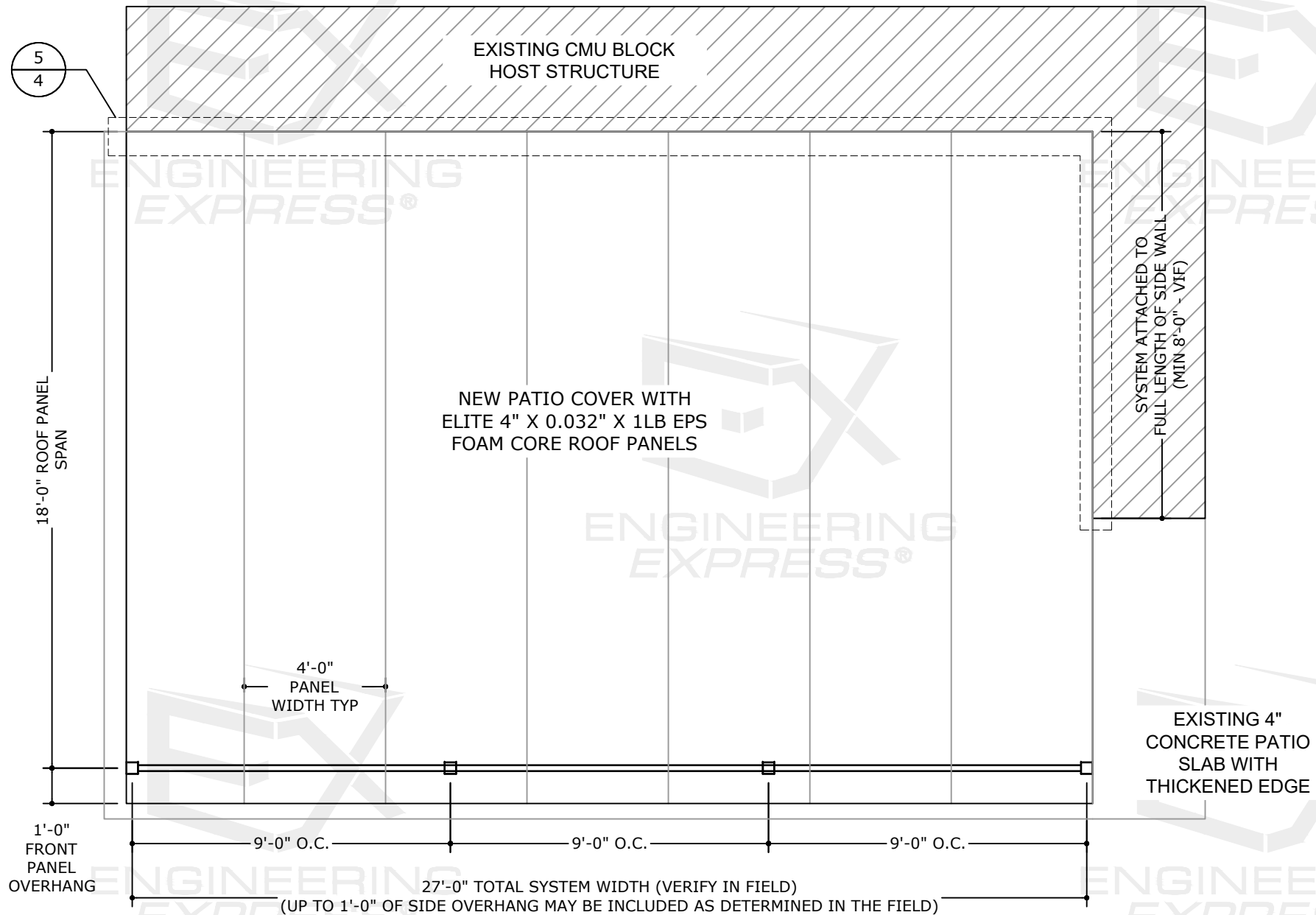


DESIGN OF FREESTANDING, FOAM PANEL ROOF PATIO COVER PEGOLA
KINGS CREEK - 8490 SW 83 STREET, MIAMI, FL 33143



1 PERGOLA PLAN VIEW
1 NOT TO SCALE PLAN

INDEX
SHEET # | DESCRIPTION

- COVER, PLAN, & DESIGN CRITERIA
- ENGINEER'S NOTES
- SYSTEM ELEVATION VIEWS
- BEAM, PANEL, AND POST CONNECTIONS
- POST BASE CONNECTIONS & FOOTINGS
- APPENDIX: FOAM PANEL SPAN CHART

PREPARED
BY



THIS SUBMITTAL IS FOR STRUCTURAL PURPOSES ONLY. THIS PRODUCT SHALL BE CONSTRUCTED USING PARTS MANUFACTURED BY "EASTERN METAL SUPPLY". 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 FOAM ROOF PANEL, FREESTANDING, RESIDENTIAL, PATIO COVER 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:

ROOF TYPE: FOAM ROOF PANEL PERGOLA
STRUCTURE SUPPORT: HOST ATTACHED
BASE CONNECTION: POST SURFACE MOUNTED BASE PLATE
ANCHORED TO EXISTING CONCRETE SLAB WITH THICKENED EDGE

DESIGN CRITERIA:

INTERNATIONAL BUILDING CODE (2021)
FLORIDA STATE BUILDING CODE 8TH EDITION (2023)
ASCE 7-22 LOAD COMBINATIONS

1. DEAD LOADING	
1.1. ROOF DEAD LOAD.....	5 PSF
2. LIVE LOADING	
2.1. ROOF LIVE LOAD.....	30 PSF (HVHZ REQUIREMENT)
3. WIND LOADING INPUTS	
3.1. METHODOLOGY.....	OPEN STRUCTURE
3.2. ULTIMATE WIND SPEED.....	175 MPH (ASD = $\sqrt{0.6} \cdot V_{ult}$)
3.3. WIND EXPOSURE FACTOR.....	B
3.4. WIND RISK CATEGORY.....	II
3.5. DIRECTIONALITY/OTHER FACTORS.....	$K_d=0.85, G=0.85, K_z=0.85, K_{zt}=1.0$
3.6. MEAN ROOF HEIGHT.....	10 FT (ATTACHED BELOW EXISTING EAVE)
3.7. SYSTEM MOUNTING HEIGHT.....	0 FT (AT GRADE)
4. SNOW LOADING	
4.1. GROUND SNOW LOAD.....	0 PSF
4.2. SNOW EXPOSURE FACTOR.....	1.0
4.3. SNOW LOAD IMPORTANCE FACTOR....	1.0
4.4. THERMAL FACTOR.....	1.2
4.5. SNOW DRIFT DIST. SURCHARGE.....	NONE
5. SEISMIC LOADS (DO NOT CONTROL)	
5.1. RISK CATEGORY.....	II
5.2. SITE CLASS.....	D
5.3. S_s	0.049
5.4. S_1	0.02
5.5. SEISMIC DESIGN CATEGORY (SDC)....	A
5.6. LONG TRANSITION PERIOD (T_L).....	4
5.7. LATERAL RESISTING SYSTEM :	
5.8. CANTILEVER COLUMN (G.1 SPEC.)	
6. RESULTANT ASD DESIGN LOAD COMBINATIONS	
6.1. MWF GRAVITY (+).....	32 PSF
6.2. MWF UPLIFT (-).....	-24 PSF
6.3. C&C GRAVITY (+).....	32 PSF
6.4. C&C UPLIFT (-).....	-24 PSF
6.5. LATERAL.....	25 PSF

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT [E-CALC.IO/DS](https://eocalc.io/ds) FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING EXPRESS®

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

IKON BUILDERS
4890 SW 74 COURT
MIAMI, FL 33155
(305) 970 - 9195

KINGS CREEK PATIO COVER
8490 SW 83 STREET
MIAMI FL, 33143

REMARKS	DATE	DRWN	CHKD
INIT REVIEW	7/03/25	CCB	CCB

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.



ENGINEER'S NOTES & DISCLAIMERS

GENERAL

1. 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.
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 **"EASTERN METAL SUPPLY"**. 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.
6. THIS SYSTEM IS DESIGNED AS AN OPEN-WALLED STRUCTURE. WALLED OR SCREENED ENCLOSURES ARE BEYOND THE SCOPE OF THIS DOCUMENT AND REQUIRE ADDITIONAL ENGINEERING REVIEW.
7. 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 COVER SHEET PROJECT INFORMATION BLOCK PROVIDED FOR A QUICK REFERENCE OF PROJECT STYLE & MATERIAL REQUIREMENTS.
8. SYSTEM NOT DESIGNED TO HANDLE CONCENTRATED LOADS FROM HUMAN ACTIVITY.
9. NO CERTIFICATION IS OFFERED FOR WATERPROOFING, SIZING, OR OPERATION OF GUTTERS.
10. 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 (U.N.O.) 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
 - 2.2. ALL OTHER EXTRUSIONS 6063-T6
 - 2.3. FASTENERS SS 304
3. STRUCTURAL ALUMINUM SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
4. ALL BEAMS SHALL HAVE A MINIMUM 1 1/2" DEPTH FULL BEARING SUPPORT UNLESS NOTED OTHERWISE.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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 ELECTROLYSIS.
14. ELECTRICAL GROUND, WHEN REQUIRED, TO BE DESIGNED & INSTALLED BY OTHERS.

OTHER MATERIALS (AS APPLICABLE)

1. 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 304 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 WELDING 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.
 5. STRUCTURAL CONCRETE SLABS SHALL BE 6" THICK MINIMUM & INCLUDE MINIMUM REINFORCEMENT OF EITHER W4XW4 / 4X4 WELDED WIRE MESH, OR#3 BARS @ 12" EACH WAY. STRUCTURAL SLABS SHALL ONLY BE UTILIZED AS A STRUCTURAL FOUNDATION FOR PATIO COVERS WITH SUFFICIENT HOST STRUCTURE SUPPORT AS DETAILED HEREIN.

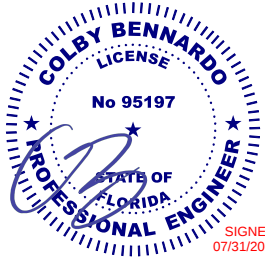
CERTIFICATION & LIABILITY

1. USE OF THIS SIGNED & SEALED DOCUMENT CONSTITUTES ACCEPTANCE OF THE PROPOSED SYSTEM LAYOUT, COMPONENTS SELECTED, AND INSTALLATION.
2. THESE DRAWINGS ARE NOT INTENDED TO BE USED AS FABRICATION OR SHOP DRAWINGS. SHOP DRAWINGS SHALL BE CREATED AND APPROVED BY OTHERS, AND BE SUBMITTED FOR E.O.R. REVIEW AND APPROVAL BEFORE INSTALLATION.
3. 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.
4. 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.
5. THIS DOCUMENT SHALL NOT BE USED OR REPRODUCED WITHOUT THE ORIGINAL SIGNATURE & RAISED SEAL OF THE CERTIFYING P.E. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION. PHOTOCOPIES AND UNSEALED DOCUMENTS ARE NOT TO BE ACCEPTED.
6. 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.
7. 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.
8. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED

COLBY BENNARDO, PE
PE# 95197 CA# 9885

FL

COPIES WITHOUT
ORIGINAL PE SEAL NOT
VALID FOR PERMIT



DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT E.CALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING
EXPRESS®

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

IKON BUILDERS

4890 SW 74 COURT
MIAMI, FL 33155
(305) 970 - 9195

KINGS CREEK PATIO COVER

8490 SW 83 STREET
MIAMI FL, 33143

REMARKS	DRWN	CHKD	DATE
INIT REVIEW	CCB	CCB	7/03/25

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT ENGINEERING EXPRESS®

25-88425

SCALE: NTS UNLESS NOTED

2

OF 5

PROJECT VIEWS - FREESTANDING PLANS & ELEVATIONS

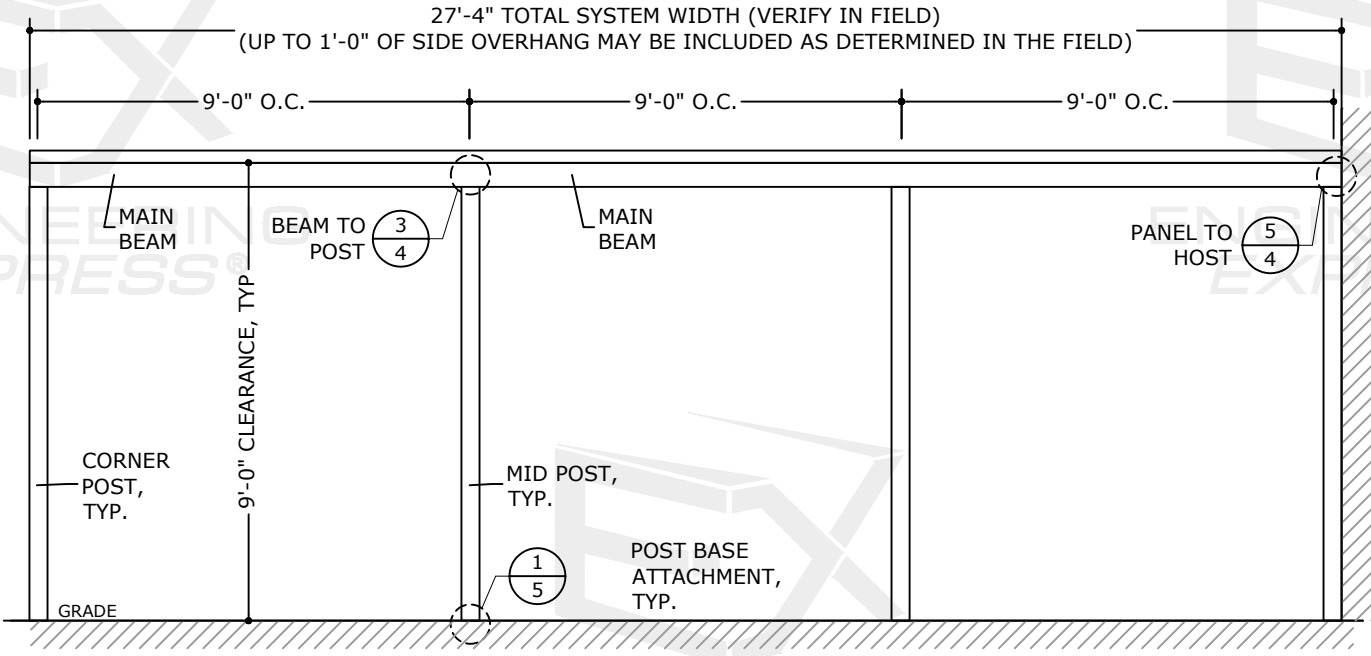
COLBY BENNARDO, PE
PE# 95197 CA# 9885

FL

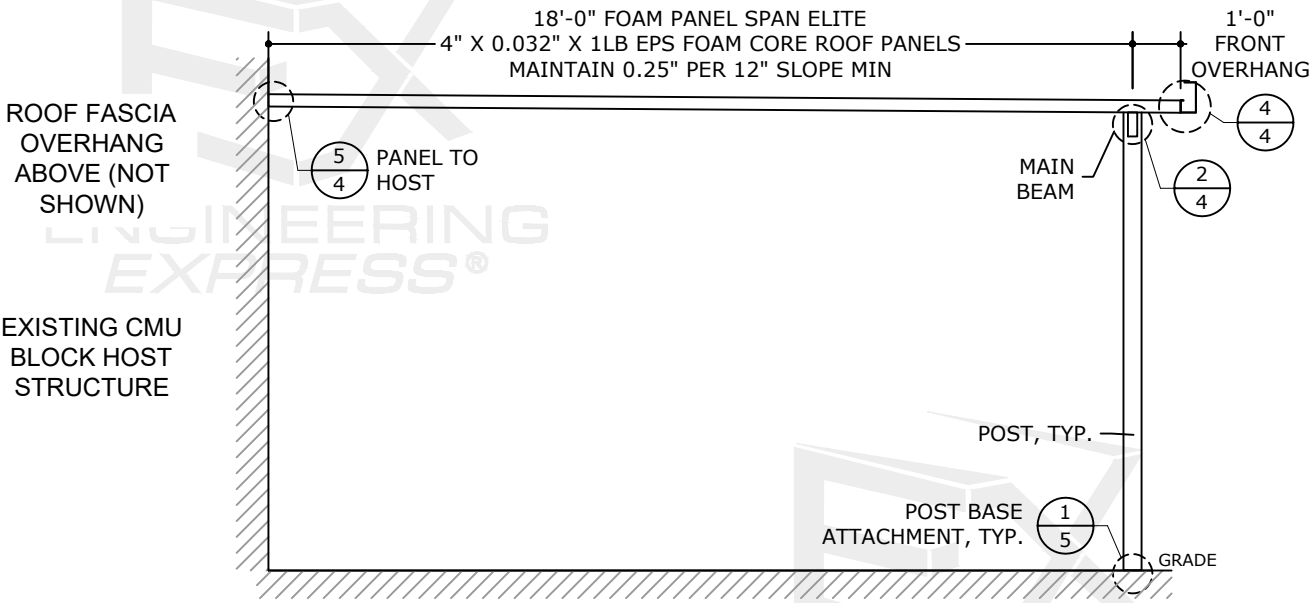
COPIES WITHOUT
ORIGINAL PE SEAL NOT
VALID FOR PERMIT

COLBY BENNARDO
LICENSE
No 95197
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SIGNED:
07/31/2025



1 PERGOLA FRONT ELEVATION
3 NOT TO SCALE ELEV



2 PERGOLA SIDE ELEVATION
3 NOT TO SCALE ELEV

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT E.CALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

ENGINEERING
EXPRESS®

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

IKON BUILDERS
4890 SW 74 COURT
MIAMI, FL 33155
(305) 970 - 9195

KINGS CREEK PATIO COVER
8490 SW 83 STREET
MIAMI FL, 33143

REMARKS	DRWN	CHKD	DATE
INIT REVIEW	CCB	CCB	7/03/25

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

25-88425

SCALE: NTS UNLESS NOTED

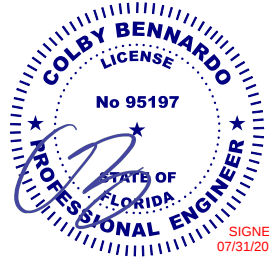
3 OF 5

ROOF PANEL TO BEAM TO POST CONNECTIONS

COLBY BENNARDO, PE
PE# 95197 CA# 9885

FL

COPIES WITHOUT
ORIGINAL PE SEAL NOT
VALID FOR PERMIT



DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
VISIT E.CALC.IO/DS FOR MORE INFORMATION.
PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE.
VALID FOR 1 PERMIT ONLY U.N.O.

**ENGINEERING
EXPRESS**

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

IKON BUILDERS
4890 SW 74 COURT
MIAMI, FL 33155
(305) 970 - 9195

KINGS CREEK PATIO COVER
8490 SW 83 STREET
MIAMI FL, 33143

REMARKS	DRWN	CHKD	DATE
INIT REVIEW	CCB	CCB	7/03/25

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT ENGINEERING EXPRESS®

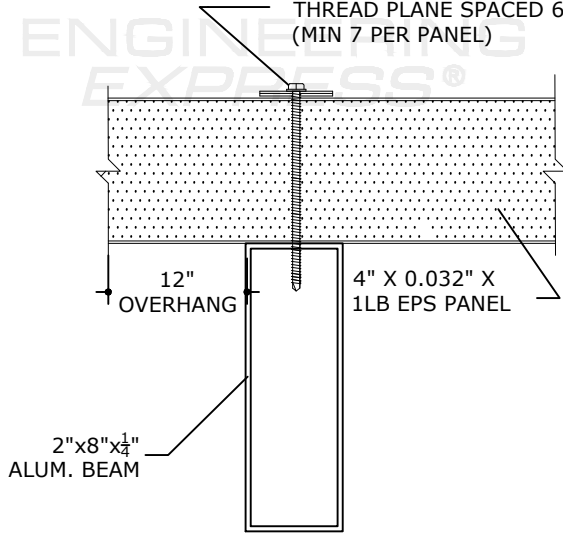
25-88425

SCALE: NTS UNLESS NOTED

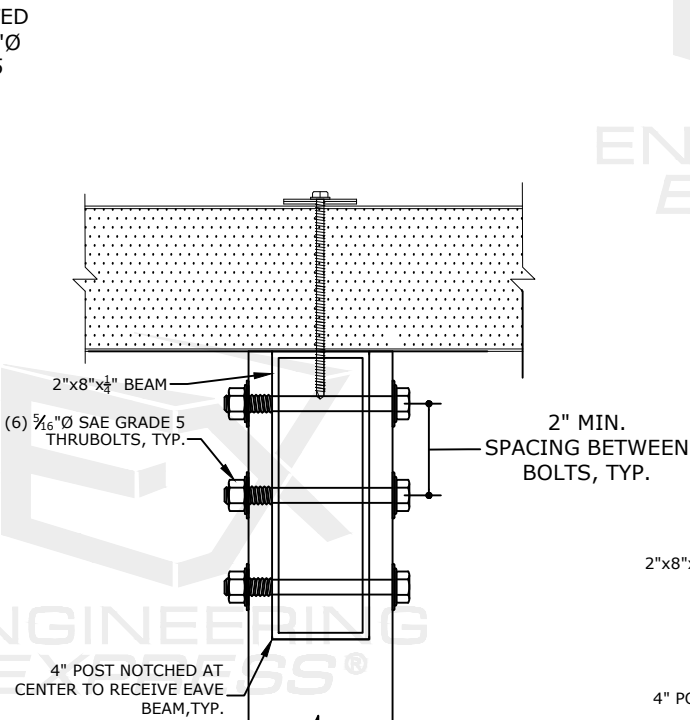
4

OF 5

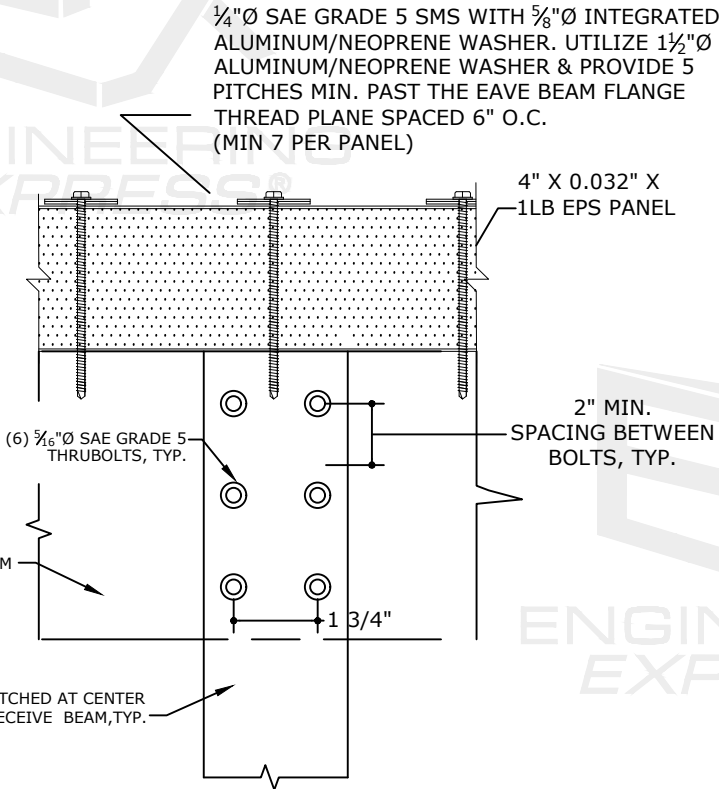
1/4"Ø SAE GRADE 5 SMS WITH 5/8"Ø INTEGRATED ALUMINUM/NEOPRENE WASHER. UTILIZE 1 1/2"Ø ALUMINUM/NEOPRENE WASHER & PROVIDE 5 PITCHES MIN. PAST THE EAVE BEAM FLANGE THREAD PLANE SPACED 6" O.C.
(MIN 7 PER PANEL)



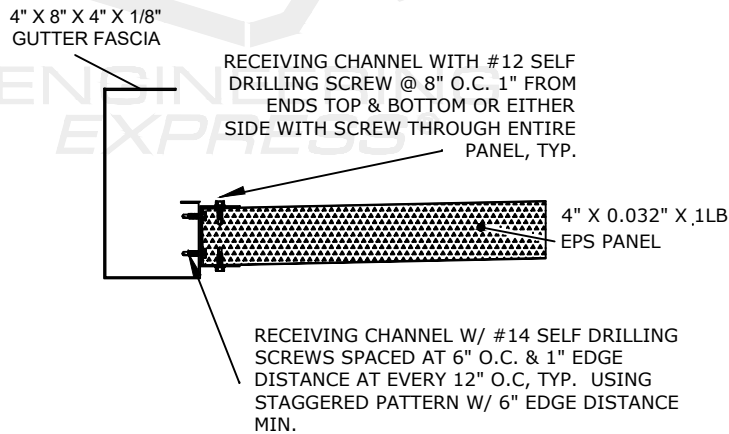
1 ROOF PANEL TO BEAM
4 NOT TO SCALE SECTION



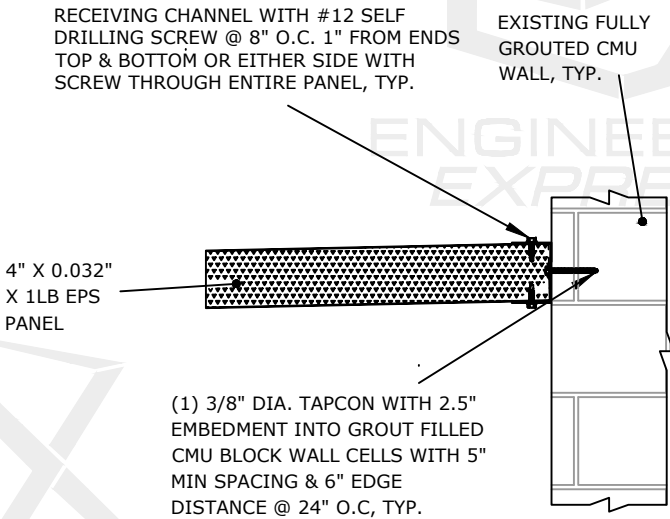
2 BEAM TO POST CONNECTION
4 NOT TO SCALE SECTION



3 BEAM TO POST CONNECTION
4 NOT TO SCALE SECTION



4 PANEL TO FRONT GUTTER
4 NOT TO SCALE DETAIL



5 HOST CONNECTION TO GROUTED CMU WALL
4 NOT TO SCALE DETAIL

HOST STRUCTURE REACTIONS
(SUPPORTING STRUCTURE SHALL BE SEPARATELY REVIEWED & CERTIFIED TO RESIST IMPOSED DESIGN LOADS LISTED)

TENSION = 17 LB/FT
SHEAR= 281 LB/FT

POST BASE CONNECTIONS

COLBY BENNARDO, PE
PE# 95197 CA# 9885

FL

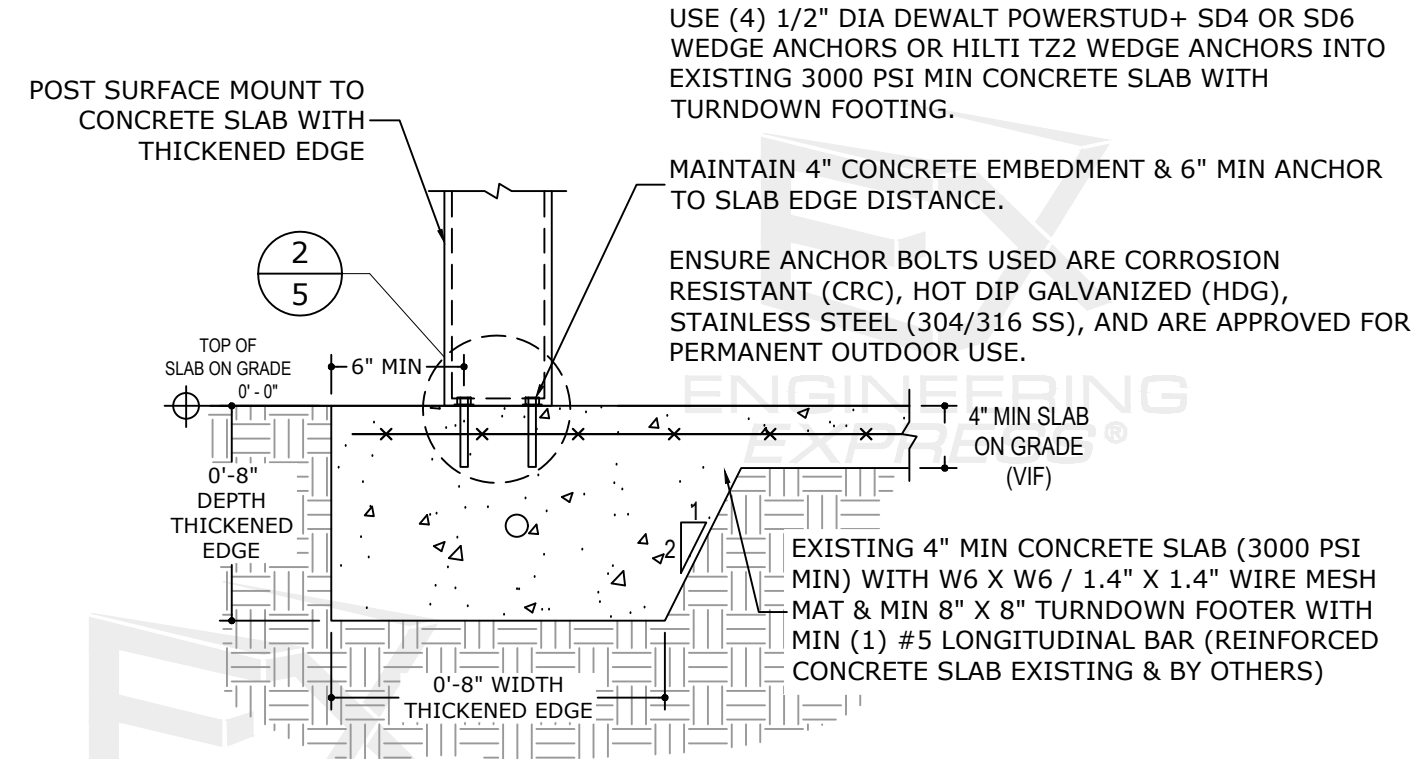
COPIES WITHOUT
ORIGINAL PE SEAL NOT
VALID FOR PERMIT

COLBY BENNARDO
LICENSE
No 95197
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SIGNED:
07/31/2025

DIGITAL SEAL NOTICE:
IF THIS DOCUMENT IS DIGITALLY SIGNED, THIS ITEM HAS BEEN DIGITALLY SIGNED BY THE ABOVE-SIGNING ENGINEER ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. VISIT EALC.ID/DS FOR MORE INFORMATION.

PRINTED DOCUMENT NOTICE:
IF THIS DOCUMENT IS PRINTED & DOES NOT CONTAIN AN ENGINEER'S ORIGINAL SIGNATURE & SEAL, THIS DOCUMENT IS VOID & NOT VALID FOR USE. PHOTOCOPIES ARE NOT PERMITTED FOR USE. **VALID FOR 1 PERMIT ONLY U.N.O.**

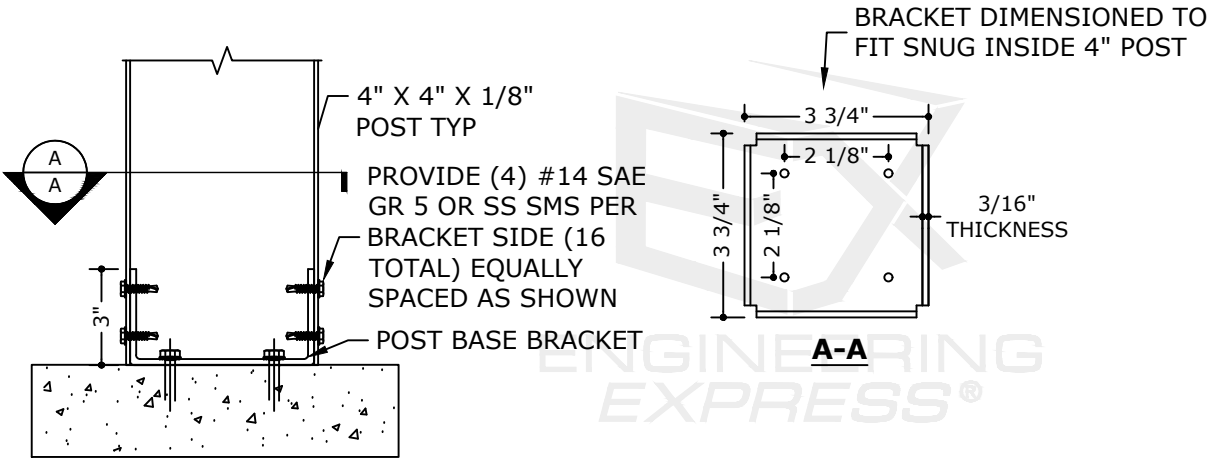


1
5

CONCRETE SLAB WITH THICKENED EDGE
SURFACE MOUNT ONLY

NOT TO SCALE

FRONT ELEV



2
5

CUSTOM SURFACE MOUNT
INTERNAL POST BASE BRACKET

NOT TO SCALE

DETAIL

**ENGINEERING
EXPRESS®**

POSTAL ADDRESS:
2234 NORTH FEDERAL HWY #7664
BOCA RATON, FL 33431
ENGINEERINGEXPRESS.COM

IKON BUILDERS
4890 SW 74 COURT
MIAMI, FL 33155
(305) 970 - 9195

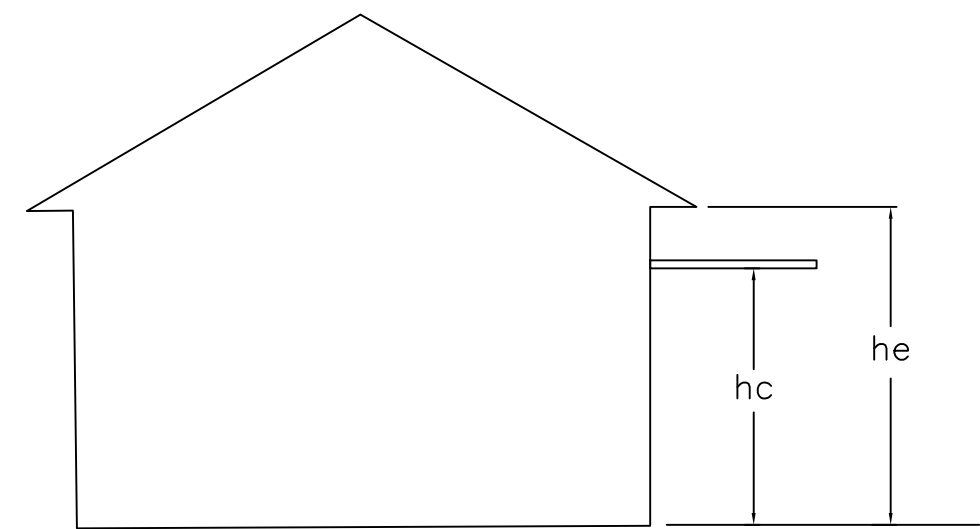
KINGS CREEK PATIO COVER
8490 SW 83 STREET
MIAMI FL, 33143

REMARKS	DRWN	CHKD	DATE
INIT REVIEW	CCB	CCB	7/03/25

THIS DOCUMENT IS THE PROPERTY OF ENGINEERING EXPRESS, AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF ENGINEERING EXPRESS. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

ELITE ALUMINUM PANELS ARE LABELED WITH A FL7561 LABEL TO ENSURE BUILDING INSPECTOR THAT THE INSULATED PANELS INSTALLED ARE APPROVED FOR USE IN THE STATE OF FLORIDA.

8th Edition FBC Basic Design Wind Speed and Allowable Design Wind Pressure for Attached Covers (canopies) on Buildings.



Attached Covers (canopies) on Buildings

- 1. Per 8th Edition FBC Chapter 16 for Components and Cladding Loads, ASCE/SEI 7-22 Chapter 30 for Components and Cladding for Attach Canopies on Buildings. Effective area for wind load calculations based on 10 sq. feet (absolute value of controlling design wind pressure is shown on span tables).
- 2. Use the wind load design pressures in the tables below for OPEN and ATTACHED covers (canopies) on buildings as a guide to determine allowable wind load design pressures. Use the design pressure selected to determine the allowable spans for the various panel types listed on Sheet 1.
- 2. The tables below ONLY applies to open and attached covers (canopies) on buildings per ASCE/SEI 7-22 Section 30.9 ATTACHED CANOPIES ON BUILDINGS and shall not be used for any other types of structures such as Enclosed, Freestanding Open, Partially Open, or Partially enclosed Buildings.
- 3. Roof covers attached to fascia are deemed $0.9 \leq hc/he \leq 1$.
- 4. Roof covers attached to the host structure underneath the fascia and overhang at deemed $0.5 \leq hc/he < 0.9$.

ASCE 7-22 Allowable Design Pressures			
ATTACHED TO FASCIA CANOPIES (Open Wind Flow), $0.9 \leq hc/he \leq 1$			
Wind Speed	Exposure B	Exposure C	Exposure D
110	10.7	15.98	19.36
120	12.8	19.02	23.04
130	15.0	22.32	27.04
140	17.4	25.88	31.37
150	19.9	29.71	36.01
160	22.7	33.81	40.97

ASCE 7-22 Allowable Design Pressures			
ATTACHED TO WALL CANOPIES (Open Wind Flow), $0.5 < hc/he < 0.9$			
Wind Speed	Exposure B	Exposure C	Exposure D
110	6.9	10.27	12.45
120	8.2	12.23	14.81
130	9.6	14.35	17.39
140	11.2	16.64	20.16
150	12.8	19.10	23.15
160	14.6	21.73	26.34

Notes:

- 1. The allowable design pressures listed in the tables are the absolute value of the controlling design pressure ($\pm dp$).

PANEL SPAN TABLE INFORMATION
PER FLORIDA APPROVAL FL# 7561
(BY OTHERS) INCLUDED WITH EX
PROJECT 25-88425, KING'S CREEK
FOR REFERENCE.

REFER FLORIDA DBPR FOR
ORIGINAL SEALED ENGINEERING &
ADDITIONAL INFORMATION

DO KIM
& ASSOCIATES, LLC

CONSULTING
STRUCTURAL
ENGINEERS

PO BOX 10039
Tampa, FL 33679
Tel: (813) 857-9955

Rev./Date	Description
 8/12 2017	ISSUED FOR FBC 6th Edition PRODUCT APPROVAL
 8/8 2020	ISSUED FOR FBC 7th Edition PRODUCT APPROVAL
 6/15 2022	ADDED LABELING STATEMENT
 8/15 2023	ISSUED FOR FBC 8th Edition PRODUCT APPROVAL
	

Elite Aluminum Corporation
4650 Lyons Technology Parkway
Coconut Creek, FL 33073

EPS FOAM CORE COMPOSITE PANELS
ALUMINUM/ALUMINUM SKIN
FLORIDA STATEWIDE PRODUCT APPROVAL

DRAWN BY:	DYK
CHECKED BY:	DYK
SCALE:	AS SHOWN
DATE:	2/19/12



This item has been digitally signed and sealed by Do Y. Kim on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Drawing No. - FL-1001

SHEET 2 OF 2