## KAWNEER 1600 WALL SYSTEM 1 2 1/2" x 7 13/16" CURTAINWALL SYSTEM LEVEL E IMPACT RESISTANT

### **GENERAL NOTES:**

- 1. THIS PRODUCT MEETS ALL THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE.
- 2. THIS SYSTEM HAS BEEN TESTED PER ASTM E 1886, AND ASTM E 1996 FOR LEVEL E LARGE AND SMALL MISSILE IMPACT RESISTANCE. SHUTTERS ARE NOT REQUIRED.
- 3. DESIGN LOADS MUST BE CALCULATED BY A PROFESSIONAL ENGINEER OR ARCHITECT FOR EACH PROJECT. THE DESIGN PRESSURE CANNOT EXCEED THE PRESSURES LISTED FOR EACH COMPONENT OF THIS SYSTEM.
- 4. WOOD BUCKS BY OTHERS AND MUST BE ANCHORED PROPERLY TO TRANSFER IMPOSED LOADS TO THE STRUCTURE.
- 5. ANCHORS SHALL BE AS LISTED AND SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT IN BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- 6. CODE REQUIREMENTS FOR SAFE GUARDS MUST BE OBSERVED.
- 7. THE GLASS CHART IN SECTION 5 IS BASED ON TESTED PRESSURES AND ASTM E 1300-09.
- 8. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH DISSIMILAR MATERIALS SHALL BE SEPARATED TO PREVENT GALVANIC REACTIONS PER FBC REQUIREMENTS.

#### **SYSTEM NOTES:**

GLASS	SEE CHART ON SHEET 06 FOR ALLOWABLE GLASS
	TYPES, SIZES AND DESIGN PRESSURES.
MULLIONS	SEE CHART ON SHEET 5 FOR ALLOWABLE
	DESIGN PRESSURES FOR VARIOUS MULLION AND
	REINFORCEMENT CONFIGURATIONS.
JAMBS	SEE CHART ON SHEET 5 FOR ALLOWABLE DESIGN
	PRESSURES FOR JAMBS WITH AND WITHOUT
	REINFORCING.
ANCHORS	SEE CHARTS IN SECTION 06 FOR ALLOWABLE LOADS
	FOR HEAD/SILL ANCHORS AND MID-SPAN ANCHORS.
SYSTEM	THE DESIGN PRESSURE OF THE ENTIRE SYSTEM IS
	THE LOWEST ALLOWABLE DESIGN PRESSURE OF THE
	COMPONENTS ABOVE.

	TABLE OF CONTENTS				
SHEET	DESCRIPTION				
01	SECTION 1 - GENERAL NOTES / SECTION NOTES				
02	SECTION 2 — ELEVATION				
03	SECTION 3 — HORIZONTAL DETAILS				
04	VERTICAL DETAILS				
05	SECTION 4 - MULLION CHARTS AND REINFORCING DETAILS				
06	SECTION 5 - GLAZING DETAILS - GLASS TYPE 1				
07	SECTION 6 - HEAD/SILL ANCHOR CHART AND ANCHOR TYPE 1 DETAILS				
08	HEAD/SILL ANCHOR CHART AND ANCHOR TYPE 2 DETAILS				
09	SECTION 7 — BILL OF MATERIALS				
10	EXTRUSION PROFILES				





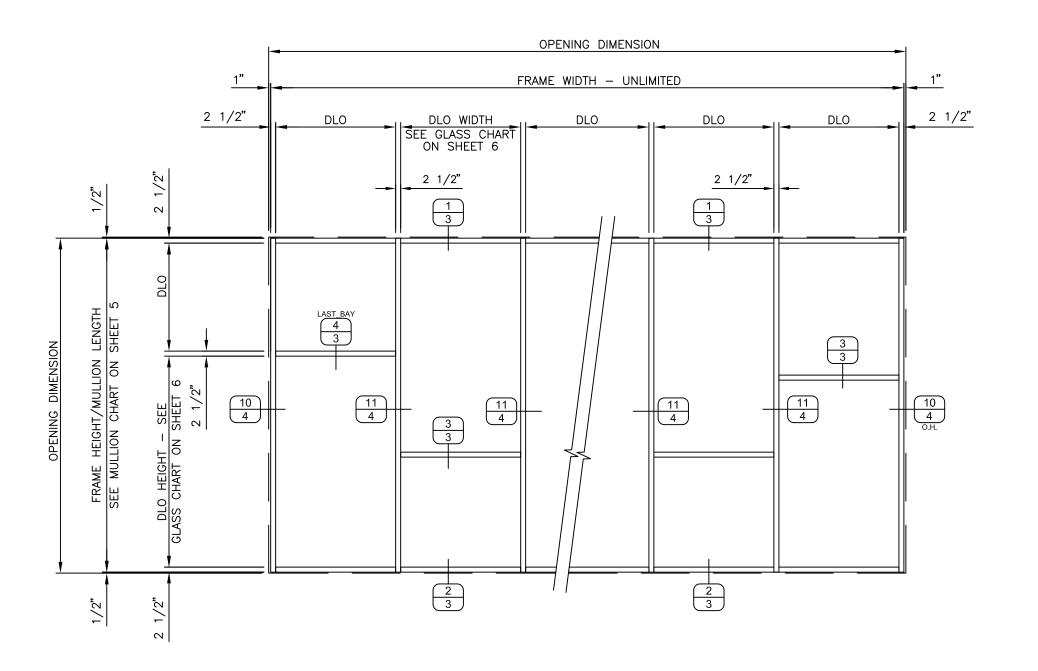
9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. **CAMDEN, TN, 38320** PH 941-380-1574

PRODUCT: 1600 WALL SYS 1 2 1/2" LEVEL E

1600-IR-LVLE

SECTION:

SHEET:



EXTERIOR VIEW (NOT TO SCALE)

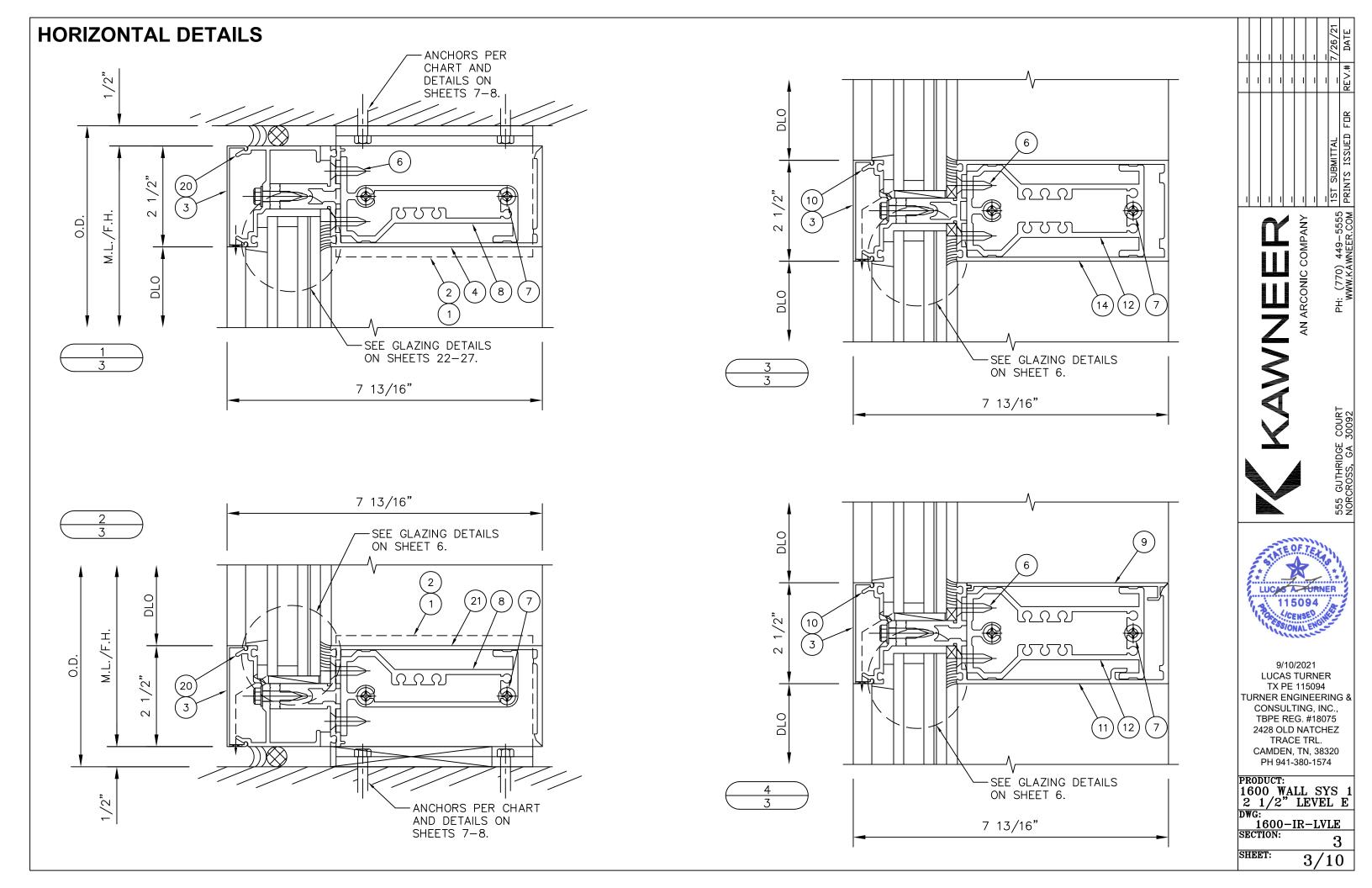




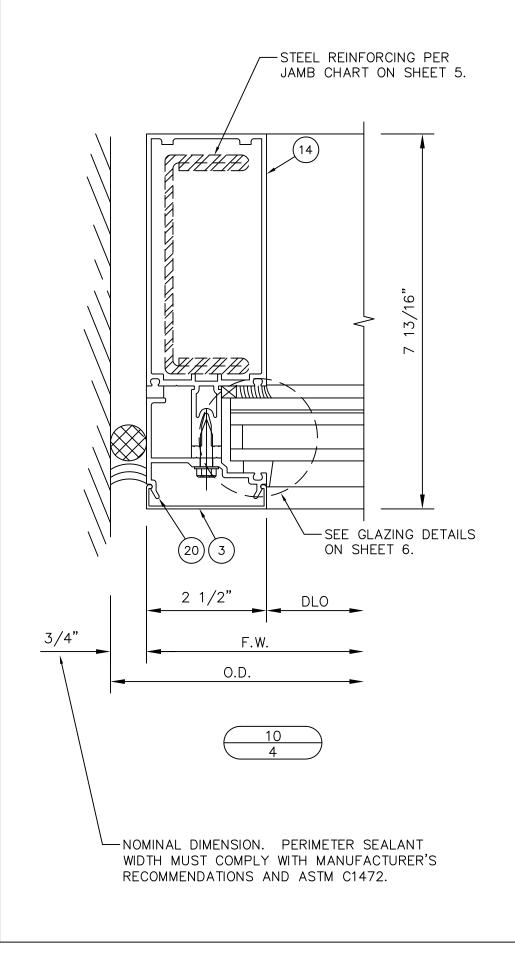
9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574

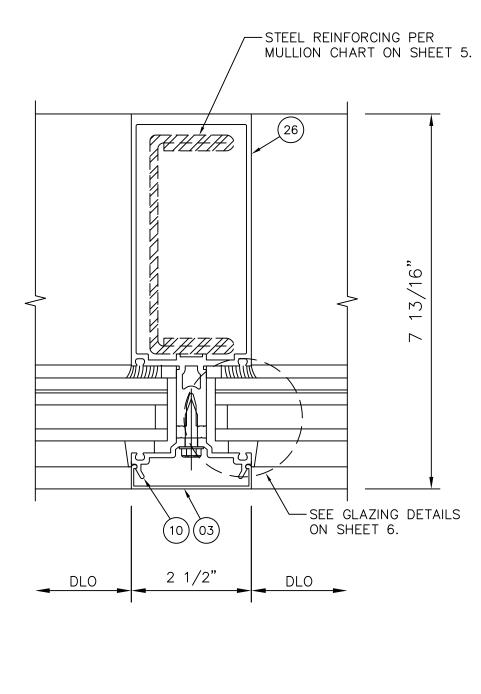
PRODUCT:
1600 WALL SYS 1
2 1/2" LEVEL E
DWG:
1600-IR-LVLE
SECTION:
2

SHEET:



### **VERTICAL DETAILS**





PH: (770) 449—5555 WWW.KAWNEER.COM



9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574

PRODUCT:
1600 WALL SYS 1
2 1/2" LEVEL E

DWG:
1600-IR-LVLE

SECTION:
3

3

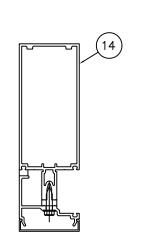
SHEET:

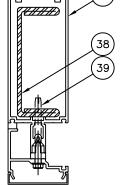
## **MULLION LIMITATIONS**

MULLION CHART						
		MAX DES	IGN PRESS	URE (psf)		
		MULLION	MULLION	MULLION		
HEIGHT	WIDTH	M1	M2	M3		
(in)	(in)	(+/-)	(+/-)	(+/-)		
	36	90	90	90		
	42	90	90	90		
96	48	90	90	90		
	54	90	90	90		
	60	90	90	90		
	36	Œ	90	90		
	42	1/2	90	90		
120	48	1-	90	90		
,	54	-	90	90		
	60	-	90	90		
	36	15.	90	90		
	42	-	90	90		
132	48	-	90	90		
	54	-	90	90		
	60	-	90	90		
	30	1-	-	83		
	36	-	-	83		
144	42	-	-	83		
	48	-		83		
	56	-	-	83		
	30	-	-	77		
	36	/2	-	77		
156	42	-	-	77		
	48	-	-	77		
	51	-	-	77		
//	36	-	-	70		
168	42		-	70		
	48	1.75	-	70		

_		WIDTH 1		WIDTH 2	-[		
FRAME / MULLION HEIGHT	JAMB MULLION		INTERMEDIATE MULLION				_
		MULLION SPA				+ <u>WIDTH</u>	. 2

		JAMB MULLIO	N CHART	
		MAX DE	SIGN PRESSU	RE (psf)
		JAM	B <b>J1</b>	JAMB <b>J2</b>
		1/2" to 3/4"	3/4" to 1"	1/2" MIN.
		CAULK JOINT	CAULK JOINT	CAULK JOINT
HEIGHT	WIDTH	WIDTH	WIDTH	WIDTH
(in)	(in)	(+/-)	(+/-)	(+/-)
	36	90	90	90
2000	42	90	90	90
96	48	90	90	90
	54	90	90	90
	60	90	90	90
	36	90	90	90
	42	90	90	90
120	48	90	90	90
	54	90	90	90
	60	90	90	90
	36	90	90	90
	42	90	90	90
132	48	90	90	90
	54	90	90	90
	60	83	90	90
	30	83	83	83
12.000	36	83	83	83
144	42	83	83	83
	48	72 83		83
	56	62	83	83
	30	77	77	77
450	36	71	77	77
156	42	61	77	77
	48	53	77	77
	52	49	73	77
400	36	52	70	70
168	42 48	45 39	66 58	70 70
	48	39	58	//





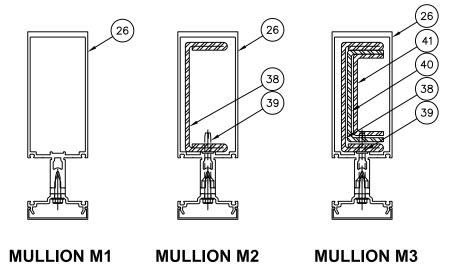
<b>JAMB</b>	<b>MULLION J1</b>	

**JAMB MULLION J2** 

	115094 /CENSEO
38 39	9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574

PRODUCT:
1600 WALL SYS 1
2 1/2" LEVEL E
DWG:
1600-IR-LVLE
SECTION:
4

SHEET:



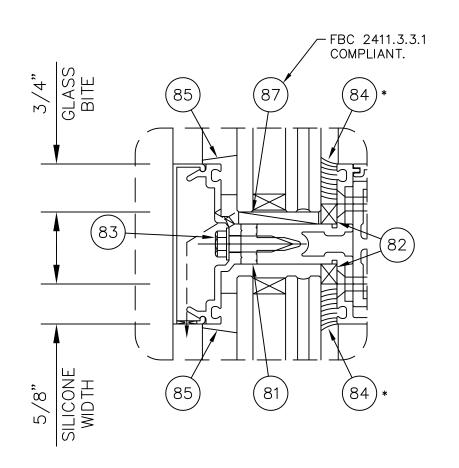
# LEVEL E LARGE AND SMALL MISSILE GLAZING

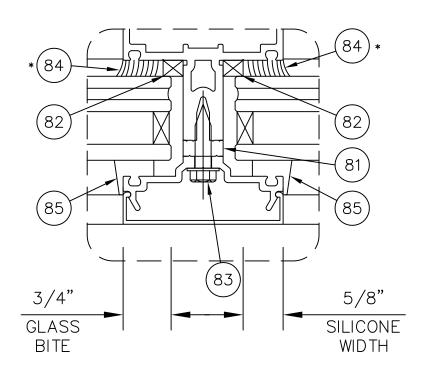
### GLASS TYPE 1:

1 5/16" INSULATED LAMINATED
1/4" TEMPERED
1/2" AIR SPACE (ALUM SPACER)
3/16" HEAT STRENGTHENED
0.180" SENTRYGLAS INTERLAYER
3/16" HEAT STRENGTHENED

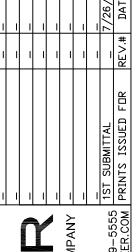
			GL	ASS CHAR	Т			
GLASS TYPE	1(LEVEL E	E LMI/SMI)						
TESTED DLOS	S = 57 1/2'	'x92 1/2" (9	00 psf), 45	1/2"x116 1/4	4" (70 psf)			
			ALLOWA	BLE DESIG	N PRESSU	RE (+/- psf	)	
DLO HEIGHT				DLO W	IDTH (in)			
(in)	36	39	42	45	48	51	54	57 1/2
92 1/2	90	90	90	90	90	90	90	90
98 1/2	90	90	90	90	90	90	90	-
104	90	90	90	90	90	90	-	-
110 1/2	90	90	90	90	90	=	i.	-
118	90	90	90	90	-	-	-	-
126 1/2	90	90	90	-	-	-	-	-
136	90	90	-	-		-	-	-
147	90	-	-	-	-	<u> </u>	-	-

### **GLAZING DETAILS**





\*INSTALLER NOTE: INSTALLER IS RESPONSIBLE FOR ALL REQUIRED COMPATIBILITY REVIEW AND APPROVALS WITH THE STRUCTURAL SILICONE MANUFACTURER AND THE INSULATING GLASS UNIT MANUFACTURER.



55 GUTHRIDGE COURT

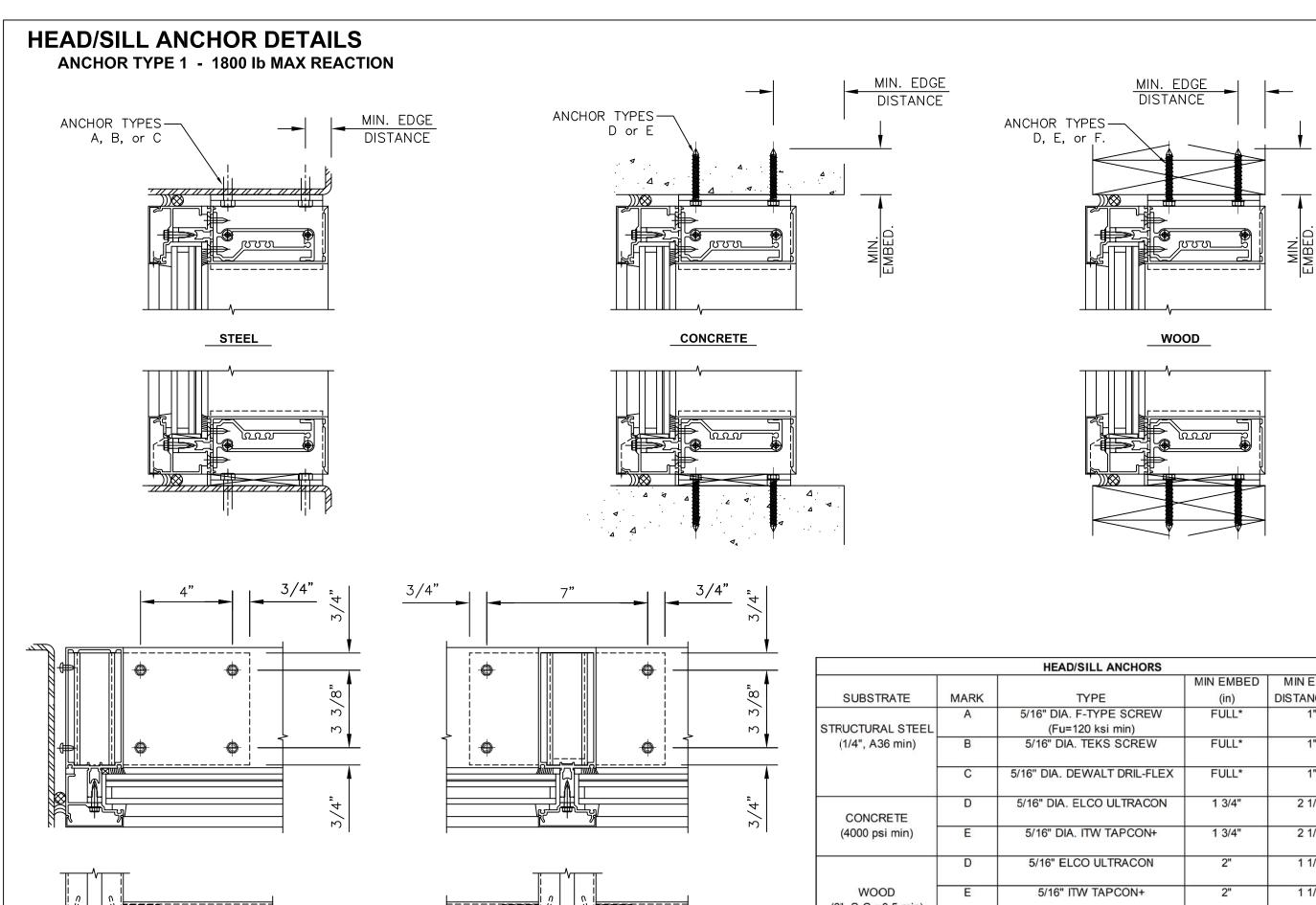


9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574

PRODUCT: 1600 WALL SYS 1 2 1/2" LEVEL E

DWG: 1600-IR-LVLE SECTION:

SHEET: 6/1



	110	HEAD/SILL ANCHORS		
			MIN EMBED	MIN EDGE
SUBSTRATE	MARK	TYPE	(in)	DISTANCE (in)
STRUCTURAL STEEL	Α	5/16" DIA. F-TYPE SCREW (Fu=120 ksi min)	FULL*	1"
(1/4", A36 min)	В	5/16" DIA. TEKS SCREW	FULL*	1"
	С	5/16" DIA. DEWALT DRIL-FLEX	FULL*	1"
CONCRETE	D	5/16" DIA. ELCO ULTRACON	1 3/4"	2 1/2"
(4000 psi min)	E	5/16" DIA. ITW TAPCON+	1 3/4"	2 1/2"
	D	5/16" ELCO ULTRACON	2"	1 1/2"
WOOD (3", S.G.=0.5 min)	E	5/16" ITW TAPCON+	2"	1 1/2"
AC 100A	F	#14 WOOD SCREW (Fu=120 ksi min)	2"	1 1/2"

\* FOR FASTENERS IN STEEL, FASTENER THREADS MUST FULLY PENETRATE THE WALL THICKNESS OF THE STEEL, WITH THREE ADDITIONAL THREADS BEYOND.

PH: (770) 449—5555 WWW.KAWNEER.COM AN ARCONIC COMPANY



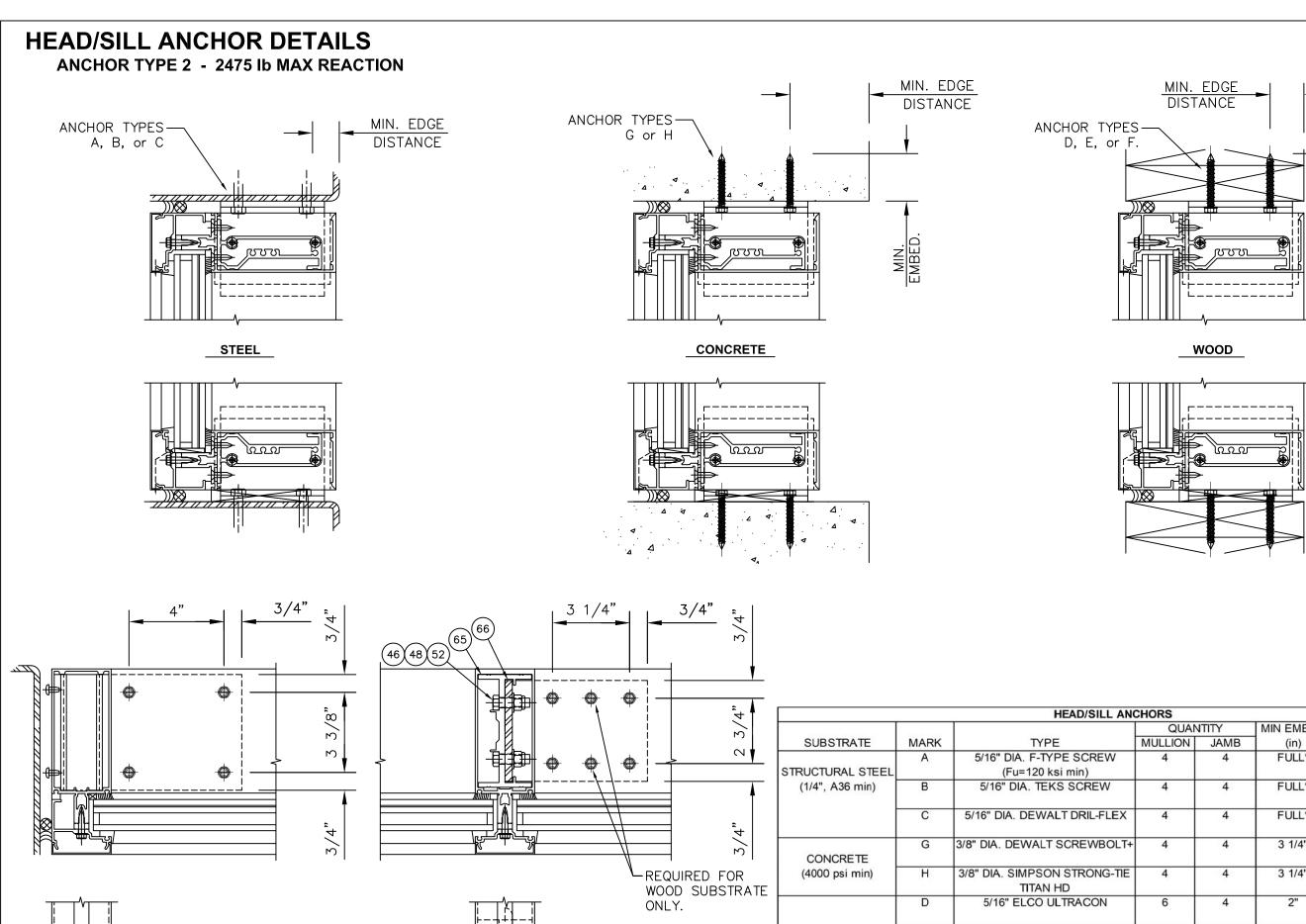
9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. **CAMDEN, TN, 38320** PH 941-380-1574

PRODUCT: 1600 WALL SYS 1 2 1/2" LEVEL E

DWG: 1600-IR-LVLE SECTION:

6

SHEET: 7/10



<del>⊨</del>===

		HEAD/SILL AND	CHORS			
			QUAN	YTITY	MIN EMBED	MIN EDGE
SUBSTRATE	MARK	TYPE	MULLION	JAMB	(in)	DISTANCE (in)
	Α	5/16" DIA. F-TYPE SCREW	4	4	FULL*	1"
STRUCTURAL STEEL		(Fu=120 ksi min)				
(1/4", A36 min)	В	5/16" DIA. TEKS SCREW	4	4	FULL*	1"
	С	5/16" DIA. DEWALT DRIL-FLEX	4	4	FULL*	1"
CONCRETE	G	3/8" DIA. DEWALT SCREWBOLT+	4	4	3 1/4"	3"
(4000 psi min)	Н	3/8" DIA. SIMPSON STRONG-TIE TITAN HD	4	4	3 1/4"	3"
	D	5/16" ELCO ULTRACON	6	4	2"	1 1/2"
WOOD (3", S.G.=0.5 min)	Е	5/16" ITW TAPCON+	6	4	2"	1 1/2"
	F	#14 WOOD SCREW (Fu=120 ksi min)	6	4	2"	1 1/2"

FOR FASTENERS IN STEEL, FASTENER THREADS MUST FULLY PENETRATE THE WALL THICKNESS OF THE STEEL, WITH THREE ADDITIONAL THREADS BEYOND.

MIN. EMBED.

PH: (770) 449-5555 WWW.KAWNEER.COM AN ARCONIC COMPANY



9/10/2021 **LUCAS TURNER** TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. **CAMDEN, TN, 38320** PH 941-380-1574

PRODUCT: 1600 WALL SYS 1

2 1/2" LEVEL E

DWG:
 1600-IR-LVLE

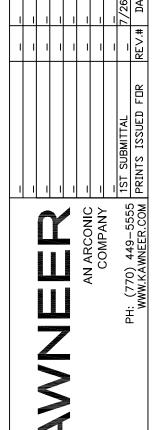
SECTION: 6

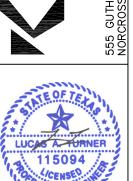
SHEET:

## **BILL OF MATERIALS**

BILL OF MATERIALS								
۱0.	PART NO.	DESCRIPTION	DIMENSIONS	MATERIAL				
01	162311	"F" ANCHOR	3.250 x 8.000 x 0.250	6063 T6 ALUMINUM				
02	162312	"T" ANCHOR	3.250 x 8.500 x 0.250	6063 T6 ALUMINUM				
03	162006	COVER	2.500 x 0.504 x 0.060	6063 T6 ALUMINUM				
06	128405	#12 x 7/8" AB FHTF	#12 x 7/8" AB FHTF	300 SERIES STAINLESS STEEL				
07	128394	#12 x 1-7/8" TYPE I CRPHTFS B	#12 x 1-7/8" B PHTF	430 SERIES STAINLESS STEEL				
80	162332	7-1/2" HEAD / SILL SHEAR BLOCK	4.395 x 2.115 x 0.125	6063 T6 ALUMINUM				
09	162020	OPEN BACK FILLER	0.434 x 4.973 x 0.090	6063 T6 ALUMINUM				
10	162517	OFFSET PRESSURE PLATE	2.500 x 0.847 x 0.100	6063 T6 ALUMINUM				
11	162091	7-1/2" OPEN BACK HORIZONTAL	2.479 x 6.500 x 0.100	6063 T6 ALUMINUM				
12	162378	7-1/2" SHEAR BLOCK	4.395 x 2.270 x 0.125	6063 T6 ALUMINUM				
	400000	LIGHT 7 4/011 VERTICAL / LIGHT ON TAIL	0.470 0.500 0.400	COCO TO ALLINAINUNA				
14	162003 028843	LIGHT 7-1/2" VERTICAL / HORIZONTAL #12 x 1/2" TYPE   CRFCHT SB	2.479 x 6.500 x 0.100	6063 T6 ALUMINUM 300 SERIES STAINLESS STEEL				
19	162528		#12 x 1/2" TYPE I CRFCHT SB					
20	162528	1-5/16" PERIMETER OFFSET PRESSURE PLATE	2.500 x 2.097 x 0.100 2.479 x 6.500 x 0.100	6063 T6 ALUMINUM				
21	162095	7-1/2" OPEN BACK HORIZONTAL FOR 1" FRAME  JAMB OFFSET PRESSURE PLATE	=	6063 T6 ALUMINUM				
22	162516	JAMB OFFSET PRESSURE PLATE	2.500 x 0.847 x 0.100	6063 T6 ALUMINUM				
26	162004	HEAVY 7-1/2" VERTICAL / HORIZONTAL FOR 1" FRAME	2.500 x 6.500 x 0.100	6063 T6 ALUMINUM				
33	128348	10-16 x 1-1/4" FHSMD	10-16 x 1-1/4" FHSMD	400 SERIES STAINLESS STEEL				
34	162307	7-1/2" SLEEVE	2.260 x 4.750 x 0.125	6063 T6 ALUMINUM				
35	128267	12 x 1" TYPE I CRPHTFS AB	12 x 1" TYPE I CRPHTFS AB	300 SERIES STAINLESS STEEL				
36	162313	SLEEVE FOR EXTERIOR COVER 3/4"	2.219 x 0.187 x 0.031	.031 5005 H32 SHEET ALUMINUM FIN				
37	162306	6" SLEEVE	2.260 x 3.250 x 0.125	6063 T6 ALUMINUM				
38	162301	MATING STEEL REINFORCING 1	1.750 x 4.560 x 0.164	GRADE 50 STEEL				
39	904208	1/4 x 2" FCHTCS D/F	1/4 x 2" FCHTCS D/F	300 SERIES STAINLESS STEEL				
40	162302	MATING STEEL REINFORCING 2	1.500 x 3.810 x 0.164	GRADE 50 STEEL				
41	162303	MATING STEEL REINFORCING 3	1.250 x 3.388 x 0.164	GRADE 50 STEEL				
43	162320	7-1/2" SHEAR BLOCK AT DOOR	1.460 x 2.270 x 0.125	6063 T6 ALUMINUM				
44	128910	10 x 1/2" TYPE I CRFCHTFS B	10 x 1/2" TYPE I CRFCHTFS B	300 SERIES STAINLESS STEEL				
45	977110	10 x 5/8" TYPE I CRFCHTFS B	10 x 5/8" TYPE I CRFCHTFS B	300 SERIES STAINLESS STEEL				
46	028596	3/8" FLAT WASHER TYPE A - NARROW	DIA 0.750 x 0.040	300 SERIES STAINLESS STEEL				
47	028779	3/8" HELICAL SPRING LOCK WASHER	DIA 0.869 x 0.125	300 SERIES STAINLESS STEEL				
48	028778	3/8"-16 x 1-1/4" HCS B	3/8"-16 x 1-1/4" HCS B	400 SERIES STAINLESS STEEL				
	100055	2/9// 40 UEV LOOKAUT		000 055050 071111 500 0755				
<u>52</u>	128392	3/8"-16 HEX LOCKNUT	0.563 x 0.650	300 SERIES STAINLESS STEEL				
57	128284	#12 x 1 1/2" AB FHTF SCREW	#12 x 1 1/2" AB FHTF	400 SERIES STAINLESS STEEL				
59	162218	3/8-16 x 4-1/2" PRHHMS	1.125 x 6.848 x .125	400 SERIES STAINLESS STEEL				
61	162249	#12 x 1 1/2" AB FHTF SCREW	1.125 x 7.598 x .125	400 SERIES STAINLESS STEEL				
65	162341	ANCHOR PLUG	2.250 x 4.750 x 0.25 x 3.000	6063 T6 ALUMINUM				
JJ	162249	STEEL ANGLE ANCHOR	2.200 A 4.700 A 0.20 X 3.000	50 KSI STEEL				

		GLAZING	MATERIALS	
NO.	PART NO.	DESCRIPTION	DIMENSIONS	MATERIAL
81	162310	THERMAL SEPARATOR	0.626 x 0.600	SHORE "A" 60±5 DUROMETER EPDM
82	027845	TAPE	0.313 x 0.250	BLACK POLYURETHANE FOAM
83	128406	1/4 x 1" HWHTFS AB	1/4 x 1" HWHTFS AB	300 SERIES STAINLESS STEEL
84	N/A	STRUCTURAL SILICONE SEALANT	N/A	SILICONE
85	027850	FIXED GASKET	0.615 x 0.630	SHORE "A" 60±5 DUROMETER EPDM
86	027342	SETTING BLOCK	0.563 x 0.188	SHORE "A" 80±5 DUROMETER EPDM
87	027081	SETTING BLOCK	1.875 x 4.125 x 0.250	SHORE "A" 85±5 DUROMETER EPDM
88	127254	3M VHB 3/4" SG TAPE B23	0.750 x 0.090	CONFORMABLE ACRYLIC FOAM
89	128475	8 x 1" TYPE I CRPHTFS A	8 x 1" TYPE I CRPHTFS A	300 SERIES STAINLESS STEEL
91	N/A	DOW CORNING	N/A	995 SILICONE SEALANT (BY OTHERS)
92	127143	TAPE	1.000 x 0.250	BLACK POLYURETHANE FOAM
93	127150	SETTING BLOCK	1.688 x 0.437	SHORE "A" DUROMETER EPDM
94	027367	SETTING BLOCK	0.750 x 0.438	SHORE "A" 85±5 DUROMETER EPDM
95	127196	SS EXTERIOR GASKET	0.928 x 0.615	SHORE "A" 60±5 DUROMETER EPDM
96	128401	10 x 1" TYPE I CRFCHTFS	10 x 1" TYPE I CRFCHTFS	300 SERIES STAINLESS STEEL
97	027857	FIXED GASKET	0.310 x 0.360	SHORE "A" 70±5 DUROMETER EPDM



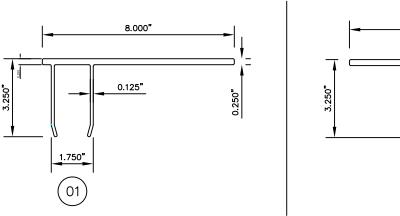


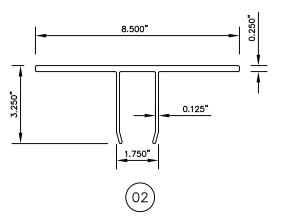
9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574

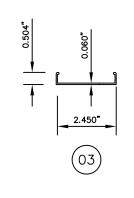
PRODUCT:
1600 WALL SYS 1
2 1/2" LEVEL E
DWG:
1600-IR-LVLE
SECTION: 7

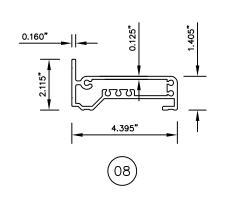
SHEET:

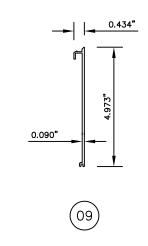
### **EXTRUSION PROFILES**

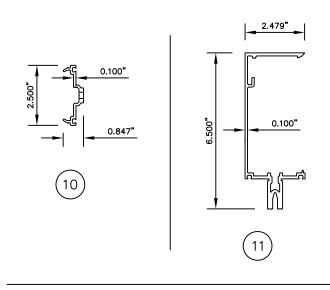


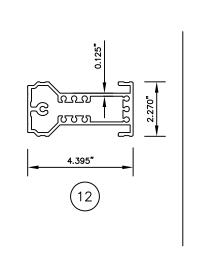


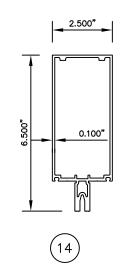


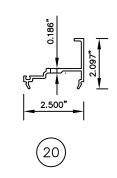


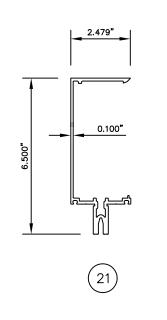


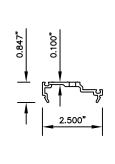




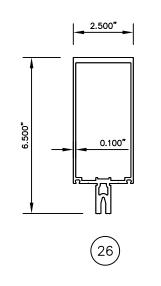


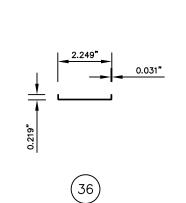


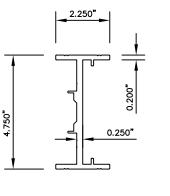












**(65)** 

	_	ı	1
		_	ı
		-	ı
		ı	
4	_	-	ı
C	_	-	
>	_	-	1
	ı	_	ı
7.	1ST SUBMITTAL	-	7/26/21
?≥	PRINTS ISSUED FOR	REV.#	DATE

PH: (770) 449—555 WWW.KAWNEER.COM



9/10/2021 LUCAS TURNER TX PE 115094 TURNER ENGINEERING & CONSULTING, INC., TBPE REG. #18075 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574

PRODUCT:
1600 WALL SYS 1
2 1/2" LEVEL E
DWG:
1600-IR-LVLE
SECTION: 7