

KAWNEER TRIFAB 451UT CENTER - TALL SILL

GENERAL NOTES

1. THIS STOREFRONT SYSTEM HAS BEEN TESTED TO ASTM E283, ASTM E330, ASTM E331, ASTM E547, AND AAMA 501, AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC), CURRENT EDITION, OUTSIDE THE HIGH VELOCITY HURRICANE ZONE. PRODUCT WAS TESTED WITH AND WITHOUT INTERIOR PERIMETER SEAL, BY OTHERS. WITHOUT INTERIOR PERIMETER SEAL, PRODUCT PASSED AIR INFILTRATION TESTING AT 1.56 PSF AND WATER PENETRATION RESISTANCE TEST OF 10.44 PSF. WITH INTERIOR PERIMETER SEAL, PRODUCT PASSED AIR INFILTRATION TESTING AT 6.24 PSF AND WATER PENETRATION RESISTANCE TEST OF 12 PSF.
2. A FLORIDA LICENSED ENGINEER FAMILIAR WITH STOREFRONT DESIGN SHALL APPROVE SHOP DRAWINGS FOR EACH PROJECT, AND THIS ENGINEER OF RECORD SHALL TAKE FULL RESPONSIBILITY FOR THE INSTALLED SYSTEM DESIGN AS A WHOLE WHILE MAKING SURE THAT THE LIMITATIONS INDICATED IN THIS DRAWING HAVE NOT BEEN EXCEEDED. THE INSTALLED STOREFRONT SYSTEM SHALL BE FABRICATED, GLAZED, AND ANCHORED IN ACCORDANCE WITH THIS DRAWING AND KAWNEER INSTALLATION INSTRUCTIONS, AS WELL AS THE APPLICABLE TEST REPORTS, OR AS INDICATED BY THE ENGINEER OF RECORD IN APPROVED SHOP DRAWINGS.
3. THIS DRAWING INDICATES VARIOUS APPROVED GLAZING METHODS AND FRAMING TYPES WHICH MAY BE USED SINGLY OR IN COMBINATION FOR EACH PROJECT. ANY NUMBER OF PANELS MAY BE USED HORIZONTALLY PROVIDED THE MAXIMUM DLO SIZES AS INDICATED IN THIS DRAWING ARE NOT EXCEEDED.
4. THIS PRODUCT IS NON-IMPACT AND REQUIRES THE USE OF APPROVED SHUTTERS IN WINDBORNE DEBRIS AREAS.
5. REQUIRED DESIGN PRESSURES SHALL BE DETERMINED FOR EACH PROJECT IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND GOVERNING WIND SPEEDS FOR THE PROJECT LOCATION.
6. THE ALLOWABLE DESIGN PRESSURES AND LOAD CAPACITIES SHOWN IN THIS DRAWING ARE ALLOWABLE STRESS DESIGN (ASD) BASIS AND ARE AS LIMITED BY ASTM E-1300 GLASS TABLES, TESTED PRESSURES, AND MULLION CALCULATIONS. ALTERNATE COMPARATIVE OR RATIONAL ANALYSIS CALCULATIONS AS DEEMED APPROPRIATE ON A PROJECT BASIS BY THE ENGINEER OF RECORD IS ACCEPTABLE.
7. DISSIMILAR MATERIALS THAT COME INTO CONTACT, INCLUDING BUT NOT LIMITED TO FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SUBSTRATES OR ALUMINUM, SHALL BE COATED OR OTHERWISE PROTECTED PER FBC REQUIREMENTS TO PREVENT CORROSION OR GALVANIC REACTIONS.
8. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER INFILTRATION RESISTANCE OF THE INSTALLED PRODUCT IS NOT WITHIN THE SCOPE OF THIS APPROVAL AND SHALL BE THE RESPONSIBILITY OF OTHERS.
9. THE 4/3 ALLOWABLE STRESS INCREASE HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF WOOD SUBSTRATE.
10. STRUCTURAL INTEGRITY OF SUBSTRATE MATERIALS TO RECEIVE THE LOADS FROM THIS PRODUCT, AND INSTALLATION OF WOOD BUCKS OR OTHER ACCESSORIES TO THE SUBSTRATE, TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
11. THIS PRODUCT SHALL BE INSTALLED USING ONE OF THE APPROVED FASTENING OR WELDING METHODS INDICATED IN THIS DRAWING, AS APPROPRIATE FOR THE SUBSTRATE TYPE, OR AS INDICATED BY THE ENGINEER OF RECORD IN APPROVED SHOP DRAWINGS. ANCHOR SIZE, EMBEDMENT, EDGE DISTANCE, AND LOCATIONS, SHALL BE IN ACCORDANCE WITH THESE DRAWINGS OR AS INDICATED IN APPROVED SHOP DRAWINGS. THE ASSEMBLY AND INSTALLATION FASTENERS INDICATED IN THIS DRAWING ARE APPLICABLE FOR NON-COASTAL APPLICATIONS. IF THE PROJECT IS WITHIN 3000 FT OF A SALTWATER COASTLINE, THE FASTENERS SHALL BE EVALUATED FOR COMPLIANCE WITH FBC SECTION 1711. SEE EVALUATION REPORT FOR THIS APPROVAL FOR ADDITIONAL INFORMATION.
12. MINIMUM ANCHOR EMBEDMENTS LISTED IN THIS DRAWING SHALL BE BEYOND WALL DRESSING OR STUCCO AND FULLY INTO SUBSTRATE. LOAD-BEARING SHIMS SHALL BE USED AT ALL ANCHOR LOCATIONS WHERE A GAP OF MORE THAN 1/16" EXISTS BETWEEN THE PRODUCT AND OPENING SUBSTRATE. MAXIMUM SHIM GAP IS AS INDICATED IN THESE DRAWINGS.
13. SUBTRATES SHALL MEET THE MINIMUM STRENGTH REQUIREMENTS AS SHOWN IN ANCHOR DETAILS IN SECTION 6. CONCRETE OR MASONRY SUBSTRATES SHALL NOT BE CRACKED. FOR INSTALLATION TO METAL SUBSTRATES, ANCHORS SHALL BE LONG ENOUGH TO BE FULLY THREADED THROUGH THE METAL THICKNESS WITH AN ADDITIONAL 3/16" MIN. OF THREADS BEYOND.
14. CONSTRUCTION NOTES: THE VERITICAL FRAME MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT & BUTTED TO THE VERTICAL FRAME MEMBER. THE VERTICAL MEMBERS ARE FASTENED TO THE HORIZONTAL MEMBERS WITH ANCHORS INTO SCREW SPLINES. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH KAWNEER INSTALLATION INSTRUCTIONS. APPLY SEALANT TO END DAM AND OVER END DAM FASTENERS PER INSTALLATION INSTRUCTIONS. SEAL OVER ALL PERMITER ANCHORS. APPLY SEALANT TO PROFILE ENDS OF ALL HORIZONTAL MEMBERS AT ASSEMBLY PER INSTALLATION INSTRUCTIONS. APPLY SEALANT IN GASKET REGLETS AND ON VERTICAL MULLION UNDER GLASS STOPS PER INSTALLATION INSTRUCTIONS. APPLY 1" LONG SEALANT BEAD TO GLAZING GASKET REGLET CORNERS JUST BEFORE INSTALLING GLAZING GASKETS. SEAL BETWEEN SILL FLASHING/HEAD RECEPTOR END DAMS AND JAMB FILLERS.

SILICONE REQUIREMENTS:

- DOW CORNING 791 - WEATHER SEALS
- PERIMETER SEALS (BY OTHERS)

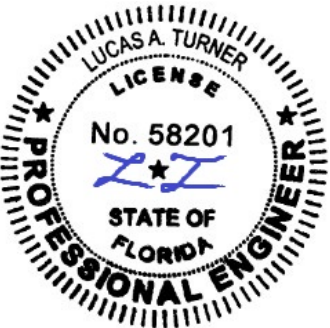


TABLE OF CONTENTS

| SHEET | DESCRIPTION                                                |
|-------|------------------------------------------------------------|
| 01    | SECTION 1 - GENERAL NOTES                                  |
| 02    | SECTION 2 - SAMPLE ELEVATION                               |
| 03    | SECTION 3 - VERTICAL FRAMING DETAILS                       |
| 04    | SECTION 3 - HORIZONTAL FRAMING DETAILS                     |
| 05    | SECTION 3 - GLAZED SILL FRAMING DETAILS                    |
| 06    | SECTION 3 - METAL PANEL SILL FRAMING DETAILS               |
| 07    | SECTIONS 4 AND 5 - MULLION LOAD TABLE, TYP. GLAZING DETAIL |
| 08    | SECTION 6 - PERIMETER ANCHOR DETAILS                       |
| 09    | SECTIONS 7 AND 8 - EXTRUSION PROFILES, BOM                 |



555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PH. 770-449-5555  
WWW.KAWNEER.COM



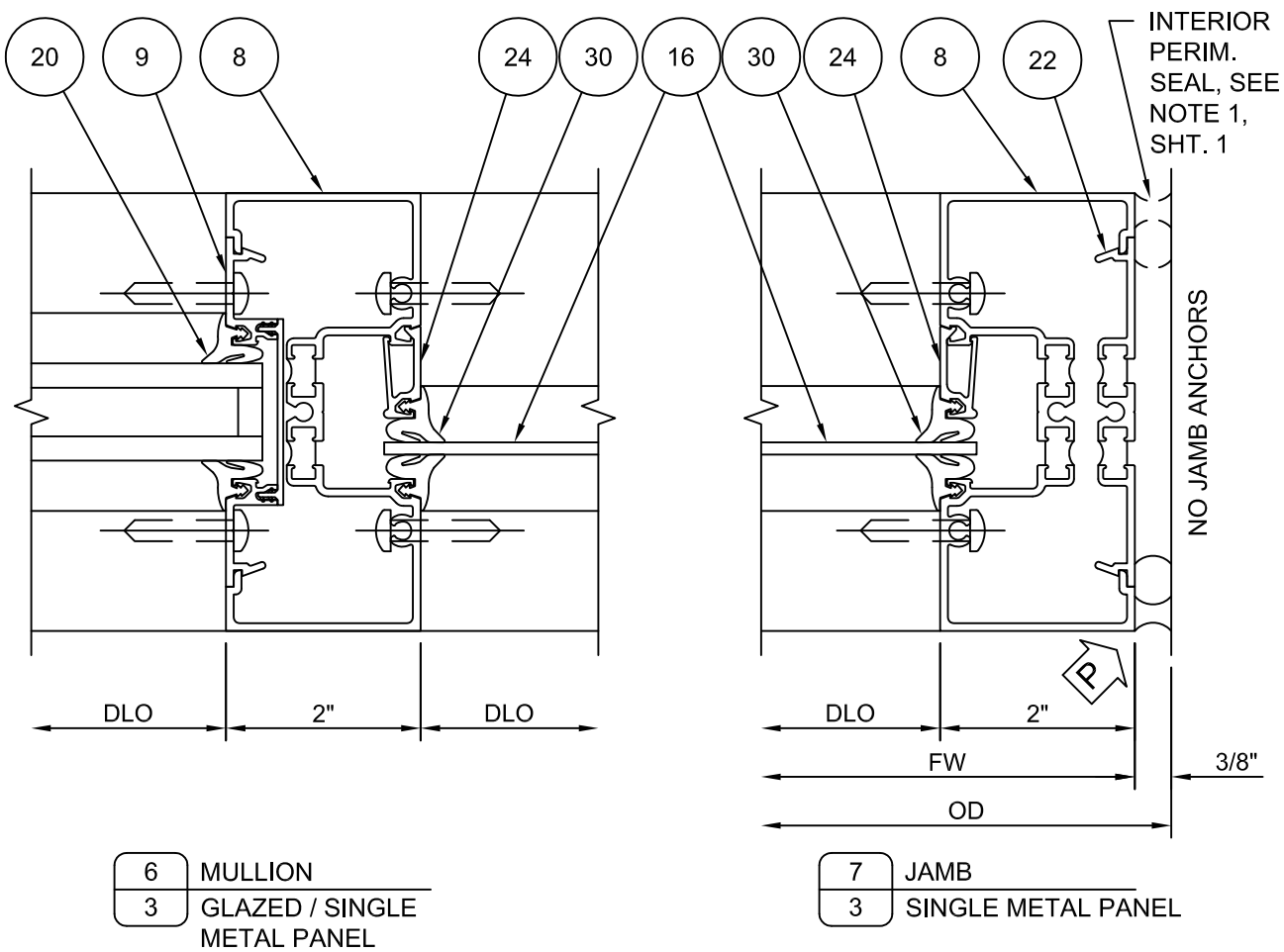
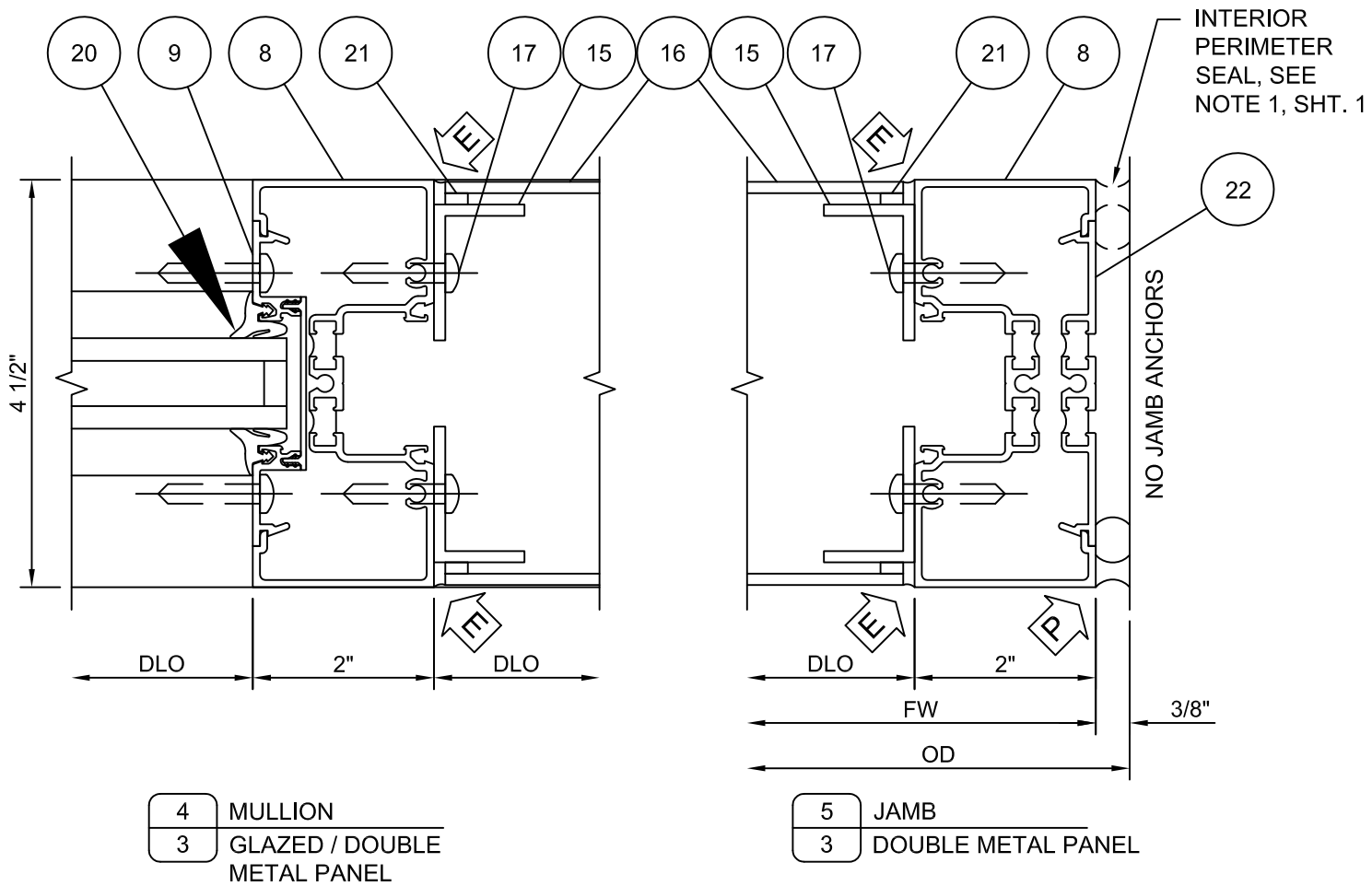
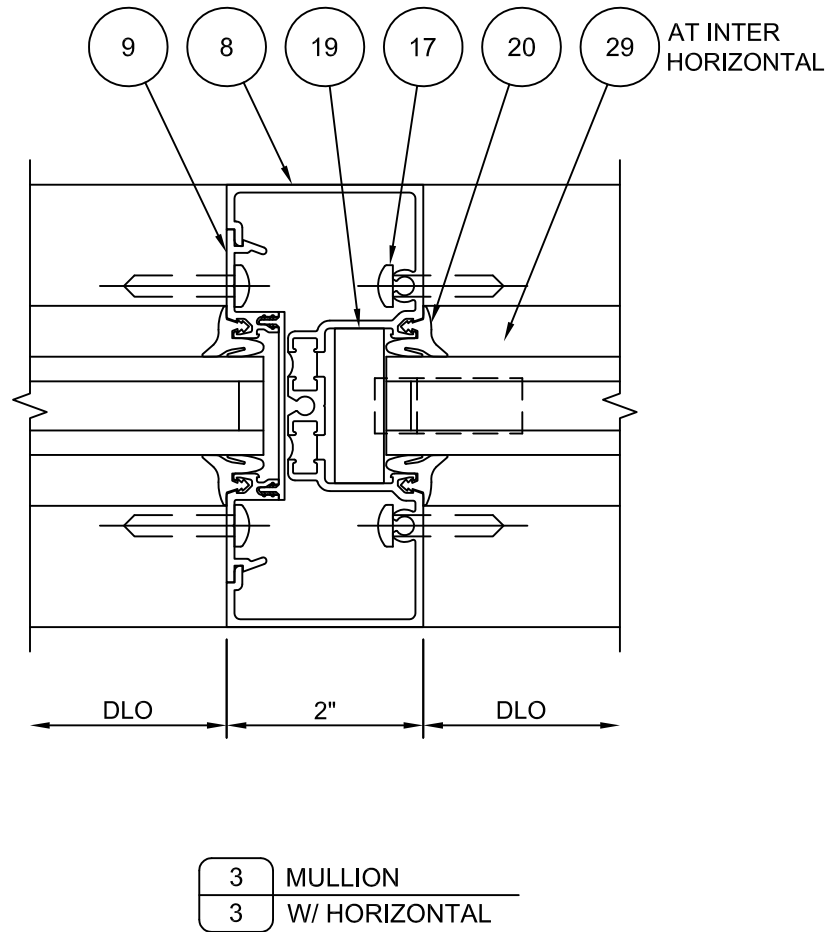
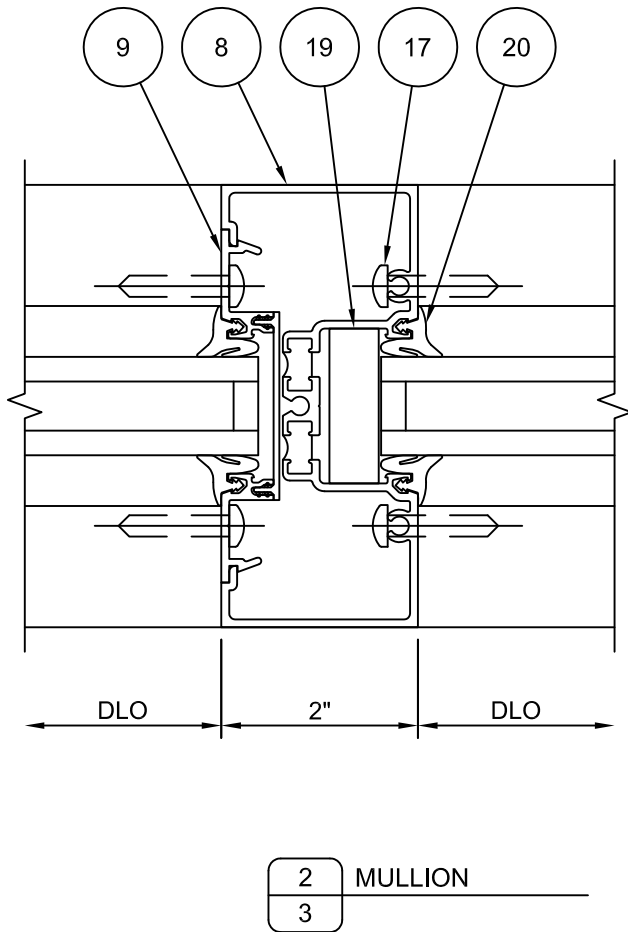
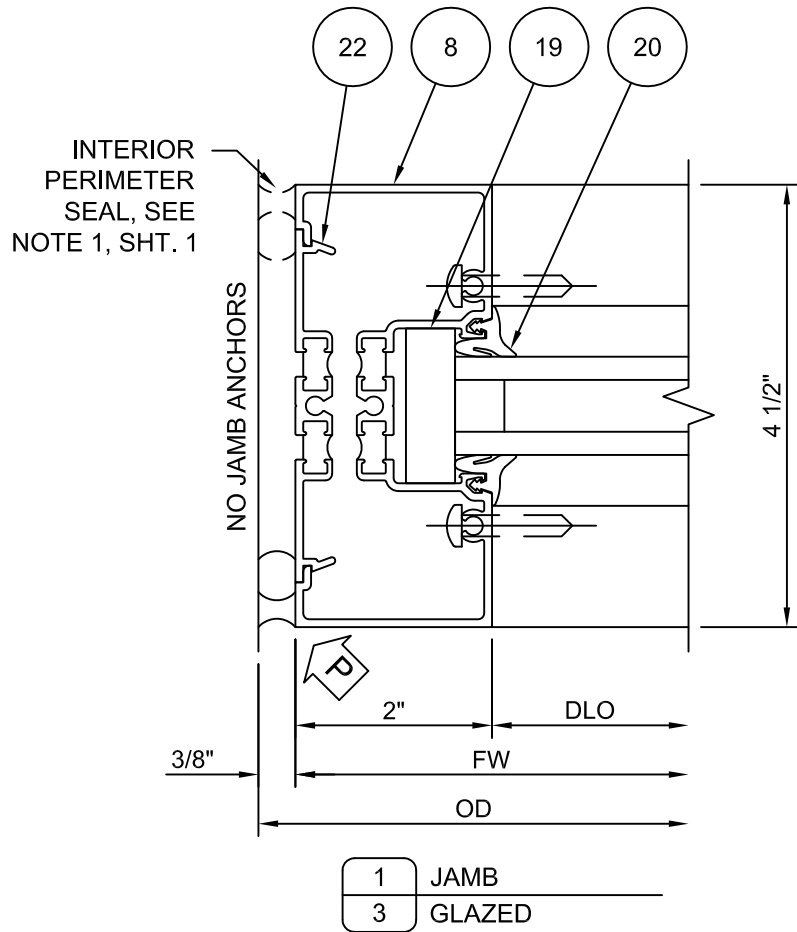
Lucas Turner  
2026.08.18  
16:08:42  
-05'00'

8/18/2026  
LUCAS A. TURNER  
FL P.E. #58201

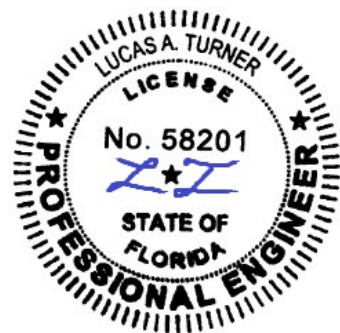
TURNER ENGINEERING &  
CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN 38320  
PH. 941-380-1574

|                                    |                         |
|------------------------------------|-------------------------|
| DRAWING NO.<br>451UT-Cntr-TallSill | PRODUCT<br>TRIFAB 451UT |
| FPA #<br>FL10008                   | SECTION 01              |
| DATE<br>02/11/2021                 |                         |
| SCALE<br>NTS                       | SHEET 01 OF 09          |





555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PH. 770-449-5555  
WWW.KAWNEER.COM



8/18/2026  
LUCAS A. TURNER  
FL P.E. #58201

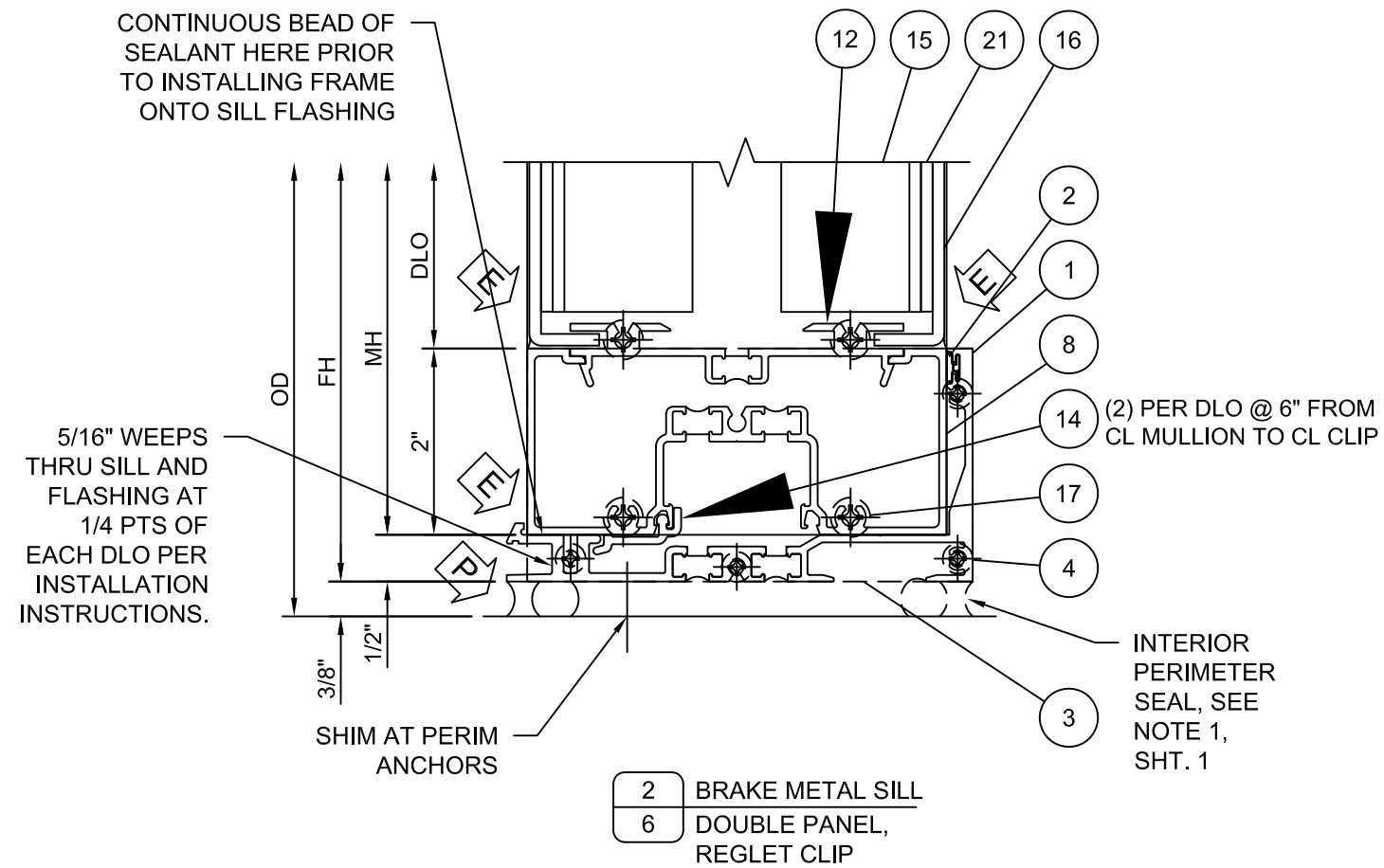
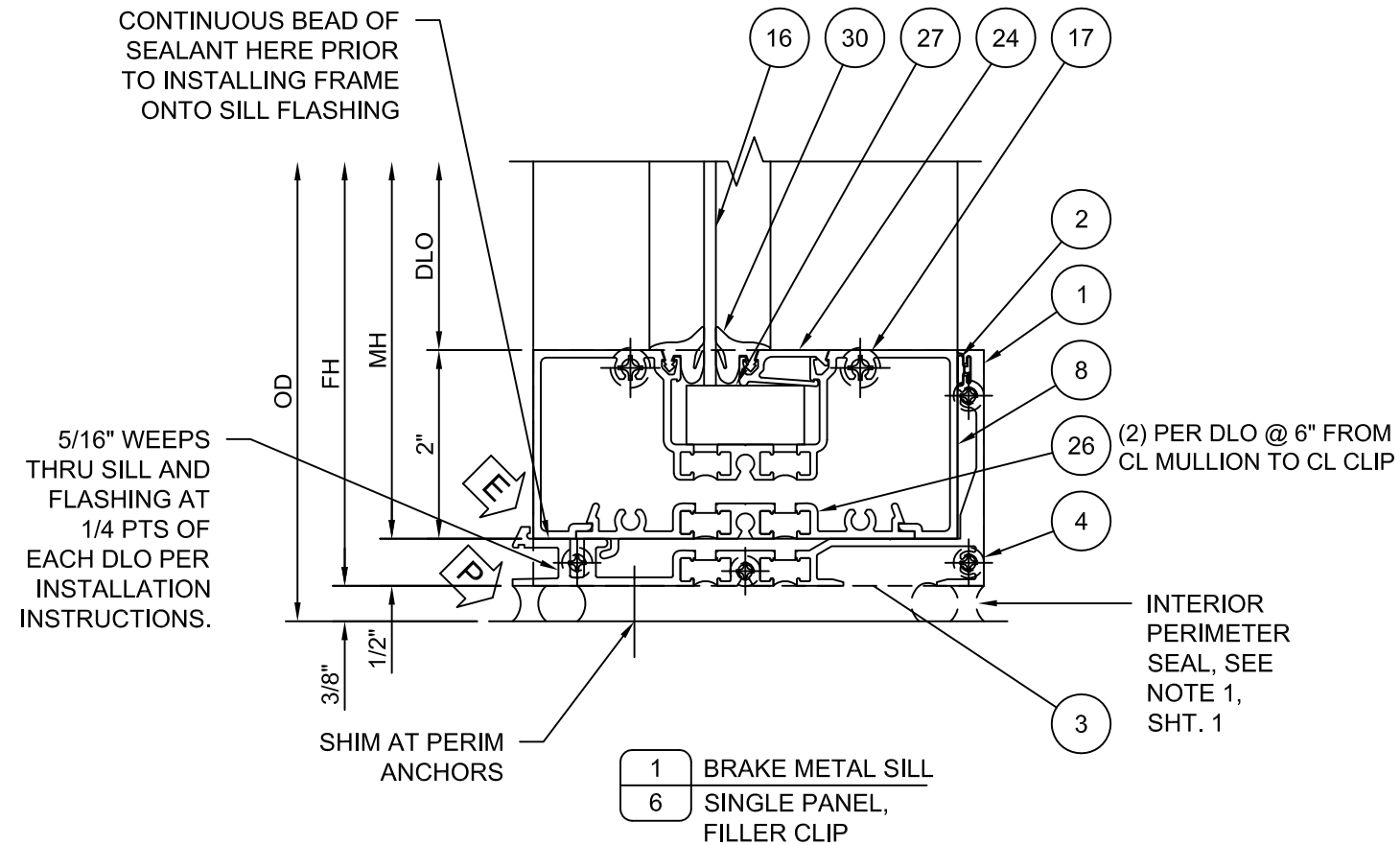
TURNER ENGINEERING &  
CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN 38320  
PH. 941-380-1574

|                                    |                         |
|------------------------------------|-------------------------|
| DRAWING NO.<br>451UT-Cntr-TallSill | PRODUCT<br>TRIFAB 451UT |
| FPA #<br>FL10008                   | SECTION 03              |
| DATE<br>02/11/2021                 |                         |
| SCALE<br>NTS                       | SHEET 03 OF 09          |

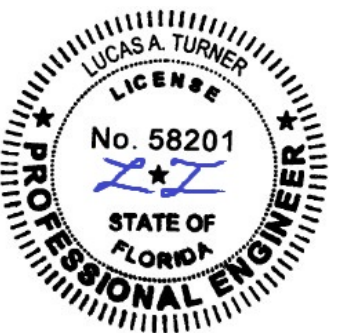
| REV. # | DATE       | PRINTS ISSUED FOR |
|--------|------------|-------------------|
| 2      | 08/18/2026 | 2026 FBC UPDATE   |
| 1      | 08/17/2023 | 2023 FBC UPDATE   |
| -      | 02/11/2021 | INITIAL RELEASE   |







555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PH. 770-449-5555  
WWW.KAWNEER.COM



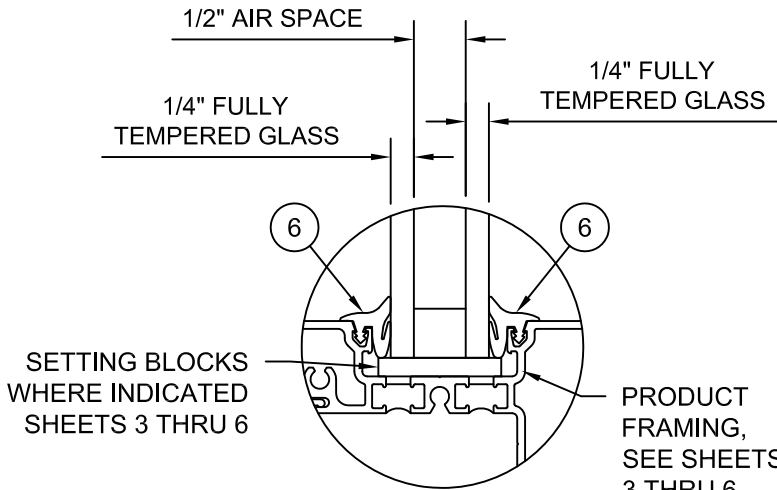
8/18/2026  
LUCAS A. TURNER  
FL P.E. #58201

TURNER ENGINEERING & CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN 38320  
PH. 941-380-1574

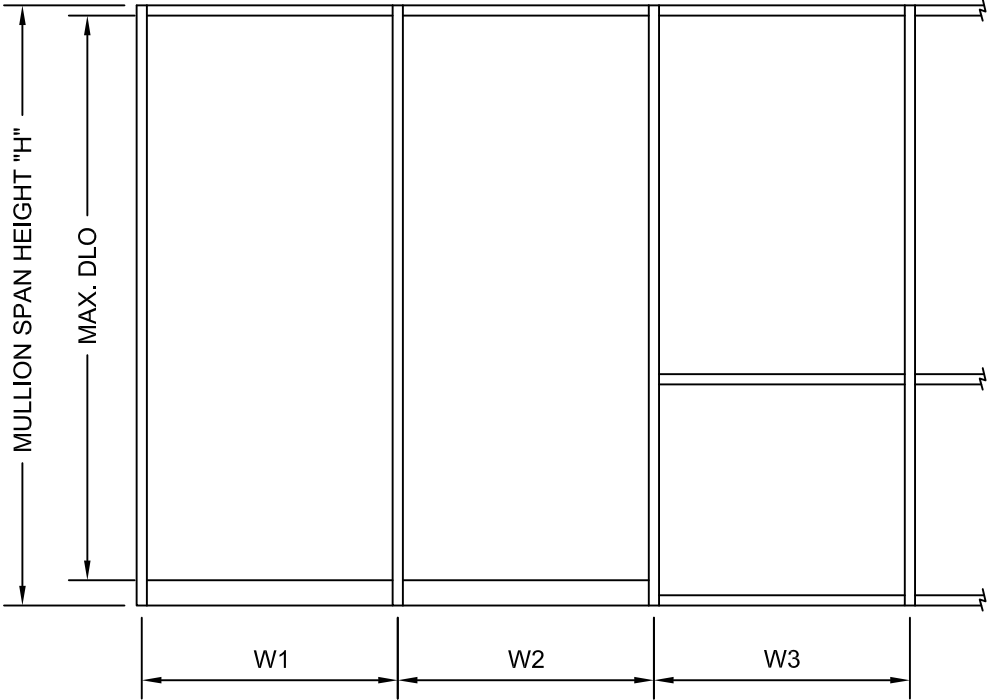
|                                    |                         |
|------------------------------------|-------------------------|
| DRAWING NO.<br>451UT-Cntr-TallSill | PRODUCT<br>TRIFAB 451UT |
| FPA #<br>FL10008                   | SECTION 03              |
| DATE<br>02/11/2021                 | SHEET 06 OF 09          |
| SCALE<br>NTS                       |                         |

|                   |   |                 |                 |        |
|-------------------|---|-----------------|-----------------|--------|
| 08/18/2026        | 2 | 08/17/2023      | 02/11/2021      | DATE   |
| 2026 FBC UPDATE   | 1 | 2023 FBC UPDATE | INITIAL RELEASE | REV. # |
| PRINTS ISSUED FOR |   |                 |                 |        |

| JAMB AND MULLION LOAD CAPACITY |                             |                             |              |                 |
|--------------------------------|-----------------------------|-----------------------------|--------------|-----------------|
| DIMENSION                      |                             |                             | JAMB<br>"J1" | MULLION<br>"M1" |
| WIDTH<br>"W" (in.)             | MULL<br>HEIGHT<br>"H" (in.) | MAX. DLO<br>HEIGHT<br>(in.) | (+/- psf)    | (+/- psf)       |
| 24                             | 72                          | 65 1/2                      | 52.5         | 52.5            |
| 30                             |                             |                             | 52.5         | 52.5            |
| 36                             |                             |                             | 52.5         | 52.5            |
| 42                             |                             |                             | 48.3         | 48.3            |
| 48                             |                             |                             | 44.9         | 44.9            |
| 54                             |                             |                             | 42.6         | 42.6            |
| 60                             |                             |                             | 35.0         | 35.0            |
| 24                             | 77 3/4                      | 71 1/4                      | 52.5         | 52.5            |
| 30                             |                             |                             | 52.5         | 52.5            |
| 36                             |                             |                             | 48.1         | 48.1            |
| 42                             |                             |                             | 43.4         | 43.4            |
| 48                             |                             |                             | 40.1         | 40.1            |
| 54                             |                             |                             | 37.7         | 37.7            |
| 60                             |                             |                             | 35.0         | 35.0            |
| 24                             | 84                          | 77 1/2                      | 52.5         | 52.5            |
| 30                             |                             |                             | 48.6         | 48.6            |
| 36                             |                             |                             | 41.4         | 41.4            |
| 42                             |                             |                             | 36.5         | 36.5            |
| 48                             |                             |                             | 33.0         | 33.0            |
| 54                             |                             |                             | 30.4         | 30.4            |
| 60                             |                             |                             | 27.6         | 27.6            |
| 24                             | 96                          | 89 1/2                      | 32.1         | 32.1            |
| 30                             |                             |                             | 27.3         | 27.3            |
| 36                             |                             |                             | 23.9         | 23.9            |
| 42                             |                             |                             | 21.4         | 21.4            |
| 48                             |                             |                             | 27.6         | 27.6            |
| 54                             |                             |                             | 22.4         | 22.4            |
| 60                             |                             |                             | 18.9         | 18.9            |
| 24                             | 108                         | 101 1/2                     | 16.5         | 16.5            |
| 30                             |                             |                             | 20.1         | 20.1            |
| 36                             |                             |                             | 16.2         | 16.2            |
| 42                             |                             |                             | 13.7         | 13.7            |
| 48                             |                             |                             |              |                 |
| 54                             |                             |                             |              |                 |
| 60                             |                             |                             |              |                 |

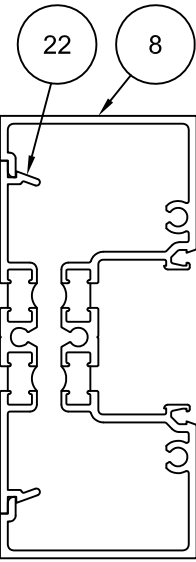


NOTE: GLAZING MEETS OR EXCEEDS MULLION DESIGN PRESSURES INDICATED IN LOAD CAPACITY TABLE ABOVE, IN ALL SIZES.

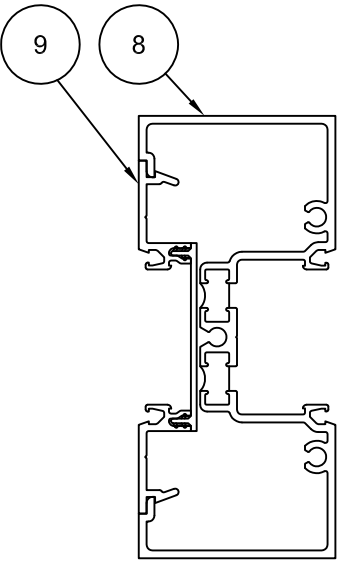


WIDTH "W" = W1 (JAMB)

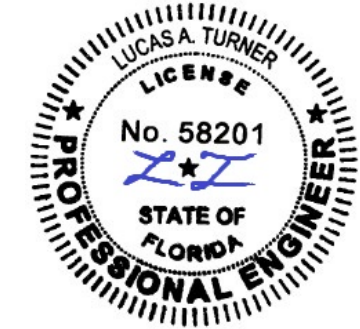
WIDTH "W" =  $\frac{W2 + W3}{2}$  (MULLION)



JAMB  
"J1"



MULLION  
"M1"



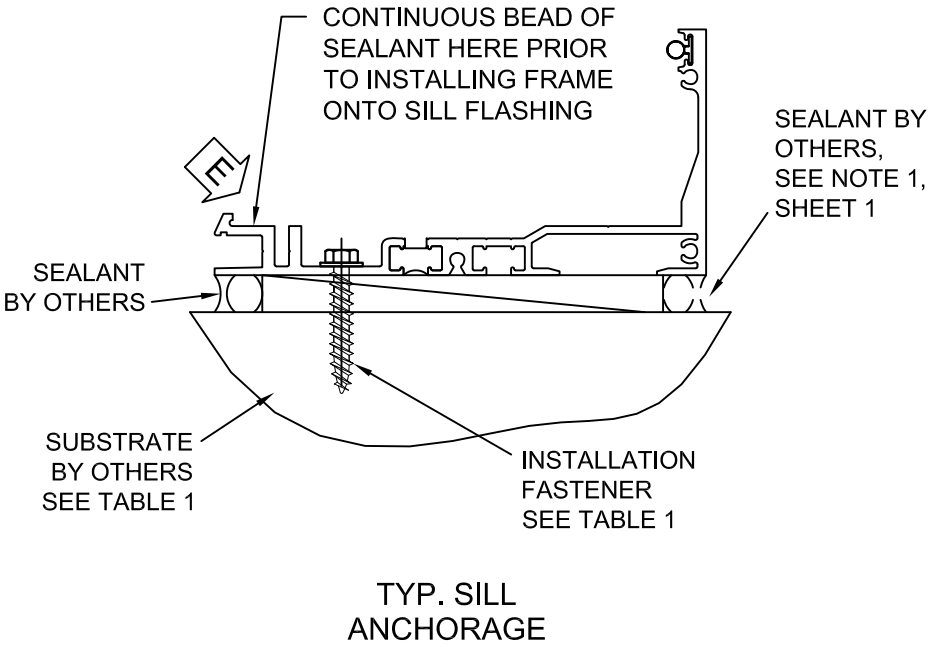
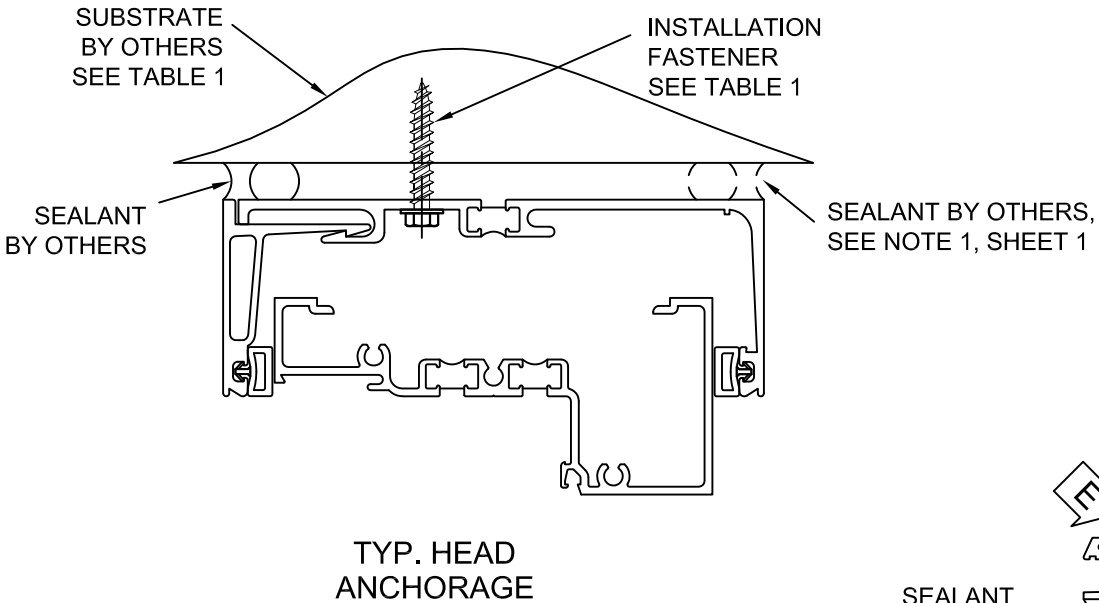
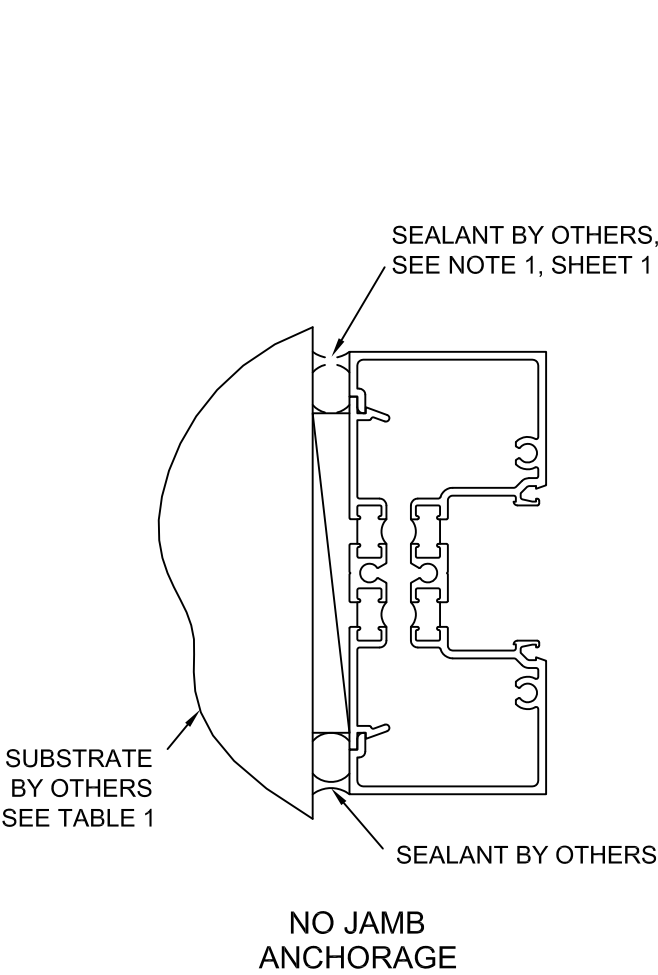
8/18/2026  
LUCAS A. TURNER  
FL P.E. #58201  
  
TURNER ENGINEERING & CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN 38320  
PH. 941-380-1574

|                                    |                         |
|------------------------------------|-------------------------|
| DRAWING NO.<br>451UT-Cntr-TallSill | PRODUCT<br>TRIFAB 451UT |
| FPA #<br>FL10008                   | SECTIONS 04/05          |
| DATE<br>02/11/2021                 |                         |
| SCALE<br>NTS                       |                         |

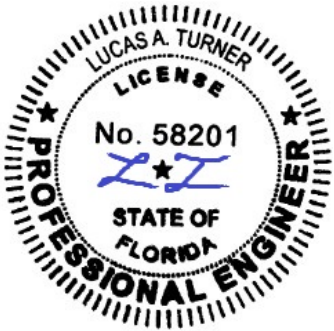
|  |  |  |  |  |                 |                 |                   |
|--|--|--|--|--|-----------------|-----------------|-------------------|
|  |  |  |  |  | 08/18/2026      |                 |                   |
|  |  |  |  |  | 2               | 08/17/2023      |                   |
|  |  |  |  |  | 1               | -               |                   |
|  |  |  |  |  | 2026 FBC UPDATE | 2023 FBC UPDATE | INITIAL RELEASE   |
|  |  |  |  |  |                 |                 | PRINTS ISSUED FOR |
|  |  |  |  |  |                 |                 | REV. #            |
|  |  |  |  |  |                 |                 | DATE              |

TABLE 1. QUALIFIED ANCHOR INFORMATION

| ID | SUBSTRATE                                                                                                         | ANCHOR                                                        | MIN. EMBEDMENT   | MIN. EDGE DISTANCE |
|----|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------|--------------------|
| A  | SOLID UNCRACKED CONCRETE (3050 PSI MIN.)                                                                          | 1/4" DEWALT COATED CARBON STEEL ULTRAACON+                    | 1 3/4"           | 2 1/2"             |
| B  | CMU (ASTM C-90) (JAMBS ONLY)                                                                                      | 1/4" DEWALT COATED CARBON STEEL ULTRAACON+                    | 1 3/4"           | 2 1/2"             |
| C  | SOLID UNCRACKED CONCRETE (3350 PSI MIN.)                                                                          | 1/4" DEWALT CRETE-FLEX SS4 MASONRY SCREW                      | 1 3/4"           | 1"                 |
| D  | CMU (ASTM C-90) (JAMBS ONLY)                                                                                      | 1/4" DEWALT CRETE-FLEX SS4 MASONRY SCREW                      | 1 1/4"           | 2 1/2"             |
| E  | SOLID UNCRACKED CONCRETE (2000 PSI MIN.)                                                                          | 1/4" ITW COATED CARBON STEEL TAPCON                           | 1 1/2"           | 1 1/2"             |
| F  | CMU (DENSITY > 117 PCF) (JAMBS ONLY)                                                                              | 1/4" ITW COATED CARBON STEEL TAPCON                           | 1"               | 2"                 |
| G  | CONCRETE (3000 PSI MIN)                                                                                           | 1/4" HILTI COATED CARBON STEEL OR STAINLESS STEEL KWIK-CON II | 1"               | 2 1/2"             |
| H  | CMU (ASTM C-90)                                                                                                   | 1/4" HILTI COATED CARBON STEEL OR STAINLESS STEEL KWIK-CON II | 1"               | 2 1/2"             |
| I  | 2x MIN. SOUTHERN PINE WOOD (G=0.55 MIN)                                                                           | #14 GRADE 5 WOOD SCREW                                        | 1 1/2"           | 1"                 |
| J  | 16 GAUGE (0.060") MIN. STEEL STUD (33 KSI YIELD MIN.) OR 1/8" MIN. ALUMINUM (6063-T5 MIN.) OR 1/8" MIN. A36 STEEL | #1/4-14 ITW TEKS SELF-DRILLING SCREW                          | FULL + 3 THREADS | 1/2"               |



**KAWNEER**  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PH. 770-449-5555  
WWW.KAWNEER.COM

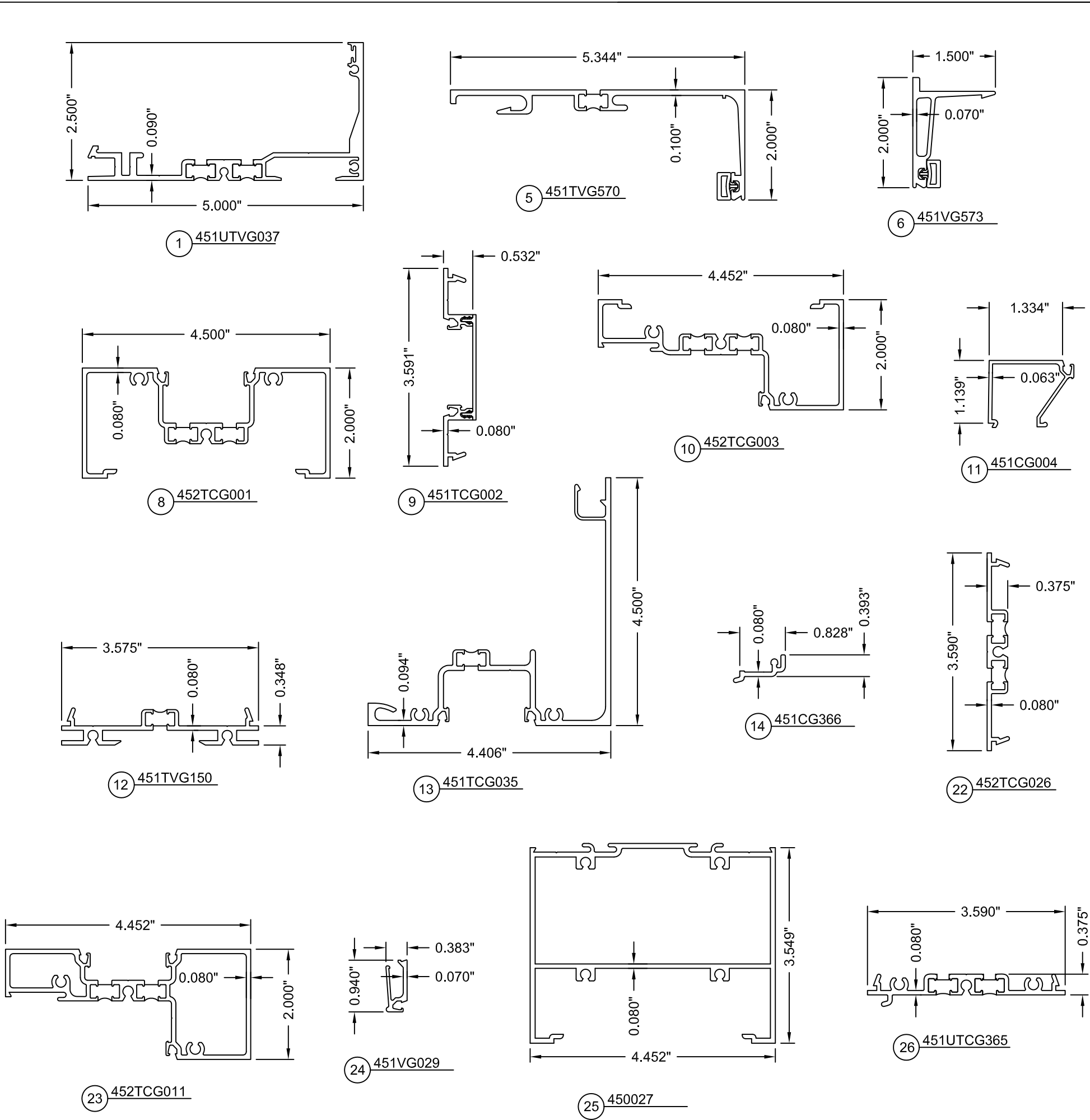


8/18/2026  
LUCAS A. TURNER  
FL P.E. #58201  
  
TURNER ENGINEERING &  
CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN 38320  
PH. 941-380-1574

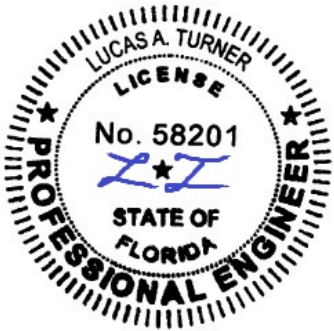
|                                    |                         |
|------------------------------------|-------------------------|
| DRAWING NO.<br>451UT-Cntr-TallSill | PRODUCT<br>TRIFAB 451UT |
| FPA #<br>FL10008                   | SECTION 06              |
| DATE<br>02/11/2021                 |                         |
| SCALE<br>NTS                       | SHEET 08 OF 09          |

| ITEM | PART NO.   | DESCRIPTION                    |
|------|------------|--------------------------------|
| 1    | 451UTVG037 | 451UT SILL FLASHING            |
| 2    | 127043     | SILL FLASHING GASKET           |
| 3    | 451TVG316  | END DAM / SCREW APPLIED / ABS  |
| 4    | 028808     | END DAM SCREW                  |
| 5    | 451TVG570  | RECEPTOR W/ WEATHERING         |
| 6    | 451VG573   | RECEPTOR FACE W/ WEATHERING    |
| 7    | 601CG317   | RECEPTOR END DAM               |
| 8    | 452TCG001  | 451UT MULLION / JAMB / OG HEAD |
| 9    | 451TCG002  | THERMAL POCKET FILLER          |
| 10   | 452TCG003  | 451UT HEAD                     |
| 11   | 451CG004   | GLASS STOP / CENTER            |
| 12   | 451TVG150  | BRAKE METAL ADAPTER            |
| 13   | 451TCG035  | 90 DEG CORNER HALF             |
| 14   | 451CG366   | 451 TALL SILL REGLET CLIP      |
| 15   | 027182     | 1/8" x 1" x 1-1/2" ANGLE       |
| 16   |            | 0.125" ALUM BRAKE MTL          |
| 17   | 028856     | FRAME SPLINE SCREW             |
| 18   | 027073     | SETTING BLOCK                  |
| 19   | 480520     | W-SIDE BLOCK                   |
| 20   | 027074     | WEDGE GASKET                   |
| 21   | 027506     | 1/8" x 1/4" FOAM TAPE          |
| 22   | 452TCG026  | FLAT FILLER (FULL LENGTH)      |
| 23   | 452TCG011  | HORIZONTAL                     |
| 24   | 451VG029   | INFILL ADAPTER                 |
| 25   | 450027     | WIDE SIDELITE BASE             |
| 26   | 451UTC365  | 451UT TALL SILL FILLER CLIP    |
| 27   | 027073     | SETTING BLOCK                  |
| 28   | 027081     | SETTING BLOCK                  |
| 29   | 451105     | WATER DEFLECTOR                |
| 30   | 027077     | WEDGE GASKET                   |

ALL ALUMINUM COMPONENTS ARE 6063-T6



555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092  
PH. 770-449-5555  
WWW.KAWNEER.COM



8/18/2026  
LUCAS A. TURNER  
FL P.E. #58201  
  
TURNER ENGINEERING &  
CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN 38320  
PH. 941-380-1574

|                                    |                                      |
|------------------------------------|--------------------------------------|
| DRAWING NO.<br>451UT-Cntr-TallSill | PRODUCT<br>TRIFAB 451UT              |
| FPA #<br>FL10008                   | SECTIONS 07/08<br><br>SHEET 09 OF 09 |
| DATE<br>02/11/2021                 |                                      |
| SCALE<br>NTS                       |                                      |