3A COMPOSITES USA, INC.
ALUMINUM COMPOSITE WALL PANEL SYSTEM

GENERAL NOTES

1. THESE COMPOSITE WALL PANELS SHALL BE USED FOR WALL CONSTRUCTION, SOFFITS, AND OTHER EXTERIOR DETAILS WHOSE REQUIREMENTS FOR POSITIVE AND NEGATIVE PRESSURES ARE WITHIN THE VALUES STATED IN NOTE 2 OF THIS DRAWING. EACH ACTUAL WALL PROJECT SHALL BE CONSTRUCTED USING THE DETAILS SHOWN ON THESE DRAWINGS AS MINIMUM REQUIRED SPECIFICATIONS.

2. THE MAXIMUM DESIGN ALLOWABLE PRESSURES FOR THIS WALL PANEL SYSTEM ARE +70.0 PSF / −90.0 PSF

3. THIS WALL PANEL SYSTEM IS TESTED IN ACCORDANCE WITH THE FOLLOWING PROTOCOLS:
   TAS−201−94, IMPACT TEST, LARGE MISSLE
   TAS−202−94, UNIFORM STATIC AIR PRESSURE TEST, WATER PENETRATION AND AIR INFILTRATION
   TAS−203−94, CYCLIC WIND PRESSURE TEST
   AND IT SHALL BE INSTALLED AS SHOWN IN THESE APPROVED DRAWINGS.

MATERIAL SPECIFICATIONS:

ALUMINUM EXTRUSIONS

1. MATERIAL: 42620, 42621, 42622, 42623, AND 38500B STIFFENER ARE EXTRUDED ALUMINUM ALLOY 6063 WITH A T5 TEMPER. (By SAF Metal Fabrication)

2. MOUNTING FASTENERS: #12 x 2" HEX WASHER HEAD ITW TEK SCREW

3. FINISH: MILL FINISH.

COMPOSITE PANEL

1. ALUMINUM COMPOSITE METAL PANEL 4MM THICK (0.157")

2. CORE: FIRE RATED THERMOPLASTIC MATERIAL WHICH IN COMPOSITE ASSEMBLY MEETS PERFORMANCE CHARACTERISTICS SPECIFIED. APPROVED CORES INCLUDE:

   2.1. ALUCOBOND PLUS (FR Core) (4mm)

3. FACE SHEETS: 0.020" ALUMINUM 3105 (STRAIN HARDENED) ALLOY

4. FINISH: PVDF/FEVE FLUOROPOLYMER RESIN COATING.

5. MAXIMUM DIMENSIONS: 5' WIDE X 12' LONG

FRAMING & ACCESSORIES

1. STEEL STUDS AND TRACKS: 18 GA. MIN. GALVANIZED STEEL WITH MIN. PROPERTIES OF 50 KSI YIELD, 65 KSI ULTIMATE.

2. STUD & TRACK FASTENERS: #12 x 1 1/2" HEX WASHER HEAD ITW TEK SCREW.

3. PANEL FASTENERS: 5/32" DIA FLUSH HEAD BLIND RIVET SPACED AT 16" O.C.

4. STIFFENER FASTENERS: #10 x 1−1/2" WAFER HEAD ITW TEK SCREW.

5. STRUCTURAL SILICONE: DOW CORNING #1199 SILICONE SEALANT.

6. WALL PANEL SYSTEM SUPPORT:

   6.1. THE STRUCTURAL ADEQUACY OF THE 18 GA. GALVANIZED STUDS AND THE 2X10 WOOD BUCK STRUCTURAL FRAMING USED IN TESTING TO SUPPORT THE METAL PANELS/SUPPORTING EXTRUSIONS AND SHOWN IN THIS PRODUCT APPROVAL DOCUMENT ARE NOT PART OF THIS PRODUCT APPROVAL.

   6.2. THE WOOD BUCK AND STEEL STUD FRAMING DETAILED IN THIS DRAWING WAS FOR TEST PURPOSES ONLY AND IS NOT INTENDED AS A RECOMMENDATION FOR ACTUAL CONSTRUCTION.

   6.3. WALL PANEL SYSTEM SUPPORTING STRUCTURE SHALL BE REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT.

TABLE OF CONTENTS

PERFORMANCE RATING	
DESIGN PRESSURE	**IMPACT RATING**
+70/-90 PSF	LARGE MISSILE IMPACT
PER ATI/INTERTEK TEST REPORT NO. D9802.01-401-18, DATED 12/3/2014 INCLUDES WATER PENETRATION TESTING TO +70 PSF DP (10.5 PSF POSITIVE TEST PRESSURE) AND AIR INFILTRATION TESTING TO 1.57 PSF & 6.24 PSF.	

PANEL ENGINEERING PROPERTIES

Property	ASTM	Testing Standard	Manufacturer Testing Data 3A Composites USA ALUCOBOND PLUS (FR Core) (4mm)
Strength Properties	E8/D638	Tensile Strength (psi)	6480 psi (ASTM D638)
	E8/D638	Tensile Yield Strength (psi)	5040 psi (ASTM D638)
	C297	Bond Integrity - Vertical Peel	1160 psi
	D1781	Bond Integrity - Drum Peel	123 N mm/mm
	C273	Bond Integrity - Flatwise Shear	2180 psi
Material Properties	D1929	Self-Ignition Temp > 650 deg. F	783°F
	E84	Flame Spread Index < 75	10
	E84	Smoke Density Index < 450	5
	D635	Rate of Burning, Class CC1 or CC2	CC1
Other		Thickness (in)	0.157
		Weight (lb/ft^2)	1.56

Fastener Schedule

Description of Use	Fastener Type	Specification	Size	Corrosion Resistance - Remarks
Panel Support Extrusions to Steel Stud	ITW Buildex Teks Self-Drilling Fasteners, Hex Washer Head	ICC-ES ESR-1976	#12 x 2"	ITW Proprietary Climaseal® or plated with electrodeposited zinc (E-Zinc) complying with the minimum corrosion resistance requirements of ASTM F1941
Panel to Support Extrusions	Flush Head Blind Rivet	n/a	5/32"	300 Stainless Steel
	ITW Buildex Teks Self-Drilling Fasteners, Wafer Head	ITW Product Report No. 02705	#10 x 1-1/2"	Gray Spex
Steel Stud to Test Buck (not recommended for actual construction)	Pan or Hex Head Wood Screw	ANSI B18.6.1	#12 x 1-1/2"	This screw is used for test buck installation only. Corrosion resistance is not required.
Steel Stud to Steel Track (not part of this product approval)	ITW Buildex Tek 3 Self-Drilling Fasteners, Hex Washer Head	ICC-ES ESR-1976	#12 x 1-1/2"	This screw is used for test buck installation only. Corrosion resistance is not required.
5/8" Plywood to Steel Studs (not recommended for actual construction)	Self Drilling Flat Head Screw	n/a	#12 x 1-1/2" located 16" on center. Not shown on drawing section views.	This screw is used for test buck installation only. Corrosion resistance is not required.

The installation of the panel wall and support structure to substrate comprised of 5/8" plywood supported by steel studs and a wood test buck is not part of this product approval document and was for test purposes only. Fastening requirements for other code conforming substrates shall be the responsibility of others in conformance with the current edition of the Florida Building Code including use of corrosion resistant fasteners.

PROJECT NO. 419-0306

BY	DATE	DESCRIPTION	REV

3A COMPOSITES USA INC.
208 WEST 5TH STREET
BENTON, KY 42025

TITLE: ALUMINUM COMPOSITE WALL PANEL SYSTEM GENERAL NOTES AND TABLES

DATE: 6/10/19
DRAWING NO: 3AC0001
SHEET: 1 OF 5
DRAWN BY: RJA
SCALE:
REV: ---

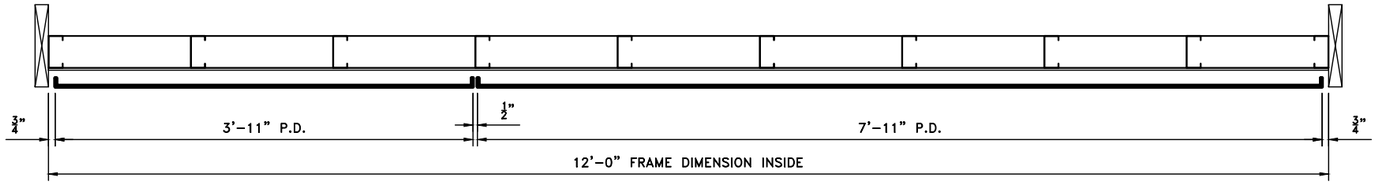
PREPARED BY: PTC Product Design Group, LLC

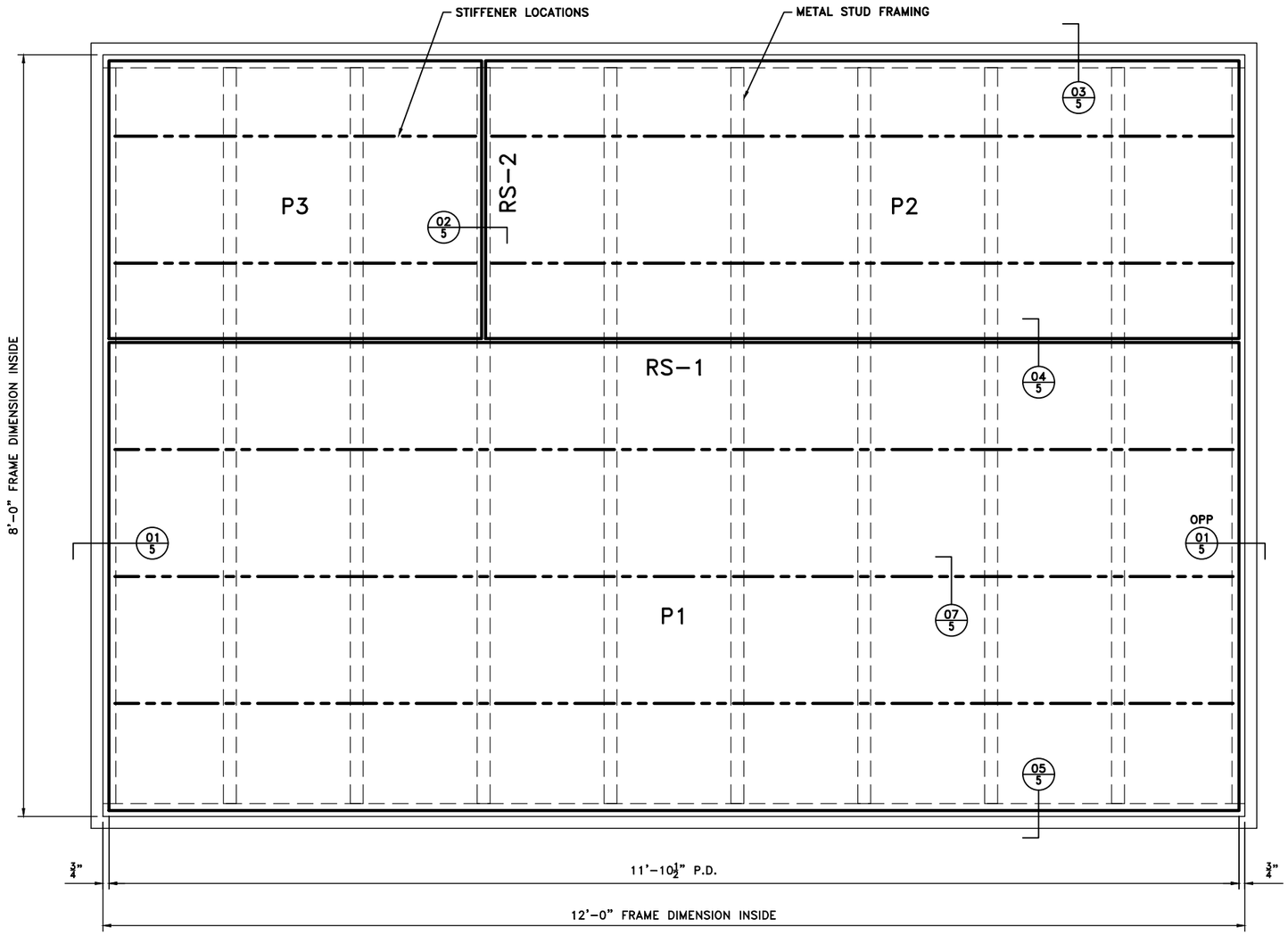
Robert J. Amoruso
Florida P.E. No. 49752

ROBERT JAMES AMORUSO LICENSE No 49752 STATE OF FLORIDA PROFESSIONAL ENGINEER

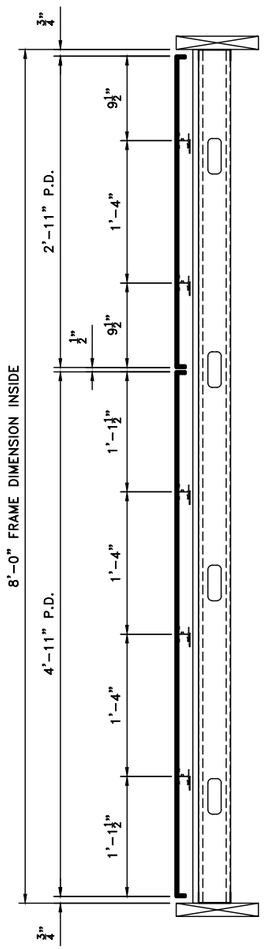
Digitally signed by Robert J. Amoruso, P.E.
Date: 2019.06.19 16:39:51 -04'00'

PTC Product Design Group, LLC
P.O. Box 520775
Longwood, FL 32752-0775
FBPE Cert. of Authorization NO. 25935





01/5 ELEVATION
SCALE: 1-1/2"=1'-0"



RS-2	1	4mm REVEAL STRIP	1.625 X 32.938
RS-1	1	4mm REVEAL STRIP	1.625 X 143.500
P3	1	PANEL	36.875 x 48.875
P2	1	PANEL	36.875 x 96.875
P1	1	PANEL	60.875 x 144.375
PART_ID	Count	PART_DESC1	CUTSIZE
PARTS LIST			

PROJECT NO. 419-0306

REV	DESCRIPTION	DATE	BY

3A COMPOSITES USA INC.
208 WEST 5TH STREET
BENTON, KY 42025

TITLE: ALUMINUM COMPOSITE WALL PANEL SYSTEM ELEVATIONS AND SECTION VIEWS

DRAWN BY: RJA | DATE: 6/10/19
SCALE: | DRAWING NO: 3AC0001
REV: --- | SHEET: 2 OF 5

PREPARED BY: PTC Product Design Group, LLC

Robert J. Amoruso
Florida P.E. No. 49752

ROBERT JAMES AMORUSO LICENSE No 49752 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Date: 2019.06.19 16:40:07 -04'00'

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Longwood, FL 32752-0775
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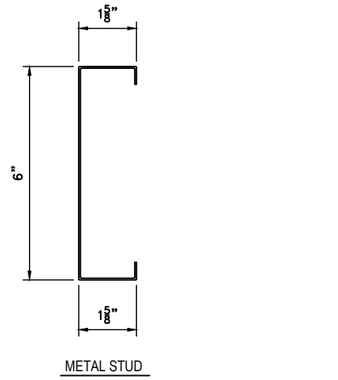
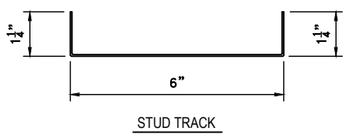
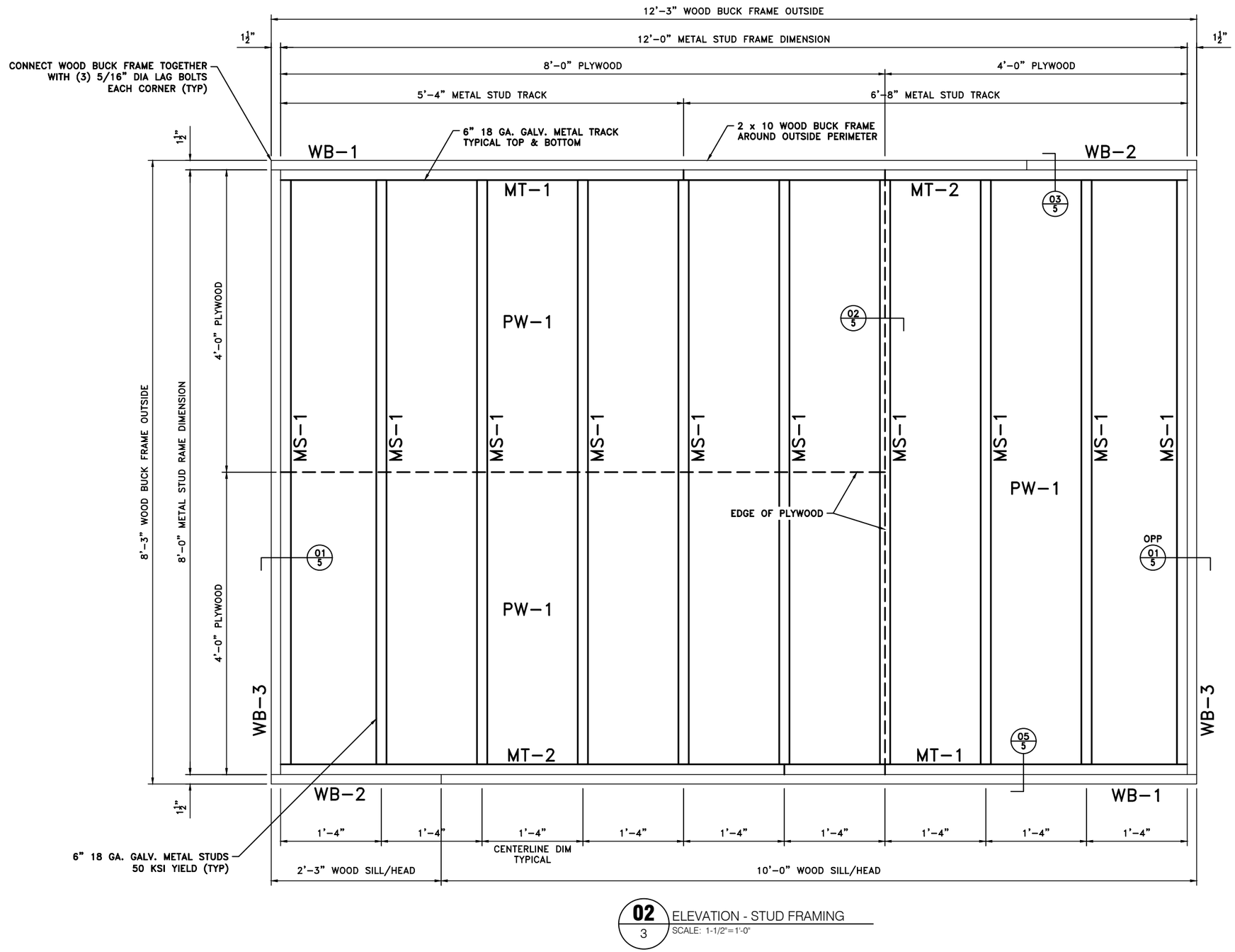


METAL STUD



STUD TRACK



02 3 ELEVATION - STUD FRAMING
SCALE: 1-1/2"=1'-0"

WB–3	2	2x10 WOOD BUCK	8'–0"
WB–2	2	2x10 WOOD BUCK	2'–3"
WB–1	2	2x10 WOOD BUCK	10'–0"
PW–1	3	5/8" PLYWOOD	4' x 8'
MT–2	2	METAL TRACK	80.000
MT–1	2	METAL TRACK	64.000
MS–1	10	METAL STUD	95.750
PART_ID	Count	PART_DESC1	CUTSIZE
PARTS LIST			

PROJECT NO. 419-0306

REV	DESCRIPTION	DATE	BY

3A COMPOSITES USA INC.
208 WEST 5TH STREET
BENTON, KY 42025

TITLE: ALUMINUM COMPOSITE WALL PANEL SYSTEM
ELEVATION - STUD FRAMING

DRAWN BY: RJA
DATE: 6/10/19
SCALE:
DRAWING NO: 3AC0001
REV: ---
SHEET: 3 OF 5

PREPARED BY: PTC Product Design Group, LLC

Robert J. Amoruso
Florida P.E. No. 49752

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Longwood, FL 32752-0775
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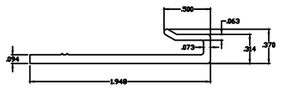
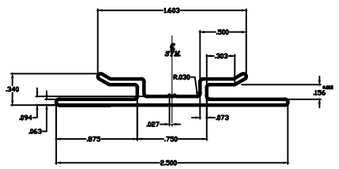
EXTRUSION PROFILES



EXTRUSION NO. 42620
6063-T5
TYPICAL UNMARKED WALLS = 0.062"



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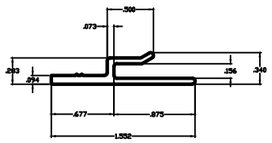

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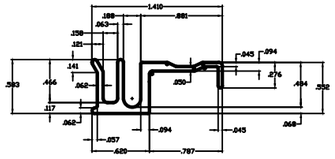

EXTRUSION NO. 42623
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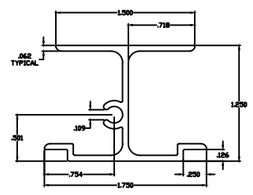
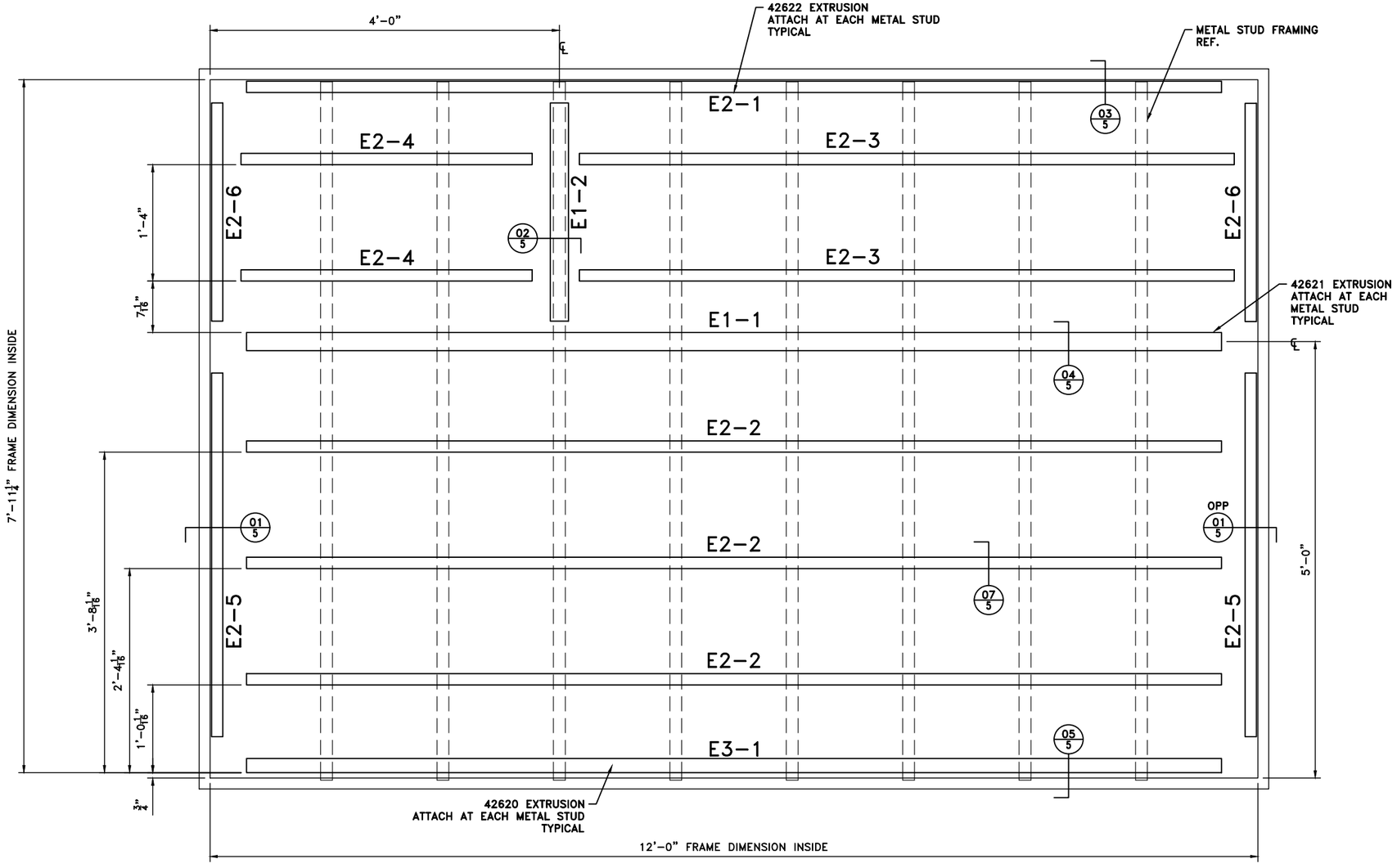


EXTRUSION NO. 38500B
6063-T5
TYPICAL UNMARKED WALLS = 0.062"

PARTS LIST			
PART_ID	Count	PART_DESC1	CUTSIZE
E3–1	1	42620 EXTRUSION	134.000
E2–6	2	42622 EXTRUSION	30.000
E2–5	2	42622 EXTRUSION	50.000
E2–4	2	42622 EXTRUSION	40.000
E2–3	2	42622 EXTRUSION	90.000
E2–2	3	42622 EXTRUSION	134.000
E2–1	1	42622 EXTRUSION	134.000
E1–2	1	42621 EXTRUSION	30.000
E1–1	1	42621 EXTRUSION	134.000



03 ELEVATION - EXTRUSION LAYOUT
4 SCALE: 1-1/2"=1'-0"

REV	DESCRIPTION	DATE	BY

PROJECT NO. 419-0306

3A COMPOSITES USA INC.
208 WEST 5TH STREET
BENTON, KY 42025

TITLE: ALUMINUM COMPOSITE WALL PANEL SYSTEM
COMPONENETS & ELEVATIONS - EXTRUSION LAYOUT

DRAWN BY:	DATE:	DRAWING NO:	SHEET:
RJA	6/10/19	3AC0001	4 OF 5
SCALE:		REV:	
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PREPARED BY:
PTC Product Design Group, LLC

Robert J. Amoruso
Florida P.E. No. 49752

ROBERT JAMES AMORUSO LICENSE No 49752 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Robert J. Amoruso, P.E.
Date: 2019.06.19 16:40:34 -04'00'

PTC Product Design Group, LLC
P.O. Box 520775
Longwood, FL 32752-0775
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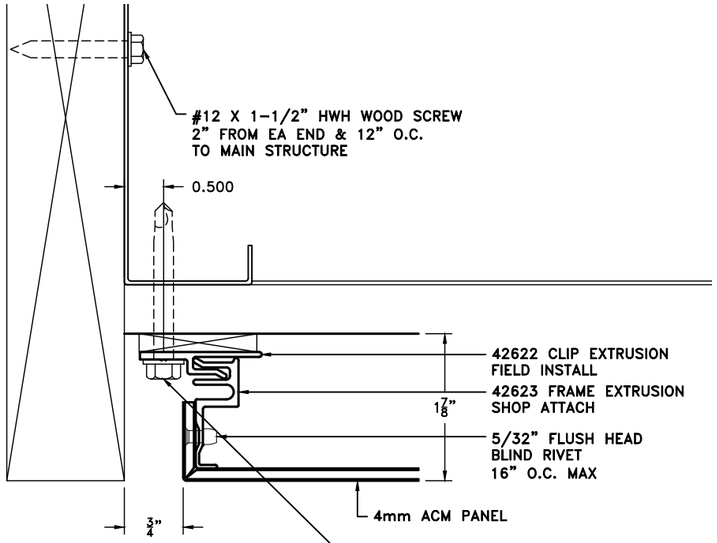
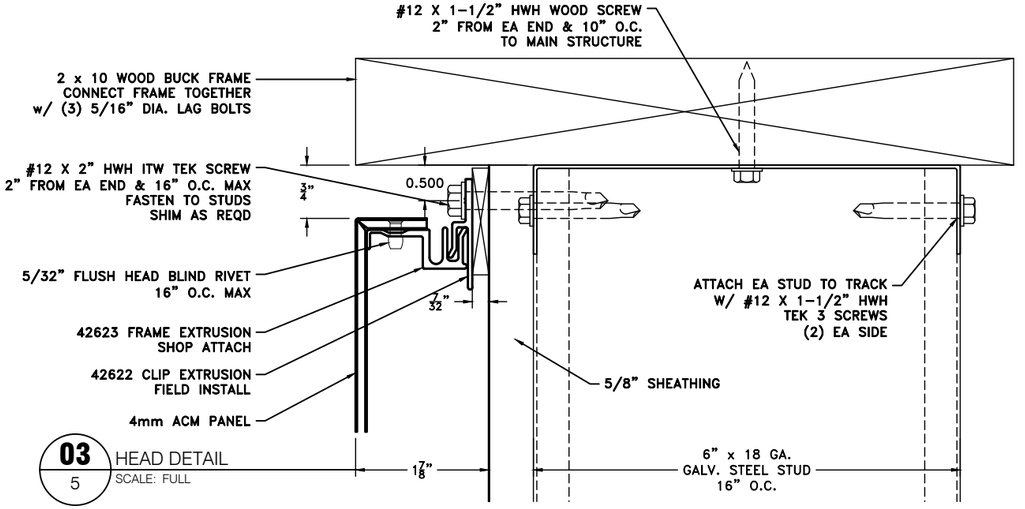


01 5 JAMB DETAIL
SCALE: FULL

TYPICAL NOTE:
SHIM IS OPTIONAL
USE AS REQUIRED



03 5 HEAD DETAIL
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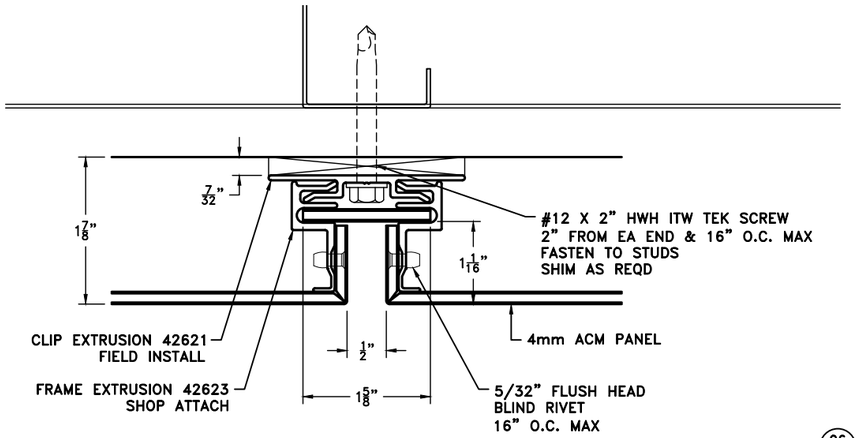

02 5 VERT DETAIL
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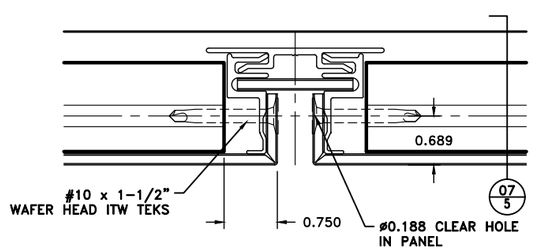

06 5 STIFFENER DETAIL
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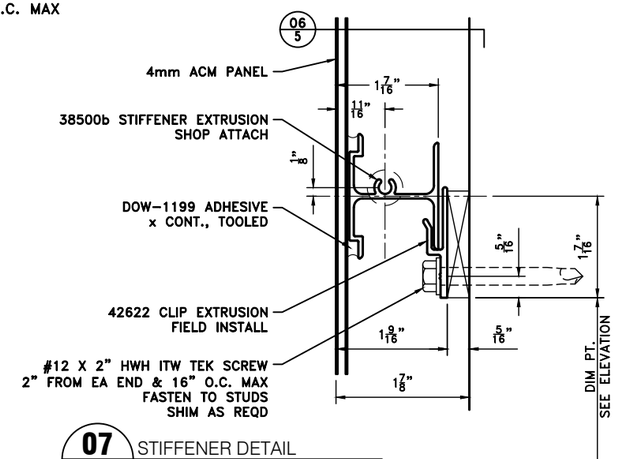

07 5 STIFFENER DETAIL
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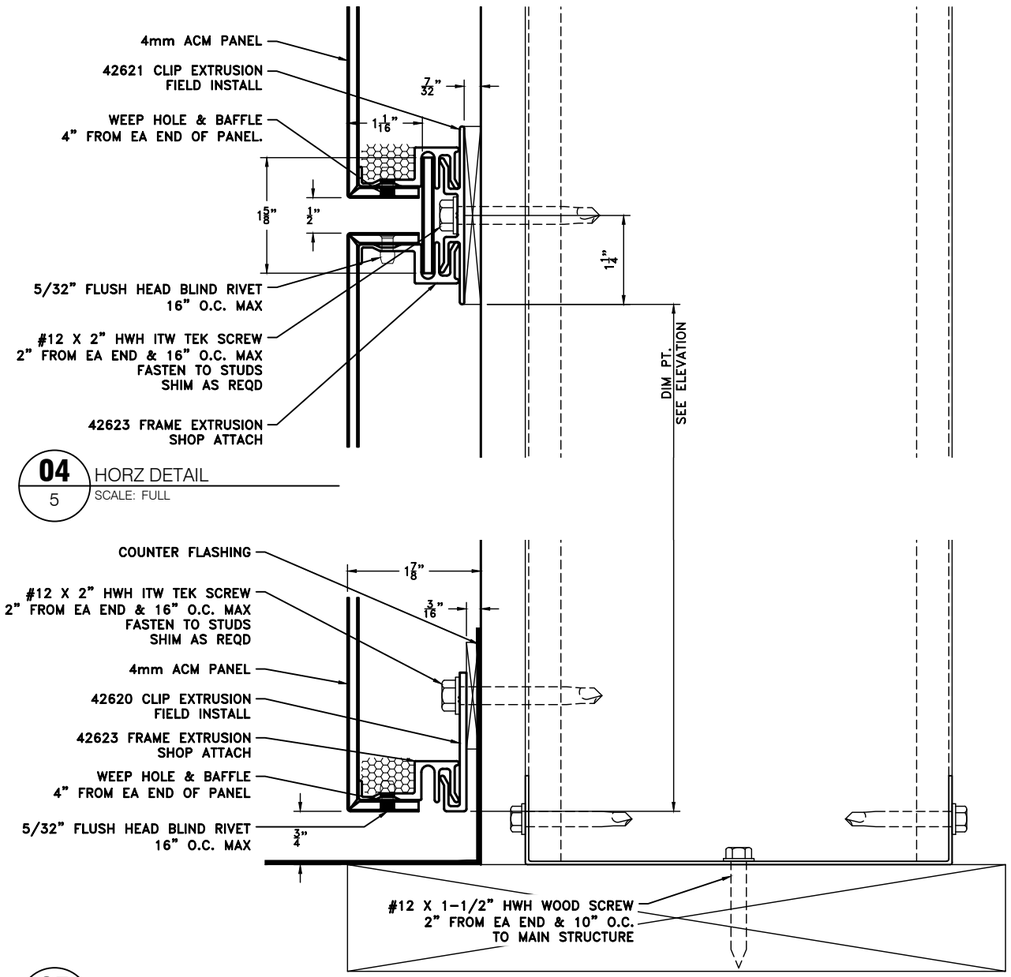

04 5 HORZ DETAIL
SCALE: FULL

05 5 SILL DETAIL
SCALE: FULL

PROJECT NO. 419-0306				
REV	DESCRIPTION	DATE	BY

3A COMPOSITES USA INC.
208 WEST 5TH STREET
BENTON, KY 42025

TITLE: ALUMINUM COMPOSITE WALL PANEL SYSTEM
DETAILS - CONNECTIONS

DRAWN BY:	DATE:	SHEET:
RJA	6/10/19	5 OF 5
SCALE:	DRAWING NO:	
---	3AC0001	
REV:		

PREPARED BY:
PTC Product Design Group, LLC

Robert J. Amoruso
Florida P.E. No. 49752

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Robert J. Amoruso, P.E.
Date: 2019.06.19
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P.O. Box 520775
Longwood, FL 32752-0775
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