

DESIGN CRITERIA:

APPLICABLE CODES, REGULATIONS & STANDARDS

1. THE 2020 FLORIDA BUILDING CODE, SPECIFICALLY CHAPTER 16
- STRUCTURAL DESIGN, CHAPTER 20 ALUMINUM & CH. 23 WOOD.
2. AA ASM 35 & SPECIFICATIONS FOR ALUMINUM STRUCTURES,
- PART 1-A OF THE ALUMINUM DESIGN MANUAL PREPARED BY
- THE ALUMINUM ASSOCIATION, INC. WASHINGTON D.C. 2005 ED.
3. ASCE 7-16 & SE17
4. NDS NATIONAL DESIGN SPECIFICATION FOR WOOD.
5. ACI318 CONCRETE REFERENCE MANUAL.

WIND LOADS

1. BUILDING OCCUPANCY CATEGORY, PARAGRAPH 1604.5 & TABLE
- 1604.5: RISK CATEGORY 1.
2. BASIC WIND SPEED, TABLE 1609C, STATE OF FLORIDA DEBRIS
- REGION & BASIC WIND SPEED, PARAGRAPH 1609.3.1 & TABLE
- 1609.3.1 EQUIVALENT BASIC WIND SPEED: 110
- MPH EXPOSURE CATEGORY, PARAGRAPH 1609.4.3: C
3. WIND LOADS PER FBC TABLE 2002.4 (MWFRS)
- VULT = 110 MPH & EXPOSURE = C

FOR 20 X 20 X 0.013" MESH SCREEN

HORIZONTAL PRESSURES ON WINDWARD SURFACES = 24 PSF

HORIZONTAL PRESSURES ON LEEWARD SURFACES = 18 PSF

VERTICAL PRESSURES ON SCREEN SURFACES = 7 PSF

VERTICAL PRESSURES ON SOLID SURFACES = 19 PSF

FOR 18 X 14 X 0.013" MESH SCREEN, APPLIED FACTOR = .88

FOR ALLOWABLE STRESS DESIGN, APPLIED FACTOR = .6

FOUNDATION DESIGN

EXISTING APPROVED 12" X 12" RIBBON FOOTER W/ (2) # 5 REBAR CONT.

MISCELLANEOUS

1. SCREENED ENCLOSURES CONTAINING SWIMMING POOLS SHALL
- COMPLY WITH THE APPLICABLE REQUIREMENTS OF FBC
- R4501.17 RESIDENTIAL SWIMMING BARRIER REQUIREMENTS.
2. ALUMINUM ADDITIONS ARE NOT TO BE INSTALLED ON A
- MANUFACTURED HOME, TRAILER HOME, OR PRE-FAB HOME.
- IF THE EXISTING STRUCTURE IS ONE OF THESE, A SEPARATE 4TH
- WALL SUPPORT SYSTEM IS SO TO BE ENGINEERED SO THAT NO
- ADDITIONAL LOADING IS PLACED ON THE MANUFACTURED HOME.

FASTENER SPECIFICATIONS

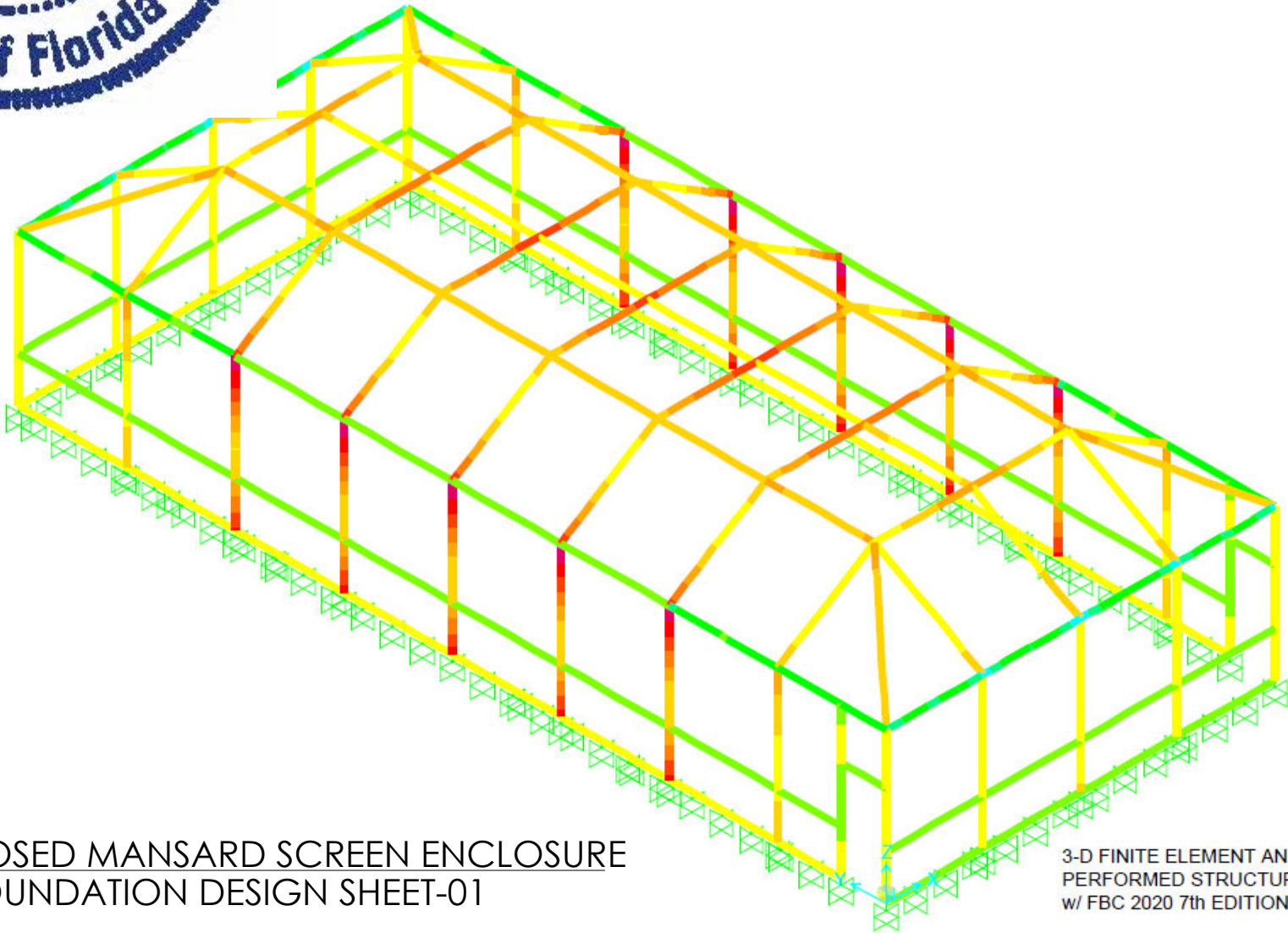
1. FASTENERS ARE REQUIRED TO BE SAE GRADE 2 OR BETTER
- ZINC PLATED. (CONCRETE ANCHORS ARE TO BE TAPCONS
- OR BETTER, INSTALLED TO MFG. SPECIFICATIONS)
2. IT IS THE OWNERS RESPONSIBILITY TO MAINTAIN THE SCREENS,
- FASTENERS AND SCREENS TO MANUFACTURING SPECIFICATIONS.
3. WHERE WOOD DECK IS PRESENT USE 1/4" X 3-1/2" GALV. LAG
- SCREWS IN LIEU OF MASONRY ANCHORS. UNLESS OTHERWISE
- SPECIFIED.
4. 1"X2" NON STRUCTURAL MEMBERS ATTACHED TO HOST
- A. FOR MASONRY/CONCRETE APPLICATION USE GALVANIZED
- 1/4" X 2-3/4" TAPCONS OR EQUAL AT 24" O.C. AND 6" FROM ENDS
- B. FOR WOOD APPLICATION USE #14 X 2-3/4" WOOD SCREW AT
- 24" O.C. AND 6" FROM ENDS.
- C. FOR ALUMINUM APPLICATION USE #10 X 1-1/2" SMS OR TEK
- SCREW AT 24" O.C. AND 6" FROM ENDS
- D. WHERE 1"X2" INSTALLED THROUGHOUT AN "OPEN VIEW"
- SPACING SHALL BE REDUCED TO 18" O.C. AND 6" FROM ENDS

RESPONSIBILITIES

1. ALL SITE WORK SHALL BE PERFORMED BY A LICENSED
- CONTRACTOR IN ACCORDANCE WITH APPLICABLE BUILDING
- CODES, LOCAL ORDANANCES, AND THE ENGINEER SHALL
- BE NOTIFIED OF ANY DISCREPANCIES.
2. FOR FASTENERS WHICH ARE NOT VISIBLE AFTER INSTALLATION,
- THE CONTRACTOR SHALL VERIFY AND ENSURE INSTALLATION
- HAS BEEN ACCOMPLISHED IN ACCORDANCE WITH
- MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH
- THE ATTACHED DETAILS.
3. FOR "PICTURE WINDOW" MODIFICATION TO EXISTING SCREEN
- ENCLOSURES, ALL OTHER "EXISTING SCREEN ENCLOSURE"
- FEATURES ARE TO MEET THE TYPICAL DETAILS AS PROVIDED
- IN THESE DETAILS. CONTRACTOR IS TO VERIFY & ASSURE
- EXISTING SCREEN ENCLOSURE IS STRUCTURALLY SOUND.
4. CONTRACTOR TO PROVIDE NOA'S & INSTALL ALL MATERIALS
- AS PER MANUFACTURER'S SPECIFICATIONS.
5. INTEGRITY OF EXISTING/ HOST STRUCTURE SHALL NOT BE
- COMPROMISED WITH THE ATTACHMENT OF THE PROPOSED
- STRUCTURE.

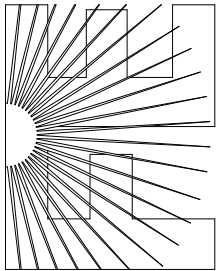
SHEET NO.	DRAWING INDEX
S/01	GENERAL NOTES
S/02	PLAN/ ELEVATIONS
S/03	DETAILS
S/04	DETAILS

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PROPOSED MANSARD SCREEN ENCLOSURE  
SEE FOUNDATION DESIGN SHEET-01

FLORIDA ENGINEERING LLC  
4161 TAMiami TRAIL, UNIT 101  
PORT CHARLOTTE, FLORIDA 33952  
(941) 391-5980  
www.flengineeringllc.com



CA CERT. #30782

PROJECT NO. 2219549

CONTRACTOR:  
SCREENWORKS INC

PROJECT ADDRESS:  
WILLIAMS  
1999 S MARION AVE  
LAKE CITY, FL 32025

DESIGN DATE: 07/16/2022

REVISION 1: DATE

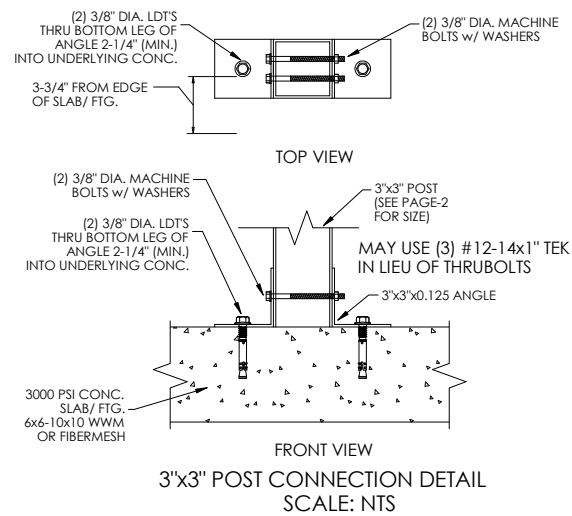
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DRAWN BY: MBG

SCALE: NTS

SHEET:

01



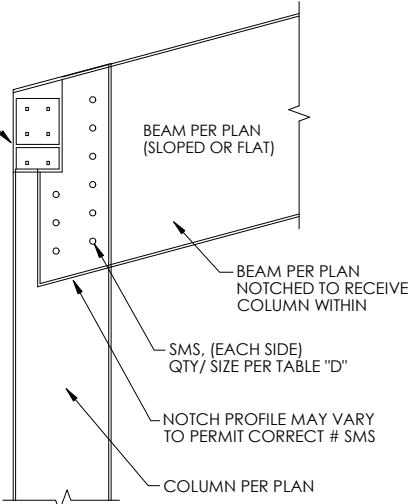
02

1"x2" FASTEN TO COL. (INTERNAL)  
w/(2) #10x1-1/2" SMS, FASTEN TO  
EAVE RAILS ABOVE w/#10 1-1/2" SMS  
24" O.C. AND 6" WITHIN COL.

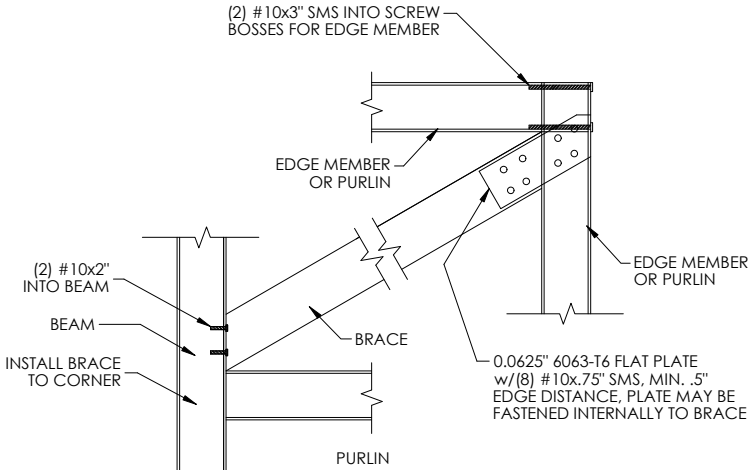
TABLE "D"

BEAM	QTY/ SIZE EACH SIDE
2 x 3	(4)/ #12
2 x 4	(5)/ #12
2 x 5	(5)/ #12
2 x 6	(6)/ #12
2 x 7	(7)/ #12
2 x 8	(8)/ #14
2 x 9	(9)/ #14
2 x 10	(9)/ #14

MAINTAIN MIN. OF 5/8" SEPERATION  
FROM EDGE OF BEAM SMS O.C.



DETAIL E - UPRIGHT TO BEAM  
CONNECTION SCALE: NTS



DETAIL "D" - ROOF BRACING CONNECTION  
SCALE: NTS

ALUMINUM MEMBERS DIMENSIONS

HOLLOW SECTIONS

2 x 2: 2" x 2" x 0.050"  
2 x 3: 2" x 3" x 0.050"  
2 x 4: 2" x 4" x 0.050"  
2 x 5: 2" x 5" x 0.050"

OPEN BACK SECTIONS

1 x 2: 1" x 2" x 0.044"  
1 x 3: 1" x 3" x 0.045"

SNAP SECTIONS

2 x 2 SNAP: 2" x 2" x 0.045"  
2 x 3 SNAP: 2" x 3" x 0.050"  
2 x 4 SNAP: 2" x 4" x 0.045"

SELF MATING (SMB)

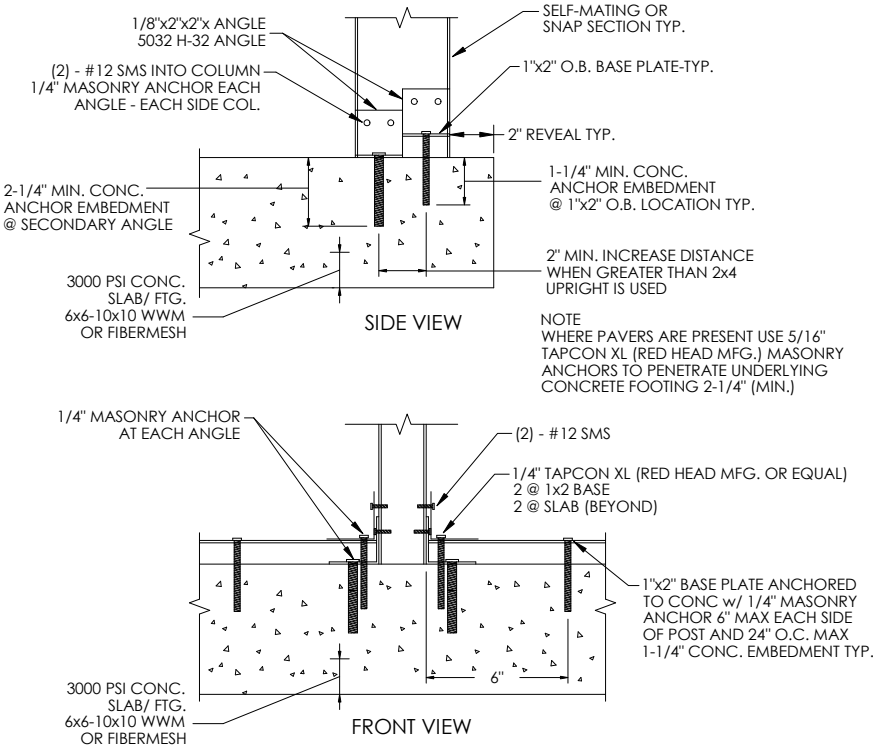
2 x 4 SMB: 2" x 4" x 0.046" x 0.100"  
2 x 5 SMB: 2" x 5" x 0.050" x 0.116"  
2 x 6 SMB: 2" x 6" x 0.050" x 0.120"  
2 x 7 SMB: 2" x 7" x 0.055" x 0.120"  
2 x 8 SMB: 2" x 8" x 0.072" x 0.224"  
2 x 9 SMB: 2" x 9" x 0.072" x 0.224"  
2 x 9(H) SMB: 2" x 9" x 0.082" x 0.306"  
2 x 10 SMB: 2" x 10" x 0.092" x 0.374"

DETAIL A

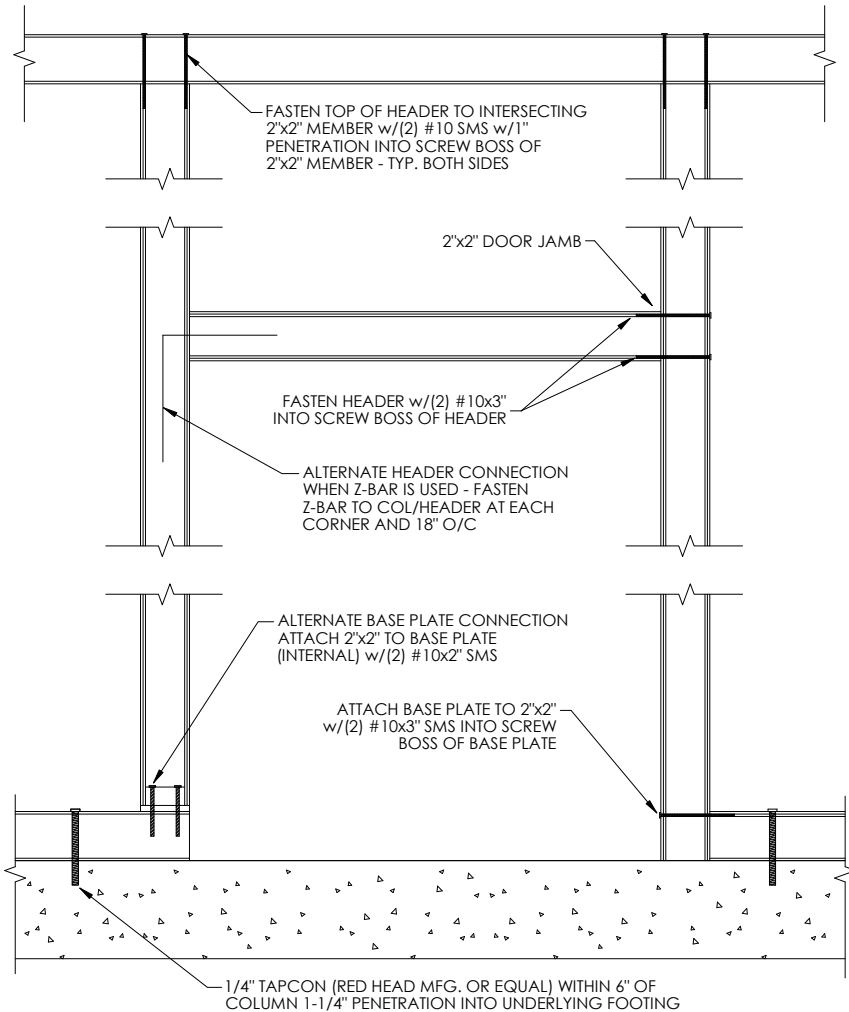
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MINIMUM NUMBER OF TAPCONS INTO CONCRETE &  
# 12 X 3/4" S.M.S. INTO UPRIGHT / EACH SIDE OF BEAM  
THROUGH SECONDARY 2" X 2" X 0.125" ANGLES  
(SEE BELOW)

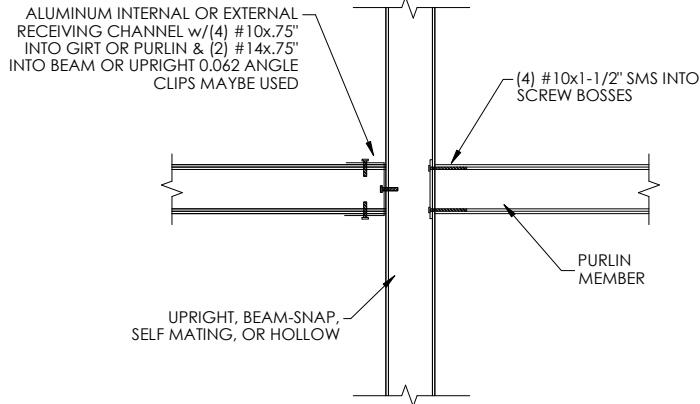
2X4 S.M.B. (1) 1/4" X 2-1/4" S.S. TAPCON & (2) # 12 X 3/4" S.M.S.  
2X5 S.M.B. (1) 1/4" X 2-1/4" S.S. TAPCON & (2) # 12 X 3/4" S.M.S.  
2X6 S.M.B. (2) 1/4" X 2-1/4" S.S. TAPCON & (3) # 12 X 3/4" S.M.S.  
2X7 S.M.B. (2) 1/4" X 2-1/4" S.S. TAPCON & (4) # 12 X 3/4" S.M.S.  
2X8 S.M.B. (3) 1/4" X 2-1/4" S.S. TAPCON & (5) # 12 X 3/4" S.M.S.  
2X9 S.M.B. (4) 1/4" X 2-1/4" S.S. TAPCON & (6) # 12 X 3/4" S.M.S.  
2X10 S.M.B. (5) 1/4" X 2-1/4" S.S. TAPCON & (7) # 12 X 3/4" S.M.S.



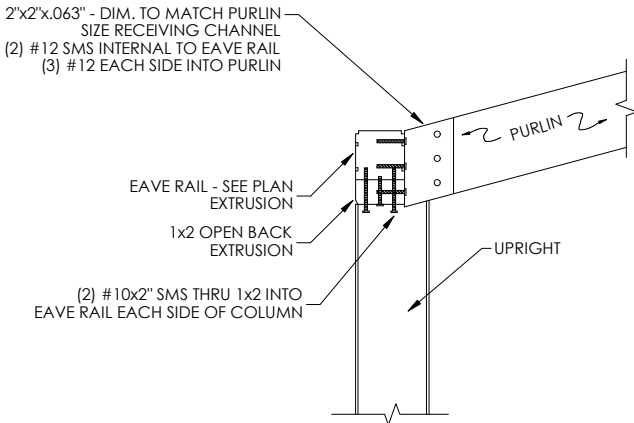
DETAIL "B" - 2"x4" OR LARGER SELF MATING  
UPRIGHT TO DECK DETAILS SCALE: NTS



DETAIL "F" - DOOR JAMB & HEADER  
CONNECTION SCALE: NTS

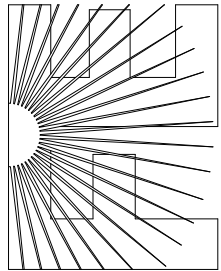


DETAIL "C" - GIRT OR PURLIN TO BEAM  
OR POST DETAIL SCALE: NTS



DETAIL "G" - SLOPED PURLIN  
CONNECTION SCALE: NTS

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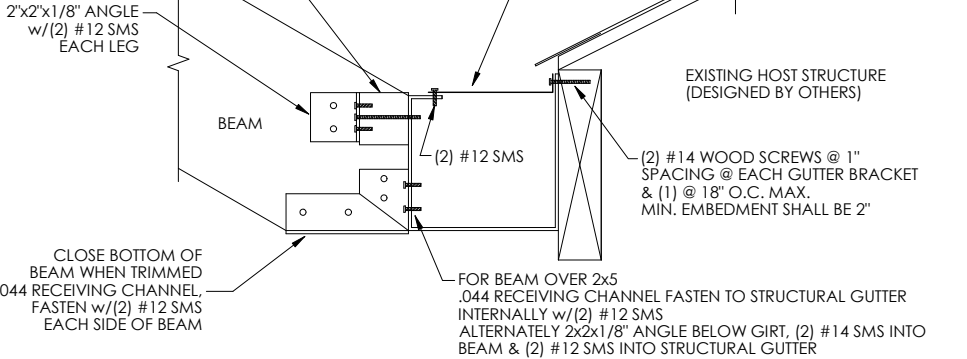
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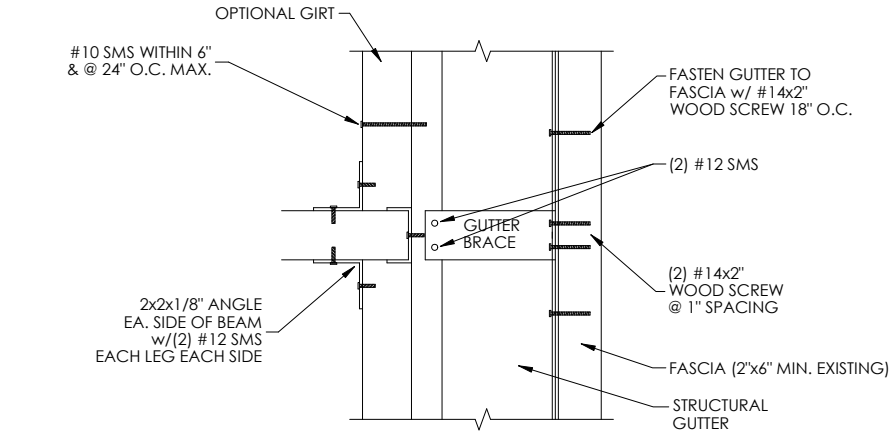
SHEET:

03

GIRT FASTENED INTERNALLY AT EACH END w/ #10x1.5" EACH SCREW GROOVE. FASTEN TO BEAM w/ 2"x2"x1/8" ANGLE (2) #12 SMS INTO BEAM & (2) #10x1.5 THRU ANGLE INTO GUTTER WHERE NO GIRT IS PRESENT, ATTACH ANGLE DIRECTLY TO GUTTER

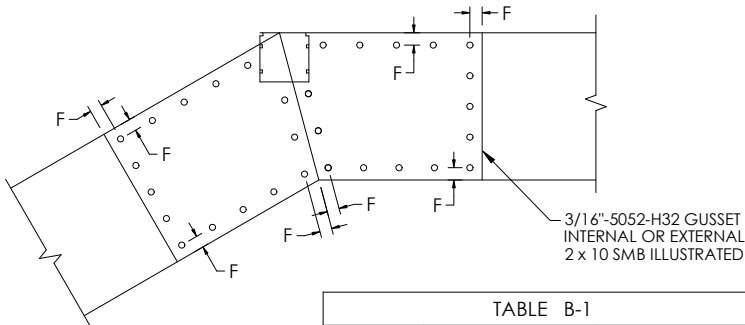


SIDE VIEW



TOP VIEW

DETAIL "H" BEAM TO GUTTER CONNECTION SCALE: NTS

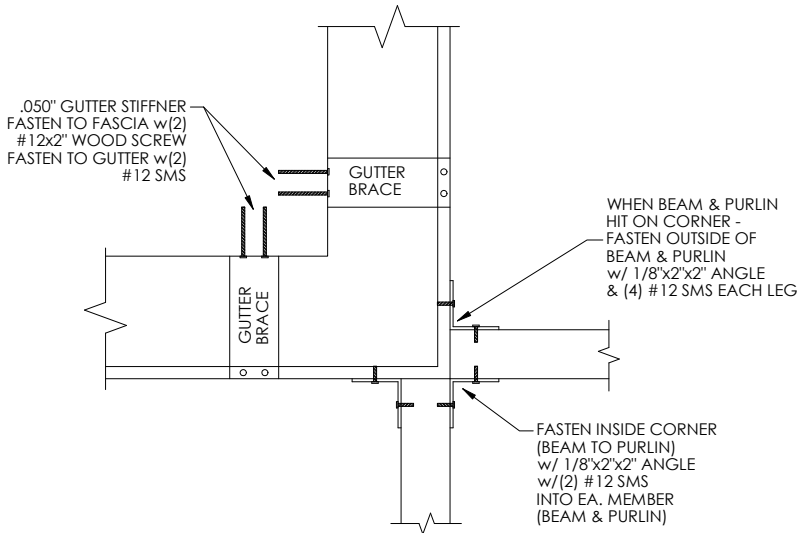


NOTE F  
INSTALL FASTENERS ALONG PERIMETER OF GUSSET -BEAM JOINT 3/8" MIN, FROM EDGE. FASTENERS MAY BE STAGGERED TO INSURE PROPER QUANTITY PER TABLE B-1

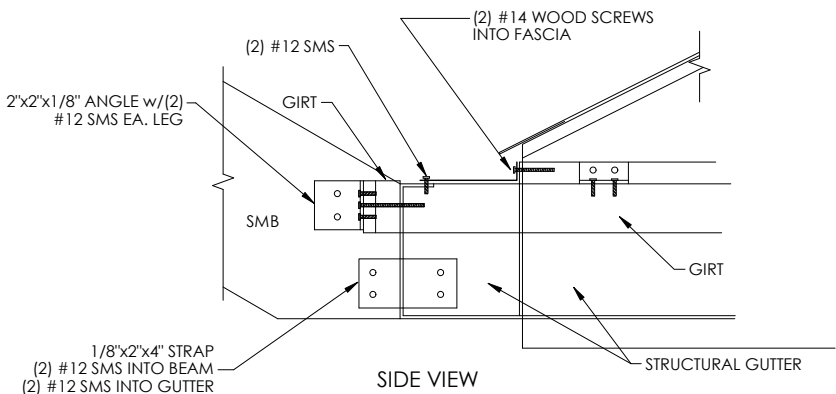
FASTENER PATTERN MAY APPEAR DIFFERENT FROM ILLUSTRATION. MAINTAIN 1/2" SEPARATION BETWEEN FASTENERS. MAINTAIN 3/8" MIN. FASTENER SEPARATION FROM BEAM JOINT OR EDGE OF BEAM LAP FASTENERS MAY BE EVENLY SPACED AROUND EDGE OF GUSSET WITHIN 3/8" OF BEAM JOINT. FASTENERS MAY BE STAGGERED TO INSURE PROPER QUANTITY PER TABLE B-1

DETAIL "K" GUSSET CONNECTION SCALE: NTS

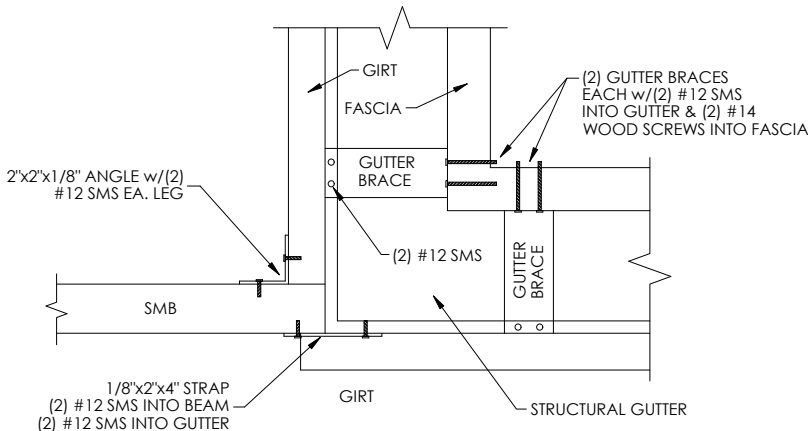
TABLE B-1		
BEAM SIZE	COL. TO BEAM QTY SMS/ SIDE OF COL.	BEAM TO BEAM QTY SMS/ EA. FACE/SIDE
2 x 4	(5) #12	(9) #12
2 x 5	(5) #12	(9) #12
2 x 6	(7) #12	(9) #12
2 x 7	(10) #12	(10) #12
2 x 8	(12) #12	(14) #12
2 x 9	(14) #14	(14) #14
2 x 10	(16) #14	(15) #14



DETAIL "M" BEAM & PURLIN TO GUTTER CONNECTION SCALE: NTS

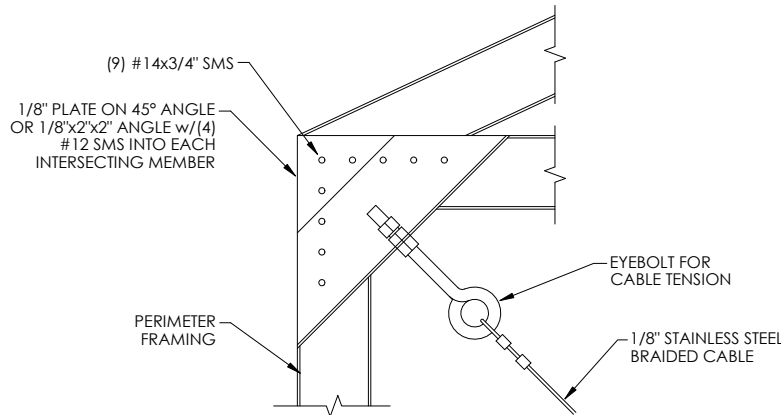


SIDE VIEW

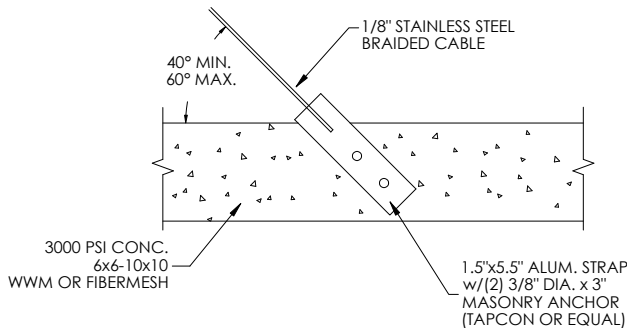
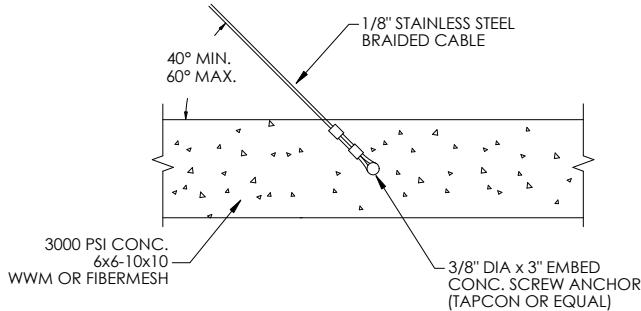
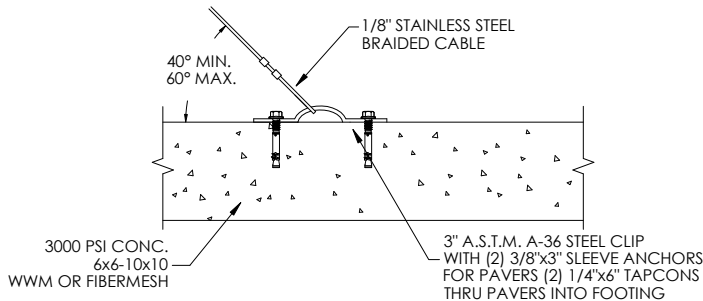


TOP VIEW

DETAIL "L" CORNER CONNECTION SCALE: NTS



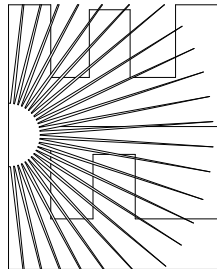
DETAIL "I-2" CABLE CONNECTION AT CORNER SCALE: NTS



DETAIL "I-1" CABLE CONNECTION AT FOUNDATION SCALE: NTS

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04