plastpro

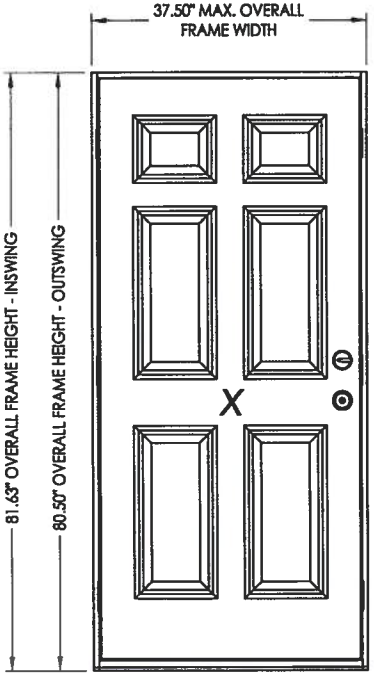
5200 W. CENTURY BLVD.
LOS ANGELES, CA 90045

Smooth / Wood Grain / White Wood Grain
Rustic / Mahogany
Series N Fiberglass Door
INSWING / OUTSWING
"NON-IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 6th Edition (2017) Florida Building Code (FBC) structural requirements including the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in the "HVHZ" this product is required to be protected with an impact resistant covering that complies with Section 1626 of the FBC.
4. When used in areas outside of the "HVHZ" requiring wind borne debris protection, this product is required to be protected with an impact resistant covering that complies with FBC Sections 1609.1.2 & R301.2.1.2.
5. For 2x stud construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
6. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
7. Outswing configurations meet water infiltration requirements for "HVHZ".
8. Inswing configurations do not meet the water infiltration requirements for the "HVHZ". Inswing units shall be installed only in non-habitable areas or at habitable locations protected by an overhang or canopy such that the angle between the edge of canopy or overhang to sill is less than 45 degrees.

TABLE OF CONTENTS



SWING	MAX. FRAME DIMENSION	DESIGN PRESSURE (PSF)	
		POSITIVE	NEGATIVE
INSWING	37.50" x 81.63"	+50.0	-50.0
OUTSWING	37.50" x 80.50"	+50.0	-50.0

STATE OF FLORIDA — LYNDON F. SCHMIDT — LICENSE No. 43409 — PROFESSIONAL ENGINEER

9.26.17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

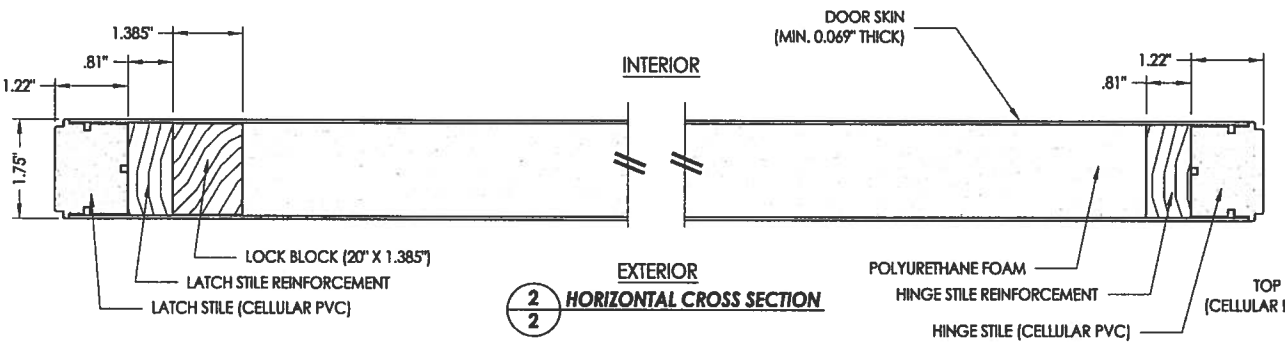
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

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

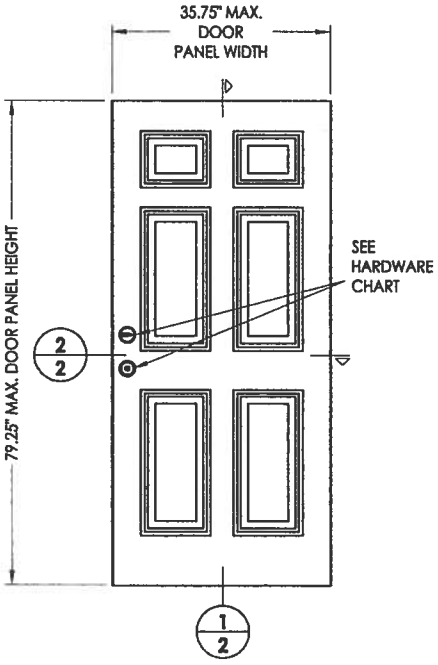
NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 1 OF 9

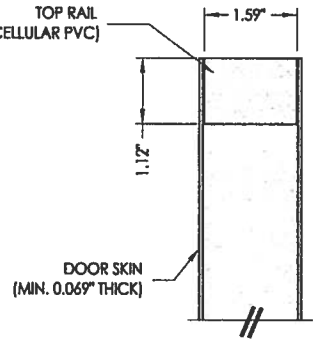
R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approval\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.6.dwg, FL-15220.6



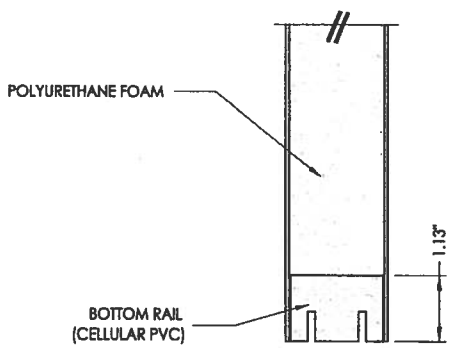
2/2 HORIZONTAL CROSS SECTION



40 DOOR PANEL



EXTERIOR INTERIOR



1/2 VERTICAL CROSS SECTION

HARDWARE CHART	
MANUFACTURER	MODEL
KWIKSET	LOCK: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (780)
YALE	LOCK: YH COLLECTION DEADBOLT: YH COLLECTION (80 SERIES)

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.8197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

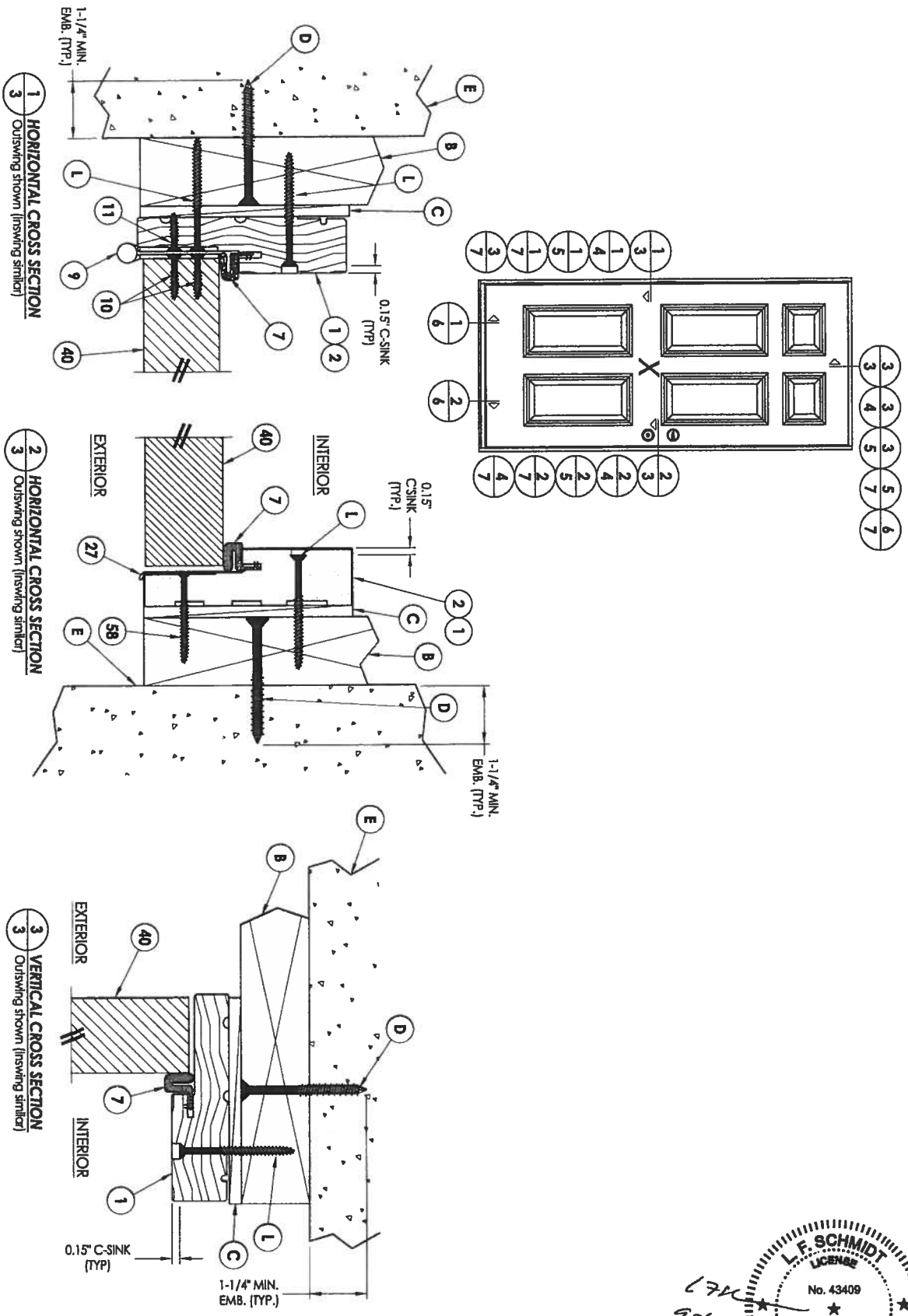
PART OR ASSEMBLY: DOOR PANEL DETAILS

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 2 OF 9

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\15221 - Jim Sent 9-21-17\FL-15220.6.dwg

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\15221 - Jim Sent 9-21-17\FL-15220.6.dwg



1/3 HORIZONTAL CROSS SECTION
Outswing shown (Inswing similar)

2/3 HORIZONTAL CROSS SECTION
Outswing shown (Inswing similar)

3/3 VERTICAL CROSS SECTION
Outswing shown (Inswing similar)

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

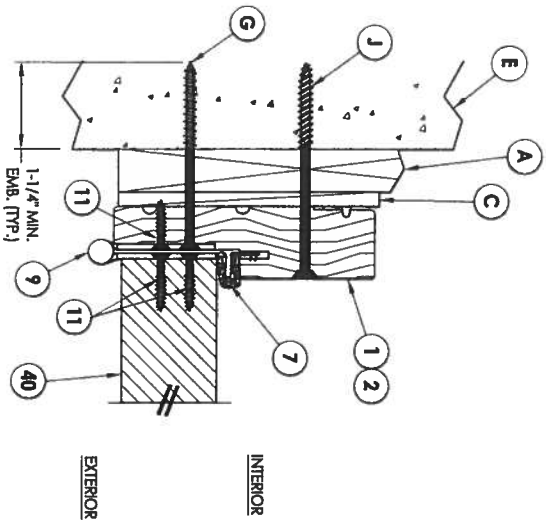
DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 3 OF 9

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

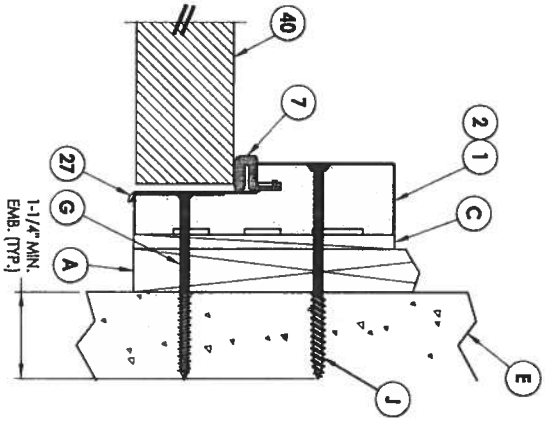
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

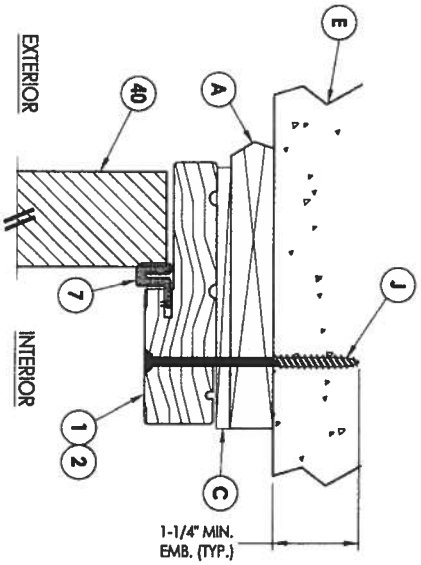
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813



1/4 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



2/4 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



3/4 VERTICAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

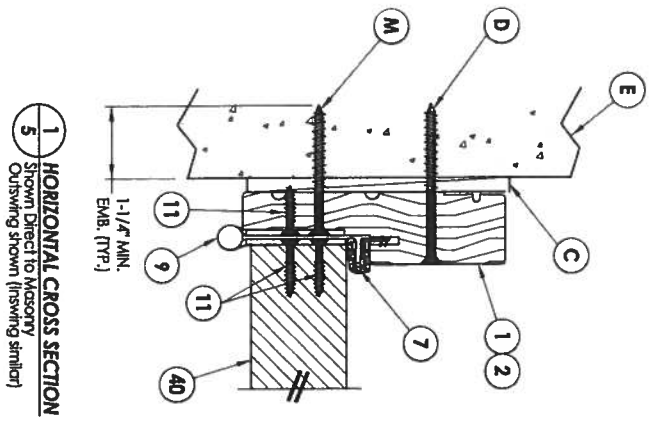
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)

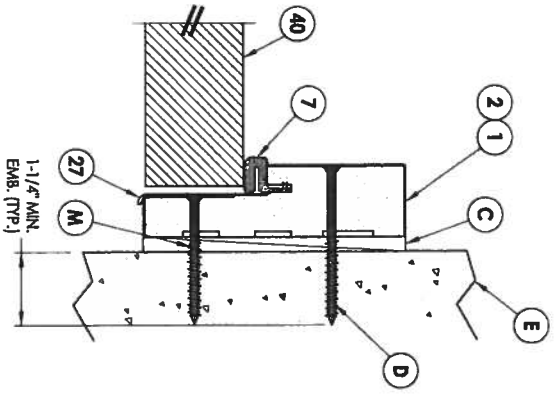
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

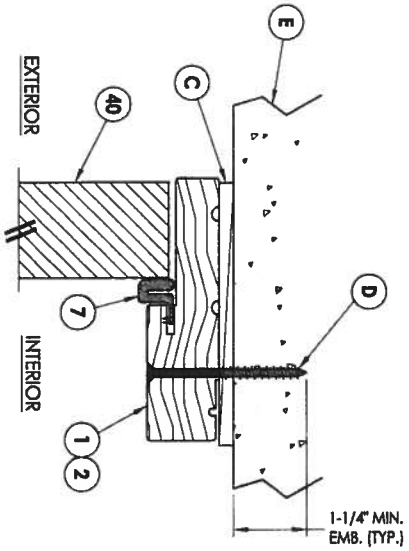
DATE: 02/20/16
SCALE: N.T.S.
DWN. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 4 OF 9



1/5 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



2/5 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



3/5 **VERTICAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

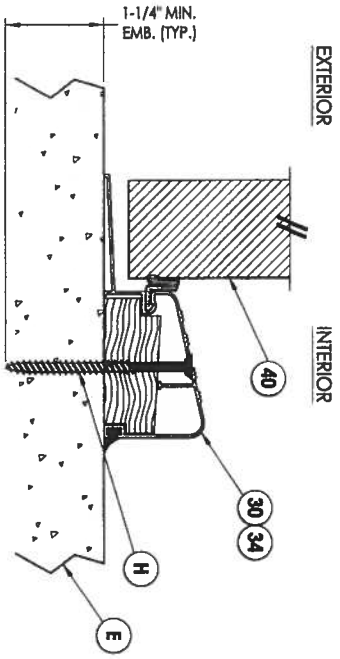
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (DIRECT TO MASONRY)

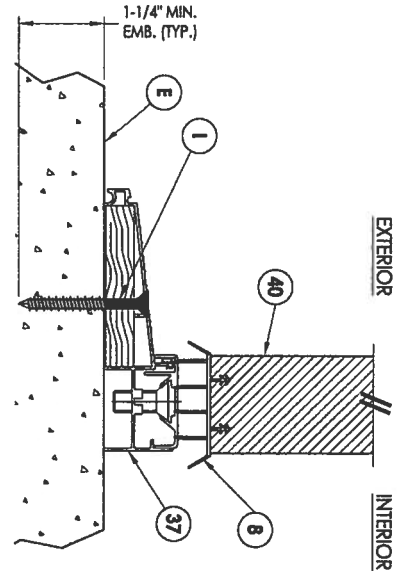
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 5 OF 9



1/6 VERTICAL CROSS SECTION
Outswing configuration



3/6 VERTICAL CROSS SECTION
Inswing configuration

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 6 OF 9

PRODUCT:
PLASTPRO INC.
FIBERGLASS DOOR

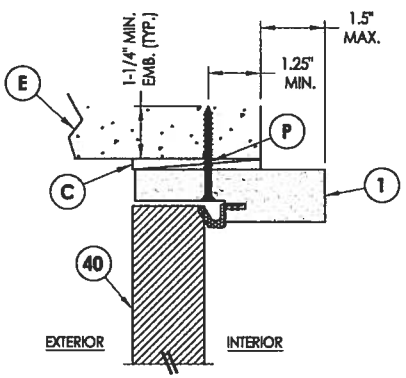
PART OR ASSEMBLY:
VERTICAL CROSS SECTIONS (THRESHOLDS)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

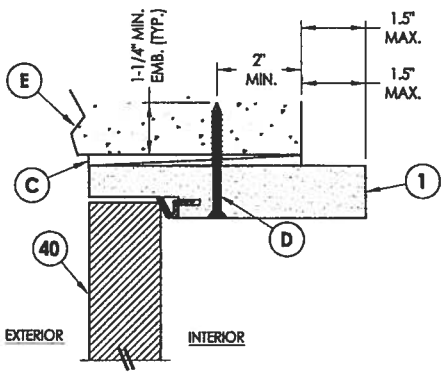
L. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

6-26-17

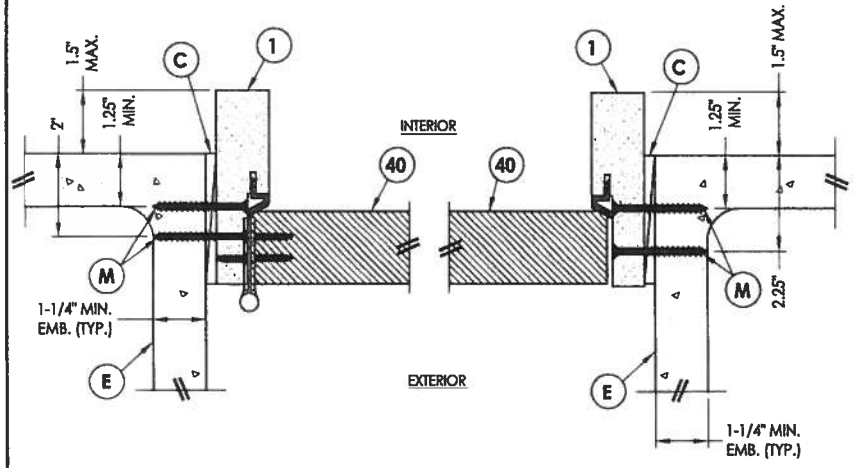
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813



5/7 VERTICAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb

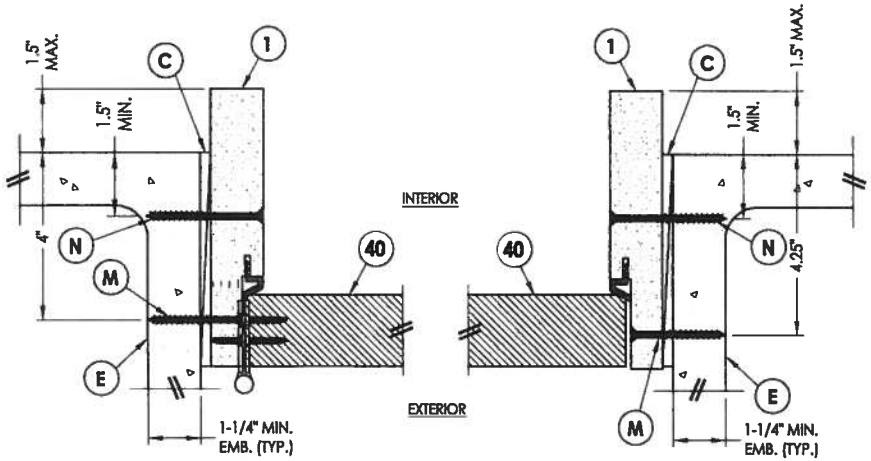


6/7 VERTICAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb



1/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb

2/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb



3/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

4/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

Documents Prepared By: STATE OF FLORIDA
Lyndon F. Schmidt
P.E. No. 43409
LYNDON F. SCHMIDT LICENSE No. 43409 PROFESSIONAL ENGINEER
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

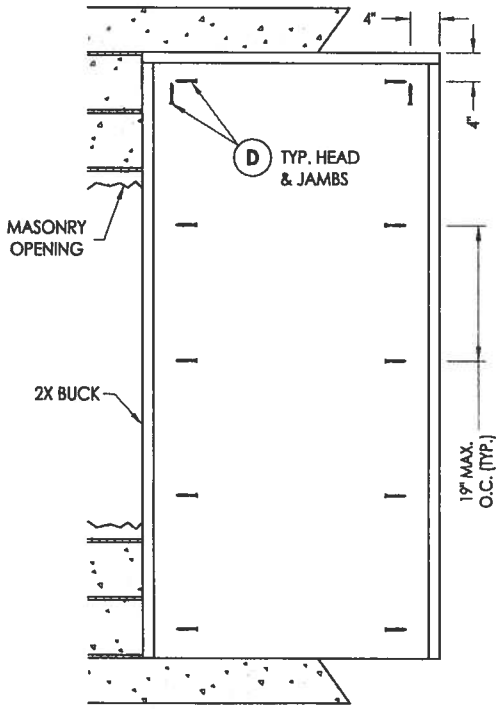
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL SECTIONS (DIRECT TO MASONRY)

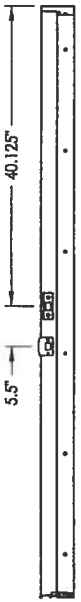
NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 7 OF 9

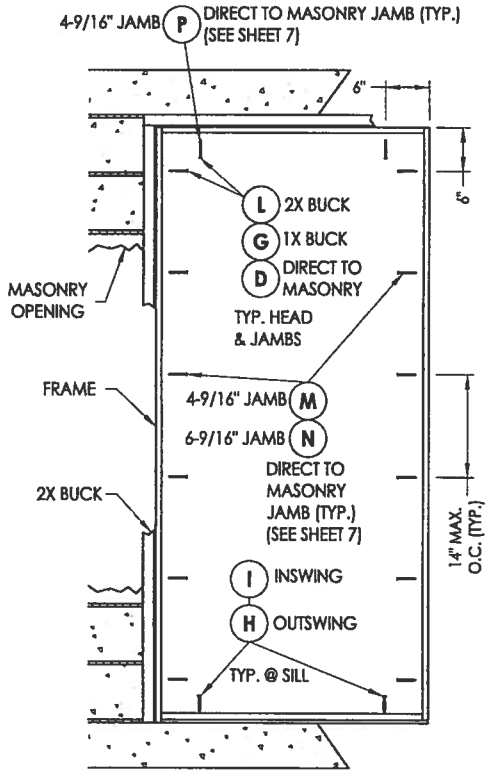
R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\15221 - Jim Sent 9-21-17\FL-15220.6.dwg



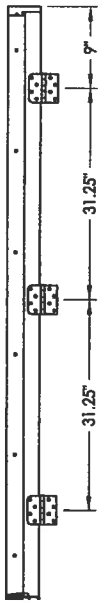
BUCK ANCHORING



STRIKE JAMB



FRAME ANCHORING
Masonry 2X buck construction



HINGE JAMB

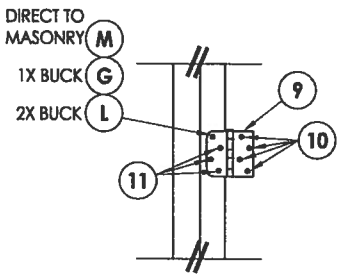
CONCRETE ANCHOR NOTES:

1. *Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.*
2. *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.*
3. *Concrete anchor table:*

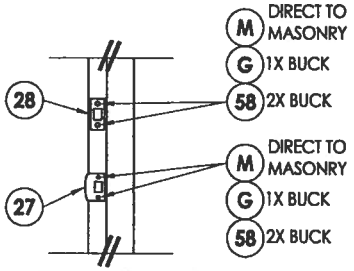
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
ELCO ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

WOOD SCREW INSTALLATION NOTES:

1. *Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.*



HINGE DETAIL



LATCH & DEADBOLT DETAIL

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

L. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

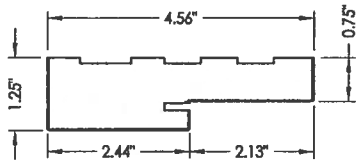
PART OR ASSEMBLY: BUCK AND FRAME ANCHORING

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

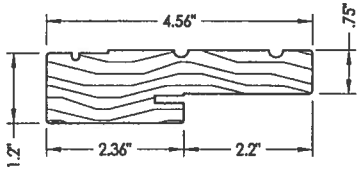
DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 8 OF 9

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.6.dwg, 1-8

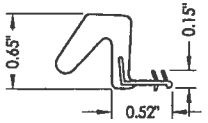
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK SG >= 0.55	WOOD
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" x 3-1/4" PFH ITW CONCRETE SCREW	STEEL
H	1/4" X 3-1/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
I	1/4" X 1-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
K	1/4" X 2-1/4" ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
M	3/16" X 2-1/4" ITW CONCRETE SCREW	STEEL
N	3/16" X 2-3/4" ITW CONCRETE SCREW	STEEL
P	1/4" X 2-1/4" PFH ELCO CONCRETE SCREW	STEEL
1	POLY FIBER JAMB	COMP. / VINYL
2	FINGER JOINTED PINE FRAME	WOOD
7	WEATHERSTRIP	FOAM
8	DOOR BOTTOM SWEEP	VINYL
9	4" X 4" BUTT HINGE	STEEL
11	#9 X 3/4" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
30	OUTSWING THRESHOLD	ALUM/WOOD
34	OUTSWING THRESHOLD	ALUM/WOOD
37	INSWING THRESHOLD	ALUM/WOOD
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
58	#8 X 2" PFH WOOD SCREW	STEEL



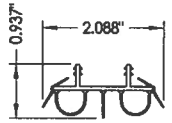
1 POLY FIBER JAMB
Plastpro



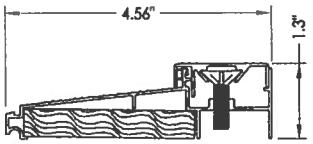
2 WOOD JAMB



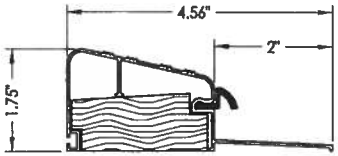
7 WEATHERSTRIP
Endura Force 5



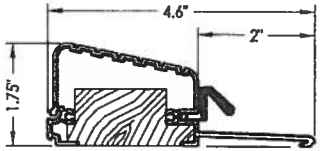
8 DOOR BOTTOM SWEEP



37 INSWING THRESHOLD
DLP (ISCS)



30 OUTSWING THRESHOLD
DLP (QOSR)



34 OUTSWING THRESHOLD
Columbia High Dam (581)

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER
9.26.17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR
PART OR ASSEMBLY: BILL OF MATERIALS

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.6
SHEET 9 OF 9

Blank

plastpro

5200 W. CENTURY BLVD.
LOS ANGELES, CA 90045

Smooth / Wood Grain / White Wood Grain Rustic / Mahogany

Series N Fiberglass Door

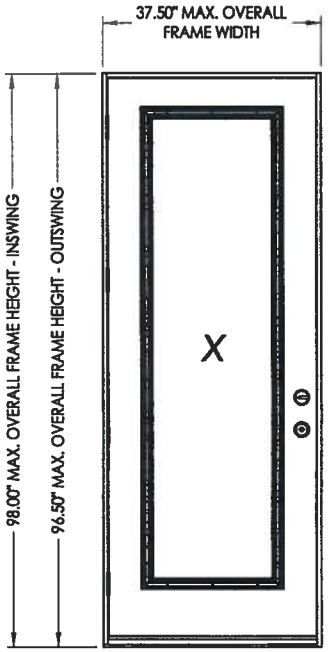
INSWING / OUTSWING

"NON-IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 6th Edition (2017) Florida Building Code (FBC) structural requirements including the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in the "HVHZ" this product is required to be protected with an impact resistant covering that complies with Section 1626 of the FBC.
4. When used in areas outside of the "HVHZ" requiring wind borne debris protection, this product is required to be protected with an impact resistant covering that complies with FBC Sections 1609.1.2 & R301.2.1.2.
5. For 2x stud construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
6. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
7. Outswing configurations meet water infiltration requirements for "HVHZ".
8. Inswing configurations do not meet the water infiltration requirements for the "HVHZ". Inswing units shall be installed only in non-habitable areas or at habitable locations protected by an overhang or canopy such that the angle between the edge of canopy or overhang to sill is less than 45 degrees.

TABLE OF CONTENTS



SWING	OVERALL FRAME DIMENSION	DESIGN PRESSURE (PSF)	
		POSITIVE	NEGATIVE
INSWING	37.50" x 98.00"	+47.0	-47.0
OUTSWING	37.50" x 96.50"	+47.0	-47.0

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

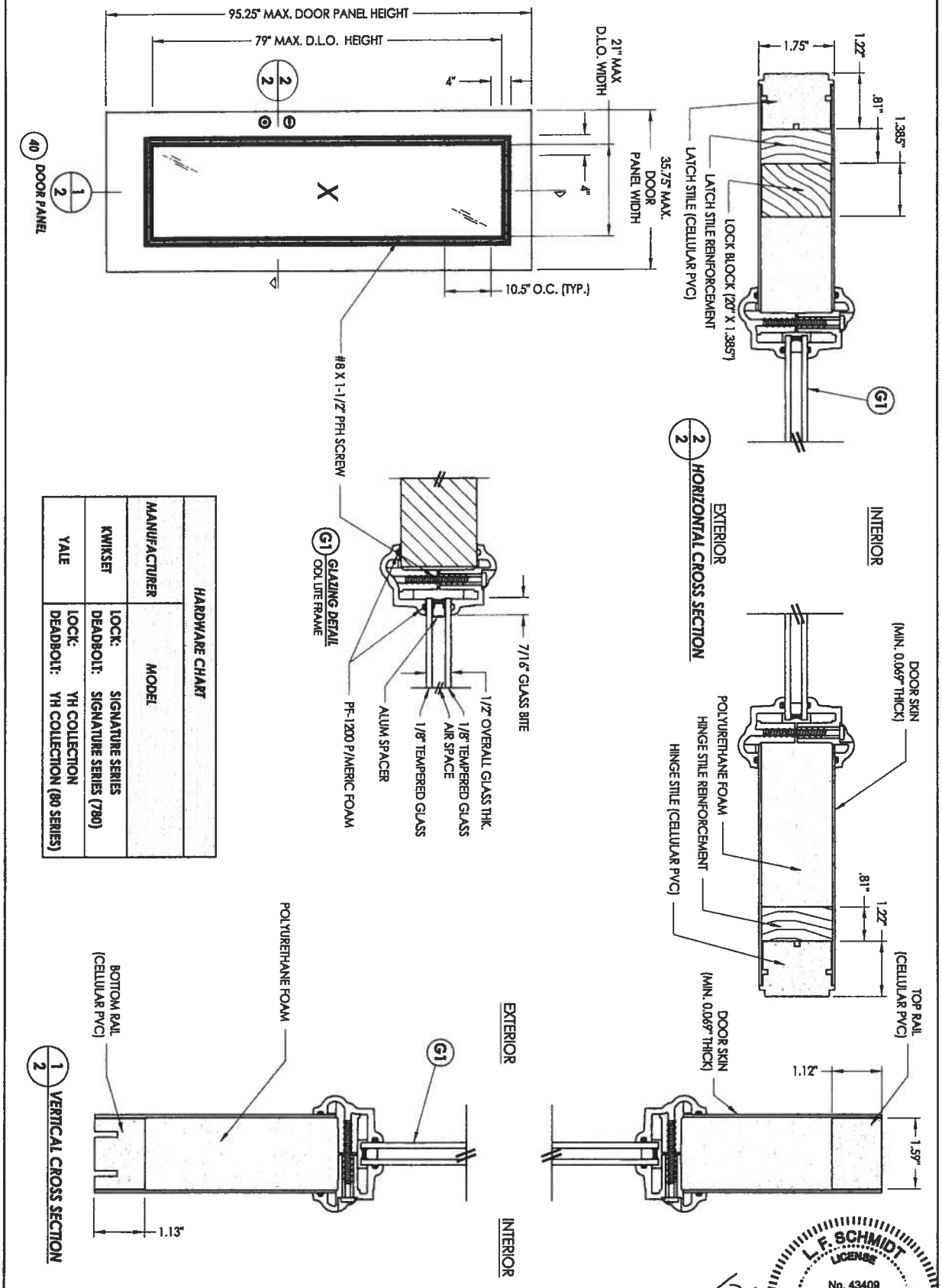
PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 1 OF 9

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.11.dwg, FL-15220.11

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\15221 - Jim Sent 9-21-17\FL-15220.11.dwg



HARDWARE CHART	
MANUFACTURER	MODEL
KWIKSET	LOCK: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (780)
YALE	LOCK: YH COLLECTION DEADBOLT: YH COLLECTION (80 SERIES)

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 2 OF 9

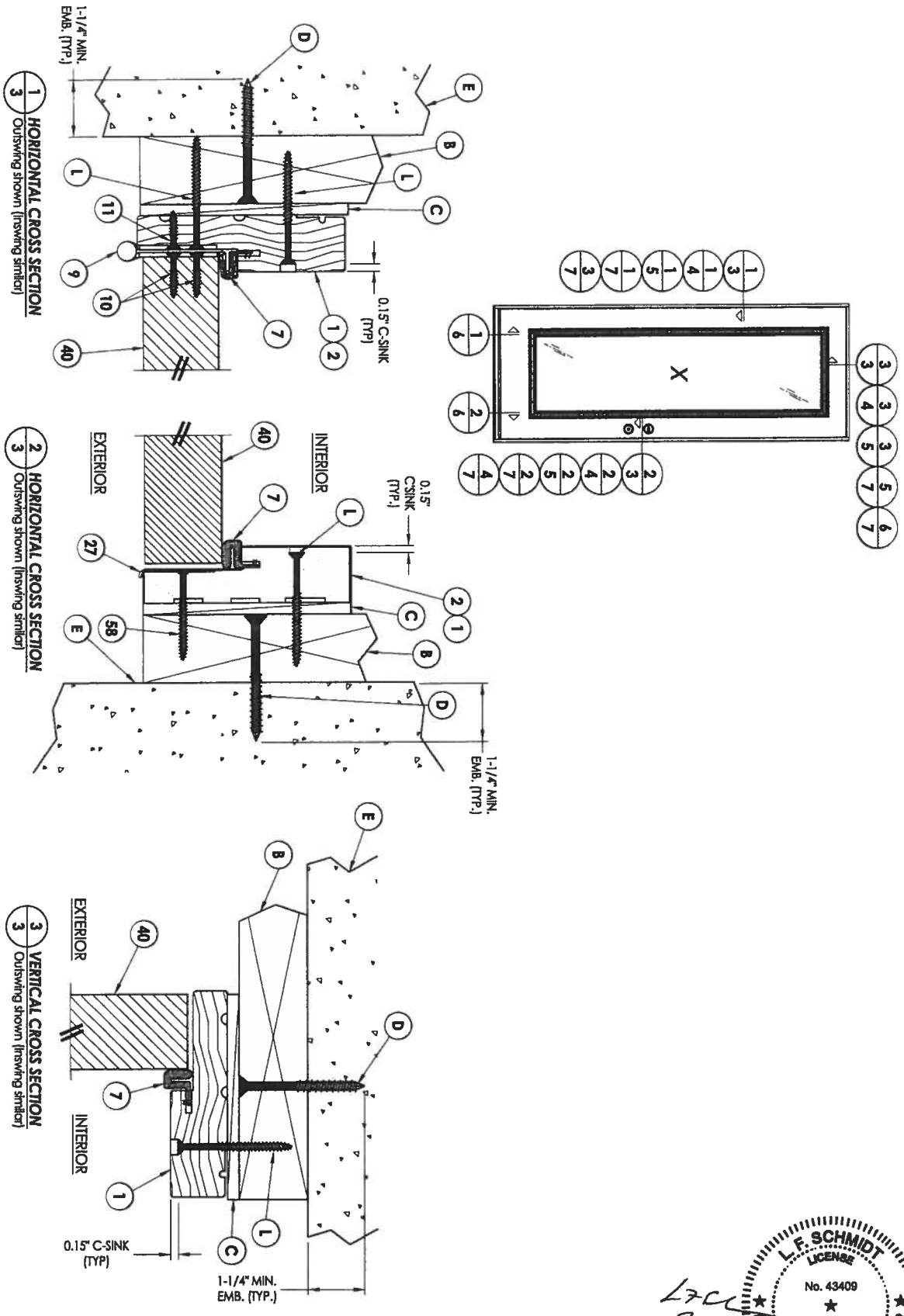
PRODUCT: PLASTPRO INC FIBERGLASS DOOR

PART OR ASSEMBLY: DOOR PANEL DETAILS AND GLAZING DETAIL

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\15221 - Jim Sent 9-21-17\FL-15220.11.dwg



L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK	
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK	
NO.	DATE	REVISIONS	BY	

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 3 OF 9

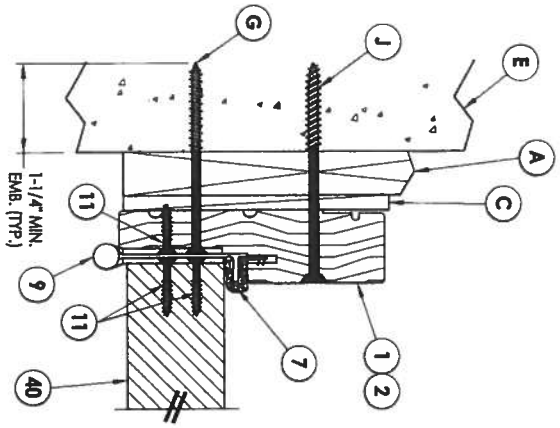
PRODUCT: PLASTPRO INC FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)

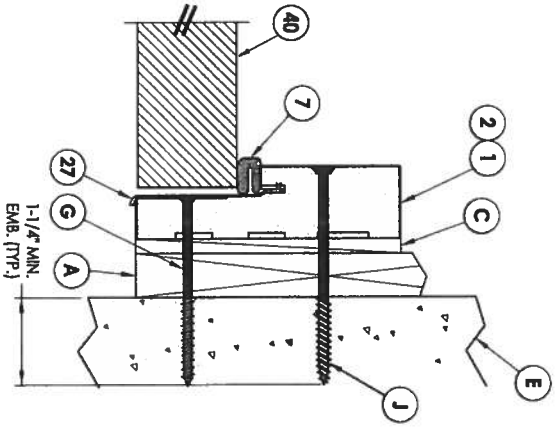
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

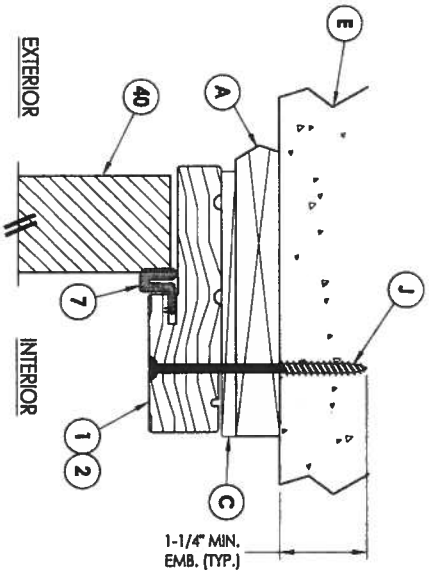
R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\15221 - Jim Sent 9-21-17\FL-15220.11.dwg



1/4 **HORIZONTAL CROSS SECTION**
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



2/4 **HORIZONTAL CROSS SECTION**
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)



3/4 **VERTICAL CROSS SECTION**
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

5-7-17

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

PRODUCT: PLASTPRO INC FIBERGLASS DOOR

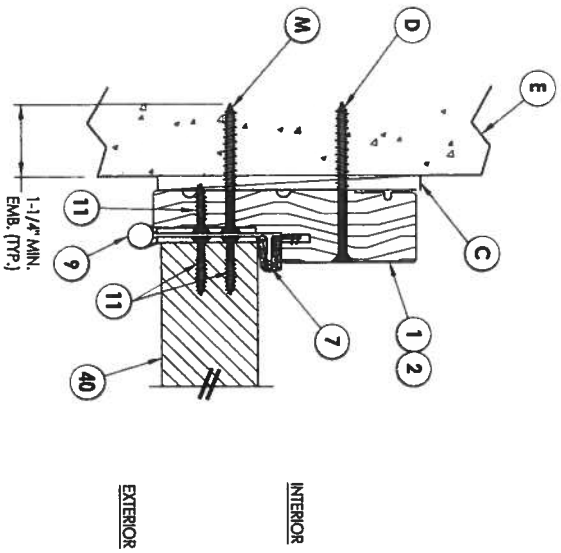
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

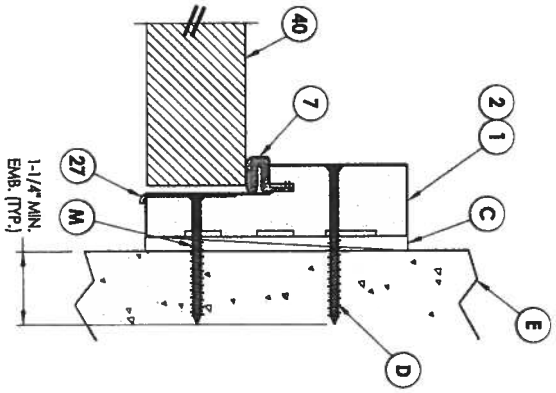
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 4 OF 9

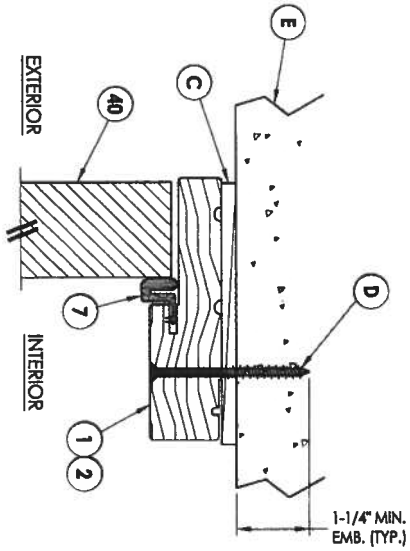
1/5 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



2/5 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



3/5 **VERTICAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



L.F. SCHMIDT
LICENSE
No. 43409
STATE OF FLORIDA
PROFESSIONAL ENGINEER

5.26.17

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

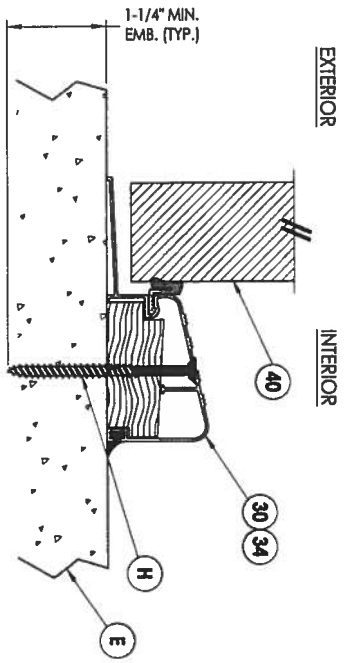
DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 5 OF 9

PRODUCT:
PLASTPRO INC
FIBERGLASS DOOR

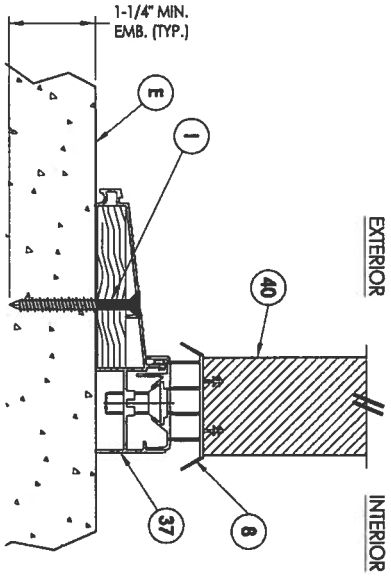
PART OR ASSEMBLY:
HORIZONTAL & VERTICAL CROSS SECTIONS (DIRECT TO MASONRY)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813



1/6 VERTICAL CROSS SECTION
Outswing configuration



3/6 VERTICAL CROSS SECTION
Inswing configuration

LF SCHMIDT LICENSE No. 43409 PROFESSIONAL ENGINEER STATE OF FLORIDA

9.26-17

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

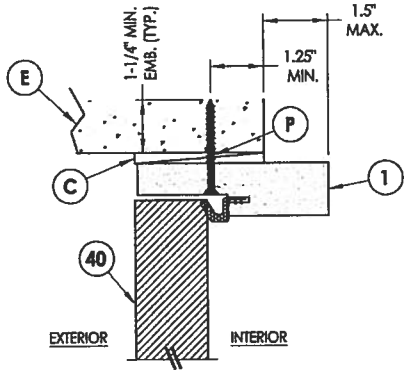
DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 6 OF 9

PRODUCT: PLASTPRO INC FIBERGLASS DOOR

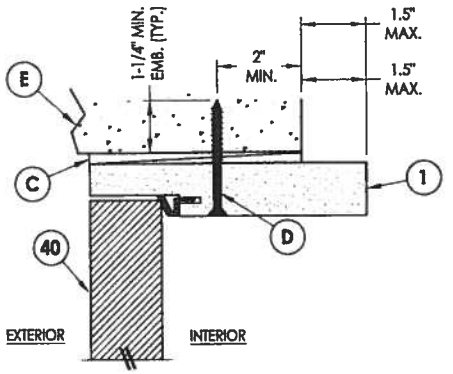
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS (THRESHOLDS)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

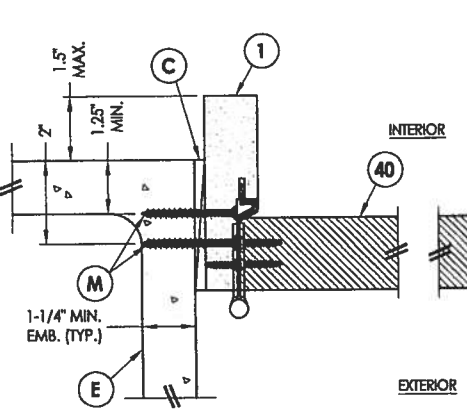
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813



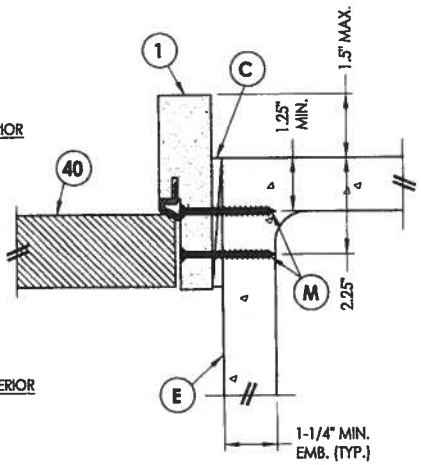
5/7 VERTICAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb



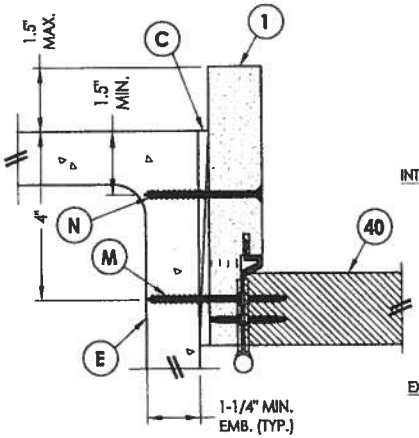
6/7 VERTICAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb



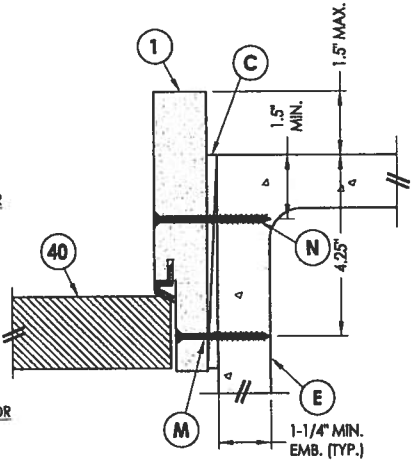
1/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb



2/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 4-9/16" jamb



3/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb



4/7 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

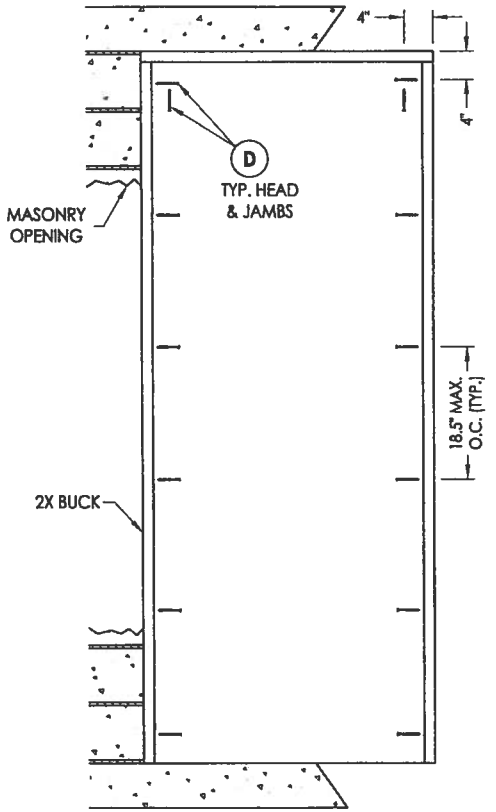
L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER
5.26.17
Documents Prepared By:
Lynden F. Schmidt
P.E. No. 43409
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL SECTIONS (DIRECT TO MASONRY)

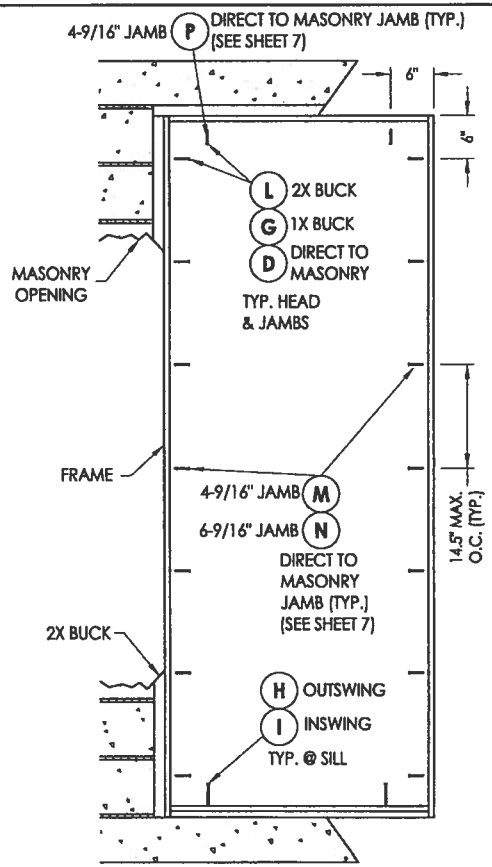
NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 7 OF 9

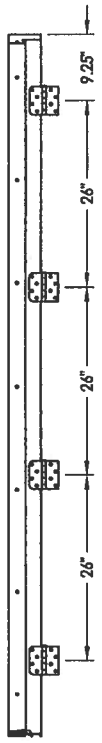


BUCK ANCHORING

STRIKE JAMB



FRAME ANCHORING



HINGE JAMB

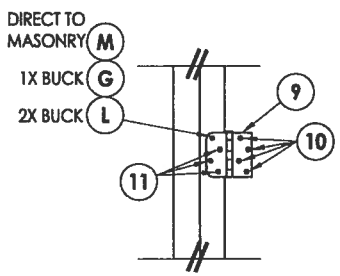
CONCRETE ANCHOR NOTES:

1. *Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.*
2. *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.*
3. *Concrete anchor table:*

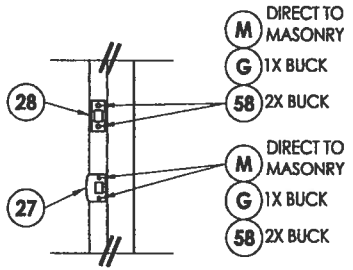
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
ELCO ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

WOOD SCREW INSTALLATION NOTES:

1. *Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.*



HINGE DETAIL



LATCH & DEADBOLT DETAIL

5.26.17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

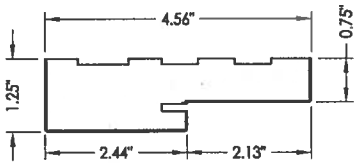
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: BUCK AND FRAME ANCHORING

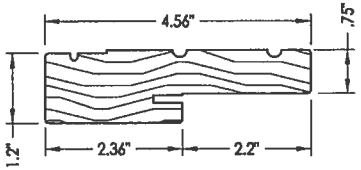
NO	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 8 OF 9

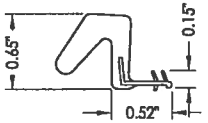
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK SG >= 0.55	WOOD
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" x 3-1/4" PFH ITW CONCRETE SCREW	STEEL
H	1/4" X 3-1/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
I	1/4" X 1-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
K	1/4" X 2-1/4" ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
M	3/16" X 2-1/4" ITW CONCRETE SCREW	STEEL
N	3/16" X 2-3/4" ITW CONCRETE SCREW	STEEL
P	1/4" X 2-1/4" PFH ELCO CONCRETE SCREW	STEEL
1	POLY FIBER JAMB	COMP. / VINYL
2	FINGER JOINTED PINE FRAME	WOOD
7	WEATHERSTRIP	FOAM
8	DOOR BOTTOM SWEEP	VINYL
9	4" X 4" BUTT HINGE	STEEL
11	#9 X 3/4" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
30	OUTSWING THRESHOLD	ALUM/WOOD
34	OUTSWING THRESHOLD	ALUM/WOOD
37	INSWING THRESHOLD	ALUM/WOOD
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
58	#8 X 2" PFH WOOD SCREW	STEEL



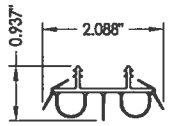
1 POLY FIBER JAMB
Plastpro



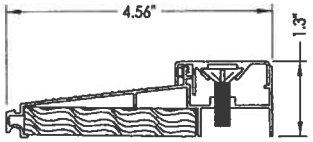
2 WOOD JAMB



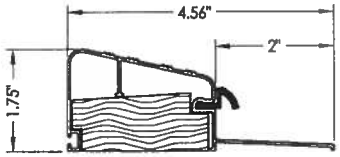
7 WEATHERSTRIP
Endura Force 5



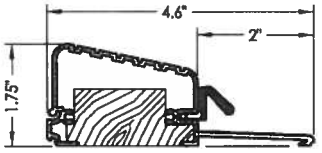
8 DOOR BOTTOM SWEEP



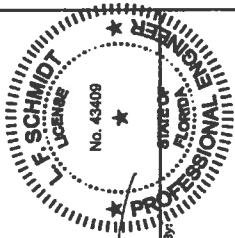
37 INSWING THRESHOLD
DLP (ISCS)



30 OUTSWING THRESHOLD
DLP (QOSR)



34 OUTSWING THRESHOLD
Columbia High Dam (581)



5-26-17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.658.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: BILL OF MATERIALS

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.11
SHEET 9 OF 9

Blank

plastpro

5200 W. CENTURY BLVD.
LOS ANGELES, CA 90045

Smooth / Wood Grain / White Wood Grain Rustic / Mahogany

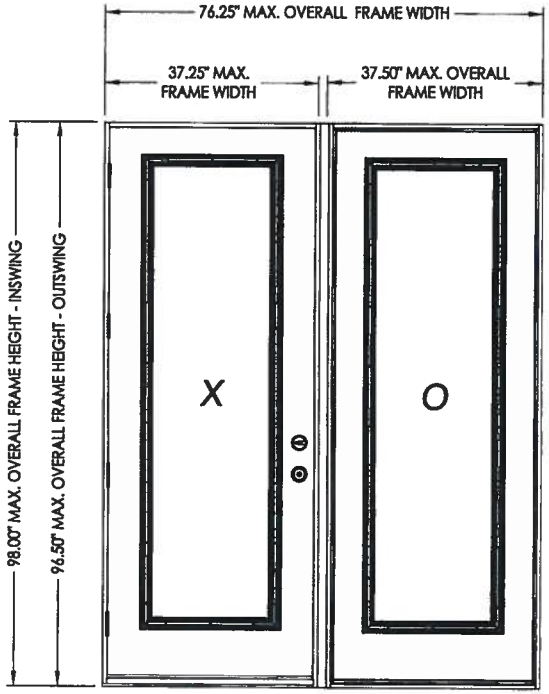
Series N Fiberglass Door

INSWING / OUTSWING "NON-IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 6th Edition (2017) Florida Building Code (FBC) structural requirements including the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. When used in the "HVHZ" this product is required to be protected with an impact resistant covering that complies with Section 1626 of the FBC.
4. When used in areas outside of the "HVHZ" requiring wind borne debris protection, this product is required to be protected with an impact resistant covering that complies with FBC Sections 1609.1.2 & R301.2.1.2.
5. For 2x stud construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
6. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
7. Outswing configurations meet water infiltration requirements for "HVHZ".
8. Inswing configurations do not meet the water infiltration requirements for the "HVHZ". Inswing units shall be installed only in non-habitable areas or at habitable locations protected by an overhang or canopy such that the angle between the edge of canopy or overhang to sill is less than 45 degrees.

TABLE OF CONTENTS



OVERALL FRAME DIMENSION	OVERALL D.L.O. DIMENSION	GLASS TYPE	DESIGN PRESSURE (PSF)	
			POSITIVE	NEGATIVE
76.25" X 98.0"	21.0" X 79.0"	G1	+47.0	-47.0

T. F. SCHMIDT License No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.859.9197
FBPE C.A. No. 9813

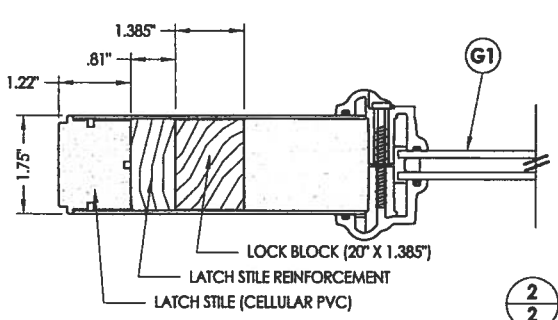
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

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

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 1 OF 11

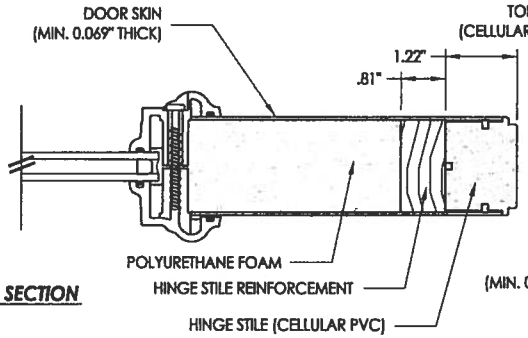
R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, FL-15220.12

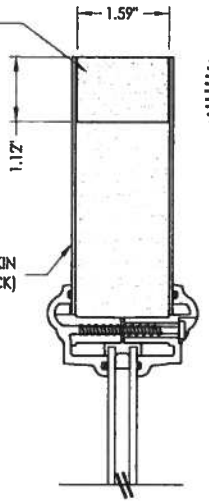


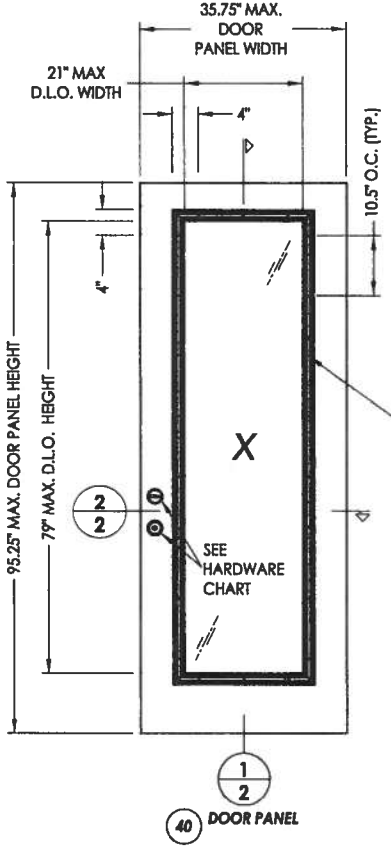
INTERIOR

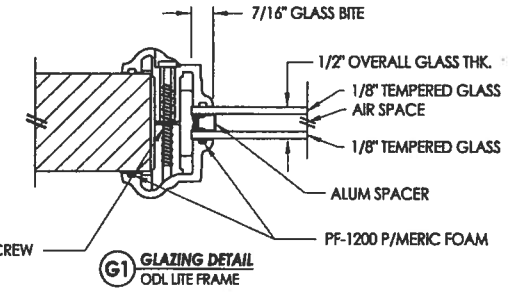
EXTERIOR

2/2 HORIZONTAL CROSS SECTION



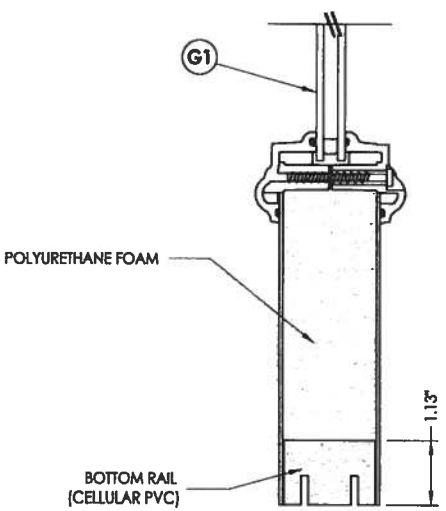






HARDWARE CHART	
MANUFACTURER	MODEL
KWIKSET	LOCK: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (780)
YALE	LOCK: YH COLLECTION DEADBOLT: YH COLLECTION (80 SERIES)

EXTERIOR INTERIOR



1/2 VERTICAL CROSS SECTION

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

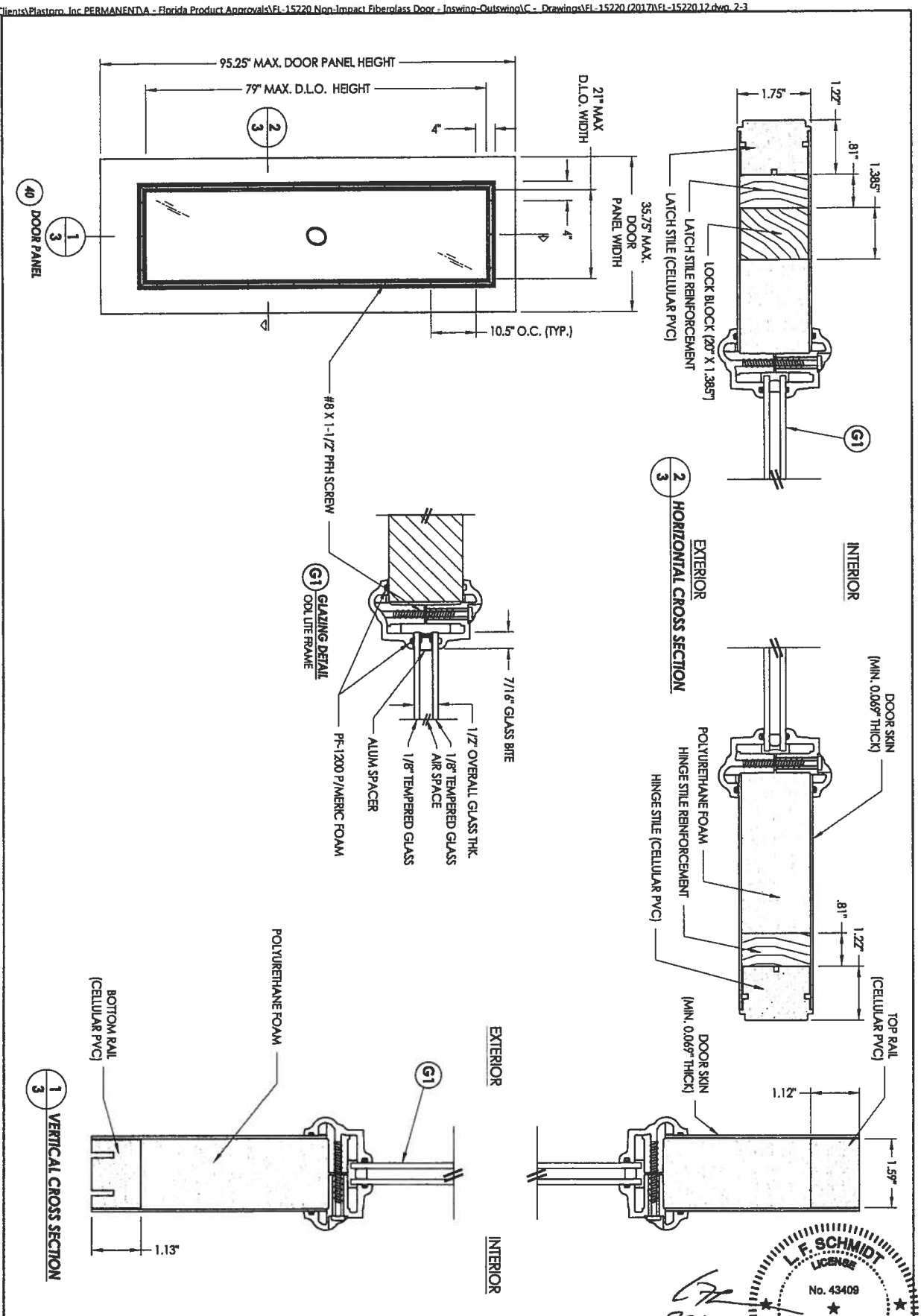
PART OR ASSEMBLY: DOOR PANEL DETAILS AND GLAZING DETAIL

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 2 OF 11

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, 2-2

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, 2-3



9.26.17

L. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DATE		BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

REVISIONS

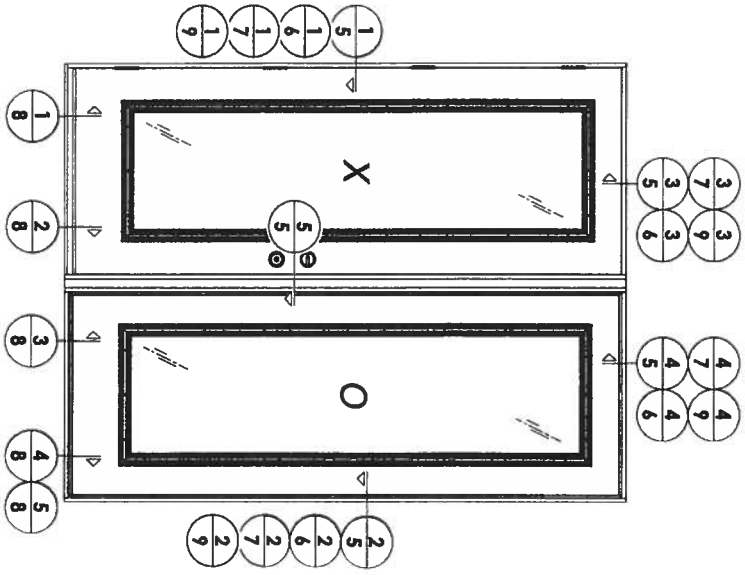
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: SIDELITE PANEL DETAILS AND GLAZING DETAIL

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 3 OF 11



NO.	DATE		BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

REVISIONS

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 4 OF 11

PRODUCT:
PLASTPRO INC.
FIBERGLASS DOOR

PART OR ASSEMBLY:
ELEVATION

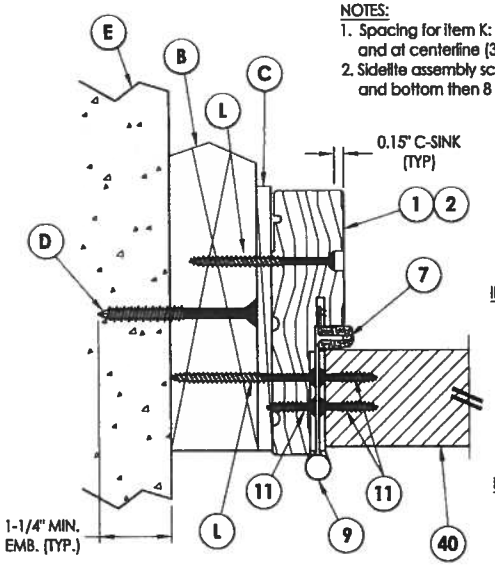
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

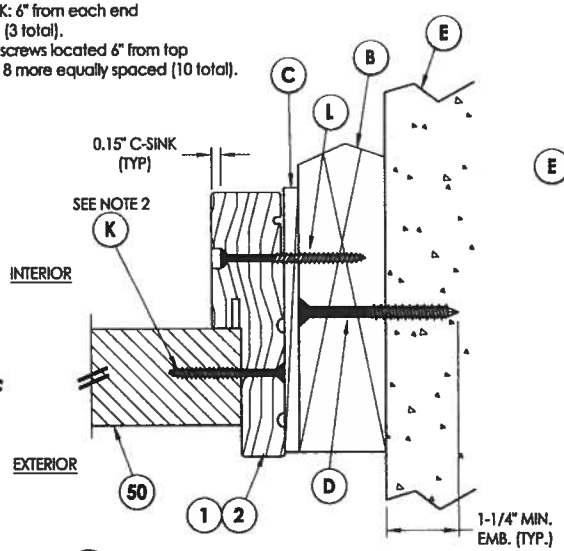
9.26.17

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

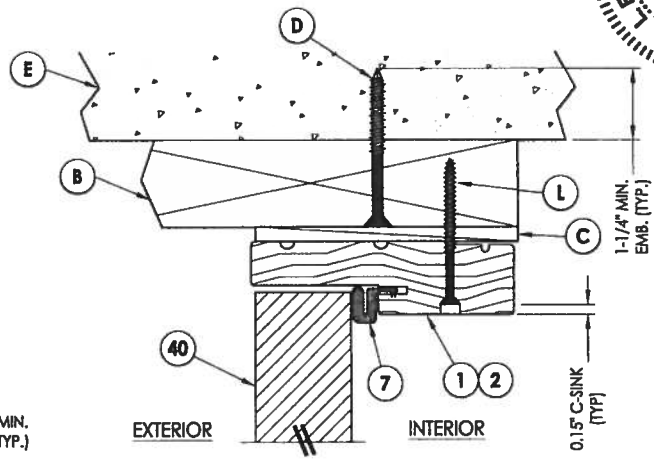
NOTES:
1. Spacing for item K: 6" from each end and at centerline (3 total).
2. Sidelite assembly screws located 6" from top and bottom then 8 more equally spaced (10 total).



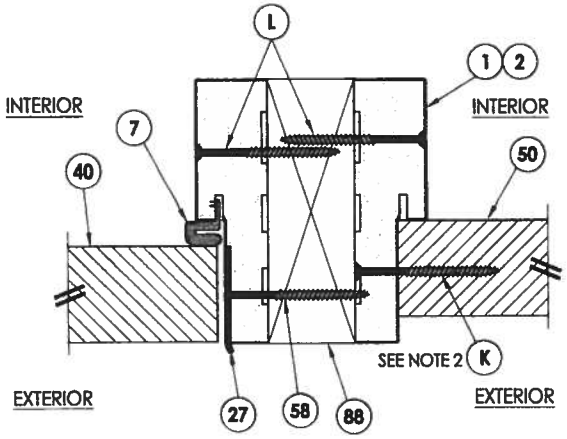
1/5 **HORIZONTAL CROSS SECTION**
Outswing shown (Inswing similar)



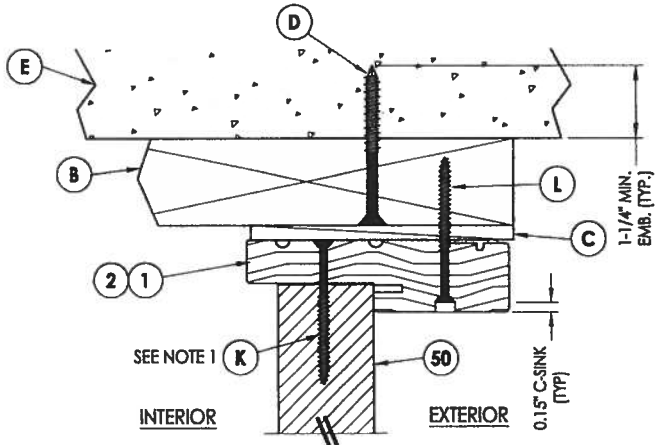
2/5 **HORIZONTAL CROSS SECTION**
Outswing shown (Inswing similar)



3/5 **VERTICAL CROSS SECTION**
Outswing shown (Inswing similar)



5/5 **HORIZONTAL CROSS SECTION**
Outswing shown (Inswing similar)



4/5 **VERTICAL CROSS SECTION**
Outswing shown (Inswing similar)

T.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

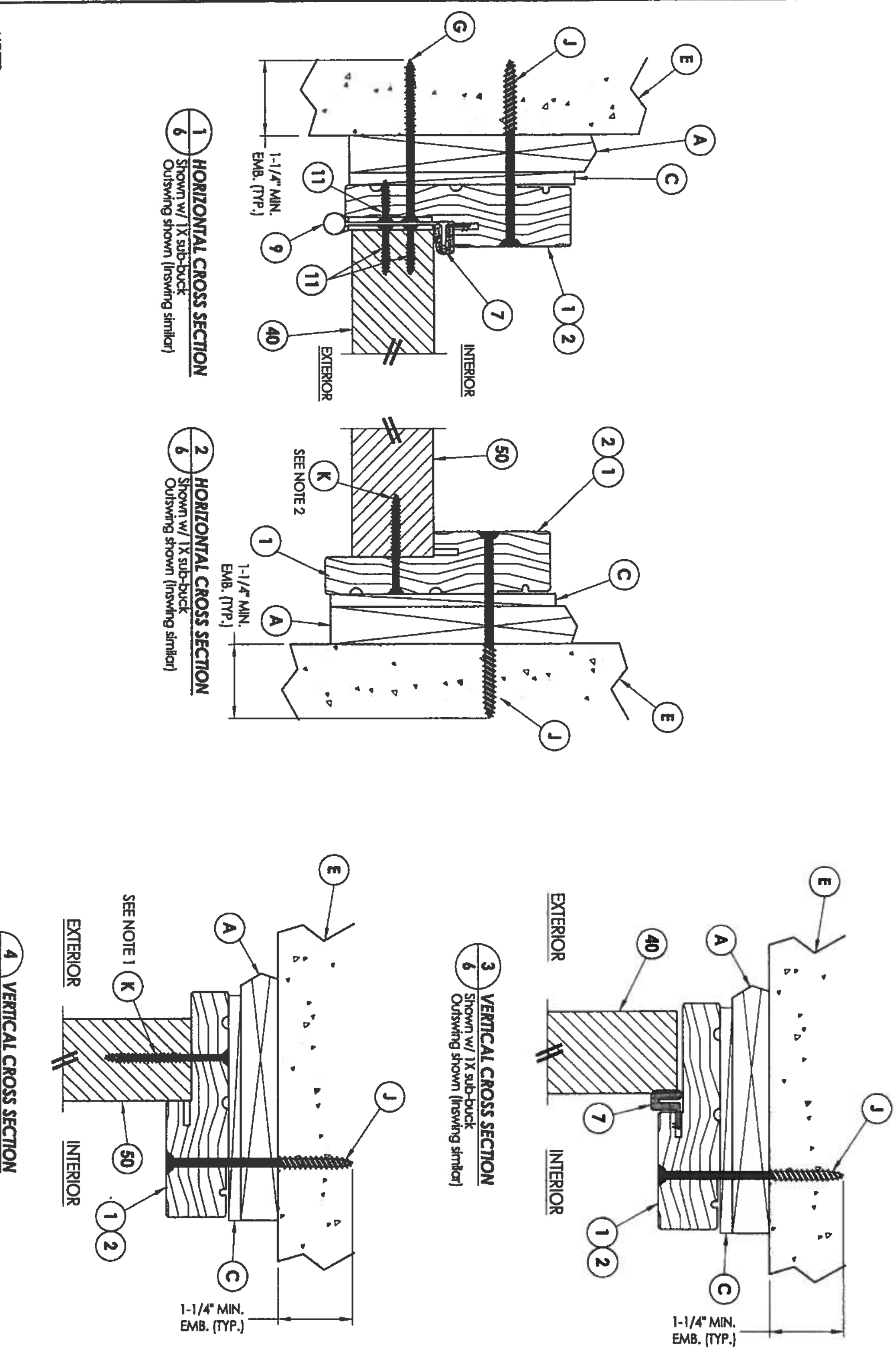
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 5 OF 11

R:\Clients\Plastpro, Inc PERMANENTVA - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, 2:5

NOTES:
1. Spacing for item K: 6" from each end and at centerline (3 total).
2. Sidelite assembly screws located 6" from top and bottom then 8 more equally spaced (10 total).



1/6 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

2/6 HORIZONTAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

3/6 VERTICAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

4/6 VERTICAL CROSS SECTION
Shown w/ 1X sub-buck
Outswing shown (Inswing similar)

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

REV. NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

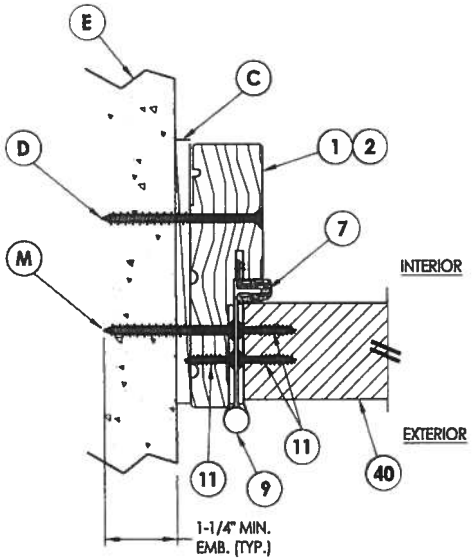
DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 6 OF 11

PRODUCT:
PLASTPRO INC.
FIBERGLASS DOOR

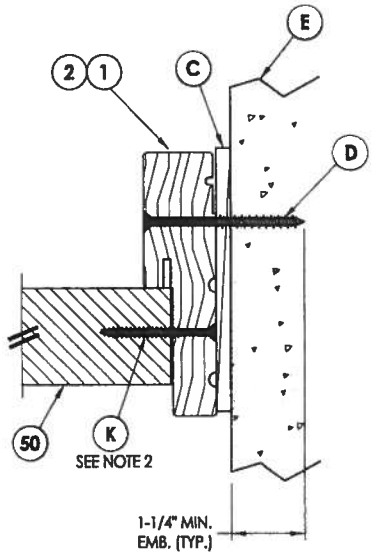
PART OR ASSEMBLY:
HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

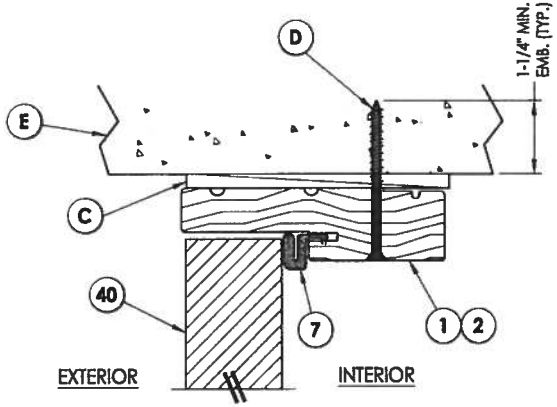
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813



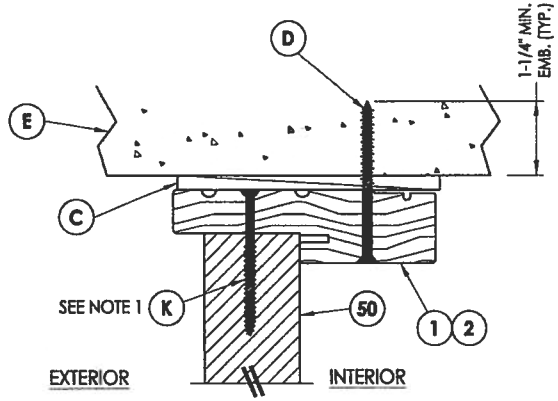
1/7 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



2/7 **HORIZONTAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



3/7 **VERTICAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)



4/7 **VERTICAL CROSS SECTION**
Shown Direct to Masonry
Outswing shown (Inswing similar)

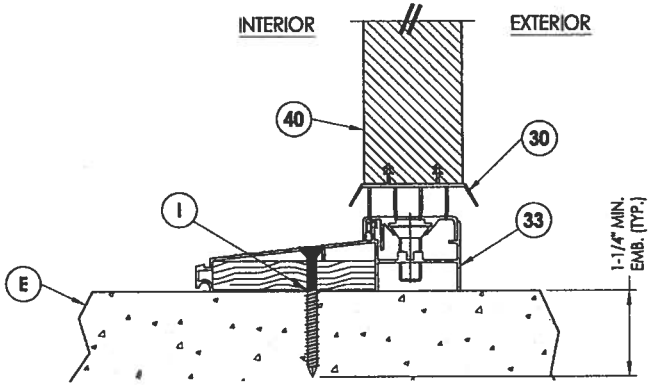
NOTES:
1. Spacing for item K: 6" from each end and at centerline (3 total).
2. Sidelite assembly screws located 6" from top and bottom then 8 more equally spaced (10 total).

L.F. SCHMIDT License No. 43409 STATE OF Florida PROFESSIONAL ENGINEER
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.859.9197
FBPE C.A. No. 9813

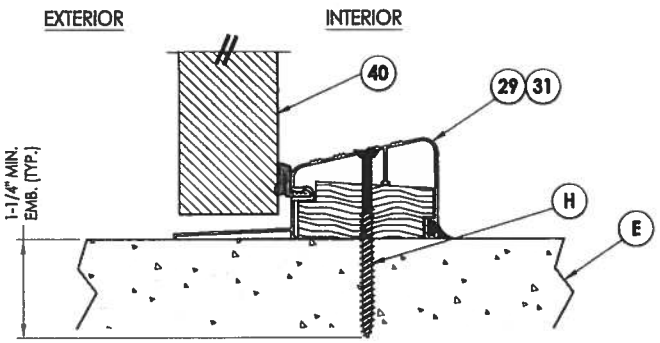
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (DIRECT TO MASONRY)

NO	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

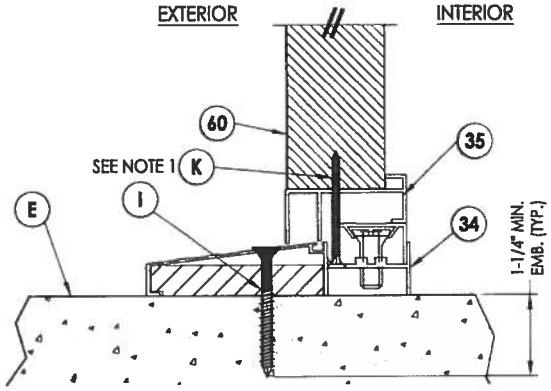
DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 7 OF 11



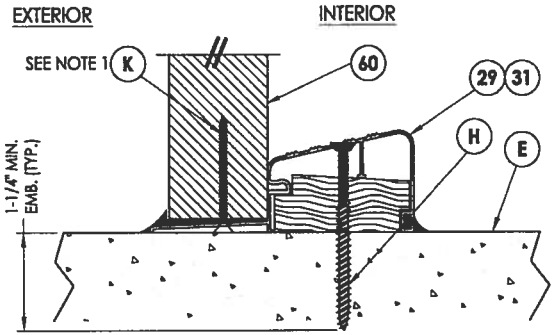
1/8 **VERTICAL CROSS SECTION**
Outswing configuration



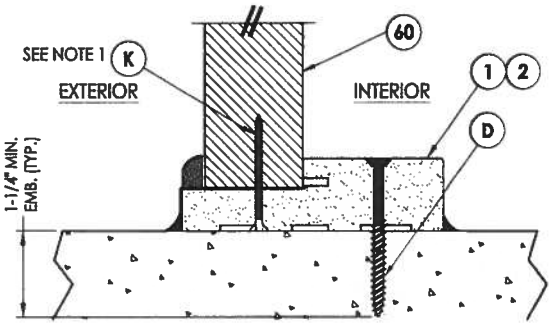
2/8 **VERTICAL CROSS SECTION**
ADA Threshold



3/8 **VERTICAL CROSS SECTION**
Inswing configuration



4/8 **VERTICAL CROSS SECTION**
Outswing configuration



5/8 **VERTICAL CROSS SECTION**
Inswing configuration

NOTE:
1. Spacing for Item K: 6" from each end and at centerline (3 total).

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.8197
FBPE C.A. No. 9813

L F SCHMIDT * No. 43409 * STATE OF FLORIDA PROFESSIONAL ENGINEER

9.24.17

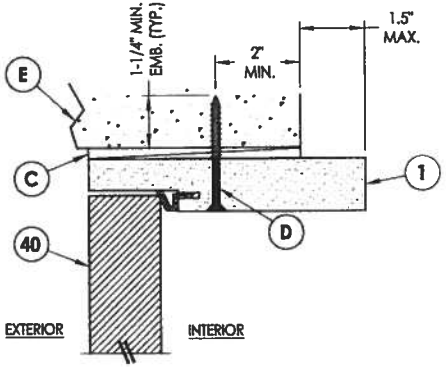
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: VERTICAL CROSS SECTIONS (THRESHOLDS)

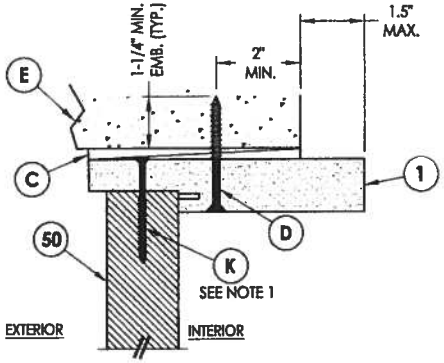
NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 8 OF 11

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, 2-8

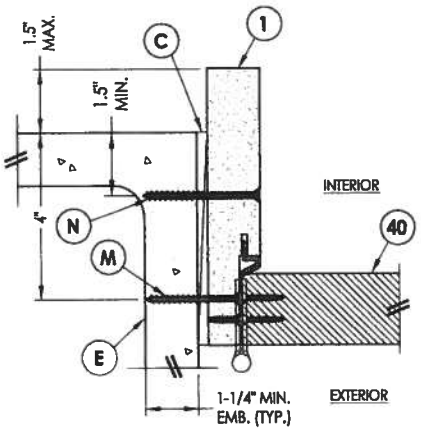


3/9 VERTICAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

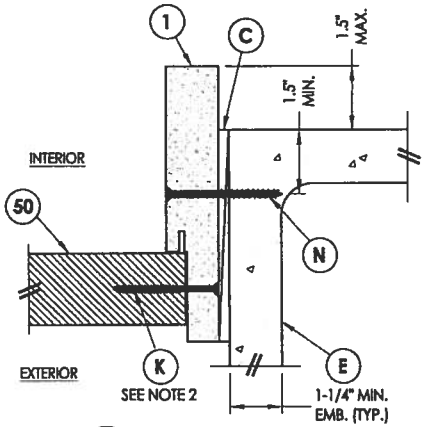


4/9 VERTICAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

NOTES:
1. Spacing for item K: 6" from each end and at centerline (3 total).
2. Sidelite assembly screws located 6" from top and bottom then 8 more equally spaced (10 total).



1/9 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb



2/9 HORIZONTAL CROSS SECTION
Shown Direct to Masonry
Outswing only w/ 6-9/16" jamb

STATE OF FLORIDA
PROFESSIONAL ENGINEER
LYNDON F. SCHMIDT
LICENSE No. 43409

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

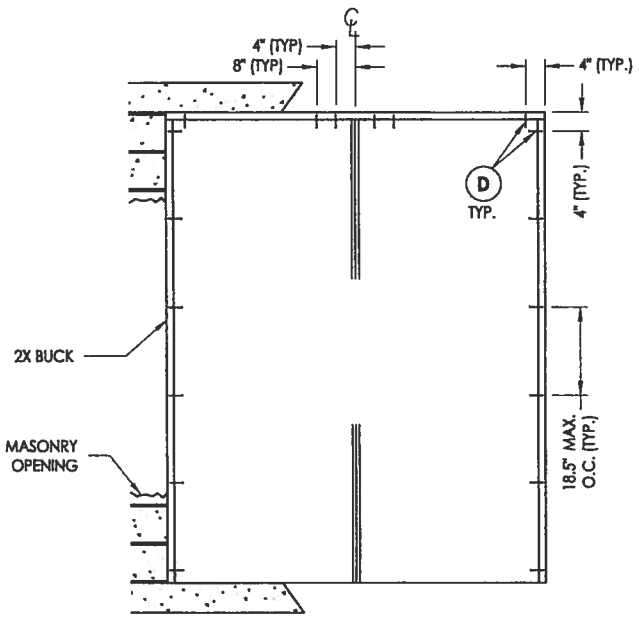
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL SECTIONS (DIRECT TO MASONRY)

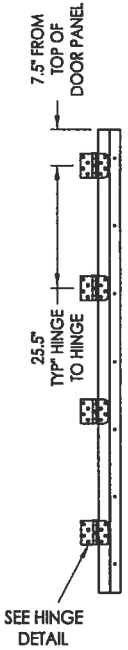
NO	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 9 OF 11

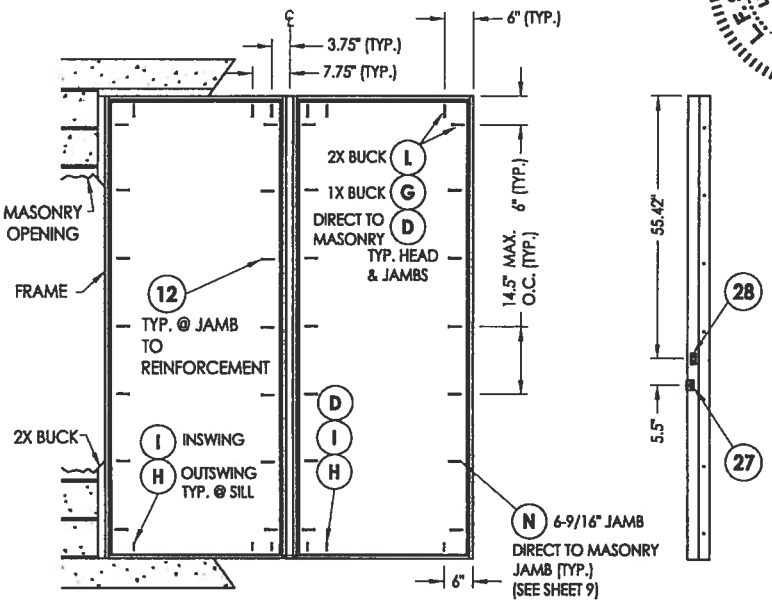
R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, 2-9



BUCK ANCHORING



HINGE JAMB



FRAME ANCHORING
Masonry 2X buck construction

STRIKE JAMB

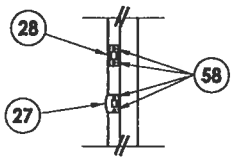
CONCRETE ANCHOR NOTES:

1. Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
2. 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.
3. Concrete anchor table:

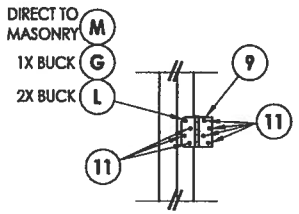
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
ELCO ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

WOOD SCREW INSTALLATION NOTES:

1. Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.



LATCH & DEADBOLT DETAIL



HINGE DETAIL

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.859.9197
FBPE C.A. No. 9813

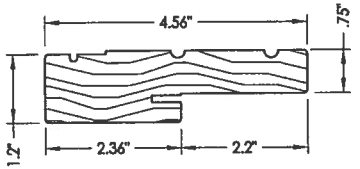
PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: BUCK AND FRAME ANCHORING

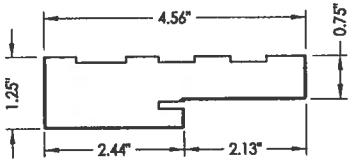
NO	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 10 OF 11

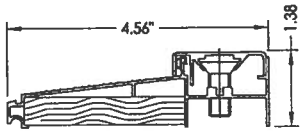
BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK SG >= 0.55	WOOD
B	2X BUCK SG >= 0.55	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" x 3-1/4" PFH ITW CONCRETE SCREW	STEEL
H	1/4" X 3-1/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
I	1/4" X 1-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
K	#7 X 2" PFH DRYWALL SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
M	3/16" X 2-1/4" ITW CONCRETE SCREW	STEEL
N	3/16" X 2-3/4" ITW CONCRETE SCREW	STEEL
1	POLY FIBER JAMB	COMP. / VINYL
2	FINGER JOINTED PINE FRAME	WOOD
7	WEATHERSTRIP	FOAM
8	DOOR BOTTOM SWEEP	VINYL
9	4" X 4" BUTT HINGE	STEEL
11	#9 X 3/4" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
29	OUTSWING THRESHOLD BY DLP	ALUM/WOOD
30	INSWING VINYL DOOR BOTTOM SWEEP	VINYL
31	OUTSWING THRESHOLD BY DLP	ALUM/WOOD
33	INSWING ADJUSTABLE ALUMINUM THRESHOLD BY DLP	ALUM/WOOD
34	INSWING SIDELITE ALUMINUM THRESHOLD BY DLP	ALUM/WOOD
35	SIDELITE SPACER	PVC
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
58	#8 X 2" PFH WOOD SCREW	STEEL
60	SIDELITE PANEL - SEE SIDELITE PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
88	2X REINFORCEMENT (CLEAR PINE) SG >= 0.49	WOOD



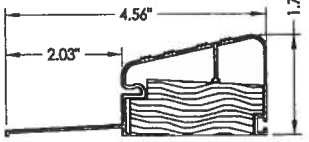
1 HEAD & SIDE Jamb



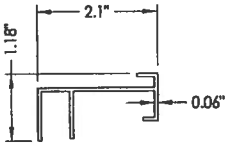
2 HEAD & SIDE Poly fiber jamb



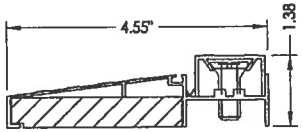
33 ADJUSTABLE INSWING THRESHOLD



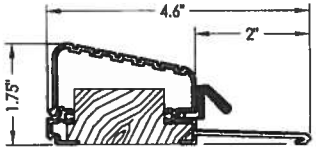
29 OUTSWING THRESHOLD BY DLP



35 SIDELITE SPACER



34 SIDELITE INSWING THRESHOLD



31 OUTSWING THRESHOLD Columbia High Dam (581)

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

9.26.17

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: PLASTPRO INC. FIBERGLASS DOOR

PART OR ASSEMBLY: BILL OF MATERIALS & COMPONENTS

NO.	DATE	REVISIONS	BY
2	08/02/17	UPDATE TO 6TH ED. (2017) FBC	JK
1	04/22/15	UPDATE TO 5TH ED. (2014) FBC	JK

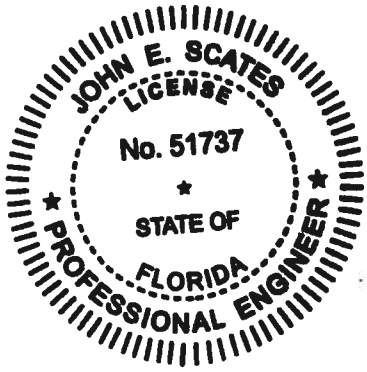
DATE: 02/20/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-15220.12
SHEET 11 OF 11

R:\Clients\Plastpro, Inc PERMANENT\A - Florida Product Approvals\FL-15220 Non-Impact Fiberglass Door - Inswing-Outswing\C - Drawings\FL-15220 (2017)\FL-15220.12.dwg, 2-11

Blanke

The Genuine. The Original.

Jamb Connection Supplement



Digitally signed by John E. Scates P.E.
Date: 2017.10.16 21:29:22 -05'00'

John E. Scates, P.E.
2560 King Arthur Blvd #124-54
Lewisville, TX 75007

This document provides a series of connection schedules and basic detailing concepts for the connection of garage door jambs to building frames with the use of various fasteners. DASMA Technical Data Sheet TDS-161 may be used as an alternate to this document.

P/N 411241 Rev. P6

SCHEDULE 1
5/16" DIAMETER LAG SCREWS

LOAD PER JAMB (LB/FT)[NOTE 3]	MAXIMUM SPACING OF LAG SCREWS PER JAMB (IN) MAIN SUPPORT MEMBER SPECIES		
	SYP SPECIFIC GRAVITY - 0.55	DOUGLAS FIR SPECIFIC GRAVITY - 0.46	SPF SPECIFIC GRAVITY - 0.42
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	22
240	24	24	20
260	24	22	19
280	24	20	17
300	24	19	16
320	22	18	15
340	21	16	14
360	20	16	13
380	19	15	13
400	18	14	12
420	17	13	11
440	16	13	11
460	15	12	10
480	15	12	10
500	14	11	10
520	14	11	9
540	13	10	9
560	13	10	8
580	12	9	8
600	12	9	8
620	11	9	8
640	11	9	7
660	11	8	7
680	10	8	7
700	10	8	7
720	10	8	6
740	9	7	6
760	9	7	6
780	9	7	6
800	9	7	6

1. BASED ON 5/16" DIAMETER LAG SCREWS WITH 1-1/2" O.D. WASHERS WITH A 1-9/32" THREAD PENETRATION INTO SEASONED DRY WOOD SUPPORTING STRUCTURE.
2. PROVIDE QUANTITY OF LAG SCREWS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) LAG SCREWS PER JAMB. LAG SCREWS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x4 OR LARGER NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. MINIMUM EDGE DISTANCE SHALL BE 1/2", MINIMUM FASTENER SPACING SHALL BE 1-1/2", AND ALL HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
8. LAG SCREWS SHALL CONFORM TO ANSI / ASME STANDARD B18.2.1.

Approved

John E. Scates, P.E.
3121 Fairgate Dr.
Carrollton, TX 75007
FL PE 51737 TX PE 56308/F2203

SCHEDULE 2
16d COMMON WIRE NAILS AND 16d THREADED HARDENED-STEEL NAILS

LOAD PER JAMB (LB/FT)[NOTE 3]	MAXIMUM NAIL SPACING PER JAMB (IN) MAIN SUPPORT MEMBER SPECIES		
	SYP SPECIFIC GRAVITY - 0.55	DOUGLAS FIR SPECIFIC GRAVITY - 0.46	SPF SPECIFIC GRAVITY - 0.42
100	24	24	19
120	24	20	16
140	21	17	14
160	18	15	12
180	16	13	10
200	15	12	9
220	13	11	8
240	12	10	8
260	11	9	7
280	10	8	7
300	10	8	6
320	9	7	6
340	8	7	n/a
360	8	6	n/a
380	7	6	n/a
400	7	6	n/a
420	7	n/a	n/a
440	6	n/a	n/a
460	6	n/a	n/a
480	6	n/a	n/a
500	6	n/a	n/a
520	n/a	n/a	n/a
540	n/a	n/a	n/a
560	n/a	n/a	n/a
580	n/a	n/a	n/a
600	n/a	n/a	n/a
620	n/a	n/a	n/a
640	n/a	n/a	n/a
660	n/a	n/a	n/a
680	n/a	n/a	n/a
700	n/a	n/a	n/a
720	n/a	n/a	n/a
740	n/a	n/a	n/a
760	n/a	n/a	n/a
780	n/a	n/a	n/a
800	n/a	n/a	n/a

1. BASED ON 16d COMMON WIRE NAILS (0.162"x3-1/2") OR 16d THREADED HARDENED-STEEL NAILS (0.148"x3-1/2") WITH A MINIMUM PENETRATION OF 2" INTO SIDE GRAIN OF MAIN MEMBER.
2. NAILS SHALL BE PROVIDED IN PAIRS AT A MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) PAIRS OF NAILS PER JAMB. NAILS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x4 OR LARGER NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. EDGE DISTANCES, END DISTANCES AND SPACINGS SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD.

Approved

John E. Scates, P.E.
3121 Fairgate Dr.
Carrollton, TX 75007
FL PE 51737 TX PE 56308/F2203

SCHEDULE 3

3/8"Ø A307 HEADED OR HOOKED ANCHOR BOLTS IN NORMAL WEIGHT CONCRETE

	MAXIMUM SPACING OF ANCHOR BOLTS PER JAMB (IN)		
LOAD PER JAMB (LB/FT)[NOTE 3]	2000 PSI CONCRETE	2500 PSI CONCRETE	3000 PSI CONCRETE
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	24
240	24	24	24
260	24	24	24
280	24	24	24
300	24	24	24
320	24	24	24
340	24	24	24
360	23	24	24
380	22	24	24
400	20	24	24
420	19	24	24
440	19	23	24
460	18	22	24
480	17	21	24
500	16	20	24
520	16	20	24
540	15	19	23
560	14	18	22
580	14	18	21
600	13	17	20
620	13	16	20
640	13	16	19
660	12	15	19
680	12	15	18
700	11	14	17
720	11	14	17
740	11	14	16
760	11	13	16
780	10	13	16
800	10	13	15

1. BASED ON 3/8"Ø A307 HEADED OR HOOKED (1.69" MIN. HOOK LENGTH) ANCHOR BOLTS WITH A 2" O.D. WASHER WITH A MINIMUM EMBEDMENT DEPTH OF 3" AND A MINIMUM EDGE DISTANCE OF 3".
2. PROVIDE QUANTITY OF ANCHOR BOLTS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) ANCHOR BOLTS PER JAMB. ANCHOR BOLTS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.

Approved

John E. Scates, P.E.
3121 Fairgate Dr.
Carrollton, TX 75007
FL PE 51737 TX PE 56308/F2203

SCHEDULE 4
3/8"Ø SIMPSON TITEN HD SCREW ANCHORS

	MAXIMUM SPACING OF ANCHORS PER JAMB (IN)		
LOAD PER JAMB (LB/FT)[NOTE 4]	2500 PSI CONCRETE[NOTE 1]	4000 PSI CONCRETE[NOTE 1]	2000 PSI GROUT FILLED CMU[NOTE 2]
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	24
240	24	24	24
260	24	24	16
280	24	24	16
300	24	24	16
320	24	24	16
340	24	24	16
360	24	24	16
380	24	24	8
400	24	24	8
420	24	24	8
440	24	24	8
460	24	24	8
480	24	24	8
500	24	24	8
520	24	24	8
540	24	24	8
560	23	24	8
580	22	24	8
600	21	23	8
620	21	22	8
640	20	22	8
660	19	21	8
680	19	20	8
700	18	20	8
720	18	19	8
740	17	19	N/A
760	17	18	N/A
780	16	18	N/A
800	16	17	N/A

1. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1-3/4" O.D. WASHER INTO NORMAL WEIGHT UNCRACKED CONCRETE WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4" AND A MINIMUM EDGE DISTANCE OF 2-3/4".
2. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1-3/4" O.D. WASHER INTO GROUT FILLED CMU WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4", A MINIMUM EDGE DISTANCE OF 4", AND A MINIMUM END DISTANCE OF 4". CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND GROUT SHALL CONFORM TO ASTM C476.
3. PROVIDE QUANTITY OF SCREW ANCHORS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) SCREW ANCHORS PER JAMB. SCREW ANCHORS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
4. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE: DESIGN LOAD = 30psf
DOOR WIDTH = 16ft
LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

5. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
6. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
7. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 4.
8. SCREW ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

Approved

John E. Scates, P.E.
3121 Fairgate Dr.
Carrollton, TX 75007
FL PE 51737 TX PE 56308/F2203

SCHEDULE 5
3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR

	MAXIMUM SPACING OF ANCHORS PER JAMB (IN)		
LOAD PER JAMB (LB/FT)[NOTE 4]	2500 PSI CONCRETE[NOTE 1]	4000 PSI CONCRETE[NOTE 1]	2000 PSI GROUT FILLED CMU[NOTE 2]
100	24	24	24
120	24	24	24
140	24	24	24
160	24	24	24
180	24	24	24
200	24	24	24
220	24	24	24
240	24	24	24
260	24	24	24
280	24	24	24
300	24	24	24
320	24	24	16
340	24	24	16
360	24	24	16
380	24	24	16
400	24	24	16
420	24	24	16
440	24	24	16
460	24	24	16
480	24	24	8
500	24	24	8
520	24	24	8
540	24	24	8
560	24	24	8
580	24	24	8
600	23	23	8
620	22	22	8
640	22	22	8
660	21	21	8
680	20	20	8
700	20	20	8
720	19	19	8
740	19	19	8
760	18	18	8
780	18	18	8
800	17	17	8

1. BASED ON 3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR WITH A 1-3/4" O.D. WASHER INTO NORMAL WEIGHT UNCRACKED CONCRETE WITH A MINIMUM EMBEDMENT DEPTH OF 2-1/2" AND A MINIMUM EDGE DISTANCE OF 3".
2. BASED ON 3/8"Ø HILTI KWIK BOLT 3 EXPANSION ANCHOR WITH A 1-3/4" O.D. WASHER INTO GROUT FILLED CMU WITH A MINIMUM EMBEDMENT DEPTH OF 2-1/2" AND A MINIMUM EDGE DISTANCE OF 4".
   ONLY ONE ANCHOR PER MASONRY UNIT
   CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND GROUT SHALL CONFORM TO ASTM C476.
3. PROVIDE QUANTITY OF ANCHORS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) ANCHORS PER JAMB. ANCHORS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
4. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

   EXAMPLE: DESIGN LOAD = 30psf
   DOOR WIDTH = 16ft
   LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

5. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
6. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED TO SUPPORT STRUCTURE. IF MOUNTING OVER DRYWALL, INCREASE FASTENER LENGTH TO ACHIEVE MINIMUM REQUIRED PENETRATION.
7. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 4.
8. SCREW ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

Approved

John E. Scates, P.E.
3121 Fairgate Dr.
Carrollton, TX 75007
FL PE 51737 TX PE 56308/F2203

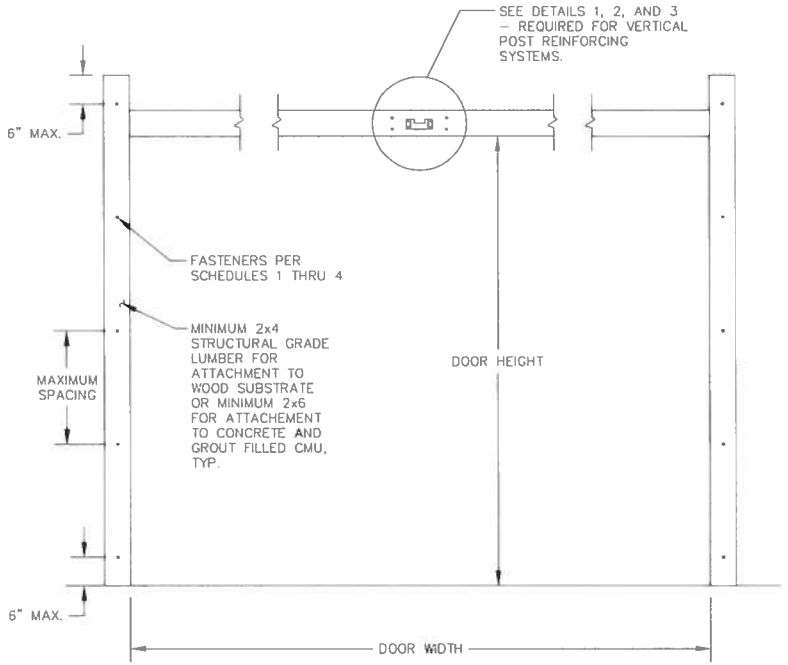
Revision P6

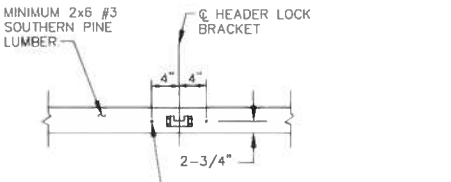
The Genuine. The Original.

OVERHEAD DOOR

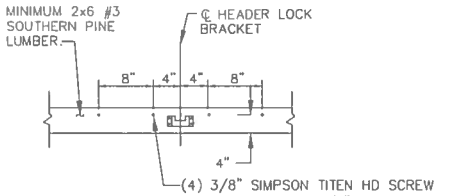
OVERHEAD DOOR CORPORATION
2501 SOUTH STATE HIGHWAY 121
SUITE 200 LEWISVILLE, TX 75067
(800) 275-3920

REVISIONS

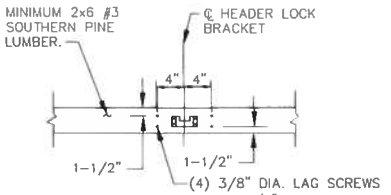




DETAIL 1
MINIMUM 2500 PSI CONCRETE
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2085 LBS.



DETAIL 2
MINIMUM 2000 PSI GROUT FILLED CMU
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2400 LBS.



DETAIL 3
WOOD SUPPORT STRUCTURE
NOTE: MAXIMUM DESIGN LOAD CAPACITY OF 2430 LBS.

JOHN E. SCATES, PE
3121 FAIRGATE DR.
CARROLLTON, TX 75007
FL PE 51737 TX PE 56308/F2203

PROFESSIONAL ENGINEER'S SEAL PROVIDED ONLY FOR VERIFICATION OF WINDLOAD CONSTRUCTION DETAILS.

	DATE	NAME
DRAWN	4/19/12	GRT
CHECKED		

SHEET 1 OF 2

JAMB CONNECTION SUPPLEMENT

DRAWING PART NO. 411241

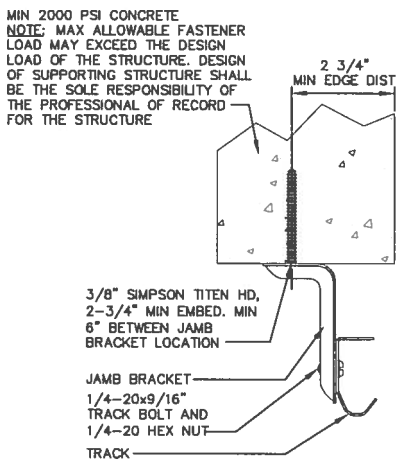
REV. P6

The Genuine. The Original.

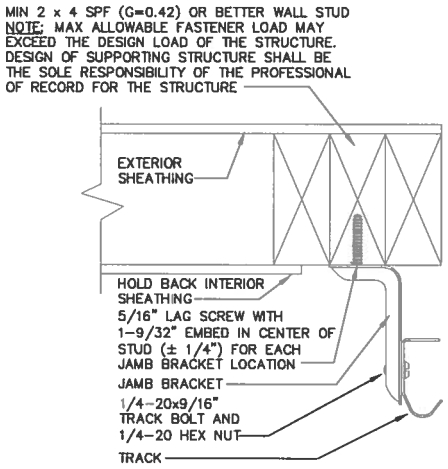
OVERHEAD DOOR

OVERHEAD DOOR CORPORATION
2501 SOUTH STATE HIGHWAY 121
SUITE 200 LEWISVILLE, TX 75067
(800) 275-3920

REVISIONS



DIRECT CONCRETE MOUNTING DETAIL



DIRECT WOOD MOUNTING DETAIL
MAX 420 LBS PER LAG FASTENER

JOHN E. SCATES, PE
3121 FAIRGATE DR.
CARROLLTON, TX 75007
FL PE 51737 TX PE 56308/F2203

PROFESSIONAL ENGINEER'S SEAL PROVIDED ONLY FOR VERIFICATION OF WINDLOAD CONSTRUCTION DETAILS.

	DATE	NAME
DRAWN	4/19/12	GRT
CHECKED		

SHEET 2 OF 2

JAMB CONNECTION SUPPLEMENT

DRAWING PART NO. 411241

REV. P6

▷ NOTES

NOTES:
1. GLAZING OPTIONS – .090" MINIMUM SSB GLAZING IN MOLDED FRAMES SCREWED TOGETHER WITH A MINIMUM OF (10) #8x1" SCREWS INSTALLED IN TOP OR INTERMEDIATE SECTION (WITH OR WITHOUT DECORATIVE INSERTS) MEETS UNIFORM STATIC WIND PRESSURES SHOWN ON THIS DRAWING. GLAZING SHALL HAVE A MAXIMUM HEIGHT OF 10.69" AND A MAXIMUM LENGTH OF 16.94". GLAZING IS NOT IMPACT RESISTANT AND DOES NOT MEET THE REQUIREMENTS FOR WIND-BORNE DEBRIS REGIONS.

2. VINYL OR WOOD DOOR STOP NAILED A MAXIMUM OF 6" O.C. MUST OVERLAP TOP AND BOTH ENDS OF PANELS MINIMUM 7/16" TO MEET NEGATIVE PRESSURES.

3. KEY LOCK, SLIDE LOCKS, OR OPERATOR REQUIRED.

4. LOUVER OPTION – .040" MINIMUM LOUVERS IN MOLDED FRAMES SCREWED TOGETHER WITH A MINIMUM OF (10) #8x1" SCREWS INSTALLED IN THE BOTTOM SECTION. LOUVERS ARE NOT IMPACT RESISTANT AND DO NOT MEET THE REQUIREMENTS FOR WIND-BORNE DEBRIS REGIONS.

5. SECTION STEEL TO HAVE A MINIMUM 26 GA THICKNESS.

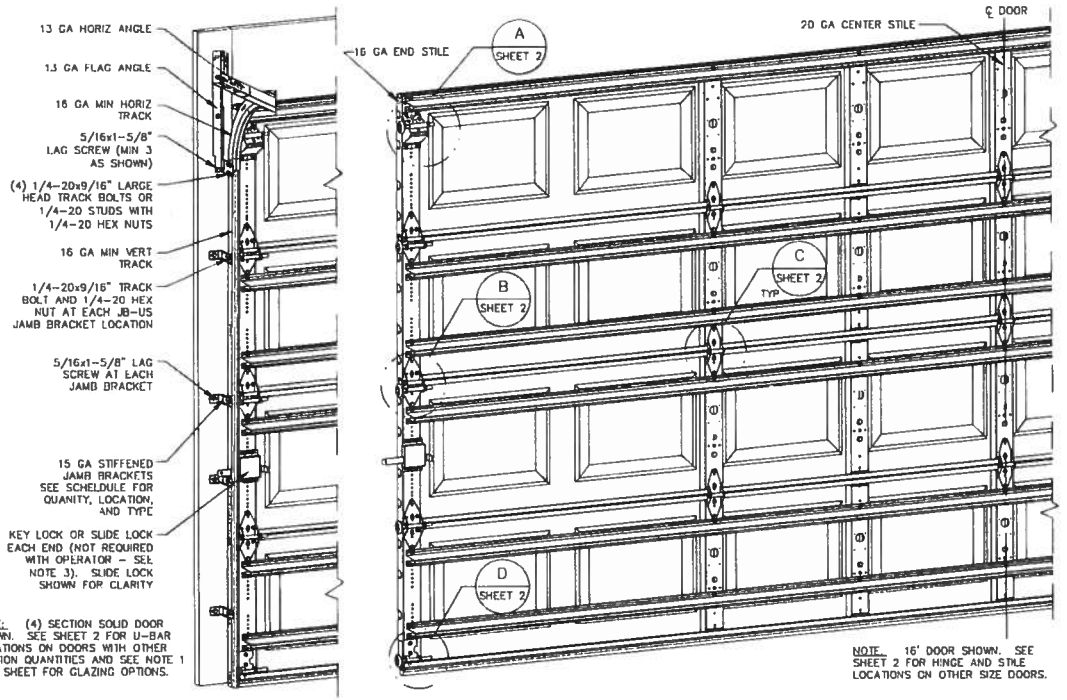
6. THE DESIGN OF THE SUPPORTING STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD FOR THE BUILDING OR STRUCTURE AND IN ACCORDANCE WITH CURRENT BUILDING CODES FOR THE LOADS LISTED ON THIS DRAWING.

7. DOOR JAMB TO BE MINIMUM 2x4 STRUCTURAL GRADE LUMBER. REFER TO JAMB CONNECTION SUPPLEMENT FOR ATTACHMENT TO SUPPORTING STRUCTURE.

8. FOR LOW HEAD ROOM LIFT CONDITIONS, TOP BRACKET SHALL BE A 13 GA LHR 7/4 TOP BRACKET WITH A MINIMUM OF (3) 1/4–14x7/8" SELF DRILLING CRIMPTITE SCREWS IN LIEU OF THE BRACKET SHOWN ON THIS DRAWING. U-BAR ON TOP SECTION SHALL BE INSTALLED ON TOP OF LHR TOP BRACKETS.

9. IN LIEU OF THE SHORT PANEL EMBOSSMENT SHOWN, LONG PANEL EMBOSSMENT, V12 PANEL EMBOSSMENT OR NO EMBOSSMENT MAY BE USED.

"FAT" TRACK TYPE SHOWN BELOW



NOTE: (4) SECTION SOLID DOOR SHOWN. SEE SHEET 2 FOR U-BAR LOCATIONS ON DOORS WITH OTHER SECTION QUANTITIES AND SEE NOTE 1 THIS SHEET FOR GLAZING OPTIONS.

NOTE: 16' DOOR SHOWN. SEE SHEET 2 FOR HINGE AND STILE LOCATIONS ON OTHER SIZE DOORS.

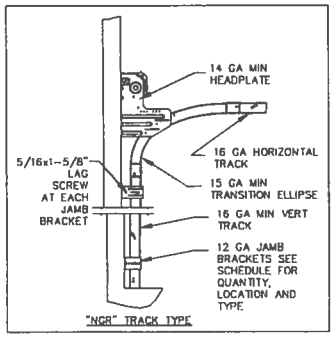
REVISIONS				
ER	REV	DESCRIPTION	DATE	APPROVAL
500851	–	RELEASE PER ER	11/23/10	SFT
30647	A	REV PER ER	4/18/12	GRT
30704	B	REV PER ER	11/13/12	GRT
	C	REV TITLE BLOCK	10/2/2017	ESC

STATIC PRESSURE RATINGS	APPROVED SIZES
DESIGN PRESSURE(PSF): 23/–25	MAX WIDTH: 16'
	MAX HEIGHT: 14'
IMPACT/CYCLIC RATED: NO	MAX SECTION HEIGHT: 21"

JAMB BRACKET SCHEDULE

DOOR HEIGHT	NO. OF SECTIONS	NO. OF JAMB BRACKETS (EACH JAMB)	TRACK TYPE	LOCATION OF CENTERLINE OF JAMB BRACKETS MEASURED FROM BOTTOM OF TRACK (ALL DIMENSIONS ± 2")
6'-6"	4	4	FAT	10" (JB-US), 25-3/4" (JB-US), 39" (JB-US), 57-1/4" (JB-US)
		6	NGR	5" (STD), 22" (STD), 35 3/4" (STD), 54-3/4" (STD), 67" (STD), 73" (STD)
7'-0"	4	4	FAT	10" (JB-US), 29-3/4" (JB-US), 42" (JB-US), 63-1/4" (JB-US)
		6	NGR	5" (STD), 22" (STD), 35 3/4" (STD), 54-3/4" (STD), 67" (STD), 73" (STD)
7'-6"	5	6	FAT	2" (JB-US), 10" (JB-US), 26-3/4" (JB-US), 45" (JB-US), 63" (JB-US), 74-1/2" (JB-US)
		7	NGR	5" (STD), 22" (STD), 35 3/4" (STD), 54-3/4" (STD), 67" (STD), 73" (STD), 82" (STD)
8'-0"	5	6	FAT	2" (JB-US), 10" (JB-US), 29-3/4" (JB-US), 48" (JB-US), 57-1/2" (JB-US), 77-1/2" (JB-US)
		7	NGR	5" (STD), 22" (STD), 35 3/4" (STD), 54-3/4" (STD), 67" (STD), 73" (STD), 82" (STD)
> 8'-0"				SEE NOTE BELOW

NOTE:
(FAT AND NGR) FOLLOWING DIMENSION DENOTES SLOTTED JAMB BRACKET ATTACHED TO TRACK WITH 1/4–20x9/16" TRACK BOLT AND NUT ALL DOORS GREATER THAN 8' IN HEIGHT REQUIRE USE OF CONTINUOUS WALL ANGLE. SEE SUPPLEMENT TRACK CHART FOR DETAILS.



"NGR" TRACK TYPE

SUPERIMPOSED DESIGN PRESSURE LOADS ON SUPPORTING STRUCTURE

DOOR WIDTH	DOOR HEIGHT	UNIFORM LOAD EACH JAMB (PLF)
10'-0"	ALL	+115.0/–125.0
12'-0"	ALL	+138.0/–150.0
14'-0"	ALL	+161.0/–175.0
15'-0"	ALL	+172.5/–187.5
16'-0"	ALL	+184.0/–200.0

SERIES 170–177, 180–187

REF DWG	USED ON

ASME Y14.100 AND Y14.5 APPLY, UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN U.S. CUSTOMARY UNITS

FOR FRACTIONS UNLESS OTHERWISE SPECIFIED

HOLE DIAMETER
UNDER .251 +.004/–.003
.251 TO .500 +.006/–.003
OVER .500 +.008/–.003

FRACTIONS
± 1/16

WHOLE NUMBERS: ± .25
.X ± 1
.XX ± .03
.XXX ± .010
ANGLES: ± .5°

FINISH: N/A

UNIT OF MEASURE: EACH

The Genuine. The Original. OVERHEAD DOOR LEWISVILLE, TEXAS

MATERIAL: NONE

	DATE
DRAWN BY: C. TAYLOR	10/15/10
CHECKED BY: M. SAWICKI	10/25/10
APPROVED BY: F. TJONG	11/23/10

DRAWING TITLE: SERIES 170, 180WL WS4, 16' MAX WIDE

DRAWING NUMBER: D–411046

SCALE: N.T.S SHEET 1 OF 2

DWAYNE J. KORNISH LICENSE No. 77945 STATE OF FLORIDA PROFESSIONAL ENGINEER

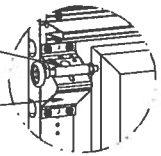
DWAYNE J. KORNISH, PE
4576 COUNTY ROAD 160
MOUNT HOPE, OHIO
FL PE 77945
TX PE 117868

PROFESSIONAL ENGINEER'S SEAL PROVIDED ONLY FOR VERIFICATION OF WIND LOAD CONSTRUCTION DETAILS

▷ NOTES

13 GA ROLLER SLIDE ATTACHED TO BRACKET WITH 5/16-18 BOLT & NUT IN CENTER SLOT AND 1/4-20x9/16" TRACK BOLT & 1/4-20 HEX NUT THROUGH ANY TWO ALIGNING HOLES

13 GA COMMERCIAL 'A' FRAME TOP BRACKET ATTACHED WITH (4) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS

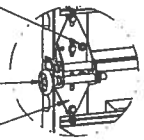


DETAIL A

ADD (2) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS (INSIDE OF EACH END HINGE)

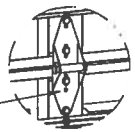
2" NYLON STORMGARD ROLLER WITH 4-1/2" STEM AND 7/16" PUSHNUT AT EACH ROLLER LOCATION. 1/4" MAX BETWEEN PUSHNUT AND BRACKET OR HINGE

14 GA WIDE BODY END HINGE ATTACHED WITH (4) 1/4-14x5/8" SELF TAPPING SCREWS



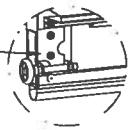
DETAIL B

18 GA NARROW BODY INTERMEDIATE HINGE ATTACHED WITH (4) 1/4-14x5/8" SELF TAPPING SCREWS



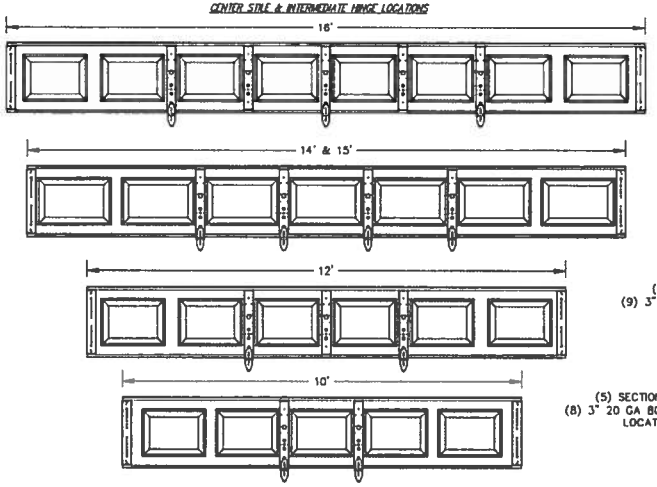
DETAIL C

14 GA BOTTOM BRACKET ATTACHED WITH (2) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS AND (1) 1/4-14x5/8" SELF DRILLING TAMPER RESISTANT SCREW

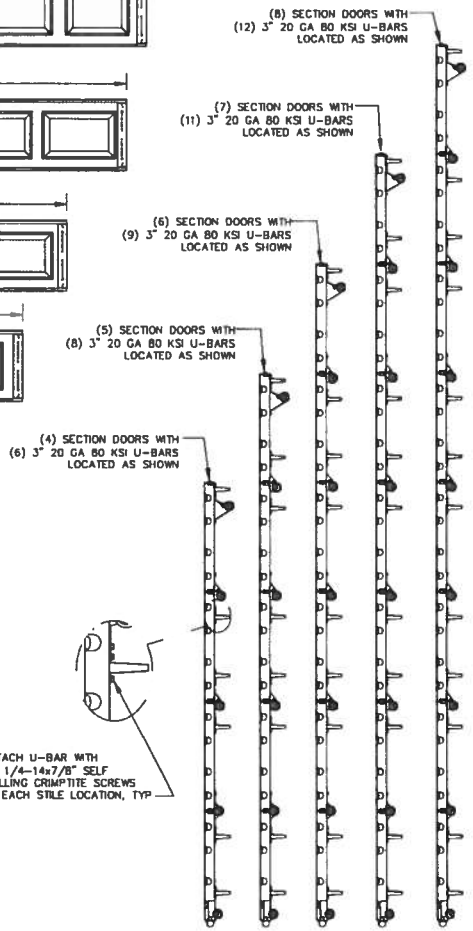


DETAIL D

CENTER STILE & INTERMEDIATE HINGE LOCATIONS



U-BAR LOCATIONS



ATTACH U-BAR WITH (2) 1/4-14x7/8" SELF DRILLING CRIMPTITE SCREWS AT EACH STILE LOCATION, TYP

REVISIONS				
ECN	REV	DESCRIPTION	DATE	APPROVAL
500851	–	RELEASE PER ER	11/23/10	SFT
30647	A	REV PER ER	4/18/12	GRT
30704	B	REV PER ER	11/13/12	GRT
	C	REV TITLE BLOCK	10/2/2017	ESC

DWAYNE J KORNISH
LICENSE
No. 77945
STATE OF FLORIDA
PROFESSIONAL ENGINEER

DWAYNE J KORNISH, PE
4576 COUNTY ROAD 180
MOUNT HOPE, OHIO
FL PE 77945
TX PE 117868

PROFESSIONAL ENGINEER'S SEAL PROVIDED ONLY FOR VERIFICATION OF WIND LOAD CONSTRUCTION DETAILS.

REF DWG	USED ON

THIRD ANGLE PROJECTION

ASME Y14.5M AND Y14.5 APPLY, UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN U.S. CUSTOMARY UNITS.

TOLERANCES UNLESS OTHERWISE SPECIFIED

HOLE DIAMETER	
UNDER .251	+.004/-.003
.251 TO .500	+.006/-.003
OVER .500	+.008/-.003

FRACTIONS	
	± 1/16

WHOLE NUMBERS:	± .25
.X	± 1
.XX	± .03
.XXX	± .010
ANGLES:	± .5°

FINISH	
N/A	
UNIT OF MEASURE	
EACH	

The Genuine. The Original. LEWISVILLE, TEXAS

MATERIAL: NONE

	NAME	DATE
DRAWN BY:	G. TAYLOR	10/15/10
CHECKED BY:	M. SAWICKI	10/25/10
APPROVED BY:	F TJONG	11/23/10

DRAWING TITLE: SERIES 170, 180WL WS4, 16' MAX WIDE

DRAWING NUMBER: D-411046

SCALE: N.T.S SHEET 2 OF 2

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES.

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. 1X BUCK OVER MASONRY/CONCRETE IS OPTIONAL.
4. WHERE SHIM OR BUCK THICKNESS IS LESS THAN 1-1/2" WINDOW UNITS MUST BE ANCHORED THROUGH THE FRAME IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. ANCHORS SHALL BE SECURELY FASTENED DIRECTLY INTO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE MATERIAL.
5. WHERE WOOD BUCK THICKNESS IS 1-1/2" OR GREATER, BUCK SHALL BE SECURELY FASTENED TO MASONRY, CONCRETE OR OTHER STRUCTURAL SUBSTRATE. WINDOW UNITS MAY BE ANCHORED THROUGH FRAME TO SECURED WOOD BUCK IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
6. WHERE 1X BUCK IS NOT USED DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
7. BUCKS SHALL EXTEND BEYOND WINDOW INTERIOR FACE SO THAT FULL FRAME SUPPORT IS PROVIDED.
8. FOR FIN INSTALLATION SHIM AS NEEDED. FOR FRAME INSTALLATION SHIM AS REQUIRED AT EACH ANCHOR LOCATION WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9. SHIMS SHALL BE LOCATED, APPLIED AND MADE FROM MATERIALS AND THICKNESS CAPABLE OF SUSTAINING APPLICABLE LOADS.
10. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
11. FRAME MATERIAL: EXTRUDED RIGID PVC.
12. UNITS MUST BE GLAZED PER ASTM E1300-04.
13. APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
14. FOR ANCHORING THROUGH FIN INTO WOOD FRAMING OR 2X BUCK USE #6 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
15. FOR ANCHORING THROUGH FRAME INTO WOOD FRAMING OR 2X BUCK USE #8 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
16. FOR ANCHORING THROUGH FRAME INTO MASONRY/CONCRETE USE 3/16" TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2 1/2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
17. FOR ANCHORING THROUGH FRAME INTO METAL STRUCTURE USE #8 SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
18. ALL FASTENERS TO BE CORROSION RESISTANT.
19. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
    A. WOOD - MINIMUM SPECIFIC GRAVITY OF G=0.42
    B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3,192 PSI.
    C. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
    D. METAL STRUCTURE: STEEL 18GA, 33KSI OR ALUMINUM 6063-T5 1/8" THICK MINIMUM
20. GEOMETRIC SHAPES ARE ALSO APPROVED. APPROVED GEOMETRIC SHAPES DIMENSIONS SHALL NOT EXCEED INSCRIBED DIMENSIONS OF APPROVED RECTANGULAR ASSEMBLY SHOWN IN SHEET 2. GEOMETRIC SHAPES ARE NOT LIMITED TO SHAPES SHOWN HEREIN.

SIGNED: 09/14/2015

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
2	ELEVATIONS
3 - 7	INSTALLATION DETAILS

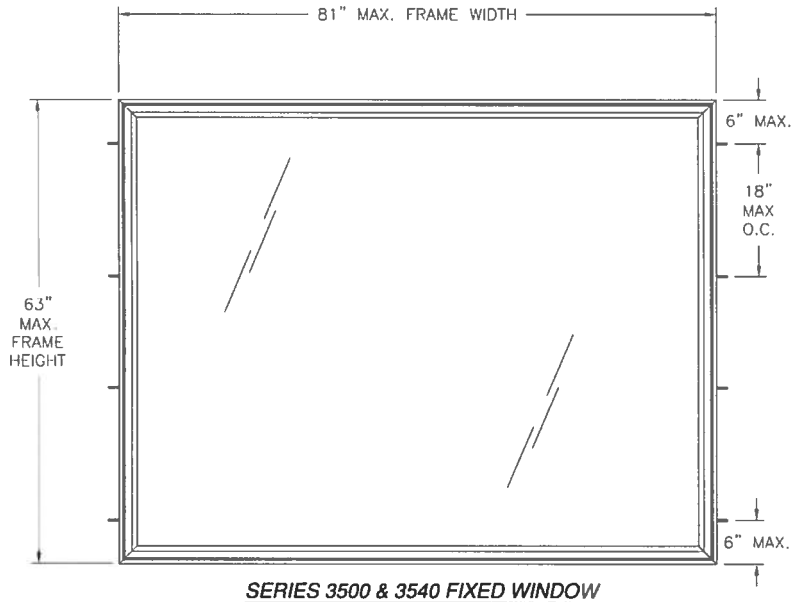
MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030-0370

SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON-IMPACT
NOTES

DRAWN.	DWG NO.	REV
N.G.	08-02818	-
SCALE NTS	DATE 9/13/12	SHEET 1 OF 7

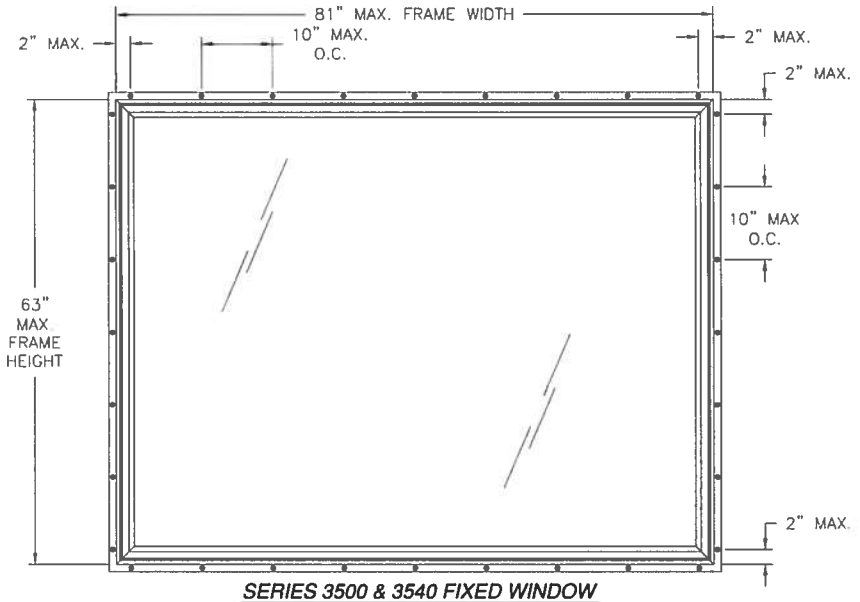
LUIS R. LOMAS
LICENSE
No. 62514
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



SERIES 3500 & 3540 FIXED WINDOW
EXTERIOR VIEW
FINLESS & FLANGE INSTALLATION

DESIGN PRESSURE RATING	IMPACT RATING
±35.0PSF	NONE



SERIES 3500 & 3540 FIXED WINDOW
EXTERIOR VIEW
FIN INSTALLATION

DESIGN PRESSURE RATING	IMPACT RATING
±50.0PSF	NONE

NOTES:
1. MAXIMUM D.L.O.: 77 1/8" X 59 1/8"
2. (2) 1" X 1/8" WEEPSLOT AT 2" FROM EDGE OF SILL FACE

SIGNED: 09/14/2015

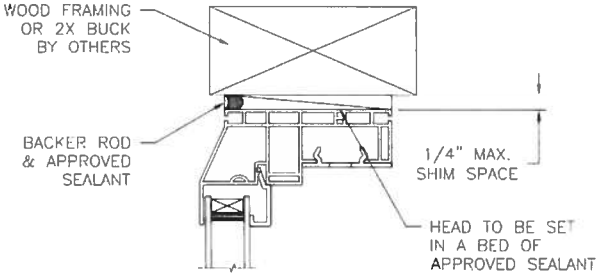
MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030-0370

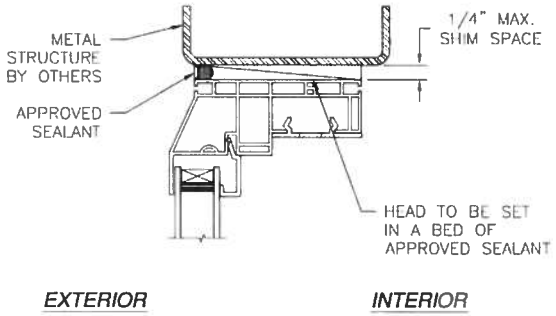
SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON-IMPACT
ELEVATIONS

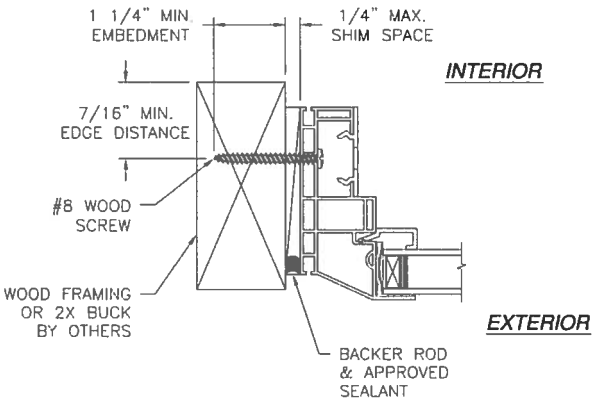
DRAWN:	DWG NO.	REV
N.G.	08-02818	–
SCALE NTS	DATE 9/13/12	SHEET 2 OF 7

LUIS R. LOMAS
LICENSE
No. 62514
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

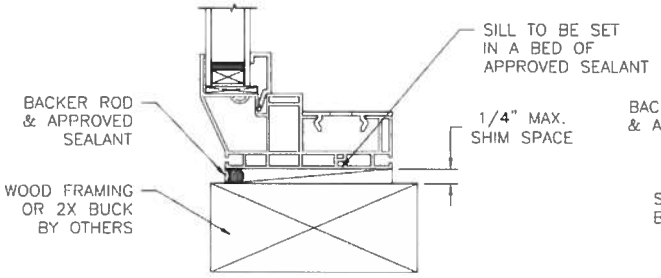
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



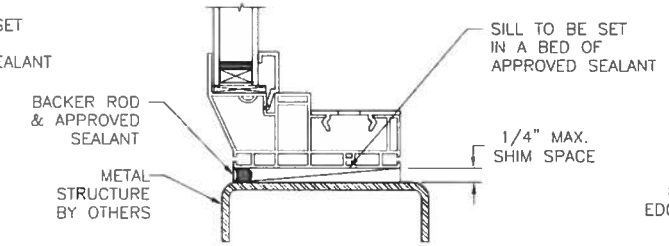




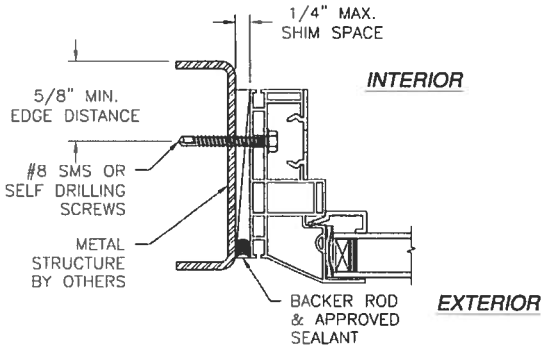
JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION



VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION



JAMB INSTALLATION DETAIL
METAL STRUCTURE INSTALLATION

SIGNED: 09/14/2015

NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

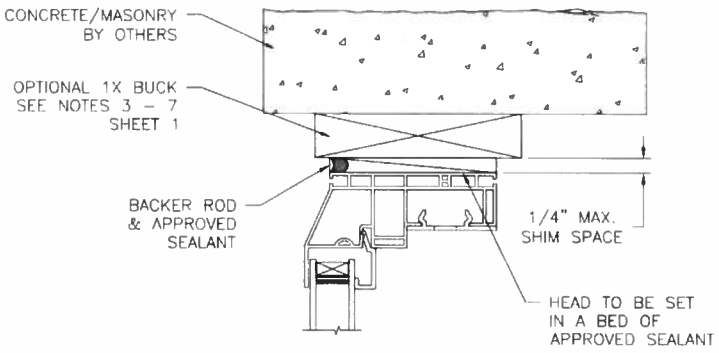
MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030-0370

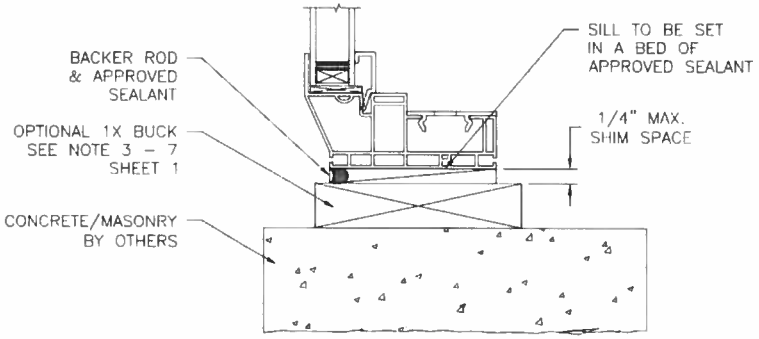
SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON-IMPACT
FINLESS INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
N.G.	08-02818	-
SCALE NTS	DATE 9/13/12	SHEET 3 OF 7

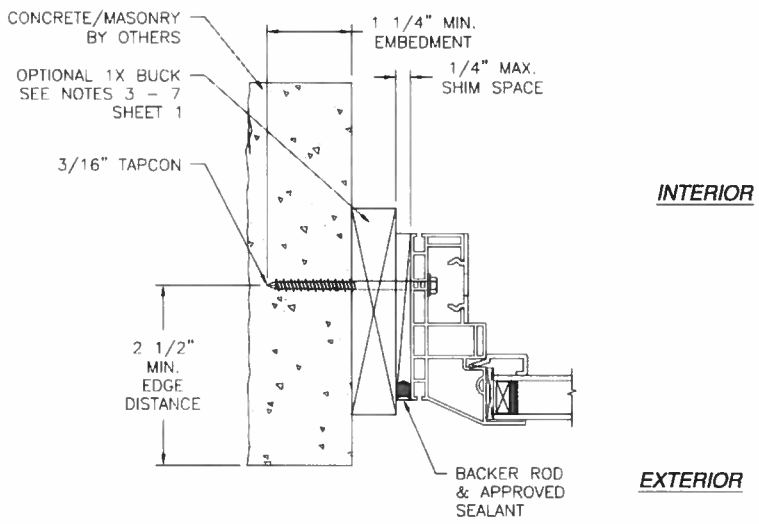
LUIS R. LOMAS
LICENSE
No. 62514
STATE OF FLORIDA
PROFESSIONAL ENGINEER

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED





VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION



JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

SIGNED: 09/14/2015

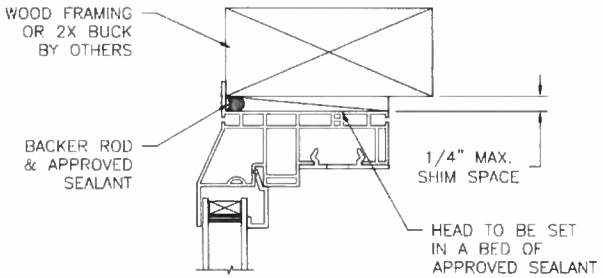
MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030–0370

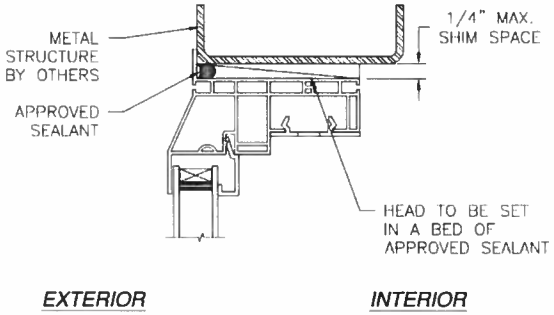
SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON–IMPACT
FINLESS INSTALLATION DETAILS

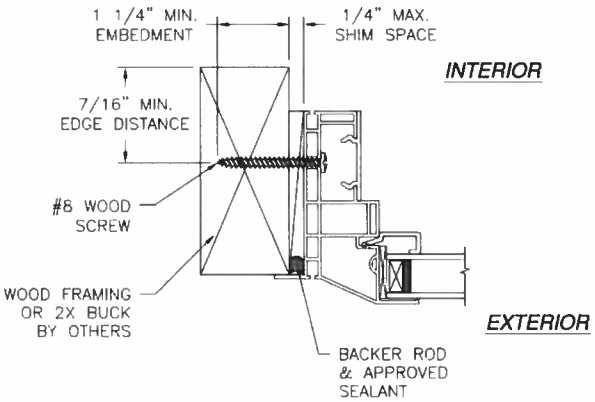
DRAWN:	DWG NO.	REV
N.G.	08–02818	–
SCALE NTS	DATE 9/13/12	SHEET 4 OF 7

LUIS R. LOMAS
LICENSE
No. 62514
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

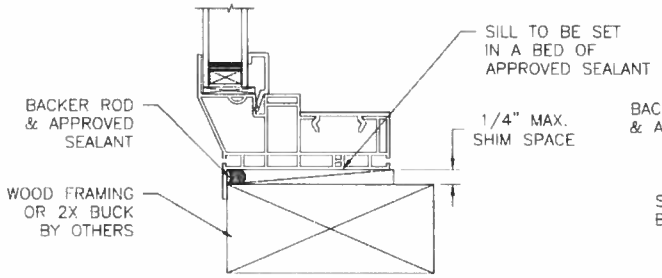
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



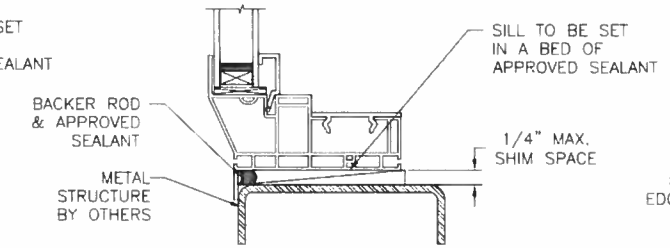




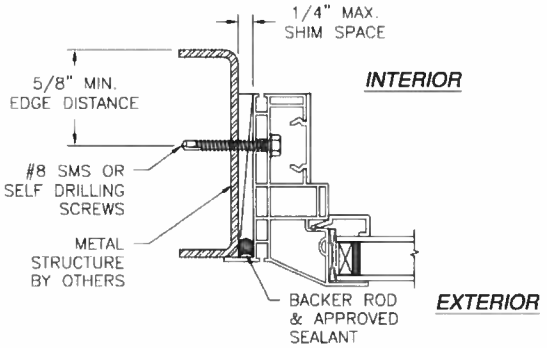
JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION



VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION



JAMB INSTALLATION DETAIL
METAL STRUCTURE INSTALLATION

SIGNED: 09/14/2015

NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

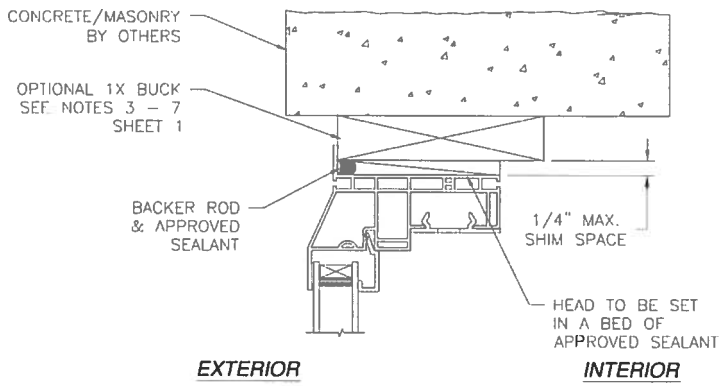
MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030-0370

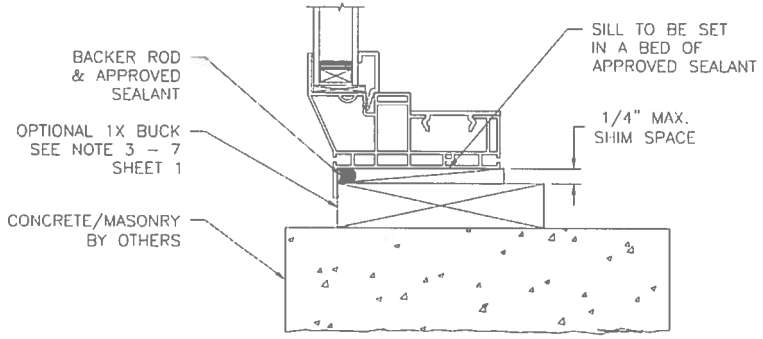
SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON-IMPACT
FLANGE INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
N.G.	08-02818	–
SCALE NTS	DATE 9/13/12	SHEET 5 OF 7

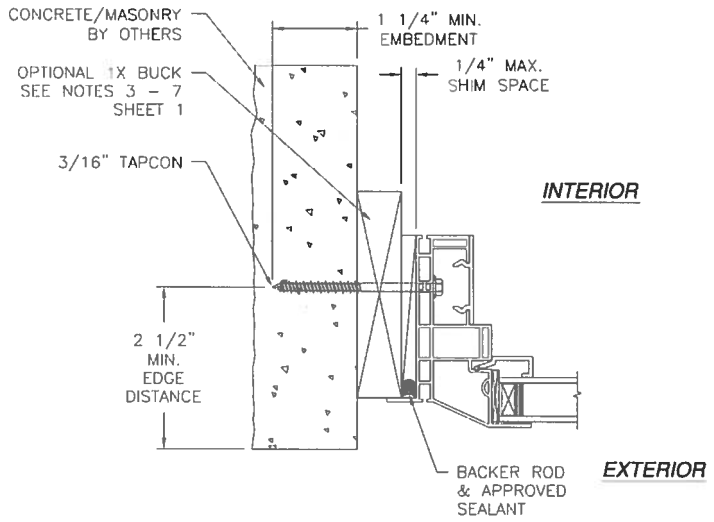
LUIS R. LOMAS
LICENSE
No. 62514
STATE OF FLORIDA
PROFESSIONAL ENGINEER

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED





VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION



JAMB INSTALLATION DETAIL
CONCRETE/MASONRY INSTALLATION

NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

SIGNED: 09/14/2015

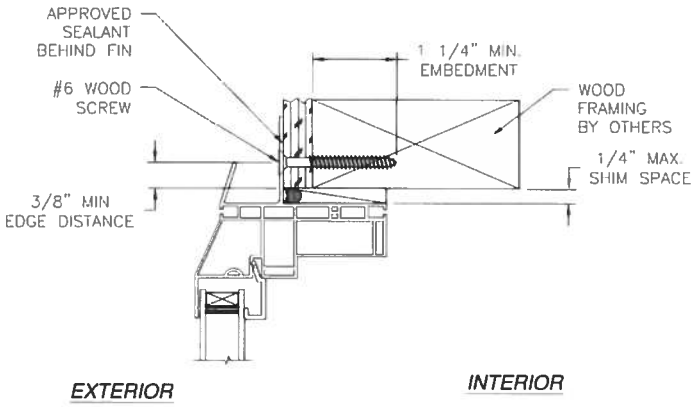
MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030-0370

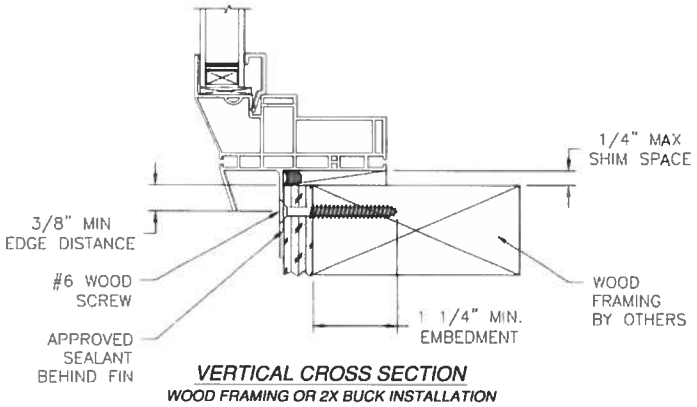
SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON-IMPACT
FLANGE INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
N.G.	08-02818	–
SCALE NTS	DATE 9/13/12	SHEET 6 OF 7

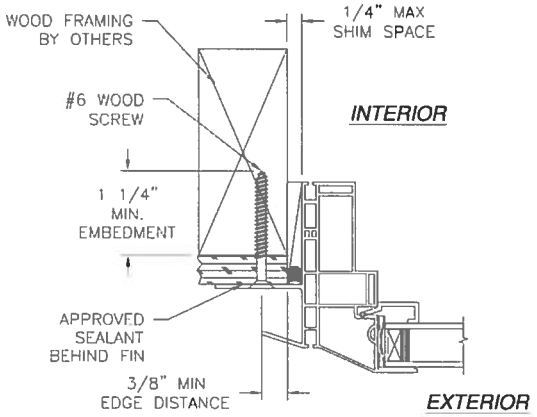
LUIS R. LOMAS
LICENSE
No. 8251
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED





VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION



JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION

NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

SIGNED: 09/14/2015

MI WINDOWS AND DOORS
650 WEST MARKET STREET
GRATZ, PA 17030-0370

SERIES 3500 & 3540 FIXED WINDOW
81" X 63" NON-IMPACT
FIN INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
N.G.	08-02818	-
SCALE NTS	DATE 9/13/12	SHEET 7 OF 7

LUIS R. LOMAS
LICENSE
No. 62514
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Blank

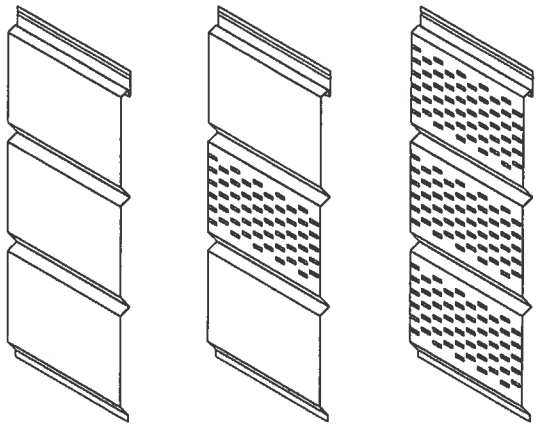
ACM™

AMERICAN CONSTRUCTION METALS

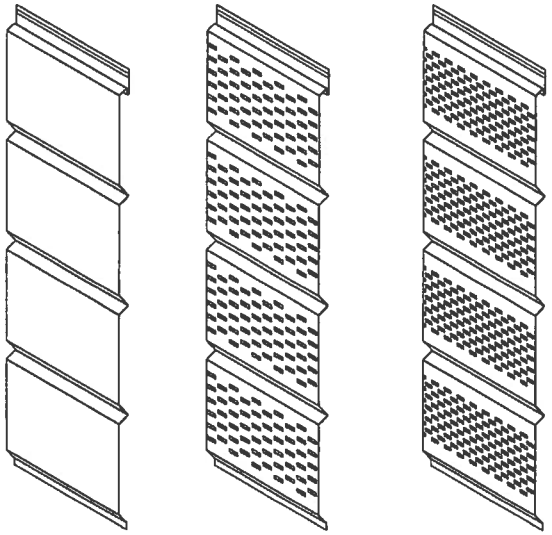
5140 West Cliffon Street
Tampa, FL 33634

"TRIPLE 4" & "QUAD 4"

ALUMINUM SOFFIT



TRIPLE 4 (T4)
T-4-012 (.0115" THICK)
T-4-014 (.0135" THICK)



QUAD 4 (Q4)
Q-4-012 (.0115" THICK)
Q-4-014 (.0135" THICK)

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 5th Edition (2014) Florida Building Code excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing or stucco.
3. Site conditions not covered by this drawing are subject to further engineering analysis.
4. Wood/CMU wall construction, by others, must be designed properly to receive loads from the soffit and/or 2" x 2" batten strips.
5. Aluminum soffits shall conform to the requirements of FBC Section 1404.5.1 and labeled according to FBC Section 1710.9.

TABLE OF CONTENTS	
SHEET #	**DESCRIPTION**
1	Typical elevations & general notes
2	Panel details
3	Soffit details & design pressures
4	Soffit details & design pressures
5	Soffit details, design pressures & bill of materials

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

3.4.15

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.658.9197
FBPE C.A. No. 9813

PRODUCT: ALUMINUM SOFFIT

PART OR ASSEMBLY: TYPICAL ELEVATIONS & GENERAL NOTES

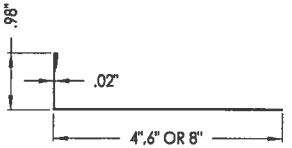
NO.	DATE	REVISIONS	BY
4	03/02/15	UPDATE TO 5TH ED. (2014) FBC	JK
3	12/13/11	UPDATE FOR 2010 FBC	LFS
2	3/9/10	ADD DETAILS	JK
1	3/31/09	ADD DETAILS	JK

DATE: 1/9/09
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-12019.1
SHEET 1 OF 5

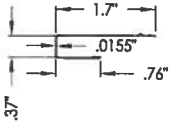
R:\Clients\American Construction Metals PERMANENT\Florida Product Approvals\FL-12019\Drawings\Current\FL-12019.dwg, FL-12019.1

SOFFIT AIR FLOW TABLE

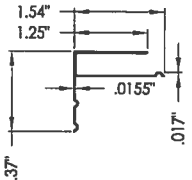
SOFFIT TYPE		AIR FLOW		SOFFIT TYPE		AIR FLOW	
		FREE FLOW AREA SQ-IN/SQ-FT	% FREE FLOW AREA			FREE FLOW AREA SQ-IN/SQ-FT	% FREE FLOW AREA
Triple 4	CENTER VENT NARROW PATTERN	3.91	2.71%	Quad 4			
	FULL VENT NARROW PATTERN	11.74	8.15%		FULL VENT NARROW PATTERN	11.74	8.15%
	FULL VENT WIDE PATTERN	3.69	2.56%		FULL VENT WIDE PATTERN	3.69	2.56%



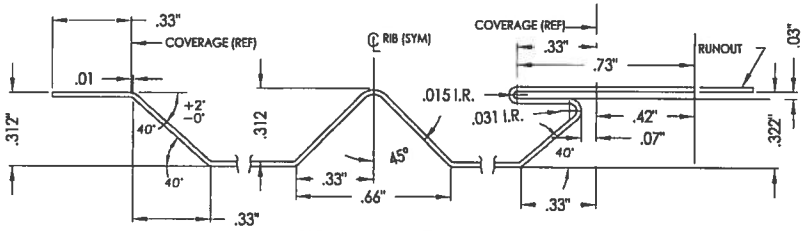
1 **FASCIA** Aluminum



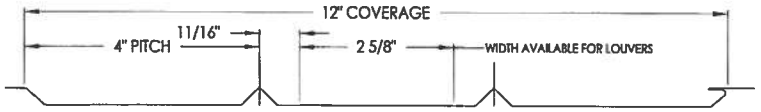
2 **"J" CHANNEL** Aluminum



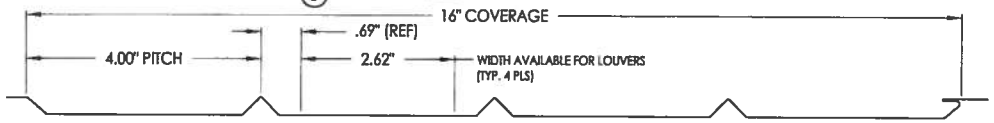
3 **"F" CHANNEL** Aluminum



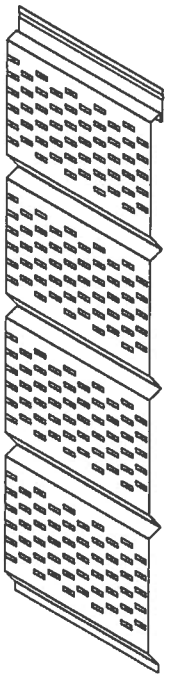
RIB AND END DETAILS

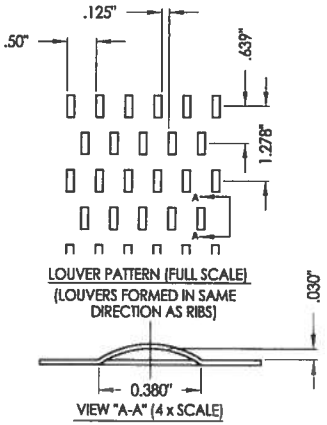


6 **TRIPLE 4 PANEL**

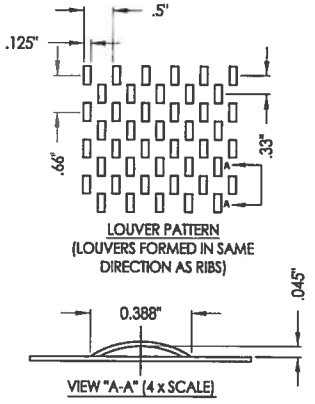


5 **QUAD 4 PANEL**

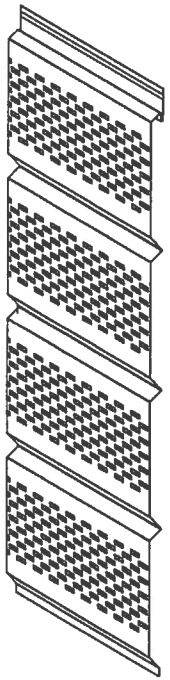


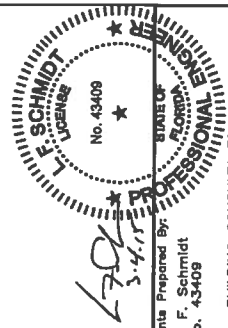


5 6 **FULL VENT - WIDE PATTERN**
(Louvers formed in same Direction as ribs)



5 6 **FULL VENT - NARROW VENT PATTERN**
(Louvers formed in same direction as ribs)





Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

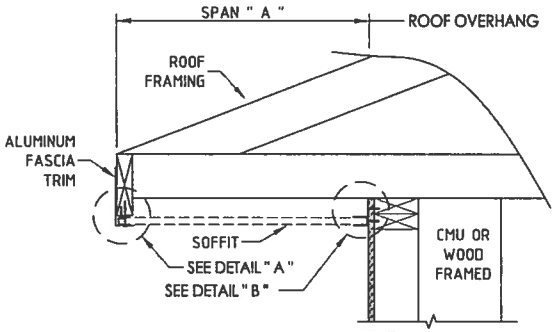
PRODUCT: ALUMINUM SOFFIT

PART OR ASSEMBLY: PANEL DETAILS

NO.	DATE	REVISIONS	BY
4	03/02/15	UPDATE TO 5TH ED. (2014) FBC	JK
3	12/13/11	UPDATE FOR 2010 FBC	LFS
2	3/9/10	ADD DETAILS	JK
1	3/31/09	ADD DETAILS	JK

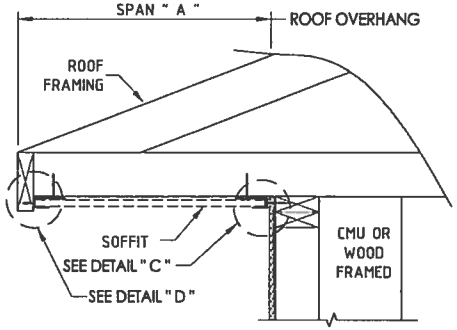
DATE: 01/01/09
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-12019.1
SHEET 2 OF 5

R:\Clients\American Construction Metals PERMANENT\Florida Product Approvals\FL-12019\Drawings\Current\FL-12019.dwg, 1-2



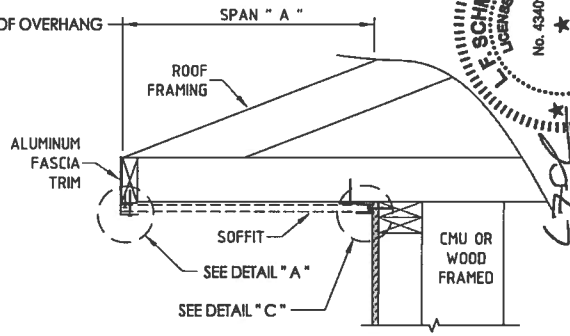
SIDE VIEW - SINGLE SPAN w/F-CHANNEL

(Shown w/ truss/framing cantilever)



SIDE VIEW - SINGLE SPAN w/J-CHANNELS

(Shown w/ truss/framing cantilever)

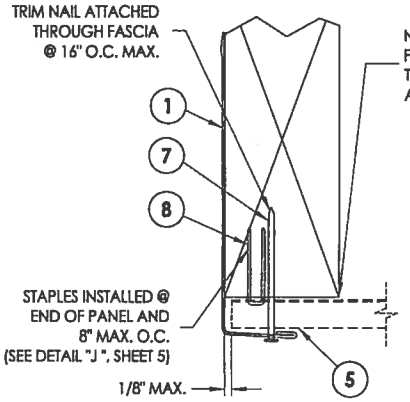


SIDE VIEW - SINGLE SPAN w/J-CHANNEL

(Shown w/ truss/framing cantilever)

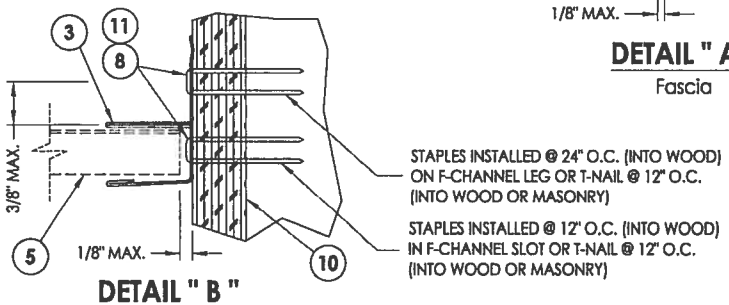
SINGLE SPAN LENGTH "A"	DESIGN PRESSURE (PSF)	
	POSITIVE	NEGATIVE
8"	+70.0	-141.0
10"	+60.0	-60.0
12"	+50.0	-50.0
14"	+38.5	-38.5
16"	+30.0	-30.0

NOTE: WOOD FRAMING AND CONNECTIONS TO BE DESIGNED BY THE ARCHITECT OR ENGINEER OF RECORD



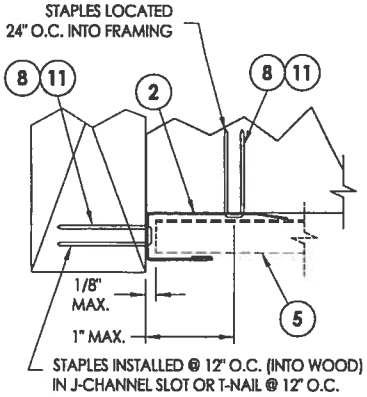
DETAIL " A "

Fascia



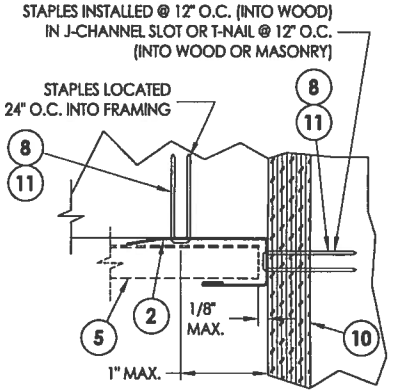
DETAIL " B "

F-Channel



DETAIL " D "

J-Channel
Fascia



DETAIL " C "

J-Channel

SUBSTRATE NOTES:
1. WOOD SUBSTRATE: G = 0.42 OR BETTER
2. MASONRY SUBSTRATE: 3,000 PSI CONCRETE (ACI 301) OR HOLLOW BLOCK (ASTM C90).

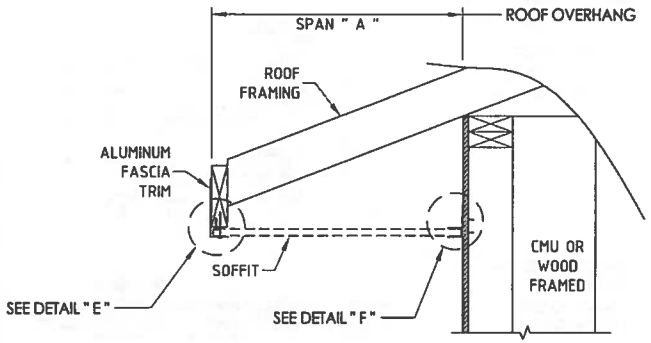
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409
STATE OF FLORIDA
PROFESSIONAL ENGINEER
L. F. SCHMIDT
LICENSE
No. 43409
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: ALUMINUM SOFFIT

PART OR ASSEMBLY: SOFFIT DETAILS & DESIGN PRESSURES

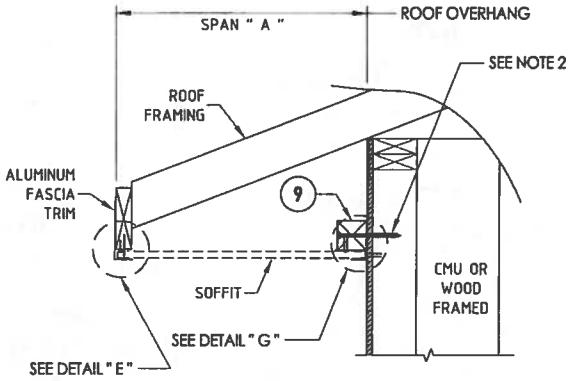
NO	DATE	REVISIONS	BY
4	03/02/15	UPDATE TO 5TH ED. (2014) FBC	JK
3	12/13/11	UPDATE FOR 2010 FBC	LFS
2	3/9/10	ADD DETAILS	JK
1	3/31/09	ADD DETAILS	JK

DATE: 1/9/09
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-12019.1
SHEET 3 OF 5



SIDE VIEW - SINGLE SPAN w/F-CHANNEL

(Shown w/ truss/framing overhang)

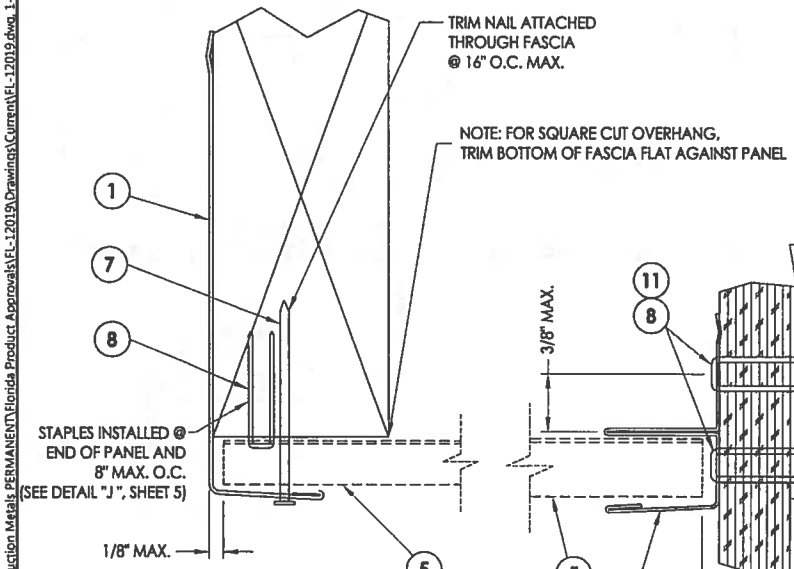


SIDE VIEW - SINGLE SPAN w/J-CHANNEL

(Shown w/ truss/framing overhang)

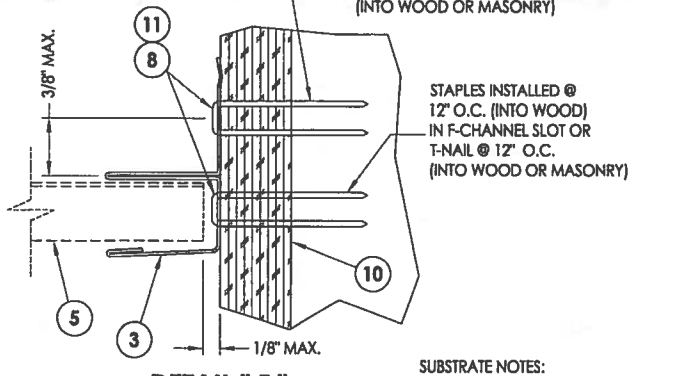
CONNECTOR NOTES:
1. WOOD FRAMING AND CONNECTIONS TO BE DESIGNED BY THE ARCHITECT OR ENGINEER OF RECORD
2. 12d COMMON NAIL OR 3/16" ITW TAPCON CONCRETE SCREW (MIN. 1-1/4" EMBEDMENT) @ 24" ON CENTER

SINGLE SPAN LENGTH "A"	DESIGN PRESSURE (PSF)	
	POSITIVE	NEGATIVE
8"	+70.0	-141.0
10"	+60.0	-60.0
12"	+50.0	-50.0
14"	+38.5	-38.5
16"	+30.0	-30.0



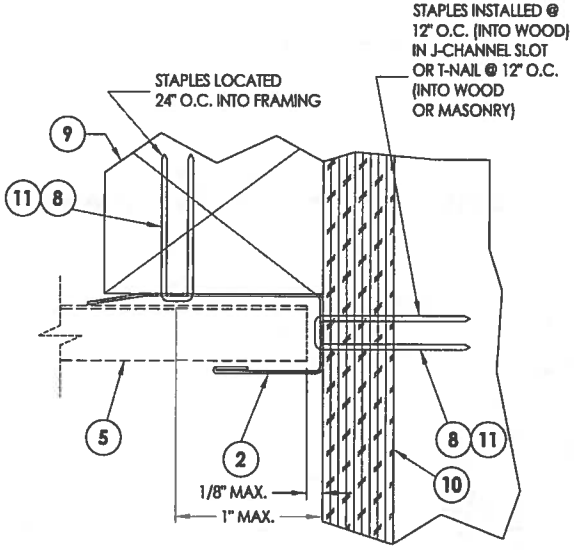
DETAIL " E "

Fascia



DETAIL " F "

F-Channel



DETAIL " G "

J-Channel

SUBSTRATE NOTES:
1. WOOD SUBSTRATE: G = 0.42 OR BETTER
2. MASONRY SUBSTRATE: 3,000 PSI CONCRETE (ACI 301) OR HOLLOW BLOCK (ASTM C90).

F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: ALUMINUM SOFFIT

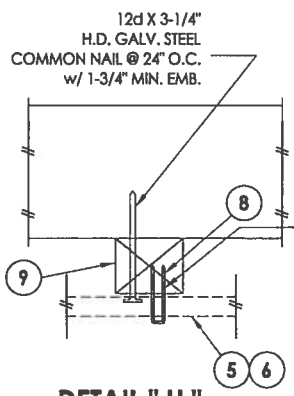
PART OR ASSEMBLY: SOFFIT DETAILS & DESIGN PRESSURES

NO	DATE	REVISIONS	BY
4	03/02/15	UPDATE TO 5TH ED. (2014) FBC	JK
3	12/13/11	UPDATE FOR 2010 FBC	LFS
2	3/9/10	ADD DETAILS	JK
1	3/31/09	ADD DETAILS	JK

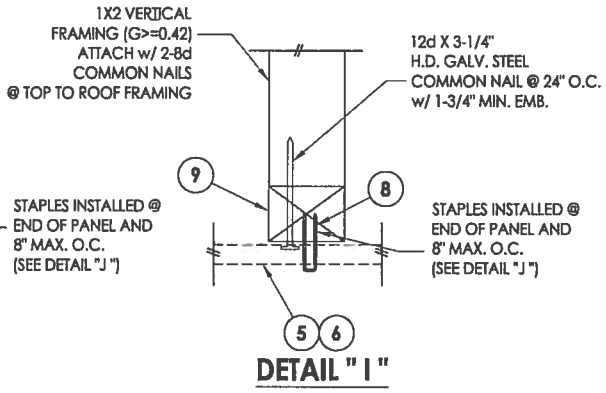
DATE: 1/9/09
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-12019.1
SHEET 4 OF 5

R:\Clients\American Construction Metals PERMANENT\Florida Product Approvals\FL-12019\Drawings\Current\FL-12019.dwg, 1-4

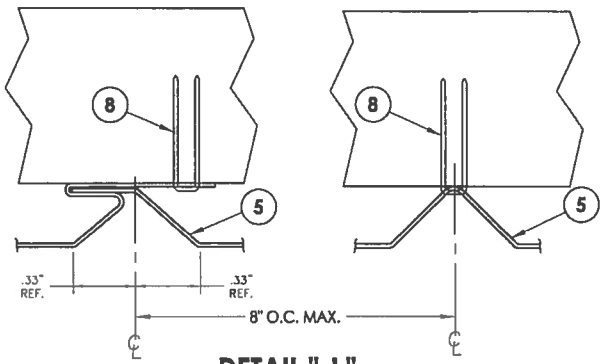
ITEM	DESCRIPTION	MATERIAL
1	FASCIA .0215" THK. AL. 3105 - H14	ALUMINUM
2	"J" CHANNEL .0155" THK. AL. 3105 - H24	ALUMINUM
3	"F" CHANNEL .0155" THK. AL. 3104 - H19	ALUMINUM
5	QUAD 4 PANEL (.0115 OR .0135" THICK) AL. 3105	ALUMINUM
6	TRIPLE 4 PANEL (.0115 OR .0135" THICK) AL. 3105	ALUMINUM
7	#15 x 1-3/4" TRIM NAIL	S.S.
8	18" GA. X 1/4" SS STAPLE (w/ 7/8" MIN. EMBEDMENT)	STEEL
9	2" X 2" BATTEN STRIP (G=.42 OR BETTER)	WOOD
10	APA B-C- GROUP 1 EXT. 15/32" PLYWOOD OR BETTER	WOOD
11	.097" DIA. T-NAIL (w/ 5/8" MIN. EMBEDMENT)	STEEL



DETAIL " H "



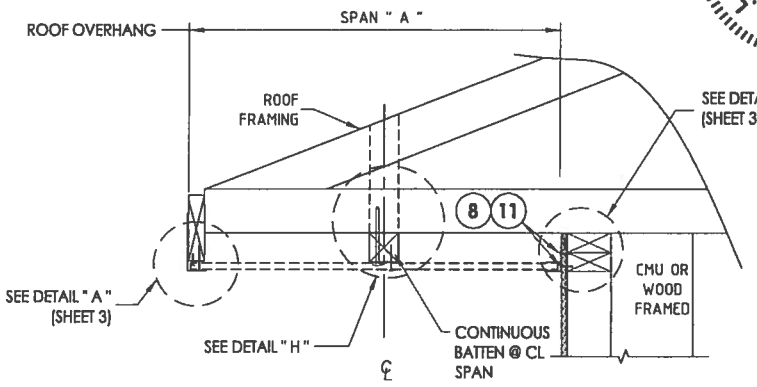
DETAIL " I "



DETAIL " J "

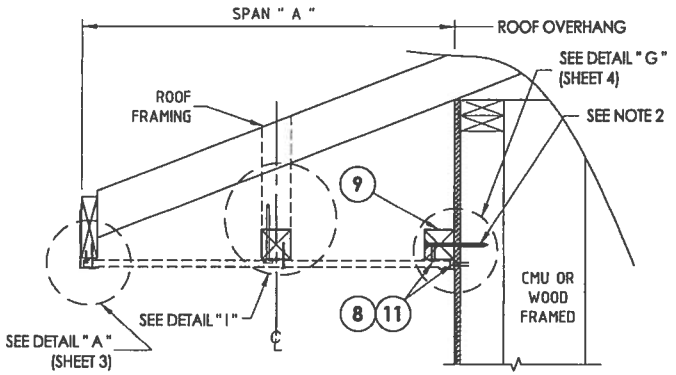
TWIN SPAN LENGTH w/CONTINUOUS BATTEN "A"	DESIGN PRESSURE (PSF)	
	POSITIVE	NEGATIVE
16"	+70.0	-70.0
18"	+66.5	-66.5
20"	+60.0	-60.0
22"	+54.5	-54.5
24"	+50.0	-50.0

CONNECTOR NOTES:
1. WOOD FRAMING AND CONNECTIONS TO BE DESIGNED BY THE ARCHITECT OR ENGINEER OF RECORD
2. 12d COMMON NAIL OR 3/16" ITW TAPCON CONCRETE SCREW (MIN. 1-1/4" EMBEDMENT) @ 24" ON CENTER



SIDE VIEW - DOUBLE SPAN w/BATTEN

(Shown w/ truss/framing cantilever)



SIDE VIEW - DOUBLE SPAN w/BATTEN

(Shown w/ truss/framing overhang)

SUBSTRATE NOTES:
1. WOOD SUBSTRATE: G = 0.42 OR BETTER
2. MASONRY SUBSTRATE: 3,000 PSI CONCRETE (ACI 301) OR HOLLOW BLOCK (ASTM C90).

STATE OF FLORIDA PROFESSIONAL ENGINEER
T. F. SCHMIDT
LICENSE No. 43409

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: ALUMINUM SOFFIT

PART OR ASSEMBLY: SOFFIT DETAILS, DESIGN PRESSURES & BILL OF MATERIALS

NO	DATE	REVISIONS	BY
4	03/02/15	UPDATE TO 5TH ED. (2014) FBC	JK
3	12/13/11	UPDATE FOR 2010 FBC	LFS
2	3/9/10	ADD DETAILS	JK
1	3/31/09	ADD DETAILS	JK

DATE: 1/9/09
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: FL-12019.1
SHEET 5 OF 5

R:\Clients\American Construction Metals PERMANENT\Florida Product Approvals\FL-12019\Drawings\Current\FL-12019.dwg, 1-5

Blank

Florida Product Approval

HardiePlank® Lap Siding

- For use inside HVHZ:
  - HardiePlank Lap Siding fastener types, fastening schedule, and installation shall be in accordance with the Miami-Dade County Florida NOA 17-0406.06. Consult the HardiePlank product installation instructions on the follow pages for all other installation requirements.

- For use outside of HVHZ,
  - HardiePlank Lap Siding fastener types, fastening schedule, and installation shall be in accordance with Engineering Evaluation Reports RIO-2683-17, RIO-2687-17, or RIO-2688-17. Consult the HardiePlank product installation instructions on the follow pages for all other installation requirements.

HardiePlank® HZ10® Lap Siding

JamesHardie®

EFFECTIVE MAY 2016

INSTALLATION REQUIREMENTS - PRIMED & COLORPLUS® PRODUCTS

Visit www.hardieinstallation.com for the most recent version.

SELECT CEDARMILL® • SMOOTH • CUSTOM COLONIAL™ SMOOTH • CUSTOM COLONIAL™ ROUGHSAWN
CUSTOM BEADED CEDARMILL® • CUSTOM BEADED SMOOTH • STRAIGHT-EDGE SHINGLE PLANK

IMPORTANT: FAILURE TO INSTALL AND FINISH THIS PRODUCT IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND JAMES HARDIE WRITTEN APPLICATION INSTRUCTIONS MAY LEAD TO PERSONAL INJURY, AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES, AND VOID THE PRODUCT ONLY WARRANTY. BEFORE INSTALLATION, CONFIRM THAT YOU ARE USING THE CORRECT HARDIEZONE™ PRODUCT INSTRUCTIONS. INSTALLATION OF HZ10® PRODUCTS OUTSIDE AN HZ10® LOCATION WILL VOID YOUR WARRANTY. TO DETERMINE WHICH HARDIEZONE™ APPLIES TO YOUR LOCATION, VISIT WWW.HARDIEZONE.COM OR CALL 1-866-942-7343 (866 9HARDIE)

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.

⚠ CUTTING INSTRUCTIONS

OUTDOORS
1. Position cutting station so that wind will blow dust away from user and others in working area.
2. Use one of the following methods:
   - a. Best: i. Score and snap; ii. Shears (manual, electric or pneumatic)
   - b. Better: i. Dust reducing circular saw equipped with a HardieBlade® saw blade and HEPA vacuum extraction
   - c. Good: i. Dust reducing circular saw with a HardieBlade saw blade (only use for low to moderate cutting)

INDOORS
1. Cut only using score and snap, or shears (manual, electric or pneumatic).
2. Position cutting station in well-ventilated area

- NEVER use a power saw indoors
- NEVER use a circular saw blade that does not carry the HardieBlade saw blade trademark
- NEVER dry sweep – Use wet suppression or HEPA Vacuum

Important Note: For maximum protection (lowest respirable dust production), James Hardie recommends always using "Best"-level cutting methods where feasible.

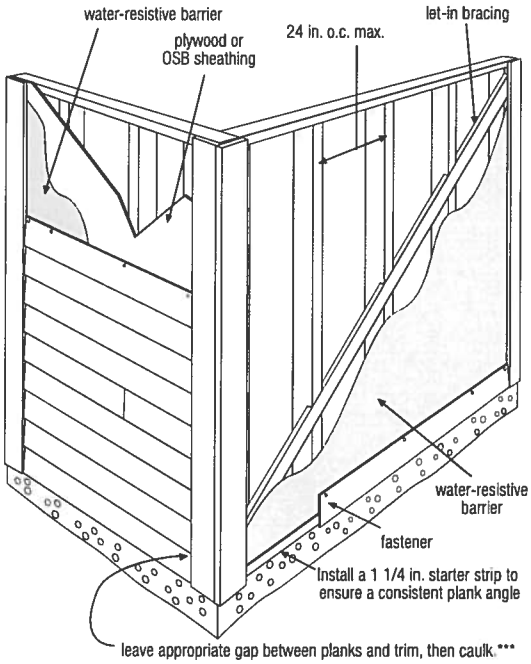
NIOSH-approved respirators can be used in conjunction with above cutting practices to further reduce dust exposures. Additional exposure information is available at www.jameshardie.com to help you determine the most appropriate cutting method for your job requirements. If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.

SD083105

GENERAL REQUIREMENTS:

- HardiePlank* lap siding can be installed over braced wood or steel studs spaced a maximum of 24 in. o.c. or directly to minimum 7/16 in. thick OSB sheathing. See general fastening requirements. Irregularities in framing and sheathing can mirror through the finished application.
- Information on installing James Hardie products over foam can be located in **JH Tech Bulletin 19** at www. jamehardie.com
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap[1], which complies with building code requirements.
- When installing James Hardie products all clearance details in figs. 3-14 must be followed.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft..
- Do not use HardiePlank lap siding in fascia or trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePlank lap siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at www.JamesHardie.com.
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.

Figure 1 **Double Wall Construction** **Single Wall Construction**

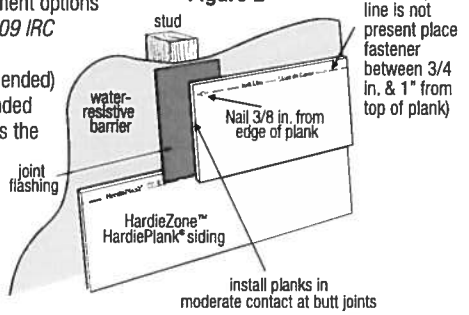


INSTALLATION: JOINT TREATMENT

One or more of the following joint treatment options are required by code (*as referenced 2009 IRC R703.10.2)*

A. Joint Flashing (James Hardie recommended)
B. Caulking* (Caulking is not recommended for ColorPlus for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.)
C. "H" jointer cover

Figure 2



Note: Field painting over caulking may produce a sheen difference when compared to the field painted PrimePlus. *Refer to Caulking section in these instructions.

[1] For additional information on HardieWrap® Weather Barrier, consult James Hardie at 1-866-4Hardie or www.hardiewrap.com

WARNING: AVOID BREATHING SILICA DUST
James Hardie® products contain respirable crystalline silica, which is known to the State of California to cause cancer and is considered by IARC and NIOSH to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) use fiber cement shears for cutting or, where not feasible, use a HardieBlade® saw blade and dust-reducing circular saw attached to a HEPA vacuum; (3) warn others in the immediate area; (4) wear a properly-fitted, NIOSH-approved dust mask or respirator (e.g. N-95) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures. During clean-up, use HEPA vacuums or wet cleanup methods - never dry sweep. For further information, refer to our installation instructions and Material Safety Data Sheet available at www.jameshardie.com or by calling 1-800-9HARDIE (1-800-942-7343). FAILURE TO ADHERE TO OUR WARNINGS, MSDS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

SD050905

CLEARANCE AND FLASHING REQUIREMENTS

Figure 3
Roof to Wall

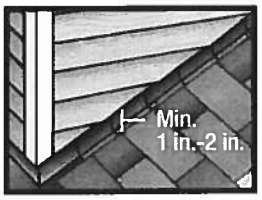


Figure 4
Horizontal Flashing

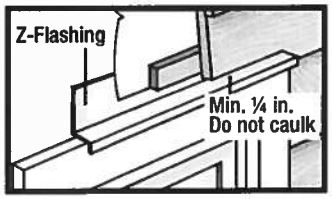


Figure 5
Kickout Flashing

Figure 6
Slabs, Path, Steps to Siding

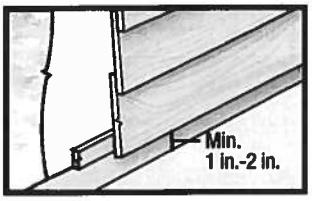


Figure 7
Deck to Wall

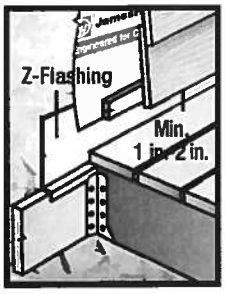


Figure 8
Ground to Siding

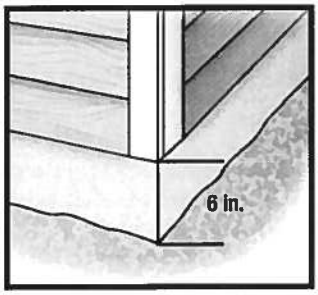


Figure 9
Gutter to Siding

Figure 10
Sheltered Areas

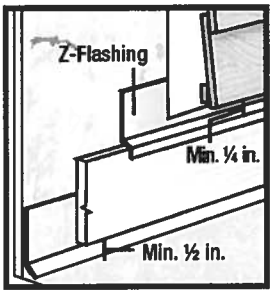


Figure 11
Mortar/Masonry

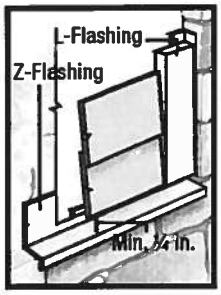


Figure 12
Drip Edge

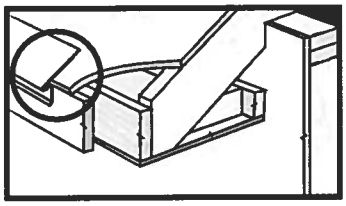


Figure 13
Block Penetration
(Recommended in HZ10)

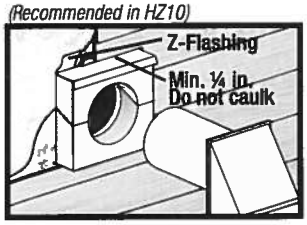


Figure 14
Valley/Shingle Extension

FASTENER REQUIREMENTS **

Blind Nailing is the preferred method of installation for HardiePlank® lap siding products. Face nailing should only be used where required by code for high wind areas and must not be used in conjunction with Blind nailing (Please see JH Tech bulletin 17 for exemption when doing a repair). **Pin-backed corners may be done for aesthetic purposes Only. Pin-backs shall be done with finish nails only, and are not a substitute for blind or face nailing.**

BLIND NAILING

Nails - Wood Framing

- Siding nail (0.09 in. shank x 0.221 in. HD x 2 in. long)
- 11ga. roofing nail (0.121 in. shank x 0.371 in. HD x 1.25 in. long)

Screws - Steel Framing

- Ribbed Wafer-head or equivalent (No. 8 x 1 1/4 in. long x 0.375 in. HD) Screws must penetrate 3 threads into metal framing.

Nails - Steel Framing

- ET & F Panelfast® nails or equivalent (0.10 in. shank x 0.313 in. HD x 1-1/2 in. long)

Nails must penetrate minimum 1/4 in. into metal framing.

OSB minimum 7/16 in.

- 11ga. roofing nail (0.121 in. shank x 0.371 in. HD x 1.75 in. long)
- Ribbed Wafer-head or equivalent (No. 8 x 1 5/8 in. long x 0.375 in. HD).

FACE NAILING

Nails - Wood Framing

- 6d (0.113 in. shank x 0.267 in. HD x 2 in. long)
- Siding nail (0.09 in. shank x 0.221 in. HD x 2 in. long)

Screws - Steel Framing

- Ribbed Bugle-head or equivalent (No. 8-18 x 1-5/8 in. long x 0.323 in. HD) Screws must penetrate 3 threads into metal framing.

Nails - Steel Framing

- ET & F pin or equivalent (0.10 in. shank x 0.25 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

OSB minimum 7/16 in.

- Siding nail (0.09 in. shank x 0.221 in. HD x 1-1/2 in. long)*

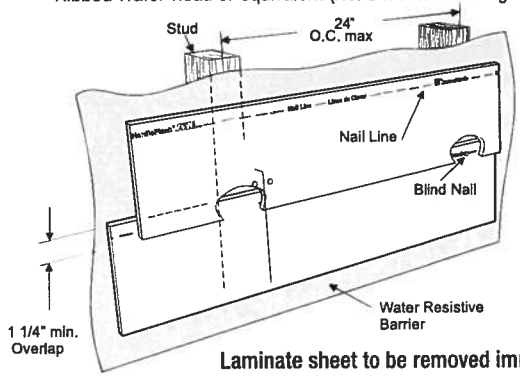
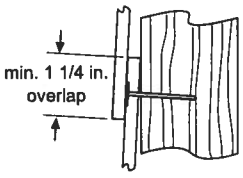
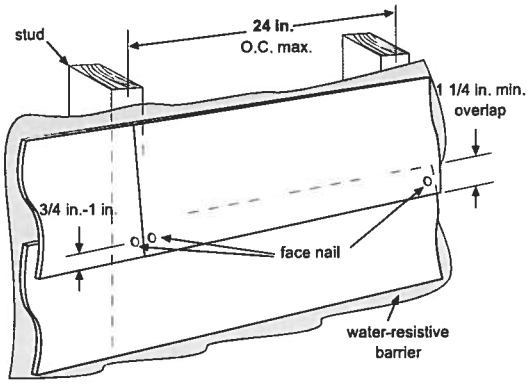


Figure 15

Figure 16
Minimum overlap for Both Face and Blind Nailing





Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

* When face nailing to OSB, planks must be no greater than 9 1/4 in. wide and fasteners must be 12 in. o.c. or less.

** Also see General Fastening Requirements; and when considering alternative fastening options refer to James Hardie Technical Bulletin USTB 17 - Fastening Tips for HardiePlank® Lap Siding.

GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5.

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space). (fig. A)
- Do not over-drive nail heads or drive nails at an angle.
- If nail is countersunk, fill nail hole and add a nail. (fig. B)
- For wood framing, under driven nails should be hit flush to the plank with a hammer (For steel framing, remove and replace nail).
- NOTE: Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.
- **Do not use aluminum fasteners, staples, or clipped head nails.**

PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).

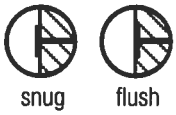


Figure A

Figure B

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products. James Hardie products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: OSI Quad as well as some other caulking manufacturers do not allow tooling.**

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie® ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePlank® lap siding with ColorPlus Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

COVERAGE CHART/ESTIMATING GUIDE

Number of 12 ft. planks, does not include waste

COVERAGE AREA LESS OPENINGS		HARDIEPLANK® LAP SIDING WIDTH								
SQ (1 SQ = 100 sq.ft.)	(exposure)	5 1/4 4	6 1/4 5	7 1/4 6	7 1/2 6 1/4	8 6 3/4	8 1/4 7	9 1/4 8	9 1/2 8 1/4	12 10 3/4
1		25	20	17	16	15	14	13	13	9
2		50	40	33	32	30	29	25	25	19
3		75	60	50	48	44	43	38	38	28
4		100	80	67	64	59	57	50	50	37
5		125	100	83	80	74	71	63	63	47
6		150	120	100	96	89	86	75	75	56
7		175	140	117	112	104	100	88	88	65
8		200	160	133	128	119	114	100	100	74
9		225	180	150	144	133	129	113	113	84
10		250	200	167	160	148	143	125	125	93
11		275	220	183	176	163	157	138	138	102
12		300	240	200	192	178	171	150	150	112
13		325	260	217	208	193	186	163	163	121
14		350	280	233	224	207	200	175	175	130
15		375	300	250	240	222	214	188	188	140
16		400	320	267	256	237	229	200	200	149
17		425	340	283	272	252	243	213	213	158
18		450	360	300	288	267	257	225	225	167
19		475	380	317	304	281	271	238	238	177
20		500	400	333	320	296	286	250	250	186

This coverage chart is meant as a guide. Actual usage is subject to variables such as building design. James Hardie does not assume responsibility for over or under ordering of product.

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-2290, HardiePlank® lap siding is recognized as a suitable alternate to that specified in the 2006,2009,&2012 International Residential Code for One- and Two-Family Dwellings, and the 2006, 2009, & 2012 International Building Code. HardiePlank lap siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida listing FL#889, Dade County, Florida NOA No. 02-0729.02, U.S. Dept. of HUD Materials Release 1263c, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

Additional Installation Information, Warranties, and Warnings are available at www.jameshardie.com

JamesHardie®

Blank

TRINITY | ERD

EXTERIOR RESEARCH & DESIGN, LLC.
Certificate of Authorization #9503
353 CHRISTIAN STREET, UNIT #13
OXFORD, CT 06478
(203) 262-9245

EVALUATION REPORT

Tarco Roofing
One Information Way, Suite 225
Little Rock, AR 72202
(254) 913-7750

Evaluation Report 10880.07.08-R9
FL10450-R9
Date of Issuance: 07/11/2008
Revision 9: 10/03/2017

SCOPE:
This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the **6th Edition (2017) Florida Building Code** sections noted herein.

DESCRIPTION: Tarco Roof Underlayments

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity|ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 10.

Prepared by:

Robert J.M. Nieminen, P.E.
Florida Registration No. 59166, Florida DCA ANE1983

The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 10/03/2017. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. Trinity|ERD does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. Trinity|ERD is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: **Tarco Roof Underlayments**, as produced by **Tarco Roofing**, have demonstrated compliance with the following sections of the **6th Edition (2017) Florida Building Code** through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1504.3.1	Wind Uplift	FM 4474	2011
1507.1.1, T1507.1.1	Physical Properties	ASTM D226	2009
1507.1.1, T1507.1.1	Physical Properties	ASTM D4869	2016
1507.1.1, T1507.1.1, 1507.2.9.2	Physical Properties	ASTM D1970	2015
1507.2.9.2	Physical Properties	ASTM D3909	2012
1507.2.9.2, FRSA/TRI April 2012	Physical Properties	ASTM D6380	2013
1507.3.3	Physical Properties	FRSA/TRI April 2012 (04-12)	2012
FRSA/TRI April 2012	Physical Properties	ASTM D6164	2011

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST6049)	FRSA/TRI April 2012 (04-12)	T33190.08.10	08/06/2010
ERD (TST6049)	ASTM D1970	T32530.08.10	08/17/2010
ERD (TST6049)	ASTM D1970	T30160.08.09-R1	10/12/2010
ERD (TST6049)	FM 4474	T37610.07.11	06/29/2011
ERD (TST6049)	ASTM D3909	T40780.04.12	04/06/2012
ERD (TST6049)	ASTM D6380	T40790.04.12	04/06/2012
ERD (TST6049)	ASTM D6164	T35410.04.12	04/18/2012
ERD (TST6049)	ASTM D1970	T45250.04.13-R2	04/23/2013
ERD (TST6049)	FRSA/TRI April 2012 (04-12)	T43930.09.13-R2	09/11/2013
ERD (TST6049)	ASTM D226 & D4869	SC4950.02.14-R2	06/25/2014
ERD (TST6049)	ASTM D1970	TAR-SC9480.15	07/02/2015
ERD (TST6049)	FM 4474	TAR-SC8020.14	12/03/2015
ERD (TST6049)	FM 4474	TAR-SC5670.03.16	03/21/2016
ERD (TST6049)	FM 4474	T6460.06.07-R2	05/26/2017
ERD (TST6049)	ASTM D226	TAR-SC13965.02.17-R1	05/17/2017
ERD (TST6049)	FBC 1507.1.1 (Exception)	TAR-SC16115.17	10/02/2017
ERD (TST6049)	FRSA/TRI April 2012 (04-12)	TAR-SC16115.17	10/02/2017
PRI (TST5878)	ASTM D1970	BRY-018-02-01	08/11/2003
PRI (TST5878)	ASTM D1970	BRY-017-02-01	08/11/2003
PRI (TST5878)	ASTM D226	TOT-014-02-02	05/18/2004
PRI (TST5878)	ASTM D226	TOT-015-02-02	05/24/2004
PRI (TST5878)	ASTM D4869	TOT-009-02-01	09/14/2004
PRI (TST5878)	ASTM D4869	TOT-009-02-02	09/14/2004
PRI (TST5878)	ASTM D226	TOT-041-02-01	05/24/2006
Miami-Dade (CER1592)	FBC HVHZ Certification	16-1116.09	01/12/2017
Tarco Roofing	Adhesive compound	Affidavit	12/15/2015
UL, LLC. (QUA9625)	Quality Assurance	Service Confirmation	Exp. 06/28/2020

4. PRODUCT DESCRIPTION:

4.1 Self-Adhering Underlayments:

LeakBarrier® MS300 Ice and Water Armor is a self-adhering, glass mat reinforced, mineral surfaced, SBS modified roof underlayment; meets ASTM D1970.

LeakBarrier® PS200^{HT} Ice and Water Armor is a self-adhering, glass mat reinforced, fabric surfaced, SBS modified roof underlayment; meets ASTM D1970 and FRSA/TRI April 2012 (04-12).

LeakBarrier® PS200^{MU} Ice and Water Armor is a self-adhering, glass mat reinforced, smooth poly film surfaced, SBS modified roof underlayment; meets ASTM D1970.

LeakBarrier® NR500^{HT} is a self-adhering, plastic film surfaced, modified underlayment; meets ASTM D1970.

LeakBarrier® SS400 Ice and Water Armor is a self-adhering, fiberglass reinforced, smooth surfaced modified underlayment; meets ASTM D1970.

4.2 Mechanically Fastened Underlayments:

Tarco 15 is an asphalt-saturated organic felt; meets ASTM D226, Type I.

Tarco 30 is an asphalt-saturated organic felt; meets ASTM D226, Type II.

Tarco NO 30 is an asphalt-saturated organic felt; meets ASTM D4869, Type II.

LeakBarrier® EasyLay® is an asphalt-coated polyester fabric roof underlayment; meets physical requirements of ASTM D226, Types I and II.

4.3 Mechanically Fastened and/or Bonded Underlayments:

Fiberglass Mineral Surfaced Roll Roofing is a glass-fiber-reinforced, asphalt-coated, granule surfaced underlayment used as a valley liner; meets ASTM D3909.

ASTM Organic Mineral Surface Tile Underlayment is an asphalt-saturated organic roll roofing sheet; meets ASTM D6380, Class M.

LeakBarrier® EasyMop™ SBS is a polyester reinforced, SBS modified bitumen roofing underlayment; meets FRSA/TRI April 2012 (04-12).

4.4 Mechanically Fastened Base Sheets:

LeakBarrier® EasyLay® UDL 15 consists of a woven-polymeric scrim with a textured fabric on the top surface; meets FBC 1507.1.1 (Exception). Within this Evaluation Report, it is used as a base sheet in multi-ply underlayment systems. See FBC File No. FL16884 use as a stand-alone roof underlayment.

LeakBarrier® EasyLay® UDL Basic consists of a woven-polymeric scrim with a textured fabric on the top surface; meets FBC 1507.1.1 (Exception). Within this Evaluation Report, it is used as a base sheet in multi-ply underlayment systems. See FBC File No. FL16884 use as a stand-alone roof underlayment.

LeakBarrier® EasyLay® UDL 50 consists of a woven-polymeric scrim with a non-woven fabric on the top surface and a rubberized polymeric coating on the back surface; meets FBC 1507.1.1 (Exception). Within this Evaluation Report, it is used as a base sheet in multi-ply underlayment systems. See FBC File No. FL16884 use as a stand-alone roof underlayment.

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither Trinity|ERD nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

5.2 This Evaluation Report is not for use in FBC HVHZ jurisdictions.

5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory for fire ratings of this product.

5.4 **Tarco Roof Underlayments** may be used with any prepared roof cover where the product is specifically referenced within FBC approval documents. If not listed, a request may be made to the Authority Having Jurisdiction for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.5 Allowable Roof Covers:

TABLE 1: ROOF COVER OPTIONS

Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate
LeakBarrier MS300	Yes	No	No	No	Yes	Yes
LeakBarrier PS200^{HT}	Yes	Yes	Yes See 5.5.2	Yes	Yes	Yes
LeakBarrier PS200^{MU}	Yes	No	No	Yes	Yes	Yes
LeakBarrier NR500^{HT}	Yes	No	No	Yes (No copper or zinc)	Yes	Yes
LeakBarrier SS400	Yes	No	No	No	Yes	Yes
LeakBarrier EasyLay	Yes	Yes (as base sheet in multi-ply system)	Yes (as base sheet in multi-ply system)	Yes	Yes	Yes
LeakBarrier EasyLay UDL 15, UDL Basic or UDL 50	Yes (See FL16884)	Yes (as base sheet in multi-ply system)	Yes (as base sheet in multi-ply system)	Yes (See FL16884)	Yes (See FL16884)	Yes (See FL16884)
Tarco 15	Yes	No	No	Yes	Yes	No
Tarco 30	Yes	Yes (as base sheet in multi-ply system)	Yes (as base sheet in multi-ply system)	Yes	Yes	Yes
Tarco NO 30	Yes	No	No	Yes	Yes	Yes
Fiberglass Mineral Surfaced Roll Roofing	Yes Valley Liner per 1507.2.9.2 (2)	No	No	No	No	No
ASTM Organic Mineral Surface Tile Underlayment	No	Yes	Yes See 5.5.2	No	No	No
LeakBarrier EasyMop SBS	No	Yes	Yes See 5.5.2	No	No	No

5.5.1 Tarco 15, Tarco 30, Tarco NO 30 and EasyLay may be used as a mechanically attached base layer followed by a LeakBarrier self-adhering top layer or asphalt-applied ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS with allowable roof covers noted above for the respective top layer underlayments.

5.5.2 "Foam-On Tile" is limited to use of following Approved tile adhesives / underlayment combinations.

TABLE 1A: ALLOWABLE TILE ADHESIVE / UNDERLAYMENT COMBINATIONS[1]

Adhesive	Florida Product Approval	Underlayments
ICP Adhesives Polyset® AH-160	FL6332	LeakBarrier PS200^{HT}, ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS

[1] *Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance.*

5.6 Allowable Substrates:

5.6.1 Direct-bond to deck:

LeakBarrier MS300, LeakBarrier PS200^{HT}, LeakBarrier PS200^{MU}, LeakBarrier NR500^{HT} or LeakBarrier SS400 self-adhered to:

- New untreated plywood (unprimed or primed with ASTM D41 primer);
- Existing plywood (unprimed or primed with ASTM D41 primer);
- New or existing OSB (unprimed or primed with ASTM D41 primer);
- Structural concrete (unprimed or primed with ASTM D41 primer).

Note: Tarco does not require priming of new or existing plywood or OSB sheathing. New or existing sheathing should be cleaned of all dirt and debris prior to application of LeakBarrier membranes.

ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS in hot asphalt to:

- ASTM D41 primed structural concrete.

*Note: Refer to **Section 5.6.4** for uplift limitations associated with direct-deck underlayment installations where the overlying roof cover is foam-on tile roofing.*

5.6.2 Bond to Mechanically Attached Base Sheet:

LeakBarrier MS300, LeakBarrier PS200^{HT}, LeakBarrier PS200^{MU}, LeakBarrier NR500^{HT} or LeakBarrier SS400 self-adhered to:

- ASTM D226, Type I or II felt;
- ASTM D4869 felt;
- LeakBarrier EasyLay, LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50.

ASTM Organic Mineral Surface Tile Underlayment or LeakBarrier EasyMop SBS in hot asphalt to:

- ASTM D226, Type I or II felt;
- ASTM D4601, Type II base sheet.

For installations under mechanically attached prepared roof coverings, base layer shall be attached per minimum codified requirements. For installations under foam-on tile systems, base layer shall be attached per minimum requirements of **FRSA/TRI April 2012 (04-12), Appendix A, Table 1**, or as listed in **Section 5.6.4** herein, or as tested in accordance with **FBC 1504.3.1**.

5.6.3 Bond to Other Substrate Types:

LeakBarrier MS300, LeakBarrier PS200^{HT}, LeakBarrier PS200^{MU}, LeakBarrier NR500^{HT} or LeakBarrier SS400 self-adhered to ASTM D41 primed metal (flashing metal, valley metal, etc.)

5.6.4 Wind Resistance for Underlayment Systems in Foam-On Tile Applications: **FRSA/TRI April 2012 (04-12)** does not address wind uplift resistance of all underlayment systems beneath foam-on tile systems, where the underlayment forms part of the load-path. The following wind uplift limitations apply to underlayment systems that are not addressed in **FRSA/TRI April 2012 (04-12)** and are used in foam-on tile applications. Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FRSA/TRI April 2012 (04-12), Appendix A, Table 1A** or **FBC 1609** for determination of design wind loads.

#1 Maximum Design Pressure = **-75.0 psf**:

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction
Primer:	(Optional) ASTM D41
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered.
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#2 Maximum Design Pressure = **-120.0 psf**:

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction
Primer:	(Optional) ASTM D41
Joint Treatment:	Plywood joints are covered with 4-inch wide strips of LeakBarrier PS200^{MU} or LeakBarrier EasyBase, rolled into place to create continuous bond
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#3 Maximum Design Pressure = **-217.5 psf**:

Deck:	Structural concrete to meet project requirements to satisfaction of Authority Having Jurisdiction.
Primer:	(Optional) ASTM D41
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#4 Maximum Design Pressure = **-45.0 psf***:

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.
Base Sheet:	LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50 (48" wide rolls); See FBC FL16884.
Fasteners:	12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps
Spacing:	6" o.c. at the 4-inch wide side laps and 8" o.c. at three (3) equally spaced, staggered center rows.
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#5 Maximum Design Pressure = **-60.0 psf**:

Deck:	Min. 19/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.
Base Sheet:	LeakBarrier EasyLay
Fasteners:	12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps
Spacing:	7" o.c. at the 4-inch wide side laps and 7" o.c. at three (3) equally spaced, staggered center rows.
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#6 Maximum Design Pressure = **-60.0 psf**:

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.
Base Sheet:	LeakBarrier EasyLay UDL 15, LeakBarrier EasyLay UDL Basic or LeakBarrier EasyLay UDL 50 (48" wide rolls); See FBC FL16884.
Fasteners:	12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps
Spacing:	6" o.c. at the 4-inch wide side laps and 6" o.c. at four (4) equally spaced, staggered center rows.
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#7 Maximum Design Pressure = **-82.5 psf**:

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.
Base Sheet:	LeakBarrier EasyLay
Fasteners:	Simplex MAXX Cap Fasteners
Spacing:	8" o.c. at the 4-inch wide side laps and 8" o.c. at four (4) equally spaced, staggered center rows.
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

#8 Maximum Design Pressure = **-120.0 psf**:

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of Authority Having Jurisdiction.
Base Sheet:	LeakBarrier EasyLay
Fasteners:	12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps
Spacing:	4" o.c. at the 4-inch wide side laps and 4" o.c. at four (4) equally spaced, staggered center rows.
Base Ply:	(Optional) LeakBarrier PS200^{MU}, self-adhered
Underlayment:	LeakBarrier PS200^{HT}, self-adhered.

5.6.4.1 All other direct-deck, adhered Tarco underlayment systems beneath foam-on tile systems carry a Maximum Design Pressure of -45 psf.

5.6.4.2 For mechanically attached Base Sheet, the maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI April 2012 (04-12), Appendix A, Table 1A**.

Alternatively, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with **FBC 1609**. In this case, Zones 2 and 3 shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are **ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29** and **Roofing Application Standard RAS 117**. Assemblies marked with an **asterisk*** carry the limitations set forth in **Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (January 2016)** for Zone 2/3 enhancements.

5.7 Exposure Limitations:

LeakBarrier EasyLay, ASTM Organic Mineral Surface Tile Underlayment and **LeakBarrier EasyMop SBS** shall not be left exposed for longer than **180-days** after installation.

LeakBarrier PS200^{HT} shall not be left exposed for longer than **120-days** after installation.

LeakBarrier MS300, NR500^{HT}, PS200^{MU} or **SS400** shall not be left exposed for longer than **30-days** after installation.

Tarco 15, Tarco 30 and **Tarco NO 30** shall be covered as soon as possible after installation; exposure for more than **24 hours** after installation could adversely affect performance.

5.8 Tile Slippage Limitations (TAS 103 per FRSA/TRI April 2012 (04-12)):

When loading roof tiles on the underlayment in direct-deck tile assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 2: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS

Underlayment	Tile Profile	Staging Method	Maximum Slope
LeakBarrier PS200^{HT}	Flat	10-tile stack or 6-tile stack (4 over 2)	6:12
	Lugged	6-tile stack (4 over 2)	6:12
LeakBarrier EasyMop SBS	Flat	6-tile stack (4 over 2)	5:12
	Lugged	6-tile stack (4 over 2)	6:12

6. INSTALLATION:

6.1 **Tarco Roof Underlayments** shall be installed in accordance with **Tarco Roofing** published installation requirements subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application, and prime the substrate (if applicable).

6.3 LeakBarrier® MS300, PS200^{HT}, PS200^{MU}, NR500^{HT} or SS400 Ice and Water Armor:

6.3.1 Shall be installed in compliance with the requirements for ASTM D1970 underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.3.2 Non-Tile Applications:

Cut to manageable sections and allow to relax prior to application.

Membrane Application:

- Place a full width piece on the prepared substrate, aligned parallel to the eave edge and extend approximately 3/8" over the eave and rake with the selvedge edge positioned upslope.
- Fold back the upslope half of the sheet and remove the exposed release film, taking care not to displace the membrane
- Working from the centerline out, roll the membrane onto the substrate, taking care to avoid wrinkles and ridges
- Apply a 1/16" thick layer of asphalt plastic cement over the eave and rake metal, extending 2" to 3" onto the deck surface.
- Fold back the downslope half of the sheet, remove the release film and roll the membrane onto the substrate from the centerline out.
- Seal all 6" end laps with a 1/16" thick application of asphalt plastic cement and stagger all end laps minimum 36".
- Remove selvage release film, if present, and install second and subsequent courses in a similar manner.
- Install capped or tin-tagged nails 6" o.c. along the centerline of the laps.
- At all T-joints, where an end-lap and the next overlapping course intersect, apply a bead of roofing laps cement before the overlapping course is laid.
- Roll the entire surface with a weighted roller, paying particular attention to side laps, end laps and eave / rake areas to ensure a complete bond.

6.3.3 Tile Applications (PS200^{HT} only):

Reference is made to **FRSA/TRI April 2012 (04-12) Installation Manual** and **Table 1** herein, using the instructions noted above as a guideline.

Wait a minimum of 24 hours prior to loading roof tiles.

For mechanically fastened tile roofing over 2-ply system, consisting of Base Sheet and self-adhering top sheet(s), Base Sheet fastening shall be not less than **FRSA/TRI April 2012 (04-12), Table 1**.

For adhesive-set tile applications, refer to **Section 5.6.4** herein.

Refer to Section 5.8 for tile staging limitations. If tiles are to be left in a staged condition for more than 30 days, Tarco Roofing requires tiles be staged two tiles perpendicular to slope, four tiles on top, parallel to slope, regardless of the allowance in Section 5.8.

6.3.4 Multi-Ply Underlayment Systems:

LeakBarrier® SS400 Ice and Water Armor followed by LeakBarrier® SS400 Ice and Water Armor (direct-to-deck per 5.6.1 or over mechanically attached base sheet per 5.6.2) is allowable for use under mechanically attached prepared roof systems. Limits of use are those associated with the top-layer material. This is not a requirement, but is allowable if a multi-ply underlayment system is desired.

6.4	**Tarco 15 and 30:**

6.4.1 Non-Tile Applications:

Shall be installed in compliance with the codified requirements for ASTM D226, Type I (Tarco 15) or ASTM D226 Type II (Tarco 30) underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.4.2 Tile Applications (Tarco 30 only):

Tarco 30 is limited to use as a mechanically attached base sheet in the "Two Ply System" from **FRSA/TRI April 2012 (04-12)**. Reference is made to **Table 1** herein, coupled with **FRSA/TRI April 2012 (04-12) Installation Manual**.

6.5	**Tarco NO 30:**

6.5.1 Shall be installed in compliance with the codified requirements for ASTM D4869, Type II underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.6	**LeakBarrier EasyLay:**

6.6.1 Shall be installed in compliance with the codified requirements for ASTM D226, Type II underlayment in **FBC Table 1507.1.1** for the type of prepared roof covering to be installed.

6.6.2 Non-Tile Applications:

Place a full width section of EasyLay, parallel to the eave edge of the roof and unroll 2 to 3 feet with the lay lines facing up, and position to the edge of the eave and rake. Install a few fasteners at the top, near the rake, and roll out the sheet to a manageable length. Pull, straighten and align the sheet so that any wrinkles are eliminated and the sheet is even with the eave edge. Fasten with 3/8" headed roofing nails or 1" capped (plastic or metal) nails, driven by hand or pneumatically, spaced 6" o.c. at all laps in the center of the seam area, and two staggered rows fastened 12" o.c. in the field of the sheet. Install nails such that the head of the nail is flush with the surface, without cutting into the surface. Fasten from the top to avoid walking or kneeling on unsecured sheet. Continue to the end of the substrate and fasten down. Align the next roll over the preceding sheet so as to form a minimum 4", water-shedding lap, and install per instructions above. Apply subsequent sheets in the same manner, with minimum 4" water-shedding laps and minimum 8" end-laps, which are staggered minimum 36" fro the preceding course.

For double layer applications, follow the instructions noted above, but using a minimum 19", water-shedding side lap.

Allow for minimum 6" up the vertical transitions and minimum 6" over hips and ridges.

At valleys, first install a vertical length of EasyLay down the center of the valley, then start at the low point and work to the high point, rolling the membrane from the center outward in each direction, ensuring no wrinkles or tears. Covered with valley-metal or other valley lining material in accordance with NRCA recommendations.

Apply a thin coat of asphalt plastic cement to waterproof areas where any cuts or tears have occurred. Seams or joints that require adhesive or sealant can be treated with high quality plastic cement (asbestos free).

6.6.3 Tile Applications, base layer in multi-ply system:

LeakBarrier EasyLay is limited to use as a mechanically attached base sheet in the "Two Ply System" from **FRSA/TRI April 2012 (04-12)**. Reference is made to **Table 1** and **Section 5.6.4** herein, coupled with **FRSA/TRI April 2012 (04-12) Installation Manual**

6.7	**ASTM Organic Mineral Surface Tile Underlayment and LeakBarrier™ EasyMop SBS:**

6.7.1 Shall be installed in compliance with current **Tarco Roofing** published installation requirements. For use in tile applications:

- ✓ **ASTM Organic Mineral Surface Tile Underlayment** and **LeakBarrier™ EasyMop SBS** are for use as an alternate to "Mineral Surface Roll Roofing" (ASTM D6380, Class M) in the "Single Ply System" from **FRSA/TRI April 2012 (04-12)** beneath mechanically fastened tile roof systems or the Hot Asphalt applied "Cap Sheet" in the "Two Ply System" from **FRSA/TRI April 2012 (04-12)** beneath mechanically fastened or adhered tile roof systems.

6.8 Tile Staging:

6.8.1 Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment. Refer to **Table 2** herein, and **Tarco Roofing** published requirements for tile staging.

6.8.2 Battens and/or Counter-battens, as required by the tile manufacturer and **FRSA/TRI April 2012 (04-12)** must be used on all roof slopes greater than 7:12. Precautions should be taken as needed, such as the use of battens or nail-boards, to prevent tile sliding and/or damage to the underlayment during the loading process.

6.8.3 **Tarco Roofing** specifies the minimum cure time after installation of self-adhering membranes and before loading of roofing tiles is forty-eight (48) hours.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the noted QA agency for information on product locations covered for **F.A.C. 61G20-3** QA requirements. The following plants have qualified products under their respective physical properties specifications.

Plant	Specification	Product(s)
Greencastle, PA	ASTM D226	LeakBarrier EasyLay, Tarco 15, Tarco 30
	ASTM D4869	Tarco NO 30
	ASTM D3909	Fiberglass Mineral Surfaced Roll Roofing
	ASTM D6380	ASTM Organic Mineral Surface Tile Underlayment
	ASTM D1970	LeakBarrier® MS300 Ice and Water Armor, LeakBarrier® PS200^{MU} Ice and Water Armor, LeakBarrier® SS400 Ice and Water Armor
	ASTM D1970 & FRSA/TRI 04-2012	LeakBarrier® PS200^{HT} Ice and Water Armor
	FRSA/TRI 04-2012	LeakBarrier® EasyMop™ SBS
Belton, TX	ASTM D226	LeakBarrier EasyLay, Tarco 15, Tarco 30
	ASTM D4869	Tarco NO 30
	ASTM D1970	LeakBarrier® MS300 Ice and Water Armor, LeakBarrier® PS200^{MU} Ice and Water Armor, LeakBarrier® SS400 Ice and Water Armor
	ASTM D1970 & FRSA/TRI 04-2012	LeakBarrier® PS200^{HT} Ice and Water Armor
Coshocton, OH	ASTM D1970	LeakBarrier® NR500^{HT}
Gujarat, India	FBC 1507.1.1 (Exception)	LeakBarrier® EasyLay® UDL 15, LeakBarrier® EasyLay® UDL Basic, LeakBarrier® EasyLay® UDL 50

9. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (847) 664-3281

- END OF EVALUATION REPORT -

CREEK
TECHNICAL SERVICES, LLC

Certificate of Authorization No. 29824
17520 Edinburgh Dr
Tampa, FL 33647
(813) 480-3421

EVALUATION REPORT

FLORIDA BUILDING CODE, 6TH EDITION (2017)

Issued September 25, 2017

Manufacturer: TAMKO BUILDING PRODUCTS
220 West 4th Street
Joplin, MO 64801
(417) 624-6644

Manufacturing Plants: Joplin, MO
Phillipsburg, KS
Frederick, MD
Dallas, TX
Tuscaloosa, AL

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Asphalt Shingles
Code Sections: 1504.1.1, 1507.2.5, 1507.2.7.1, 1523.6.5.1
Properties: Physical properties, Wind Resistance, Wind Driven Rain

REFERENCES

Entity	Report No.	Standard	Year
PRI Construction Materials Technologies (TST5878)	TAP-043-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-051-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-054-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-114-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-117-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-130-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-131-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-165-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-280-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-303-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-307-02-01	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-314-02-01 Rev 2	TAS 100	1995
PRI Construction Materials Technologies (TST5878)	TAP-315-02-01	ASTM D 6381	2008(2013)e1
PRI Construction Materials Technologies (TST5878)	TAP-317-02-01	TAS 100	1995
UL LLC (TST9628)	02NK9507	ASTM D 3161	2016
UL LLC (TST9628)	04NK24366	ASTM D 3462	2010A
UL LLC (TST9628)	05NK28006	ASTM D 6381	2008(2013)e1
		UL 2390	
		ASTM D 7158	2011
UL LLC (TST9628)	06NK03898	ASTM D 3161	2016
		ASTM D 3462	2010A
UL LLC (TST9628)	08CA59132	ASTM D 3161	2016
UL LLC (TST9628)	09NK07896	ASTM D 3161	2016
		ASTM D 3462	2010A
UL LLC (TST9628)	10CA50498	ASTM D 3462	2010A
UL LLC (TST9628)	10CA64882	ASTM D 3161	2016
UL LLC (TST9628)	11NK14014	ASTM D 3161	2016
		ASTM D 3462	2010A
UL LLC (TST9628)	12CA24551	ASTM D 3161	2016
UL LLC (TST9628)	4786110543	ASTM D 6381	2008(2013)e1
UL LLC (TST9628)	4787043752	ASTM D 3161	2016
UL LLC (TST9628)	4787148748	ASTM D 7158	2011
		ASTM D 3161	2016
		ASTM D 3462	2010A
CREEK Technical Services LLC (ANE11669)	TBP15001.3	Calculations	2017

PRODUCT DESCRIPTION

Elite Glass-Seal® (Frederick, Joplin & Tuscaloosa)	12-1/4" x 36", ASTM D 3161, Class F and ASTM D 7158, Class H self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with ceramic granules complying with ASTM D 3462.
Glass-Seal (Frederick & Tuscaloosa)	12-1/4" x 36", ASTM D 3161, Class F and ASTM D 7158, Class H self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with ceramic granules complying with ASTM D 3462.
Glass-Seal (Joplin)	12-1/4" x 36", ASTM D 7158, Class H self-sealing, 3-tab asphalt shingle with fiberglass mat coated on both sides with asphalt and surfaced with ceramic granules complying with ASTM D 3462. Shingles shall be used in the non-HVHZ only.
Heritage® (Dallas, Frederick, Joplin, Phillipsburg & Tuscaloosa)	13-1/4" x 39-3/8", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Premium (Dallas, Frederick, Phillipsburg & Tuscaloosa)	13-1/4" x 39-3/8", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Premium (Frederick)	12" x 36", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Vintage® (Phillipsburg)	17-1/2" x 40", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Woodgate (Dallas & Frederick)	13-1/4" x 39-3/8", ASTM D 3161, Class F and ASTM D 7158, Class H fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Heritage® Woodgate (Frederick)	12" x 36-3/8", ASTM D 3161, Class F fiberglass reinforced, laminated architectural asphalt shingle surfaced with mineral granules complying with ASTM D 3462. Shingles shall be used in the non-HVHZ only.
Hip and Ridge Shingles (Frederick & Joplin)	12-1/4" x 12", ASTM D 3161, Class F fiberglass reinforced, hip and ridge asphalt shingle surfaced with mineral granules complying with ASTM D 3462.
Vintage® Hip and Ridge (Phillipsburg)	12" x 12", ASTM D 3161, Class F fiberglass reinforced, hip and ridge asphalt shingle surfaced with mineral granules complying with ASTM D 3462.

INSTALLATION

Elite Glass-Seal® (Frederick, Joplin & Tuscaloosa) & **Glass-Seal** (Frederick, Joplin (Non-HVHZ) & Tuscaloosa)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-1/8 inch exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5-1/8-inch exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

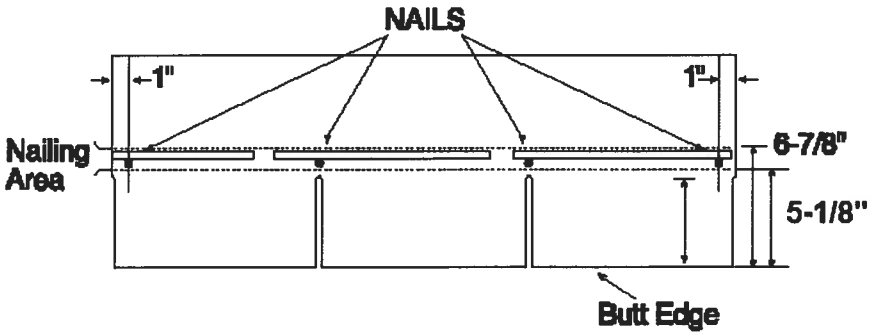


Figure 1. Elite Glass-Seal & Glass-Seal 4 Nail Pattern (Non-HVHZ only)

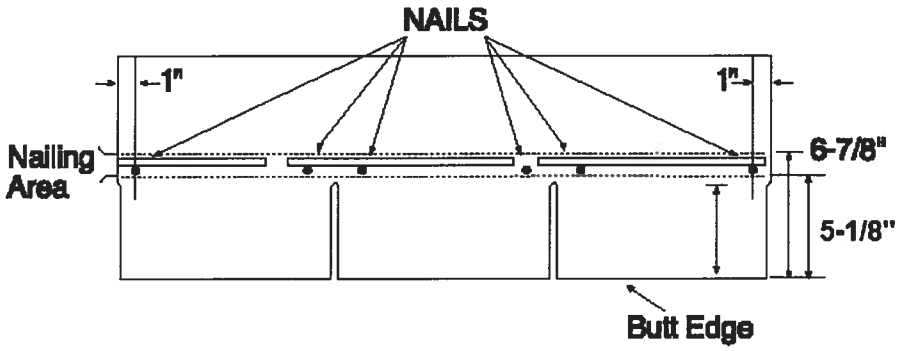


Figure 2. Elite Glass-Seal & Glass-Seal 6 Nail Pattern

Heritage® (Dallas, Frederick, Joplin, Phillipsburg & Tuscaloosa) & **Heritage® Premium** (Dallas, Frederick Phillipsburg & Tuscaloosa) & **Heritage® Woodgate** (Dallas & Frederick)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5-5/8 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5-5/8 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

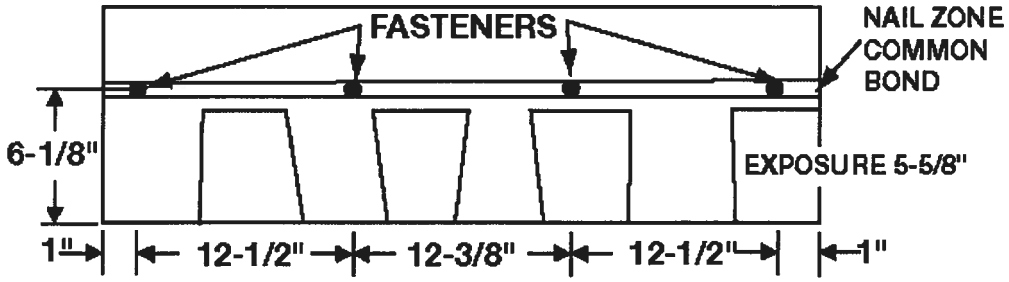


Figure 3. Heritage®, Heritage® Premium, and Heritage® Woodgate (Dallas) 4 Nail Pattern (non-HVHZ only)

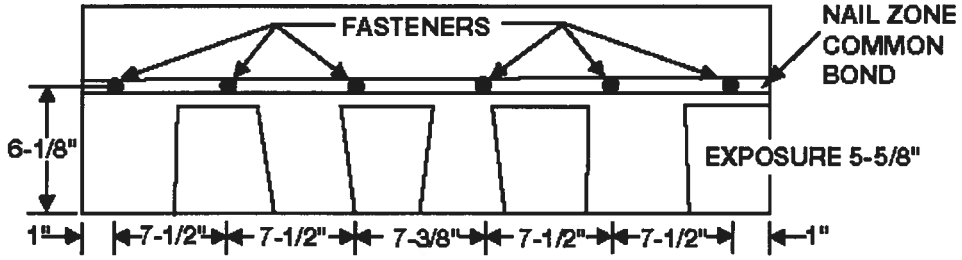


Figure 4. Heritage® & Heritage® Premium 6 Nail Pattern

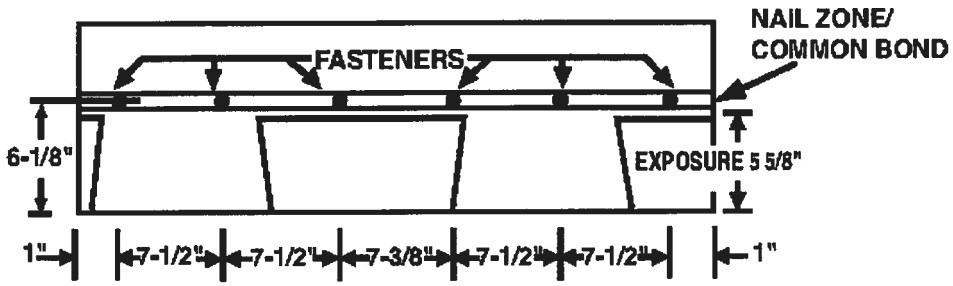


Figure 5. Heritage® Woodgate
6 Nail Pattern

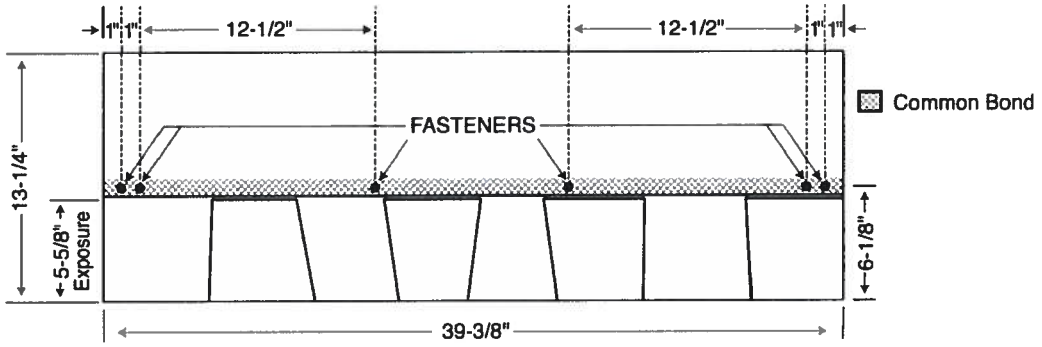


Figure 6. Heritage®, Heritage® Premium, & Heritage® Woodgate
Alternate 6 Nail Pattern

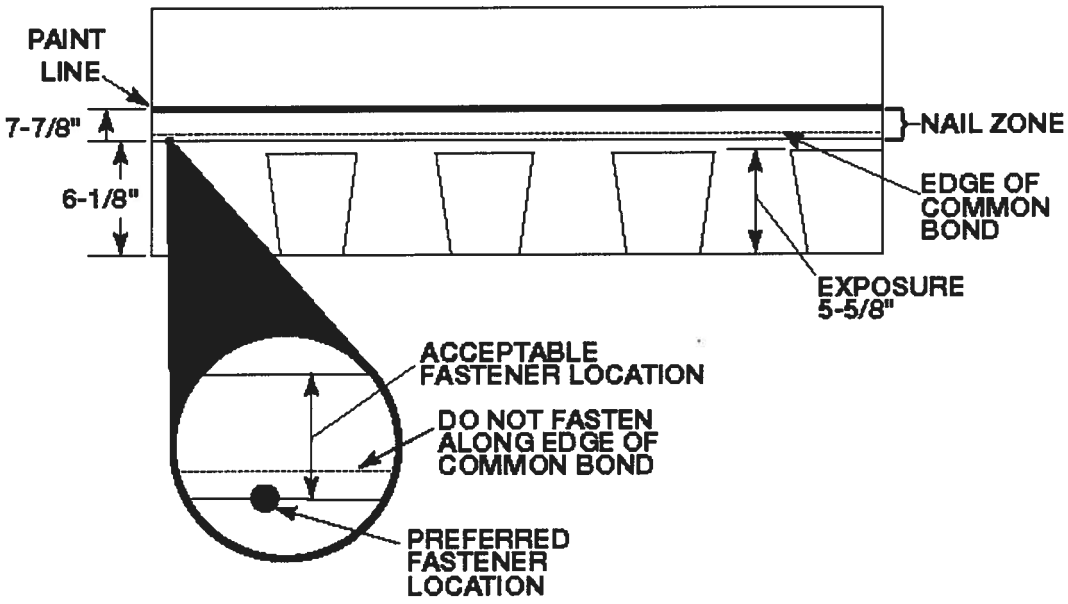


Figure 7. Heritage® (Tuscaloosa)
Expanded Nail Zone
Nail patterns from Figures 3, 4, and 6 may be placed in the nail zone as described above

Heritage® Premium (Frederick)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12. .
	Installation (HVHZ):	Installed with 5 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

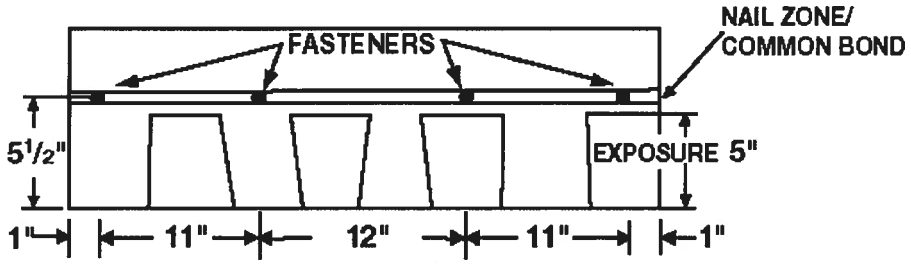


Figure 8. Heritage® Premium (Frederick)
4 Nail Pattern (non-HVHZ only)

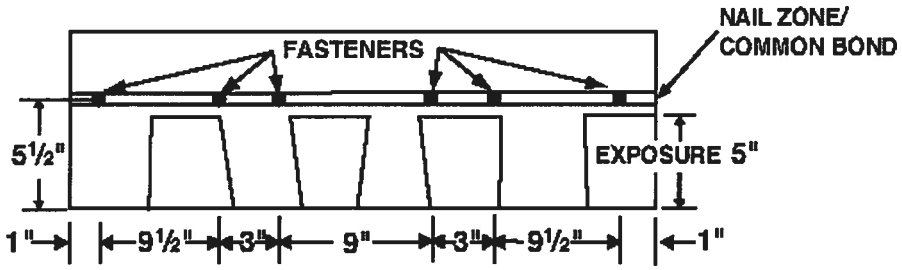


Figure 9. Heritage® Premium (Frederick)
6 Nail Pattern

Heritage® Woodgate (Frederick)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (Non-HVHZ):	Installed with 5 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "4 Nail Pattern" or "6 Nail Pattern" detailed below.

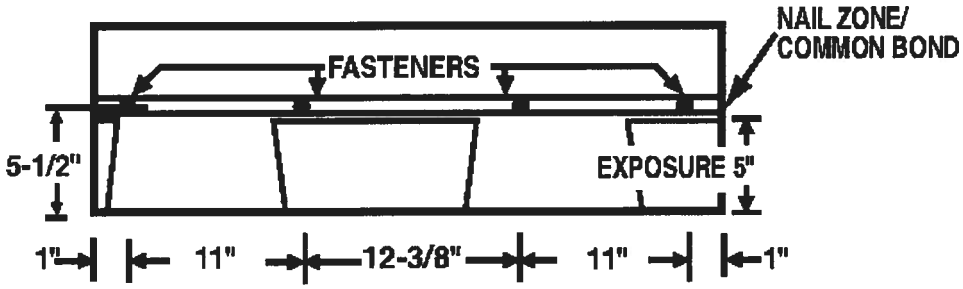


Figure 10. Heritage® Woodgate (Frederick)
4 Nail Pattern (non-HVHZ only)

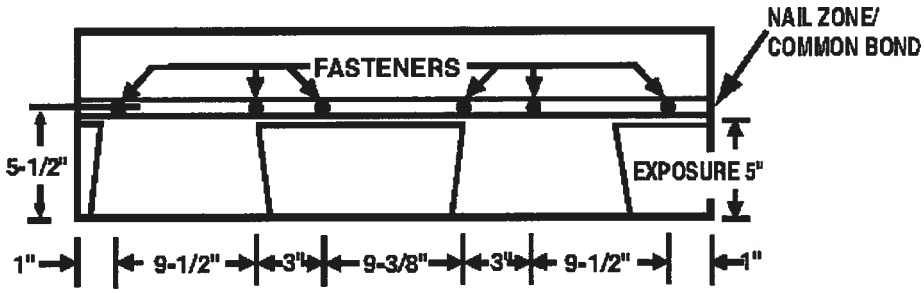


Figure 11. Heritage® Woodgate (Frederick)
6 Nail Pattern

Heritage® Vintage® (Phillipsburg)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements. Refer to the manufacturer's application instructions when installing shingles at slopes greater than 21:12.
	Installation (HVHZ):	Installed with 5 in. exposure in accordance with RAS 115 and manufacturer's published installation instructions. Shingles shall be attached using "6 Nail Pattern" detailed below.
	Installation (Non-HVHZ):	Installed with 5 in. exposure in accordance with FBC requirements and manufacturer's published installation instructions. Shingles shall be attached using either "5 Nail Pattern" or "6 Nail Pattern" detailed below.

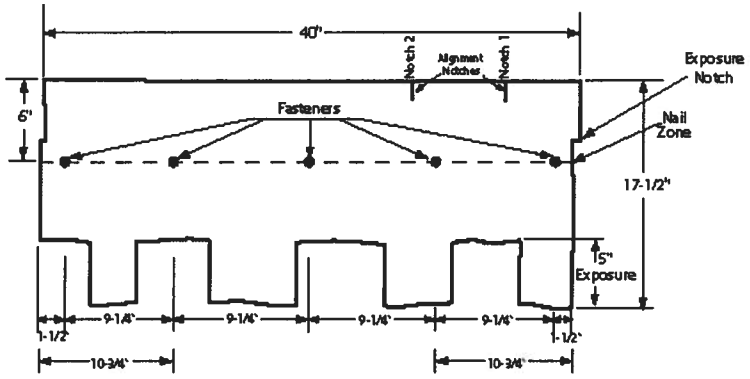


Figure 12. Heritage® Vintage®
5 Nail Pattern (non-HVHZ only)

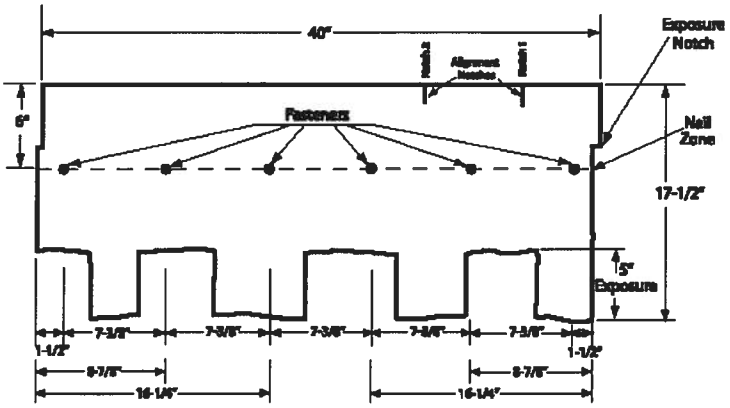


Figure 13. Heritage® Vintage®
6 Nail Pattern

Hip & Ridge (Frederick & Joplin)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements.
	Installation:	Installed with 5-1/8 inch exposure in accordance with the FBC and manufacturer's published installation instructions. The direction of the exposed end shall be away from the prevailing wind.

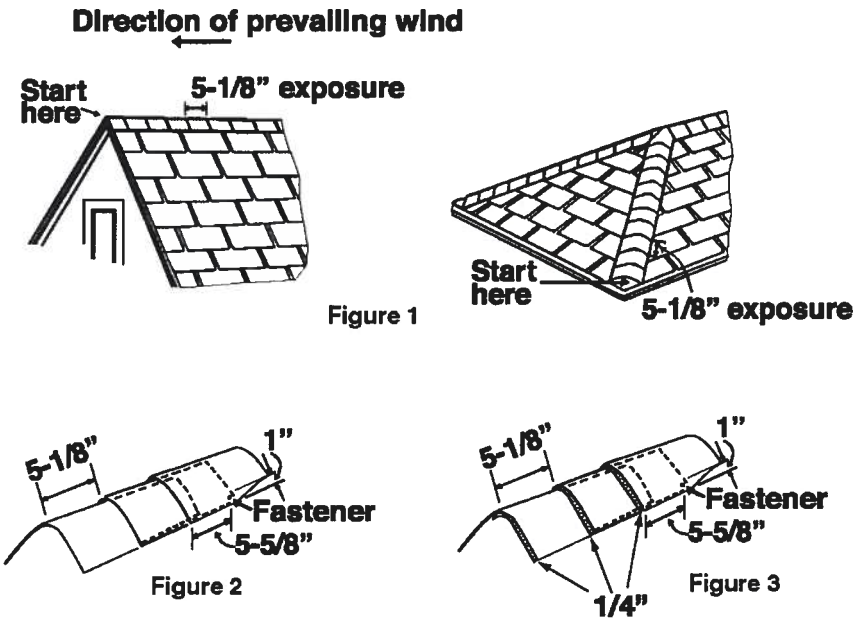


Figure 14. Hip & Ridge (Frederick & Joplin)

Vintage® Hip & Ridge (Phillipsburg)	Basic Wind Speed (V_{ult}):	Max. 194 mph
	Basic Wind Speed (V_{asd}):	Max. 150 mph
	Deck (HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 19/32 in. plywood or wood plank for new construction; Min. 15/32 in. plywood existing construction.
	Deck (Non-HVHZ):	In accordance with FBC requirements; Solidly sheathed min. 15/32 in. plywood or wood plank for new construction; Min. 7/16 in. OSB existing construction.
	Underlayment:	In accordance with FBC requirements.
	Min. slope:	2:12 and in accordance with FBC requirements.
	Installation:	Installed with 5 inch exposure in accordance with the FBC and manufacturer's published installation instructions. The direction of the exposed end shall be away from the prevailing wind.

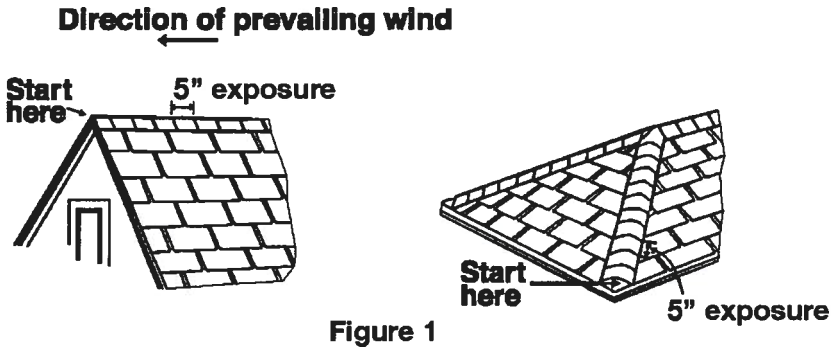


Figure 1

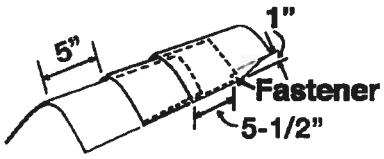


Figure 2

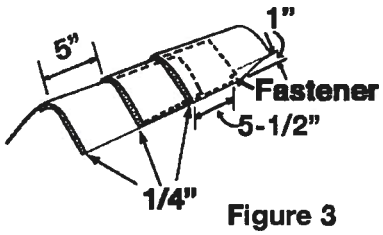


Figure 3

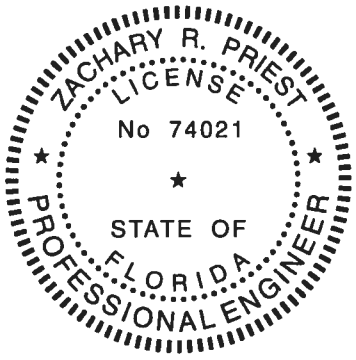
Figure 15. Vintage® Hip & Ridge (Phillipsburg)

LIMITATIONS

1) Fire Classification is not within the scope of this evaluation.
2) The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads established for components and cladding and in accordance with FBC requirements.
3) The mean roof height shall be restricted to a maximum 33 ft in the HVHZ.
4) Classification to ASTM D 7158 applies to exposure B & C with a building mean roof height of 60-ft or less.
5) Deck substrates shall be clean, dry, and free from any irregularities and debris. All fasteners in the deck shall be checked for protrusion and corrected prior to underlayment application.
6) Shingles shall be installed starting at the eave in horizontal layers such that the laps shed water from the deck.
7) Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and code compliant detail shall prevail.
8) All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.

COMPLIANCE STATEMENT

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 6th Edition (2017) as evidenced in the referenced documents submitted by the named manufacturer.



2017.09.25
11:31:41
-04'00'

Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE11669

CERTIFICATION OF INDEPENDENCE

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

END OF REPORT

Blank