

# PLY GEM WINDOWS

## SERIES 1500 SINGLE HUNG WINDOW

### (IMPACT)

NOTES:

- THIS INSTALLATION HAS BEEN EVALUATED FOR USE IN LOCATIONS ADHERING TO THE FLORIDA BUILDING CODE OUTSIDE THE HVHZ, AND WHERE PRESSURE REQUIREMENTS AS DETERMINED BY ASCE 7 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES DO NOT EXCEED THE DESIGN PRESSURE RATINGS HEREIN.
- THIS PRODUCT IS MISSILE LEVEL D, WIND ZONE 3 IMPACT RESISTANT. WHEN USED IN WIND ZONE 3 OR BELOW AREAS, THIS PRODUCT DOES NOT REQUIRE THE USE OF APPROVED IMPACT PROTECTIVE DEVICES (SHUTTERS).
- ANCHOR TYPE, SIZE, SPACING, EMBEDMENT, AND EDGE DISTANCE SHALL BE AS SPECIFIED IN THESE DRAWINGS. USE APPROPRIATE ANCHORAGE FROM TABLE I ACCORDING TO SUBSTRATE TYPE. A MINIMUM CENTER-TO-CENTER SPACING OF 3" SHALL BE MAINTAINED BETWEEN ALL INSTALLATION FASTENERS IN ANY DIRECTION.
- ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL DRESSING OR STUCCO. FOR MASONRY OPENINGS WITH WOOD BUCKS LESS THAN 1-1/2" THICK, EMBEDMENT SHALL BE BEYOND WOOD BUCKS, IF USED, AND INTO MASONRY SUBSTRATE. WOOD BUCKS WITH MASONRY ARE OPTIONAL.
- WOOD, METAL, OR MASONRY OPENINGS, BUCKS, AND BUCK FASTENERS, BY OTHERS, SHALL BE PROPERLY DESIGNED AND INSTALLED BY OTHERS TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE. ADEQUACY OF THE STRUCTURE TO RECEIVED THESE LOADS SHALL BE VERIFIED BY THE CONTRACTOR OR AUTHORITY HAVING JURISDICTION (AHJ).
- IT IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD OR AS APPROVED BY THE AHJ TO SELECT PLY GEM PRODUCTS TO MEET ALL APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES, OR OTHER SAFETY REQUIREMENTS FOR EACH INSTALLATION.
- SHIMS ARE REQUIRED WHERE GAPS OF GREATER THAN 1/16" EXIST BETWEEN OPENING AND FRAME. MAX. SHIM STACK IS 1/4". SHIMS SHALL BE LOAD-BEARING AND CAPABLE OF TRANSFERRING LOADS TO THE SUBSTRATE.
- SEALING AND FLASHING STRATEGIES FOR OVERALL WATER INFILTRATION RESISTANCE OF THE INSTALLED PRODUCT SHALL BE THE RESPONSIBILITY OF OTHERS USING ASTM E 2112 AND IS NOT ADDRESSED BY THIS DOCUMENT.
- INSTALLED GLAZING SHALL COMPLY WITH ASTM E 1300.
- ALL FASTENERS PENETRATING INTO PRESSURE TREATED WOOD SHALL BE CAPABLE OF PREVENTING CORROSION DUE TO REACTION WITH PRESSURE TREATMENT CHEMICALS. ANY DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE PROTECTED TO PREVENT REACTIONS IN ACCORDANCE WITH CODE REQUIREMENTS.
- A WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR THE ANALYSIS OF WOOD SCREWS ONLY.
- PRODUCTS SHALL BE CONSTRUCTED AS SPECIFIED IN TEST REPORTS NATIONAL CERTIFIED TESTING LABORATORIES I10-I5597-I, I10-I6245-I, I10-I5653-I & -2, I10-I6054-I AND I10-I6416-3.
- DESIGNATION "X" IS FOR OPERABLE PANEL AND "O" IS FOR FIXED PANEL.
- USE A BACKER ROD ON ALL JOINTS  $>3/4"$  DEEP AND/OR WIDER THAN  $1/4"$ . FINISHED CAULK JOINT SHOULD BE A MINIMUM OF  $3/8"$  DEEP.

| SIZE CHART   |          |                |                      |                            |
|--------------|----------|----------------|----------------------|----------------------------|
| OVERALL SIZE |          | PRODUCT RATING | MAX. DESIGN PRESSURE | MISSILE IMPACT RATING      |
| WIDTH        | HEIGHT   |                |                      |                            |
| 38-1/16"     | 77-1/16" | LC-PG50        | +50/-60 PSF          | LARGE & SMALL IMPACT RATED |
| 52-1/8"      | 62"      | LC-PG50        | +50/-60 PSF          | LARGE & SMALL IMPACT RATED |
| 52-1/8"      | 71"      | LC-PG50        | +50/-50 PSF          | LARGE & SMALL IMPACT RATED |

| TABLE OF CONTENTS |                              |
|-------------------|------------------------------|
| SHEET             | SHEET DESCRIPTION            |
| 1                 | INSTALLATION & GENERAL NOTES |
| 2                 | ELEVATIONS & ANCHOR SCHEDULE |
| 3                 | GLAZING DETAILS              |
| 4                 | VERTICAL SECTIONS            |
| 5                 | HORIZONTAL SECTIONS          |

Lucas Turner,  
PE 58201  
2024.11.25  
08:33:05  
-06'00'

TABLE I: INSTALLATION FASTENERS TABLE

| ID                         | SUBSTRATE TYPE                                                 | ANCHOR TYPE                                           | MIN. EMBED.               | MIN. EDGE DISTANCE |
|----------------------------|----------------------------------------------------------------|-------------------------------------------------------|---------------------------|--------------------|
| FIN INSTALLATION           |                                                                |                                                       |                           |                    |
| A                          | 2X MIN. SPRUCE-PINE-FIR WOOD (G=0.42)                          | #8 WOOD SCREW                                         | 1-1/2"                    | 7/16"              |
| B                          | 16 GAUGE (0.060") STEEL 36 KSI MIN. OR 1/8" ALUM. 6063-T5 MIN. | #10-16 SELF-DRILLING SCREW (TEKS/DRIL-FLEX/KWIK-FLEX) | FULL, PLUS 3 THREADS MIN. | 7/16"              |
| FRAME OR CLIP INSTALLATION |                                                                |                                                       |                           |                    |
| C                          | CONCRETE (2 KSI MIN.)                                          | 3/16" ITW TAPCON                                      | 1-1/2"                    | 1-1/8"             |
| D                          | HOLLOW OR GROUT-FILLED CMU (117 PCF MIN.)                      | 3/16" ITW TAPCON                                      | 1"                        | 2"                 |
| E                          | 2X MIN. SOUTHERN PINE WOOD (G=0.55)                            | 3/16" ITW TAPCON                                      | 1-3/8"                    | 7/8"               |
| F                          | CONCRETE (2.85 KSI MIN.)                                       | 3/16" ELCO ULTRACON                                   | 1-3/4"                    | 1-1/8"             |
| G                          | HOLLOW OR GROUT-FILLED CMU (ASTM C-90)                         | 3/16" ELCO ULTRACON                                   | 1-1/4"                    | 2-1/2"             |
| H                          | 2X MIN. SOUTHERN PINE WOOD (G=0.55)                            | #10 WOOD SCREW                                        | 1-3/8"                    | 7/8"               |
| I                          | 16 GAUGE (0.060") STEEL 36 KSI MIN. OR 1/8" ALUM. 6063-T5 MIN. | #10-16 SELF-DRILLING SCREW (TEKS/DRIL-FLEX/KWIK-FLEX) | FULL, PLUS 3 THREADS MIN. | 1/2"               |

NOTE: ALL SCREWS AND TAPCONS SHALL HAVE MOD. TRUSS, PAN, OR HEX WASHER HEAD, 0.42" MIN. HEAD OR WASHER DIAMETER FOR FIN ANCHORS, 0.355" MIN. HEAD OR WASHER DIAMETER FOR FRAME ANCHORS.

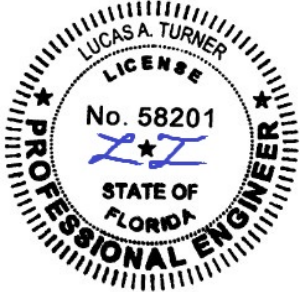


Part of the Cornerstone Building Brands Family

433 N. MAIN ST.,  
PO BOX 559,  
ROCKY MOUNT, VA 24151

PH: 540-484-6348  
FX: 540-484-6683

|                                                                                |          |         |                                  |  |     |   |   |   |   |
|--------------------------------------------------------------------------------|----------|---------|----------------------------------|--|-----|---|---|---|---|
| TITLE: SERIES 1500 SINGLE HUNG IMPACT WINDOW<br>INSTALLATION AND GENERAL NOTES | DATE     | BY      | REVISION DESCRIPTION             |  | NO. | E | F | G | H |
|                                                                                | 12.12.12 | JLA     | UPDATED NOTE 12.EC 19-020        |  |     |   |   |   |   |
|                                                                                | DWN BY:  | CHK BY: | UPDATED FOR 7TH EDITION 2020 FBC |  |     |   |   |   |   |
|                                                                                | SCALE:   | NTS     | UPDATED FOR 8TH EDITION 2023 FBC |  |     |   |   |   |   |



11/22/2024  
LUCAS A. TURNER, P.E.  
FL PE # 58201  
TURNER ENGINEERING & CONSULTING, INC.  
(COA # 29779)  
2428 OLD NATCHEZ TRACE  
TRAIL, CAMDEN, TN 38320  
PH. 941-380-1574

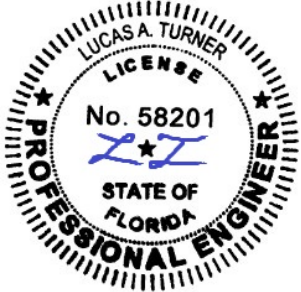
FL#: 16103

DWG #: PGWI83FL

SHEET: 1-FL OF 5



| TITLE: SERIES 1500 SINGLE HUNG IMPACT WINDOW<br>GLAZING DETAILS |  |  |  | DATE     | BY  | REVISION DESCRIPTION             | NO. |
|-----------------------------------------------------------------|--|--|--|----------|-----|----------------------------------|-----|
|                                                                 |  |  |  | 12.12.12 | JLA |                                  | E   |
|                                                                 |  |  |  | 12.04.19 | LMH | UPDATED NOTE 12.EC 19-020        | F   |
|                                                                 |  |  |  | 12.01.20 | LMH | UPDATED FOR 7TH EDITION 2020 FBC | G   |
|                                                                 |  |  |  | 12.04.23 | LMH | UPDATED FOR 8TH EDITION 2023 FBC | H   |
|                                                                 |  |  |  | 11.22.24 | LMH | UPDATED BEVELED SECTION VIEWS    |     |

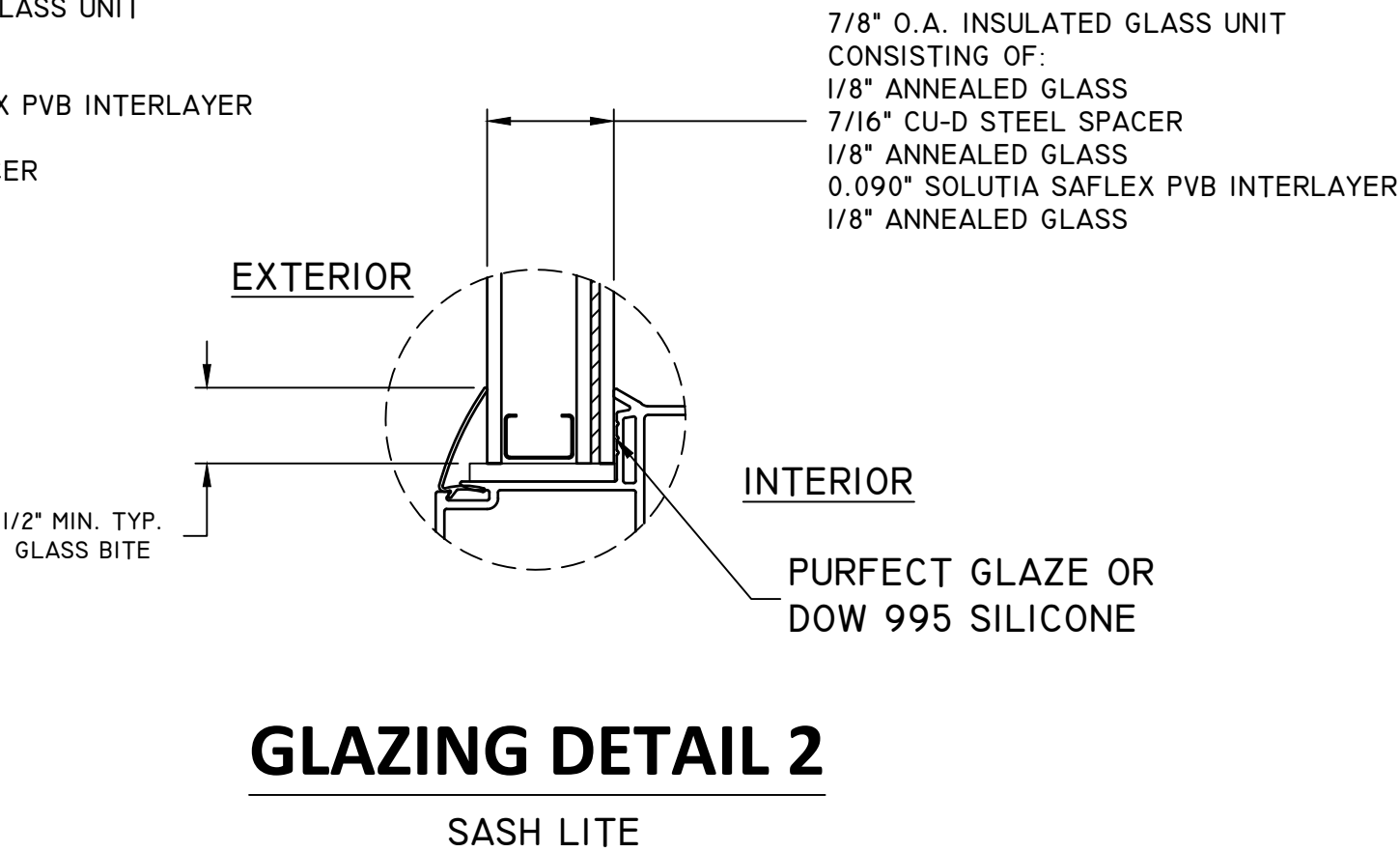
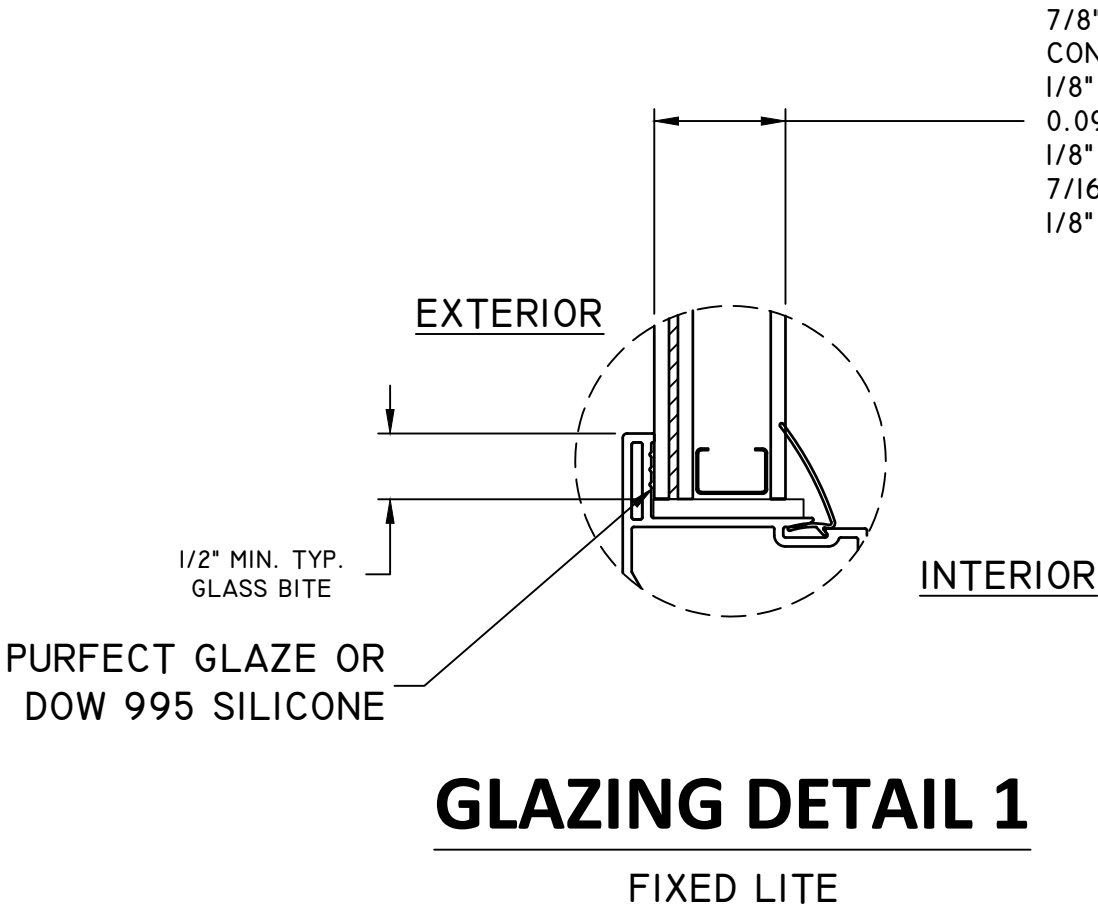


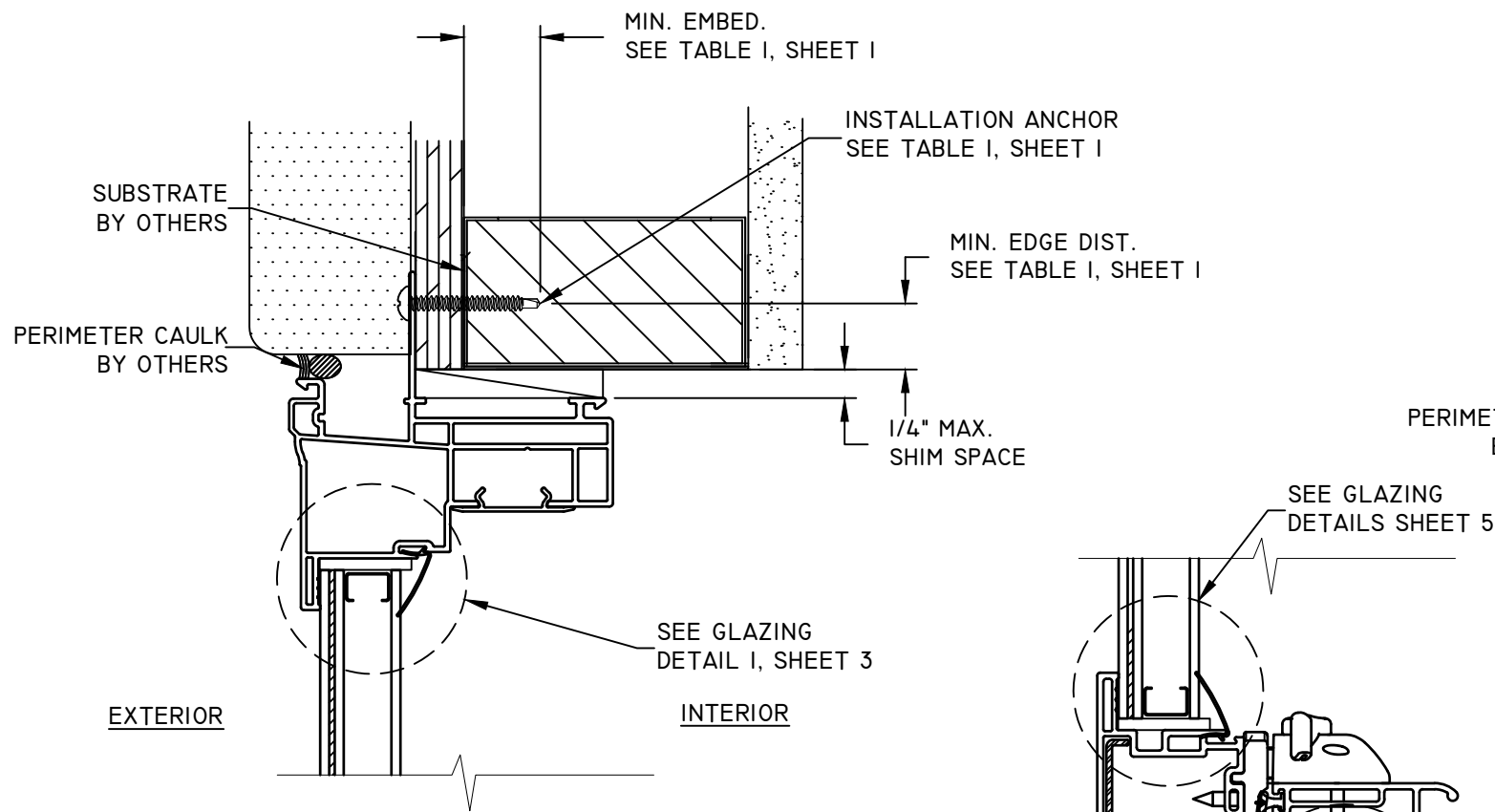
11/22/2024  
LUCAS A. TURNER, P.E.  
FL PE # 58201  
TURNER ENGINEERING &  
CONSULTING, INC.  
(COA # 29779)  
2428 OLD NATCHEZ TRACE  
TRAIL, CAMDEN, TN 38320  
PH. 941-380-1574

FL#: 16103

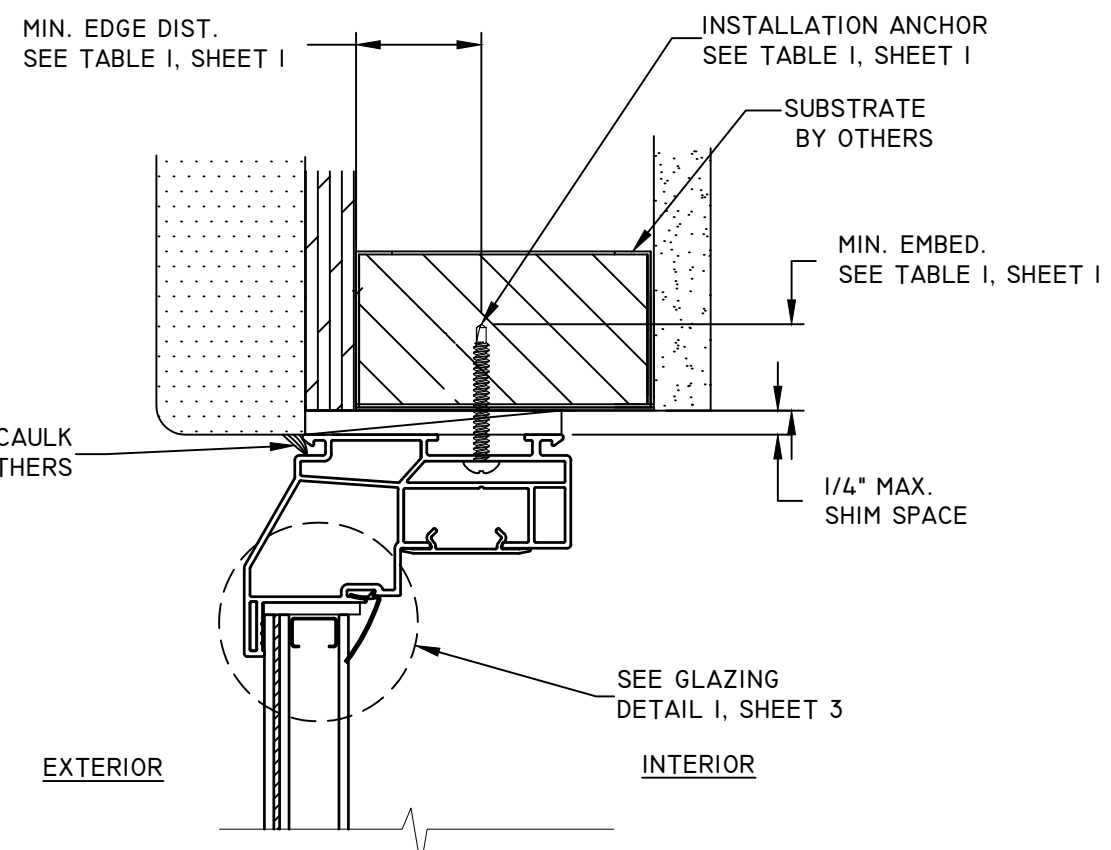
DWG #: PGWI83FL

SHEET: 3 OF 5

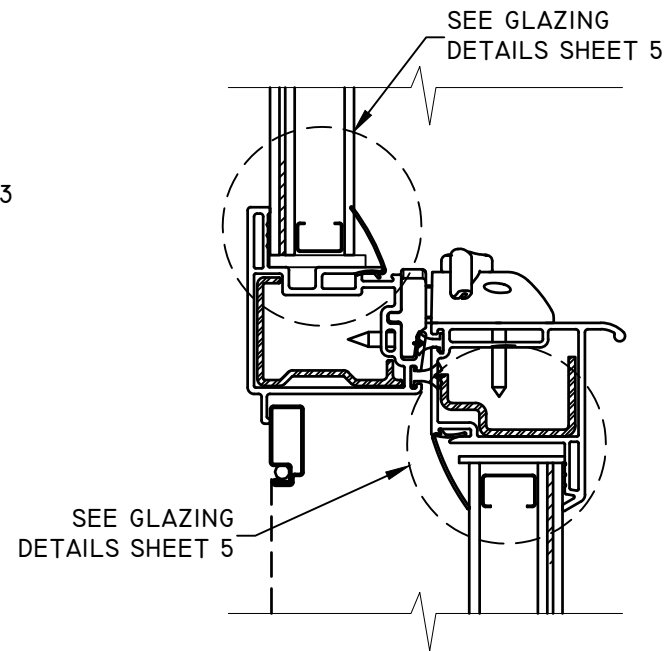




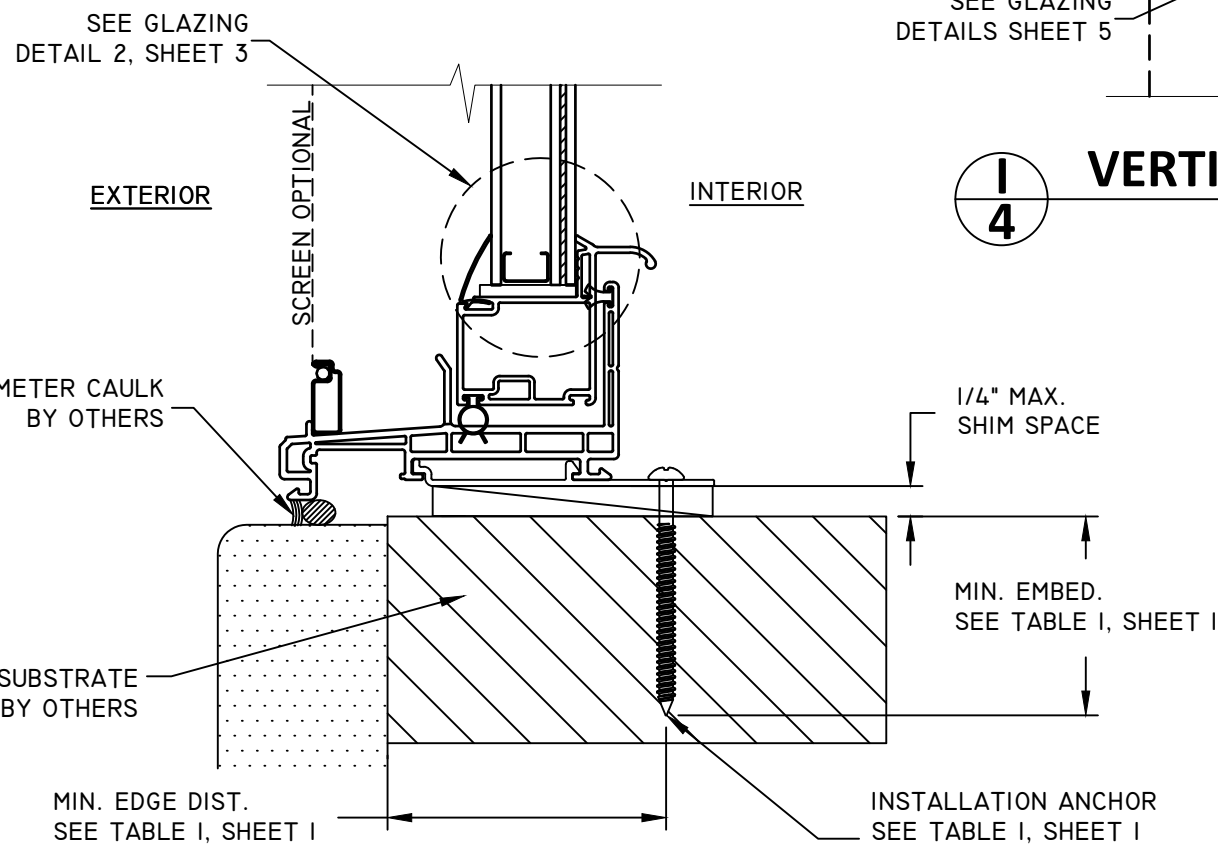
**B  
4** VERTICAL SECTION  
HEAD  
BRICKMOULD FRAME - FIN INSTALLATION



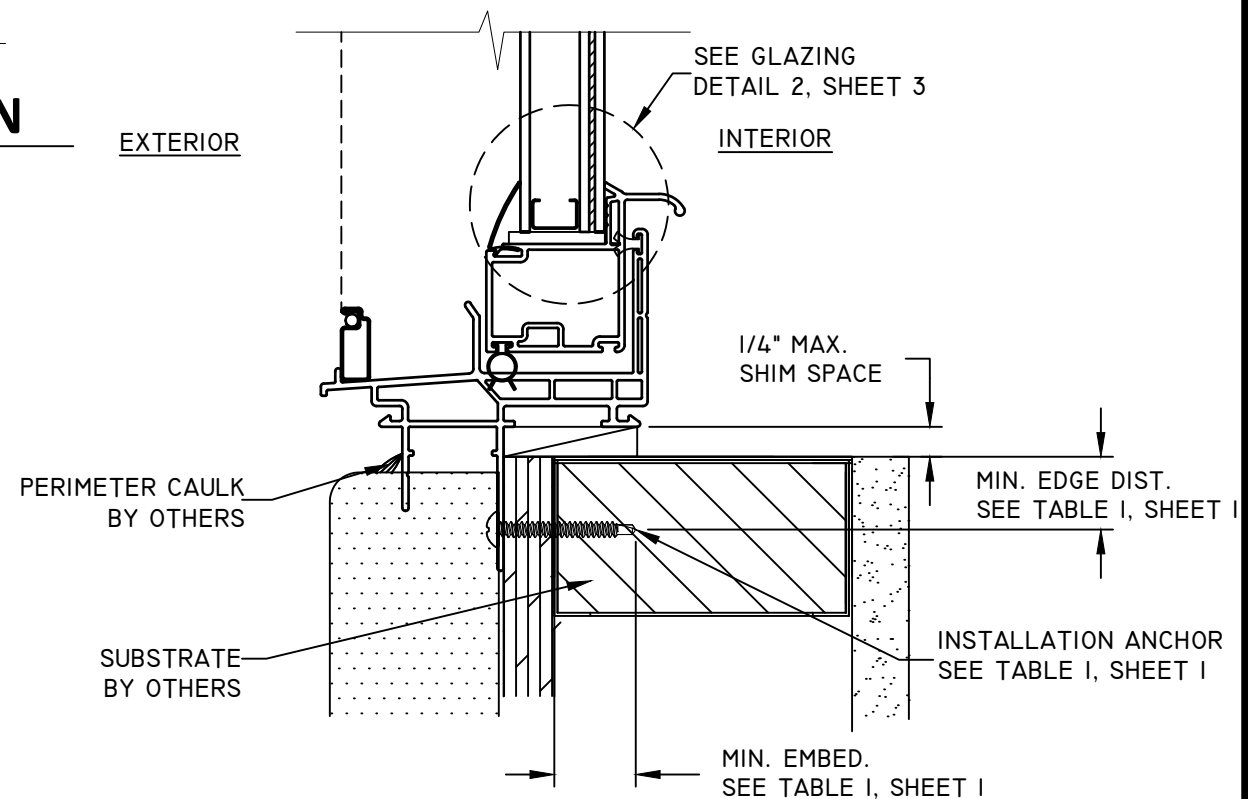
**C  
4** VERTICAL SECTION  
HEAD  
BEVELED FRAME - FRAME INSTALLATION



**I  
4** VERTICAL SECTION  
MEETING RAIL  
TYPICAL

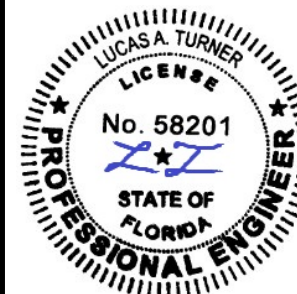


**A  
4** VERTICAL SECTION  
SILL  
BRICKMOULD FRAME - CLIP INSTALLATION



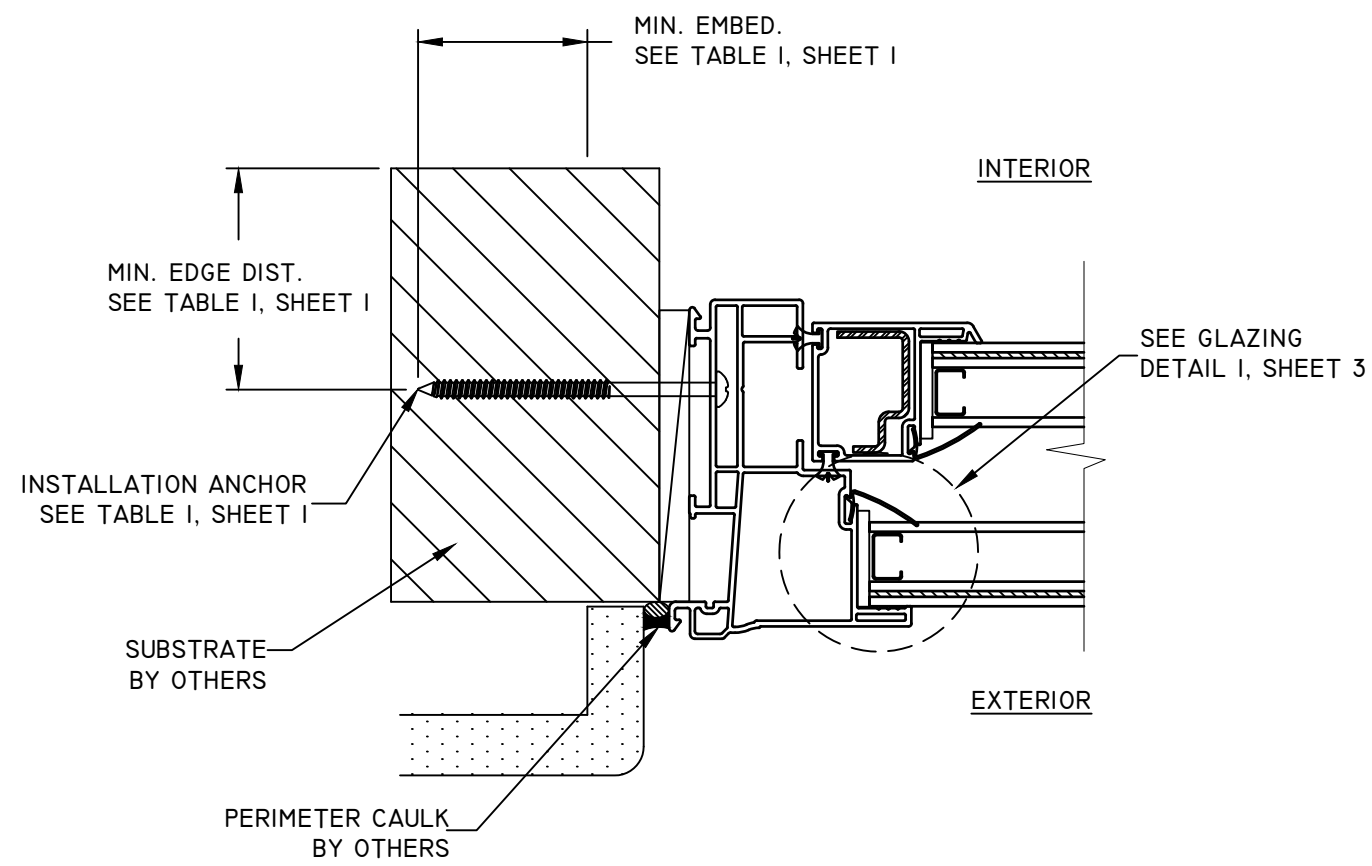
**D  
4** VERTICAL SECTION  
SILL  
BEVELED FRAME - FIN INSTALLATION

|                                                                   |                |                                  |               |          |
|-------------------------------------------------------------------|----------------|----------------------------------|---------------|----------|
| TITLE: SERIES 1500 SINGLE HUNG IMPACT WINDOW<br>VERTICAL SECTIONS | NO.            | REVISION DESCRIPTION             | BY            | DATE     |
|                                                                   | E              | UPDATED NOTE 12.EC 19-020        | LMH           | 12.04.19 |
|                                                                   | F              | UPDATED FOR 7TH EDITION 2020 FBC | LMH           | 12.01.20 |
|                                                                   | G              | UPDATED FOR 8TH EDITION 2023 FBC | LMH           | 12.04.23 |
|                                                                   | H              | UPDATED BEVELED SECTION VIEWS    | LMH           | 11.22.24 |
| DATE:<br>12.12.12                                                 | DWN BY:<br>JLA | CHK BY:                          | SCALE:<br>NTS |          |



11/22/2024  
LUCAS A. TURNER, P.E.  
FL PE # 58201  
TURNER ENGINEERING &  
CONSULTING, INC.  
(COA # 29779)  
2428 OLD NACHEZ TRACE  
TRAIL, CAMDEN, TN 38320  
PH. 941-380-1574

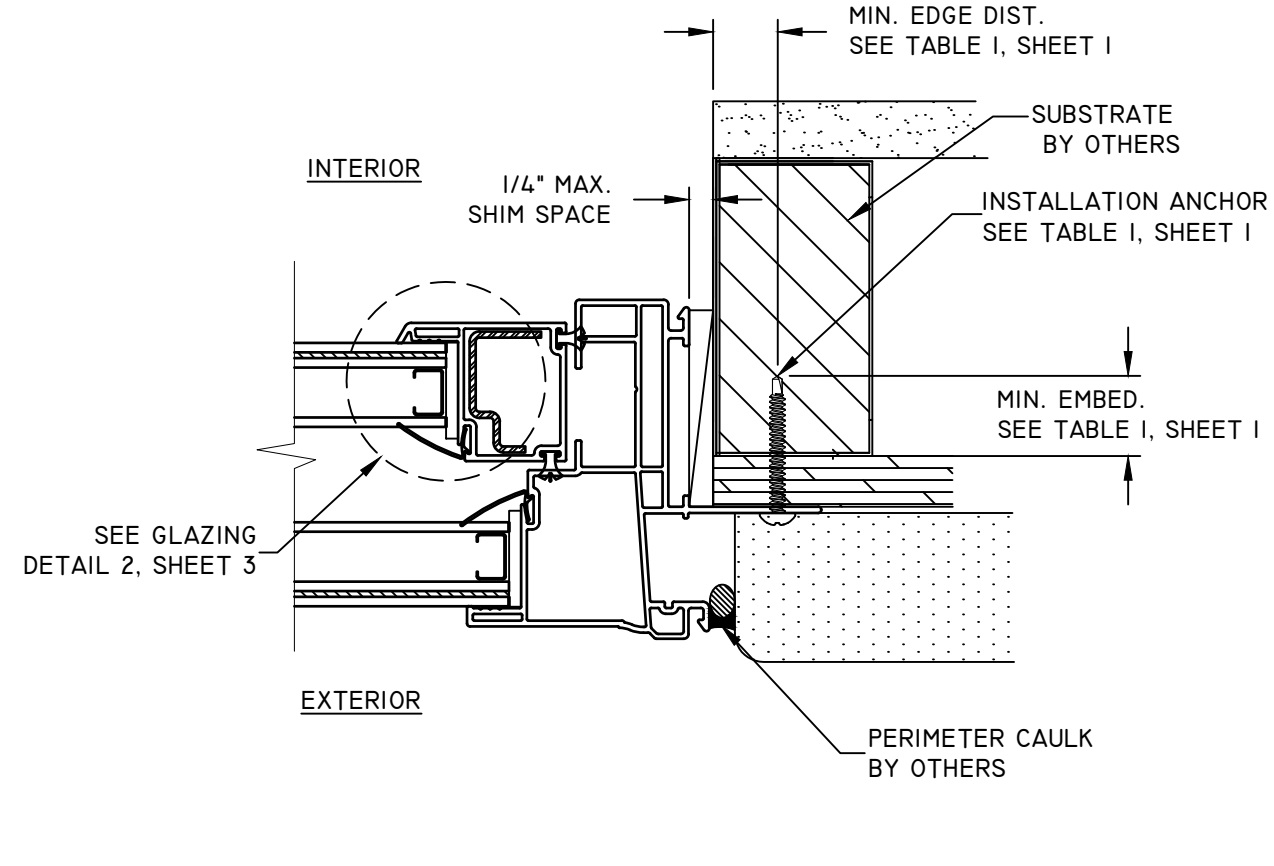
FL#: **16103**  
DWG #: **PGWI83FL**  
SHEET: **4 OF 5**



**E**  
**5**

**HORIZONTAL SECTION**

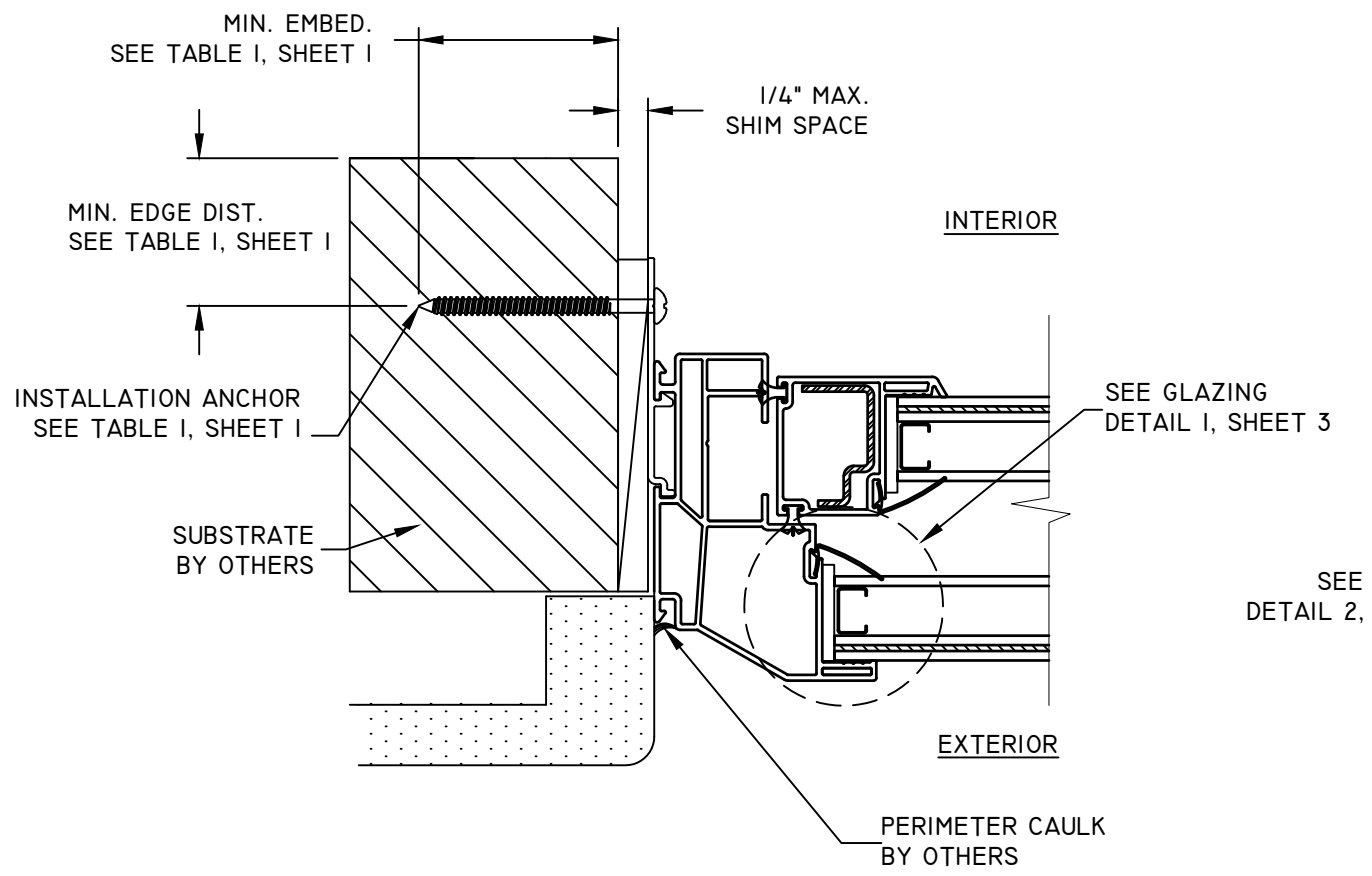
JAMB /  
BRICKMOULD FRAME - FRAME INSTALLATION



**F**  
**5**

**HORIZONTAL SECTION**

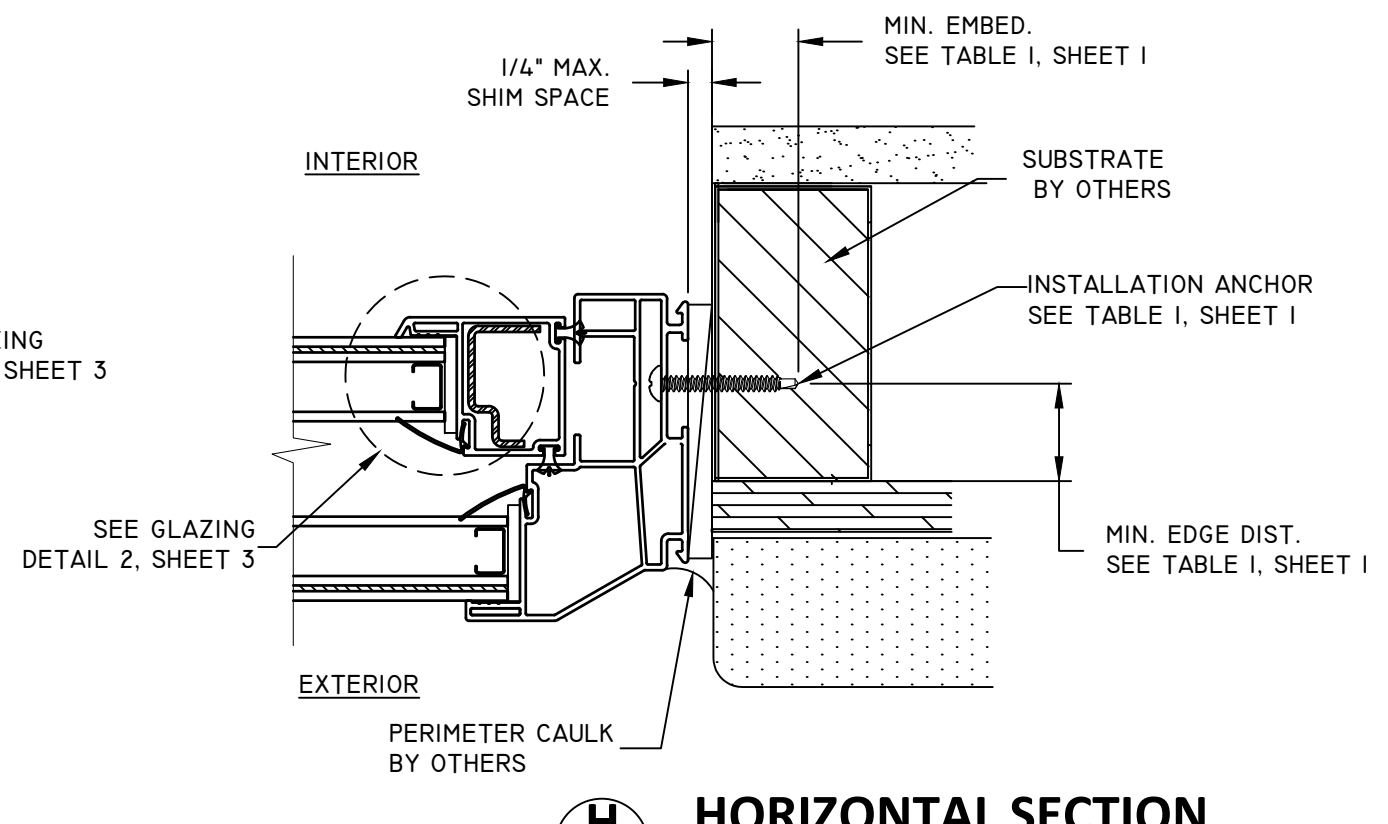
JAMB  
BRICKMOULD FRAME - FIN INSTALLATION



**G**  
**5**

**HORIZONTAL SECTION**

JAMB  
BEVELED FRAME - CLIP INSTALLATION



**H**  
**5**

**HORIZONTAL SECTION**

JAMB  
BEVELED FRAME - FRAME INSTALLATION

**Ply Gem**  
WINDOWS & DOORS  
Part of the Cornerstone Building Brands Family

433 N. MAIN ST.,  
PO BOX 559,  
ROCKY MOUNT, VA 24151

PH: 540-484-6348  
FX: 540-484-6683

| TITLE: SERIES 1500 SINGLE HUNG IMPACT WINDOW<br>HORIZONTAL SECTIONS |         |         |        | REVISION DESCRIPTION |     |          |                                  |
|---------------------------------------------------------------------|---------|---------|--------|----------------------|-----|----------|----------------------------------|
| DATE:                                                               | DWN BY: | CHK BY: | SCALE: | NO.                  | BY  | DATE     |                                  |
| 12.12.12                                                            | JLA     | .       | NTS    | E                    | LMH | 12.04.19 | UPDATED NOTE 12.EC 19-020        |
|                                                                     |         |         |        | F                    | LMH | 12.01.20 | UPDATED FOR 7TH EDITION 2020 FBC |
|                                                                     |         |         |        | G                    | LMH | 12.04.23 | UPDATED FOR 8TH EDITION 2023 FBC |
|                                                                     |         |         |        | H                    | LMH | 11.22.24 | UPDATED BEVELED SECTION VIEWS    |



11/22/2024  
LUCAS A. TURNER, P.E.  
FL PE # 58201  
TURNER ENGINEERING &  
CONSULTING, INC.  
(COA # 29779)  
2428 OLD NACHEZ TRACE  
TRAIL, CAMDEN, TN 38320  
PH. 941-380-1574

FL#: **16103**

DWG #: **PGWI83FL**

SHEET: **5 OF 5**