Builder/Contractor Responsibilities

Drawing Validity – These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings – Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (April 2010 Section 4.4.1)

Code Official Approval – It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Building Erection – The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector (April 2010 Section 7.10.3) (CSA/S16-09 Section 29).

Discrepancies – Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (April 2010 Section 3.3)

Materials by Others – All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans – The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design
The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2 and A3)

STAR BUILDING SYSTEMS®

For questions regarding the interpretation of the drawings, materials provided, or assembly of the parts:
- Call 1-800-879-7827 and ask for the "Field Service" department.
- Before or after normal hours, you may send an email to OKCSField.Service@StarBuildings.net. Please include the order no., brief description of the question, & contact name and phone number.

ENGINEERING DESIGN CRITERIA

Building Code	FLORIDA BUILDING CODE, 6TH EDITION (2017)
Building Risk Category	Normal (Risk Category II)
Roof Dead Load	
Superimposed	2.15 psf
Collateral	1.50 psf
(1.00 psf Acoustical Ceiling 0.50 psf Other)	
Roof Live Load	20.00 psf reduction allowed
Wind	
Ultimate Wind Speed (Vult)	120.00 mph
Nominal Wind Speed (Vasd)	92 mph (IBC section 1609.3.1)
Serviceability Wind Speed	76 mph
Wind Exposure Category	B
Internal Pressure Coef (GCpi)	0.18/-0.18
Wall Loads for components not provided by building manufacturer	
Corner Areas (within 4.00' of corner)	23.70 psf pressure -31.61 psf suction
Other Areas	23.70 psf pressure -25.68 psf suction
These values are the maximun values required based on a 10 sq ft area.	
Components with larger areas may have lower wind loads.	

DEFLECTION CRITERIA

The material supplied by the manufacturer has been designed with the following minimun deflection criteria. The actual deflection may be less depending on actual load and actual member length.

BUILDING DEFLECTION LIMITS..... BLDG-A

Ceiling Type : Acoustical/Other

Roof Limits	Rafters	Purlins	Panels
Live: L/	180	150	60
Serviceability Wind: L/	180	180	60
Total Gravity: L/	120	120	60
Total Uplift: L/	N/A	N/A	60

Frame Limits	Sidesway
Live: H/	60
Serviceability Wind: H/	60
Portal Serviceability Wind: H/	N/A
Total Gravity: H/	60

Wall Limits	Limit
Total Wind Panels: L/	60
Total Wind Girts: L/	90
Total Wind EW Columns: L/	120

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, ASTM A1011 SS, or ASTM A1011 HSLAS with a minimun yield point of 50 ksi. Material properties of hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with a minimun specified yield point of 50 ksi. Hot rolled angles, other than flange braces, conform to ASTM 36 minimun. Hollow structural shapes conform to ASTM A500 grade B, minimun yield point is 42 ksi for round HSS and 46 ksi for rectangular HSS. Material properties of cold-formed light gage steel members conform to the requirements of ASTM A1011 SS Grade 33, ASTM A1011 HSLAS Grade 55 Class 1, ASTM A653 SS Grade 55, or ASTM A653 HSLAS Grade 55 Class 1 with a minimun yield point of 55 ksi. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

All bolted joints with A325 Type 1 bolts are specified as snug-tightened joints in accordance with the Specification for Structural Joints Using ASTM A325 or A490 Bolts, December 31, 2009. Pre-tensioning methods, including turn-of-nut, calibrated wrench, twist-off-type tension-control bolts or direct-tension-indicator are NOT required. Installation inspection requirements for Snug Tight Bolts (Specification for Structural Joints Section 9.1) is suggested.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the metal building manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

This project is designed using manufacturer's standard serviceability criteria. Generally this means that all deflections are within typical performance limits for normal occupancy and standard metal building products.

This metal building system is designed as an Enclosed Building. Exterior and/or operable components including, but not limited to, doors, windows, vents, etc. ("Components") must be designed to withstand the required component and cladding wind pressures specified by the building code. In order to maintain the metal building system's Enclosed Building condition, all Components shall be closed when wind velocities reach half the designed wind load for the metal building system as shown on the drawings and design criteria documentation. Failure to maintain the metal building system's Enclosed Building condition will violate and void all warranties and certifications applicable to the material supplied by the metal building manufacturer.

Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

Roof and wall panels have been designed in accordance with section 2222.4 of the Florida Building Code.
Product approval numbers for the State of Florida, Department of Community Affairs per Product Rule 9B-72.
1. Panel Walls
   FL11917 PBR 26 gauge walls
2. Roofing Products
   FL11868 PBR 26 gauge roofs

Using 7x7 eave gutter with 4 x 5 downspouts, the roof drainage system has been designed using the method outlined in the MBMA Metal Building Systems Manual. Downspout locations have not been located on these drawings. The downspouts are to be placed on the building sidewalls at a spacing not to exceed 60 feet with the first downspout from both ends of the gutter run within 30 feet of the end. Downspout spacing that does not exceed the maximun spacing will be in compliance with the building code. The gutter and downspout system as provided by the manufacturer is designed to accommodate 10 in/hr rainfall intensity.

Drawing Index

Revision	Date	Description	By	Ck'd

STAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Customer:
APEX METAL BUILDING SYSTEMS
LIVE OAK, FL

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	MVM 3/10/20
Checked by:	SNH 3/10/20
Project Engineer:	AXQ
Job Number:	17-B-54835
Sheet Number:	E1 of 7

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

Brian A. Carmichael, P.E.
Florida P.E. 67645

Drawing has been digitally signed.

BRIAN A. CARMICHAEL
No. 67645
STATE OF FLORIDA
03/17/20
PROFESSIONAL ENGINEER

34

Download panel installation manuals from:
www.ncimanuals.com

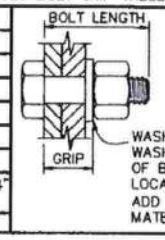
Descargue los manuales de instalación del panel desde:
www.ncimanuals.com

BUILDING DESCRIPTIONS

Building ID	Width	Length	Height	Slope
Building A	40'-0	60'-0	16'-0	1:12

7/8" ø A325 BOLT GRIP TABLE

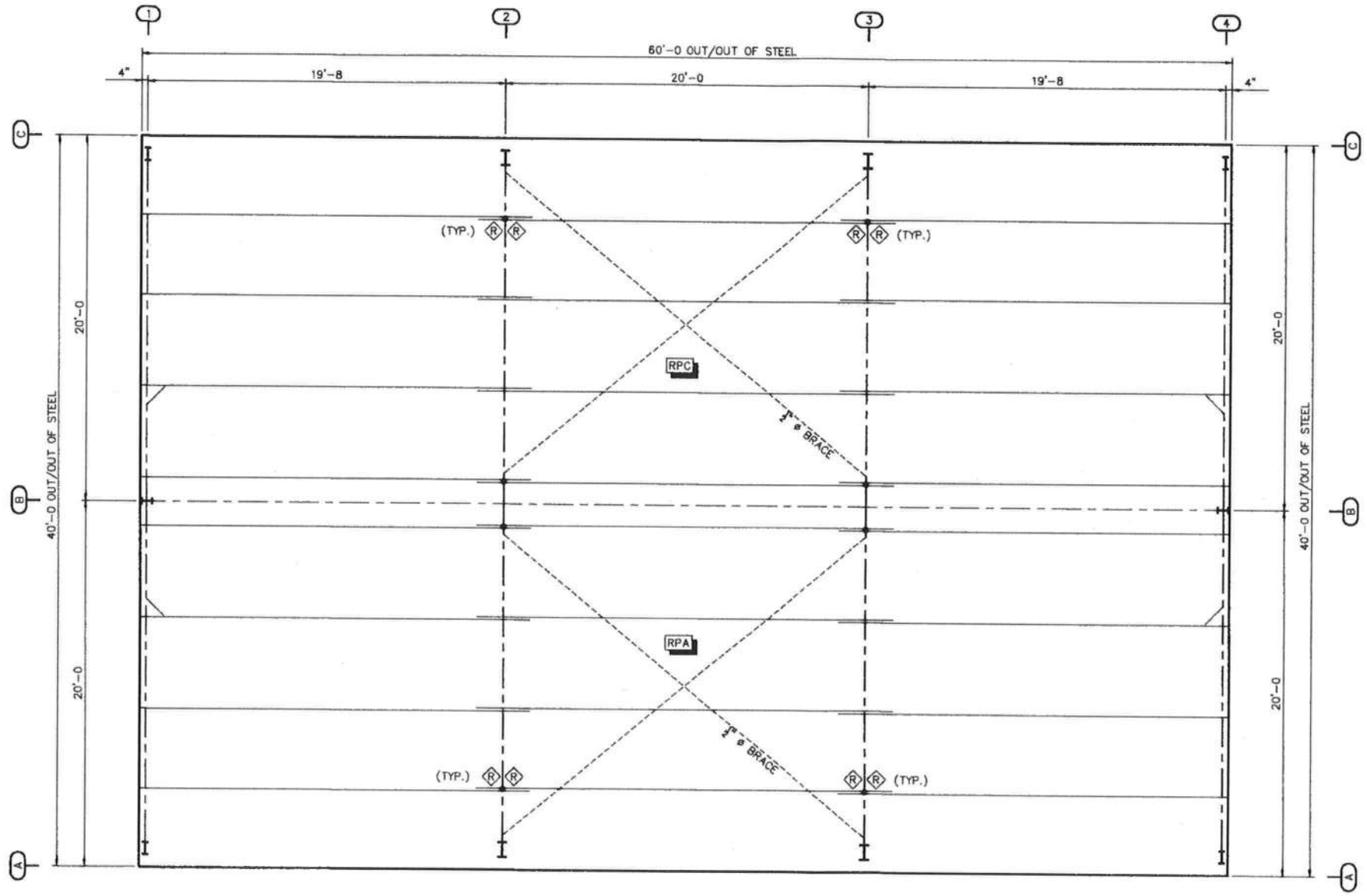
GRIP	LENGTH
0 TO 9/16"	1 1/4" F.T.
Over 9/16" TO 1 1/16"	1 3/4" F.T.
Over 1 1/16" TO 1 5/16"	2"
Over 1 5/16" TO 1 9/16"	2 1/4"
Over 1 9/16" TO 1 13/16"	2 1/2"
Over 1 13/16" TO 2 1/16"	2 3/4"
LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS	
F.T. DENOTES FULLY THREADED	



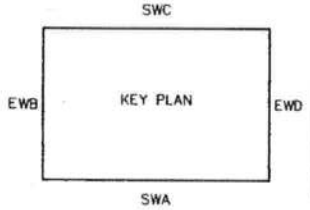
NOTE: FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.

WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT, OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.

● – DENOTES: CLIP LOCATION
SC90 AT 8" PURLINS
SC92 AT 10" PURLINS
SC94 AT 12" PURLINS



ROOF FRAMING PLAN



ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
Ⓠ	-0'-0½"	Ⓣ	2'-5½"
Ⓢ	0'-3½"	Ⓤ	3'-1¼"
Ⓡ	1'-5½"	REFER TO CF01122	

Revision	Date	Description	By	Ck'd

ASTAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Customer: APEX METAL BUILDING SYSTEMS LIVE OAK, FL

Project Name & Location: KRIS FASE WHITE SPRINGS, FL

Drawing Status: ☐ Preliminary, Not For Construction ☒ For Construction Permit ☐ For Approval Not For Construction ☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	MVM 3/10/20
Checked by:	SNH 3/10/20
Project Engineer:	AXQ
Job Number:	17-B-54835
Sheet Number:	E2 of 7

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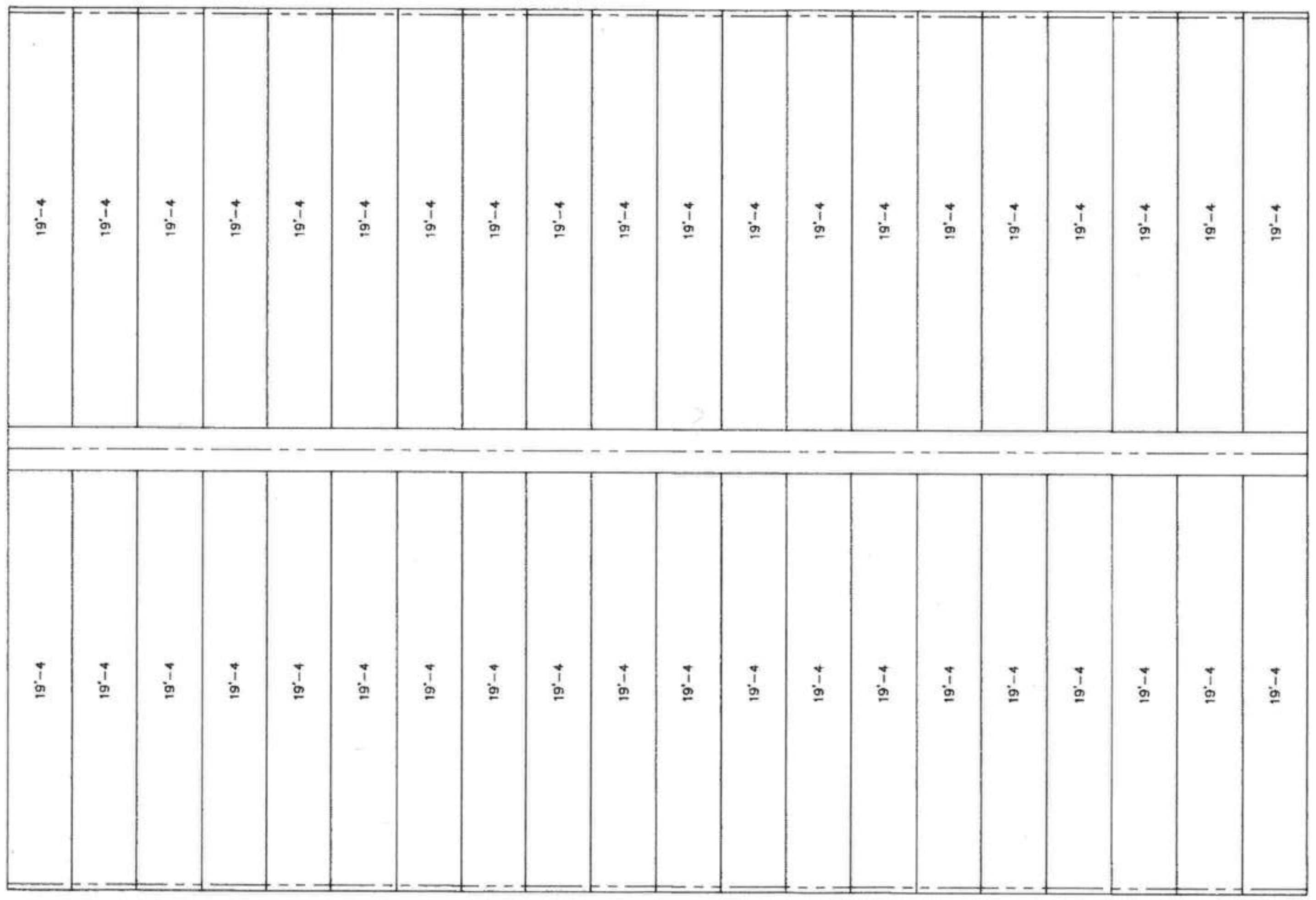
Brian A. Carmichael, P.E.
Florida P.E. 67645

Drawing has been digitally signed.

BRIAN A. CARMICHAEL
No. 67845
STATE OF FLORIDA
03/17/20
PROFESSIONAL ENGINEER

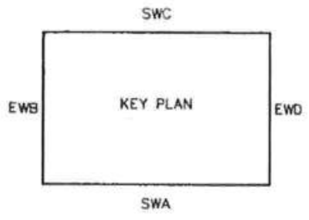
PBR ROOF PANELS ARE TO BE FIELD CUT IF THE PANELS EXTEND OUTSIDE OF THE ROOF PLANE, PANELS ARE NOT TO BE BACK LAPPED.

ROOF SHEETING PLANE 2
PANEL TYPE = PBR (S300)
PANEL OVERHANG = 3"
FROM OUTER STEEL



ROOF SHEETING PLAN

ROOF SHEETING PLANE 1
PANEL TYPE = PBR (S300)
PANEL OVERHANG = 3"
FROM OUTER STEEL



DOWNSPOUTS ARE TO BE PLACED AT A SPACING NOT TO EXCEED 60'-0
WITH A DOWNSPOUT WITHIN 30'-0 OF EACH END OF THE GUTTER RUN.

DOWNSPOUT LAYOUT
[4 REQ'D]

Revision	Date	Description	By	Ck'd

STAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Customer:
APEX METAL BUILDING
SYSTEMS
LIVE OAK, FL

Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Drawing Status: ☐ Preliminary (Not For Construction) ☒ For Construction Permit
☐ For Approval (Not For Construction) ☐ For Erector Installation

Scale: NOT TO SCALE
Drawn by: MVM 3/10/20
Checked by: SNH 3/10/20
Project Engineer: AXQ
Job Number: 17-B-54835
Sheet Number: E3 of 7

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Brian A. Carmichael, P.E.
Florida P.E. 67645

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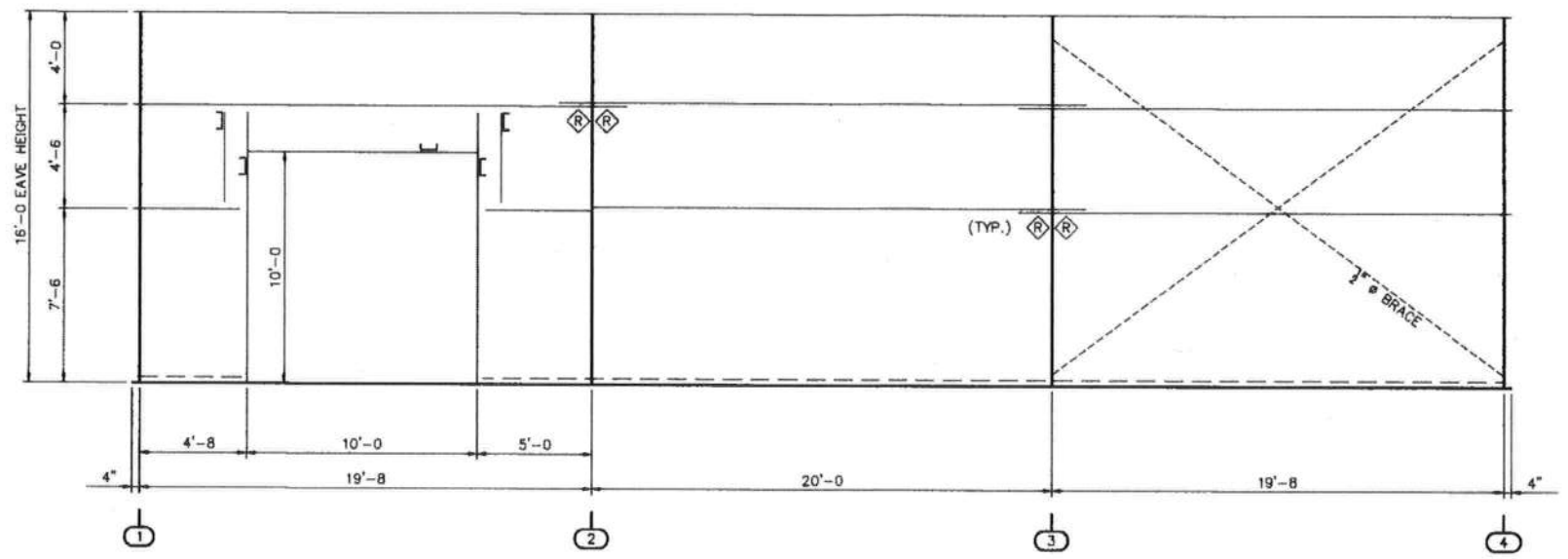
BRIAN A. CARMICHAEL
No. 67645
03/17/20

SCHEDULE OF ACCESSORIES

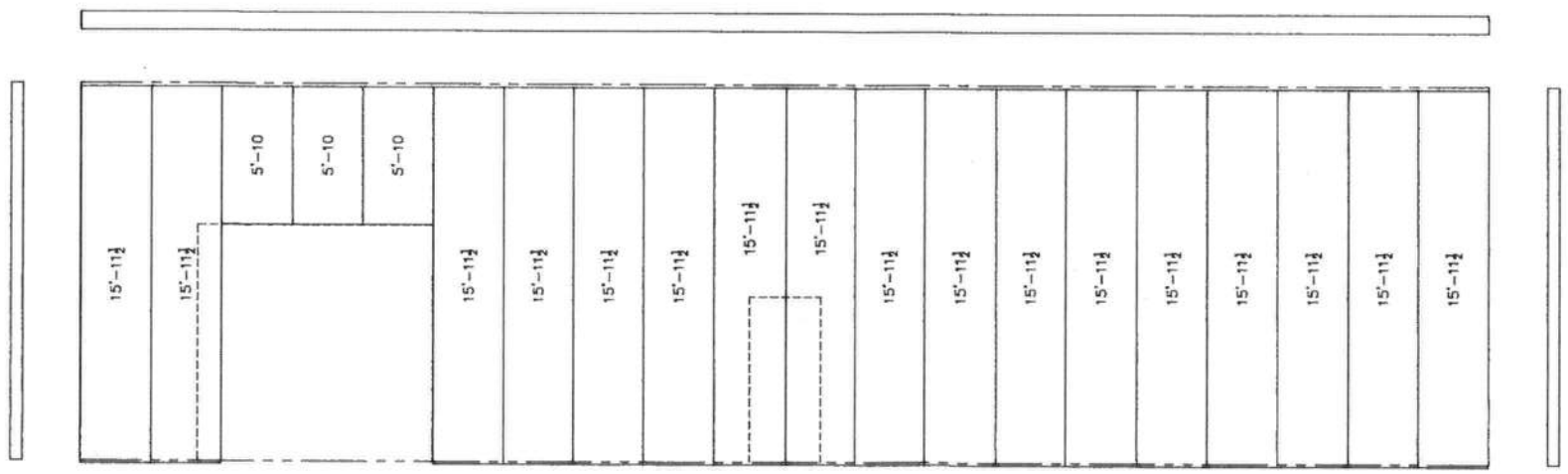
NO. REQD	DESCRIPTION
2	3'-0 X 5'-0 FACTORY LOCATED FRAMED OPENINGS
2	10'-0 X 10'-0 FACTORY LOCATED FRAMED OPENINGS
2	3070 KNOCK-DOWN WALK DOORS

REFER TO DETAILS ON INSTALLATION OF WALK DOORS.
REFER TO DETAILS ON INSTALLATION OF FRAMED OPENINGS.
USE STANDARD WALL PROCEDURES TO ERECT THE SIDEWALL AND ENDWALL PANELS.



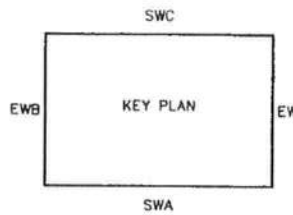
ELEVATION "SWA"

NOTE: GIRTS AND/OR WALL PANELS MAY REQUIRE FIELD CUTTING AT FRAMED OPENINGS, WALK DOORS, WINDOWS, LOUVERS, OPEN AREAS, AND/OR CONSTRUCTION (NOT BY MANUFACTURER) AREAS.



PBR WALL PANELS
PANEL COVERAGE = 3'-0
COLOR = S300
PANEL PKG. REQ'D. = PBS-3
Field Cut Panel and Trim as required per Construction Details

WALL SHEETING ELEVATION "SWA"
BLDG "A"



ZEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
Q	-0'-0¼"	T	2'-5¾"
S	0'-3½"	V	3'-1½"
R	1'-5¾"	REFER TO CF01122	

Revision	Date	Description	By	Ck'd

ASTAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Customer:
APEX METAL BUILDING SYSTEMS
LIVE OAK, FL

Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	MVM 3/10/20
Checked by:	SNH 3/10/20
Project Engineer:	AXQ
Job Number:	17-B-54835
Sheet Number:	E4 of 7

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Brian A. Carmichael, P.E.
Florida P.E. 67645

Drawing has been digitally signed.

Drawing has been digitally signed.

Brian A. Carmichael, P.E.
Florida P.E. 67645

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Sheet Number:	E5 of 7
Job Number:	17-B-54835
Project Engineer:	AXO
Drawn by:	MVM 3/10/20
Checked by:	SNH 3/10/20
Scale:	NOT TO SCALE

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OKLAHOMA CITY, OK 73149
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Customer:
APEX METAL BUILDING SYSTEMS
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Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Drawing Status:
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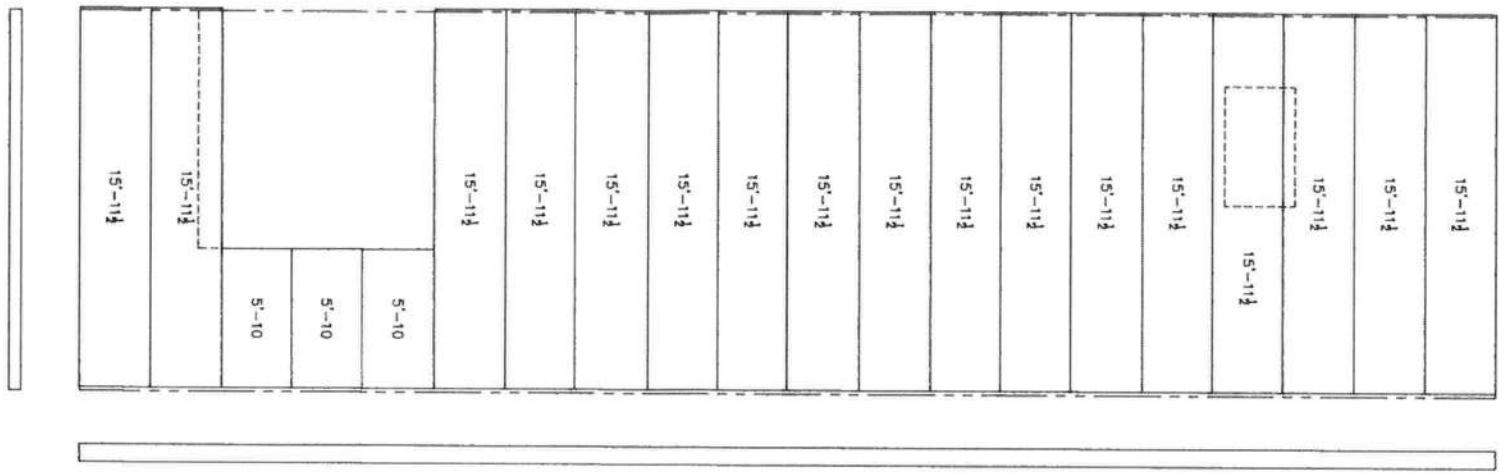
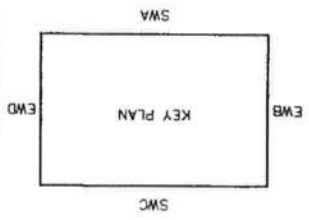
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

Ck'd	By	Description	Date	Revision

WALL SHEETING ELEVATION "SWC"
BLDG "A"



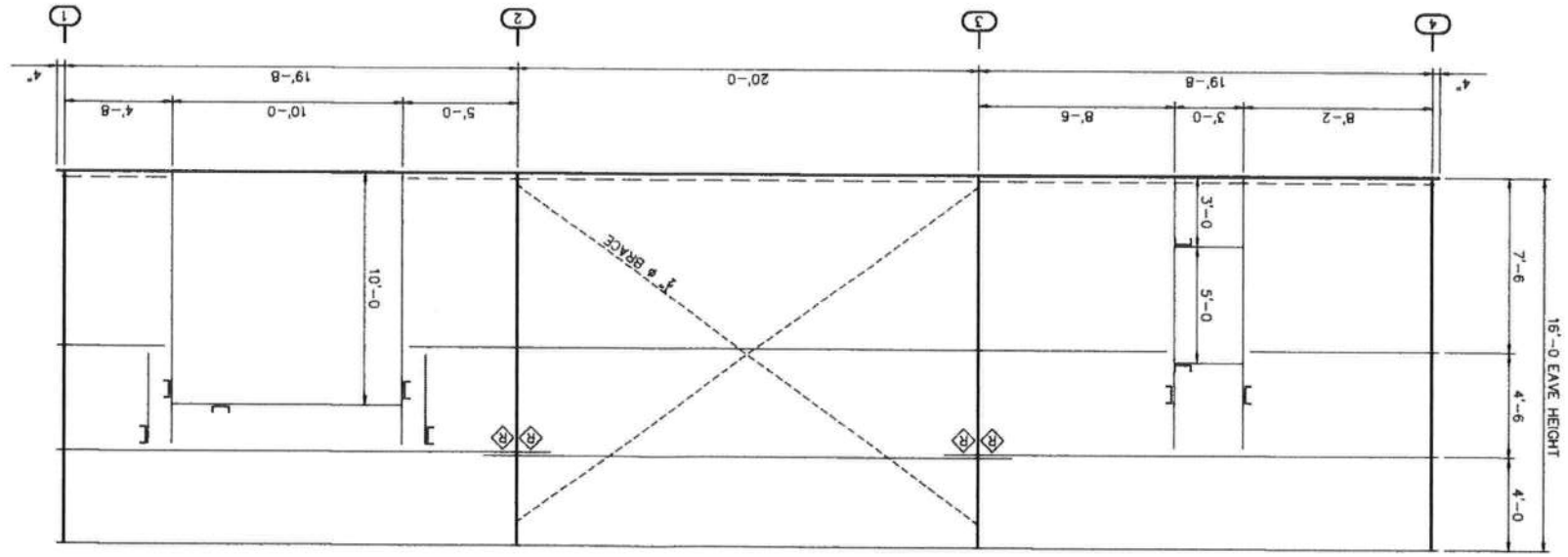


SEE SECTION LAP TABLE			
SYMBOL	LAP LENGTH	SYMBOL	LAP LENGTH
Ⓢ	-0'-0¾"	Ⓣ	2'-5¾"
Ⓢ	0'-3¾"	Ⓣ	3'-1¾"
Ⓡ	1'-5¾"	REFER TO CFD1122	

PBR WALL PANELS
PANEL COVERAGE = 3'-0
COLOR = S300
PANEL PKG. REQ'D. = PBS-4
Field Cut Panel and Trim as required per Construction Details

NOTE: GIRTS AND/OR WALL PANELS MAY REQUIRE FIELD CUTTING AT FRAMED OPENINGS, WALK DOORS, WINDOWS, LOUVERS, OPEN AREAS, AND/OR CONSTRUCTION (NOT BY MANUFACTURER) AREAS.

ELEVATION "SWC"



Drawing has been digitally signed

BRIAN A. CARMICHAEL
STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 67845
03/17/20

Brian A. Carmichael, P.E.
Florida P.E. 67845

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Sheet Number: **E6 of 7**

Job Number: 17-B-54835

Project Engineer: AXG

Drawn by: MVM 3/10/20

Checked by: SNH 3/10/20

Scale: NOT TO SCALE

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8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Customer:
APEX METAL BUILDING SYSTEMS
LIVE OAK, FL

Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☒ For Construction Permit
☐ For Erector Installation

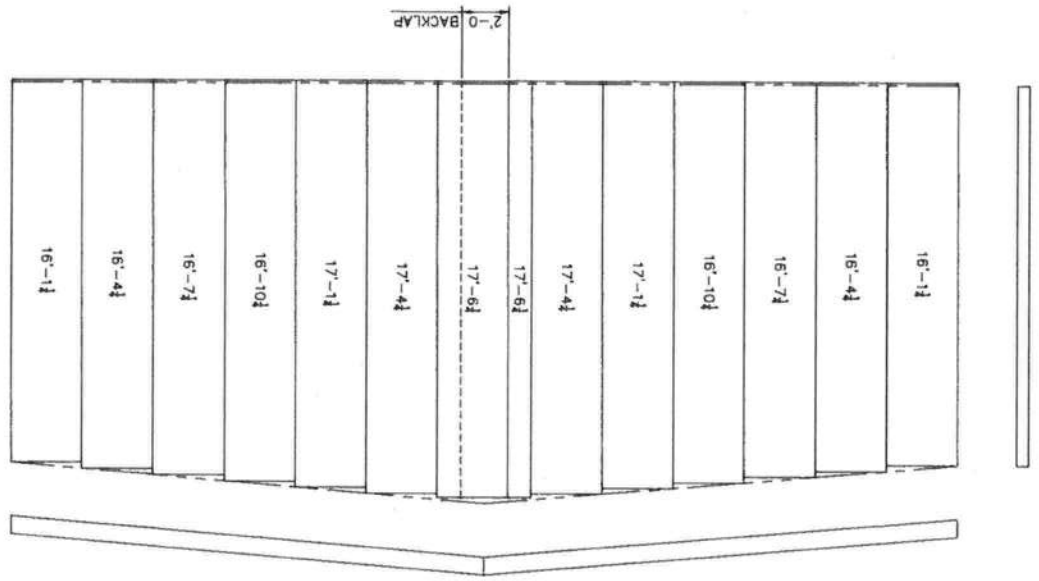
Ck'd	By	Description	Date	Revision

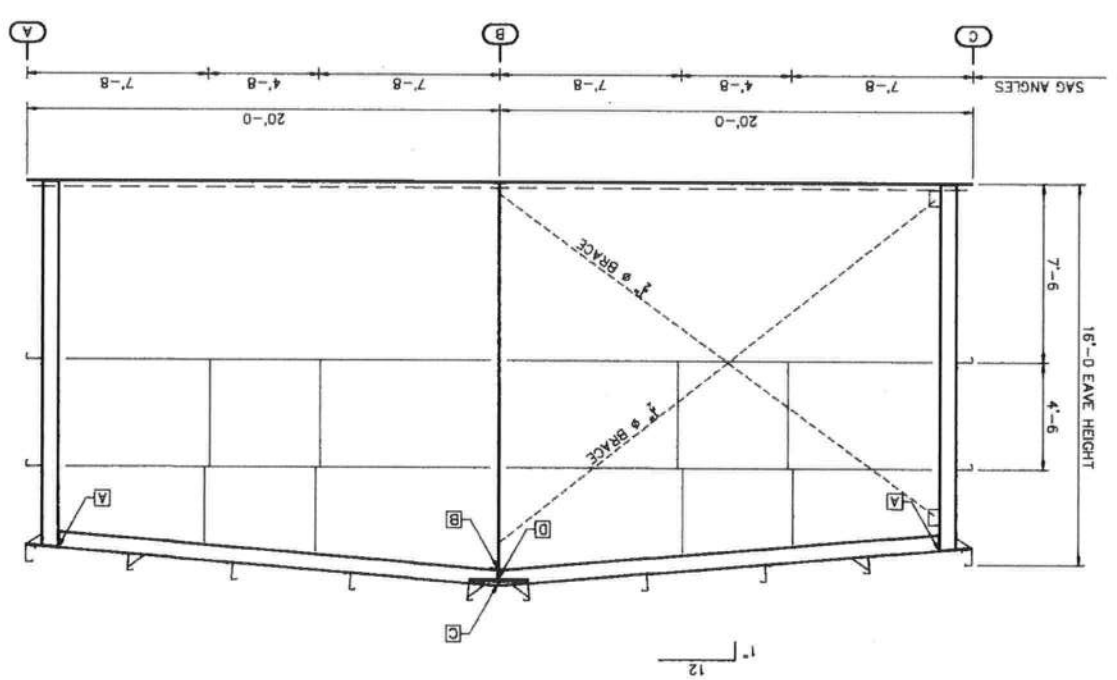
NOTE: GIRTS AND/OR WALL PANELS MAY REQUIRE FIELD CUTTING AT FRAMED OPENINGS, WALK DOORS, WINDOWS, LOUVERS, OPEN AREAS, AND/OR CONSTRUCTION (NOT BY MANUFACTURER) AREAS.

ELEVATION "EWB"

WALL SHEETING ELEVATION "EWB"
BLDG "A"

PBR WALL PANELS
PANEL COVERAGE = 3'-0
COLOR = S300
PANEL PKG. REQ'D. = PBS-1
Field Cut Panel and Trim as required per Construction Details

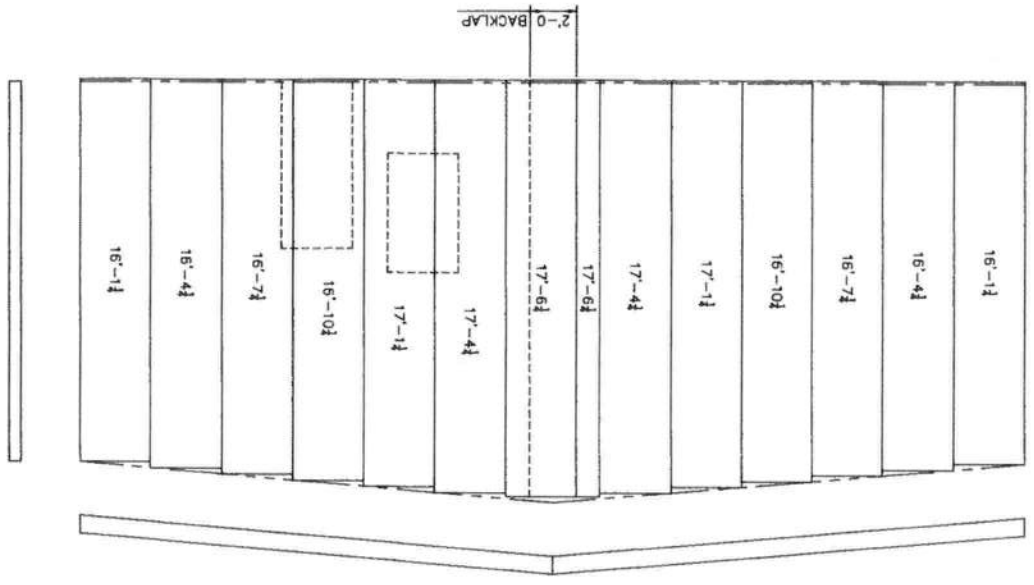


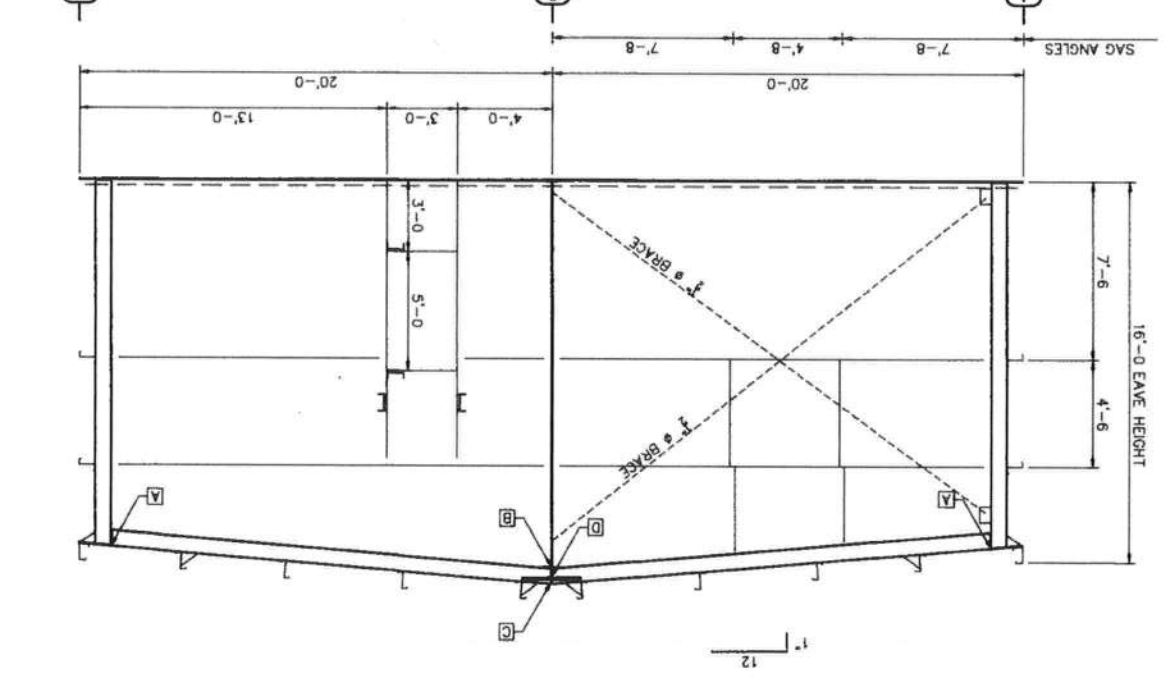


ELEVATION "EWD"

WALL SHEETING ELEVATION "EWD"
BLDG "A"

PBR WALL PANELS
PANEL COVERAGE = 3'-0
COLOR = S300
PANEL PKG. REQ'D. = PBS-2
Field Cut Panel and Trim as required per Construction Details

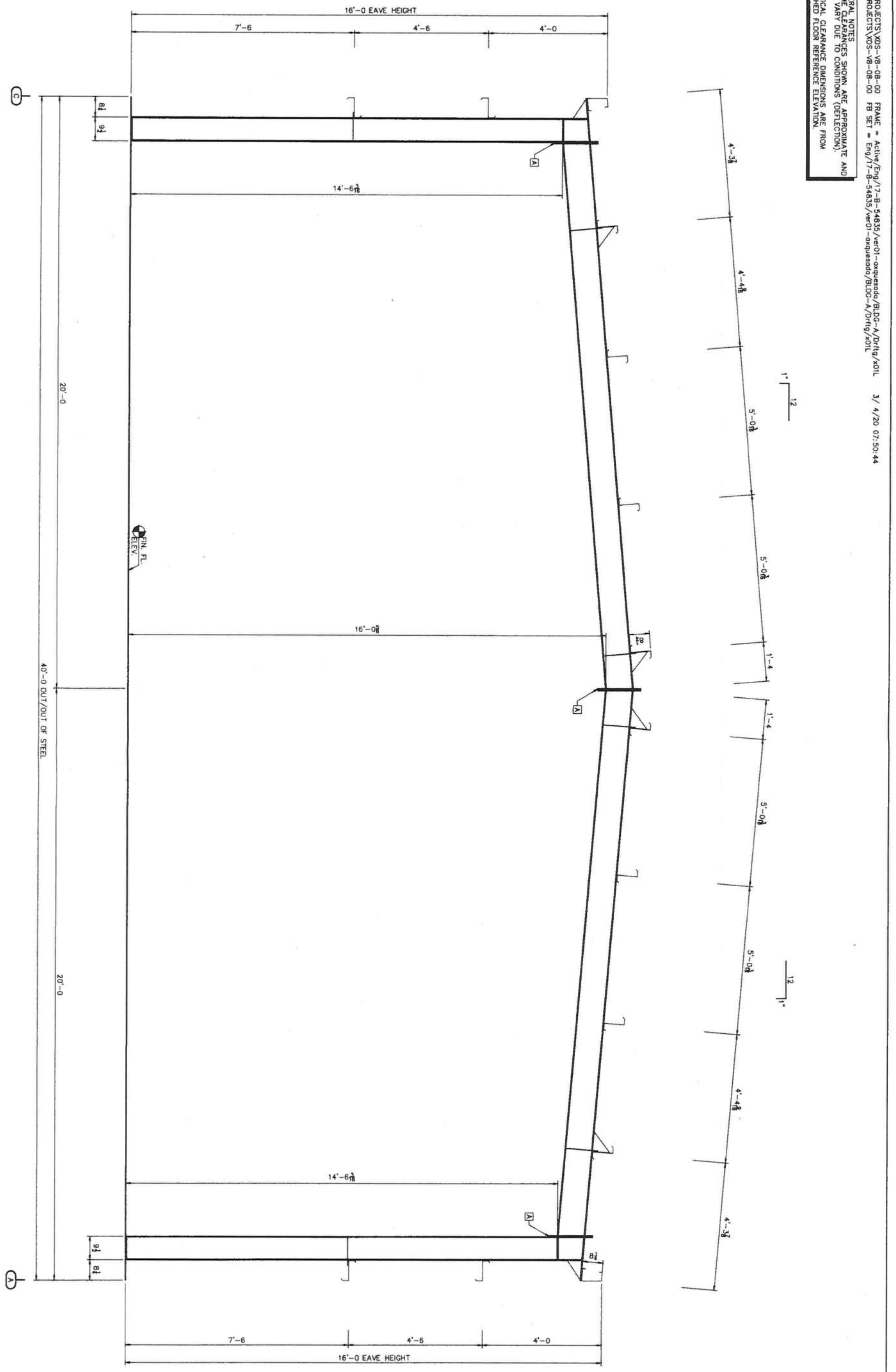




SPLICE BOLT TABLE

CONN.	QTY. SIZE TYPE	HARDENED BEVELED WASHERS		
A	(2) ¾ X 1½ A325 BΔN	0	0	0
B	(4) ¾ X 1½ A325 BΔN	4	0	0
C	(4) ¾ X 1½ A325 BΔN	0	0	0
D	(4) ¾ X 1½ A325 BΔN	0	0	0

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).
VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.



CROSS SECTION AT FRAME LINES "2" & "3"

SPLICE BOLT TABLE

CONN.	QTY.	SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(8)	3/4 X 1 3/4	A325 B&N	0	0

STAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Customer: APEX METAL BUILDING SYSTEMS LIVE OAK, FL

Project Name & Location: KRIS FASE WHITE SPRINGS, FL

Drawing Status: ☐ Preliminary (Not For Construction) ☒ For Construction Permit ☐ For Approval (Not For Construction) ☐ For Erector Installation

Revision	Date	Description	By	Ck'd

Scale: NOT TO SCALE
Drawn by: MVM 3/10/20
Checked by: SNH 3/10/20
Project Engineer: AXQ
Job Number: 17-B-54835
Sheet Number: E7 of 7

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

Brian A. Carmichael, P.E.
Florida P.E. 67645

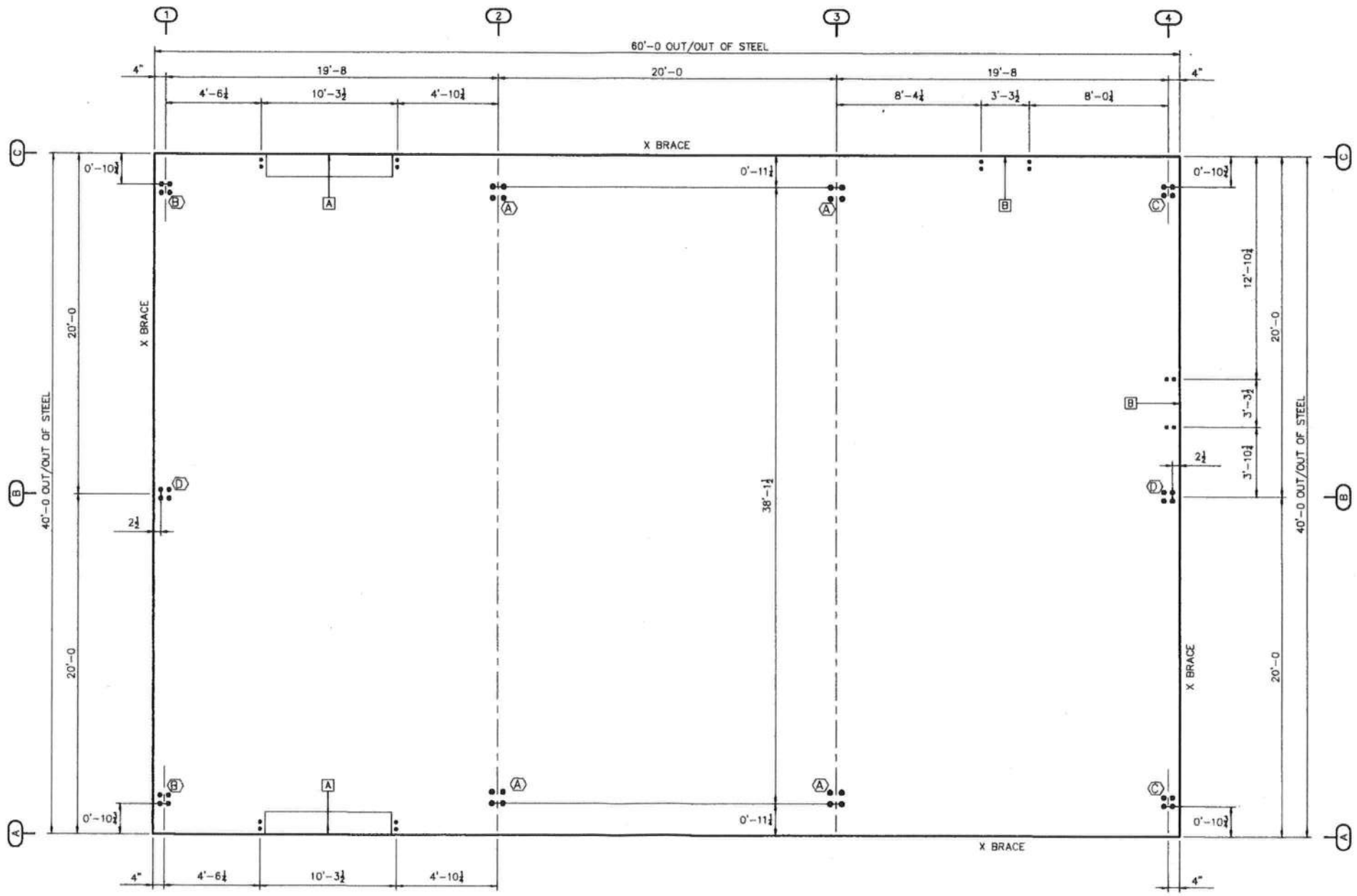
BRIAN A. CARMICHAEL No. 67645 STATE OF FLORIDA PROFESSIONAL ENGINEER 03/17/20

Drawing has been digitally signed.

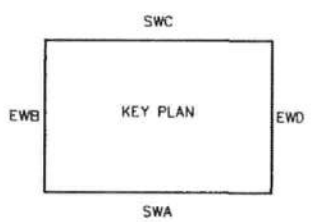
Anchor Rod Drawings

1) This drawing is for anchor rod placement only and is not foundation design.
2) Foundation must be square and level with all anchor rods true in size, location, and projection.
3) Projection shown must be held to keep threads clear of finished concrete.
4) This structural design data includes magnitude and location of design loads and support conditions, material properties, and type and size of major structural members necessary to show compliance with the Order Documents at the time of this issue. Any change to building loads or dimensions may change structural member sizes and locations shown. This structural design data will be superseded and voided by any future mailing.
5) Anchor rod size is determined by shear and tension at the bottom of the base plate. The length of the anchor rod and method of load transfer to the foundation are to be determined by the foundation engineer, and are not provided by the manufacturer.
6) Anchor rods are ASTM F1554 Gr. 36 material unless noted otherwise.
7) 3000 psi concrete compressive strength (f'c) is assumed for the purpose of column base plate design unless otherwise noted.

FINISH FLOOR AT ELEVATION 100'-0



ANCHOR ROD SETTING PLAN



ACCESSORY SCHEDULE			
MARK	DESCRIPTION	DETAIL	QUAN.
A	10'-0 X 10'-0 FRAMED OPENINGS	F	2
B	3'-0 X 5'-0 FRAMED OPENINGS	E	2

ANCHOR BOLTS TO BE DESIGNED BY FOUNDATION ENGINEER USING DIAMETERS SHOWN IN THIS TABLE.

ANCHOR ROD DESCRIPTION	QUANTITY
⅞"ø DIAMETER X	40
¾"ø DIAMETER X	16

Revision	Date	Description	By	Ck'd

ASTAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Customer:
APEX METAL BUILDING SYSTEMS
LIVE OAK, FL

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: MVM 3/10/20
Checked by: SNH 3/10/20
Project Engineer: AXQ
Job Number: 17-B-54835
Sheet Number: F1 of 3

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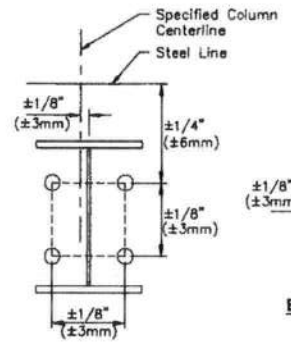
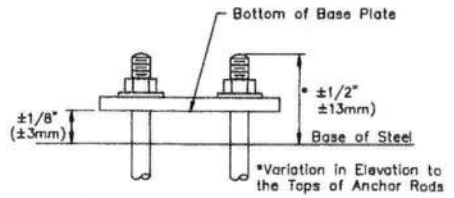
Brian A. Carmichael, P.E.
Florida P.E. 67645

Drawing has been digitally signed.

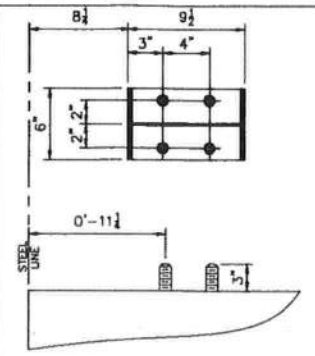
AISC CODE OF STANDARD PRACTICE TOLERANCES FOR SETTING ANCHOR RODS



ANCHOR ROD SETTING TOLERANCES

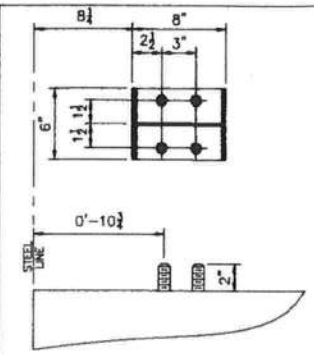


BASE PLATE AND ANCHOR ROD TOLERANCES



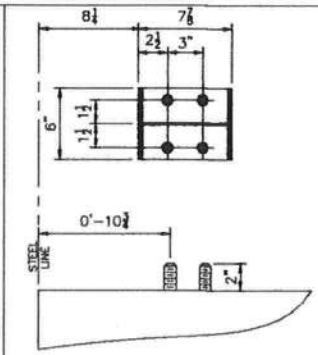
TYPICAL SECTION
¾"ø ANCHOR RODS

(A) BASE OF STEEL AT ELEV. 100'–0



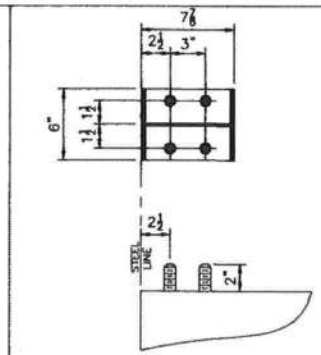
TYPICAL SECTION
⅞"ø ANCHOR RODS

(B) BASE OF STEEL AT ELEV. 100'–0



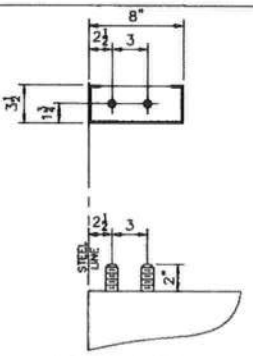
TYPICAL SECTION
⅞"ø ANCHOR RODS

(C) BASE OF STEEL AT ELEV. 100'–0



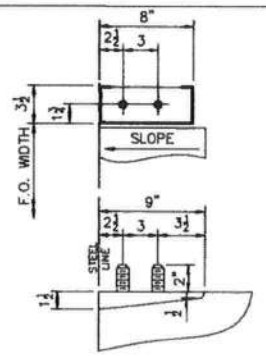
TYPICAL SECTION
⅞"ø ANCHOR RODS

(D) BASE OF STEEL AT ELEV. 100'–0



TYPICAL SECTION
⅞"ø ANCHOR RODS

(E) BASE OF STEEL AT ELEV. 100'–0



TYPICAL SECTION
⅞"ø ANCHOR RODS

(F) BASE OF STEEL AT ELEV. 100'–0

Revision	Date	Description	By	Ck'd

ASTAR BUILDING SYSTEMS®
8500 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Project Name & Location:
KRIS FASE
WHITE SPRINGS, FL

Customer:
APEX METAL BUILDING SYSTEMS
LIVE OAK, FL

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Fabrication)
☐ For Construction Permit
☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: MVM 3/10/20
Checked by: SNH 3/10/20
Project Engineer: AXQ
Job Number: 17-B-54835
Sheet Number: F2 of 3

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Brian A. Carmichael, P.E.
Florida P.E. 67645

Drawing has been digitally signed.

BRIAN A. CARMICHAEL
LICENSE
No. 67645
STATE OF FLORIDA
03/17/20
PROFESSIONAL ENGINEER

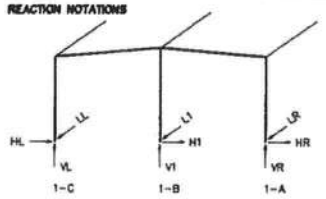
PATH: R:\jobs\Active\Eng\17-B-54835\ver02-axqueseda\BLDG-A\run01\

FRAME DESCRIPTION: Endwall END
USER NAME: axqueseda JOB NAME: 54835A
DATE: 3/04/20 FILE: REW38LD01
PAGE: EW-1

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.

TIME: 07:42:26

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

COLUMN	1-C			1-B			1-A		
LOAD GROUP	HL	VL	LL	HI	VI	LI	HR	VR	LR
D	0.0	0.5	0.	0.	0.8	0.	0.0	0.5	0.
C	0.0	0.2	0.	0.	0.3	0.	0.0	0.2	0.
L	0.0	2.1	0.	0.	3.8	0.0	0.0	2.1	0.
W+	-0.1	-2.9	1.4	0.	-4.9	3.1	0.1	-2.9	1.4
W-	-0.1	-2.9	-1.7	0.	-4.9	-3.5	0.1	-2.9	-1.7
WR	-0.1	-1.8	0.	1.8	-6.1	0.0	0.1	-2.9	0.
WL	-1.8	-4.2	0.	0.	-3.5	0.0	0.1	-2.9	0.

LOAD GROUP DESCRIPTION

D : DEAD LOAD
C : COLLATERAL LOAD
L : LIVE LOAD
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W- : WIND LOAD AS AN OUTWARD ACTING SUCTION
WR : WIND FORCE FROM THE RIGHT
WL : WIND FORCE FROM THE LEFT

NOTES

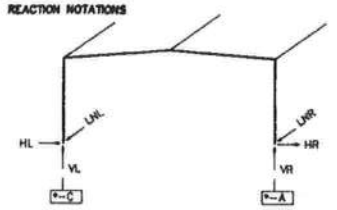
1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
b) RIGID FRAMES
(1) GABLED BUILDINGS
(a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
(b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
(2) SINGLE SLOPE BUILDINGS
(a) LEFT COLUMN IS THE LOW SIDE COLUMN.
(b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
(c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
c) ENDWALLS
(1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
(2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
f) X-BRACING
(1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
(2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATION FACTOR, Ω_0
(3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESENT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, Rd, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO $I_E F_a S_a(0.2)$ IS GREATER THAN 0.45.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC, 2015 IBC, OR FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0.
b) FOR IBC CODES, THE SEISMIC REACTIONS PROVIDED ARE AT A STRENGTH LEVEL AND DO NOT CONTAIN THE RHO FACTOR.
c) FOR NBCC CODES, THE SEISMIC REACTIONS PROVIDED DO NOT CONTAIN THE $R_d R_o$ FACTOR.
THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

FRAME ID @ 40./16./19.833 20./120./
USER NAME: axqueseda JOB NAME: 54835A
DATE: 3/ 4/20 FILE: frames_2-3.fra
PAGE: 1-2

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 2 3
NOTES: (1) All reactions are in kips and kip-ft.
(2) Primary wind load cases are not concurrent.
(3) X-bracing reactions (RBPULW and RBUPEQ) are combined with LWL and LEQ groups only.

TIME: 07:50:44

REACTION NOTATIONS



LOAD GROUP REACTION TABLE GRIDLINES * = 2 3

COLUMN	*-C			*-A		
LOAD GROUP	HL	VL	LWL	HR	VR	LWR
DL	0.3	1.3	0.0	-0.3	1.3	0.0
LL	1.4	4.8	0.0	-1.4	4.8	0.0
COLL	0.2	0.8	0.0	-0.2	0.8	0.0
WL1	-3.7	-7.8	0.0	-0.9	-4.5	0.0
WL2	-3.9	-4.7	0.0	-0.7	-1.4	0.0
WL3	0.9	-4.5	0.0	3.7	-7.8	0.0
WL4	0.7	-1.4	0.0	3.9	-4.7	0.0
LWL1	0.3	-8.8	0.0	-0.1	-5.5	0.0
RSUPLW	0.0	-2.2	-2.8	-0.0	-2.2	-2.8
LWL2	0.1	-5.5	0.0	-0.3	-6.8	0.0
LWL3	0.1	-3.7	0.0	0.1	-2.4	0.0
LWL4	-0.1	-2.4	0.0	-0.1	-3.7	0.0
RSDWLW	-0.0	2.2	0.0	0.0	2.2	0.0

LOAD GROUP DESCRIPTION

DL : Roof Dead Load
LL : Roof Live Load
COLL : Roof Collateral Load
WL1 : Wind from Left to Right with +GCpi
WL2 : Wind from Left to Right with -GCpi
WL3 : Wind from Right to Left with +GCpi
WL4 : Wind from Right to Left with -GCpi
LWL1 : Windward Corner Left with +GCpi
RSUPLW : Upward Acting Rod Brace Load from Long. Wind
LWL2 : Windward Corner Right with +GCpi
LWL3 : Windward Corner Left with -GCpi
LWL4 : Windward Corner Right with -GCpi
RSDWLW : Downward Acting Rod Brace Load from Long. Wind

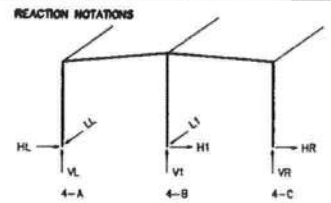
PATH: R:\jobs\Active\Eng\17-B-54835\ver01-axqueseda\BLDG-A\run01\

FRAME DESCRIPTION: Endwall END
USER NAME: axqueseda JOB NAME: 54835A
DATE: 3/04/20 FILE: REW48LD01
PAGE: EW-2

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.

TIME: 07:45:19

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

COLUMN	4-A			4-B			4-C		
LOAD GROUP	HL	VL	LL	HI	VI	LI	HR	VR	LR
D	0.0	0.5	0.	0.	0.8	0.	0.0	0.5	0.
C	0.0	0.2	0.	0.	0.3	0.	0.0	0.2	0.
L	0.0	2.1	0.	0.	3.8	0.0	0.0	2.1	0.
W+	-0.1	-5.1	2.8	0.	-4.9	3.1	0.1	-2.9	0.
W-	-0.1	-0.6	0.	0.	-4.9	-3.5	0.1	-2.9	0.
WR	-0.1	-1.6	0.	1.8	-6.1	0.0	0.1	-2.9	0.
WL	-1.8	-4.2	0.	0.	-3.5	0.0	0.1	-2.9	0.

LOAD GROUP DESCRIPTION

D : DEAD LOAD
C : COLLATERAL LOAD
L : LIVE LOAD
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W- : WIND LOAD AS AN OUTWARD ACTING SUCTION
WR : WIND FORCE FROM THE RIGHT
WL : WIND FORCE FROM THE LEFT

Revision	Date	By	Ck'd
Description			

ASTAR BUILDING SYSTEMS®
8600 SOUTH I-35 SERVICE RD.
OKLAHOMA CITY, OK 73149
(405) 636-2010

Customer: APEX METAL BUILDING SYSTEMS LIVE OAK, FL

Project Name & Location: KRIS FASE WHITE SPRINGS, FL

Drawing Status: ☐ Preliminary (Not For Construction) ☐ For Construction Permit ☐ For Approval (Not For Construction) ☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: MVM 3/10/20
Checked by: SNH 3/10/20
Project Engineer: AXQ
Job Number: 17-B-54835
Sheet Number: F3 of 3

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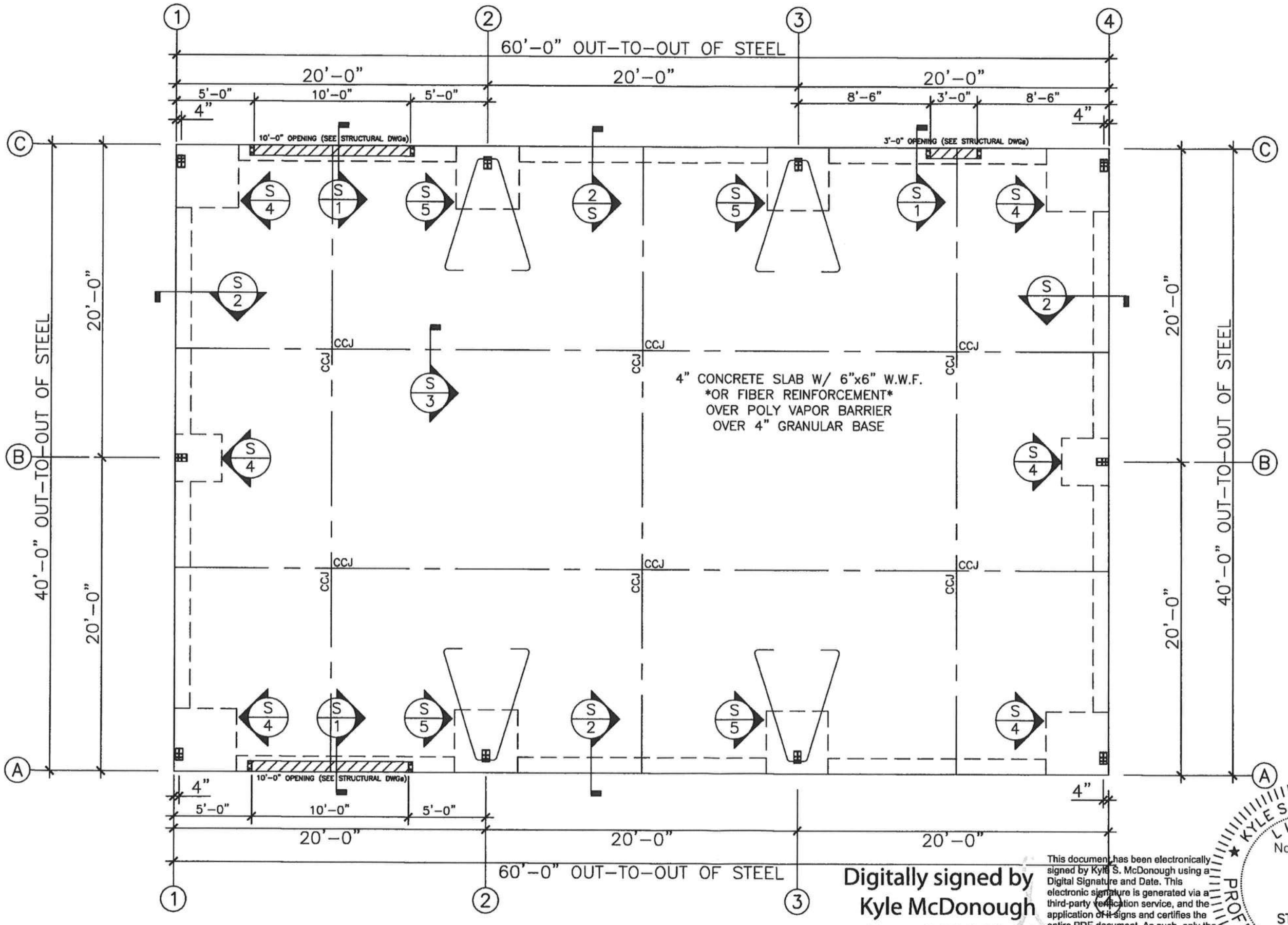
Brian A. Carmichael, P.E.
Florida P.E. 67645

Drawing has been digitally signed.

BRIAN A. CARMICHAEL
No. 67645
STATE OF FLORIDA
PROFESSIONAL ENGINEER
03/17/20



FOUNDATION PLAN

Digitally signed by Kyle McDonough
Date: 2020.03.26 '14:08:57 -04'00

This document has been electronically signed by Kyle S. McDonough using a Digital Signature and Date. This electronic signature is generated via a third-party verification service, and the application of it signs and certifies the entire PDF document. As such, only the first page of this documents requires a digital verified signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

KYLE S. McDONOUGH LICENSE No. 83601 STATE OF FLORIDA PROFESSIONAL ENGINEER

APEX METAL BUILDING SYSTEMS
118 Northeast Conner St.
LIVE OAK, FL 32406
PHONE: 800.231.0026

KRIS FASE
WHITE SPRINGS, FL 32096
JOB NO. 20-149

DATE
MARCH 26, 2020

SHEET
1 OF 3

DESIGN LOADS:

ROOF LIVE LOAD:	20 PSF	
ROOF DEAD LOAD		
SUPERIMPOSED:	2.15 PSF	
COLLATERAL:	1.5 PSF	
GROUND SNOW LOAD:	0.0 PSF	
FLAT ROOF SNOW LOAD:	0.0 PSF	
ULTIMATE WIND SPEED:	120 MPH	
WIND EXPOSURE CATEGORY:	B	
IMPORTANCE FACTOR:	WIND	1.00
	SEISMIC	1.00
	SNOW	1.00

SEISMIC DESIGN PARAMETERS:

SEISMIC USE GROUP:	II – NORMAL
SPECTRAL RESPONSE ACCELERATION:	S_S: N/A
	S_1: N/A
SITE CLASSIFICATION:	D
SEISMIC DESIGN CATEGORY:	–

LATERAL DESIGN CONTROL:

EARTHQUAKE: ____
WIND: X
CALCULATED BUILDING DESIGN BASE SHEARS:
VX= SEE METAL BLDG. DRAWINGS
VY= SEE METAL BLDG. DRAWINGS

FOUNDATIONS:

1. ASSUMED SOIL BEARING PRESSURE IS 2,000 PSF ON FIRM UNDISTURBED SOIL OR COMPACTED FILL MATERIAL. ALL CONC. FOOTINGS SHOULD EXTEND BELOW FROST LINE PER LOCAL BUILING CODE.
2. FILL MATERIAL SHALL BE FREE OF ROOTS, WOOD, AND OTHER ORGANIC MATERIAL MATERIALS USED FOR FILL BELOW FOOTINGS AND WITHIN BUILDING LIMITS SHALL BE TESTED AND APPROVED FOR USE BY AN APPROVED TESTING AGENCY.
3. FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 8 INCHES AND COMPACTED TO 95 PERCENT OF THE OPTIMUM DENSITY AS DEFINED BY ASTM D-698.
4. PROOFROLLING SHALL BE CONDUCTED FOR BUILDING SUBGRADE USING A FULLY LOADED DUMP TRUCK. PROOFROLLING SHALL BE CONDUCTED FOLLOWING A SUITABLE PERIOD OF DRY WEATHER TO AVOID DEGRADING AN OTHERWISE ACCEPTABLE SUBGRADE.
5. UTILITY LINES SHALL NOT BE PLACED THROUGH BUILDING FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL.

CONCRETE:

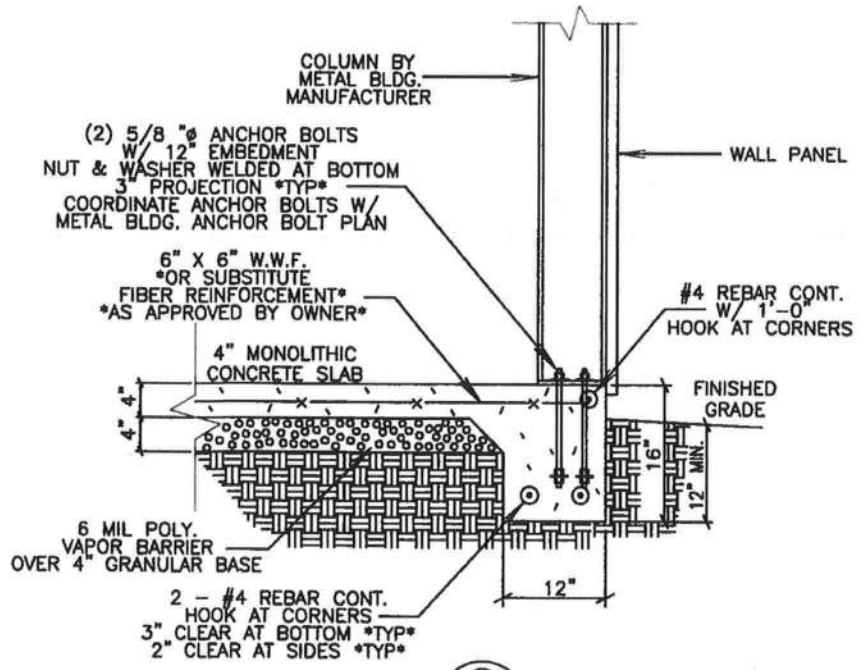
1. ALL CONCRETE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE *ACI 318-14*.
2. ALL CONCRETE SHALL HAVE ASTM C-33 AGGREGATE WITH MAXIMUM UNIT WEIGHT OF 150 PCF. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3,000 PSI AT 28 DAYS, MIN.

REINFORCING STEEL:

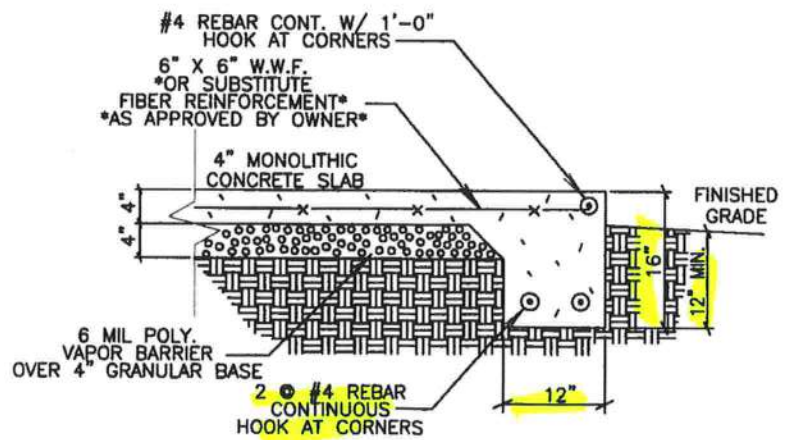
1. REINFORCING STEEL SHALL BE BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A-615, GRADE 60.
2. CONCRETE COVERAGE OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE UNLESS OTHERWISE NOTED:
   A. FOOTINGS AND GRADE BEAMS 3 INCHES
   B. SLABS ON GRADE 2 INCHES
3. REINFORCING STEEL SHALL BE LAPPED USING THE FOLLOWING SCHEDULE:
   NO.4 = 25" NO.5 = 31" NO.6 = 37"

GENERAL NOTES:

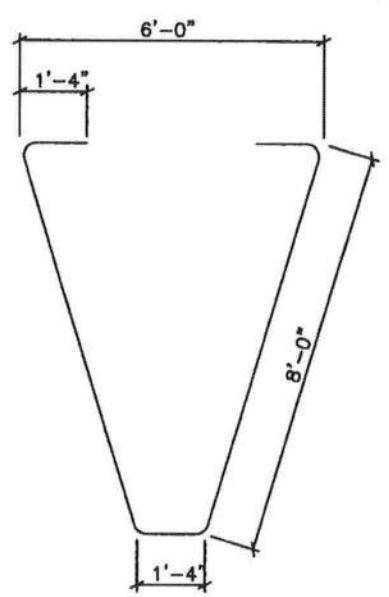
1. FINISHED FLOOR ELEVATION IS AT 100'-0" UNLESS OTHERWISE NOTED.
2. SLAB ON GRADE IS 4 INCH NORMAL WEIGHT CONCRETE WITH 6"X6" W1.4XW1.4 WELDED WIRE FABRIC OR FIBER REINFORCEMENT (AS APPROVED BY OWNER) ON 6 MIL VAPOR BARRIER AND 4 INCH GRANULAR BASE.
3. CONTROL JOINTS IN CONCRETE SLABS SHALL BE SAWCUT. CONSTRUCTION JOINTS SHALL BE FORMED WITH KEYED METAL EDGE FORM MATERIAL OR EQIVALENT.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODES AND REGULATIONS.
5. ALL DIMENSIONS SHOULD BE READ OR CALCULATED, NOT SCALED.
6. REFER TO METAL BUILDING DRAWINGS FOR SPECIFIC DETAILS AND INFORMATION.
7. REFER TO METAL BUILDING DRAWINGS FOR ALL ANCHOR BOLT SIZES AND LOCATIONS.
8. THE DESIGN OF THIS FOUNDATION WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE 2015 EDITION.
9. THE CONTRACTOR SHALL EXERCISE PROPER PRECAUTION TO VERIFY ALL EXISTING CONDITIONS AND LAYOUT OF WORK. IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY ERROR RESULTING FROM FAILURE TO EXERCISE SUCH PRECAUTION.
10. ANY DISCREPANCIES, ERRORS OR OMISSIONS DISCOVERED IN THE DOCUMENT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH RELATED WORK. OTHERWISE, THE CORRECTION OF SUCH ITEMS IS THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR.
11. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.



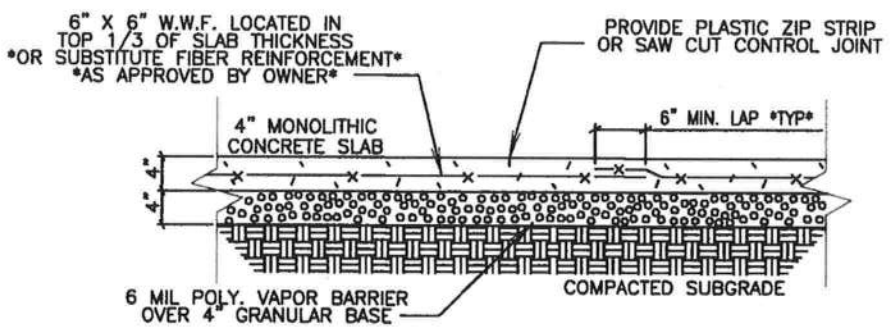
S/1 OPENING JAMBS



S/2 PERIMETER FOOTING



HAIRPIN BAR BEND DIAGRAM



S/3 CONTROL JOINT

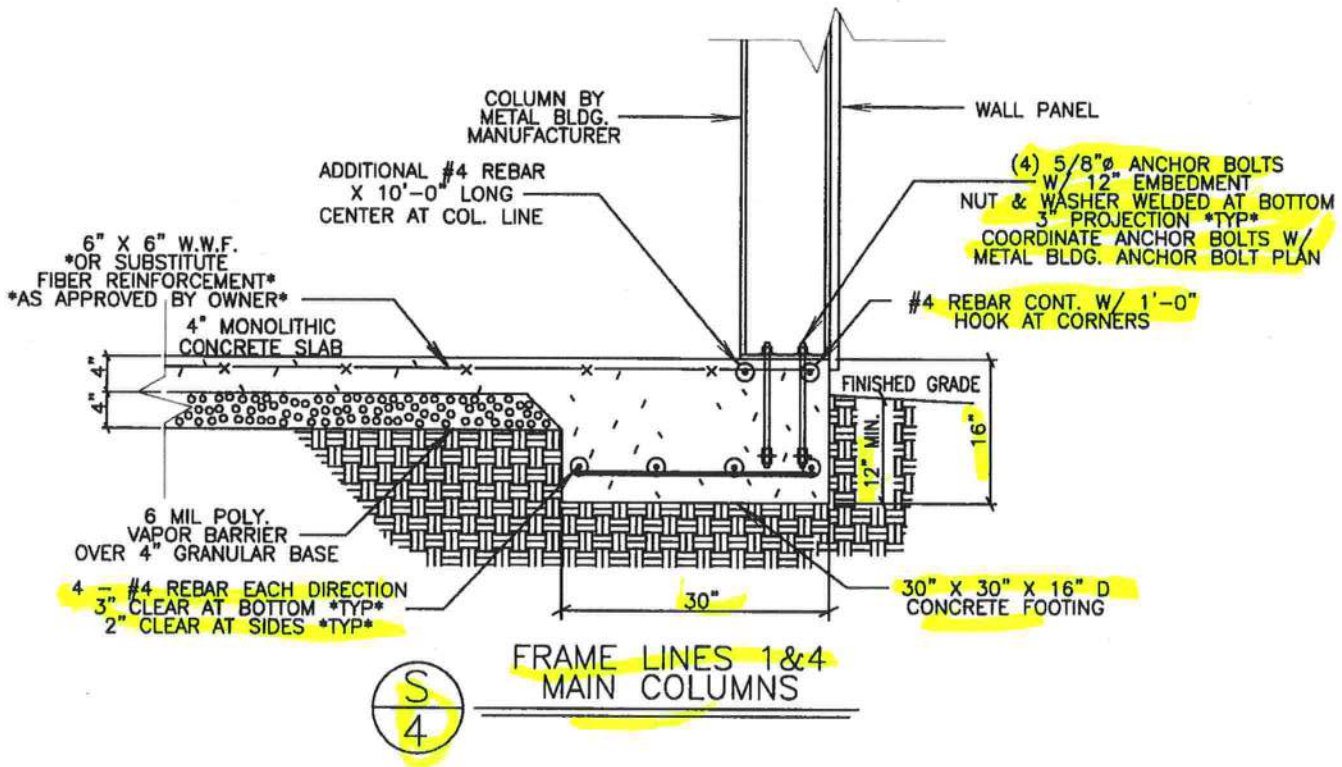
KYLE S. McDONOUGH
LICENSE
No. 83601
STATE OF FLORIDA
PROFESSIONAL ENGINEER

APEX METAL BUILDING SYSTEMS
118 Northeast Conner St.
LIVE OAK, FL 32406
PHONE: 800.231.0026

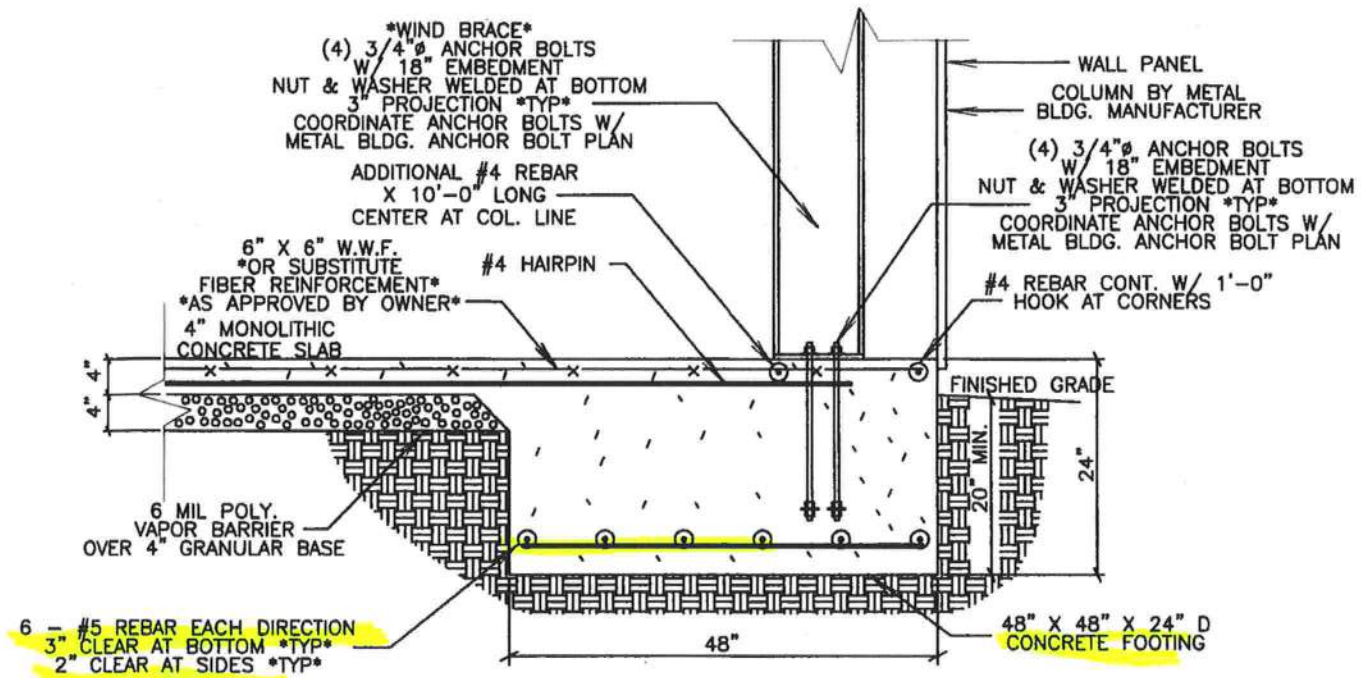
KRIS FASE
WHITE SPRINGS, FL 32096
JOB NO. 20-149

DATE
MARCH 26, 2020

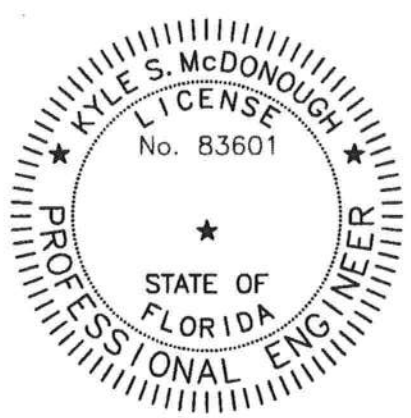
SHEET
2 OF 3



S/4 FRAME LINES 1&4 MAIN COLUMNS



S/5 FRAME LINES 2&3 MAIN COLUMNS



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