

MASTERGRAIN

16566 HIGHWAY 12 PO BOX 399 MIDLAND, ONTARIO, CANADA

OPAQUE FIBERGLASS SINGLE DOOR w/ or w/o SIDELITES IN SWING "NON-IMPACT"

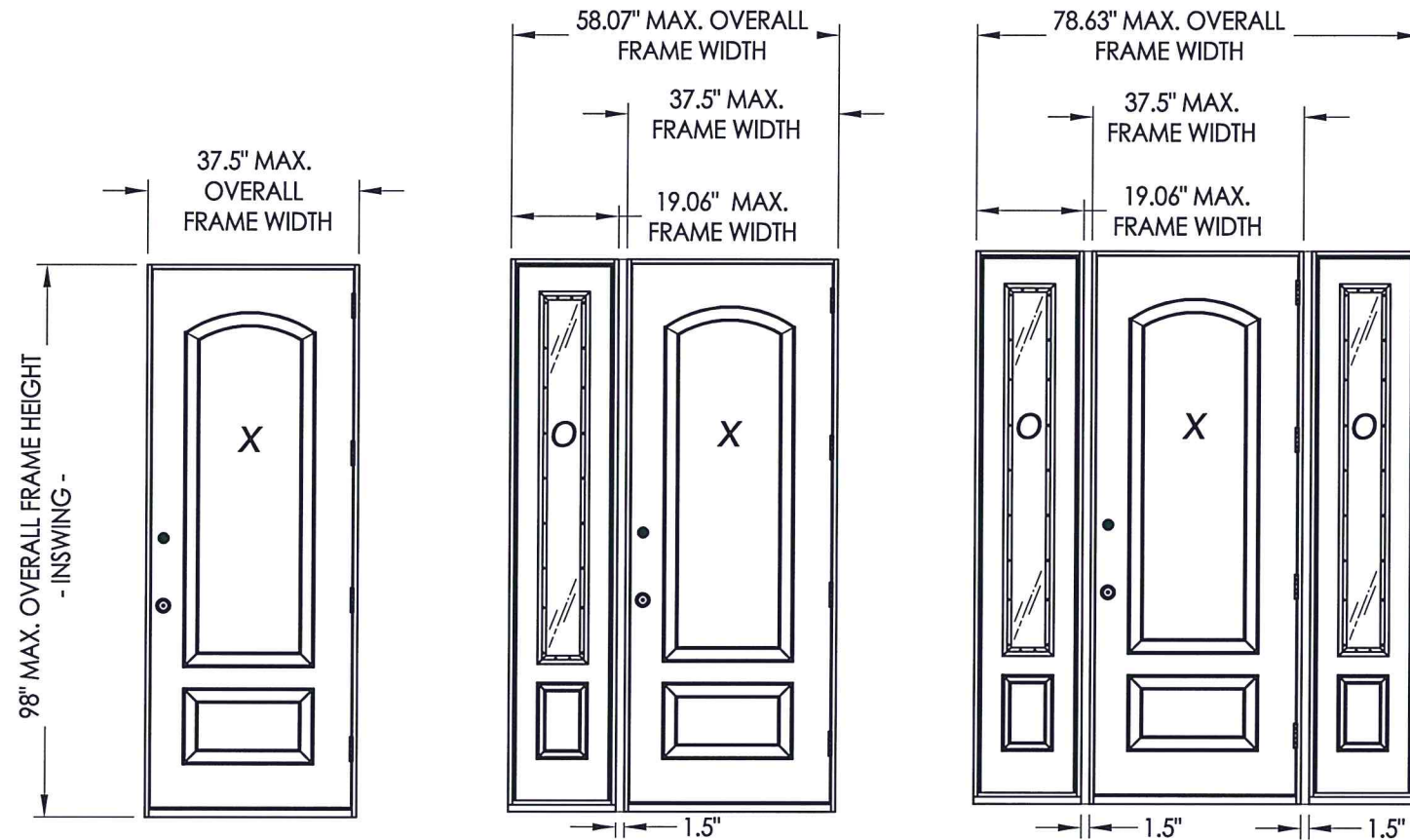
EVALUATED FOR USE IN THE STATE OF TEXAS

The Glazed Fiberglass Door system described herein complies with the 2018 International Residential Code (IRC), Sections R301 & R609 and the 2018 International Building Code (IBC), Sections 1404.13, 1609, 1709.5, 2403 and 2404 subject to the following conditions:

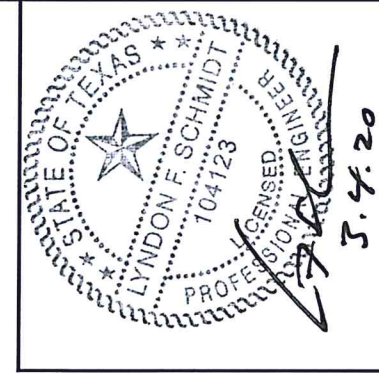
1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. When used in areas requiring wind-borne debris protection this product is required to be protected with an impact resistant covering that complies with Section R301.2.1.2 of the IRC and Section 1609.2 of the IBC.
3. Allowable design pressure requirements must be equal to or less than the design pressure rating shown in the design pressure chart, sheet 1 of this drawing.
4. Conditions not covered by this drawing are subject to further engineering analysis.

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| 3 | Sidelite panel details and glazing detail |
| 4 | Elevations |
| 5 | Horizontal cross section |
| 6 | Vertical cross sections |
| 7 | Vertical cross sections |
| 8 | Frame anchoring |
| 9 | Frame anchoring |
| 10 | Bill of materials and components |



| CONFIGURATION | MAX. FRAME DIMENSION | MAX. D.L.O. DIMENSION | DESIGN PRESSURE (PSF) IN SWING | |
|---------------|----------------------|-----------------------|--------------------------------|----------|
| | | | POSITIVE | NEGATIVE |
| X | 37.5" x 98.0" | N/A | +55.0 | -60.0 |
| OX / XO | 58.07" x 98.0" | 7.0" x 63.12" | +55.0 | -60.0 |
| OXO | 78.63" x 98.0" | 7.0" x 63.12" | +55.0 | -60.0 |



Documents Prepared By: Lyndon F. Schmidt, P.E.
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Phone No.: 813.659.9197
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

| NO. | DATE | BY | REVISIONS |
|-----|---------|-----|-----------------------------|
| 1 | 3/03/20 | LFS | UPDATE TO 2018 IBC/IRC CODE |

DATE: 01/04/10

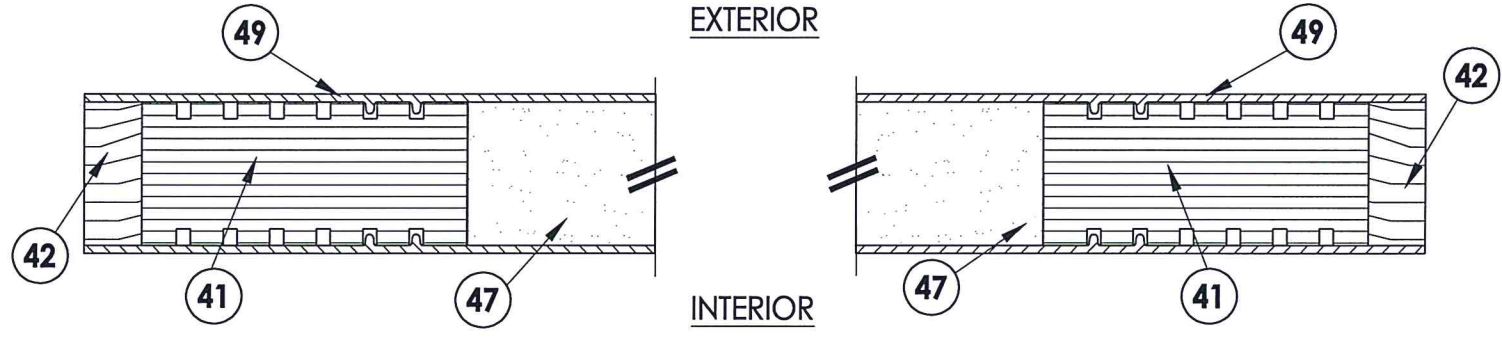
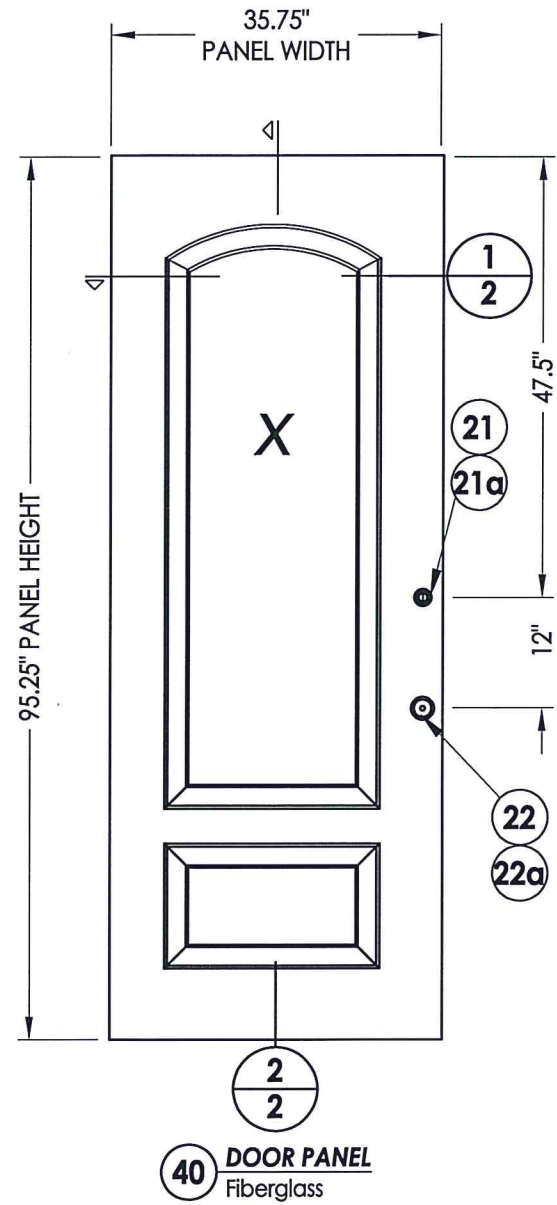
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DWG. BY: JK

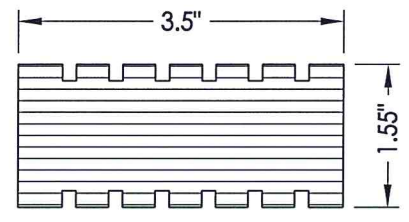
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DRAWING NO.: TX-4046

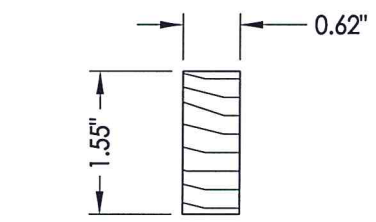
SHEET 1 OF 10



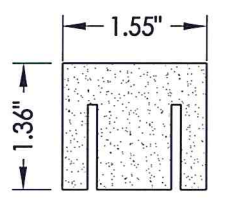
1 HORIZONTAL CROSS SECTION
2



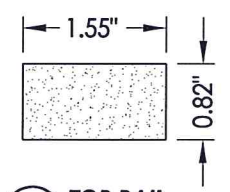
41 HINGE AND LATCH STILE
Reinforcement / LSL



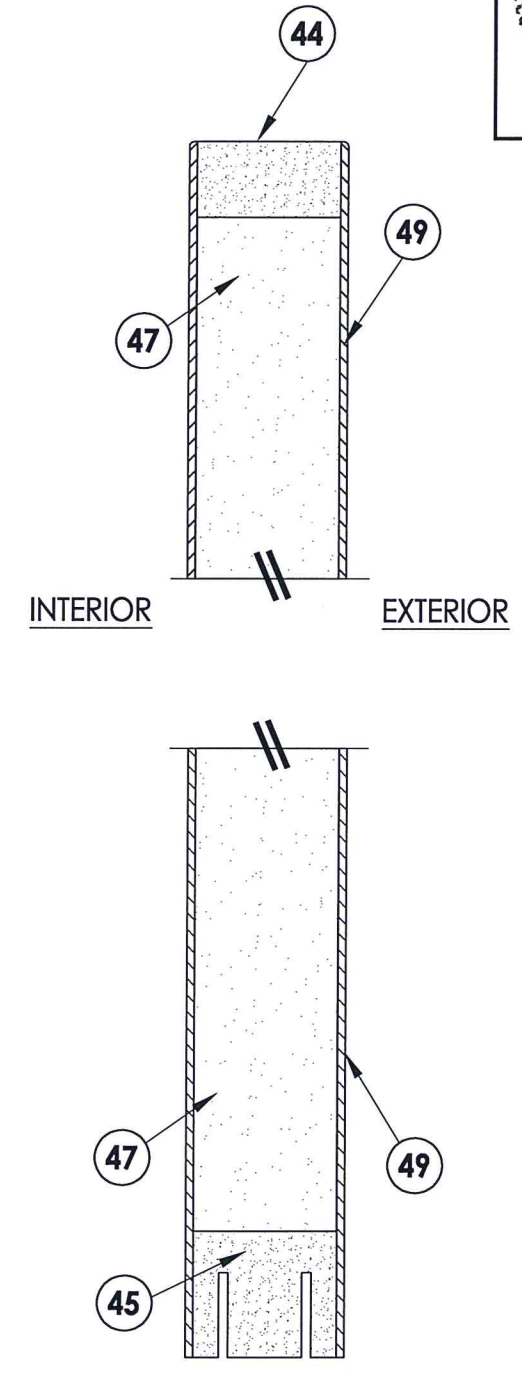
42 HINGE AND LATCH STILE
Wood



45 BOTTOM RAIL
Composite



44 TOP RAIL
Composite



2 VERTICAL CROSS SECTION
2



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PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: DOOR PANEL DETAILS

| NO. | DATE | DESCRIPTION | BY |
|-----|---------|-----------------------------|-----|
| 1 | 3/03/20 | UPDATE TO 2018 IBC/IRC CODE | LFS |

DATE: 01/04/10

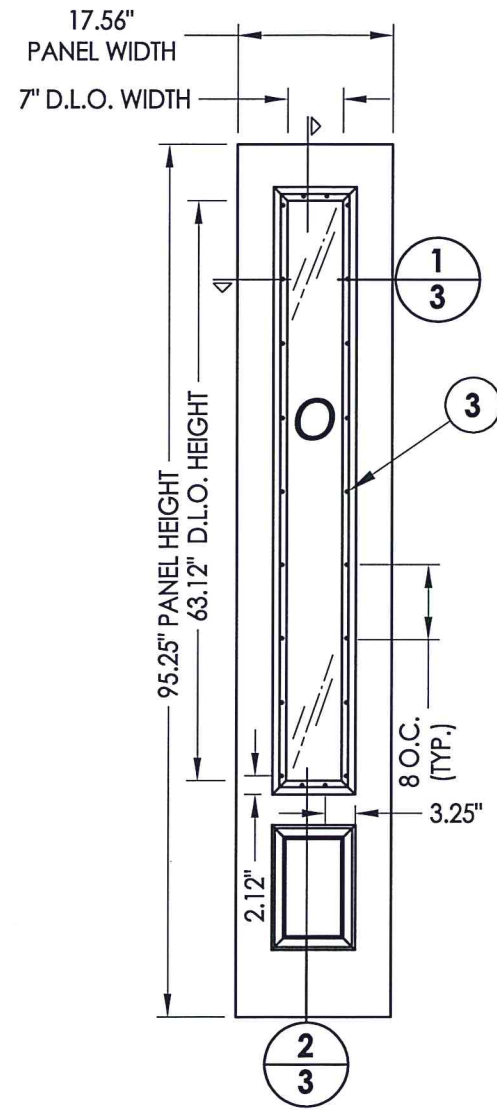
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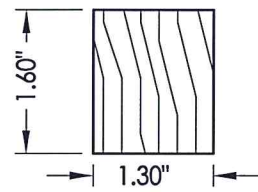
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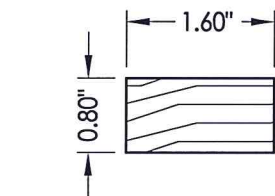
SHEET 2 OF 10



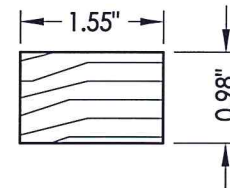
50 SIDELITE PANEL
Fiberglass



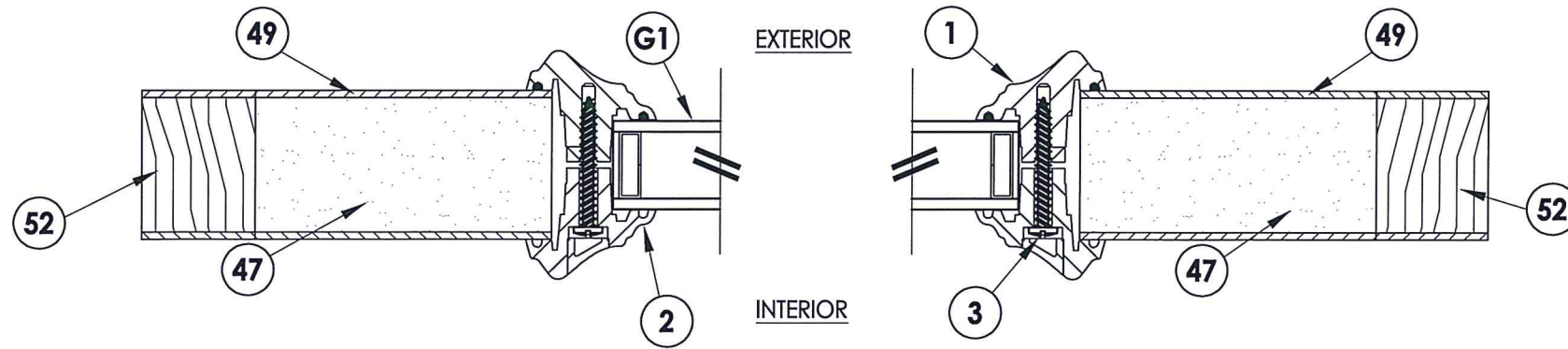
52 SIDELITE STILE
Wood



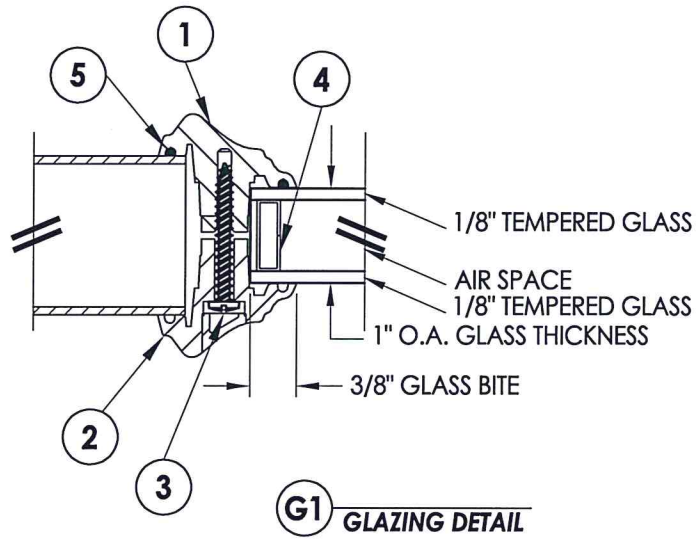
53 SIDELITE BOTTOM RAIL
Wood



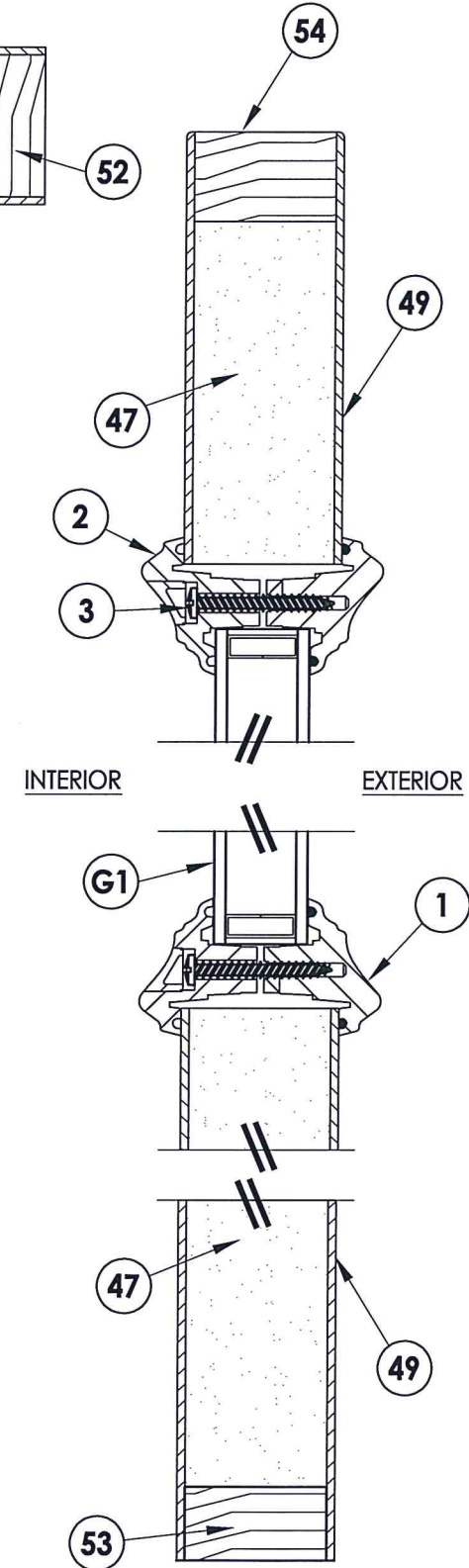
54 SIDELITE TOP RAIL
Wood



1 HORIZONTAL CROSS SECTION



G1 GLAZING DETAIL



2 VERTICAL CROSS SECTION



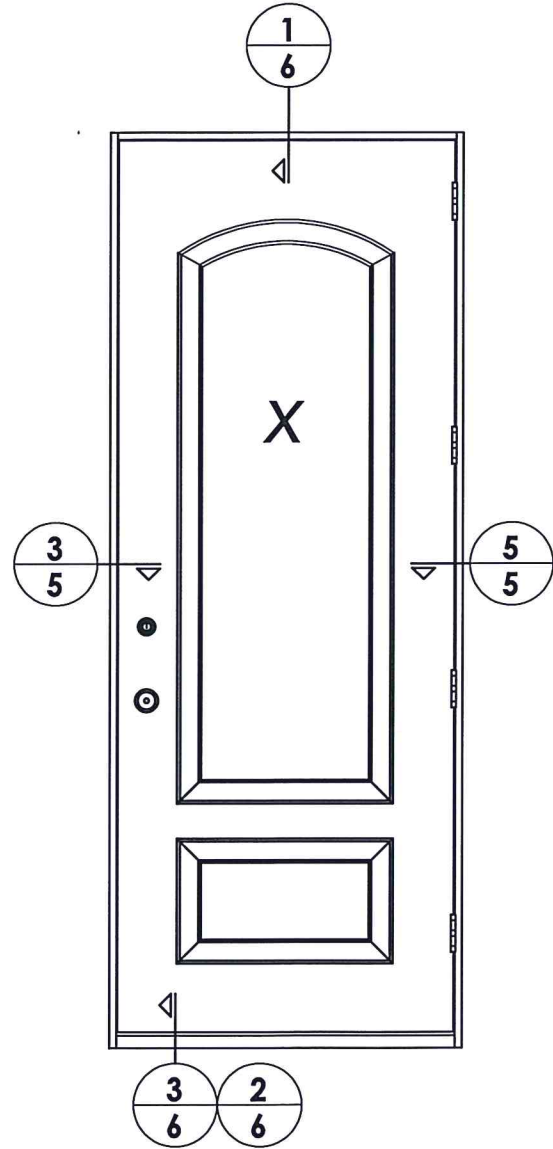
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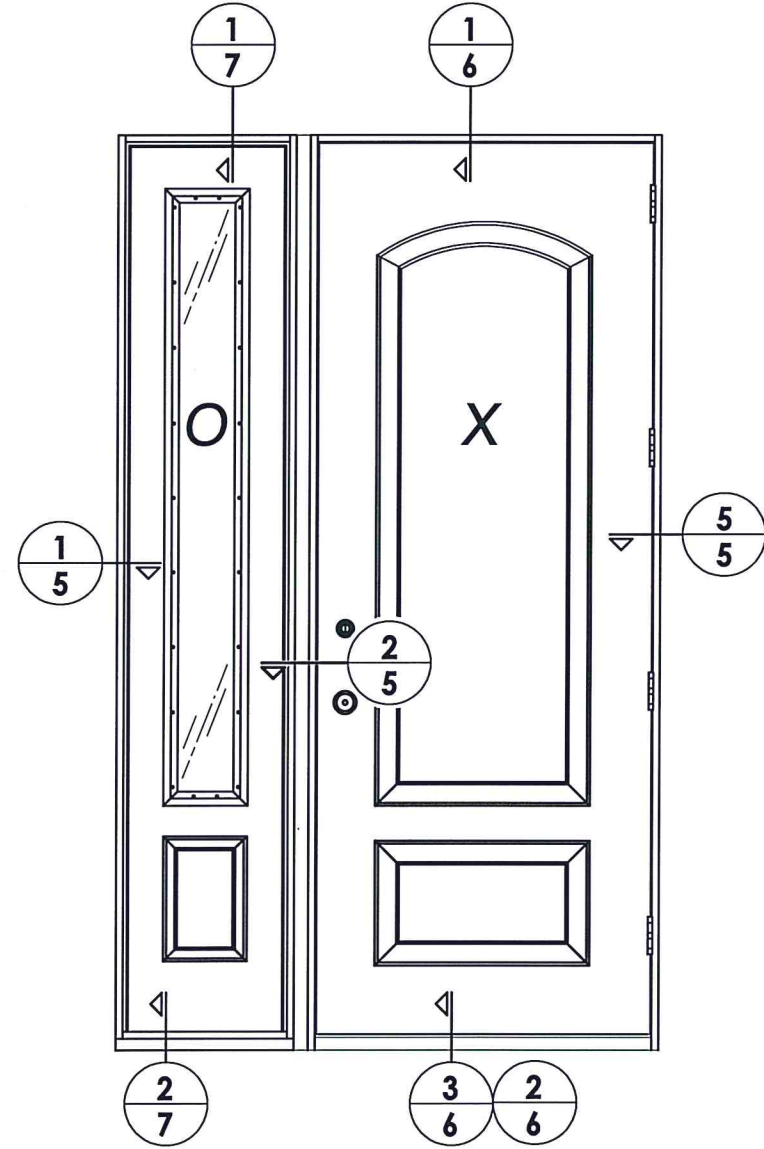
PRODUCT: MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY: SIDELITE PANEL DETAILS AND GLAZING DETAIL

| NO. | DATE | REVISIONS |
|-----|---------|-----------------------------|
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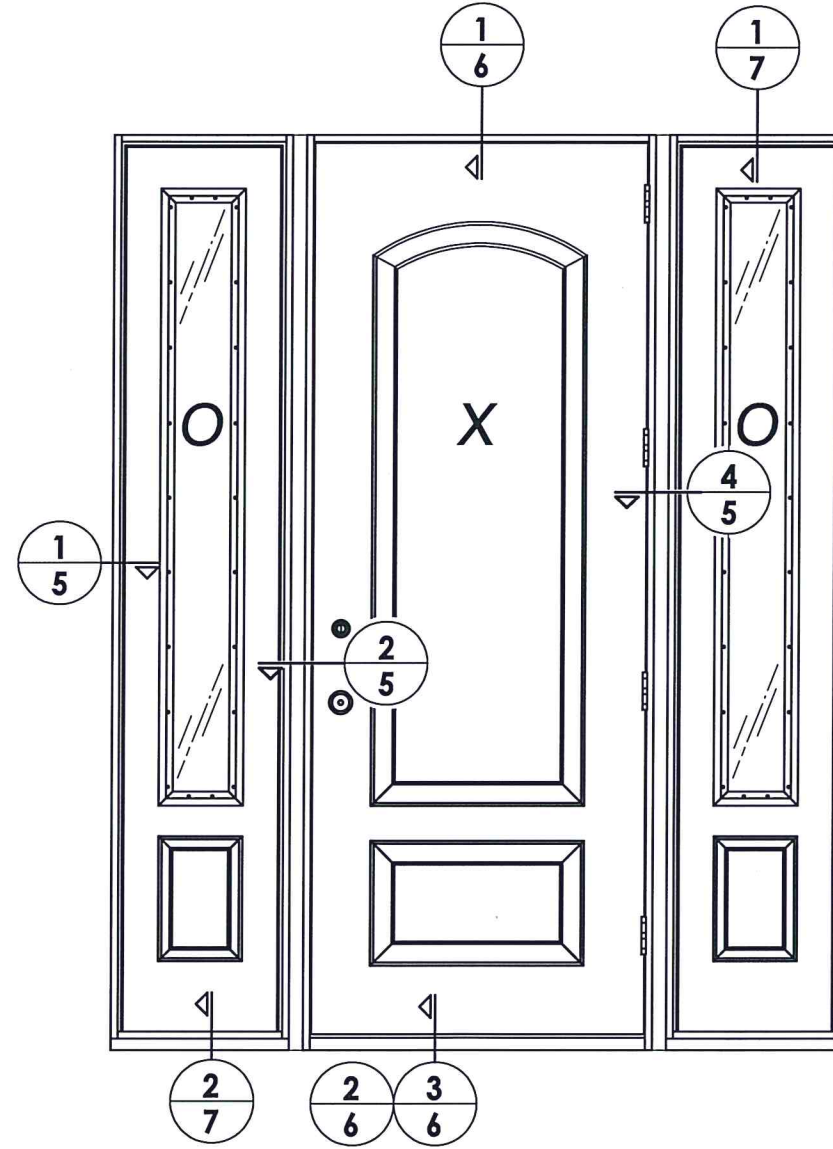
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CHK. BY: LFS
DRAWING NO.: TX-4046
SHEET 3 OF 10



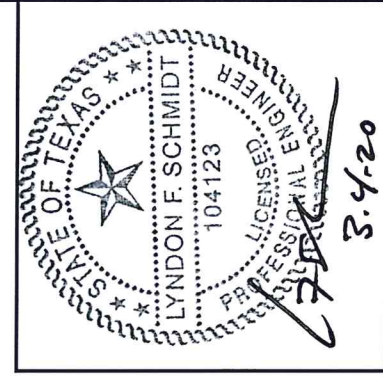
ELEVATION (X)



ELEVATION (OX / XO)



ELEVATION (OXO)



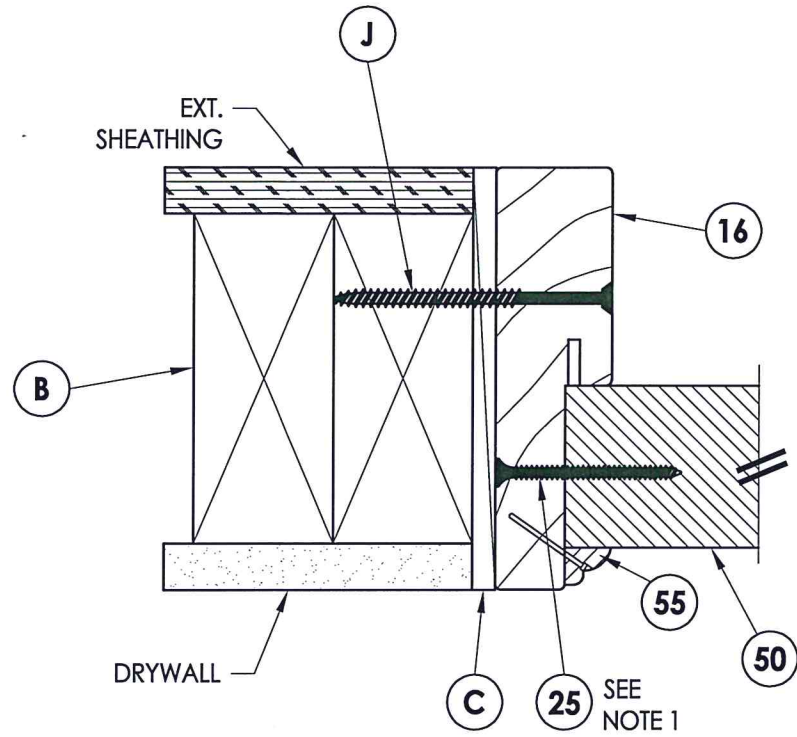
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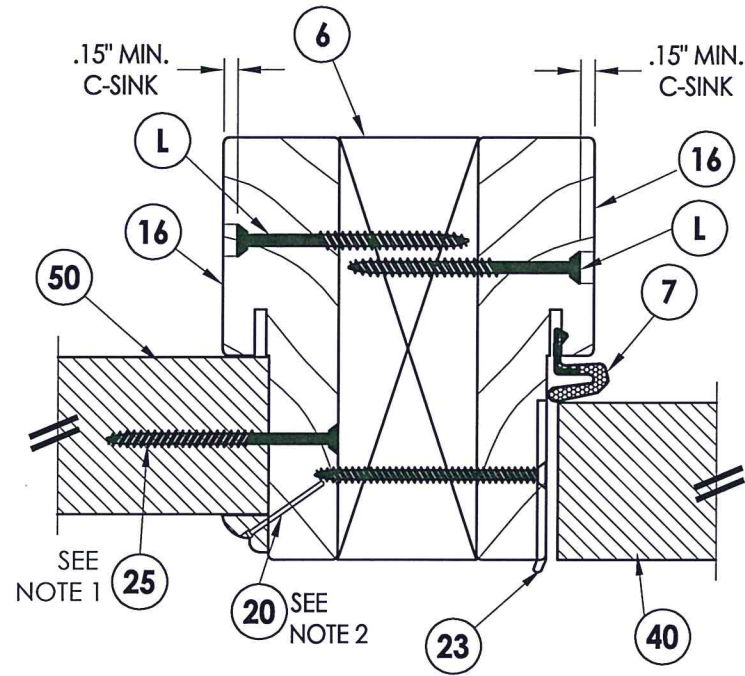
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| | |
|--------------------------------------|---------|
| PRODUCT: MASTERGRAIN FIBERGLASS DOOR | |
| PART OR ASSEMBLY: ELEVATIONS | |
| NO. | DATE |
| 1 | 3/03/20 |
| UPDATE TO 2018 IBC/IRC CODE | |
| LFS | BY |
| REVISIONS | |
| DATE: 01/04/10 | |
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| CHK. BY: LFS | |
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| SHEET 4 of 10 | |

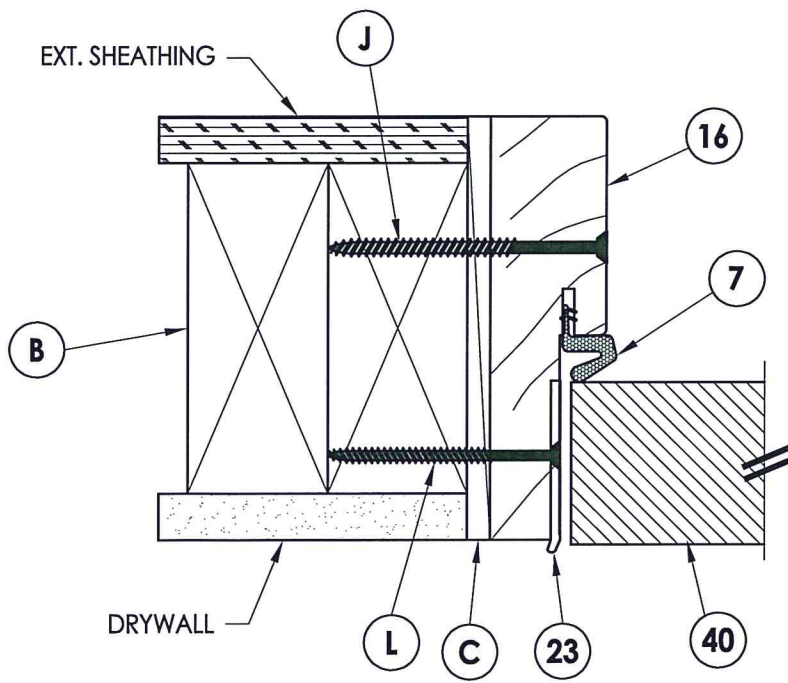
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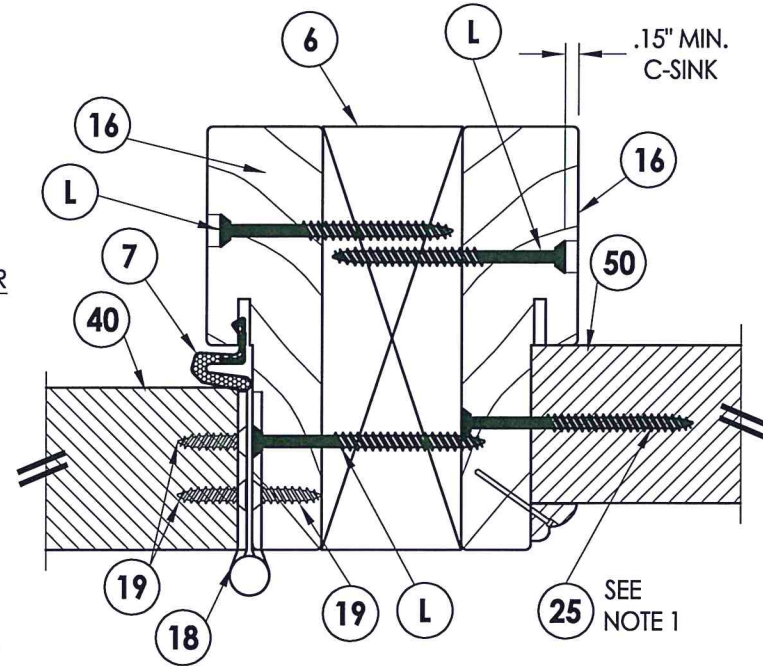
1
5 HORIZONTAL CROSS SECTION



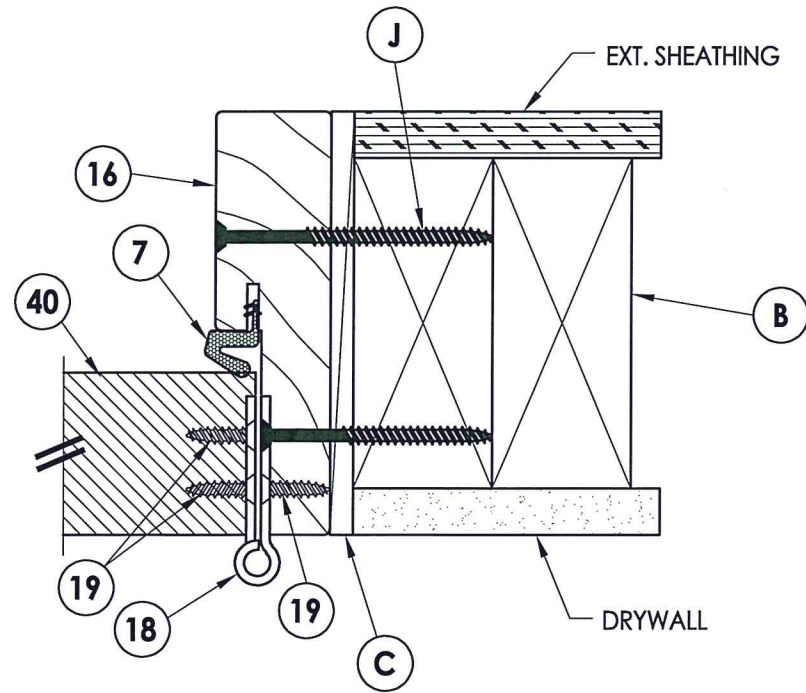
2
5 HORIZONTAL CROSS SECTION



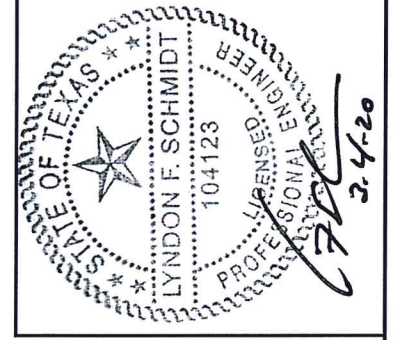
3
5 HORIZONTAL CROSS SECTION



4
5 HORIZONTAL CROSS SECTION



5
5 HORIZONTAL CROSS SECTION



NOTE:

1. Sidelite ass'y fastener; 6" from each end and 6 more screws equally spaced between. (8 screws total per jamb.)
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).

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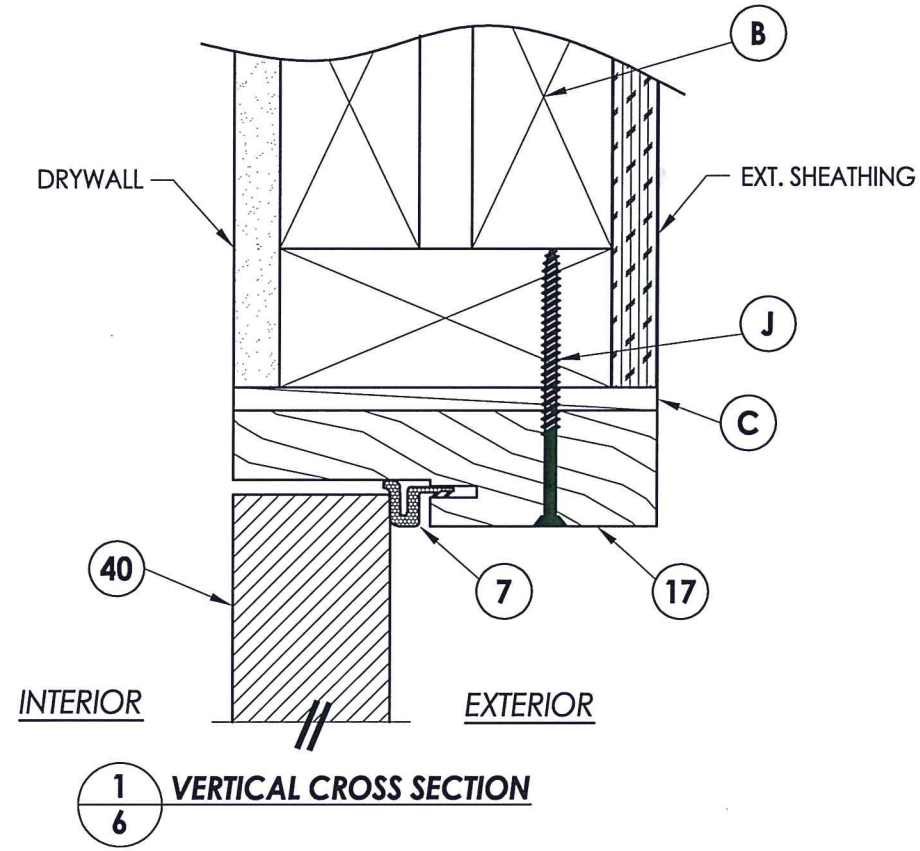
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PRODUCT: MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

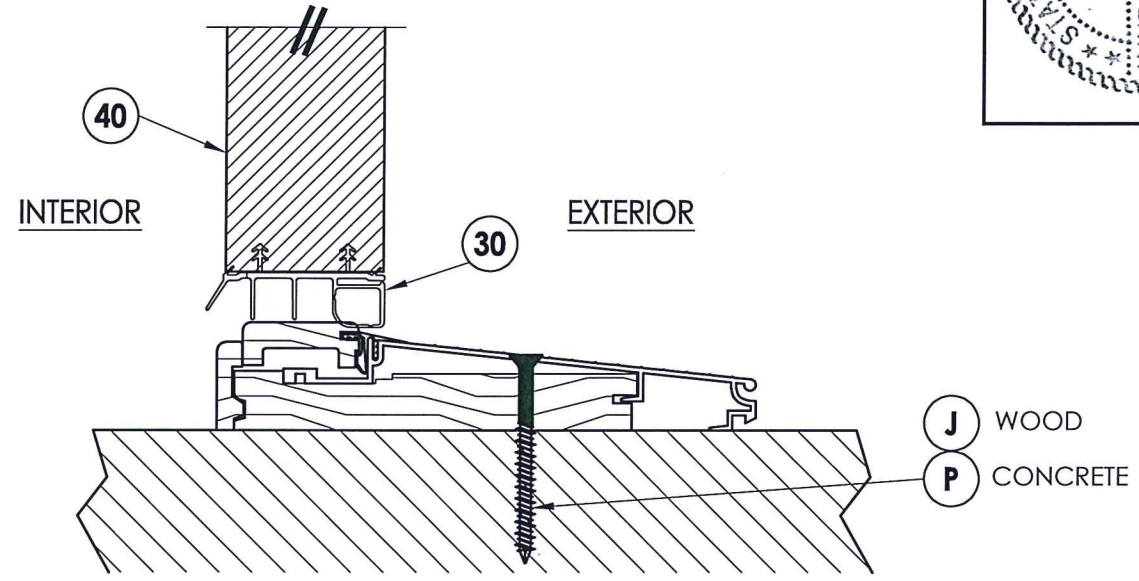
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DATE: 01/04/10
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DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4046
SHEET 5 of 10

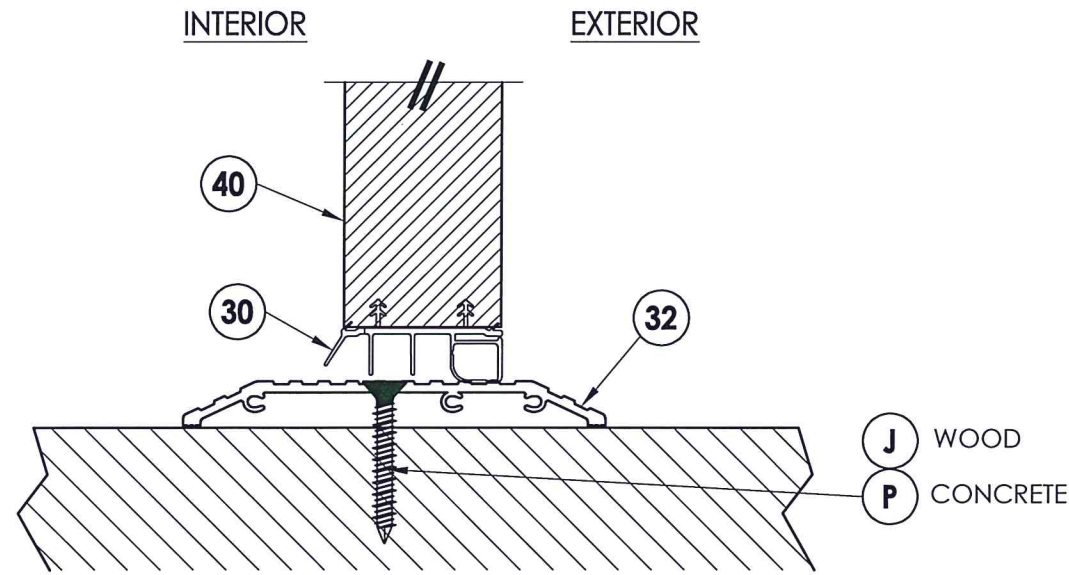
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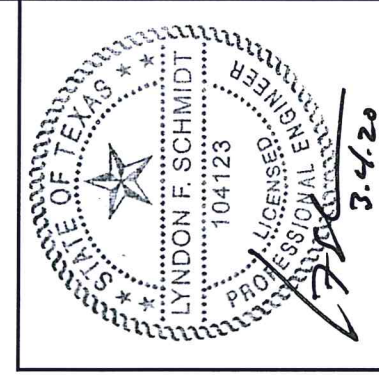
1
6 VERTICAL CROSS SECTION



2
6 VERTICAL CROSS SECTION
Inswing configuration



3
6 VERTICAL CROSS SECTION
Shown w/ ADA threshold



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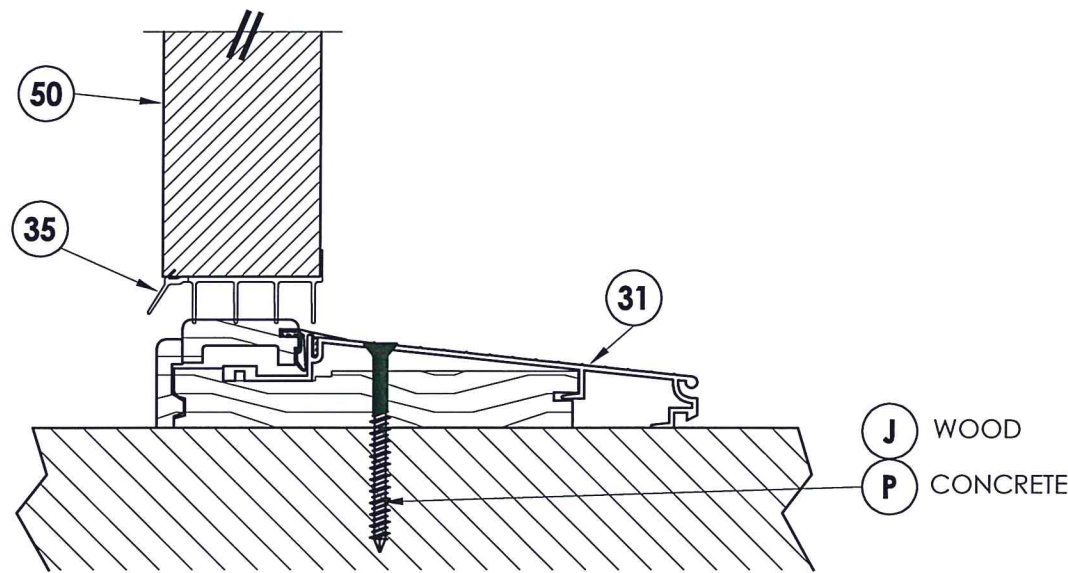
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PRODUCT: MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

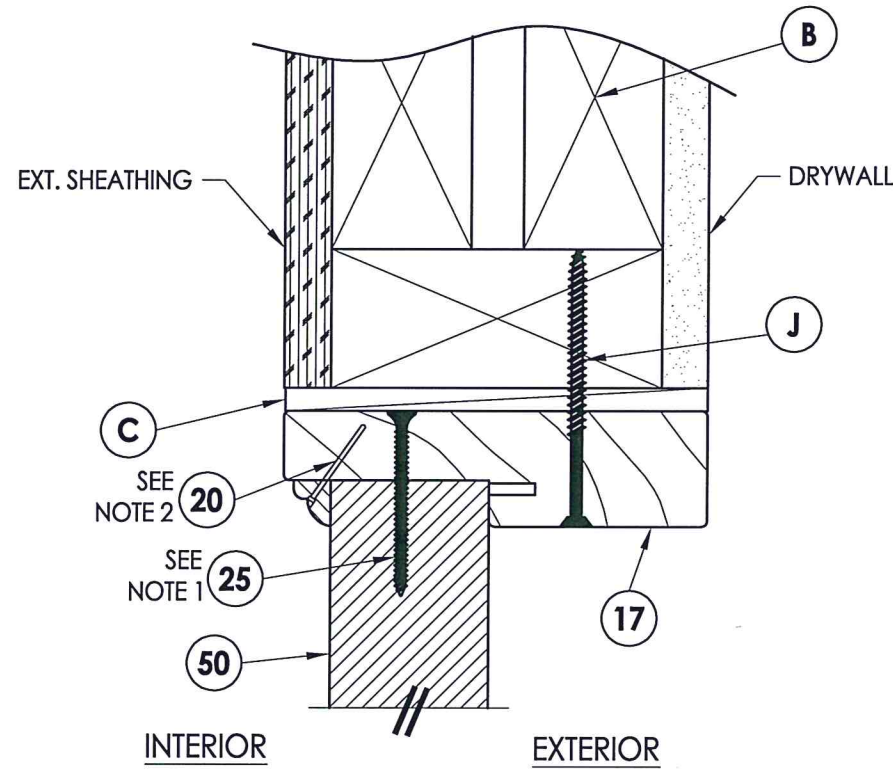
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DATE: 01/04/10
SCALE: N.T.S.
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CHK. BY: LFS
DRAWING NO.: TX-4046
SHEET 6 of 10

INTERIOR EXTERIOR



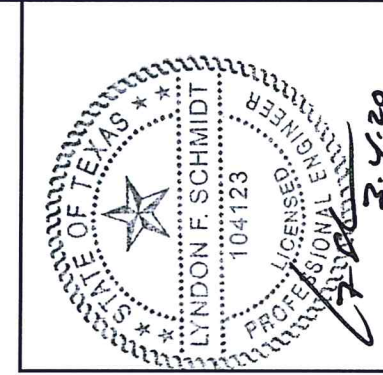
2
7 VERTICAL CROSS SECTION
Inswing configuration



1
7 VERTICAL CROSS SECTION

NOTE:

1. Screws thru head jamb located 3" from each end.
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).

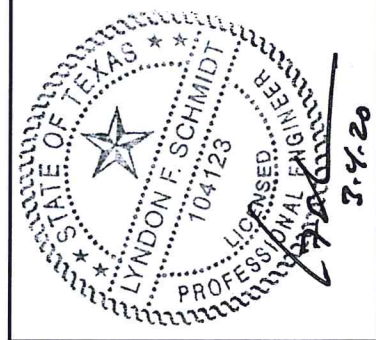


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| | |
|---|-------------------------------------|
| PRODUCT: MASTERGRAIN FIBERGLASS DOOR | |
| PART OR ASSEMBLY: VERTICAL CROSS SECTIONS | |
| NO. | REVISIONS |
| 1 | 3/03/20 UPDATE TO 2018 IBC/IRC CODE |
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| | BY |
| | LFS |
| DATE: 01/04/10 | |
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| DWG. BY: JK | |
| CHK. BY: LFS | |
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| SHEET 7 OF 10 | |

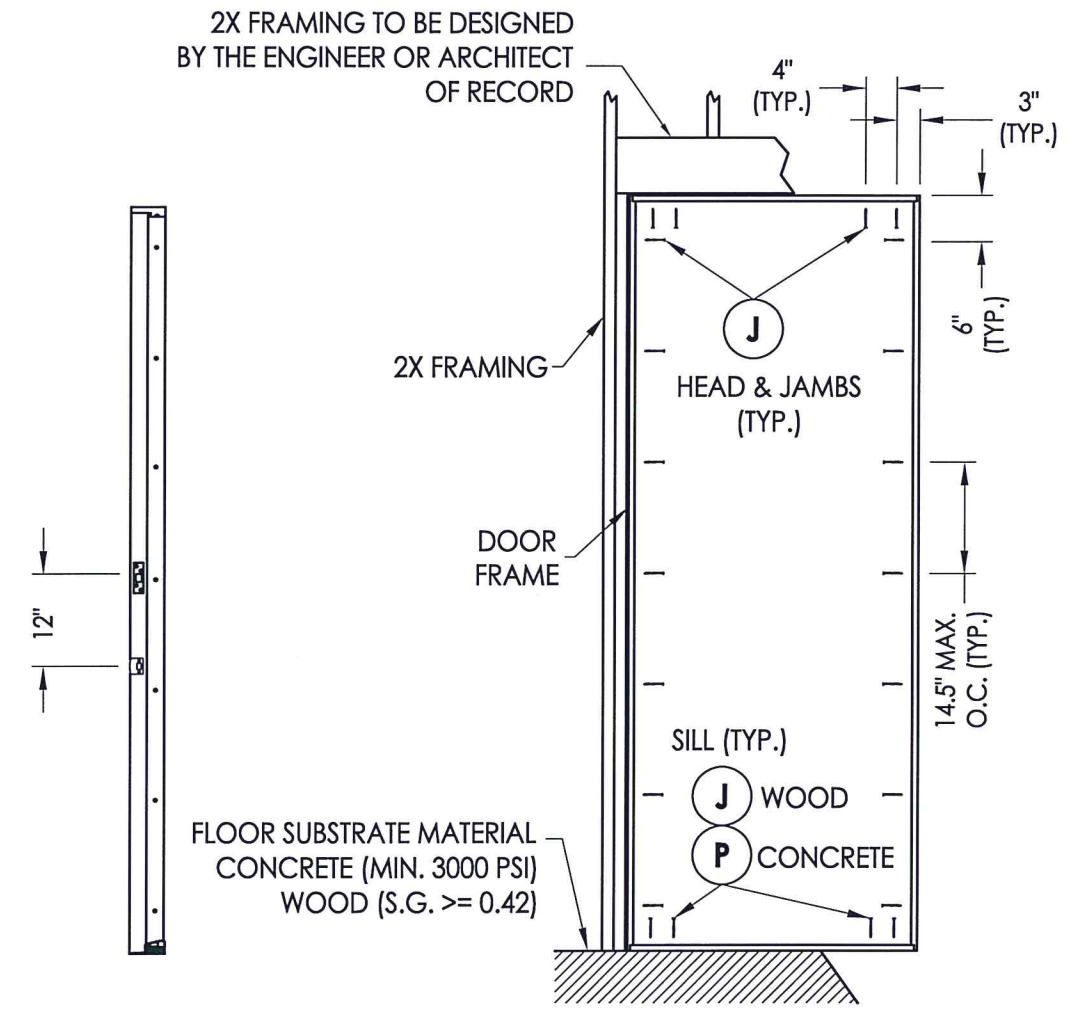
** Additional anchor required for DP > 50 PSF



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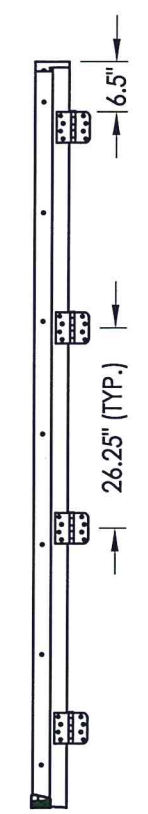
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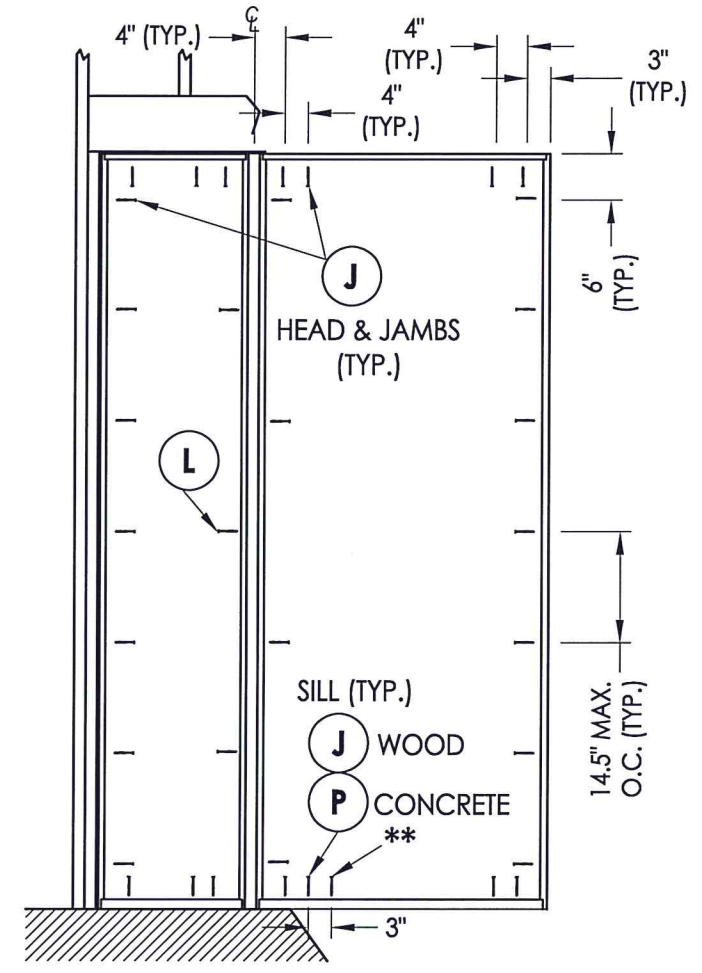


STRIKE JAMB

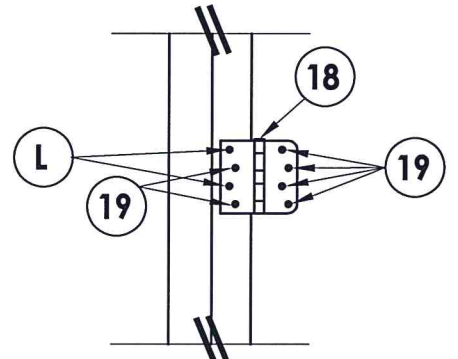
FRAME ANCHORING
Stud construction



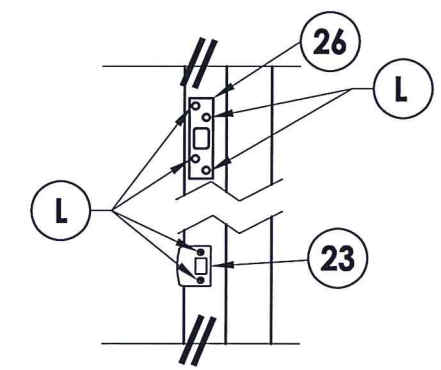
HINGE JAMB



FRAME ANCHORING
Masonry construction



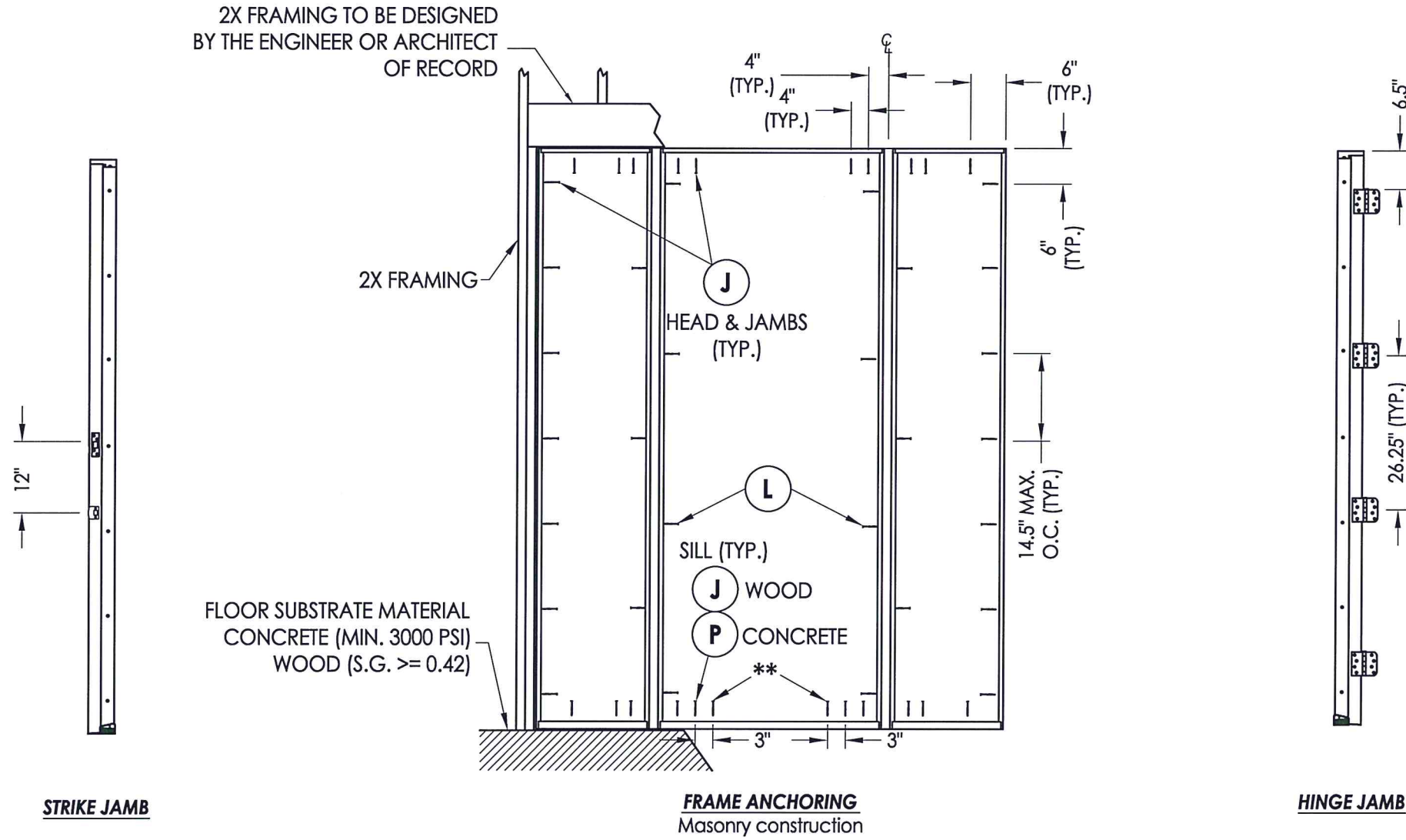
HINGE DETAIL



LATCH & DEADBOLT DETAIL
SECURITY STRIKE

| | | | |
|----------------------|---------|--------------------------------|-----|
| PRODUCT: | | MASTERGRAIN FIBERGLASS DOOR | |
| PART OR ASSEMBLY: | | FRAME ANCHORING | |
| NO. | DATE | DESCRIPTION | BY |
| 1 | 3/03/20 | UPDATE TO 2018 IBC/IRC CODE | LFS |
| REVISIONS | | | |
| DATE: 01/04/10 | | | |
| SCALE: N.T.S. | | | |
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| CHK. BY: LFS | | | |
| DRAWING NO.: TX-4046 | | | |
| SHEET 8 OF 10 | | | |

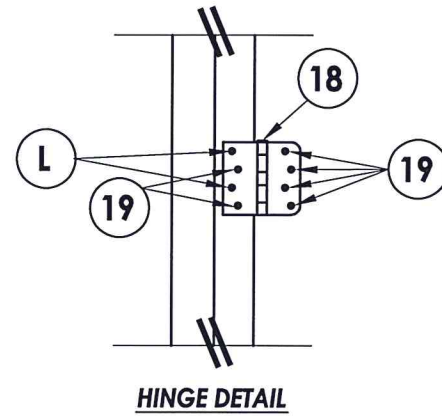
** Additional anchor required
for DP > 50 PSF



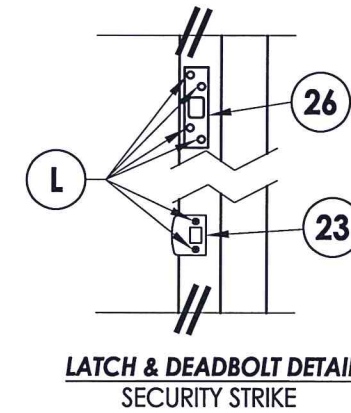
STRIKE JAMB

FRAME ANCHORING
Masonry construction

HINGE JAMB



HINGE DETAIL



LATCH & DEADBOLT DETAIL
SECURITY STRIKE



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| | |
|-------------------|--------------------------------|
| PRODUCT: | MASTERGRAIN FIBERGLASS DOOR |
| PART OR ASSEMBLY: | FRAME ANCHORING |

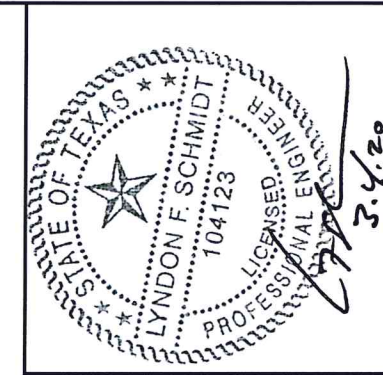
| NO. | DATE | DESCRIPTION | BY |
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| 1 | 3/03/20 | UPDATE TO 2018 IBC/IRC CODE | LFS |

| | |
|--------------|----------|
| DATE: | 01/04/10 |
| SCALE: | N.T.S. |
| DWG. BY: | JK |
| CHK. BY: | LFS |
| DRAWING NO.: | TX-4046 |
| SHEET | 9 OF 10 |

BILL OF MATERIALS

| ITEM # | DESCRIPTION | MATERIAL |
|--------|---|---------------|
| B | 2X FRAMING SG >= 0.42 | WOOD |
| C | 1/4" MAX. SHIM SPACE | - |
| J | #10 X 3" PFH WS | STEEL |
| K | #9 X 2-1/2" PFH WS | STEEL |
| L | #10 X 2-1/2" PFH WOOD SCREW | STEEL |
| P | 3/16" ELCO OR ITW PFH CONCRETE SCREW | STEEL |
| 1 | FEMALE LITE FRAME - MASTERGRAIN | POLYPROPYLENE |
| 2 | MALE LITE FRAME - MASTERGRAIN | POLYPROPYLENE |
| 3 | #8 X 1-3/4" PANHEAD SMS (LIGHT FRAME SCREW) | STEEL |
| 4 | ALUMINUM SPACER SYSTEM | ALUMINUM |
| 5 | SILICONE WEATHER SEAL MG #2500 | SILICONE |
| 6 | 2X MULLION SG > = 0.55 | WOOD |
| 7 | WEATHER STRIP | FOAM |
| 8 | #10 X 1-1/2" PFH | STEEL |
| 16 | SIDE JAMB SG > = 0.42 | WOOD |
| 17 | HEAD JAMB SG > = 0.42 | WOOD |
| 18 | 4" X 4" HINGE MIN 0.1" THICK | STEEL |
| 19 | #10 X 3/4" PFH WS | STEEL |
| 20 | 1" BRAD NAIL | STEEL |
| 21 | KWIKSET DEADBOLT -SERIES 690 CP | STEEL |
| 21A | COPPER CREEK DB2410 SC #8003 DEADBOLT | STEEL |
| 22 | KWIKSET LOCK -SERIES 690 CP PASSAGE | STEEL |
| 22A | COPPER CREEK BK2040 SC# 8379 PASSAGE | STEEL |

| | | |
|----|---|---------------|
| 23 | LATCH STRIKE PLATE | STEEL |
| 24 | DEADBOLT STRIKE PLATE | STEEL |
| 25 | #8 X 2-1/2" PFH WOOD SCREW | STEEL |
| 26 | SECURITY STRIKE PLATE | STEEL |
| 30 | DOOR BOTTOM SWEEP | VINYL |
| 31 | INSWING THRESHOLD | ALUM/COMP. |
| 32 | ADA THRESHOLD | ALUM. |
| 34 | SIDELITE THRESHOLD | ALUM./COMP. |
| 35 | SIDELITE SWEEP | VINYL |
| 40 | DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS | - |
| 41 | HINGE AND LATCH REINFORCMENT | WOOD |
| 42 | HINGE AND LATCH STILE - SG >= 0.42 | WOOD |
| 44 | TOP RAIL | COMP. |
| 45 | BOTTOM RAIL | COMP. |
| 47 | POLYEURETHANE FOAM | POLYEURETHANE |
| 49 | FIBERGLASS SKIN 0.08" MIN. THICKNESS | FIBERGLASS |
| 50 | SIDELITE PANEL - SEE SIDELITE PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS | - |
| 52 | SIDELITE STILE - SG >= 0.42 | WOOD |
| 53 | SIDELITE BOTTOM RAIL SG > = 0.42 | WOOD |
| 54 | SIDELITE TOP RAIL SG > = 0.42 | WOOD |
| 55 | SIDELITE TRIM | WOOD |



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: BILL OF MATERIALS

| NO. | DATE | DESCRIPTION | BY |
|-----|---------|-----------------------------|-----|
| 1 | 3/03/20 | UPDATE TO 2018 IBC/IRC CODE | LFS |

REVISIONS

DATE: 01/04/10
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4046
SHEET 10 of 10

CONCRETE ANCHOR NOTES:

- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
- Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimension are not exceeded.
- Concrete anchor table:

| ANCHOR TYPE | ANCHOR SIZE | MIN. EMBEDMENT | MIN. CLEARANCE TO MASONRY EDGE | MIN. CLEARANCE TO ADJACENT ANCHOR |
|----------------|-------------|----------------|--------------------------------|-----------------------------------|
| ITW TAPCON® | 1/4" | 1-3/4" | 1-1/2" | 4" |
| ELCO ULTRACON® | 1/4" | 1-3/4" | 1" | 4" |

