

SUMMERSPACE 12'X16' ALUMINUM CABANA GENERAL PERFORMANCE EVALUATION

TO BE USED ALONG WITH A DESIGN PROFESSIONAL'S SITE SPECIFIC EVALUATION & CERTIFICATION FOR PERMIT.
NO CERTIFICATION IS OFFERED FOR USE WITHOUT A SITE SPECIFIC PLAN UNDER SEPARATE CERTIFICATION

DESIGN LOADING LIMITATIONS:

DESIGN LOADING LIMITATIONS: LOCAL DESIGN CONDITIONS ALLOWABLE UP TO:

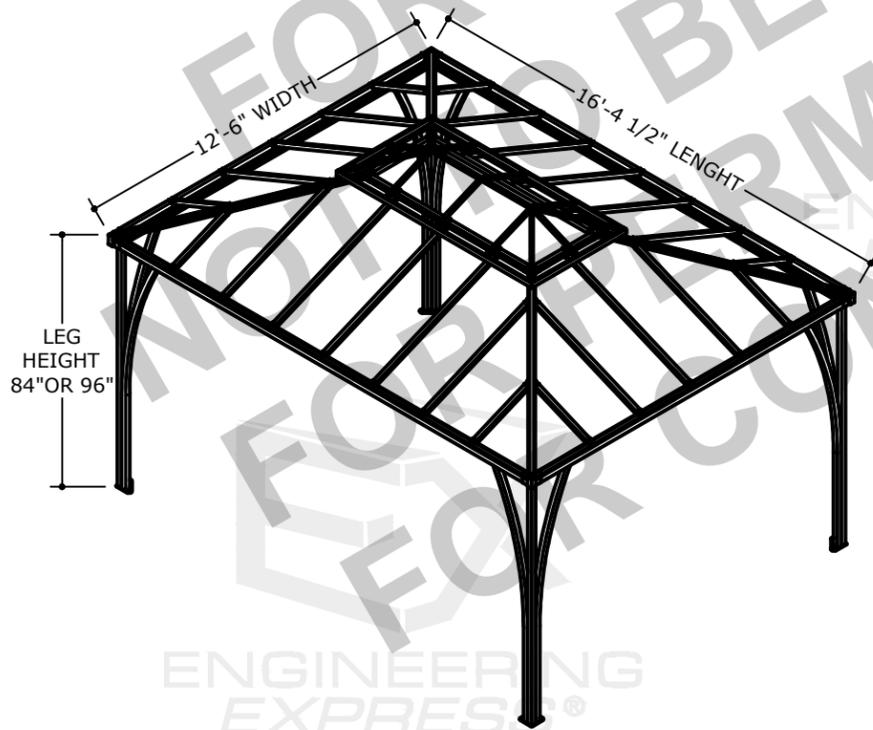
SYSTEM AS DETAILED - FABRIC ROOF PERMANENTLY INSTALLED:

ULT WIND SPEED: 130 MPH; EXPOSURE CATEGORY: D; GROUND SNOW LOAD: 20 PSF

SYSTEM AS DETAILED - FABRIC ROOF TO BE REMOVED DURING A DESIGN WIND OR SNOW EVENT*:

ULT WIND SPEED: 175 MPH; EXPOSURE CATEGORY: D; GROUND SNOW LOAD: 60 PSF

*IN AREAS WITH LOCAL WIND OR SNOW DESIGN CRITERIA EXCEEDING THE CONDITIONS LISTED, FABRIC ROOF SHALL BE REMOVED IN ANTICIPATION OF ANY NAMED WIND EVENT OR EXTENDED SNOWFALL EVENT.



1 12' X 16' RECTANGULAR
SUMMERSPACE ALUMINUM CABANA
1 NOT TO SCALE ISO

INDEX

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BY



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THIS SUBMITTAL IS FOR STRUCTURAL PURPOSES ONLY. THIS PRODUCT SHALL BE CONSTRUCTED USING PARTS MANUFACTURED BY "SUMMERSPACE" OR "FUTUREGUARD". ALL NON-STRUCTURAL ELECTRICAL / MECHANICAL UNITS AND COMPONENTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. ANY INFORMATION NOT REFERENCED HEREIN SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR THIS PRODUCT.

PROJECT PARTS TAKEOFF & SCHEDULE PROVIDED BY THE MANUFACTURER MAY NOT MATCH THE INFORMATION DETAILED HEREIN. MATERIAL TAKEOFF & COORDINATION SHALL NOT BE THE RESPONSIBILITY OF THE SIGNING ENGINEER. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO CONFIRM THE MATERIALS, HARDWARE, AND ANY REQUIRED CONNECTION ANCHORS USED FOR INSTALLATION MATCH THE INFORMATION SHOWN HEREIN BEFORE INSTALLATION BEGINS. REFER THE PROJECT INFORMATION BLOCK PROVIDED ABOVE FOR A QUICK REFERENCE OF PROJECT STYLE & MATERIAL REQUIREMENTS.

SCOPE OF WORK:

DESIGN & INSTALLATION OF A NEW ALUMINUM CABANA WITH FABRIC ROOF, FREESTANDING, RESIDENTIAL, OR COMMERCIAL SUMMERSPACE PERGOLA AS DETAILED HEREIN

EXCLUSIONS:

THE DESIGN OF ANY EXISTING HOST STRUCTURE, MECHANICAL ELEMENTS, EGRESS, WATERPROOFING ELECTRICAL, WIRING, FAN BEAMS, FANS, OR ANY ACCESSORY ATTACHMENTS ARE NOT INCLUDED WITH THIS DESIGN OR CERTIFICATION U.N.O

PROJECT INFORMATION:

PERGOLA STYLE: SUMMERSPACE 8'X8' ALUMINUM, OPEN AIRFLOW CABANA
ROOF TYPE: WEATHER-TREATED FABRIC ROOF
STRUCTURE SUPPORT: FREESTANDING
BASE CONNECTION: ALUMINUM POST & BASEPLATE ANCHORED TO CONCRETE FOOTING, CONCRETE SLAB, OR EXISTING WOOD DECK (BY OTHERS)

DESIGN CRITERIA:

INTERNATIONAL BUILDING CODE & RESIDENTIAL CODE (2018 & 2021)
CURRENT STATE BUILDING CODE (REFERENCED STATE CODES PER NOTES ON FOLLOWING SHEET)
ASCE 7-16 LOAD COMBINATIONS

- DEAD LOADING
 - ROOF DEAD LOAD..... 5 PSF
- LIVE LOADING
 - ROOF LIVE LOAD..... 5 PSF (PER ASCE 7-16; 4.3-1 FOR FABRIC ROOF ON SKELETON STRUCTURE)
- WIND LOADING INPUTS
 - METHODOLOGY..... OPEN STRUCTURE UP TO 175 MPH
 - ULTIMATE WIND SPEED..... (ASD = SQRT(0.6)*Vult)
 - WIND EXPOSURE FACTOR..... UP TO D
 - WIND RISK CATEGORY..... II
 - DIRECTIONALITY/OTHER FACTORS..... Kd=0.85, G=0.85, Kz=0.85, Kzt=1.0 (FLAT TERRAIN)
 - MEAN ROOF HEIGHT..... TOTAL HEIGHT UP TO 11 FT 3 IN
 - SYSTEM MOUNTING HEIGHT..... 0 FT (AT GRADE)
- SNOW LOADING
 - GROUND SNOW LOAD..... UP TO 20 PSF
 - SNOW EXPOSURE FACTOR..... 1.0
 - SNOW LOAD IMPORTANCE FACTOR... 1.0
 - THERMAL FACTOR..... 1.2
 - SNOW DRIFT..... PER CODE
- SEISMIC LOADS (NOT TO CONTROL)
 - RISK CATEGORY..... II
 - SITE CLASS..... D
 - SEISMIC DESIGN CATEGORY (SDC).... UP TO C
 - SEISMIC LOADING DOES NOT CONTROL DESIGN
- RESULTANT MAIN WIND FORCE RESISTING SYSTEM ASD DESIGN LOAD COMBINATIONS
 - ASD MWFRS DESIGN LOADING
 - GRAVITY (+)..... 25 PSF
 - UPLIFT (-)..... -19 PSF
 - LATERAL..... 22 PSF

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SUMMERSPACE
101 MERROW ROAD
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12'x16' OPEN CABANA
PERFORMANCE EVALUATION
INTERNATIONAL BUILDING CODE (2018 & 2021)

REMARKS	DATE	DRWN	CHKD
INIT ISSUE	3/24/23	CCB	FLB

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SCALE: NTS UNLESS NOTED

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GENERAL

- 1. THIS SYSTEM HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 7TH EDITION (2020). ALSO APPLICABLE FOR THE IBC/IRC (2018 & 2021), AS WELL AS CURRENT VERSIONS OF THE MN, NC, NJ, NY, OH, SC, & VA BUILDING CODES AS APPLICABLE. CODE ENFORCED COMPLIES WITH STATE OF SEAL AND IF MULTIPLE VERSIONS ARE LISTED THEN MOST STRINGENT APPLIES. DESIGN SHALL UTILIZE ASD DESIGN METHOD USING ASCE 7-16 OR ASCE 7-10 CODES FOR SITE SPECIFIC APPLICATIONS AS APPLICABLE. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY AND GOVERN. DESIGN CRITERIA OR SPANS BEYOND STATED HEREIN MAY REQUIRE ADDITIONAL SITE SPECIFIC SEALED ENGINEERING.
- 2. ANY EXISTING HOST STRUCTURE MUST BE CAPABLE OF SUPPORTING THE LOADED SYSTEM AS VERIFIED BY THE ENGINEER & OR ARCHITECT OF RECORD, et.al. THE HOST STRUCTURE WHICH IS DESIGNED, CERTIFIED, AND INSPECTED BY OTHERS MUST PROVIDE SUFFICIENT CAPACITY FOR THIS SPECIFIED PATIO COVER SYSTEM. NO WARRANTY OR GUARANTEE TO THESE CONDITIONS, EITHER EXPRESSED OR IMPLIED, IS OFFERED WITH THIS CERTIFICATION.
- 3. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. ALL STRUCTURAL MEMBERS AS SHOWN HAVE BEEN DESIGNED TO CARRY IN PLACE DESIGN LOADS ONLY; THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORT OF ANY ADDITIONAL LOADS AND FORCES IMPOSED DURING MANUFACTURING, TRUCKING, ERECTING, AND HANDLING.
- 4. SPECIAL INSPECTIONS MAY BE REQUESTED OR REQUIRED AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION.
- 4.1. IN AREAS OF SEISMIC DESIGN CATEGORY (SDC) D-F, AN INSPECTOR SHALL EXAMINE THE DESIGNATED SEISMIC SYSTEM, MOUNTING, AND ANCHORAGE REQUIRING QUALIFICATION IN ACCORDANCE WITH SECTION 13.2.2 OF ASCE 7 PER IBC 1705.12.4, AS WELL AS INSPECT REINFORCEMENT AND VERIFY PLACEMENT PER IBC 1908.4
- 5. **THIS SUBMITTAL IS FOR STRUCTURAL PURPOSES ONLY.** THIS PRODUCT SHALL BE CONSTRUCTED USING PARTS MANUFACTURED BY "SUMMERSPACE" OR "FUTUREGUARD". ALL NON-STRUCTURAL ELECTRICAL / MECHANICAL UNITS AND COMPONENTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. ANY INFORMATION NOT REFERENCED HEREIN SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR THIS PRODUCT.
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FABRIC CANOPY DESIGN & OPERATION:

- 1. SYSTEM NOT DESIGNED TO HANDLE CONCENTRATED LOADS FROM HUMAN ACTIVITY. THE STRUCTURE SHALL NOT BE WALKED UPON AND IS NOT DESIGNED FOR HUMAN ACTIVITY OR STORAGE.
- 2. DURING SUCH PERIODS OF TIME AS ARE DESIGNATED BY THE U.S. WEATHER BUREAU AS A HIGH WIND OR SNOW ADVISORY FOR THE AREA, THIS SYSTEM MAY HAVE ITS FABRIC ROOF COMPONENTS AND ADDITIONAL ACCESSORY COMPONENTS TEMPORARILY REMOVED AND SAFELY STORED. SLIDING SCREENS AND CURTAINS SHALL BE FULLY REMOVED / RETRACTED / OPENED & SECURELY LOCKED DURING SUSTAINED WIND SPEEDS OF 35 MPH OR WIND GUSTS ABOVE 75 MPH.
- 3. DURING ANY PERIOD OF EXTENDED SNOWFALL OR SNOW ACCUMULATION UPON THE ROOF SYSTEM, SNOW BUILDUP SHALL BE CLEARED FROM THE ROOF WITHIN 24 HOURS OF ITS ACCUMULATION (OR WHENEVER POSSIBLE).
- 4. THE STRUCTURAL SYSTEM AS DETAILED HEREIN HAS BEEN DESIGNED WITH CONSIDERATION OF A SOLID, FABRIC ROOF SYSTEM PERMANENTLY INSTALLED DURING DESIGN WEATHER EVENTS UNLESS OTHERWISE NOTED. HOWEVER, THE STRUCTURAL INTEGRITY OF ANY FABRIC OR ACCESSORY COMPONENTS IS NOT INCLUDED WITH THIS CERTIFICATION. SECUREMENT OF ANY FABRIC ROOF COMPONENTS OR NON-STRUCTURAL ACCESSORIES MAY BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.
- 5. CARE SHALL BE TAKEN WITH ROOFING AND NON-STRUCTURAL ACCESSORIES AS TO NOT ALLOW ANY ADDITIONAL COMPONENT TO DETACH FROM THE OVERALL SYSTEM AND BECOME FLYING DEBRIS.
- 6. **THE STRUCTURE SHALL BE POSTED WITH A LEGIBLE AND READILY VISIBLE DECAL OR PAINTED**

INSTRUCTIONS TO THE OWNER OR TENANT STATING THAT (1) THE SYSTEM IS NOT DESIGNED FOR HUMAN ACTIVITY, (2) TO RETRACT WINDSCREENS & SLIDING PANEL WALLS DURING WIND ADVISORIES, AND (3) THAT CARE SHALL BE TAKEN TO AVOID THE BUILDUP OF SNOW, DEBRIS, CONSTRUCTION LOADS, OR OTHER FORCES THAT MAY EFFECT THE INTEGRITY OF THIS DESIGN. THE CANOPY OWNER SHALL BE NOTIFIED OF THESE CONDITIONS BY THE PERMIT HOLDER AT THE TIME OF SALE.

- 7. NO CERTIFICATION IS OFFERED FOR WATERPROOFING, SIZING, OR OPERATION OF GUTTERS.
- 8. SYSTEM NOT DESIGNED FOR WATERSHED OF RAINFALL FROM ADJACENT ROOFS UNLESS SPECIFICALLY SHOWN HEREIN, TYP.

STRUCTURAL MATERIALS AND CONNECTIONS

STRUCTURAL ALUMINUM & ALUMINUM WELDING:

- 1. ALL COMPONENTS SHALL BE STRUCTURAL ALUMINUM UNLESS OTHERWISE NOTED, AND SHALL BE FABRICATED AND ERECTED ACCORDING TO THE GOVERNING BUILDING CODE AND MATERIAL STANDARDS REFERENCED ON THIS SHEET.
- 2. UNLESS OTHERWISE NOTED, ALL STRUCTURAL ALUMINUM SHALL BE MIN 1/8" THICK AND BE OF THE FOLLOWING ALLOY AND TEMPER:
 - 2.1. BEAMS, PURLINS, COLUMNS 6063-T6 OR 6060 T6
 - 2.2. ALL OTHER EXTRUSIONS 6063-T6
 - 2.3. FASTENERS SS 316
- 3. STRUCTURAL ALUMINUM SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
- 4. WHERE ALUMINUM IS IN CONTACT WITH OTHER METALS EXCEPT 300 SERIES STAINLESS STEEL, ZINC OR CADMIUM AND THE FAYING SURFACES ARE EXPOSED TO MOISTURE, THE OTHER METALS SHALL BE PAINTED OR COATED WITH ZINC, CADMIUM, OR ALUMINUM.
- 5. UNCOATED ALUMINUM SHALL NOT BE EXPOSED TO MOISTURE OR RUNOFF THAT HAS COME IN CONTACT WITH OTHER UNCOATED METALS EXCEPT 300 SERIES STAINLESS STEEL, ZINC, OR CADMIUM. ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH MASONRY, CONCRETE, WOOD, FIBERBOARD, OR OTHER POROUS MATERIAL THAT ABSORBS WATER SHALL BE PAINTED.
- 6. FOR ALUMINUM IN CONTACT WITH CONCRETE: ACCEPTABLE PAINTS: PRIMING PAINT (ONE COAT), SUCH AS ZINC MOLYBDATE PRIMER IN ACCORDANCE WITH FEDERAL SPECIFICATION TT-P-645B ("GOOD QUALITY", NO LEAD CONTENT). ALT: HEAVY COATING OF ALKALI RESISTANT BITUMINOUS PAINT. ALT: WRAP ALUMINUM WITH A SUITABLE PLASTIC TAPE APPLIED IN SUCH A MANNER AS TO PROVIDE ADEQUATE PROTECTION AT THE OVERLAPS.
- 7. ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE TO WHICH CORROSIVE COMPONENTS SUCH AS CHLORIDES HAVE BEEN ADDED IF THE ALUMINUM WILL BE ELECTRICALLY CONNECTED TO STEEL. EMBEDDED ALUMINUM ELEMENTS WILL BE COVERED WITH PLASTIC TAPE OR OTHERWISE PROTECTED AS PER 2015 ADM M.7.3.
- 8. BOLT HOLES SHALL BE DRILLED THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
- 9. ALUMINUM WELDING SHALL BE PERFORMED BY A QUALIFIED WELDER IN ACCORDANCE WITH WELD FILLER ALLOYS MEETING ANSI/AWS A5.10 STANDARDS TO ACHIEVE ULTIMATE DESIGN STRENGTH IN ACCORDANCE WITH THE ALUMINUM DESIGN MANUAL PART I-A, TABLE 7.3.1. ALL ALUMINUM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOLERANCES, QUALITY, AND METHODS OF CONSTRUCTION AS SET FORTH IN THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE-ALUMINUM (D1.2). MINIMUM WELD IS 1/8" THROAT FULL PERIMETER FILLET WELD UNLESS OTHERWISE NOTED.
- 10. STAINLESS STEEL FASTENERS SHALL BE ASTM F593 316 SS COLD WORKED CONDITION. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR ALL SCREW CONNECTIONS. ALL FASTENER CONNECTIONS TO METAL SHALL PROVIDE 2xDIAMETER EDGE DISTANCE AND 3xDIAMETER SPACING.
- 11. SELF-DRILLING SCREWS SHALL BE TEK BRAND / ALL POINTS FASTENERS OF SIZE #10, ALUMINUM OR STAINLESS STEEL 300 SERIES, WITH MINIMUM 1/2" THREAD ENGAGEMENT BEYOND THE CONNECTED PART, UNLESS OTHERWISE NOTED.
- 12. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- 13. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.

STRUCTURAL WOOD (HOST STRUCTURES AS APPLICABLE):

- 1. ALL DIMENSION LUMBER SHALL BE STRUCTURAL GRADE #2 SOUTHERN YELLOW PINE OR BETTER MEETING APPLICABLE REQUIREMENTS OF THE SOUTHERN PINE INSPECTION BUREAU (SPIB) AND PRESSURE-IMPREGNATED (PT) BY AN APPROVED PROCESS (ACQ 0.4 PRESSURE TREATED) PRESERVATIVE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE BUILDING CODE AND AMERICAN WOOD PRESERVERS ASSN (AWPA) "BOOK OF STANDARDS" OR 0.55 SPECIFIC GRAVITY MIN.
- 2. ALL METAL CONNECTORS IN CONTACT WITH WOOD USED IN LOCATIONS EXPOSED TO WEATHER SHALL BE GALVANIZED.

- 3. MEMBERS SHALL BE FREE OF CRACKS AND KNOTS. MOISTURE CONTENT SHALL BE 19% OR LESS.
- 4. WOOD THAT IS IN CONTACT WITH CONCRETE OR MASONRY, AND AT OTHER LOCATIONS AS SHOWN ON STRUCTURAL DRAWINGS, SHALL BE PROTECTED WITH 30 # FELT (UNLESS NOTED OTHERWISE) OR PRESSURE TREATED IN ACCORDANCE WITH AITC-109. MEMBER SIZE SHOWN ARE NOMINAL UNLESS NOTED OTHERWISE.

OTHER MATERIALS (AS APPLICABLE)

- 1. ANY SPECIFIED LIGHT GAUGE STEEL MEMBERS SHALL CONFORM TO ASTM A36 AND CURRENT EDITION OF AISC WITH MINIMUM Fy = 36KSI
- 2. MATERIALS NOT DETAILED HEREIN SHALL BE DESIGNED AND INSTALLED CONFORMING TO THE MANUFACTURER'S SPECIFICATIONS AND ANY GOVERNING CODES & STANDARDS.

ANCHORS & FASTENERS

- 1. ALL FASTENERS TO BE #14 OR GREATER ASTM F593 COLD WORKED 316 STAINLESS STEEL, UNLESS NOTED OTHERWISE. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- 2. ALL METAL CONNECTORS USED IN LOCATIONS EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED.
- 3. ALL FASTENERS SHALL BE SPACED WITH 2x DIAMETER END DISTANCE AND 2.5xDIAMETER MIN. SPACING TO ADJACENT FASTENERS, UNLESS NOTED OTHERWISE. PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR ALL FASTENERS.
- 4. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE AS NOTED HEREIN. MINIMUM EMBEDMENT AND EDGE DISTANCE ARE DEPTHS INTO SOLID SUBSTRATE AND DO NOT INCLUDE THICKNESS OF STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES. ALL CONCRETE ANCHORS SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.
- 5. ANCHOR QUANTITIES INDICATED IN DETAILS ARE FOR GRAPHICAL PURPOSES ONLY. DO NOT SCALE DIAMETER, LENGTH, OR PENETRATION(S). HEAD STYLE(S) ARE FREELY INTERCHANGEABLE.

NON-STRUCTURAL ELEMENTS:

- 1. THE INSTALLATION OF ANY ACCESSORIES THAT DO NOT AFFECT THE STRUCTURAL INTEGRITY OF THE STRUCTURE ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION AND NOT REQUIRED TO BE CERTIFIED UNDER THIS STRUCTURAL DRAWING. THEY MAY BE INSTALLED WITHIN LIMITATIONS STATED HEREIN AND AS DESIRED PER MFR. SPECIFICATIONS. DETAILS PROVIDED HEREIN ARE FOR REFERENCE ONLY

FOUNDATION, CONCRETE, AND REINFORCEMENT

FOUNDATION & EARTHWORK

- 1. SURROUNDING SOIL TO BE WELL COMPACTED BY MECHANICAL MEANS TO 90% OPTIMUM DENSITY, BE FREE OF MUCK AND ORGANICS, AND ACHIEVE 2000 PSF MIN BEARING PRESSURE AND LATERAL BEARING PRESSURE BELOW NATURAL GRADE OF 150 PSF.
- 2. EXCAVATIONS NEAR ADJACENT FOOTINGS AND FOUNDATIONS SHALL NOT REMOVE LATERAL SUPPORT WITHOUT FIRST UNDERPINNING OR PROTECTING THE THE FOOTING OR FOUNDATION AGAINST SETTLEMENT OR LATERAL TRANSLATION.
- 3. SOIL SHALL BE CLASSIFIED OR VERIFIED BY OTHERS PRIOR TO CONSTRUCTION AS SAND CLASS OR BETTER. SHOULD OTHER CONDITIONS OR MATERIALS BE ENCOUNTERED THE ENGINEER OF RECORD MUST BE NOTIFIED.
- 4. FILL TO BE PLACED OVER THE NATURAL GROUND TO ACHIEVE THE FINISH PAD ELEVATION. BACKFILL MATERIAL SHALL CONSIST OF CLEAN GRANULAR SOILS CONTAINING LESS THAN 5% ORGANIC WITH NO MORE THAN 30% ROCK, AND NO ROCK LARGER THAN 3 INCHES IN DIAMETER AND PLACED IN LOOSE LIFTS NOT TO EXCEED 12 INCHES IN THICKNESS. ALL FILL MATERIAL FOUND AT FOUNDATION LEVEL AND BACKFILL SHALL BE COMPACTED TO 98% OF THE STANDARD PROCTOR DENSITY.

CONCRETE

- 1. CONCRETE MIXTURES SHALL BE DESIGNED TO REACH A COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.
- 2. ALL MIXING, TRANSPORTING, PLACING, & CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318.
- 3. NO ADMIXTURES ARE TO BE USED WITHOUT THE WRITTEN APPROVAL OF THE ABOVE-SIGNED ENGINEER.
- 4. CONCRETE SHALL BE TYPE 1 PORTLAND CEMENT MEETING THE REQUIREMENTS OF ASTM C150, AGGREGATES TO MEET ASTM C33. POTABLE WATER SHALL BE USED.
- 5. SLUMP SHALL BE A MINIMUM OF 3" AND MAXIMUM OF 5" CONCRETE DURING AND IMMEDIATELY AFTER DEPOSITING SHALL BY THOROUGHLY COMPACTED BY MEANS OF MECHANICAL VIBRATION.

REINFORCING STEEL

- 1. ALL REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A615, GRADE 60

(U.O.N.), FREE FROM OIL, LOOSE SCALE AND LOOSE RUST AND BENT, LAPPED, PLACED, SUPPORTED AND FASTENED ACCORDING TO THE "ACI DETAILING MANUAL" (SP-66) AND THE ACI 318.

- 2. ALL WELDED WIRE FABRIC IS TO CONFORM TO ASTM A185 MINIMUM YIELD STRENGTH OF 85 KSI.
- 3. CLEAR COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - FOOTINGS EXPOSED TO EARTH: 3"
 - UNFORMED FACES EXPOSED TO EARTH: 3"
 - SLABS EXPOSED TO WEATHER: 2"
- 4. ALL STEEL SHALL BE SECURELY HELD IN PLACE DURING POURING OF CONCRETE. IF REQUIRED, ADDITIONAL BARS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.

CERTIFICATION & LIABILITY

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- 4. DIMENSIONS ARE SHOWN TO ILLUSTRATE DESIGN FORCES AND OTHER DESIGN CRITERIA. THEY MAY VARY SLIGHTLY, BUT SHALL REMAIN IN CONFORMANCE WITH THE LIMITATIONS OF THIS PLAN. THE CONTRACTOR IS TO VERIFY ALL FIELD DIMENSIONS PRIOR TO INSTALLATION, AND VERIFY THAT PROPOSED DIMENSIONS AND FIELD CONDITIONS AGREE WITH THIS PROPOSED PLAN.
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- 7. ENGINEER SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
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12'x16' OPEN CABANA
PERFORMANCE EVALUATION
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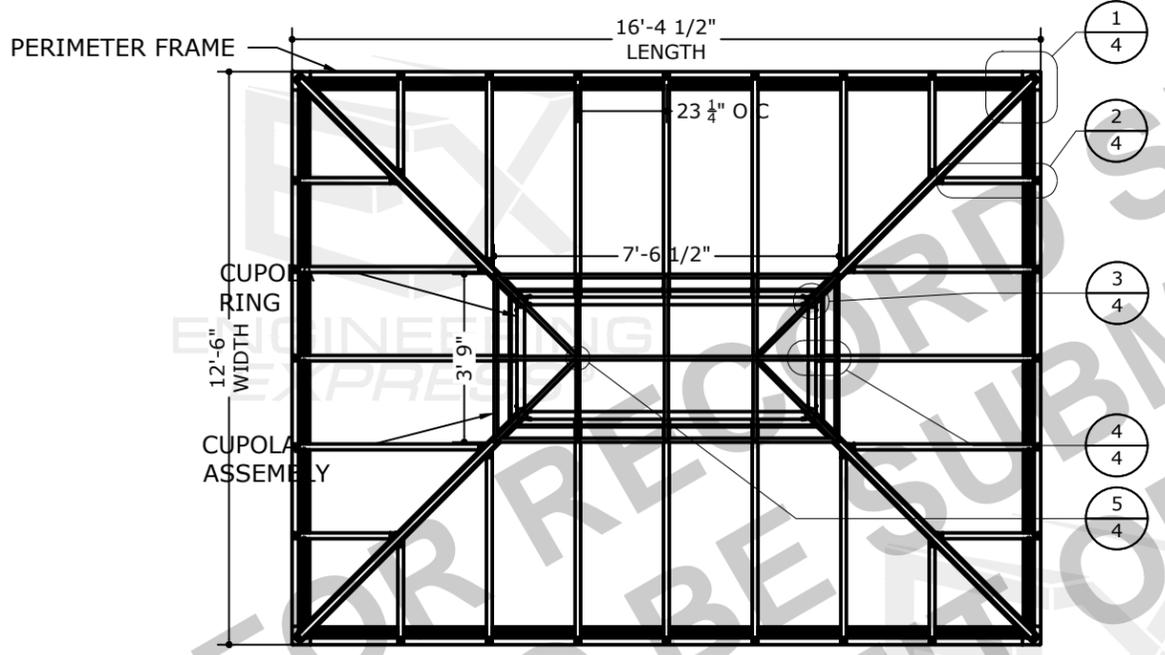
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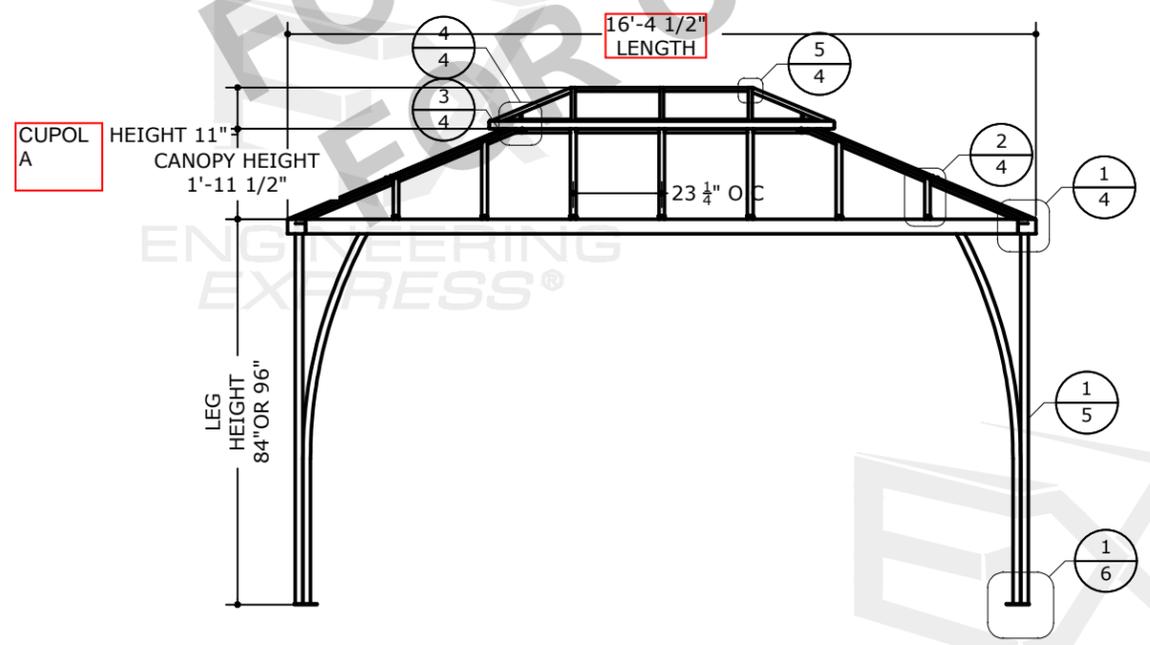
4/5/2023 5:32 AM RENE BERWUJER@engineering-express.com march23-60077 - summerspace performance evaluation(dwg)03-27-23\23-60081 - summerspace 12x16 cabana.dwg

PROJECT VIEWS - ISOMETRIC, PLANS & ELEVATIONS

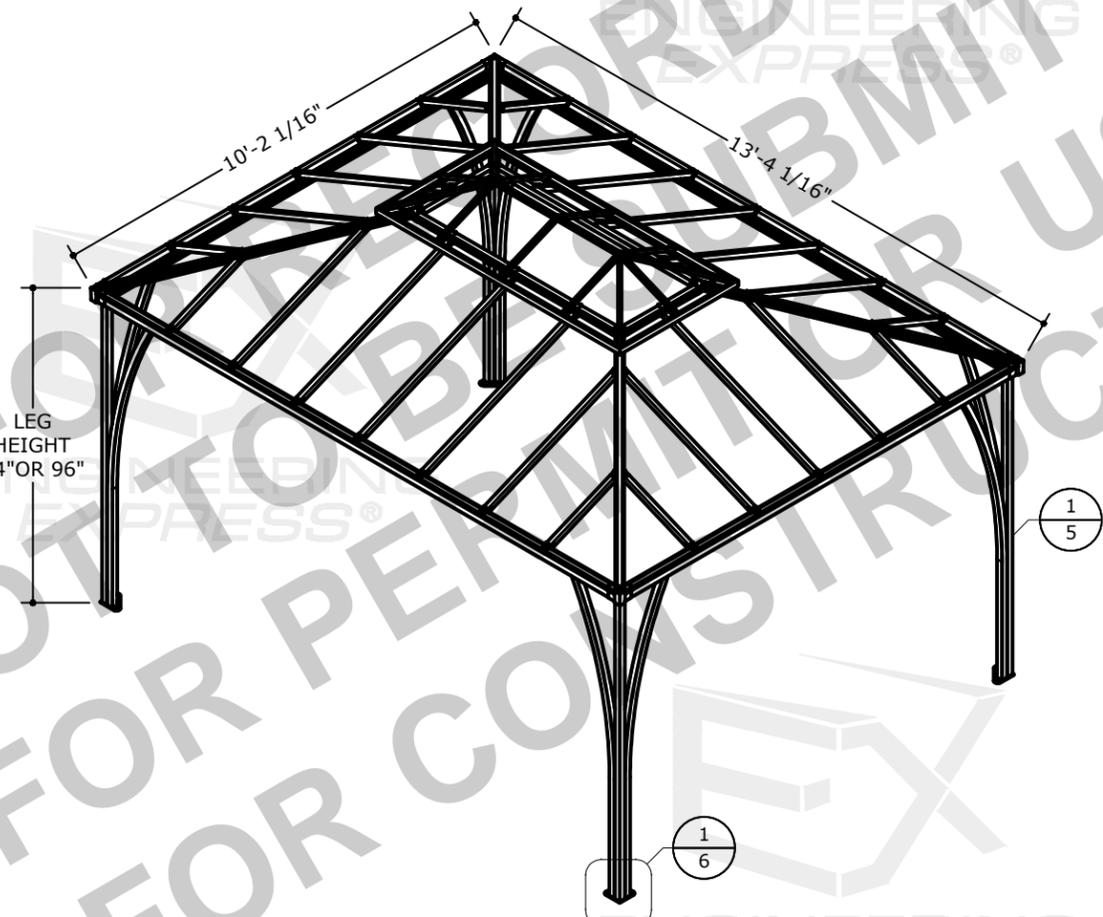
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1 12x16 CABANA
 3 1 1/4" = 1'-0" PLAN



2 12'x16' CABANA
 3 NOT TO SCALE ELEV



3 12'x16' CABANA
 3 NOT TO SCALE ISO

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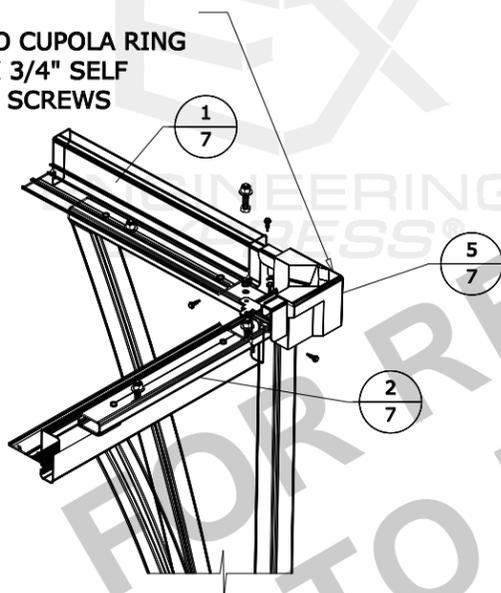
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SYSTEM CONNECTIONS & ASSEMBLY

SOFFIT TO CUPOLA RING
(1) #10 X 3/4" SELF DRILLING SCREWS

SOFFIT TO CUPOLA RING
(2) #10 X 3/4" SELF DRILLING SCREWS

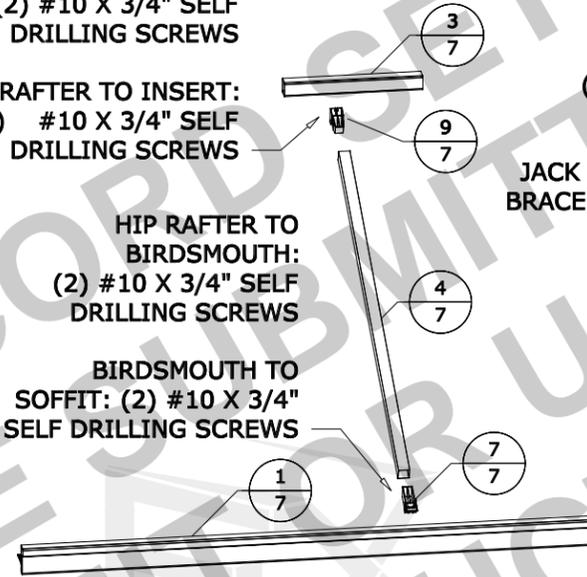


INSERT TO CUPOLA RING:
(2) #10 X 3/4" SELF DRILLING SCREWS

HIP RAFTER TO INSERT:
(2) #10 X 3/4" SELF DRILLING SCREWS

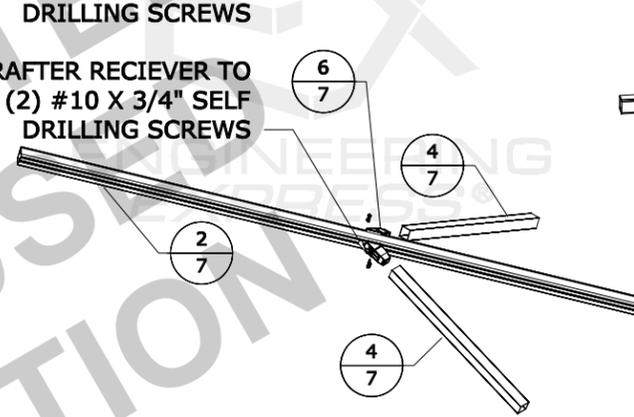
HIP RAFTER TO BIRDSMOUTH:
(2) #10 X 3/4" SELF DRILLING SCREWS

BIRDSMOUTH TO SOFFIT:
(2) #10 X 3/4" SELF DRILLING SCREWS



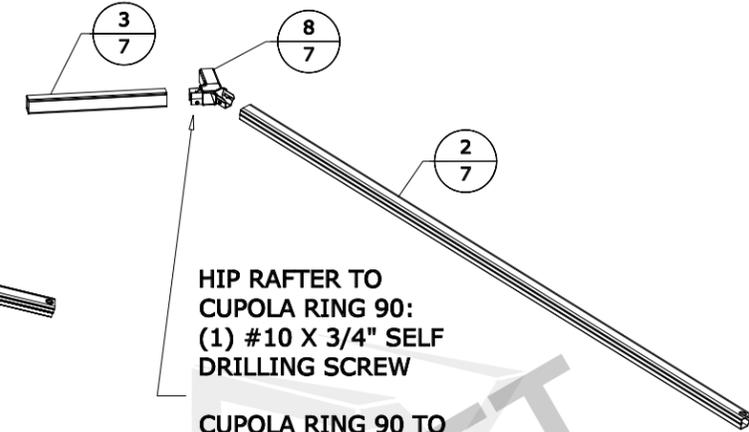
HIP RAFTER TO JACK RAFTER RECIEVER:
(2) #10 X 3/4" SELF DRILLING SCREWS

JACK RAFTER RECIEVER TO BRACE:
(2) #10 X 3/4" SELF DRILLING SCREWS



HIP RAFTER TO CUPOLA RING 90:
(1) #10 X 3/4" SELF DRILLING SCREW

CUPOLA RING 90 TO CUPOLA RING:
(2) #10 X 3/4" SELF DRILLING SCREW



PERIMETER SOFFIT & HIP RAFTER TO SOFFIT CORNER 90 CONNECTION

SUPPORT RAFTER TO PERIMETER SOFFIT, TO HIP RAFTER, AND TO CUPOLA RING CONNECTION

HIP RAFTER AND CUPOLA RING TO CUPOLA RING 90 CONNECTION

1
4 NOT TO SCALE ISO

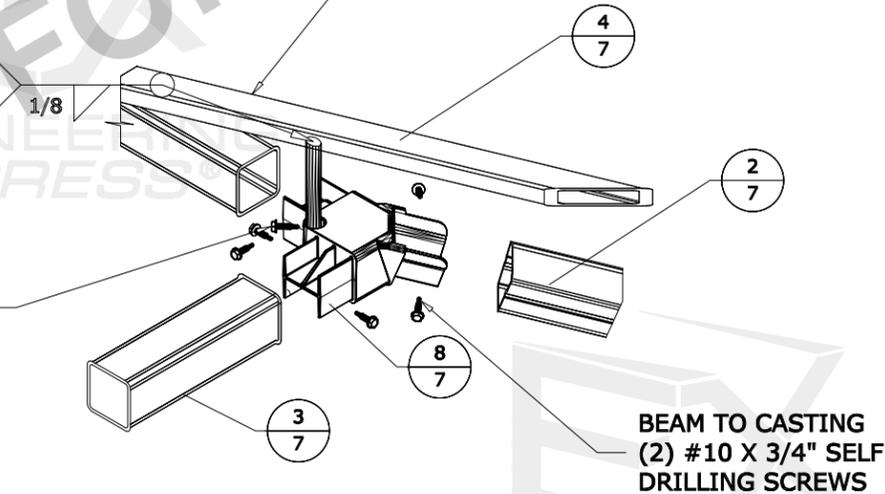
2
4 NOT TO SCALE ISO

3
4 NOT TO SCALE ISO

UPPER CUPOLA ASSEMBLY MAY EITHER BE REMOVED OR REMAIN IN PLACE DURING DESIGN WIND EVENTS.

CUPOLA RING 1/2" Ø HOLLOW PEG WELDED TO UPPER FRAME

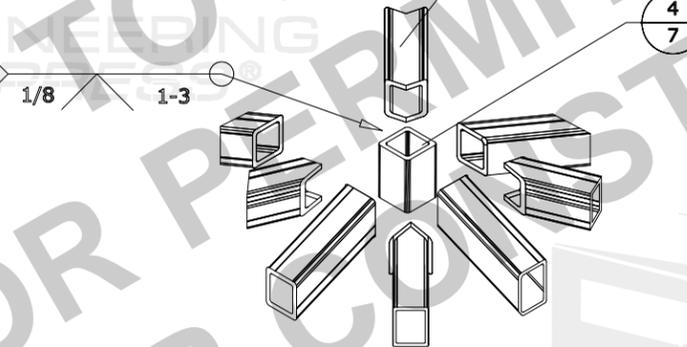
CUPOLA RING 1/2" Ø HOLLOW PEG INTO CUPOLA RING CASTING SLOT & SECURED WITH #14 (OR 1/4"Ø) X 1.25" SS SMS SCREW THROUGH PEG & BACK FACE OF CASTING.



BEAM TO CASTING
(2) #10 X 3/4" SELF DRILLING SCREWS

FULL BUTT WELD ALL CONNECTIONS AT CUPOLA PEAK

1/8 1-3



4
4 NOT TO SCALE ISO

5
4 NOT TO SCALE ISO

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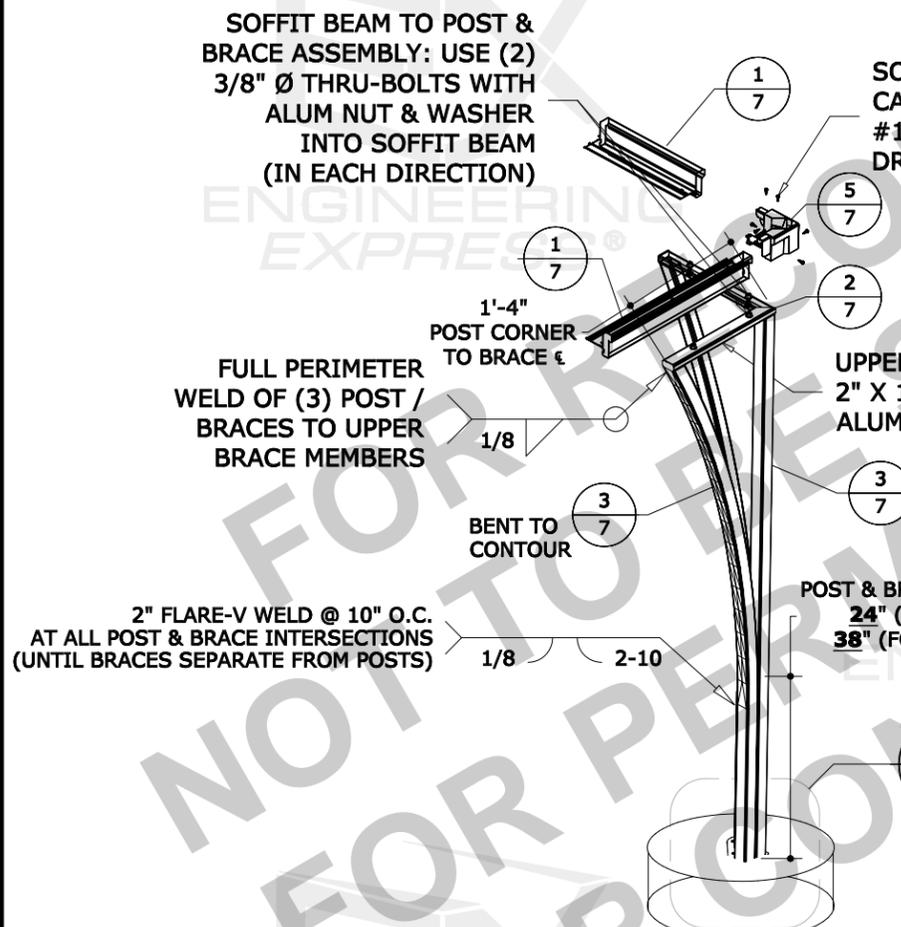
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POST & BRACE DETAILS & ASSEMBLY

POST & BASEPLATE ASSEMBLY TO BE PRE-FABRICATED

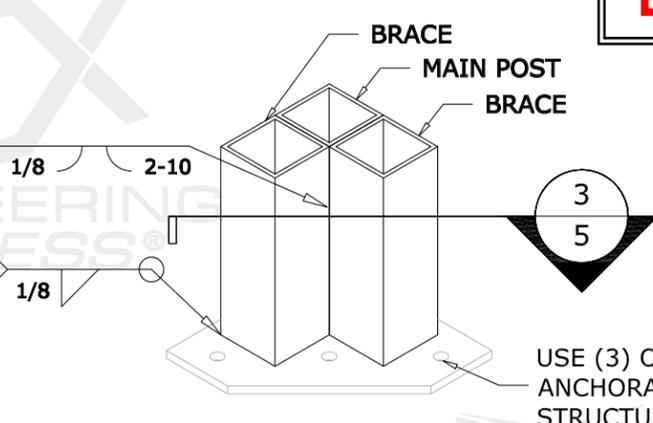
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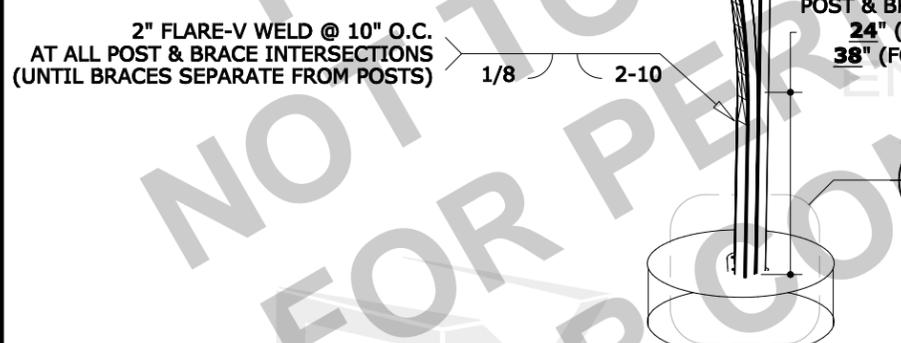
SOFFIT BEAM TO CASTING: USE (3) #10 X 3/4" SELF DRILLING SCREWS

2" FLARE-V WELD @ 10" O.C. AT ALL POST & BRACE INTERSECTIONS (UNTIL BRACES SEPARATE FROM POSTS)

FULL PERIMETER WELD OF (3) POST / BRACES TO BASEPLATE



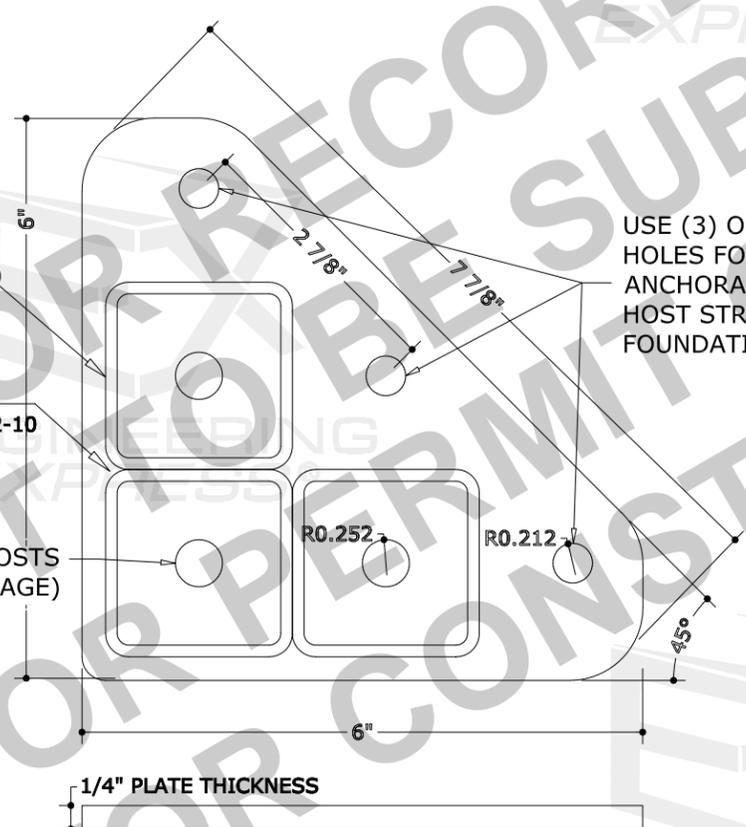
POST & BRACE ASSEMBLY WELDED CONNECTION & BASEPLATE
 NOT TO SCALE ISO



FULL PERIMETER WELD OF (3) POST / BRACES TO BASEPLATE

2" FLARE-V WELD @ 10" O.C. AT ALL POST & BRACE INTERSECTIONS (UNTIL BRACES SEPARATE FROM POSTS)

BASEPLATE HOLES INSIDE POSTS OPTIONAL (NOT USED FOR ANCHORAGE)



POST & BRACE ASSEMBLY BASEPLATE & ANCHORAGE
 NOT TO SCALE SECTION

ANCHORAGE REQUIREMENTS:

CONNECTION TO ISOLATED CONCRETE FOOTING OR SLAB:
 USE (3) 3/8" Ø SS DEWALT SCREW BOLT+ INTO 3000 PSI MIN CONCRETE FOOTING OR SLAB. MAINTAIN 3.25" MIN EMBEDMENT AND 3" TO ANY NEAREST CONCRETE EDGE

CONNECTION TO WOOD DECK HOST STRUCTURE
 USE (3) 5/16" Ø S.S. WOOD TAPCONS OR LAG SCREWS INTO EXISTING SYP (G_{MIN} = 0.55) WOOD DECK OR HOST STRUCTURE (INTO STRUCTURAL JOISTS OR BLOCKING BY OTHERS). MAINTAIN 3.5" THREAD ENGAGEMENT AND 3/4" MINIMUM EDGE DISTANCE

CORNER POST, BRACE, & BASEPLATE ASSEMBLED IN SHOP & DELIVERED AS ONE ITEM FOR INSTALLATION

1 CORNER POST & BRACE ASSEMBLY
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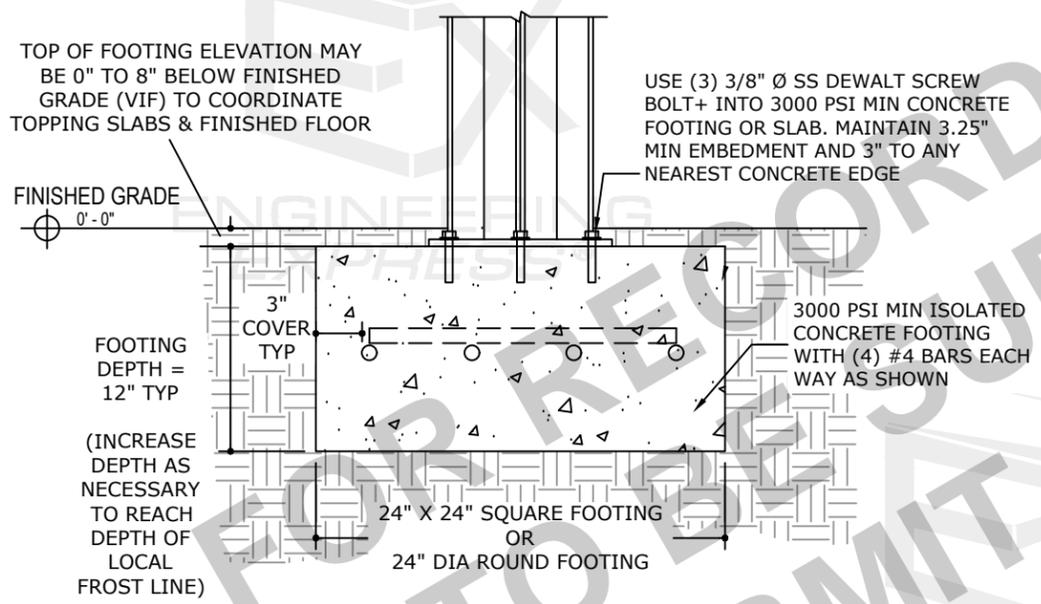
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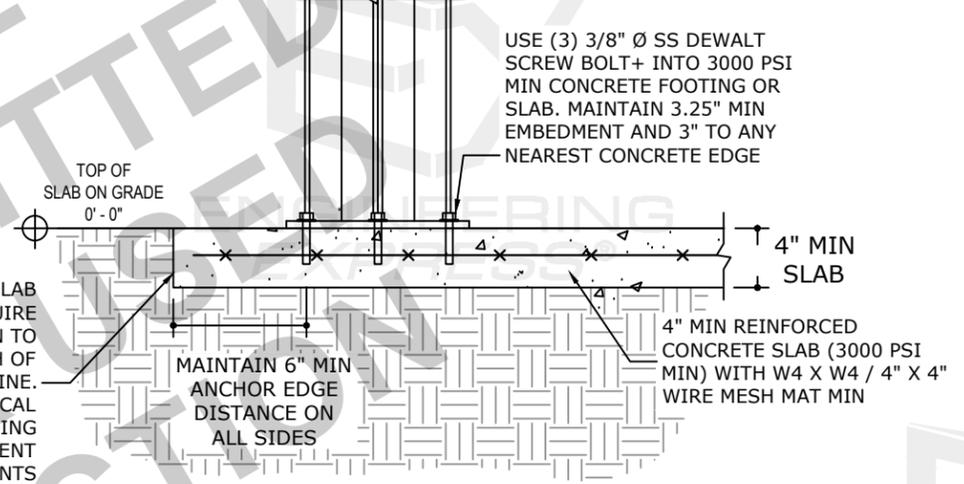
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POST BASE CONNECTION OPTIONS TO CONCRETE OR WOOD HOST STRUCTURES

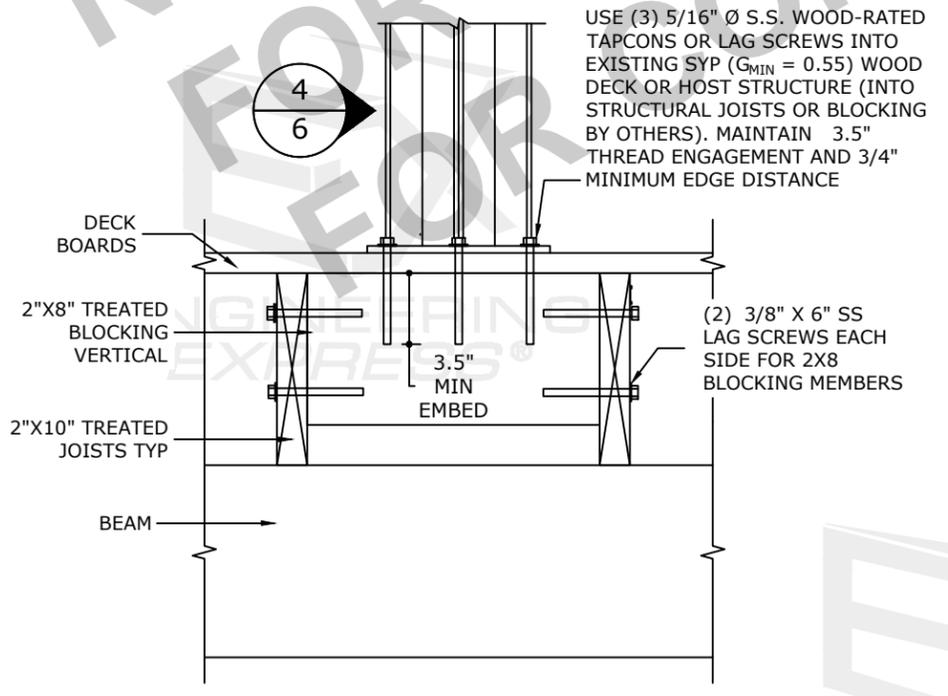
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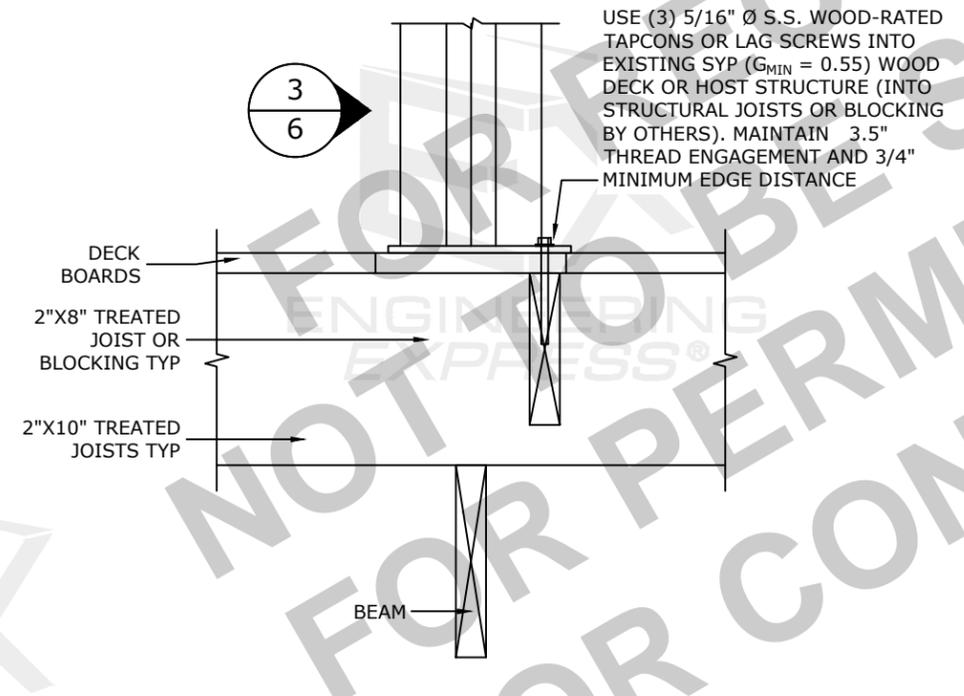
1
6
SURFACE MOUNT TO ISOLATED FOOTING
NOT TO SCALE SECTION



2
6
SURFACE MOUNT TO CONCRETE SLAB
NOT TO SCALE SECTION



3
6
SURFACE MOUNT TO WOOD HOST STRUCTURE
NOT TO SCALE SECTION



4
6
SURFACE MOUNT TO WOOD HOST STRUCTURE (ALT VIEW)
NOT TO SCALE SECTION

CONCRETE FOOTING & ANCHORAGE NOTES:

1. MINIMUM SOIL BEARING PRESSURE OF 1500 PSF & CONCRETE WEIGHT OF 150 PCF HAVE BEEN CONSIDERED IN FOOTING DESIGN.
2. FOOTING & SLAB THICKENED EDGE DEPTHS LISTED ARE MINIMUM ALLOWABLE. DEPTH SHALL BE INCREASED AS NECESSARY SUCH THAT THE BOTTOM OF THE FOOTING REACHES THE LOCAL CODE REQUIRED FROST LINE.
3. SLAB MAY REQUIRE THICKENED EDGE TO ACCOMMODATE ANCHOR REQUIRED EMBEDMENT DEPTH OR LOCAL FROST LINE.

WOOD HOST STRUCTURE NOTES:

1. WOOD HOST STRUCTURE SHALL BE DESIGNED & DETAILED BY OTHERS. CERTIFICATION OR ANALYSIS OF WOOD HOST STRUCTURE NOT INCLUDED IN THIS CERTIFICATION.
2. BLOCKING SHALL BE INCLUDED AS NECESSARY TO ACCOMMODATE POST & BASEPLATE REQUIRED ANCHORAGE. BLOCKING MAY BE DESIGNED & DETAILED BY OTHERS UNDER SEPARATE CERTIFICATION.

HOST STRUCTURE REACTIONS

ANY EXISTING SUPPORTING HOST STRUCTURE SHALL BE SEPARATELY REVIEWED & CERTIFIED TO RESIST IMPOSED DESIGN LOADS LISTED

LOADING SHOWN BELOW REPRESENTS LOADING UNDER WORST-CASE DESIGN LIMITATIONS (MAXIMUM WIND LOAD, SNOW LOAD, OR COMBINATION LOAD). REDUCED LOADING MAY BE CALCULATED SEPARATELY UNDER SEPARATE ENGINEERING & CERTIFICATION

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 TENSION (UPLIFT) = -900 LB
 SHEAR (LATERAL) = 200 LB

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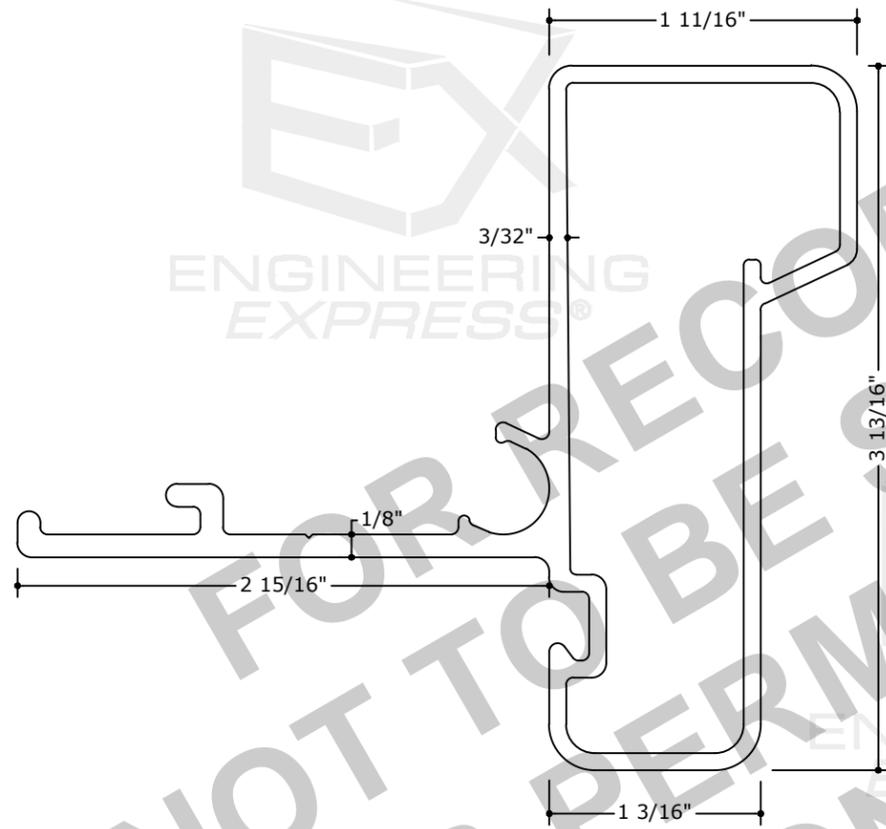
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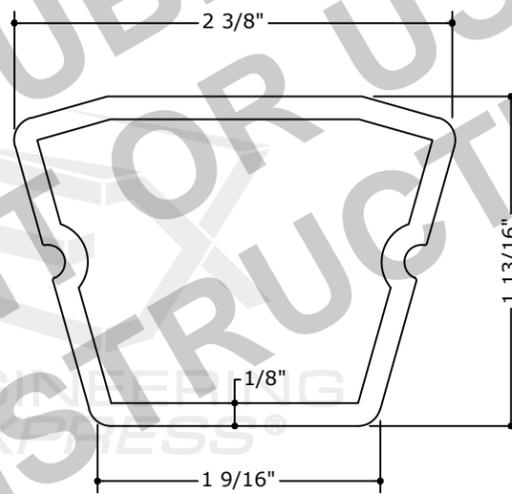
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STRUCTURAL SECTIONS - BEAMS, POSTS, AND STRUCTURAL CASTINGS

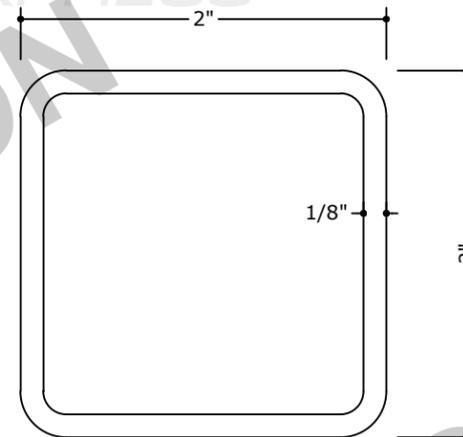
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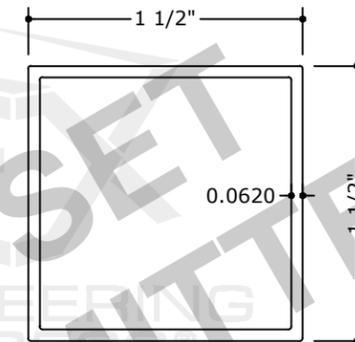
1
7
PERIMETER SOFFIT BEAM
FG174A - SS SOFFIT
NOT TO SCALE 6005A-T61 ALUM



2
7
CORNER BEAM
FG175A - HIP RAFTER
NOT TO SCALE 6005A-T61 ALUM

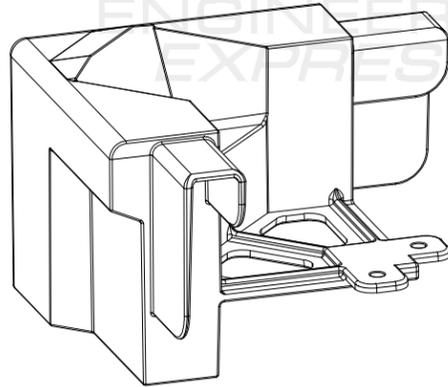


3
7
FRAME, POST, & BRACE - FG161A
2" X 2" X 1/8" SQUARE TUBE
NOT TO SCALE 6063-T5 ALUM

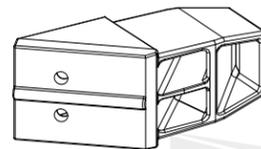


4
7
SUPPORT RAFTERS - FG177A
1.5" X 1.5" X.062" SQUARE TUBE
NOT TO SCALE 6063-T5 ALUM

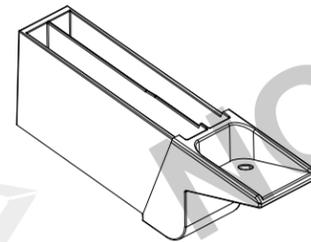
STRUCTURAL CASTINGS



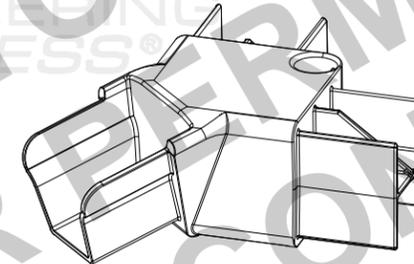
5
7
SOFFIT CORNER 90
1202-0001
NOT TO SCALE A360 ALUM



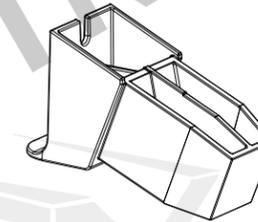
6
7
JACK RAFTER RECIEVER
1202-0003
NOT TO SCALE A360 ALUM



7
7
COMMON BIRDSMOUTH
1202-0004
NOT TO SCALE A360 ALUM



8
7
CUPOLA RING 90
1202-0005
NOT TO SCALE A360 ALUM



9
7
COMMON RAFTER TOP INSERT
1202-0007
NOT TO SCALE A360 ALUM

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