
(3)	13228084	SCREW 12 X 1 HWH SD NW
(4)	13228101	SCREW 12 X 1 1/4 FL-TP SD WW
(5)	13228105	SCREW 1/4 X 1 1/4 LG-LF SD WW
(6)	13228095	SCREW 5 X 1/2 HWH SD NW
(7)	13181333	BOLT 1/2 X 2 HDGL ASSET GALV & NUT (13281911)
(8)	13281899	BOLT 5/8 X 2 1/4 HWH ASSET GALV & NUT (13281916)
(9)	13281787	BOLT 3/4 X 1 1/2 HWH ASSET GALV & NUT (13281912)
(10)	13281900	BOLT 3/4 X 2 1/2 HWH ASSET GALV & NUT (13281912)
(11)	13228100	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADP1 ROOF
(12)	13228103	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR
(13)	13228101	SCREW 12 X 1 1/4 FL-TP SD WW FOR ADP1 ROOF
	13228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR

LOC.	PART NUMBER	DESCRIPTION
(14)	13228083	SCREW 12 X 1 1/4 HWH SD #3 PT NW
(15)	13281913	BOLT 1/2 X 1 1/2 HWH ASSET GALV & NUT (13281911)
(16)	13281870	BOLT 1/2 X 1 PLT RD HD A307 PLTD & NUT (26880071)
(17)	13281105	SCREW 12 X 2 FL-TP SD WW
(18)	9980011	BOLT 3/8 X 7/8 PHPS HS (W/D WASHER) & NUT (26880081)
(19)	51880033	BOLT 3/8 X 7/8 HEX HS (W/D WASHER) & NUT (26880081)
(20)	13228122	SCREW 1/4 X 1 1/2 HWH SD NW
(21)	13228124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(22)	13228126	SCREW 12 X 1 LG-LF ST WW
(23)	13281836	SCREW 1/4 X 1 HWH SD NW
(24)	13228094	SCREW 10 X 1 1/2 HWH WOODTITE WW
(25)	13228095	SCREW 5 X 1/2 HWH SD NW
(26)	13228096	SCREW 5 X 3/4 HWH SD NW
(27)	13228097	SCREW 5 X 1 HWH SD NW
(28)	13228098	SCREW 5 X 1 1/4 HWH SD NW
(29)	13228099	SCREW 5 X 1 1/2 HWH SD NW
(30)	13228102	SCREW 1/4 X 1 1/2 LG-LF SD WW
(31)	13228104	SCREW 1/4 X 1 1/2 FL-TP SD WW
(32)	13228106	SCREW 1/4 X 1 3/4 LG-LF SD WW

ABBREVIATIONS

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SD	= SELF DRILLING
ST	= SELF TAPPING
SS	= STAINLESS STEEL
RD	= ROUND
WW	= WITH WASHER
NW	= NO WASHER
FLT	= FLAT
HWH	= HEAVY HEX
UNPL	= UNPLATED
PLTD	= PLATED
WSHR	= WASHER HEAD
FL-TP	= FLAT TOP
LG-LF	= LONG LIFE
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SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
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MORAN
HAYDEN, CO 81639

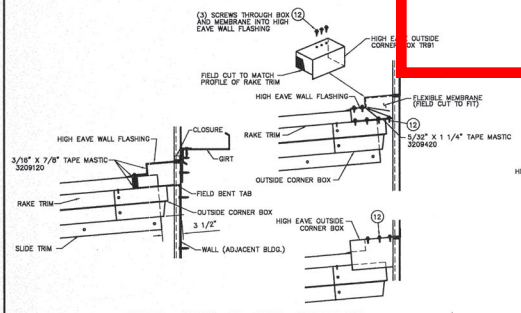
ERECTION DETAILS

BEHLEN MFG. CO.
COLUMBUS, NEBRASKA

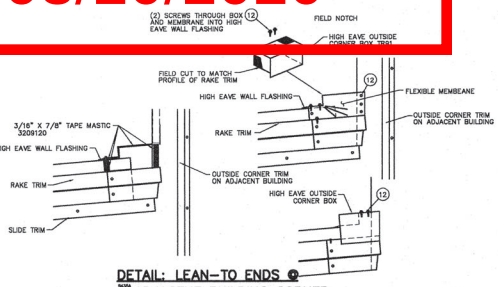
JOB NO. X2212 SHT. 31 OF 32

RCRBD Record Set
T.A.

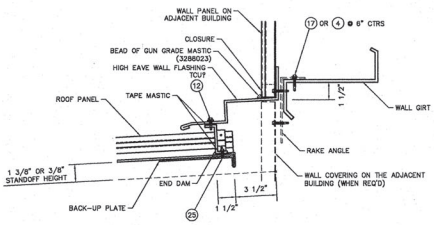
03/20/2020



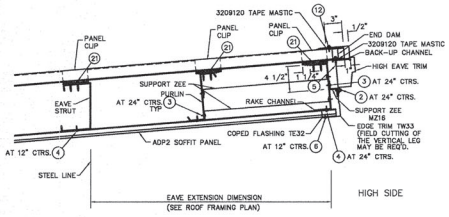
DETAIL: LEAN-TO STOP SHORT OF ADJACENT BUILDING CORNER



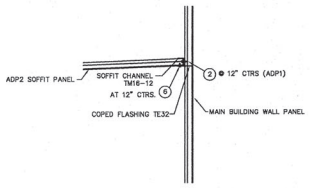
DETAIL: LEAN-TO ENDS @ ADJACENT BUILDING CORNER



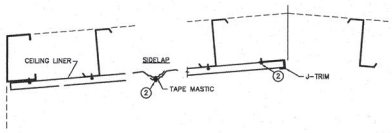
DETAIL: TRIM ALONG HIGH EAVE OF LEAN-TO-BUILDING



DETAIL: SIDEWALL EAVE EXTENSION AT CORNER OF HIGH EAVE OF LEAN-TO BUILDINGS



DETAIL: LEAN-TO SOFFIT PANEL TO MAIN BUILDING



DETAIL: CEILING LINER

FASTENER SCHEDULE

LOC.	PART NUMBER	DESCRIPTION
(1)		AS NOTED ON RIGID FRAME ELEVATION
(2)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW
(3)	3228084	SCREW 12 X 1 HWH SD NW
(4)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW
(5)	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW
(6)	3228098	SCREW 8 X 1/2 HWH SD NW
(8)	3186333	BOLT 1/2 X 2 HWHX A325T GALV. & NUT (1328191)
(9)	3328199	BOLT 5/8 X 2 1/4 HWHX A325T GALV & NUT (1328195)
(10)	3328187	BOLT 3/4 X 1 1/2 HWHX A325T GALV & NUT (1328197)
(11)	3328190	BOLT 3/4 X 2 1/2 HWHX A325T GALV & NUT (1328197)
(12)	3228100	SCREW 1/4 X 3/4 FL-TP SD WW FOR ADP1 ROOF
	3228103	SCREW 1/4 X 3/4 LG-LF SD WW FOR SSR
(13)	3228101	SCREW 12 X 1 1/4 FL-TP SD WW FOR ADP1 ROOF
	3228105	SCREW 1/4 X 1 1/4 LG-LF SD WW FOR SSR

LOC.	PART NUMBER	DESCRIPTION
(14)	3228083	SCREW 12 X 1 1/4 HWH SD #5 PT NW
(15)	3328193	BOLT 1/2 X 1 1/2 HWHX A325T GALV & NUT (1328191)
(16)	3328178	BOLT 1/2 X 1 FLT SD HD A307 PLTD & NUT (2688007)
(17)	3228102	SCREW 12 X 2 FL-TP SD WW
(18)	9990111	BOLT 3/8 X 7/8 PNPS HD (W/O WASHER) & NUT (2688008)
(20)	N180004	BOLT 3/8 X 7/8 HEX HD (W/O WASHER) & NUT (2688008)
(21)	3328129	SCREW 1/4 X 1 1/2 HWH SD NW
(23)		SEE WALL PANEL ERECTION GUIDE FOR SCREW & SPACING
(24)	3328124	SCREW 1/4 X 1 1/4 HWH SHOULDER SD NW
(25)	3328128	SCREW 17 X 1 LG-LF ST NW
(26)	3328138	SCREW 1/4 X 1 HWH SD NW
(27)	3208084	SCREW 10 X 1 1/2 HWH WOODTITE WW

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ST	= SELF TAPPING
SS	= STAINLESS STEEL
RT	= ROD
RD	= ROUND
WW	= WITH WASHER
NW	= NO WASHER
FLT	= FLAT
HVHX	= HEAVY HEX
UNPL	= UNPLATED
PLTD	= PLATED
HWH	= HEX WASHER HEAD
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COLORADO LICENSED STEPHEN M. JOSEPH 43093 9/24/2019 PROFESSIONAL ENGINEER

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SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
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COLUMBUS, NEBRASKA

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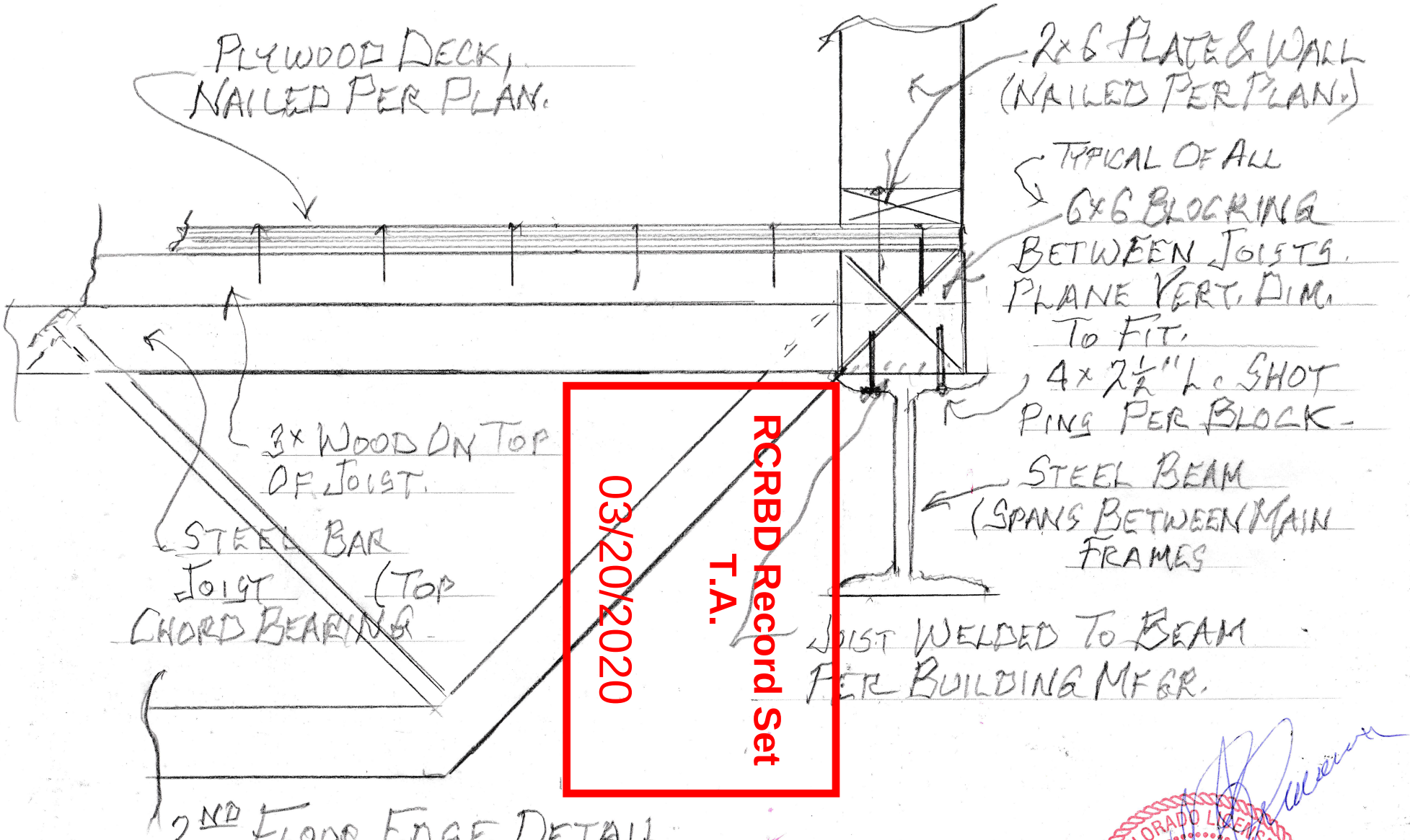
JOB NO. X2212
SHT. 32 OF 32



RCRBD Record Set
T.A.
03/20/2020

2ND FLOOR EDGE DETAIL
(2" = 1'-0")

COLORADO LICENSED
GREGORY H. HERMANN
174222
PROFESSIONAL ENGINEER

MORAN STEEL BUILDING
LONESOME BEAR RANCH
ROUTT COUNTY, CO.

RCRBD PERMIT # TB-19-830
3/19/20

RCRBD
Record Set

48" Sq. Pad, Top=96'-0" Min. 15" Th. w/ #5's @ 6" o.c.e.w.

60" Sq. Pads Top=96'-0" Min. 15" Th. w/#5's @ 6" o.c.e.w.

48" Sq. Pad, Top =96'-0", Min. 15" Th. w/#5's @ 16" o.c.e.w.

12" Sq. Pedestal Top=100'-0" (Typical Of 6, Per Detail 'D') (Sh. 2S)

80'-0"

19'-7" | 20'-0" | 20'-0" | 19'-7"

5" | 1'-0" (Typ. Of A) | A

18'-11¾"

7'-0"

2'-0" | 3'-0" (Door) | B-1 | B-2 | B-3 | B-4 | 8'-9" (Typ. Of 6) | 2'-0"

Block Top Of Wall Down To 99'-0" @ 2 - O.H. Doors & @ 2 Man Doors & Pour Slab Over.

Top Of Stem Wall & Pilasters = 100'-0" Throughout, Except @ 4 Doorways.

Top Of Footer = 96'-0" Throughout (Including Pads Under Pilasters)

4'-0" | 4'-0" (Typical Of 6)

12" Wide x 12" Min. Th. Concr. Tie Beam w/ 4 - #4's, Contin. Top Of Beam = 99'-0" (Typical Of 3)

C

8" Th. Concr. Stem Wall, Per Sec. 'A', (3 Sides)

16" Wide x 18" Min. Th. Concr. Footer w. 2 - #5's, Contin., Per Sec. 'A', (3 Sides)

Slab Floor, Per Slab Plan - Sh. 3S

Pads Below Pilasters: Top=96'-0", Min. 18" Th. #5's @ 6" o.c.e.w. (Typical Of 10)

40'-0"

14'-0" (O.H. Door)

9'-0" (Man Door)

4'-0"

4'-2"

1'-0"

D-1 | 2'-6" (Typ. Of 4) | 1'-0" | D-2 | 1'-0" | 2'-8" (Typ. Of 6) | D-3 | 3'-2" | 3'-2" | D-4 | 1'-0" | 2'-6" (Typ. Of 4) | D-5 | 1'-0"

13'-11¾"

12" / 8" Th. Concr. Stem Wall Per Sec. 'B', (This Side Only)

3'-0" (Door) | 1'-6"

B

4" ϕ PVC Drain To Daylight.

4" ϕ, D-2729 Perf. PVC Footer Drain, Per Secs. 'A' & 'B'

20" Wide x 18" Min. Th. Footer w/ 9 - #5's, Contin., Per Sec. 'B' (This Side Only)

18" / 12" Sq. Pedestal, Top=105'-0" Per Detail 'E' - (Typical Of 4) (Sh. 2S)

54" Sq. Pads, Top=96'-0" Min. 15" Th., w/ #5's @ 6" o.c.e.w.

42" Sq. Pads, Top=96'-0" Min. 15" Th., w/ #5's @ 6" o.c.e.w.

Foundation Plan
(3/16" = 1'-0")

Pilaster Details On Sh. 4S

Set All Anchor Bolts w/ Templates, Per Behlen A.B. Layout.

Exp. Joint

100'-0"

Base Channel Over 'Sill Seal'

98'-10"

#3's @ 9" o.c.e.w.

2 - #5's, Contin., Top & Bottom.

Compacted Backfill, Per Soils Letter

2 - 4" ϕ PVC Cleanouts

R-15

#5 Horiz., Contin.

#5's 5 | 60 @ 18" o.c. w/ Alt. Legs In Footer

1'-9" (Typ. Of 4)

2'-0" | 5'-9"

96'-0"

Pad Beyond

B-5

94'-6" Max

Membrane - 'Mirafi' #600X or Equal.

4" ϕ, D2729 Perf. PVC. In ¾" Scr. Rock, Covered w./ 'Mirafi' #140N.

Min. 2" Th. EPS Insul. Over Bituthastic Coating.

Section 'A'
(1" = 1'-0")

Rock Veneer

100'-0"

99'-0" (Rock Ledge)

R-15

98'-10"

8"

#5's 7 | 60 @ 18" o.c. w/ Alt. Legs In Footer

#4, Contin.

#4's 5 | 12 @ 18" o.c.

12"

Section 'B'
(1" = 1'-0")

12"

6" | 6"

99'-10"

99'-0" (Frame)

98'-0" (Max.)

4 - #4's Contin.

Section 'C'
(1" = 1'-0")

FOUNDATION

BARN / BUNKHOUSE
LONESOME BEAR RANCH
ROUTT COUNTY, COLORADO

REVISION LOG

NO.	DESCRIPTION	DATE	D	C	A

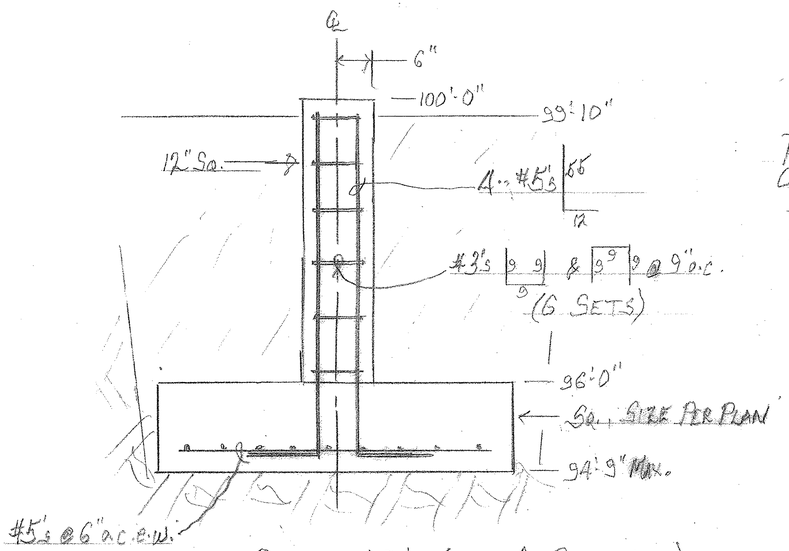
Bear Valley Design, Ltd.
Engineers - Consultants
P. O. BOX 475 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5484

DATE: Sept '16 | SCALE: As Noted | JOB: — | REV.: 0

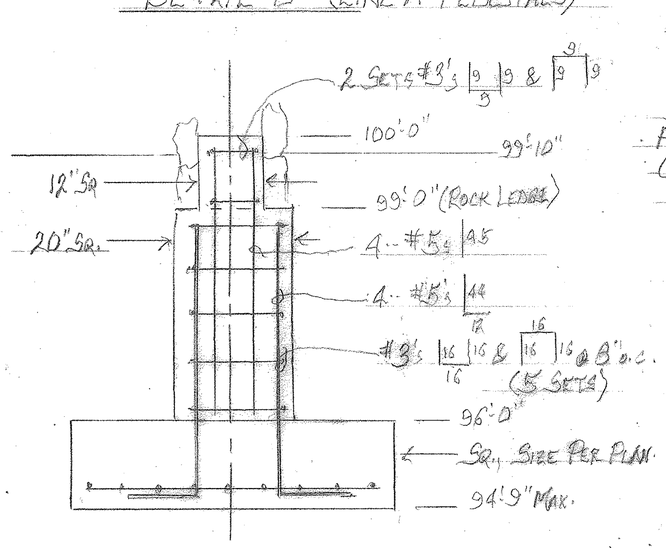
DRWN. | CHK. | APP.

SHEET 15 OF 35-D

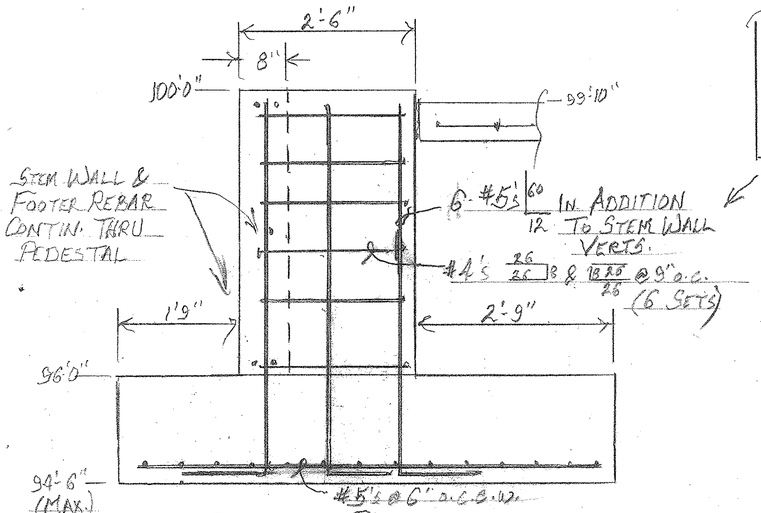
RCRBD
Record Set



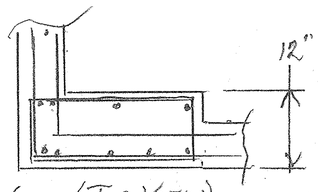
DETAIL 'D' - (LINE A PEDESTALS)



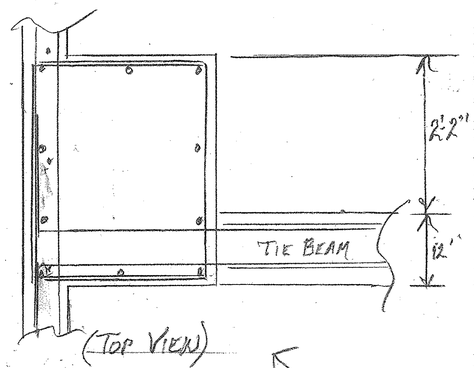
DETAIL 'E' - (LIKE E PEDESTALS)
(1" = 1'-0")



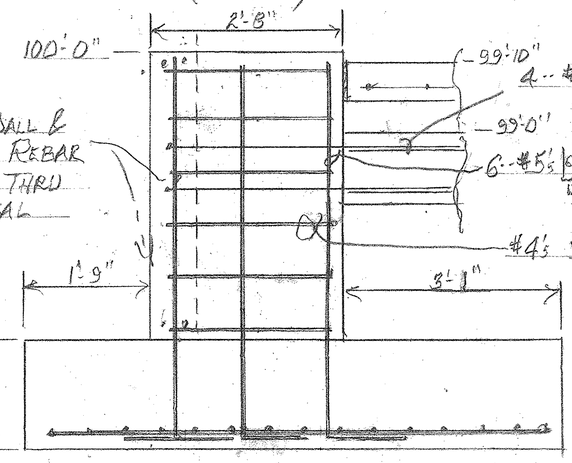
PILASTER DETAIL
(B-1, B-5, D-1, D-5)
(1" = 1'-0")



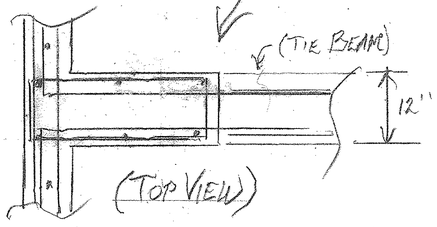
(TOP VIEW)



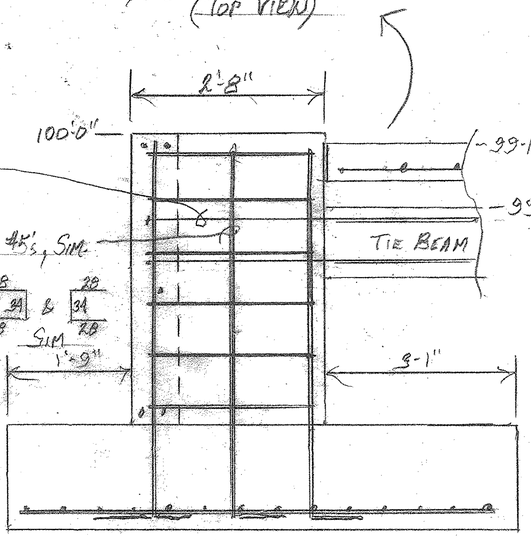
(TOP VIEW)



PILASTER DETAIL
(B-2, D-2)
(1" = 1'-0")



(TOP VIEW)



PILASTER DETAIL
(B-3, B-4, D-3, D-4)
(1" = 1'-0")

REVISION LOG

NO.	DESCRIPTION	DATE	D	C	A

FOUNDATION
BARN / BUNKHOUSE
LONESOME BEAR RANCH
ROUTT COUNTY, COLORADO

Bear Valley Design, Ltd.
Engineers - Consultants
P. O. BOX 475 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5454

DATE: Sept '19 | SCALE: 1"=1'-0" | JOB: - | REV.: 0
DRWN. | CHK. | APR.
SHEET 2.3 OF BS-D

RCRBD
Record Set

Hi Ted--

Per our discussion this afternoon, Mike and I will be working with Scott Myller in order to address all of the issues you have raised with respect to occupancy separation and other 'upstairs' issues in the subject building.

Yes, the slab on the main floor will incorporate hydronic radiant heating, and insulation under the slab, between the 'Barrier' vapor barrier I specified on the drawing and the foam material (with buttons for locating the tubing) with have an R value of at least R5.

The anchor bolts will be as follows:

3/4" D., imbedded in the pilasters (5 locations on each side) will be 36" long with a 4" right angle hook at the bottom and 5" length of 3/4"
D. UNC thread at the top.

3/4" D. imbedded in the end walls for end wall columns will be 18" long with a 3" right angle hook at the bottom and 5" length of 3/4" D. UNC thread at the top.

All 1/2" D. bolts for miscellaneous door frame attachments may b typically available commercial drill in type cinch anchors.

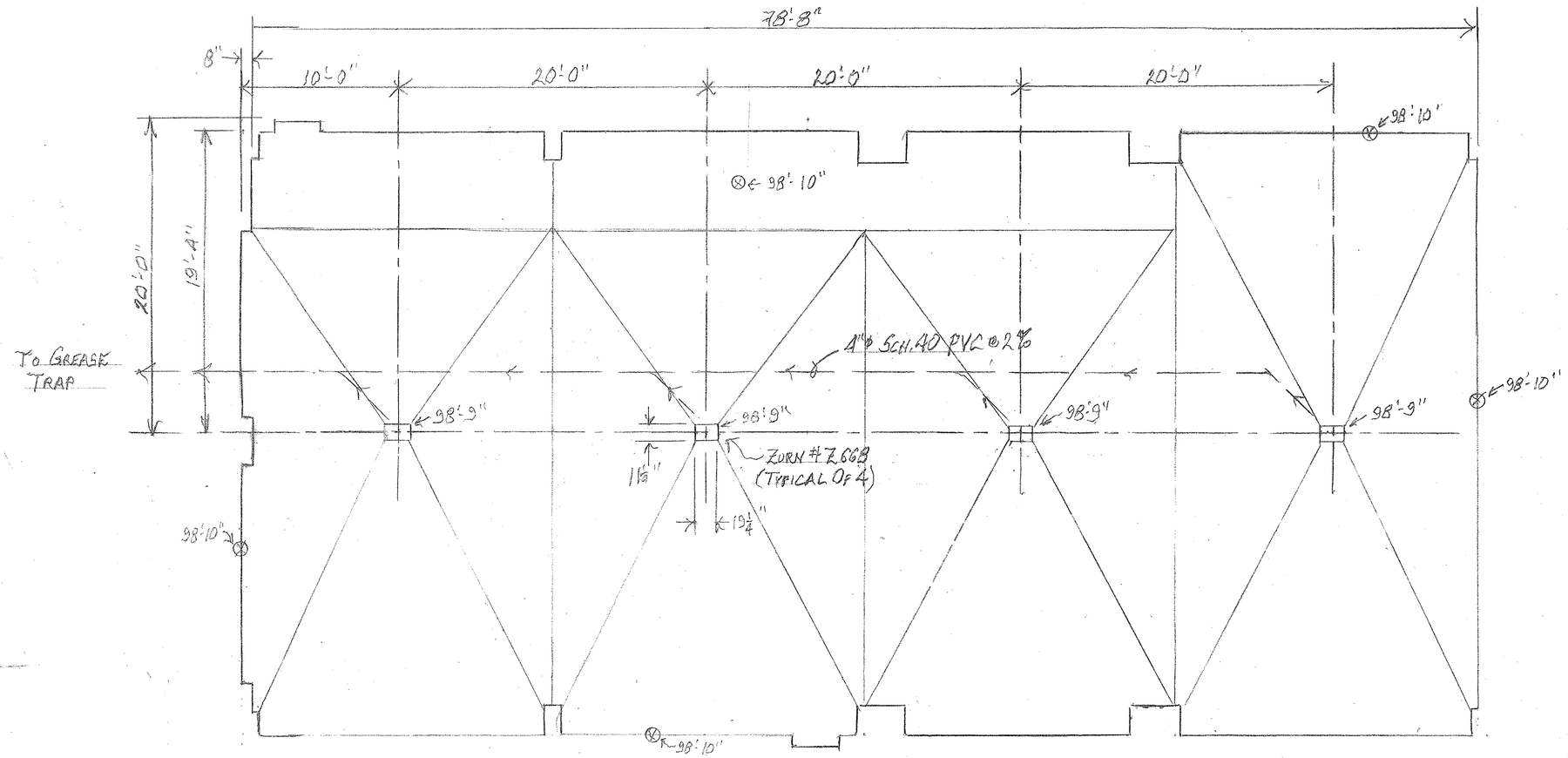
All 3/4" bolt shall be either of A-36 steel or meet the building manufacturer's noted 'F1554' spec, whichever is more stringent.

At the present time, Mike and I are discussing alternative methods for dealing with the insulation gap you pointed out where the rock veneer (which is not extend more than 4 ' above grade) extends below grade. We will have this detail worked out before it is time to pour the floor slab.

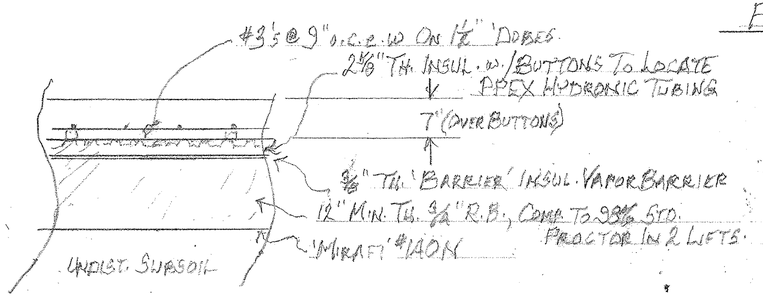
Mike is planning to come by your office today (Friday 10/4) and I hope that this info is sufficient so that you will be able to issue the foundation permit for the building when he arrives there.

Thanks, and best regards,

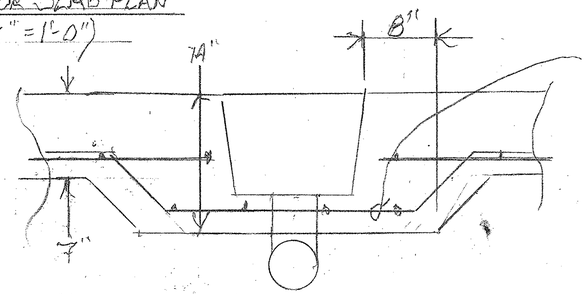
Greg



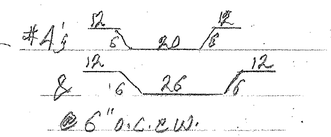
FLOOR SLAB PLAN
(¼" = 1'-0")



TYPICAL SLAB SECTION
(1" = 1'-0")



SLAB DETAIL @ FLOOR DRAINS
(2" = 1'-0")



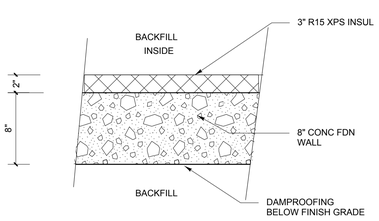
SLAB PLAN & DETAILS
BARN & BUNKHOUSE
LONESOME BEAR RANCH
ROUTT COUNTY, COLORADO

REVISION LOG

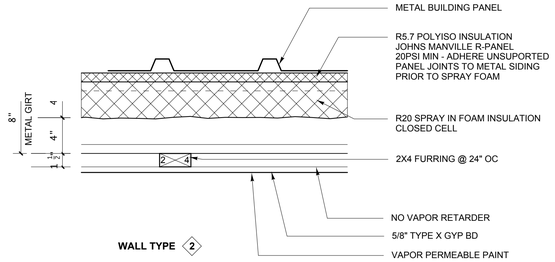
NO.	DESCRIPTION	DATE	D	C	A

Bear Valley Design, Ltd.
Engineers - Consultants
P. O. BOX 475 STEAMBOAT SPRINGS, COLO. 80477 (970) 879-5454

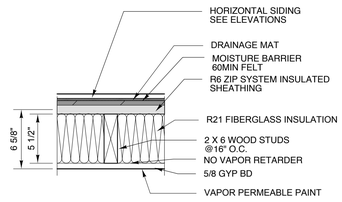
DATE: 10/4/10 SCALE: AS NOTED JOB: — REV: 0
DRWN. CHK. APR.
SHEET 3 OF 3 S-D



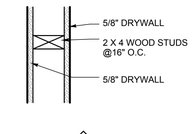
WALL TYPE 1



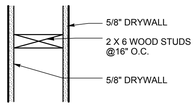
WALL TYPE 2



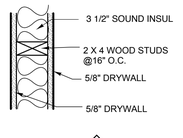
WALL TYPE 3



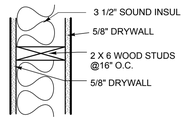
WALL TYPE 4



WALL TYPE 5



WALL TYPE 6

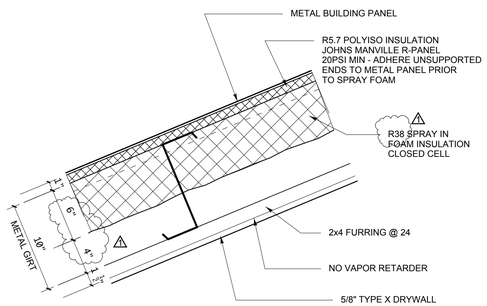


WALL TYPE 7

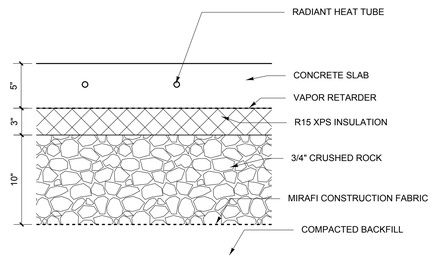
1 WALL TYPES

A3.2

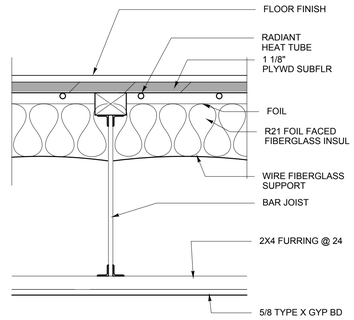
1 1/2" =1'- 0"



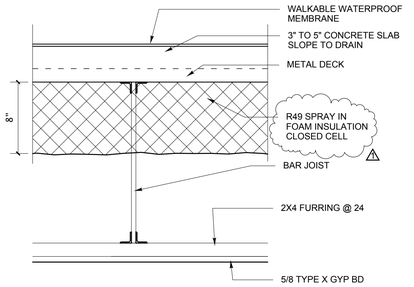
ROOF TYPE R



FLOOR TYPE F



FLOOR TYPE G

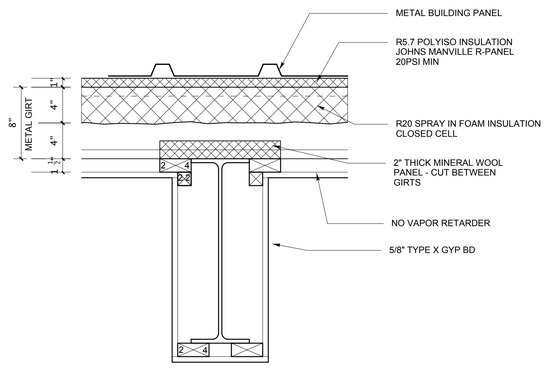


ROOF TYPE H

2 ROOF TYPES

A3.2

1 1/2" =1'- 0"



3 FLOOR TYPES

A3.2

1 1/2" =1'- 0"

4 COLUMN FIRE PROTECTION

A3.2

1 1/2" =1'- 0"

Architect
scott myller. architect
652 Ruby Square
P. O. Box 771854
Steamboat Springs, CO 80477
970.846.1700

Structural Engineer

STATE OF COLORADO
SCOTT MYLLER
C-5015
LICENSED ARCHITECT
3/11/20

RCRBD Record Set
T.A.
03/20/2020

MORAN RESIDENCE

30857 COUNTY RD 53
HAYDEN
COLORADO

REVISIONS:

REV. DATE:	REV. NAME:	REV. NO.:
3/11/20	INSULATION R-VALUE	1

NOTES:

WALL TYPES
FLOOR TYPES
ROOF TYPE

date: 9 MAR 2020
scale: 1/4" = 1' - 0"

A3.2

RCRBD Record Set
T.A.

03/20/2020

STATE OF COLORADO
SCOTT MYLLER C-5015
LICENSED ARCHITECT
3/9/20

Architect
scott myller. architect
652 Ruby Square
P. O. Box 771854
Steamboat Springs, CO 80477

970.846.1700

2015 INTERNATIONAL RESIDENTIAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE

BUILDING CODE ANALYSIS:
SINGLE FAMILY RESIDENCE OVER A GARAGE

OCCUPANCY:
R3

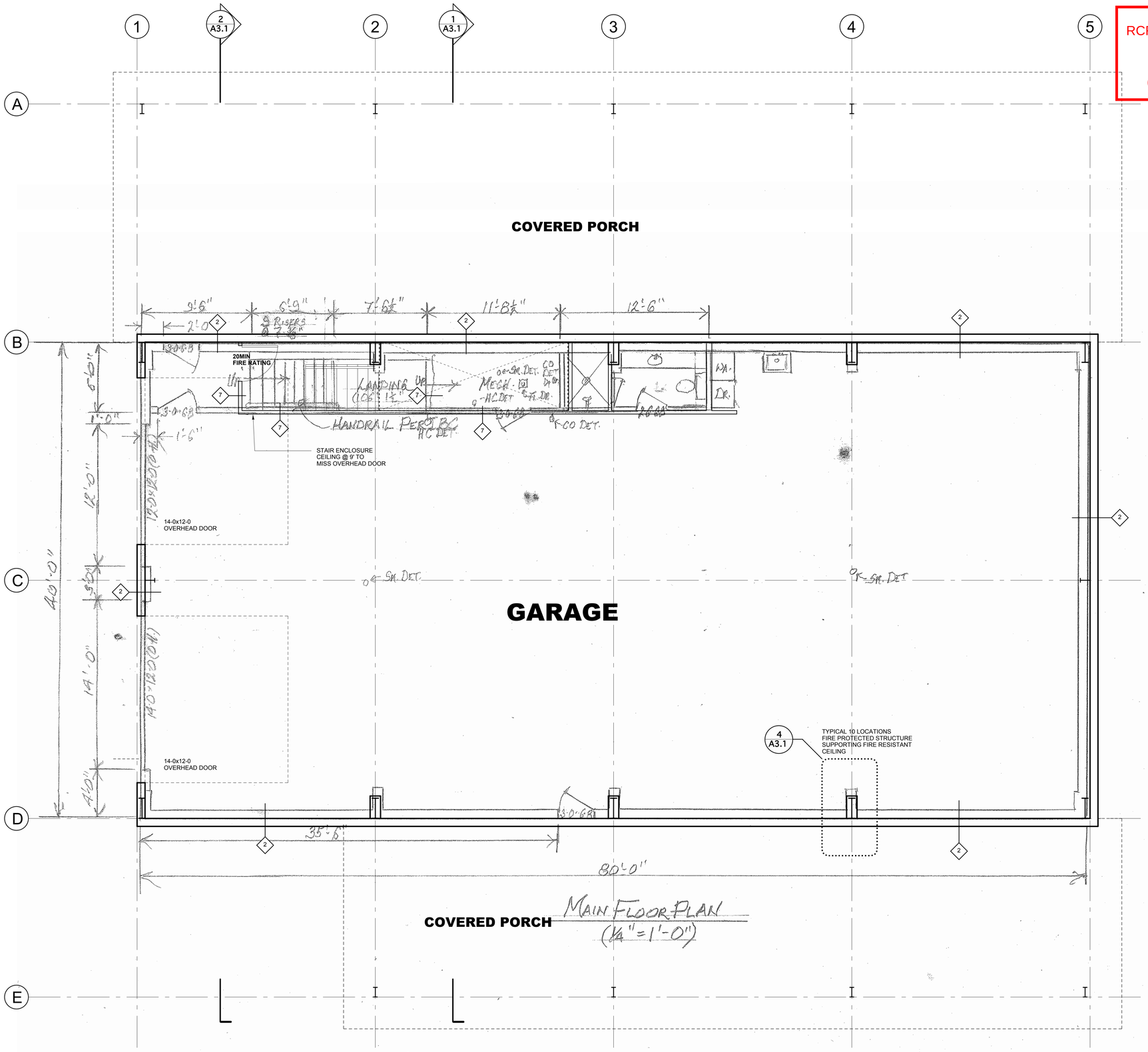
TYPE OF CONSTRUCTION:
VN - UN-SPRINKLERED

SEPARATION BETWEEN R3 AND GARAGE:
5/8" TYPE X GYP BOARD ON CEILING OF GARAGE
5/8" TYPE X GYP BOARD PROTECTING STRUCTURE SUPPORTING ABOVE
1/2" GYP BOARD ON WALLS SEPARATING OCCUPANCIES

ALLOWABLE FLOOR AREA:
>10,000 sf & 2 Stories
Unit Area = 3200 main + 3200 upper

SECOND STORY EXITING REQUIREMENTS:
One exit required for up to 10 occupants
One exit required for R3 occupancy

CLIMATE ZONE 7
All Windows and Doors shall carry a U-Value of 0.32 min.



MORAN RESIDENCE

30857 COUNTY RD 53
HAYDEN
COLORADO

REVISIONS:

REV. DATE:	REV. NAME:	REV. NO.:

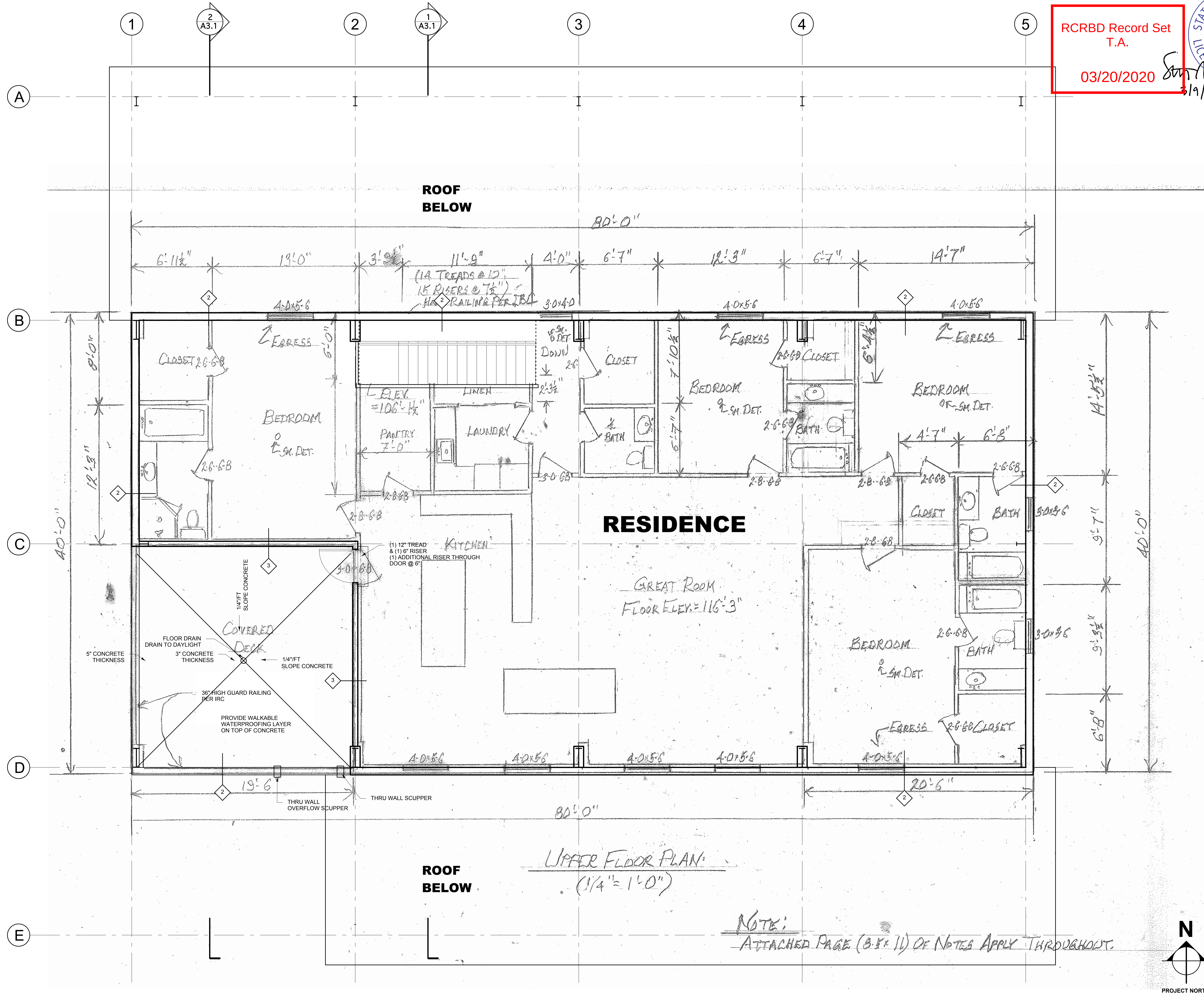
NOTES:

MAIN FLOOR WALL TYPE PLAN

date: 9 MAR 2020
scale: 1/4" = 1' - 0"

N
PROJECT NORTH

A2.1


ROOF BELOW
80'-0"
6'-11½"
13'-0"
3'-9½"
11'-9"
4'-0"
6'-7"
12'-3"
6'-7"
14'-7"
(14 TREADS @ 10")
15 RISERS @ 7½"
HANDRAILING PER IBC
4-0x5-6
3-0x4-0
CLOSET 2-6-6B
EGRESS
BEDROOM
SM. DET.
2-6-6B
ELEV. = 106'-4½"
LINEN
PANTRY 7'-0"
LAUNDRY
DOWN
CLOSET
BATH
2-8-6B
3-0-6B
RESIDENCE
KITCHEN
(1) 12" TREAD & (1) 6" RISER (1) ADDITIONAL RISER THROUGH DOOR @ 6"
1/4"/FT SLOPE CONCRETE
COVERED DECK
FLOOR DRAIN DRAIN TO DAYLIGHT
3" CONCRETE THICKNESS
5" CONCRETE THICKNESS
1/4"/FT SLOPE CONCRETE
36" HIGH GUARD RAILING PER IRC
PROVIDE WALKABLE WATERPROOFING LAYER ON TOP OF CONCRETE
GREAT ROOM
FLOOR ELEV. = 116'-3"
4'-7"
6'-8"
3-0x5-6
40'-0"
8'-0"
12'-3"
14'-5½"
9'-7"
9'-3½"
6'-8"
19'-6"
20'-6"
THRU WALL SCUPPER
THRU WALL OVERFLOW SCUPPER
80'-0"
UPPER FLOOR PLAN
(1/4" = 1'-0")
NOTE:
ATTACHED PAGE (8.5x 11) OF NOTES APPLY THROUGHOUT.
ROOF BELOW
N
PROJECT NORTH

RCRBD Record Set
T.A.
03/20/2020

STATE OF COLORADO
SCOTT MYLLER
C-5015
LICENSED ARCHITECT
3/19/20

Architect
scott myller. architect
652 Ruby Square
P. O. Box 771854
Steamboat Springs, CO 80477
970.846.1700

MORAN RESIDENCE

30857 COUNTY RD 53
HAYDEN
COLORADO

REVISIONS:

REV. DATE:	REV. NAME:	REV. NO.:

NOTES:

2ND FLOOR WALL TYPE PLAN

date: 9 MAR 2020
scale: 1/4" = 1' - 0"

A2.2

RCRBD Record Set
T.A.

03/20/2020

STATE OF COLORADO
SCOTT MYLLER
C-5015
LICENSED ARCHITECT
3/9/20

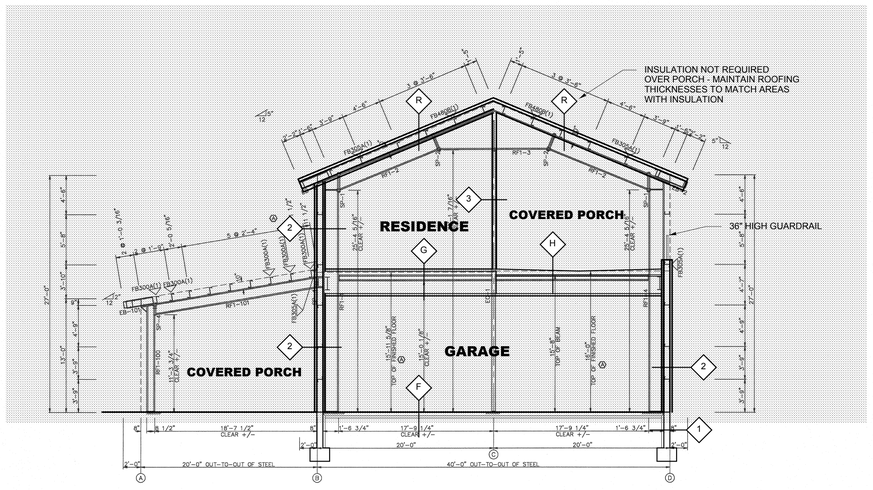
Architect
scott myller. architect
652 Ruby Square
P. O. Box 771854
Steamboat Springs, CO 80477

970.846.1700

Structural Engineer

SPLICE PLATE & BOLT TABLE										CAP PLATE BOLTS				
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length	Mark	Qty	Type	Dia	Length
SP-1	4	4	0	A325	0.750	3.50	8"	1/2"	2'-3 1/2"	EC-1	4	A325	0.500	1.50
SP-2	4	4	0	A325	0.750	2.50	8"	1/4"	2'-1 1/8"					
SP-4	4	0	0	A325	0.750	2.50	8"	3/8"	1'-1"					

FLANGE BRACES: Both Sides(U.N.)
A – L1.5x160
B – L3.0x120



RIGID FRAME ELEVATION: FRAME LINE 1

ERECTION NOTES:
1. THE "APPLICABLE WALL PANEL ERECTION GUIDE" IS TO BE USED IN CONJUNCTION WITH THESE DRAWINGS TO DETERMINE COMPLETE ERECTION REQUIREMENTS.
2. ALL FLANGE BRACING MUST BE INSTALLED AT FRAME LINES AS SHOWN.

RIGID FRAMES BY THIS MANUFACTURER ARE DESIGNED TO BE FASTENED USING A-325 HIGH STRENGTH BOLTS BY THE "SNUG-TIGHTENED" METHOD, AS DEFINED AND DESCRIBED IN THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION (RCSC, 12-31-2009), SECTION 4.1, "SNUG-TIGHTENED JOINTS" (REFERENCE SECTION 8.1)

ITEM	REVISIONS	DRAWN BY	DATE	DESIGNED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE
1									
2									
3									
A	UPDATED TABLE & FLOOR HEIGHT	ART	10/30/19	PPJ	10/30/19	NRD	11/1/19		

SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/20/19
REVIEWED BY DATE

MORAN HAYDEN CO 81639

RIGID FRAME ELEVATION

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 5 OF 32

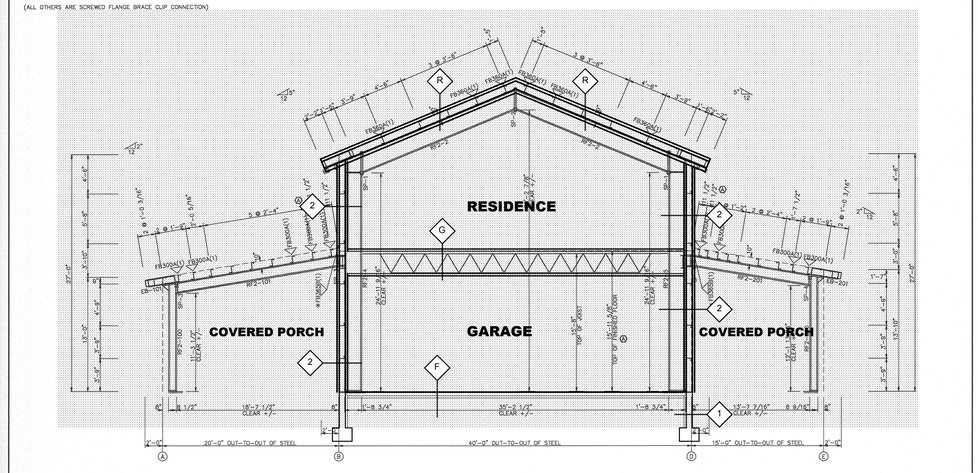
2 SECTION LOOKING WEST

A3.1 — 1 1/2" =1'- 0"

SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	1.000	3.00	8"	5/8"	2'-3 1/2"
SP-2	4	4	0	A325	1.250	4.00	10"	5/8"	2'-3 1/2"
SP-3	4	0	0	A325	0.750	2.50	8"	3/8"	1'-1 1/4"
SP-4	4	0	0	A325	0.750	2.50	8"	3/8"	1'-1"

FLANGE BRACES: Both Sides(U.N.)
B – L2x140S
A – L1.5x180

* – INDICATES BOLTED FLANGE BRACE CLIP CONNECTION.
(ALL OTHERS ARE SCREWED FLANGE BRACE CLIP CONNECTION)



RIGID FRAME ELEVATION: FRAME LINES 3 & 4

ERECTION NOTES:
1. THE "APPLICABLE WALL PANEL ERECTION GUIDE" IS TO BE USED IN CONJUNCTION WITH THESE DRAWINGS TO DETERMINE COMPLETE ERECTION REQUIREMENTS.
2. ALL FLANGE BRACING MUST BE INSTALLED AT FRAME LINES AS SHOWN.

RIGID FRAMES BY THIS MANUFACTURER ARE DESIGNED TO BE FASTENED USING A-325 HIGH STRENGTH BOLTS BY THE "SNUG-TIGHTENED" METHOD, AS DEFINED AND DESCRIBED IN THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS SPECIFICATION (RCSC, 12-31-2000), SECTION 4.1, "SNUG-TIGHTENED JOINTS" (REFERENCE SECTION 8.1)

ITEM	REVISIONS	DRAWN BY	DATE	DESIGNED BY	DATE	APPROVED BY	DATE	REVIEWED BY	DATE
1									
2									
3									
A	REVISED PURLIN SPACING & TABLE	PPJ	10/30/19	PPO	10/30/19	NRD	11/1/19		

SCALE : NONE
DRAWN BY J. NELSON DATE 9/18/19
CHECKED BY J. NELSON DATE 9/20/19
APPROVED BY NRD DATE 9/20/19
REVIEWED BY DATE

MORAN HAYDEN CO 81639

RIGID FRAME ELEVATION

BEHLEN MFG. CO. COLUMBUS, NEBRASKA

JOB NO. X2212 SHT. 7 OF 32

2 SECTION LOOKING EAST

A3.1 — 1 1/2" =1'- 0"

MORAN RESIDENCE

30857 COUNTY RD 53
HAYDEN
COLORADO

REVISIONS:

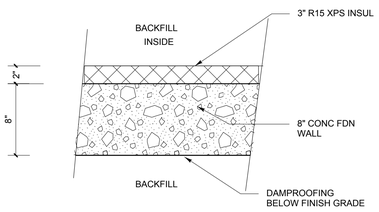
REV. DATE:	REV. NAME:	REV. NO.:

NOTES:

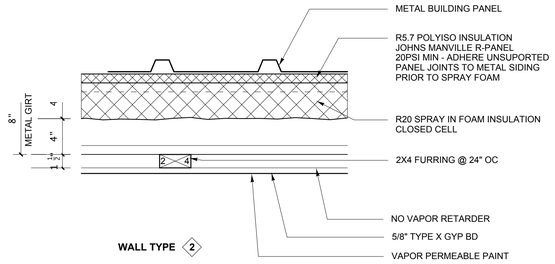
WALL TYPE SECTIONS

date: 9 MAR 2020
scale: 1/4" = 1' - 0"

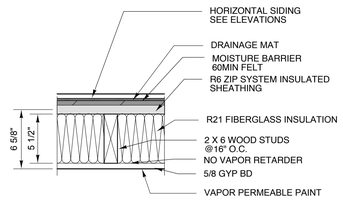
A3.1



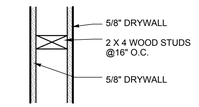
WALL TYPE 1



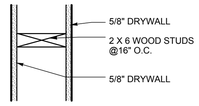
WALL TYPE 2



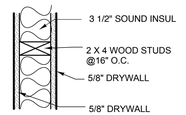
WALL TYPE 3



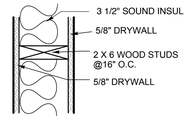
WALL TYPE 4



WALL TYPE 5



WALL TYPE 6

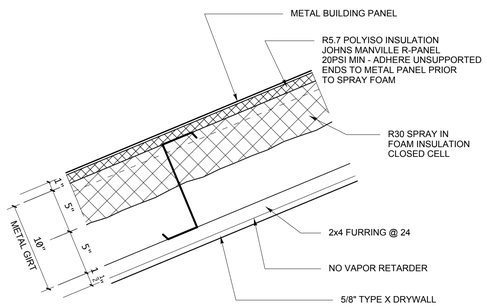


WALL TYPE 7

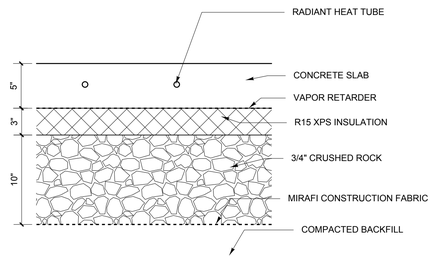
1 WALL TYPES

A3.2

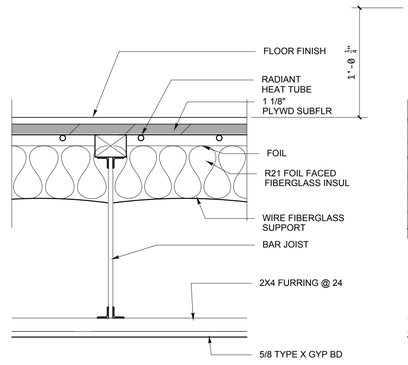
1 1/2" =1'- 0"



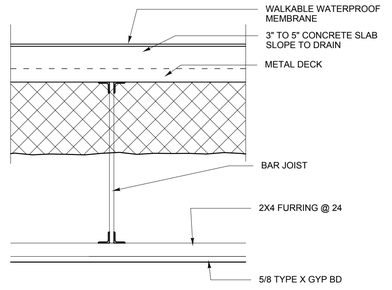
ROOF TYPE R



FLOOR TYPE F



FLOOR TYPE G



ROOF TYPE H

2 ROOF TYPES

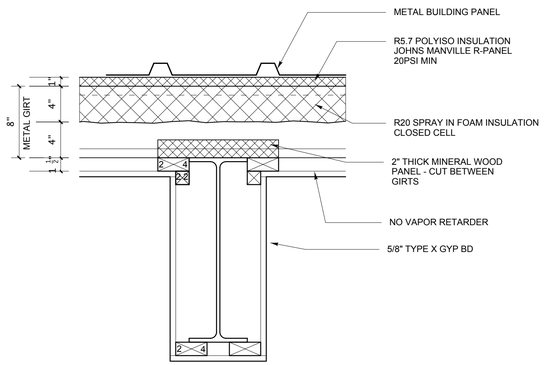
A3.2

1 1/2" =1'- 0"

3 FLOOR TYPES

A3.2

1 1/2" =1'- 0"



4 COLUMN FIRE PROTECTION

A3.2

1 1/2" =1'- 0"

Architect
scott myller. architect
652 Ruby Square
P. O. Box 771854
Steamboat Springs, CO 80477
970.846.1700

Structural Engineer

STATE OF COLORADO
SCOTT MYLLER C-5015
LICENSED ARCHITECT
3/9/20

MORAN RESIDENCE

30857 COUNTY RD 53
HAYDEN
COLORADO

REVISIONS:

REV. DATE:	REV. NAME:	REV. NO.:

NOTES:

WALL TYPES
FLOOR TYPES
ROOF TYPE

date: 9 MAR 2020
scale: 1/4" = 1' - 0"

Revised
03/20/2020 8:42:51 AM

A3.2

Bear Valley Design, Ltd.

Engineers - Consultants

P. O. Box #770475
STEAMBOAT SPRINGS, COLORADO, 80477-0475
MOBILE: (970) 879-5454
E-MAIL: <bearbvd@mindspring.com>

June 27, 2019

RCRBD
Record Set

Mr. Carrol Moran
PO Box 209
Chatfield, Texas, 75105

Subject: Soil investigation and LTAR evaluation for a two buildings and an Onsite Wastewater Treatment System (OWTS) on a 100.94 acre tract of land on the Lonesome Bear Ranch in T5N R868W, in Routt County, Colorado.

Dear Mr. Moran,

Per your request, we performed a soil investigation and evaluation on the subject site earlier in June of this year. The investigation was performed for the purpose of providing soil design parameters for the foundations for a steel building and for a residence, and the evaluation was performed the purpose of designing an Onsite Wastewater Treatment System (OWTS) for use by the steel building (which will include a bunkhouse).

The proposed steel structure is anticipated to be of typical, single story, red iron steel framed construction, including a slab on grade main floor and a bunkhouse upper floor, all to be founded on reinforced concrete stem walls which bear upon reinforced concrete spread footers. The proposed residence is anticipated to be of typical wood framed construction, with a slab on grade lower (walk-out) lower floor, a main floor and an upper floor. The building site is located on top of a hogback with slopes downward to the north, aouth, and east, and a slope upward to the west. The vegetation on the site consists of grass and oak brush. Although the building site is nearly level, the slopes downward to the south and east are relatively steep, and the slope upward to the west is fairly steep.

Three test pits and a profile hole (four pits total) were advanced on the lot, three in the relatively flat area where the buildings are expected to be situated. The profile hole was advances somewhat downslope to the north of the proposed building pad, in the logical location for the OWTS absortion field. The pits were advanced using a crawler mounted excavator.

All three test pit revealed 12 to 24 inches of very slightly moist, medium brown sandy, slightly silty loam, topsoil overlying a native, moderately dense, very slightly moist medium sand subsoil which extended to the maximum depth explored of eight feet.

The fourth test pit (the profile hole) revealed approximately 30 inches of similar, moderately moist topsoil overlying subsoils similar to those exposed in the first three test pits, but less dense, and containing small amounts of silt and clay . The profile hole was advanced to a depth of nine feet, and revealed no signs of free ground water and no bedrock.

No bedrock or free water was encountered in any of the four test pits.

Our experience with similar soils, taken together with our observations in the test pits, have led us to form the opinion that the moderately dense sand subsoil observed in the first three test pits will provide stable bearing for the foundations of both of the proposed structures. We also concluded that the site and the subsoil observed in the profile hole are, in fact, suitable for the installation of an OWTS with a leach field of the type of design detailed below.

Spread footers for both of the proposed structures should be designed to bear on the moderately dense sand subsoil observed in the first three test pits, with a maximum net bearing pressure of 2.0 KSF. No minimum dead load will be necessary on any of the footers. Any retaining structures should be designed to retain pressure equivalent to that which would be exerted by a fluid weighing 40 PCF.

The footers for both foundations must be surrounded with a footer drain ccnstructed using 4" diameter D-2729 perforated PVC pipe (with the perforations located at 4 and 8 'o'clock'), bedded and covered with ¾" screened rock, which in turn must be wrapped in a geo-fabric such as 'Mirafi' #140N. Both footer drains must run from a pair of clean-outs, have a minimum 1% slope around the foundation to a corner opposite the clean-outs, and at that point be wyed together to drain to daylight via a non-perforated 4" diameter PVC pipe. These drains must be located at a low enough grade so that it will prevent

water which might penetrate the backfill from soaking the bearing soil beneath the footers. The daylighted end of these drains should be protected from intrusion by critters by means of a screen and cobbles.

Frost protection for the foundations must be provided by maintaining a minimum of 48" of earth cover over them, measured in any direction. The finish grade should provide for a minimum of 2% slope away from the structures in all directions for a minimum of 10 feet , as well as for positive and continuous drainage away from the buildings without any ponding. Native subsoil materials will provide appropriate backfill. It is anticipated that a large portion of both buildings' perimeters will be surrounded with a graveled driving surface. Backfill not situated beneath a graveled driving surface may be capped with a maximum six inch thick layer of topsoil. The native backfill material must be placed in lifts a maximum of 10 inches thick, with each lift moistened and compacted to 93% of its Standard Proctor density.

In order to control moisture as well as to minimize heating costs for the proposed building, as well as to provide for proper curing of the concrete, all slab on grade floors must be placed directly on top of a minimum six mil thick sheet of visquene. The slabs on grade must be isolated from the subgrade by a minimum twelve inch thick layer of compacted ¾" road base gravel. This gravel fill must be isolated from the underlying material by means of a sheet of 'Mirafi' #140N (or equal). It is anticipated that the slab on grade floors will be provided with hydronic, in floor heating. In this case, underslab insulation per energy code requirements must be provided. We highly recommend the use of foam insulation provided with 'buttons' for positively locating the (O2 barrier type) Ppex tubing, and providing a layer of 'Barrier' insulating vapor barrier beneath the foam insulation.

All structural elements of the building must be isolated so that the slab on grade floors are free to float with respect to the rest of the buildings. All partitions located directly above any slab on grade floors must be constructed with a minimum 1-½ inch high expansion joint, built per typical local practice, at the bottom of the framing of said partitions.

The native slightly clayey sand subsoil encountered in the profile hole classifies as a Type 3 soil per CDOPH& E Regulation #43. Therefore, absorption trenches for the proposed OWTS should be designed based on a Long Term Acceptance Rate (LTAR) of 0.35 gallons per square foot per day.

We re-emphasize that no free ground water was observed in either the profile hole or in the other test pits, and the observed subsoil in the profile hole extended more than four feet below the expected design elevation of the bottom of the proposed absorption trenches without encountering any free ground water.

Thank you for the opportunity to have been of professional service to you in this matter.

Sincerely,
Bear Valley Design, Ltd.

COLORADO LICENSED
GREGORY H. HERMANN
17422
PROFESSIONAL ENGINEER

Gregory H. Hermann
Colorado P. E. #17422

Structural Notes--Lonesome Bear Ranch, Barn/Bunkhouse, Routt County, Colorado

1. All concrete shall contain six 90 pound sacks of Type II cement per cubic yard, ¾ inch maximum size aggregate, 2% to 4% entrained air, and shall be placed in full accordance with all provisions of the current version of ACI-318.

2. All reinforcing steel shall conform to ASTM A-615, Grade 60

3. Design slab on grade floor load is 250 lbs./sq. ft., live;

.4. Design nominal snow load is 80 lbs./sq. ft.

5. Design wind load is 90 mph, per IRC 'Exposure B' requirements at a density altitude of 7,200 ft., mean sea level.

6. Design earthquake is per IRC 'Zone B' requirements.

7. Design soil conditions are 2.0 KiP/sq. ft., maximum net bearing and 0.0 KiP/sq. ft., minimum dead load, per Bear Valley Design, Ltd. Letter dated June 27, 2019.

8. All details enumerated in the letter referenced in 7. Must be executed in full.

9. The steel ('red iron') frame building above the foundation is to be designed, engineered, certified, and fabricated by others. Installation of the building and anchor bolts in the foundation is to be per the building mfgr's. sizing and layout dimensions and specifications

10. Heating plans to be provided on a design/build basis by mechanical contractor.

11. Electrical plans to be provided on a design/build basis by electrical contractor.

12. Plumbing plans to be provided on a design/build basis by plumbing contractor.

13. All above grade, enclosed portions of the building are to be insulated using spray-on, 2 part urethane foam insulation, with minimum R values of R-50 in the roof and R-30 in the exterior walls.

100.94 Acre Parcel on Lonesome Bear Ranch, Routt County, OWTS Calculations

Proposed Barn and Bunkhouse:

4 Bedrooms = 7 persons @ 75 Gallons/ day/ person= 525 Gal./day design flow

Minimum tank size = 1,250 Gallons, with 2 chambers and an approved effluent filter plus a 500 Gallon Dosing Tank with a Fluid Dynamics, Inc., #216 Auto-siphon, giving average 30 gpm flow for an approx. 250 gallon dose.

Leach Field Sizing : 'Infiltrator' Quick 4 chambers in center fed trenches.

Long Term Acceptance Rate (LTAR) = 0.35 Gal./ sq. ft. / day into Type 3 Soil, sandy clay loam (per Bear Valley Design, Ltd., letter, dated 6/27/19)

(525 Gal./day) x (.7 (reduction factor for use of chambers)) x (.9 (reduction factor for dosing)) / (0.35 Gal./day/ sq. ft.) = 945 sq. ft. (required absorption area)

System will be designed to use 'Infiltrator' 'Quick 4' chambers. Said chambers provide an effective absorption area 48" x 34". (48 x 34)/144 = 11.33 sq. ft./ chamber

945 sq. ft./ (11.33 sq. ft./ chamber) = 84 chambers required (4 rows of 21), center fed

scott myller. architect
652 Ruby Square
Steamboat Springs, CO 80487

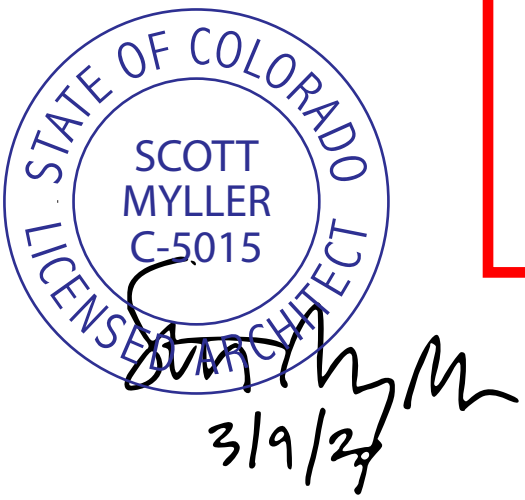
Routt County Regional Building Department
136 Sixth Street
P.O. Box 773840
Steamboat Springs, CO 80477

March 1, 2020

RE: TB-19-830

The following list is a direct response to the items listed on the Plan Review Comments requiring corrections:

1. Noted.
2. While the name of the project is called a bunkhouse, this it the only building on the site and is intended to be used by the owner and his family and friends. No "guest ranch" uses are proposed. No "agricultural" uses are intended either and no hazardous storage is proposed under the covered porches. The 2015 IRC shall be used for review with a 3487sf residence and a 2913sf garage.
3. A propane fired boiler is proposed to supply radiant heat to the garage slab and for staple up tubing below the residence floor.
4. See attached details for insulation values.
5. See attached wall type details and locations.
6. The metal building shop drawings were provided prior to foundation permit.
7. The Structural Engineer of record (Bear Valley Designs) shall provide special inspections for all high strength bolts – if any.



RCRBD Record Set
T.A.

03/20/2020

970.846.1700
www.ythatguy.com
myller@ythatguy.com

BEHLEN Building Systems

4025 E. 23rd Street, P.O. Box 569
Columbus, NE 68602-0569 U.S.A.
P: 402.564.3111 F: 402.563.7470
www.behlenbuildingsystems.com

September 12, 2019

LETTER OF DESIGN CERTIFICATION

Reference Number : X2212
Building Description : 1 - 40'-0" x 80'-0" x 27'-0"
Building Owner/Location : MORAN, HAYDEN, CO
Builder : Charchalis Construction and In

This document shall serve to certify that the above referenced building has been designed by this IAS AC472 accredited manufacturer in accordance with the order documents and information shown below:

Design Standard : 2015 IBC

GRAVITY LOAD DATA

Roof Live Load (psf)	:	20.00 *
Uniform Roof Snow Load (psf)	:	97.30
Snow Importance Factor	:	1.00
Rain on Snow (psf)	:	0.00
Pg (psf)	:	139.00
Pf (psf)	:	97.3
Ce	:	1.00
Ct	:	1.00
Collateral Load (psf)	:	3.0

EARTHQUAKE LOAD DATA

Site Class	:	D
Ss (%g): 27.1	Sds:	0.286
S1 (%g): 7.5	Sd1:	0.120
Seismic Design Category	:	B
Seismic Importance Factor	:	1.00
R	:	3.00
Cs	:	I x Sds / R
Basic Structural System	:	NDFS
Analysis Procedure	:	Equivalent Lateral Force

WIND LOAD DATA

Basic Wind Speed (mph)	:	115
Wind Exposure	:	C
Wind Importance	:	1.00
GCpi	:	± 0.18

Risk Category : II

* Roof Live Load is Non-Reducible

Steel members are designed in general accordance with the 14th Edition of the AISC Manual for Steel Construction and the 2012 Edition of the AISI Cold Form Steel Design Manual.

This certification is strictly limited to the design of structural components designed and manufactured by Behlen Mfg. Co. for the loads and standards shown. Certification does not extend to foundation, mechanical, electrical, plumbing, fire protection, civil work, architectural responsibilities, overall project coordination, erection supervision or inspection, or other aspects of code or specification compliance not so indicated. When properly erected, according to the Behlen plans, on an adequate foundation, this Behlen building has been designed to safely sustain these loads.

BEHLEN BUILDING SYSTEMS

COLORADO LICENSED
STEPHEN JOSEPH REINERS
43093
9/16/2019
PROFESSIONAL ENGINEER

RCRBD Record Set
T.A.

03/20/2020

CWB CERTIFIED CSA A660 · MBMA MEMBER · BEHLEN BUILDING SYSTEMS GOOD IRON GREAT EXPERIENCE! · IAS ACCREDITED AC472 · AISC MEMBER · ISO 9001 SGS