MECHANICALLY OPENING LOUVERED PERGOLA

(HOST-ATTACHED) SHANE MCARTHUR 8609 SE 78TH ST. | MERCER ISLAND, WA 98040

SCOPE OF WORK

DESIGN & INSTALLATION OF A NEW MECHANICALLY OPENING LOUVERED PERGOLA AS DESIGNED HEREIN AT THE ADDRESS

EXCLUSIONS:

HE DESIGN OF THE 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.

DESIGN CRITERIA

INTERNATIONAL BUILDING CODE (2018) STATE / LOCAL BUILDING CODE (YEAR) ASCE 7-16 LOAD COMBINATIONS

1. DE/	AD LOADING ROOF DEAD LOAD	5 PSF
2. LIV 2.1.	E LOADING ROOF LIVE LOAD	20 PSF
3. SNO 3.1. 3.2. 3.3. 3.4. 3.5.		30 PSF 1.0 1.0 1.2 PER CODE
4. SEI 4.1. 4.2. 4.3. 4.4. 4.5. 4.6. 4.7. 4.8.	ISMIC LOADS RISK CATEGORY SITE CLASS SS SI SEISMIC DESIGN CATEGORY (SDC) LONG TRANSITION PERIOD (TL) LATERAL RESISTING SYSTEM CANTILEVER COLUMN (G.1 SPEC.)	II D 1.462 0.504 D
WIND L 4.1.	OADING INPUTS METHODOLOGY	OPEN STRUCTURI 110 MPH
4.2. 4.3. 4.4. 4.5. 4.6. 4.7.	(ASD = SQRT(O WIND EXPOSURE CATEGORY	
4.7.	STSTEM MOUNTING REIGHT	

GENERAL NOTES

482

4.8.3.

4.8. LRFD RESULTANT WIND LOADING

GRAVITY (+).....

LIPLIFT (-

LATERAL

THIS STRUCTURE HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE STRUCTURAL PROVISIONS OF THE ABOVE REFERENCED BUILDING CODE. STRUCTURE SHALL BE FABRICATED IN ACCORDANCE WITH ALL GOVERNING CODES. 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.

28 PSF

20 PSF

- THE 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 DECK SYSTEM. NO WARRANTY OR GUARANTEE TO THESE CONDITIONS. EITHER EXPRESSED OR IMPLIED, IS OFFERED WITH THIS CERTIFICATION.
- THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE 8. 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 9 IMPOSED DURING MANUFACTURING, TRUCKING, ERECTING, AND HANDLING.
- SPECIAL INSPECTIONS MAY BE REQUESTED OR REQUIRED AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION.
- IN AREAS OF SEISMIC DESIGN CATEGORY (SDC) D-F, AN INSPECTOR SHALL EXAMINE THE DESIGNATED SEISMIC SYSTEM, MOUNTING, AND ANCHORAGE REOUIRING **OUALIFICATION 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

LOUVERED PERGOLA DESIGN & OPERATION

- LOUVERS SHALL BE SPACED SUCH THAT THEY ALLOW 50% SYSTEM POROSITY WHEN FULLY OPENED.
- SYSTEM NOT DESIGNED TO HANDLE CONCENTRATED LOADS FROM HUMAN ACTIVITY
- LOUVERS SHALL BE ROTATED TO A 90 DEGREE 'OPEN' POSITION DURING ANY NAMED STORM OR WEATHER DESIGN EVENT TO PREVENT EXCESSIVE FORCE TO THIS STRUCTURE. THE OWNER SHALL BE NOTIFIED IN WRITING OF THIS AND THAT CARE SHALL BE TAKEN TO AVOID BUILDUP OF SNOW, DEBRIS, CONSTRUCTION LOADS, & ANY OTHER FORCES THAT CAN AFFECT THE INTEGRITY OF THIS DESIGN.
- THE STRUCTURE SHALL BE POSTED WITH A LEGIBLE AND READILY VISIBLE DECAL OR PAINTED INSTRUCTIONS TO THE OWNER OR TENANT STATING TO REPOSITION THE LOUVERS AND WINDSCREENS DURING WIND OR SNOW ADVISORIES. THE CANOPY OWNER SHALL BE NOTIFIED OF THESE CONDITIONS BY THE PERMIT HOLDER AT THE TIME OF SALE.
- SYSTEM SHALL BE EQUIPPED AND SOMFY CERTIFIED TO OPERATE PROPERLY WITH SENSORS WHICH WILL PROMPT THE LOUVER BLADES TO ROTATE TO THE OPEN (VERTICAL) POSITION WHENEVER THE WIND SPEED REACHES 45 MPH MINIMUM, OR TEMPERATURE DROPS TO 32° FAHRENHEIT OR LOWER, AND/OR INCLUDE THE ABILITY FOR MANUAL OPENING AND LOCKING BY THE USER.
- 6. LOUVERED ROOF SYSTEM SHALL BE PER MANUFACTURER MAXIMUM SPANS OR BY OTHERS.
- 7. NO CERTIFICATION IS OFFERED FOR WATERPROOFING, SIZING, OR OPERATION OF GUTTERS.
- SYSTEM NOT DESIGNED FOR WATERSHED OF RAINFALL FROM ADJACENT ROOFS UNLESS SPECIFICALLY SHOWN

STRUCTURAL MATERIALS AND CONNECTIONS

STRUCTURAL ALUMINUM & ALUMINUM WELDING

- ALL COMPONENTS SHALL BE STRUCTURAL ALUMINUM (U.N.O.) AND SHALL BE FABRICATED AND ERECTED ACCORDING TO THE GOVERNING BUILDING CODE AND MATERIAL STANDARDS REFERENCED ON THIS SHEET.
- 2. ALL STRUCTURAL ALUMINUM SHALL BE MIN 1/8" THICK LIND AND BE OF THE FOLLOWING ALLOY AND TEMPER:

0.1	I.O. AND BE OF THE FOLLOWING AL	LOT AND TEMPL
2.1.	BEAMS, PURLINS, COLUMNS	6063-T6
2.2.	ALL OTHER EXTRUSIONS	6063-T6
2.3.	FASTENERS	SS 316
2.4.	LOUVERS	6063-T5

- 3. STRUCTURAL ALUMINUM SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
- ALL BEAMS SHALL HAVE A MINIMUM 1 1/2" DEPTH FULL BEARING SUPPORT UNLESS NOTED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- BOLT HOLES SHALL BE DRILLED THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
- 10. ALUMINUM WELDING SHALL BE PERFORMED 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.

- 11. 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.
- 12. SELF-DRILLING SCREWS SHALL BE TEK BRAND / ALL POINTS FASTENERS OF SIZE #14, STAINLESS STEEL 300 SERIES, WITH MINIMUM 1/2" THREAD ENGAGEMENT BEYOND THE CONNECTED PART, UNLESS OTHERWISE NOTED.
- 13. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT FLECTROLYSIS.
- 14. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.

STRUCTURAL WOOD (AS APPLICABLE)

- ALL DIMENSION LUMBER SHALL BE STRUCTURAL GRADE #2 SPRUCE-PINE-FIR OR BETTER MEETING APPLICABLE REOUIREMENTS OF THE SOUTHERN PINE INSPECTION BUREAU (SPIB), THE PROVISIONS OF THE APPLICABLE BUILDING CODE AND THE WESTERN WOOD PORDUCTS ASSN. (WWPA) "GRADE RULE BOOK"
- ALL DIMENSION LUMBER SHALL BE PRESSURE-IMPREGNATED (PT) BY AN APPROVED PROCESS (ACQ 0.4 PRESSURE TRÉATED) PRESERVATIVE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE BUILDING CODE AND AMERICAN WOOD PRESERVERS ASSN (AWPA) "BOOK OF STANDARDS" OR 0.42 SPECIFIC GRAVITY MIN.
- ALL METAL CONNECTORS IN CONTACT WITH WOOD USED IN LOCATIONS EXPOSED TO WEATHER SHALL BE GALVANIZED.
- NATIS SHALL PENETRATE THE SECOND MEMBER A DISTANCE EQUAL TO THE THICKNESS OF THE MEMBER BEING NAILED THERETO. THERE SHALL BE NOT LESS THAN 2 NAILS IN ANY
- MEMBERS SHALL BE FREE OF CRACKS AND KNOTS. MOISTURE CONTENT SHALL BE 19% OR LESS.
- 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)

- ANY SPECIFIED LIGHT GAUGE STEEL MEMBERS SHALL CONFORM TO ASTM A36 AND CURRENT EDITION OF AISC WITH MINIMUM Fv = 36KSI
- GLASS PANELS (IF SHOWN) SHALL BE MIN 3/8" FULLY TEMPERED GLASS & MUST COMPLY WITH ANSI Z97.1 / CATEGORY II CPSC 16 CFR 1201 AS CERTIFIED BY GLASS

ANCHORS & FASTENERS

- 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 WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" BY THE ALUMINUM ASSOCIATION, INC., & ANY APPLICABLE FEDERAL, STATE, AND/OR LOCAL CODES.
- ALL METAL CONNECTORS USED IN LOCATIONS EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED.
- ALL FASTENERS SHALL BE SPACED WITH 2x DIAMETER END DISTANCE AND 3xDIAMETER MIN. SPACING TO ADJACENT FASTENERS. UNLESS NOTED OTHERWISE, PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE FOR ALL FASTENERS.
- 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.
- 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 MER SPECIFICATIONS, DETAILS PROVIDED HEREIN ARE FOR

REFERENCE ONLY.

FOUNDATION, CONCRETE, AND

REINFORCEMENT FOUNDATION & EARTHWORK

- SURROUNDING SOIL TO BE WELL COMPACTED BY MECHANICAL MEANS TO 90% OPTIMUM DENSITY, BE FREE OF MUCK AND ORGANICS, AND ACHIEVE 1500 PSF MIN BEARING PRESSURE AND LATERAL BEARING PRESSURE BELOW NATURAL GRADE OF 150 PSF.
- EXCAVATIONS NEAR ADJACENT FOOTINGS AND FOUNDATIONS SHALL NOT REMOVE LATERAL SUPPORT WITHOUT FIRST UNDERPINNING OR PROTECTING THE THE FOOTING OR FOUNDATION AGAINST SETTLEMENT OF LATERAL TRANSLATION.
- 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.
- 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

- CONCRETE MIXTURES SHALL BE DESIGNED TO REACH A COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS. ALL MIXING, TRANSPORTING, PLACING, & CURING OF
- CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318. NO ADMIXTURES ARE TO BE USED WITHOUT THE WRITTEN
- APPROVAL OF THE ABOVE-SIGNED ENGINEER. CONCRETE SHALL BE TYPE 1 PORTLAND CEMENT MEETING
- THE REOUIREMENTS OF ASTM C150, AGGREGATES TO MEET ASTM C33. POTABLE WATER SHALL BE USED
- 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

- 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
- ALL WELDING WIRE FABRIC IS TO CONFORM TO ASTM A185 MINIMUM YIELD STRENGTH OF 85 KSI.
- CLEAR COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

FOOTINGS EXPOSED TO EARTH: UNFORMED FACES EXPOSED TO FARTH: FORMED FACES IN CONTACT WITH EARTH: 2" SLABS NOT IN CONTACT WITH EARTH: SLABS EXPOSED TO WEATHER: BEAMS AND COLUMNS:

- 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.
- WHEN REINFORCING STEEL IS NOTED AS CONTINUOUS REINFORCING IN SLABS, WALLS, AND/OR BEAMS, SPLICE CONTINUOUS REINFORCING STEEL ONLY UNAVOIDABLE DUE TO STOCK LENGTHS. LAP CONTINUOUS REINFORCING A MINIMUM OF 48 BAR
- DIAMETERS IN BEAMS & COLUMNS, 36 BAR DIAMETERS STAGGER ALL SPLICES A MINIMUM OF FOUR FEET.
- ADJACENT BAR WITH SPLICES ARE NOT ACCEPTABLE. LOCATE TOP BAR FOR SPLICES WITHIN MIDDLE HALF GO
- THE SPAN AND LOCATE BOTTOM BAR SPLICES AT SUPPORTS, OR BETWEEN SUPPORTS AND 1/3 SPAN POINT UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR SCHEDULES
- CONTINUITY AT COLUMNS SHALL BE PROVIDED BY CONTINUING HORIZONTAL REBARS THROUGH COLLIMNS OR BY BENDING HORIZONTAL REINF. INTO COLUMNS A DISTANCE OF 30".
- PROVIDE 12" STANDARD ACI HOOK MINIMUM FOR ALL DISCONTINUOUS TOP REINFORCING.
- PROVIDE INTERIOR AND EXTERIOR HORIZONTAL LAPPED CORNER BARS AT ALL CORNERS TO MATCH SIZE, TYPE AND SPACING OF HORIZONTAL WALL REINFORCING IF

PROVIDE 2- #5 X 48" DIAGONALLY AT CORNERS OF ALL OPENINGS WIDER THAN 15". EXTEND BOTTOM BARS 8" PAST OPENINGS GREATER THAN 3'-0" ON BOTH SIDES.

- LAP SPLICES IN WELDED WIRE FABRIC ARE TO BE MADE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THEN THE CROSS WIRE SPACING PLUS 3"
- SHOP DRAWINGS SHALL BE SUBMITTED FOR E.O.R. REVIEW AND APPROVAL BEFORE INSTALLATION.
- ALL STRUCTURAL PRECAST UNITS AND THEIR ATTACHMENTS TO THE MAIN STRUCTURE SHALL BE INSPECTED AFTER FRECTION, BUT BEFORE CONCEALMENT, SUCH INSPECTIONS SHALL BE PERFORMED BY AN ARCHITECT OR PROFESSIONAL ENGINEER REGISTERED IN THE PERMITTING STATE.

CERTIFICATION & LIABILITY

- USE OF THIS DOCUMENT CONSTITUTES ACCEPTANCE OF THE PROPOSED SYSTEM LAYOUT, COMPONENTS SELECTED, AND INSTALLATION. THESE DRAWINGS ARE NOT INTENDED TO BE USED AS FABRICATION OR SHOP DRAWINGS
- 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.
- ENGINEERING EXPRESS HAS NOT VISITED THIS JOBSITE. INFORMATION CONTAINED HEREIN IS BASED ON CONTRACTOR SUPPLIED DATA AND MEASUREMENTS. ENGINEERING EXPRESS SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. WORK SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THIS ENGINEERING SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO REEVALUATE OUR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS.
- USE OF THIS SIGNED & SEALED DOCUMENT CONSTITUTES ACCEPTANCE OF THE PROPOSED SYSTEM LAYOUT, SELECTED, AND COMPONENTS INSTALLATION REOUIREMENTS
- THIS DOCUMENT SHALL NOT BE USED OR REPRODUCED WITHOUT THE ORIGINAL SIGNATURE & RAISED SEAL OF THE CERTIFYING P.F. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION. PHOTOCOPIES AND UNSEALED DOCUMENTS ARE NOT TO BE ACCEPTED.
- 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
- ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE ONLY PERMITTED TO SHOW SITE-SPECIFIC CONDITIONS: HOWEVER ANY CHANGES, ALTERATIONS OR ADDITIONS MADE TO THE CONTENT OF THIS DOCUMENT WILL INVALIDATE THIS CERTIFICATION
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED



VISIT ECALC.IO/STRUXURE

FOR ENGINEER CERTIFIED ORIGINALS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THE QR CODE TO THE RIGHT > VISIT ENGINEERINGEXPRESS.COM/STORE
FOR ADDITIONAL PLANS, REPORTS & RESOURCES



DIGITAL SEAL NOTICE:

OTCONTAIN AN ENGINEER'S ORIGINAL IGNATURE & SEAL, THIS DOCUMENT IS VO NOT VALID FOR USE. PHOTOCOPIES ARE



401

AVE #547 , 99206 SHANE MCARTHUR 8609 SE 78TH ST MERCER ISLAND, WA 980 9116 E SPRAGUE A SPOKANE, WA 9

OUTDOOR

末쯝유퍖

AND WRITE COPYRIGHT ENGINEERING EXPRESS

22-52551

SCALE: NTS UNLESS NOTED



PRESENTED BY STRUXURE WASHINGTON

PROJECT SHANE & ROBYN MCARTHUR

ADDRESS 8609 SE 78TH ST MERCER ISLAND, WA 98040

CONTRACT NO. 2106233



STRUXURE INC. 154 ETHAN ALLEN DRIVE DAHLONEGA, GA 30533

SHEET INDEX	
GENERAL NOTES	G
COVER PAGE	A100
PERSPECTIVE VIEW	A101
TOP VIEW	A102
BEAMS & GUTTER PLAN	A103
FAN & LIGHTS PLAN	A104
SECTION 1-1	A200
SECTION A-A	A201
DETAILS	A300
DETAILS	A301
DETAILS	A302
DETAILS	A303
DETAILS	A304
DETAILS	A305
DETAILS	A306
DETAILS	A307
DETAILS	A308
MOTOR SPECIFICATIONS	A400
REVISIONS	A500
TOTAL PAGES	19
NOTE	

NOTES

FRAME: BRONZE LOUVERS: ADOBE

ELEVATION: AT GRADE



STRUXURE'

154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248

DESCRIPTION

DATE 05/06/22

DRAWN BY 18.5

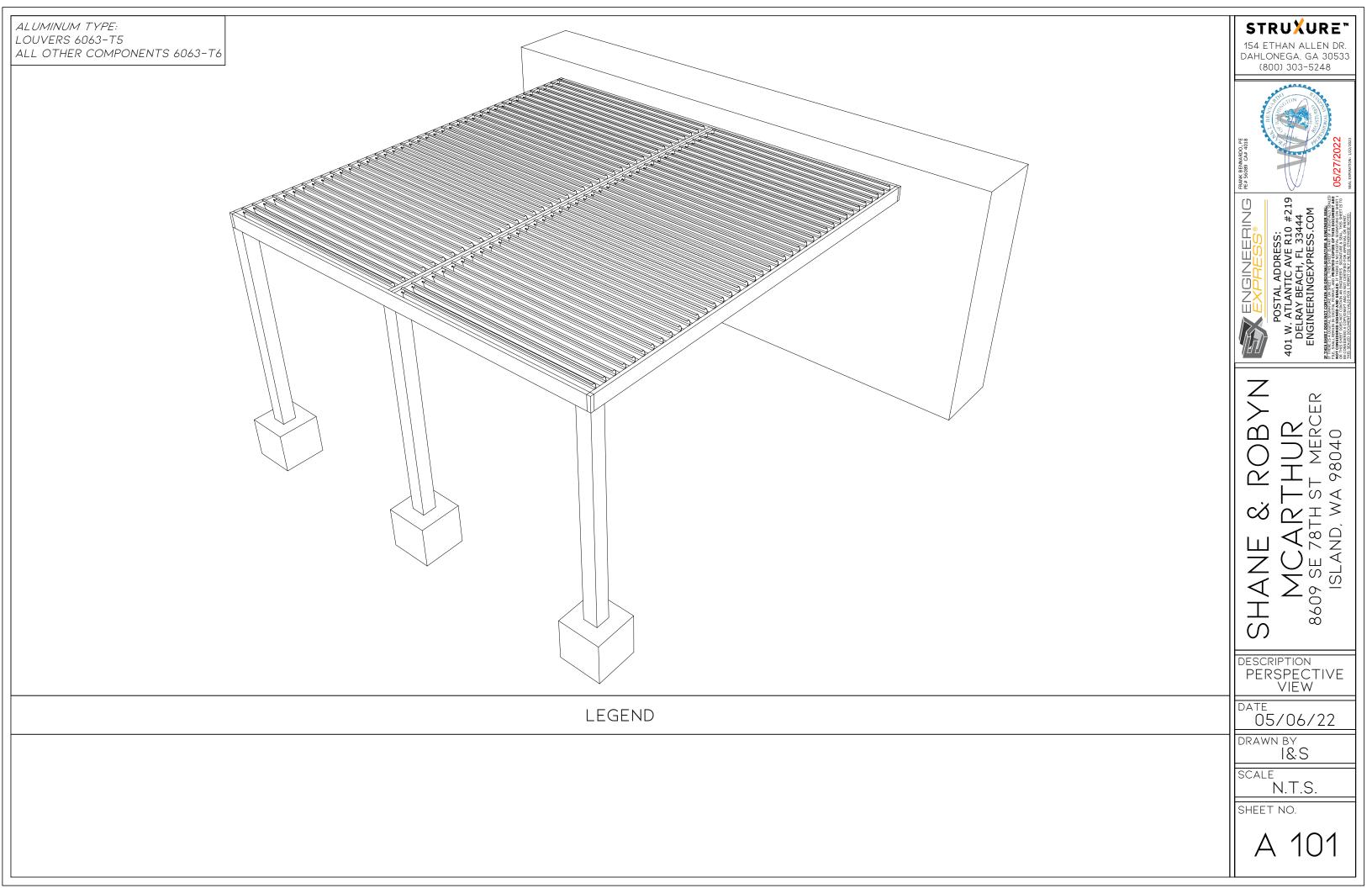
SCALE

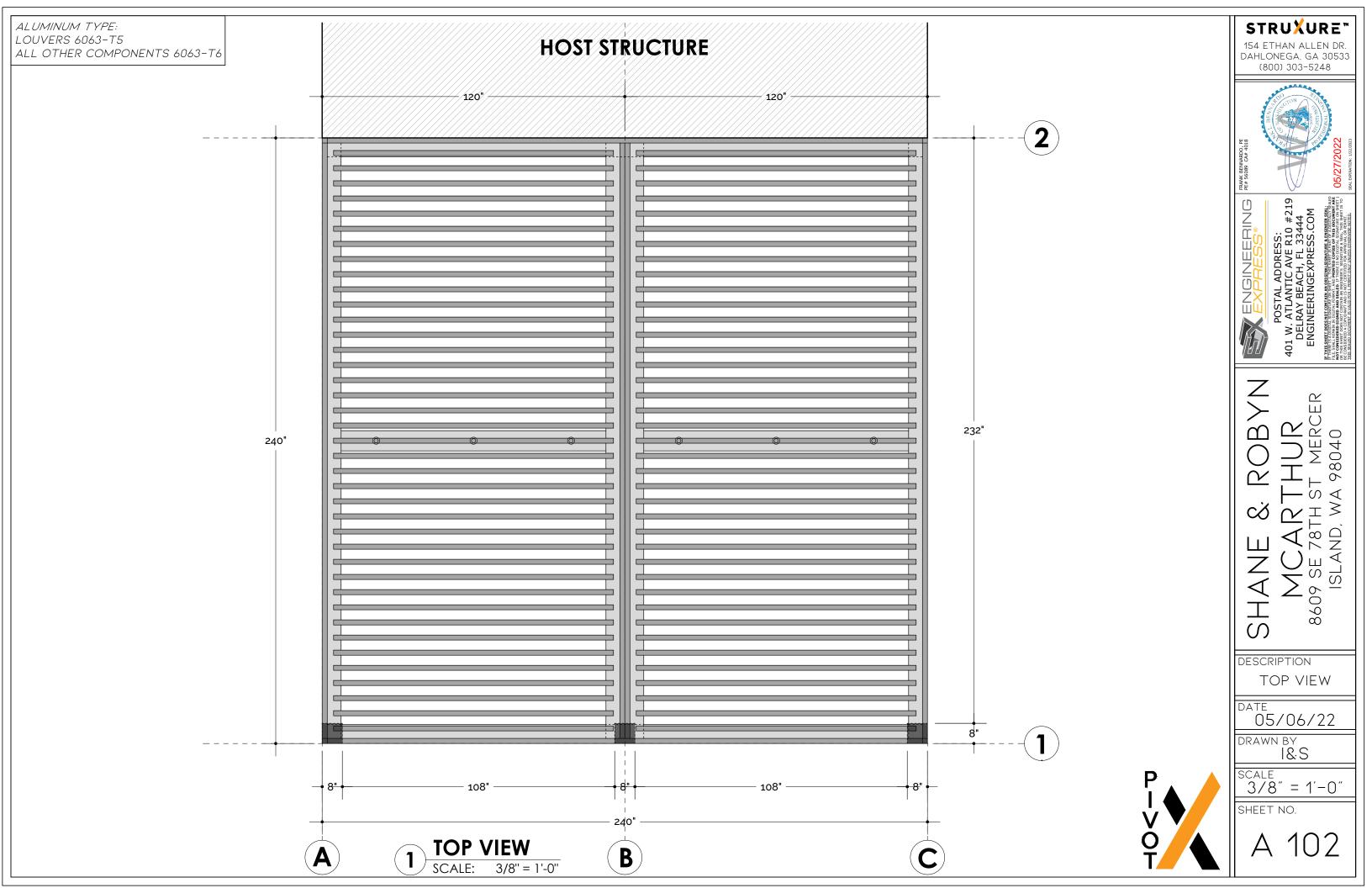
SHEET NO.

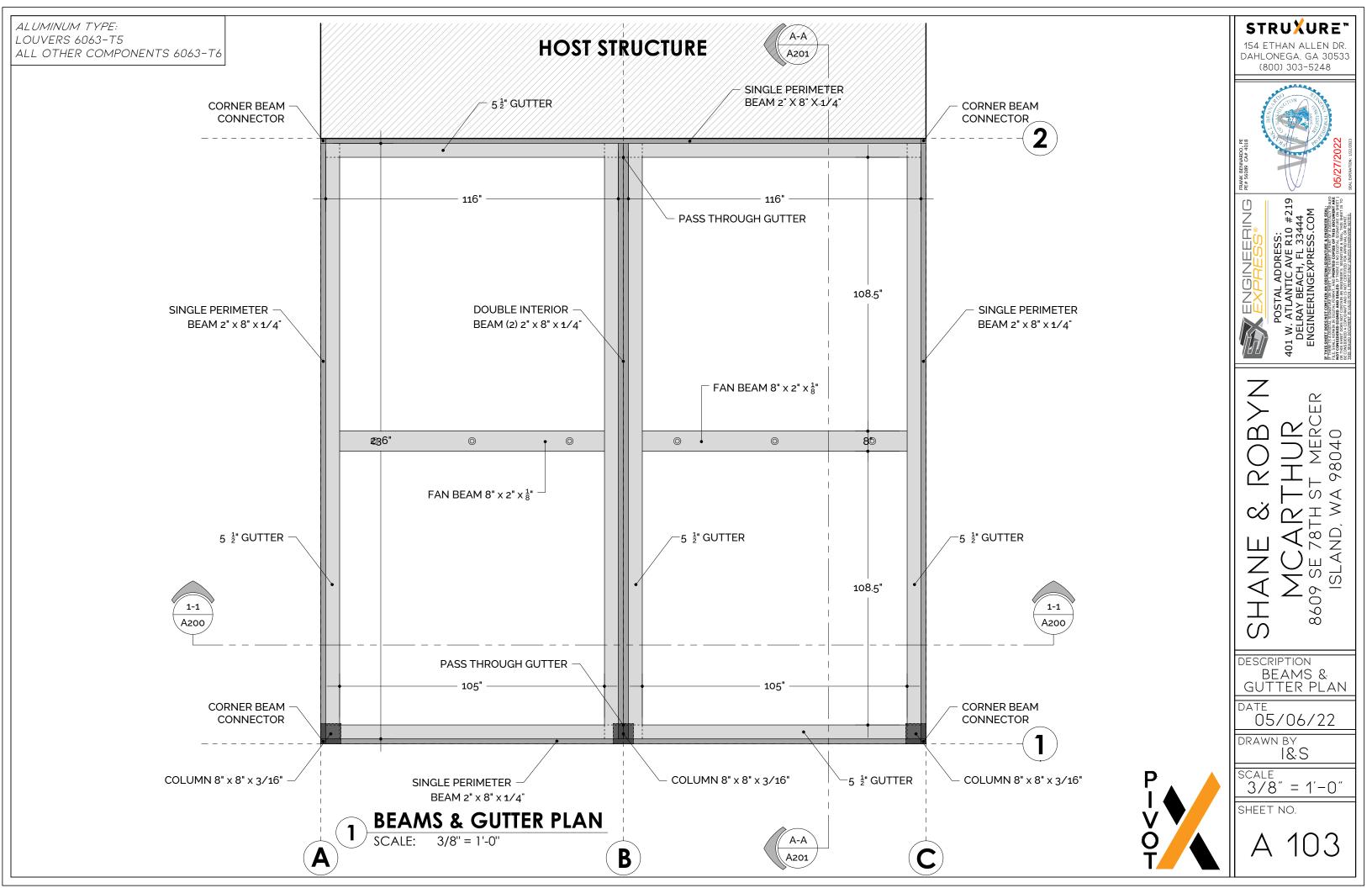
A 100

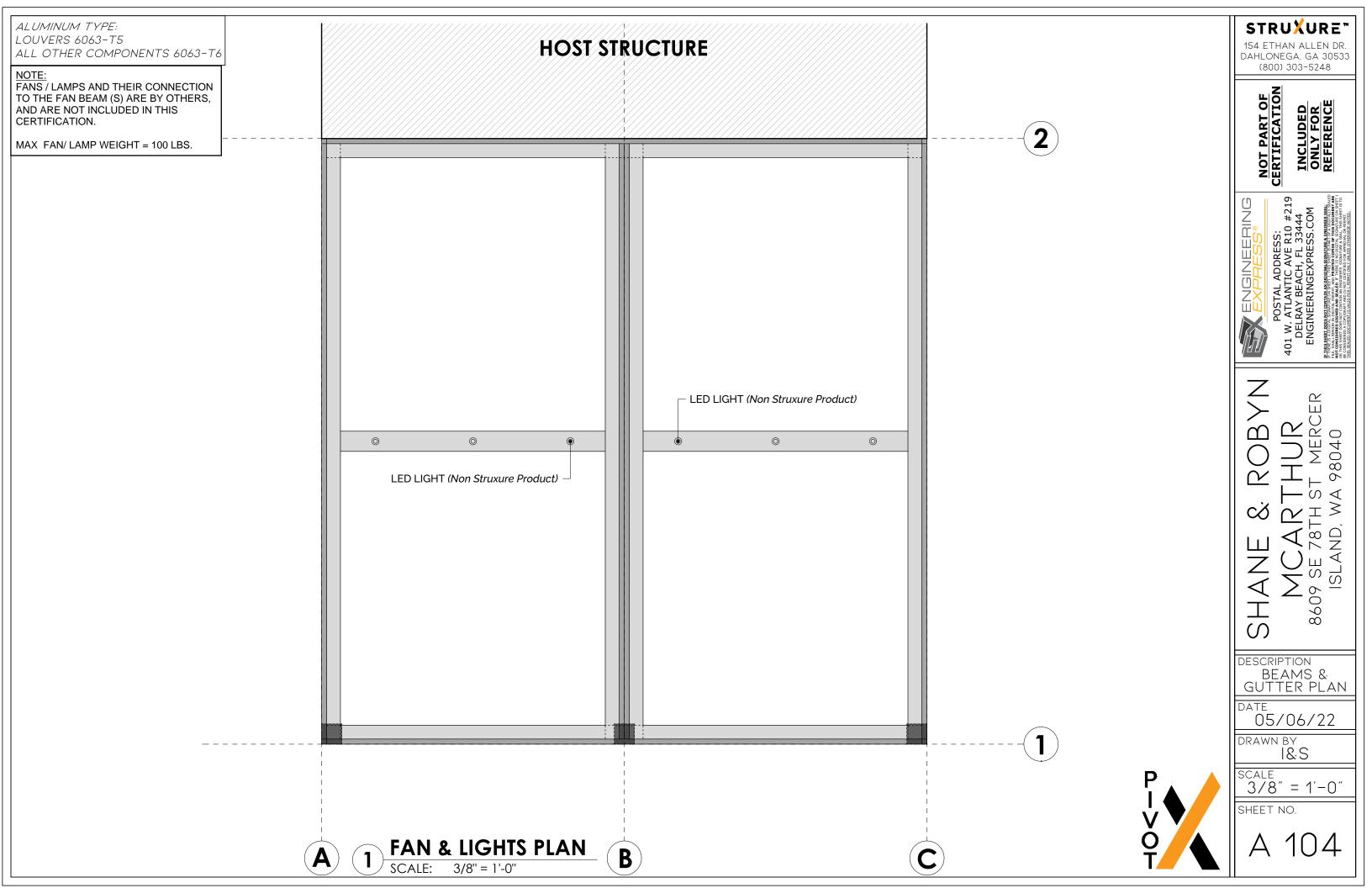


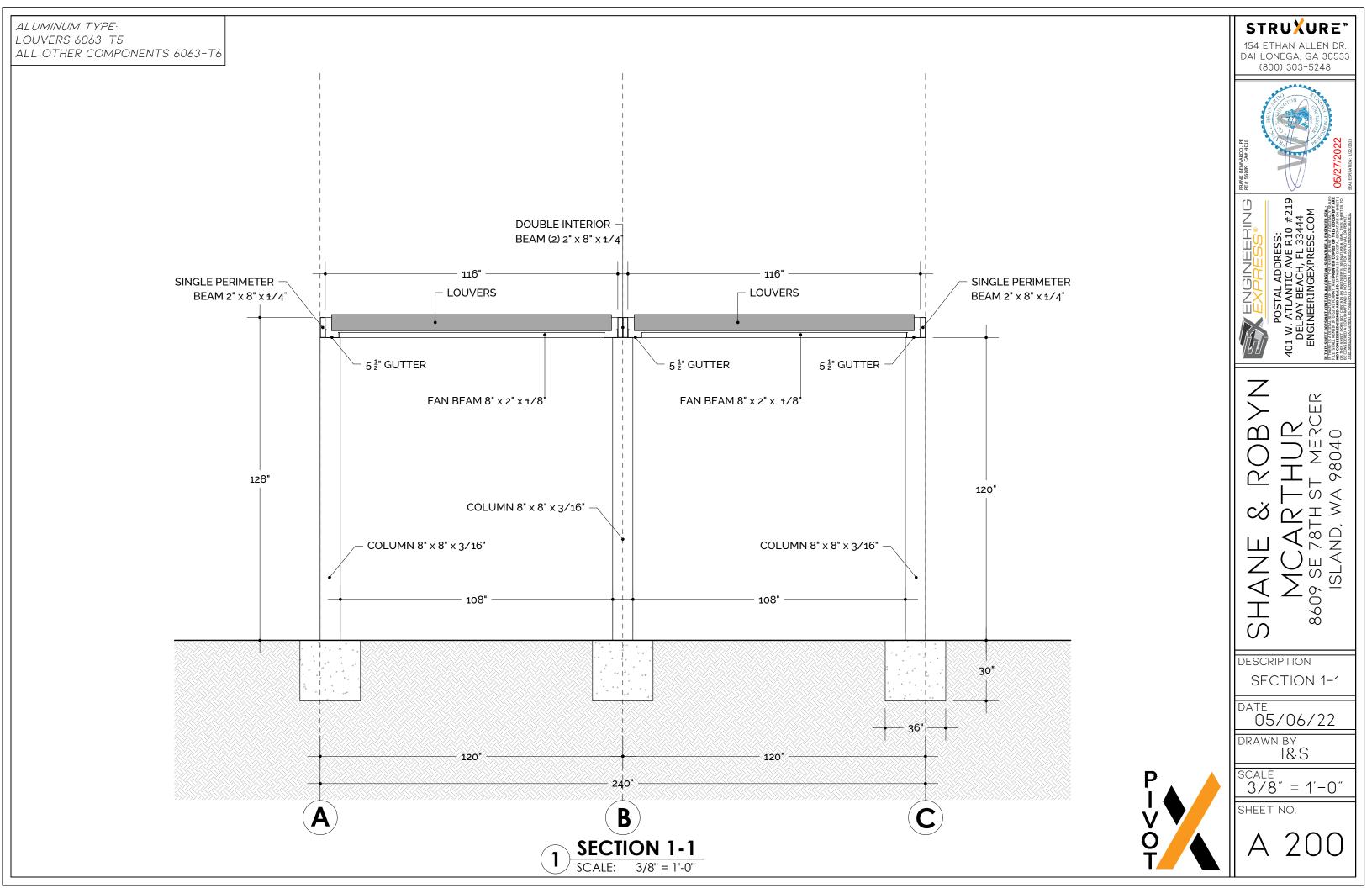
DURING SUCH PERIODS OF TIME AS ARE DESIGNATED BY THE U.S. WEATHER BUREAU AS A HIGH WIND OR SNOW ADVISORY FOR THE AREA, THIS SYSTEM MUST BE LOCKED IN THE OPEN POSITION, WITH THE LOUVER BLADES VERTICAL THE STRUCTURE SHALL ALSO NOT BE WALKED UPON AND IS NOT DESIGNED FOR HUMAN ACTIVITY OR STORAGE.

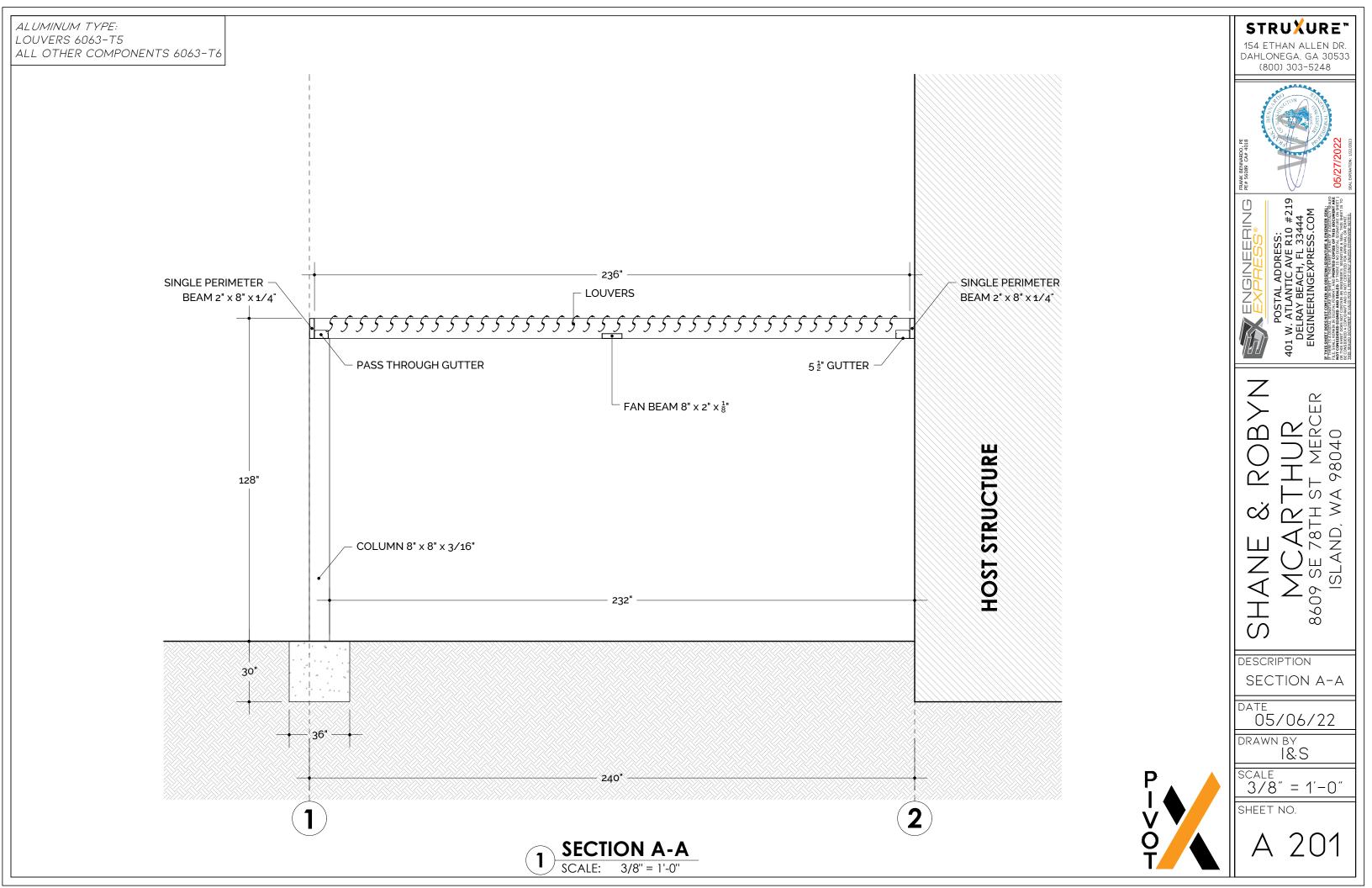












STRUXURE"

154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248



ENGINEERING

POSTAL ADDRESS: 401 W. ATLANTIC AVE R10 #219 DELRAY BEACH, FL 33444 ENGINEERINGEXPRESS.COM

110R 3T MERCER 98040 E 78T AND, 8609

DESCRIPTION **DETAILS**

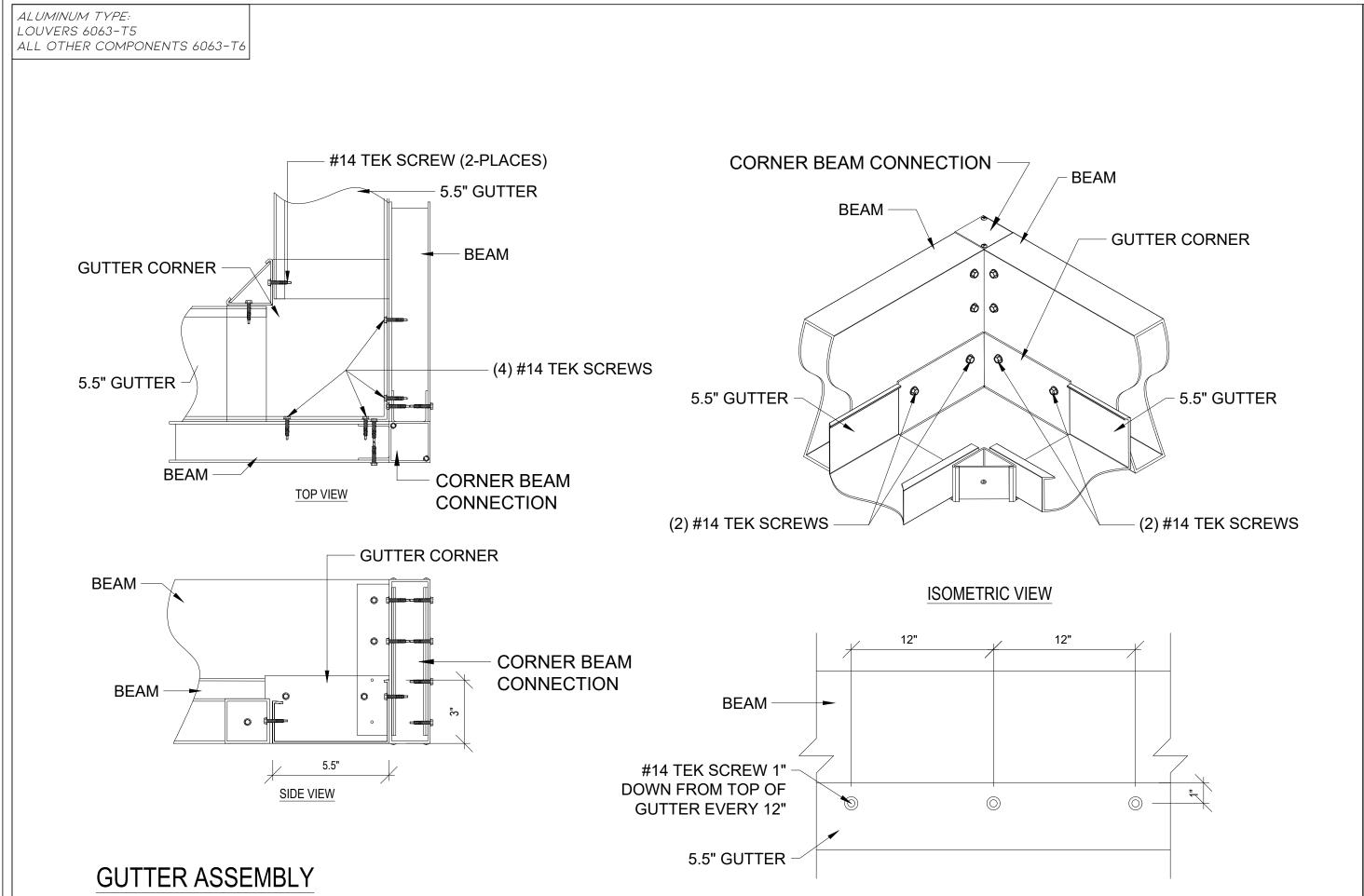
DATE 05/06/22

DRAWN BY

18.S

SCALE N.T.S.

SHEET NO.



STRUXURE" 154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248

8609

DESCRIPTION DETAILS

DATE 05/06/22

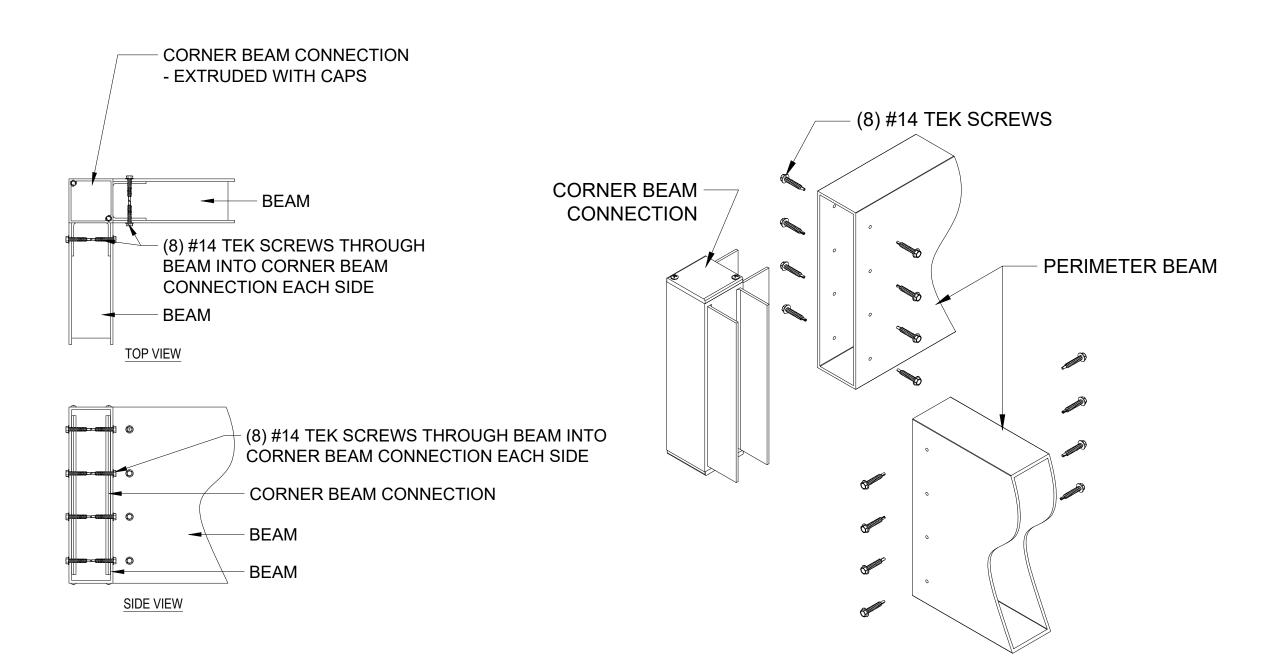
DRAWN BY 18.5

SCALE

N.T.S.

SHEET NO.

ALUMINUM TYPE: LOUVERS 6063-T5 ALL OTHER COMPONENTS 6063-T6



TYPICAL CORNER ASSEMBLY

STRUXURE" 154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248

8609

DESCRIPTION DETAILS

DATE 05/06/22

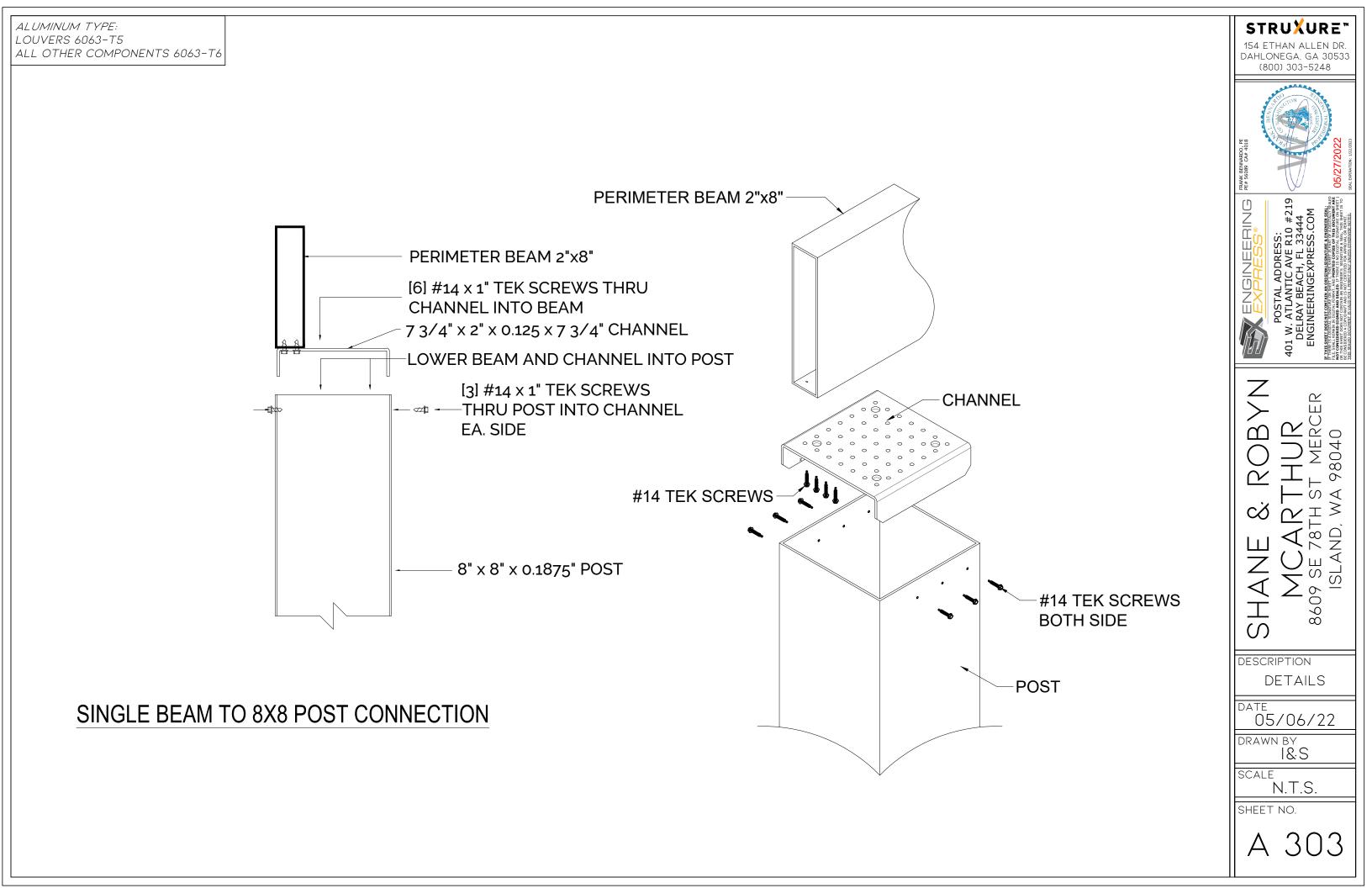
DRAWN BY 18.5

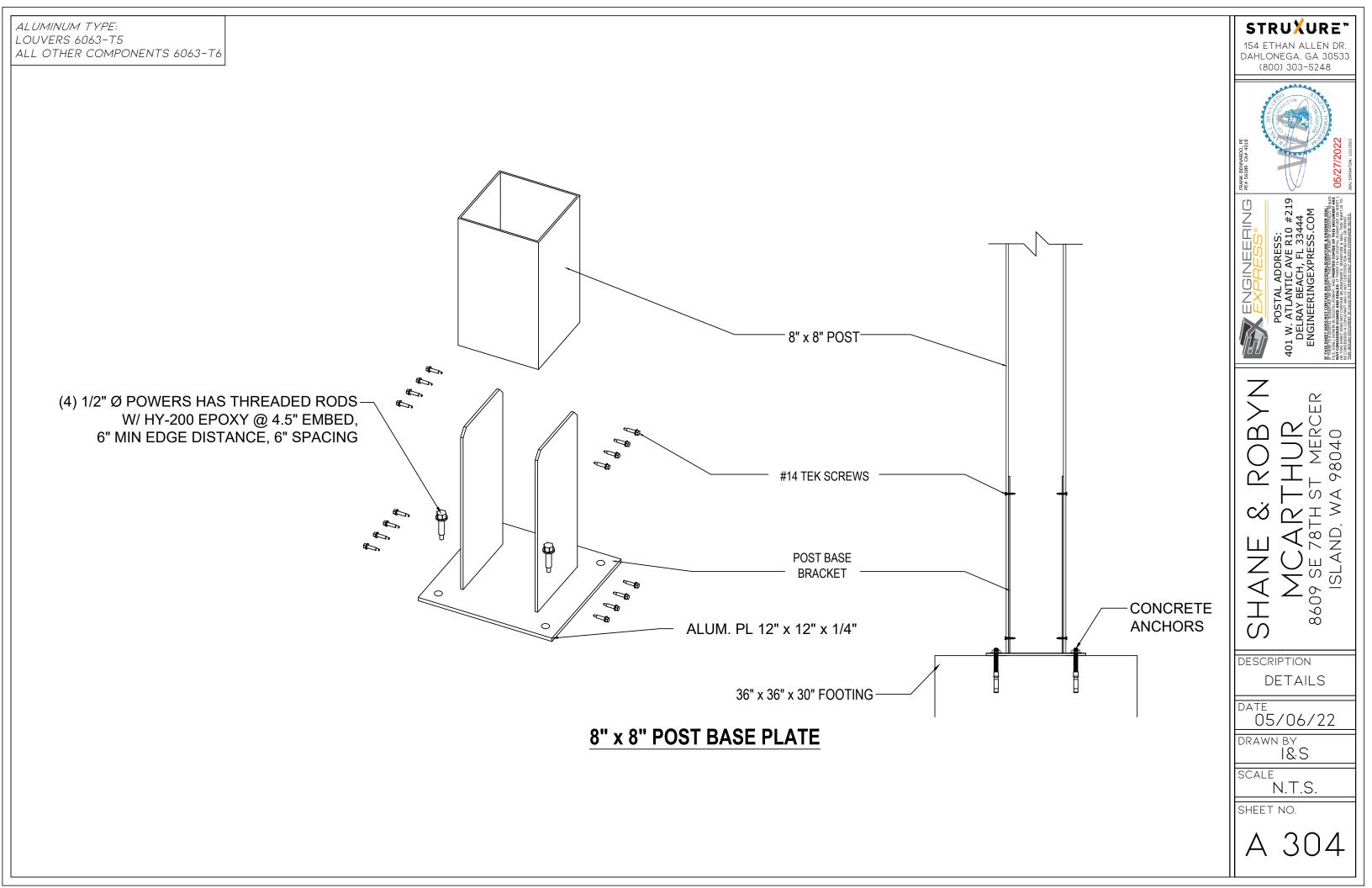
SCALE

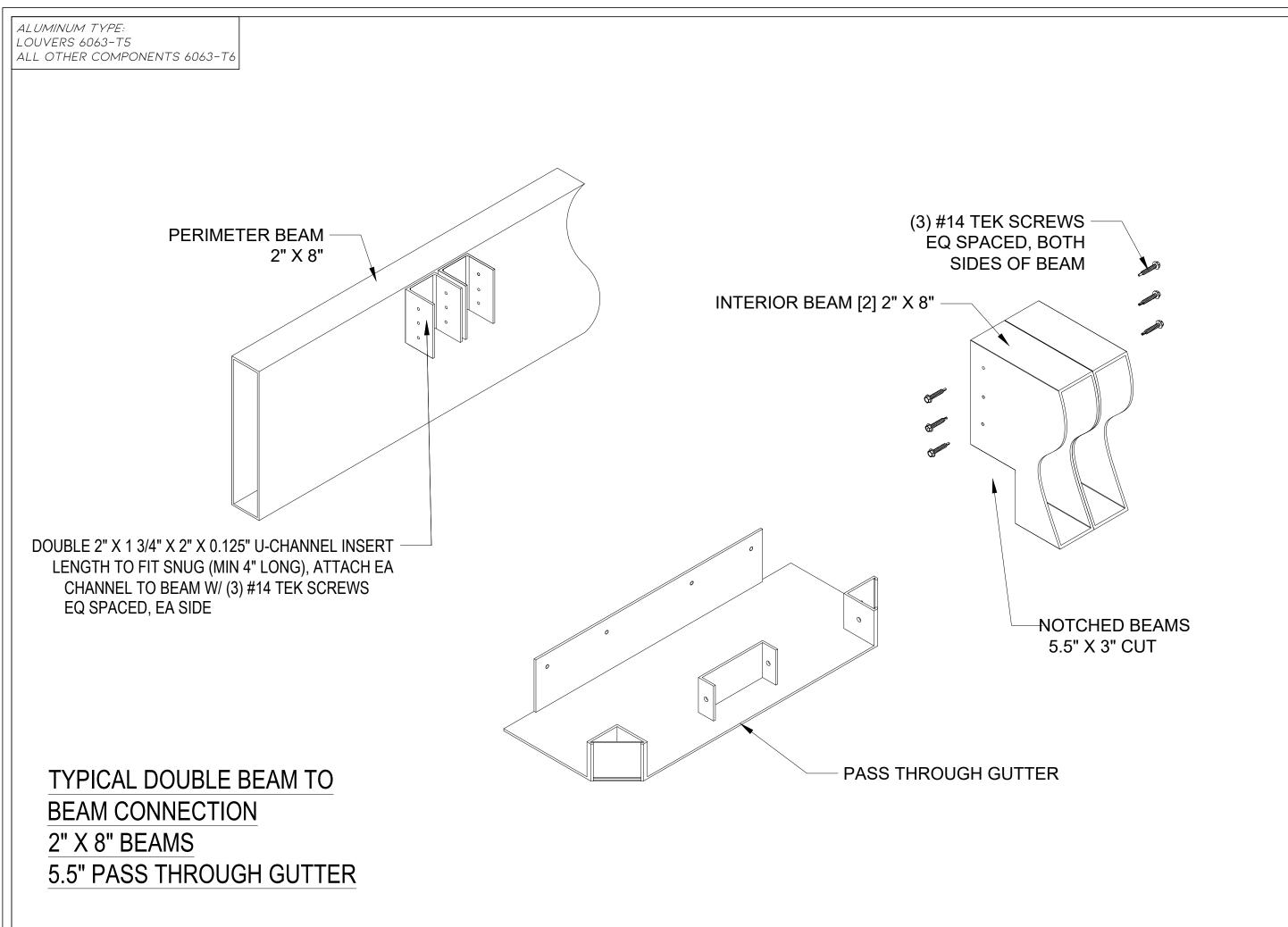
N.T.S.

SHEET NO.

A 302







STRUXURE"

154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248



DESCRIPTION DETAILS

DATE 05/06/22

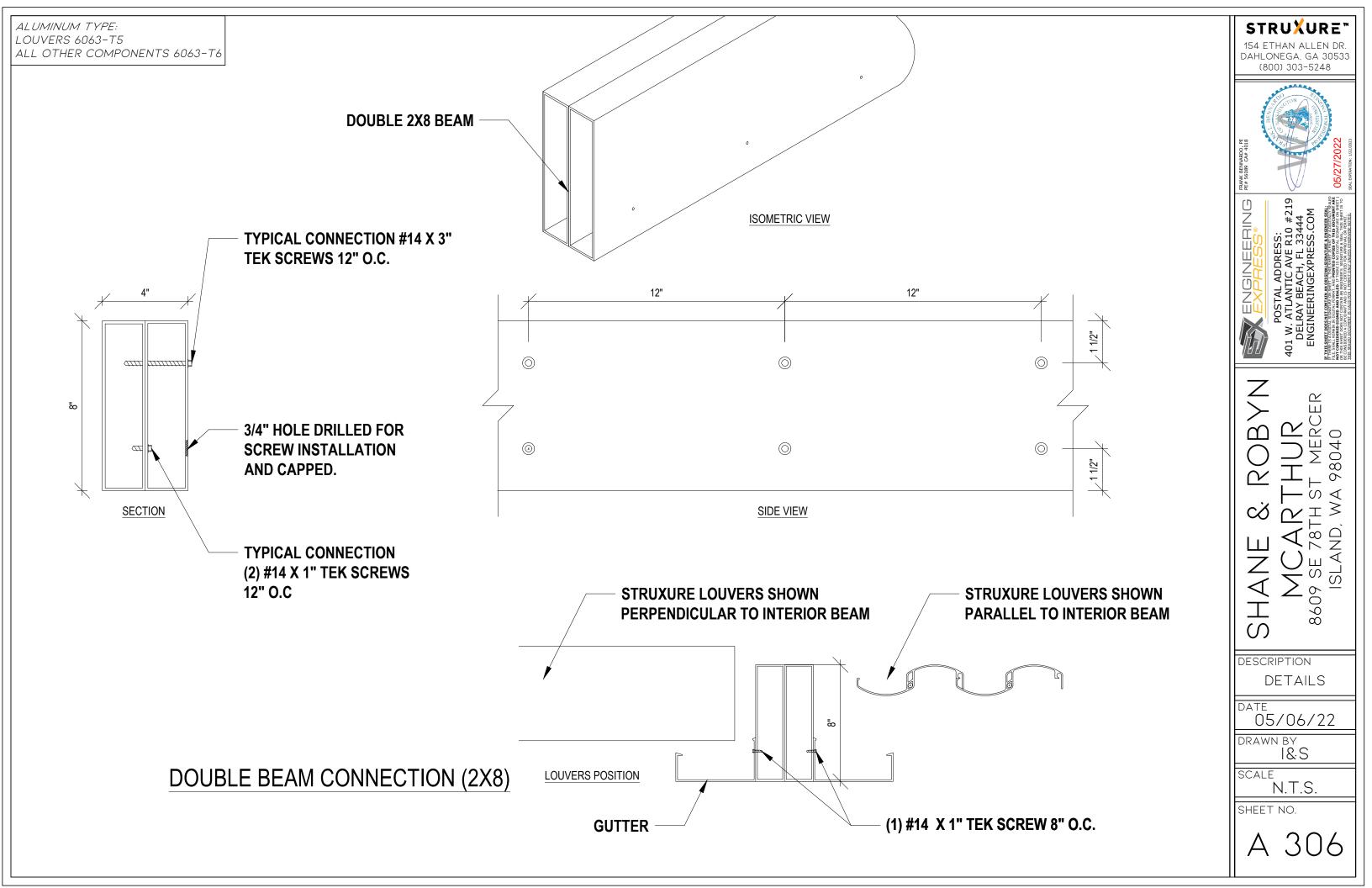
DRAWN BY 18.5

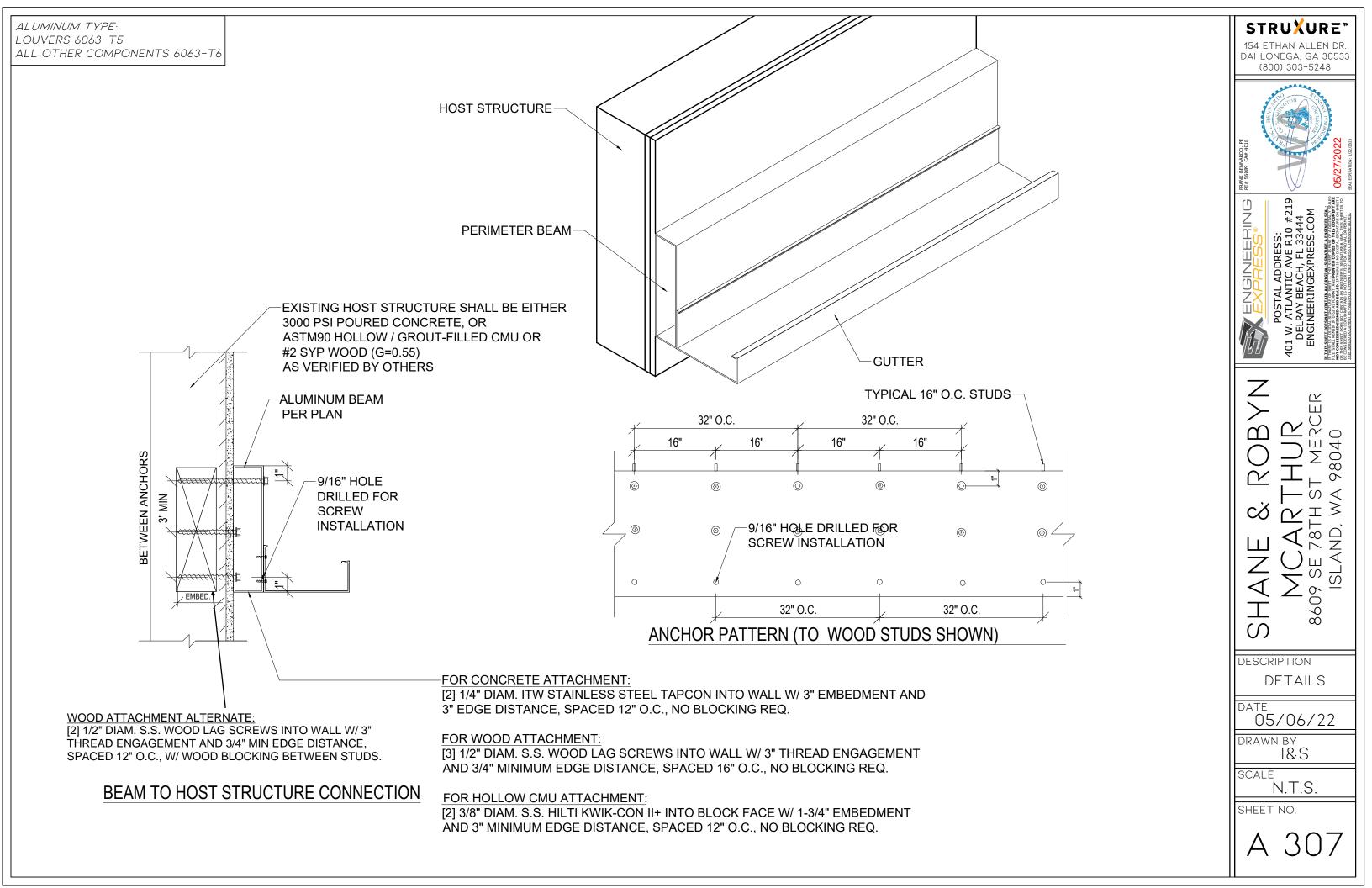
SCALE

N.T.S.

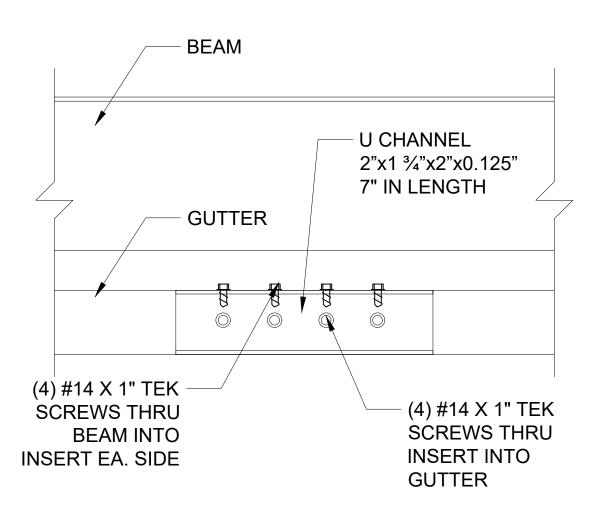
SHEET NO.

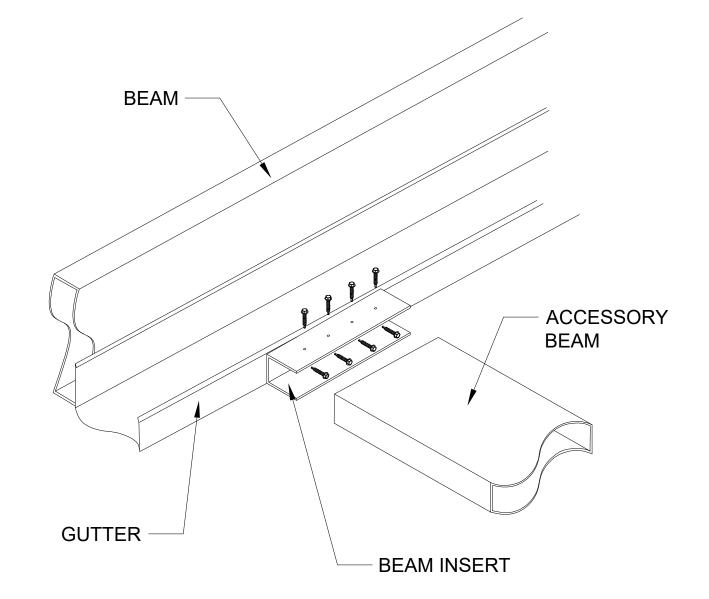
A 305





ALUMINUM TYPE: LOUVERS 6063-T5 ALL OTHER COMPONENTS 6063-T6





FAN BEAM CONNECTION

STRUXURE"

154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248



8609

DESCRIPTION DETAILS

DATE 05/06/22

DRAWN BY 18.5

SCALE

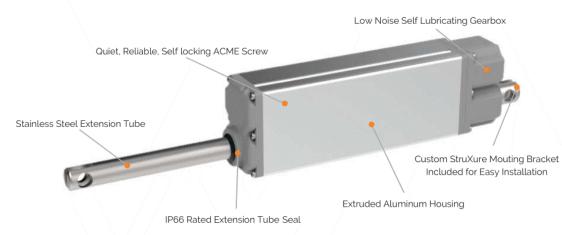
N.T.S.

SHEET NO.

A 308

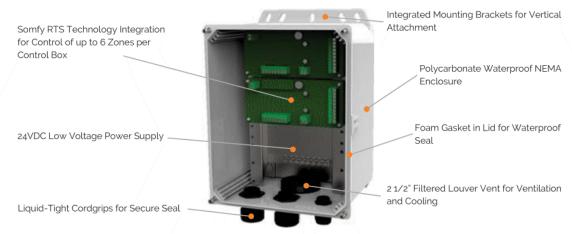


LOUVERED ROOF MOTOR



SOMFY TECHNIC	CAL SPECIFICATIONS	
VOLTAGE		
Input Voltage	[VDC]	24
LOAD		
Static Load (Fx), max.	[N/lbs]	2500 /562
Dynamic Load (Fx), max.	[N/lbs]	2500 / 562
STROKE		
Stroke length, standard	[mm]	135
CURRENT		
Current consumption, rated load	[A]	1.875
GENERAL DATA		
Speed, no load	[mm/s]	3.4
Speed, rated load	[mm/s]	2.8
Operating temperature limits	[°C]	-10/+60
Service life	[Cycles]	± 10,000
Sound level	[dB(A)]	≤ 70
Lead screw type		ACME
Protection Class		IP66
Certificates		CE (EN60601-:
Insulation		CLASS III

LOUVERED PERGOLA CONTROL



*Product dimensions: 10.59 x 8.59 x 6.96 in. / 268.99 x 218.19 x 176.78 mm

" Enclosure must be mounted in this vertical orientation.

COMPONENT RATIN	GS AND CERTIFICATIONS	
POWER SUPPLY		
Input Voltage	[VAC]	115/230
Input Voltage Frequency Range	[Hz]	47 - 63
Output Voltage	[VDC]	24
Voltage Adjustable Range	[VDC]	21.6 - 28.8V
Current Range	[A]	0 - 14.6
Rated Power	[W]	350.4
Safety Standard	[UL Certification]	UL60950-1
POWER SUPPLY CABLE (NOT SHOWN)		
Safety Standard	[ETL Certification]	#3170291
Voltage Rating	[V]	300
Temperature Rating	[°F]	-40 to 158
ENCLOSURE		
Safety Standard	[UL Certification]	UL508A
	[File Number]	E352997
Temperature Range	[°F]	-40 to 257
Impact Resistance	[in/lb]	500
Dielectric Strength	[volts/mil]	380
UV Rating	[UL Certification]	UL 746C
Flammability Rating	[UL Certification]	UL 94

STRUXURE"

154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303-5248

NOT PART OF CERTIFICATION

8609

DESCRIPTION MOTOR SPECIFICATION

05/06/22

DRAWN BY 1&·S

SCALE

N.T.S.

SHEET NO.

ALUMINUM TYPE: LOUVERS 6063-T5			STRUXURE™
ALL OTHER COMPC	DNENTS 6063-T6		154 ETHAN ALLEN DR. DAHLONEGA, GA 30533 (800) 303–5248
			FRANK BENNARDO, PE PE# 56089 CA# 4018 O5/27/2022
	DATE:	REVISION:	ENGINEERING POSTAL ADDRESS: 401 W. ATLANTIC AVE R10 #219 DELRAY BEACH, FL 33444 ENGINEERINGEN WHIT COMMENT OF THE BEACH WE BE A COMMENT OF THE STATE OF THE S
1			POS W. ATS POSE REPOSE SOLIC POSE SOLIC CONTRIBUTION OF THE POSE SOLIC CONTRIBUTION OF THE PO
2			401 V DO
3			
4			
5			ROBY THUR 98040
6			
7			
8			
9			
10			
11			
12			DESCRIPTION REVISIONS
			DATE
NOTES	S:		05/06/22
			DRAWN BY 18:S
			N.T.S.
			SHEET NO.
			A 500