TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	NOTES
2	ELEVATIONS
3	ANCHORING LAYOUT
4 – 10	CROSS SECTIONS
11 – 12	INSTALLATION DETAILS
13	WEEP DETAILS
14	COMPONENTS

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2006 IBC AND THE 2006 IRC WITH STATE OF TEXAS MODIFICATIONS.
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. 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.
4. ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
5. FRAME MATERIAL: ALUMINUM 6063–T6
6. UNITS MUST BE GLAZED PER ASTM E1300–04, SEE SHEET 6 FOR GLASS DETAILS.
7. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
8. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
9. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #14 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
10. FOR ANCHORING INTO MASONRY/CONCRETE USE 1/4" 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.
11. FOR ANCHORING INTO METAL STRUCTURE USE #14 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.
12. ALL FASTENERS TO BE CORROSION RESISTANT.
13. 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 12GA, 33KSI OR ALUMINUM 6063–T5 1/8" THICK MINIMUM

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

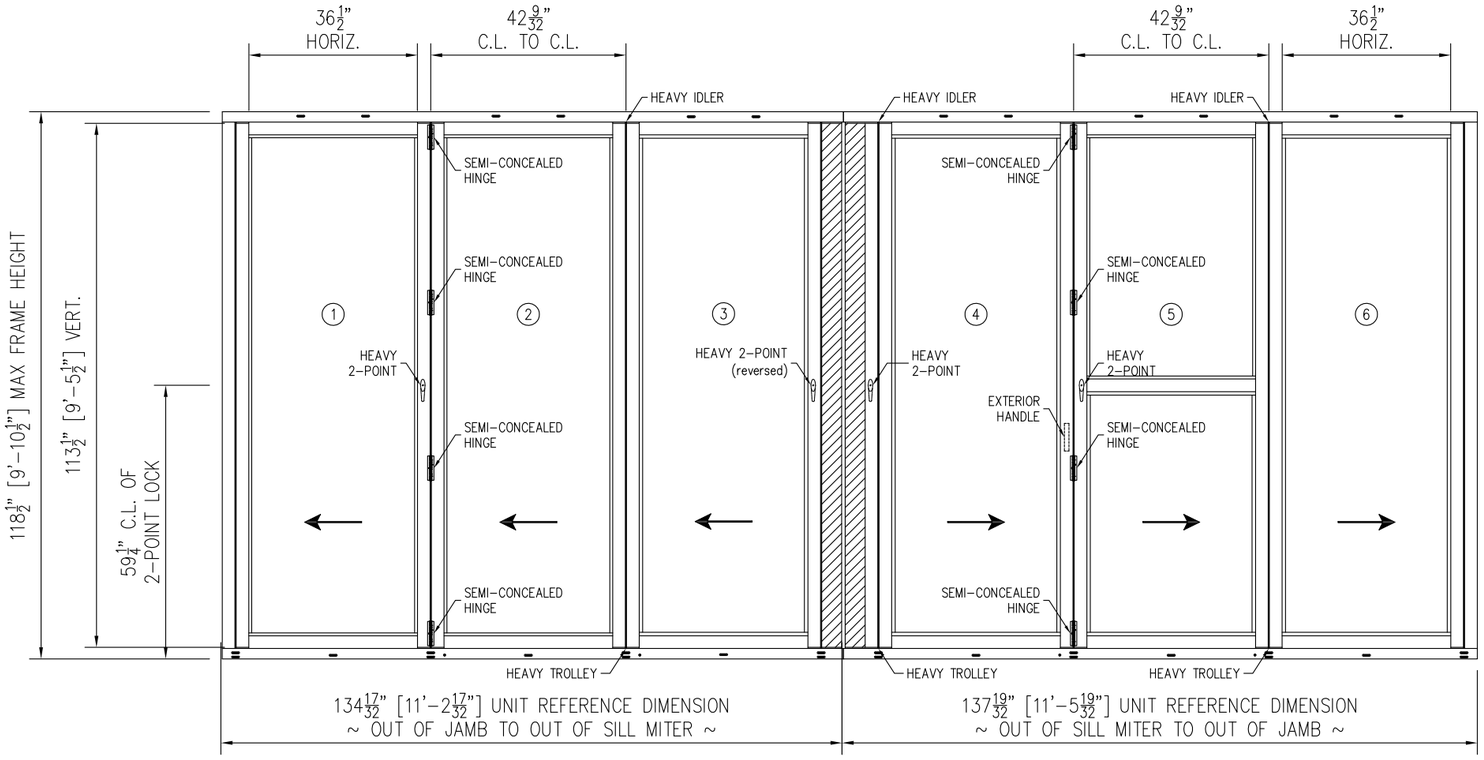
SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO–POST – STANDARD SILL
NOTES

DRAWN:	DWG NO.	REV
V.L.	08–02638	–
SCALE NTS	DATE 03/19/15	SHEET 1 OF 14

STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

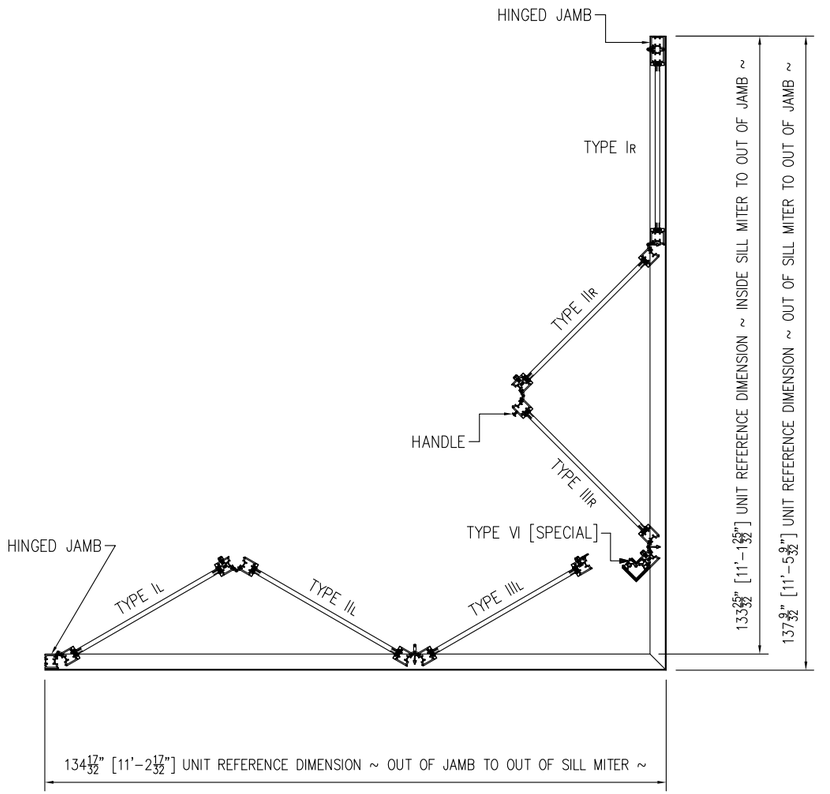
Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL 90° CORNER NO-POST - STANDARD SILL

EXTERIOR VIEW



SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL 90° CORNER NO-POST - STANDARD SILL

PLAN VIEW

DESIGN PRESSURE RATING	*IMPACT RATING*
±80.0PSF	*LARGE AND SMALL MISSILE IMPACT*

MISSILE LEVEL D, WIND ZONE 4

DESIGN PRESSURE RATING	*IMPACT RATING*
±55.0PSF	*LARGE AND SMALL MISSILE IMPACT*

MISSILE LEVEL D, WIND ZONE 4
WITH NON-THERMAL PANELS

SIGNED: 03/20/2015

HARDWARE SCHEDULE
A. SEMI-CONCEALED HINGE BY SOLAR INNOVATIONS
B 2 POINT HANDLE & LOCK MS000487-XX BY SOLAR INNOVATIONS

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

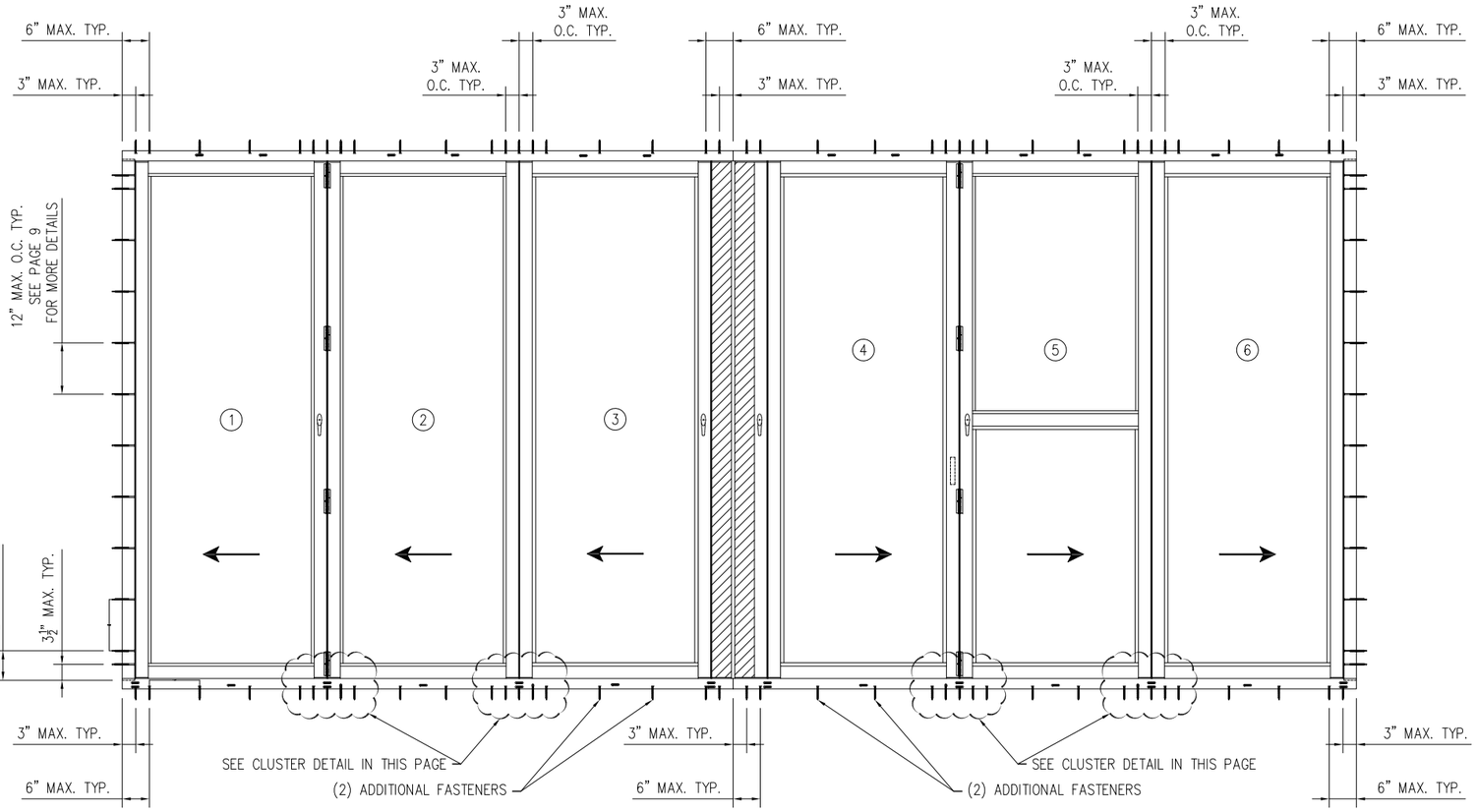
SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
ELEVATIONS

DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 2 OF 14

STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

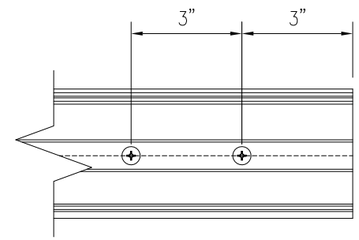
Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

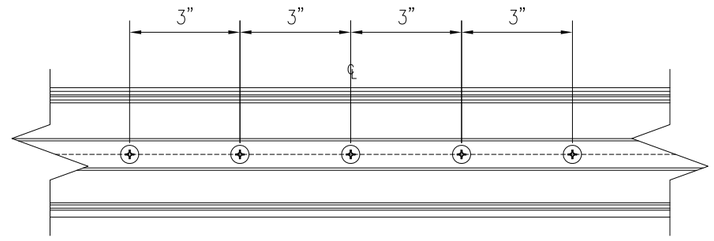


ANCHOR LAYOUT

APPLICABLE TO ALL CONFIGURATIONS.



SILL AND HEAD
END DETAIL



SILL AND HEAD
CLUSTER DETAIL

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
ANCHOR LAYOUT

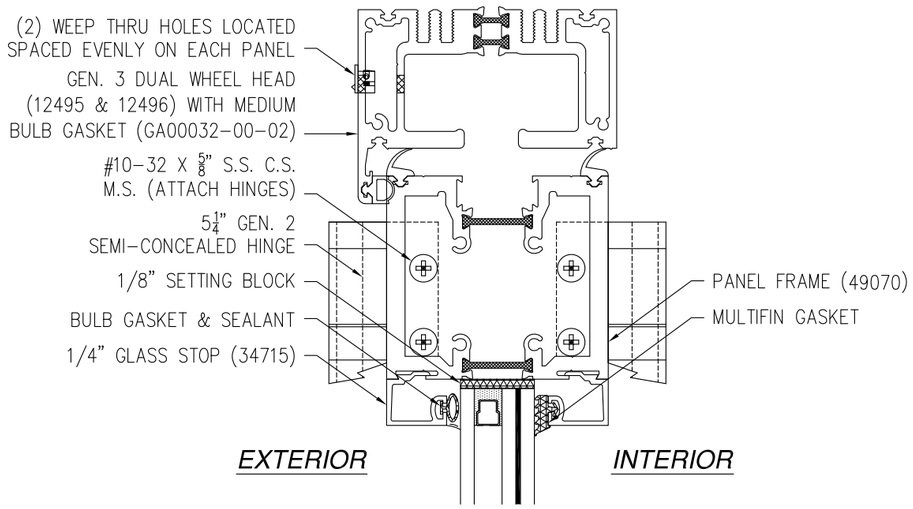
DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 3 OF 14

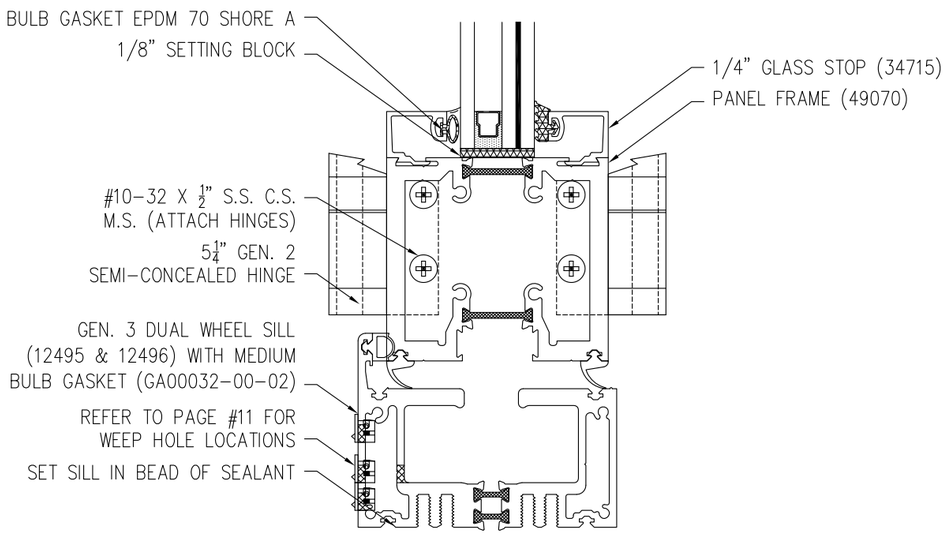
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

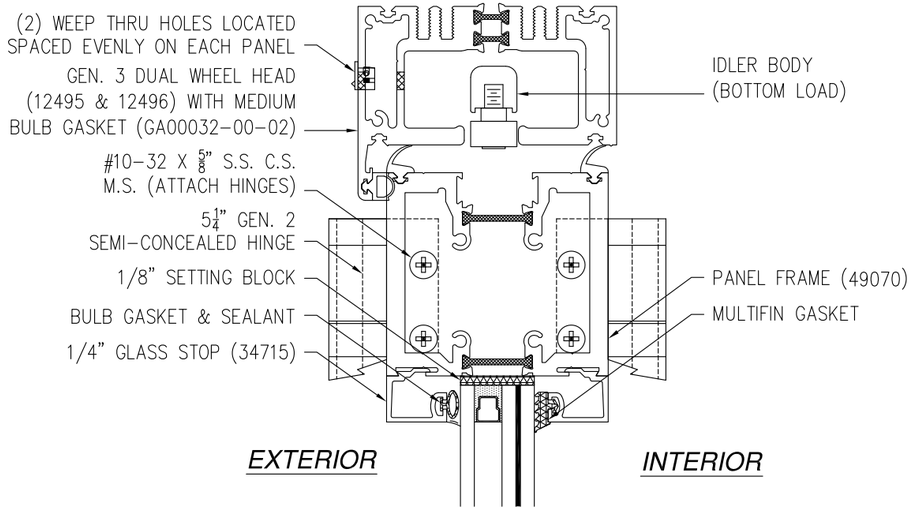
FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12

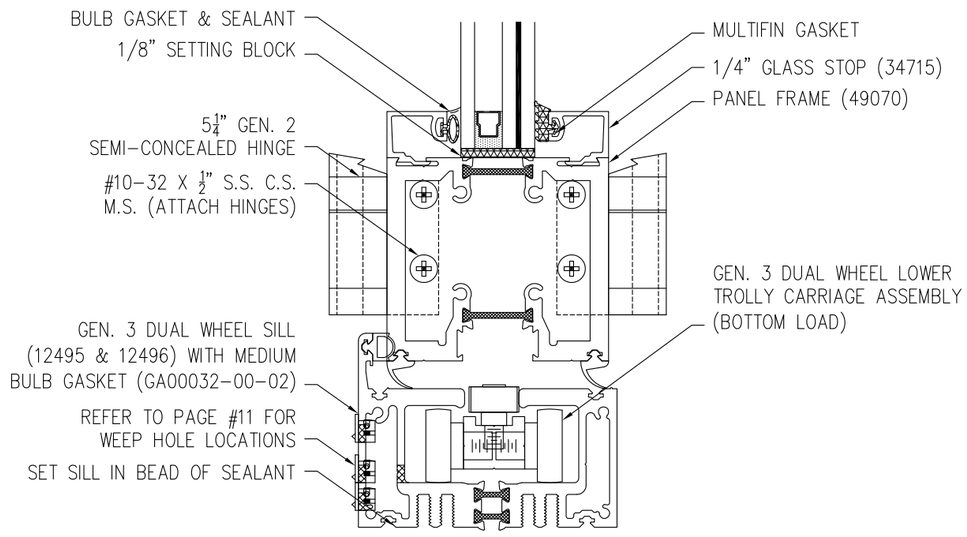
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED





VERTICAL CROSS SECTION
STANDARD





VERTICAL CROSS SECTION
STANDARD

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

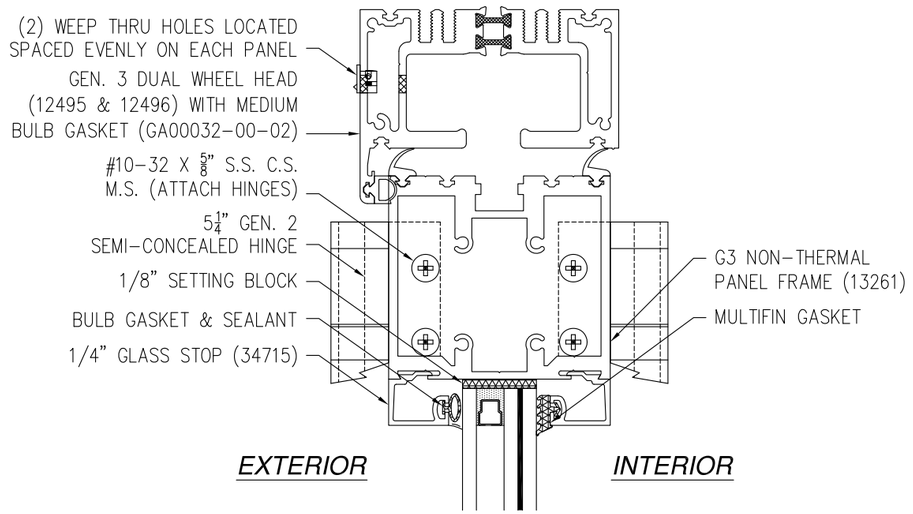
DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 4 OF 14

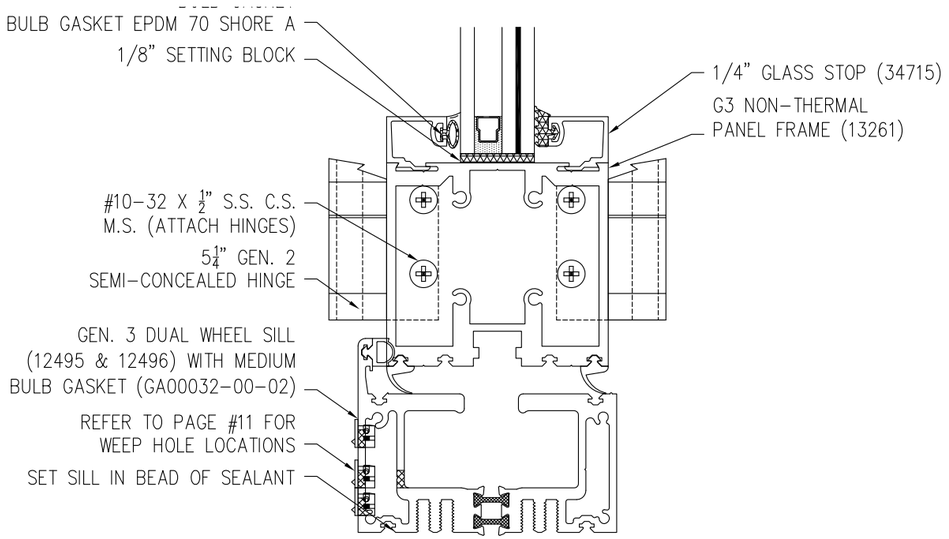
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

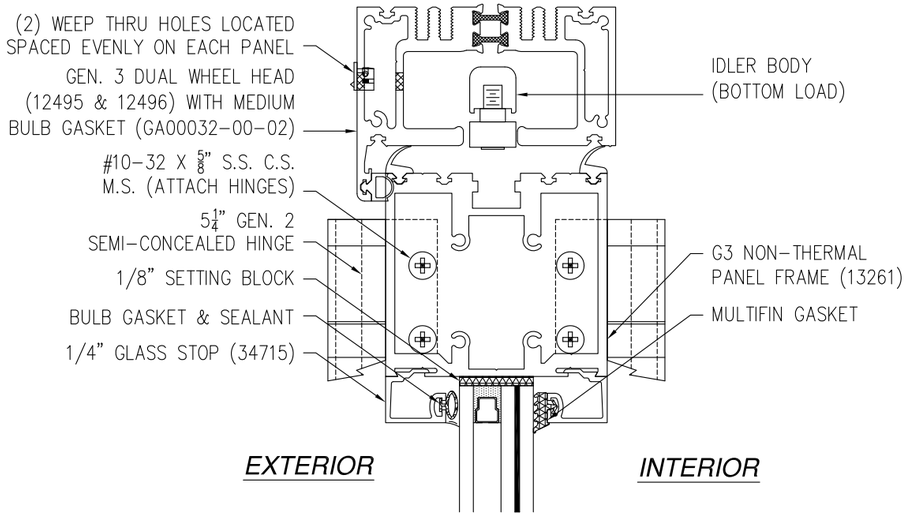
FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12

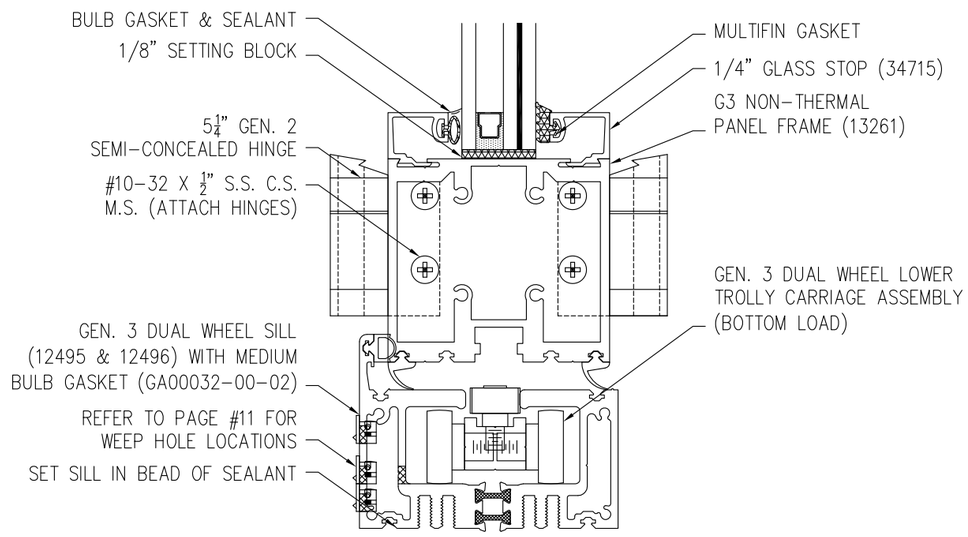
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED





VERTICAL CROSS SECTION
NON-THERMAL PANEL





VERTICAL CROSS SECTION
NON-THERMAL PANEL

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

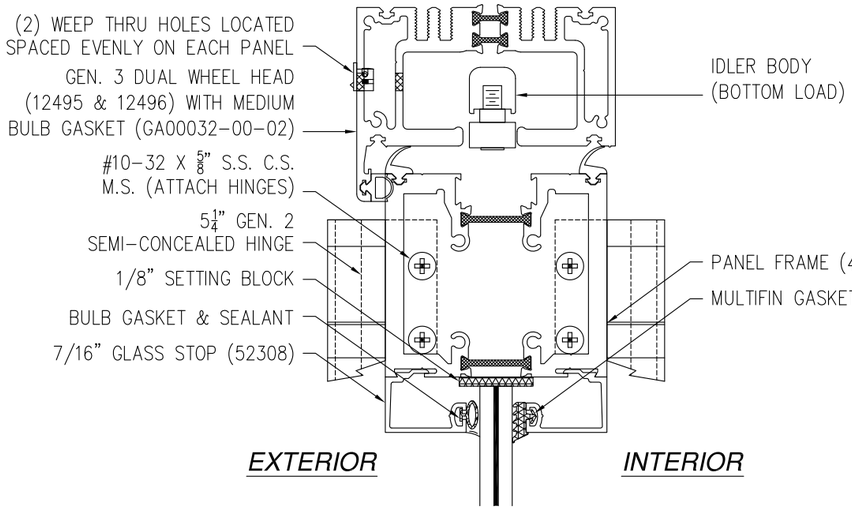
DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 5 OF 14

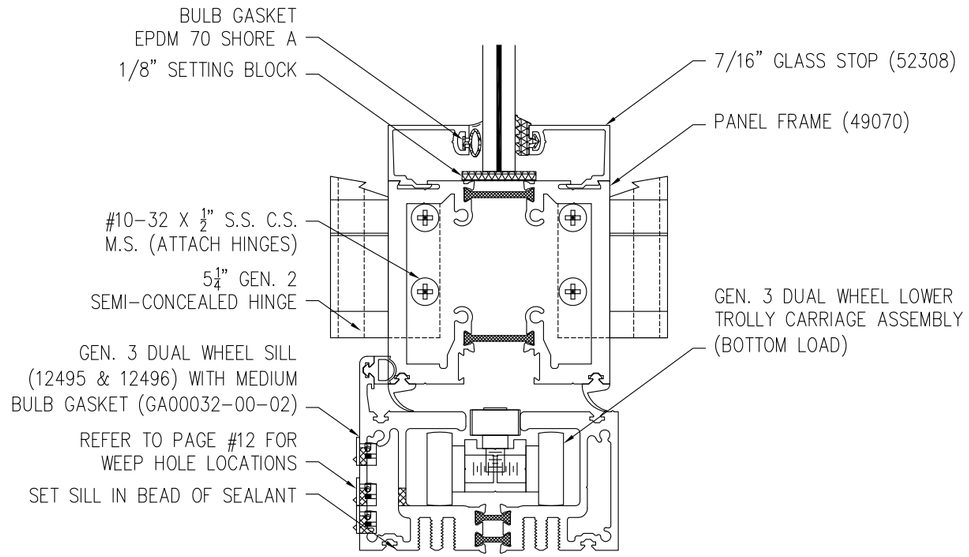
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

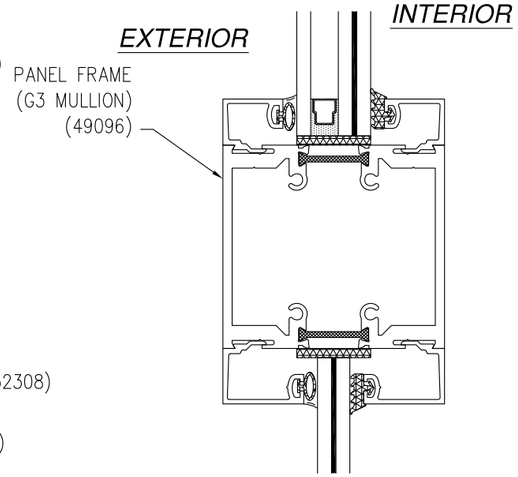
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12

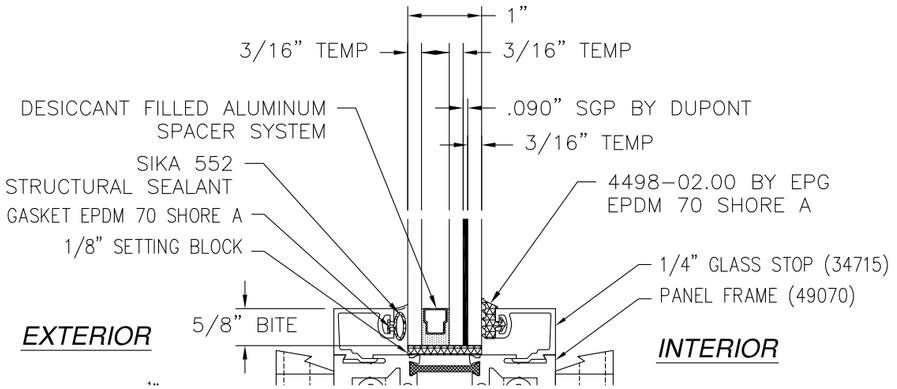




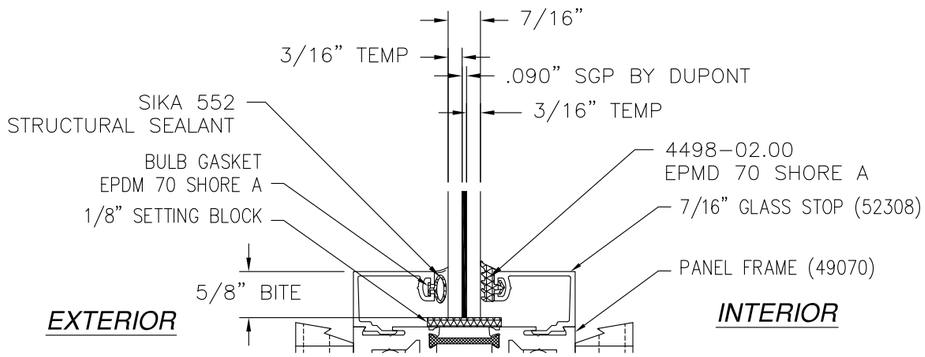
VERTICAL CROSS SECTION
BOTTOM LOAD SILL



VERTICAL CROSS SECTION
HORIZONTAL RAIL OPTIONAL



GLAZING DETAIL A



GLAZING DETAIL B

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

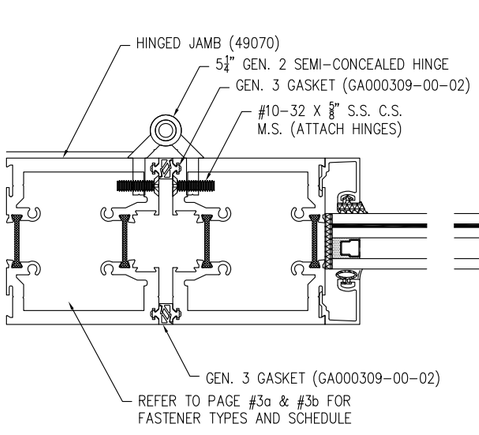
DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 6 OF 14

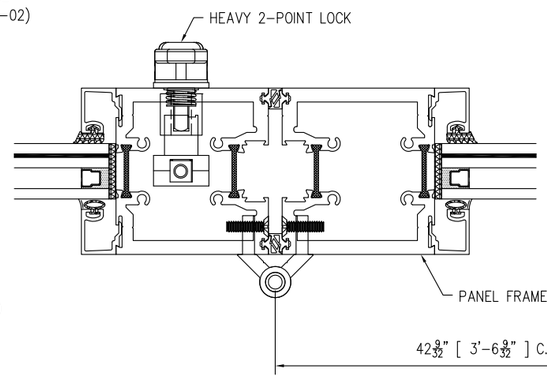
STATE OF TEXAS · LUIS R. LOMAS · 101889 · LICENSED PROFESSIONAL ENGINEER

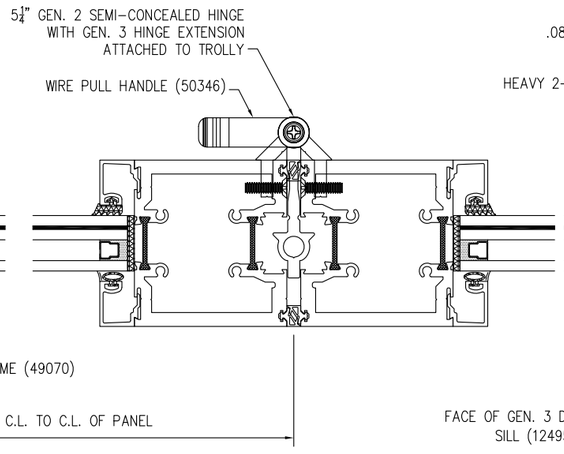
Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12

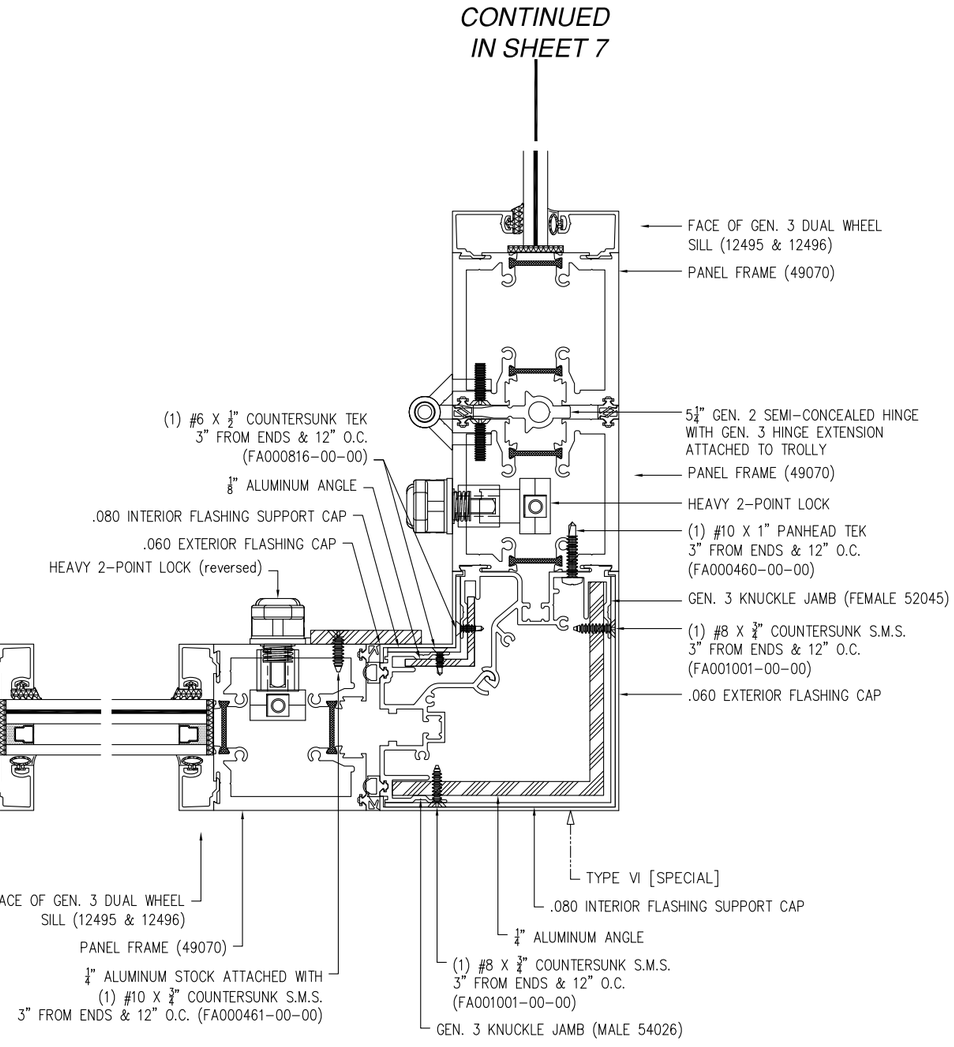






HORIZONTAL CROSS SECTION

CONTINUED IN SHEET 7



SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 7 OF 14

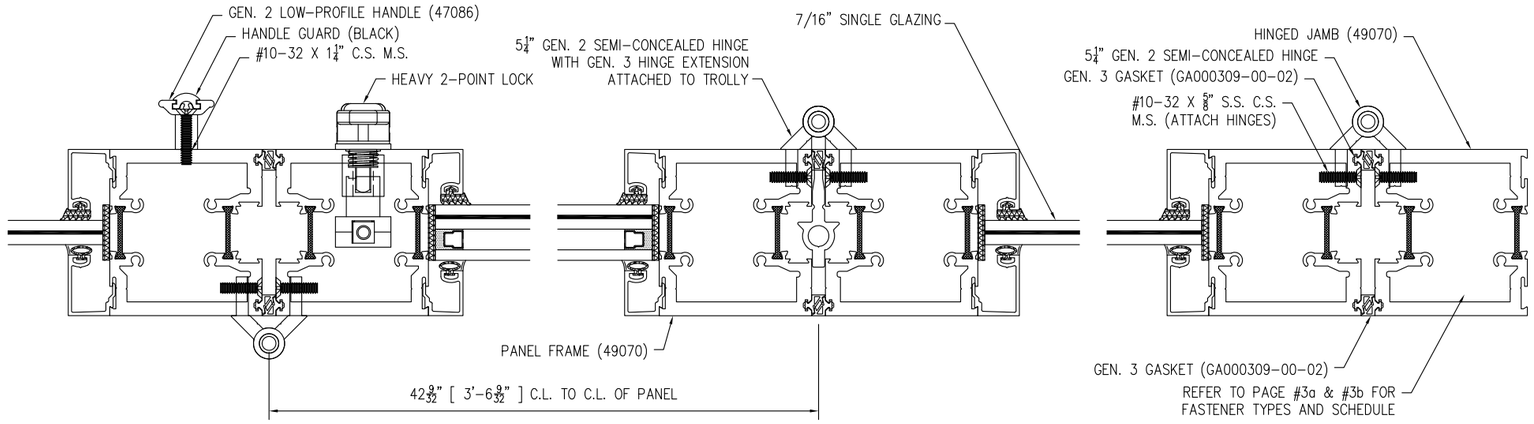
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12

CONTINUED FROM SHEET 6



HORIZONTAL CROSS SECTION

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

DRAWN:	DWG NO.	REV
V.L.	08-02638	–

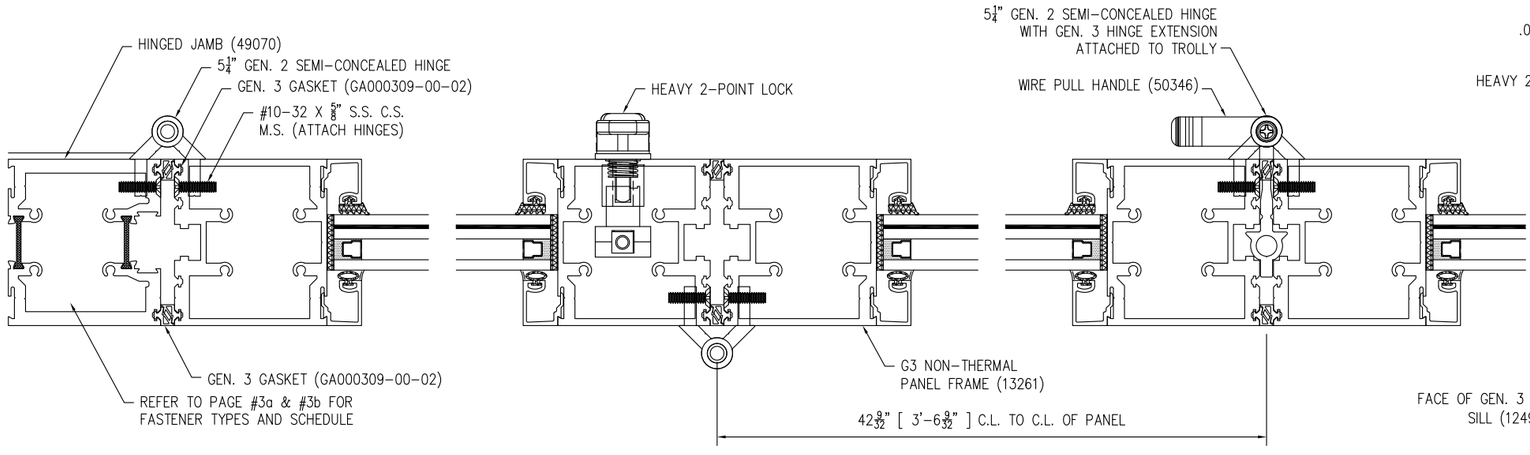
SCALE	DATE	SHEET
NTS	03/19/15	8 OF 14

STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

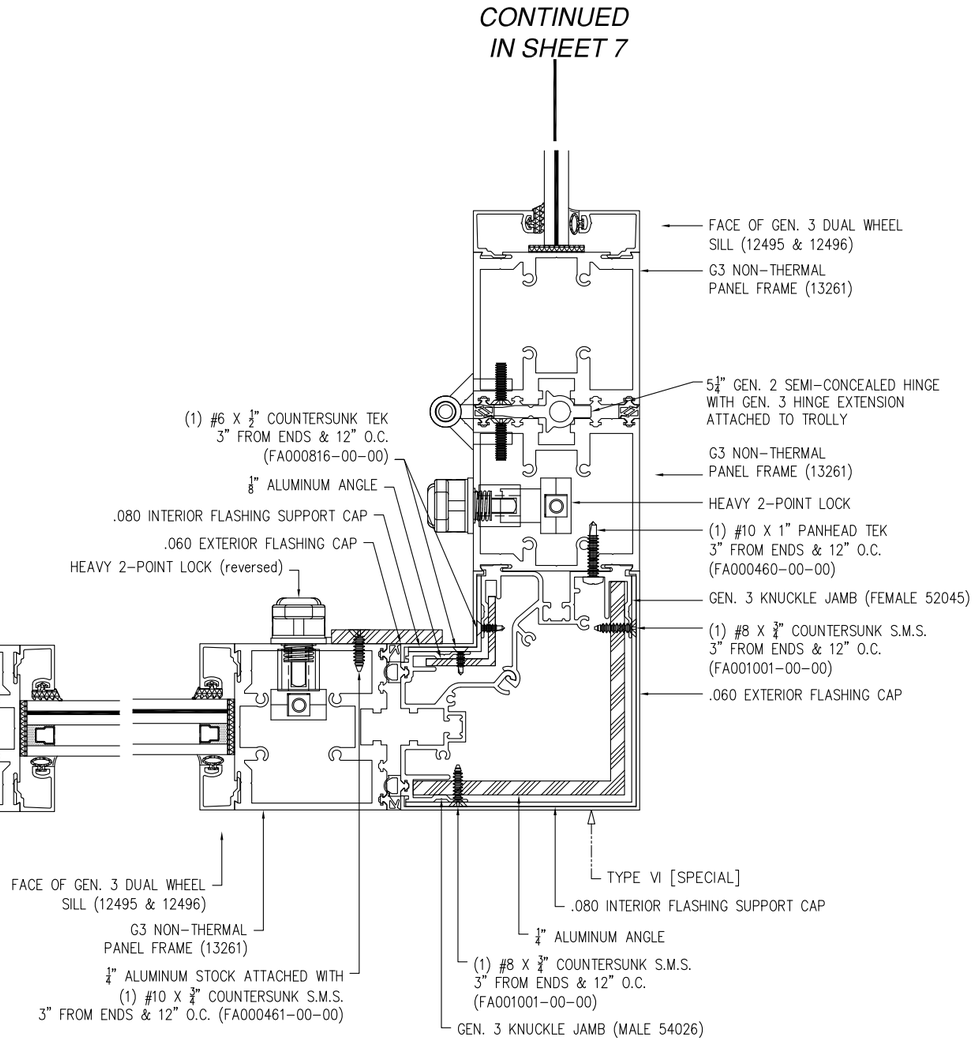
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12



HORIZONTAL CROSS SECTION

CONTINUED IN SHEET 7



SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 9 OF 14

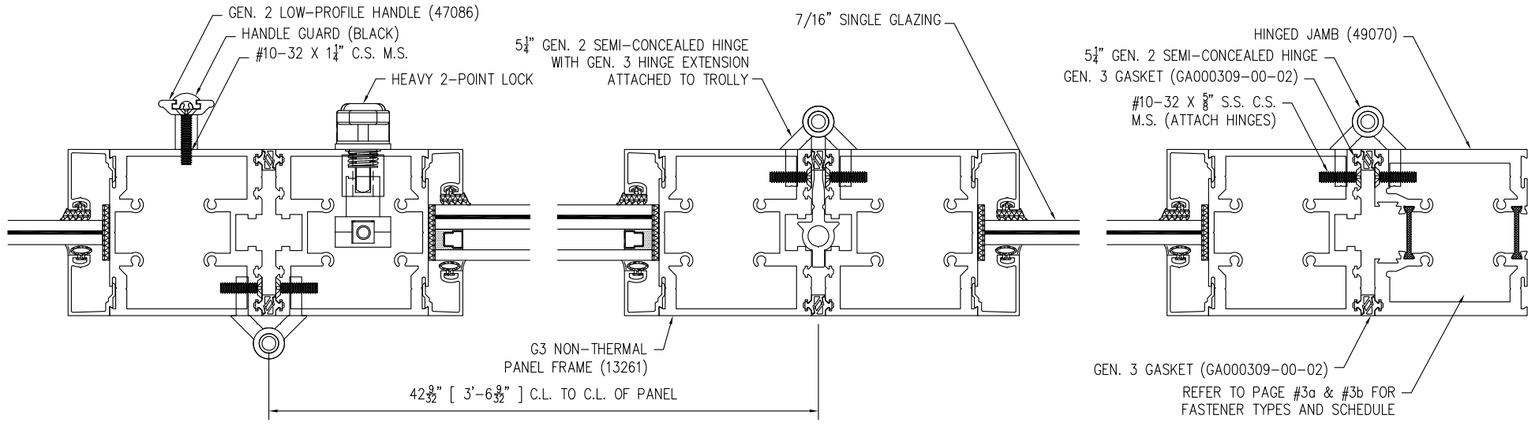
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FOR ILLUSTRATION PURPOSES ONLY
FOR INSTALLATION DETAILS REFER TO SHEETS 11 - 12

CONTINUED FROM SHEET 6



HORIZONTAL CROSS SECTION

SIGNED: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
CROSS SECTIONS

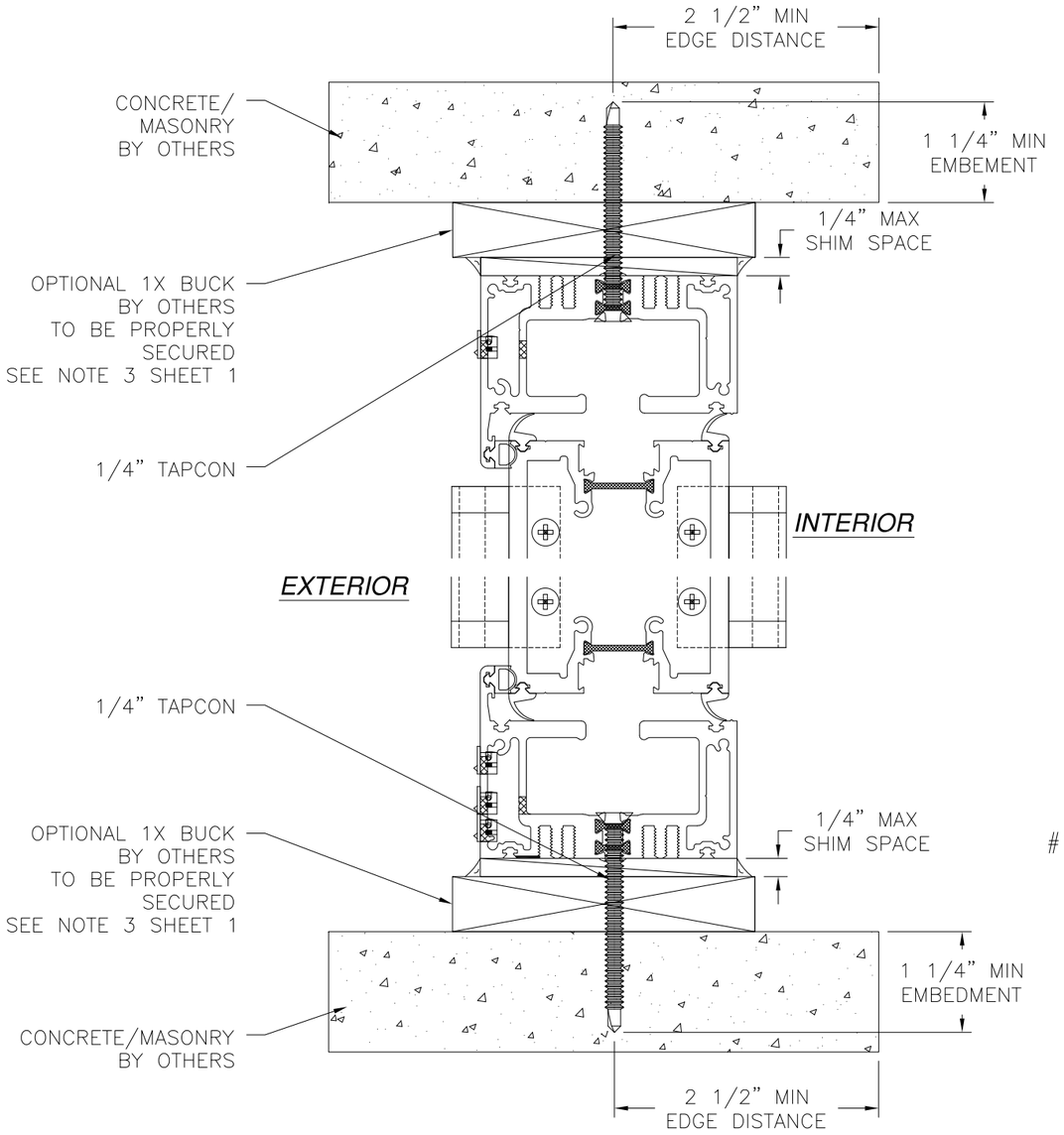
DRAWN:	DWG NO.	REV
V.L.	08-02638	–

SCALE	DATE	SHEET
NTS	03/19/15	10 OF 14

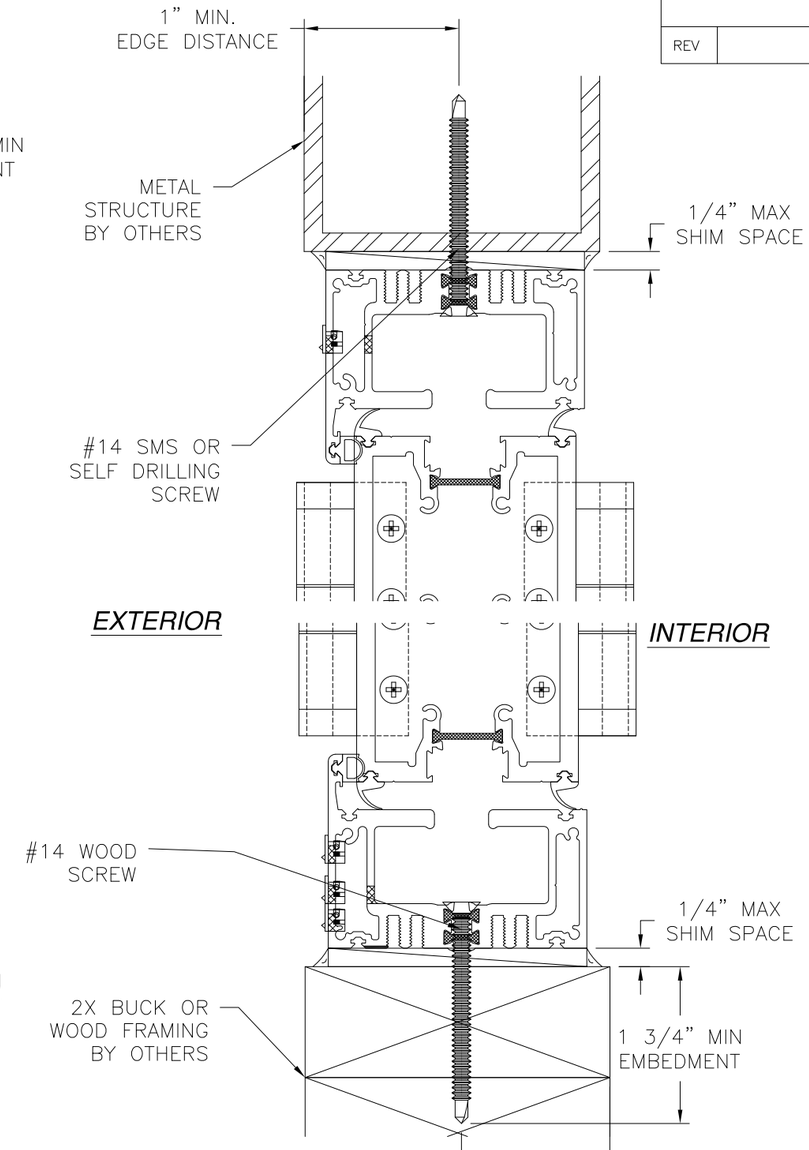
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK
OR METAL STRUCTURE 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: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

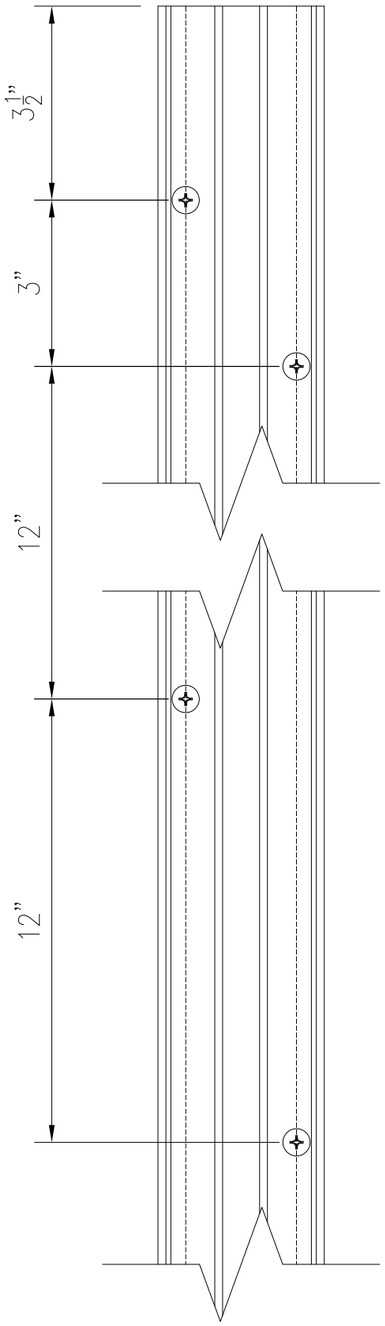
SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
INSTALLATION DETAIL

DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 11 OF 14

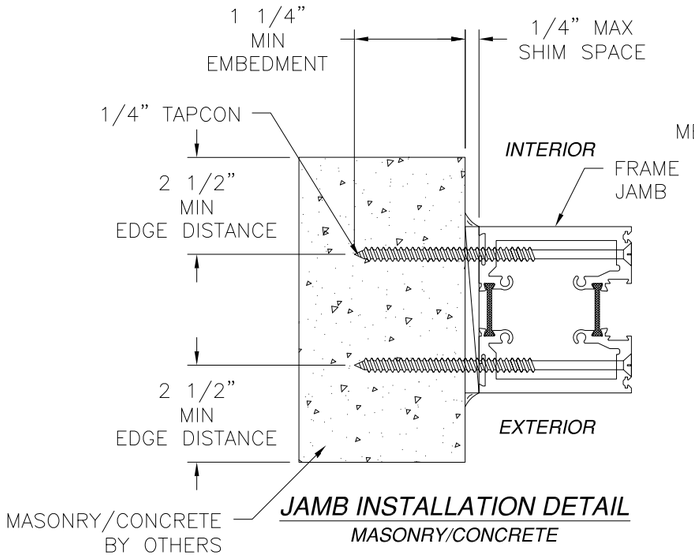
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

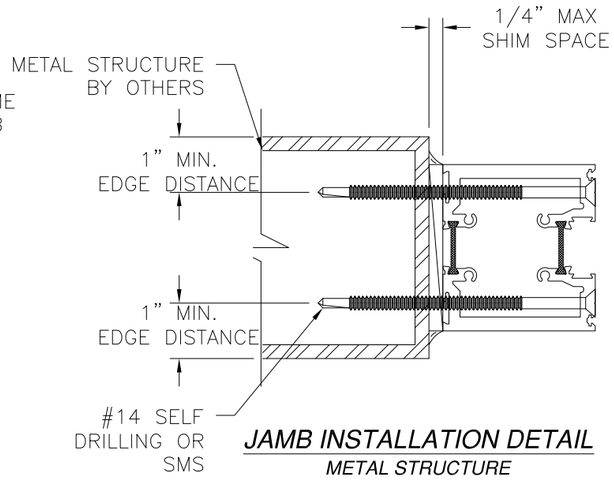
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



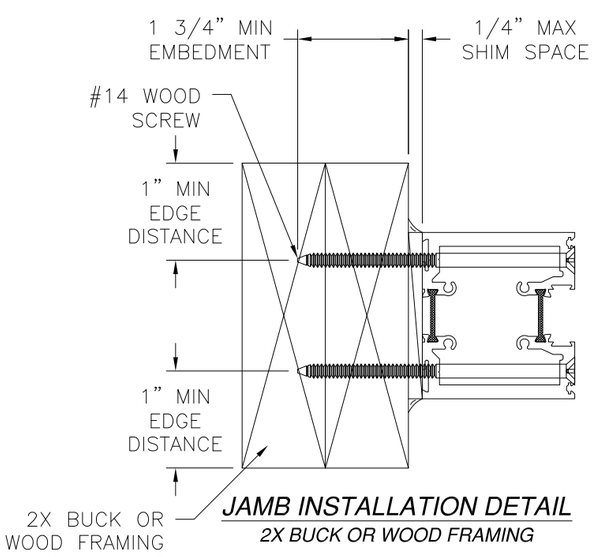
JAMB ANCHOR LOCATIONS DETAIL



JAMB INSTALLATION DETAIL
MASONRY/CONCRETE



JAMB INSTALLATION DETAIL
METAL STRUCTURE



JAMB INSTALLATION DETAIL
2X BUCK OR WOOD FRAMING

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: 03/20/2015

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

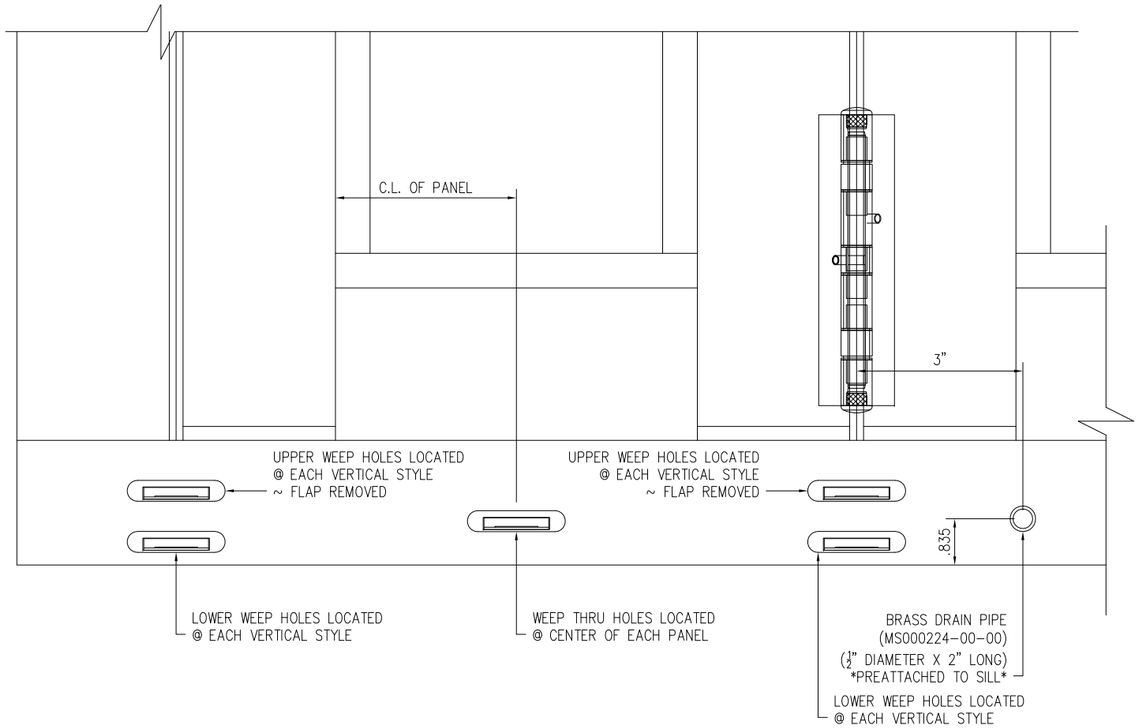
SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
INSTALLATION DETAIL

DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 12 OF 14

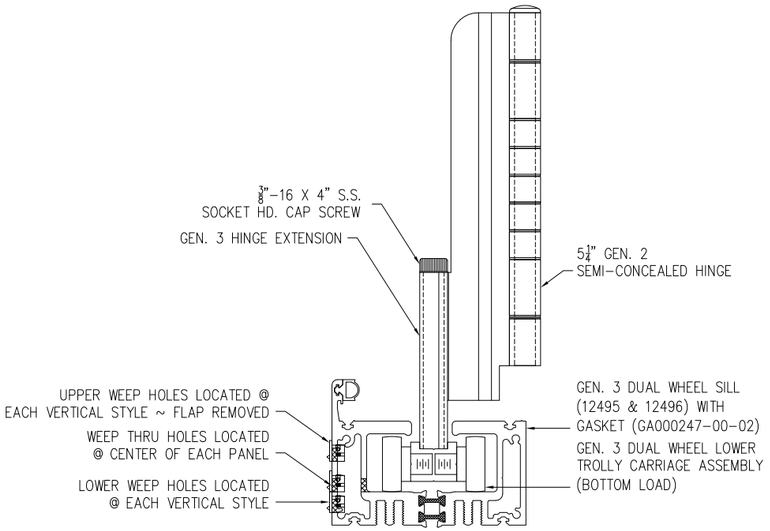
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

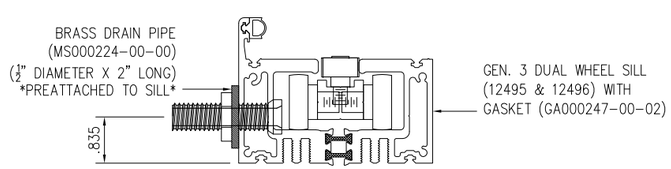
Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



WEEP HOLES LOCATION DETAILS





DRAIN PIPE DETAIL

© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SIGNED: 03/20/2015

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

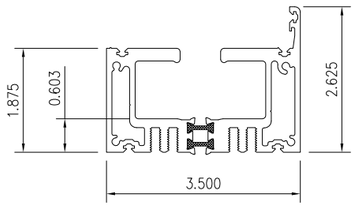
SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL
WEEP HOLES DETAILS

DRAWN:	DWG NO.	REV
V.L.	08-02638	–
SCALE NTS	DATE 03/19/15	SHEET 13 OF 14

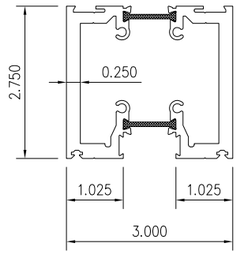
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

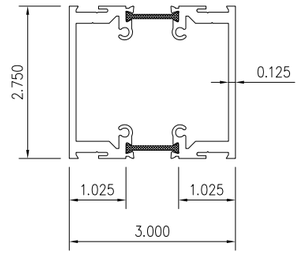
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



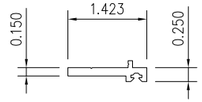
DUAL WHEEL
HEAD / SILL



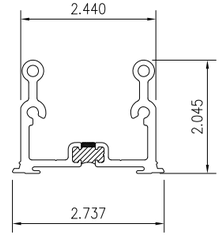
FRAME



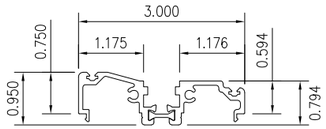
HORIZONTAL
MULLION



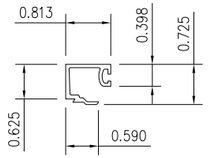
FRAME
CAP



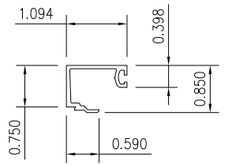
FRAME
LUG



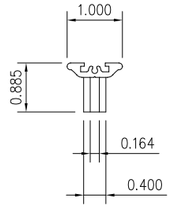
3rd GENERATION
DOOR ADAPTOR



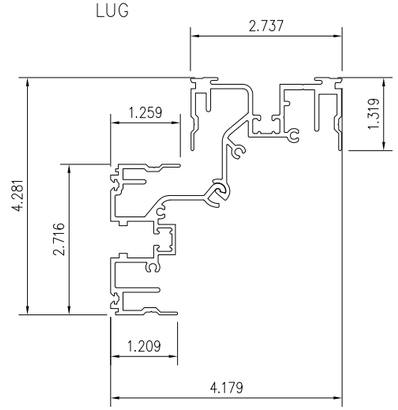
1/4" GLASS
STOP



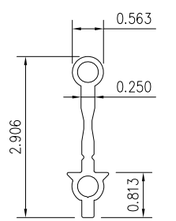
7/16" GLASS
STOP



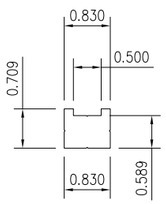
2nd GENERATION
HANDLE



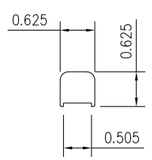
KNUCKLE
JAMB



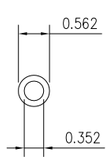
HINGE
EXTENSION



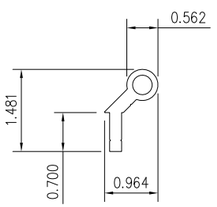
TROLLY
BODY



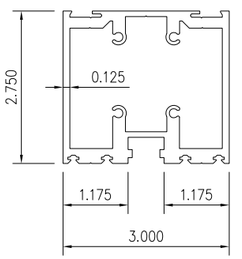
IDLER
BODY



HINGE
BARREL



5 1/4" SEMI-
CONCEALED HINGE



NON-THERMAL
FRAME

SIGNED: 03/20/2015

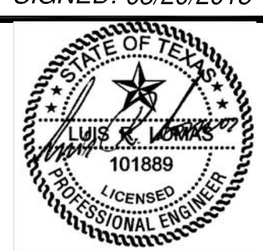
© Copyright 2012 Solar Innovations, Inc. All Rights Reserved. These drawings are applicable only to the product specified herein, are the exclusive sole property of Solar Innovations, Inc., and are considered both confidential and proprietary. Any use of the information, design or drawings contained herein for any purpose whatsoever without the expressed written consent of a Solar Innovations, Inc. authorized individual is forbidden.

SOLAR INNOVATIONS, INC.
31 ROBERTS RD
PINE GROVE, PA 17963

SI 33350 G3 IMPACT FGW 3.5X9.5 PANEL
90° CORNER NO-POST – STANDARD SILL COMPONENTS

DRAWN:	DWG NO.	REV
V.L.	08-02638	–

SCALE	DATE	SHEET
NTS	03/19/15	14 OF 14



Luis R. Lomas P.E.
TX No.: 101889