Engineering Evaluation Report #5570NS-250121-01

Prepared by:
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Registration Number: #29296

Manufacturer:
PGT Industries LLC
3400 Precision Drive
N. Venice, FL 34275

Product Description:
SGD5570NS Series Impact-resistant Vinyl Sliding Glass Door, (LM & SM); FL Approval #33106

Compliance:
The above-mentioned product has been evaluated for compliance with the requirements of the Florida Department of Business and Professional Regulation for Statewide Acceptance per Rule 61 G20-3.005 method 1(d). The product listed herein complies with requirements of the current Florida Building Code.

This product has been evaluated and is in compliance with the current Florida Building Code, including the “High Velocity Hurricane Zone” (HVHZ).

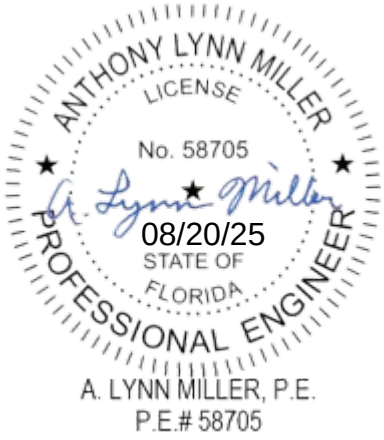
Supporting Technical Documentation:
1. Approval document: drawing number SGD557NSFPA-LM, signed and sealed by A. Lynn Miller, P.E.

2. Test Report Nos.:
QAI NOK-0072, QAI NOK-0075, QAI NOK-0080 and QAI NOK- 0099, NOK-0102 signed and sealed by Idalmis Ortega P.E.; QAI: QAI Laboratories

TAS 201-94 Large Missile Impact Test
TAS 202-94 Uniform Static Air Pressure Test
TAS 203-94 Cyclic Pressure Loading Test

3. Calculations, signed and sealed by A. Lynn Miller, P.E., dated 2/29/24., 6/13/24

Limitations and Conditions of use:
• Units must be glazed per ASTM E1300-09, refer to approval document for glazing details.
• This product is rated to be used in the HVHZ.
• This product is impact resistant and does not require impact protection in wind borne debris regions.
• Frame and panel material to be extruded Aluminum and Vinyl.
• Units must be installed in accordance with approval documents.



SERIES SS10MI IMPACT RESISTANT SLIDING GLASS DOOR INCLUDING POCKETS & 90° / 135° CORNERS

FLORIDA PRODUCT APPROVAL #10158

DESIGN PRESSURE RATING
SEE TABLES 1 & 2 ON SHEETS 7 & 8

IMPACT RATING
RATED FOR LARGE & SMALL MISSILE IMPACT RESISTANCE MISSILE LEVEL D

GENERAL NOTES 4
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EXAMPLE 11
ANCHOR LOC 12-16
PANEL TYPES 17
SCREEN DR TRACK 18
EXTRUSIONS 19
PARTS LIST 20

GENERAL NOTES:

1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

2) SHUTTERS ARE NOT REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.

3) ANCHORAGE: THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33.33% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

4) OVERALL SEAL/WEATHERSTRIPPING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

5) GLASS MUST BE VERIFIED FOR COMPLIANCE WITH GLASS REQUIREMENTS PER CURRENT FLORIDA BUILDING CODE, AS APPLICABLE. DESIGN LOADS ARE BASED ON ALLOWABLE STRESS DESIGN, ASD.

ANCHOR NOTES:

1) SEE TABLE A ON THIS SHEET FOR EMBEDMENT, EDGE DISTANCE AND SUBSTRATE REQUIREMENTS. FOR OTHER SUBSTRATE APPLICATIONS SEE TABLE A-ON THIS SHEET.

2) WOOD BUCKS DEPICTED AS (X) ARE LESS THAN 1-1/2" THICK, PROPERLY SECURED. (X) WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SOLID CONCRETE OR CMU. WOOD BUCKS DEPICTED AS (X) ARE 1-1/2" THICK OR GREATER. (X) AND (X) BUCKS WHEN USED SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD & TO BE REVIEWED BY THE BUILDING OFFICIAL.

3) A SILL IS TIGHT TO SUBSTRATE, GROUT OR OTHER MATERIAL IS NOT REQUIRED. IF USED, NON-SHRINK, NON-METALLIC GROUT, MIN. 1/4" THICK & 5400 PSI MIN. (DOOR BY OTHERS) MUST FULLY SUPPORT THE ENTIRE LENGTH OF THE SILL THAT IS NOT TIGHT TO THE SUBSTRATE, AND TRANSFER SHEAR LOAD TO SUBSTRATE. IF SUBSTRATE IS WOOD, 30# FELT PAPER OR PLASTIC IS REQUIRED BETWEEN THE GROUT AND WOOD SUBSTRATE, OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

INSTRUCTIONS:

1) KNOWING THE REQUIRED ALLOWABLE STRESS DESIGN PRESSURE OF THE OPENING, THE ANCHOR REQUIREMENTS FOR THE SLIDING GLASS DOORS MAY BE DETERMINED FROM DESIGN PRESSURE TABLES 1, 2 OR 3, DEPENDING ON THE GLASS/FRAME ORIENTATION.

2) LOCATE THE SLIDING GLASS DOOR SIZE ON THE TABLE USING THE FRAME HEIGHT AND THE NOMINAL PANEL WIDTH IF YOUR EXACT SIZE IS NOT LISTED, ROUND UP TO THE NEXT GREATER LISTED WIDTH AND/OR HEIGHT.

3) CHOOSE WHICH ANCHOR GROUP (A-D) IS MOST APPLICABLE. ANCHORS ARE DEFINED IN TABLE A, THIS SHEET, ALONG WITH THE CORRESPONDING SUBSTRATE, MINIMUM EMBEDMENT AND MINIMUM EDGE DISTANCE.

4) FROM THE DESIGN PRESSURE TABLES (TABLES 1, 2 OR 3), VERIFY THAT THE DESIGN PRESSURE REQUIRED FOR THE OPENING IS MET OR EXCEEDED. USE THE ANCHOR QUANTITIES SHOWN.

5) INSTALL AS PER THE GUIDELINES OF THIS SHEET SET. ADDITIONALLY, SEE THE EXAMPLE ON SHEET 11.

TABLE A

Group	Anchor	Substrate	Frame Member	Min. Edge Distance	Min. Embedment
A	#12 Jmax (STD) (Ds) or 4-1/2 & 5 (HHD) (min. 11 threads in 2)	Southern Pine (SG=0.55)	Head/Sill (Jamb)	5/16"	1-3/4"
			P-Track	3/16"	1-3/4"
		Aluminum, 6063-T5* (F_tu=22 ksi, min. thickness= Head: 0.062" Sill: 0.062" (0.062" min. thickness) Jamb: Solid, 6063-T5, 2.9* (0.070" min. thickness))	Head/Sill (Jamb)	3/8"	1/2"
			P-track	1/8"	1/2"
			Head/Sill (Jamb)	3/8"	1/2" (1/4" Dia.)
			P-track	3/8"	1/2" (1/4" Dia.)
	1/2" Diameter Lifesaver	Southern Pine (SG=0.55)	Head/Sill (Jamb)	1"	1-3/4"
			P-track	1"	1-3/4"
	5/16" Dia. (#10 U.S. Coarse Thread)	Southern Pine (SG=0.55)	Head/Sill (Jamb)	1"	1-3/4"
			P-track	1"	1-3/4"
B	#12 Tmax Wood Screw (SW)	Southern Pine (SG=0.55)	Head/Sill (Jamb)	5/16"	1-3/4"
			P-track	5/16"	1-1/2"
C	1/4" Tapcon (Stainless)	Concrete (min. f'c=2.5 ksi)	Head/Sill (Jamb)	1"	1-3/4"
			P-track	1"	1-3/4"
		Unreinforced CMU (f'c=1.5 ksi)	Jamb	1"	1-1/4"
			P-track	1"	1-1/4"
	1/4" Dia. (#10 U.S. Coarse Thread)	Unreinforced CMU (f'c=1.5 ksi)	Jamb	1-1/2"	1-1/4"
			P-track	1-1/2"	1-1/4"
		Grouted CMU (min. 2.25 ksi)	Head/Sill (Jamb)	1-1/2"	1-3/4"
			P-track	1-1/2"	1-3/4"
	1/4" Dia. (#10 U.S. Coarse Thread)	Unreinforced CMU (f'c=1.5 ksi)	Jamb	1"	1-1/4"
			P-track	1"	1-1/4"
		Southern Pine (SG=0.55)	Head/Sill (Jamb)	1"	1-3/4"
			P-track	1"	1-3/4"
D	1/4" Tapcon (Stainless)	Concrete (min. f'c=2.5 ksi)	Head/Sill (Jamb)	2-1/2"	1-3/4"
			P-track	2-1/2"	1-3/4"
		Unreinforced CMU (f'c=1.5 ksi)	Jamb	2-1/2"	1-1/4"
			P-track	2-1/2"	1-1/4"
	1/4" Dia. (#10 U.S. Coarse Thread)	Concrete (min. f'c=2.5 ksi)	Head/Sill (Jamb)	2-1/2"	1-3/4"
			P-track	2-1/2"	1-3/4"
		Unreinforced CMU (f'c=1.5 ksi)	Jamb	2-1/2"	1-1/4"
			P-track	2-1/2"	1-1/4"

1) WHERE SUBSTRATE CONDITIONS REQUIRE MORE/LESS THAN ONE ROW OF THE ANCHOR GROUPS NOTED, CHOOSE THE ANCHOR GROUP OF THE LOWEST LETTER FOR ALL TABLES IN THIS APPROVAL.

2) ALL ANCHOR HEAD TYPES ARE APPLICABLE.

3) WOOD SCREWS SHALL NOT BE USED IN PVC BUCK APPLICATIONS.

4) ANCHORS MUST BE OF SUFFICIENT LENGTH SO THAT A MINIMUM OF 1 THREAD EXTENDS BEYOND METAL SUBSTRATE.

PGT

SERIES SS10MI IMPACT RESISTANT SLIDING GLASS DOOR INCLUDING POCKETS & 90° / 135° CORNERS

FLORIDA PRODUCT APPROVAL #10158

SHEET 1 OF 20

DRAWING NUMBER

REVISIONS

DATE

SCALE

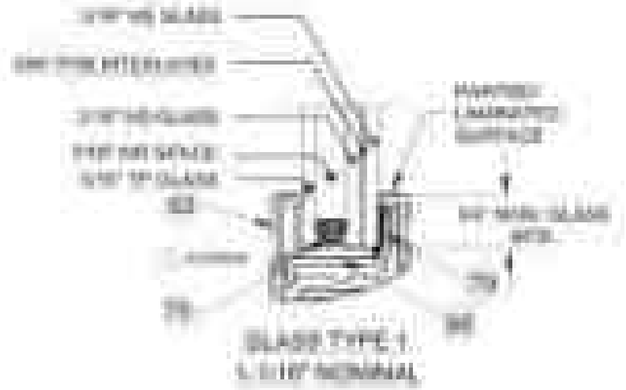
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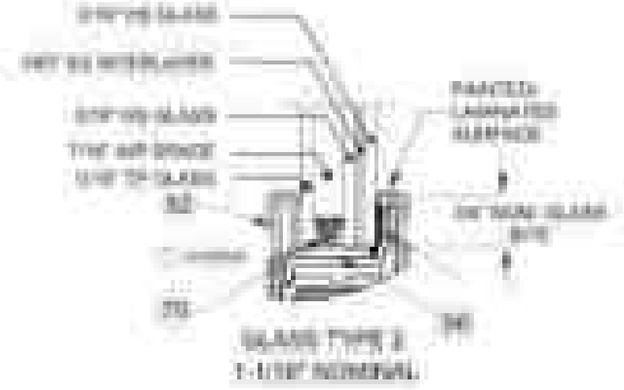
APPROVED BY

STATE OF FLORIDA

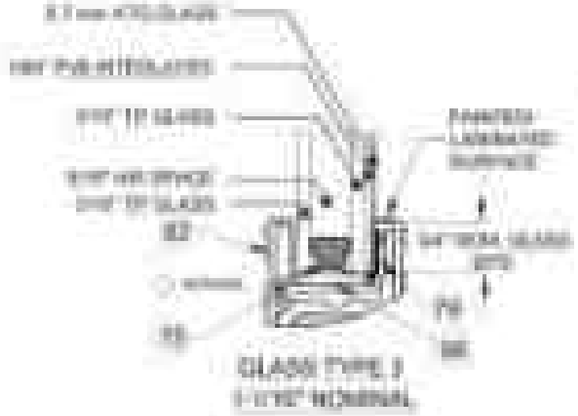
PROFESSIONAL ENGINEER



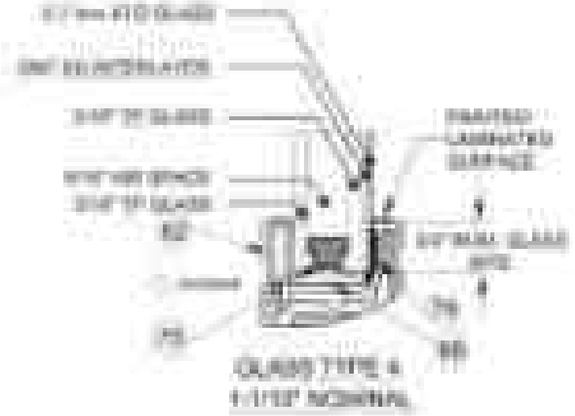
GLASS TYPE 1
1-1/16" NOMINAL



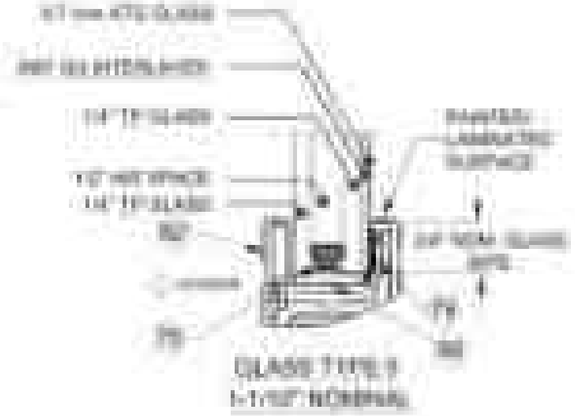
GLASS TYPE 2
1-1/16" NOMINAL



GLASS TYPE 3
1-1/16" NOMINAL



GLASS TYPE 4
1-1/16" NOMINAL



GLASS TYPE 5
1-1/16" NOMINAL

TABLE 8

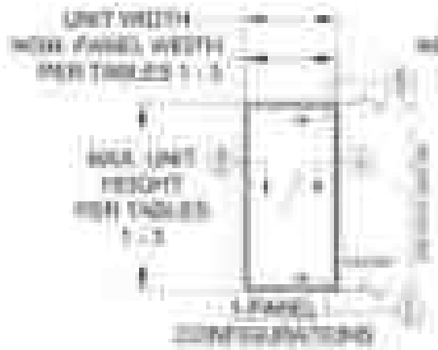
Glass Type	Description (Listed from Exterior to Interior)
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2	[illegible]
3	[illegible]
4	[illegible]
5	[illegible]

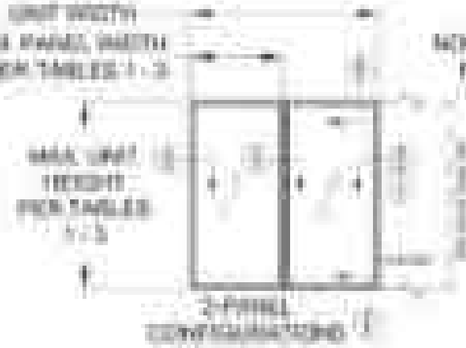
"HS" = HEAT STRENGTHENED
"T" = TEMPERED
"PVB" = .060" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA, INC.
"SG" = .060" SENTRYGLAS® INTERLAYER BY KURARAY AMERICA, INC.

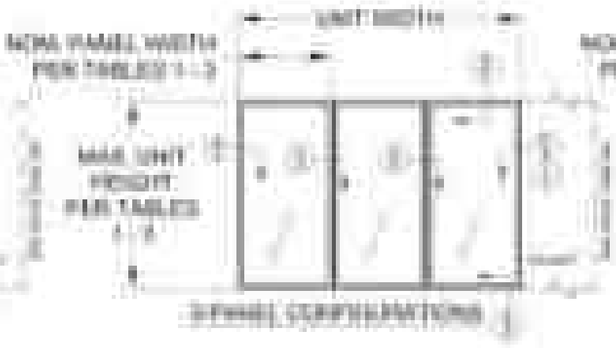
No.	Revision	By	Date
1	[illegible]	[illegible]	[illegible]

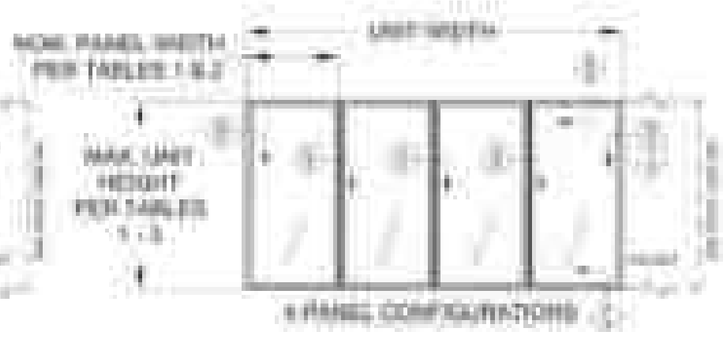
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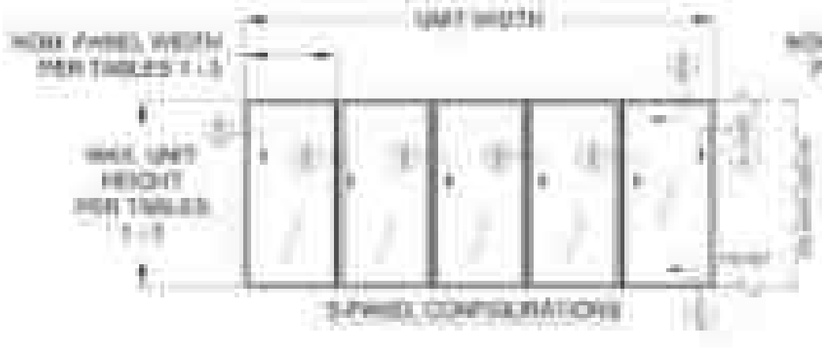
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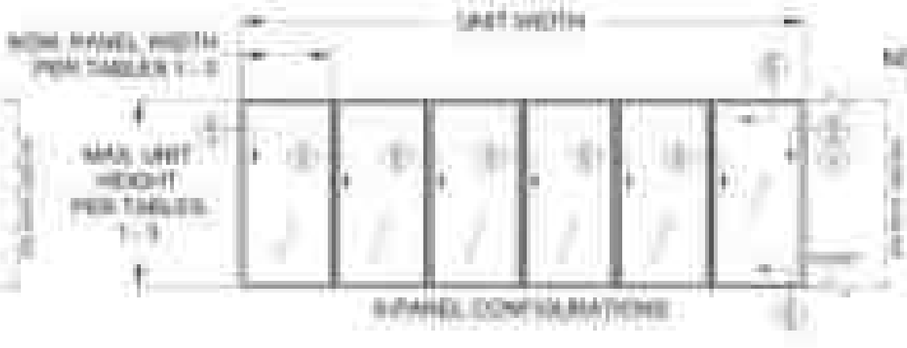




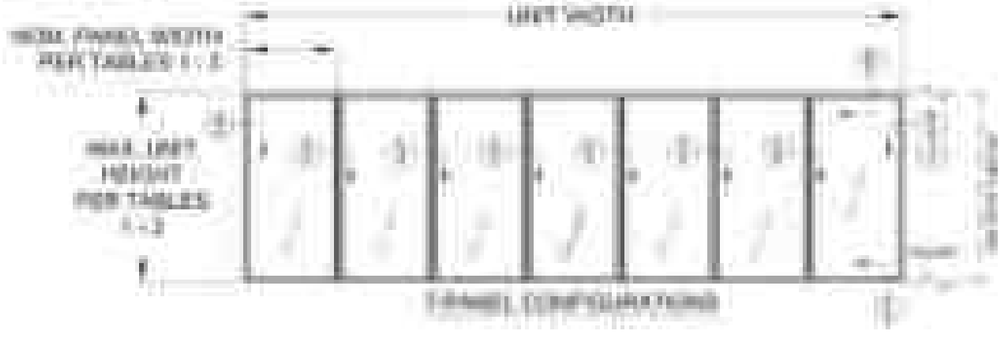


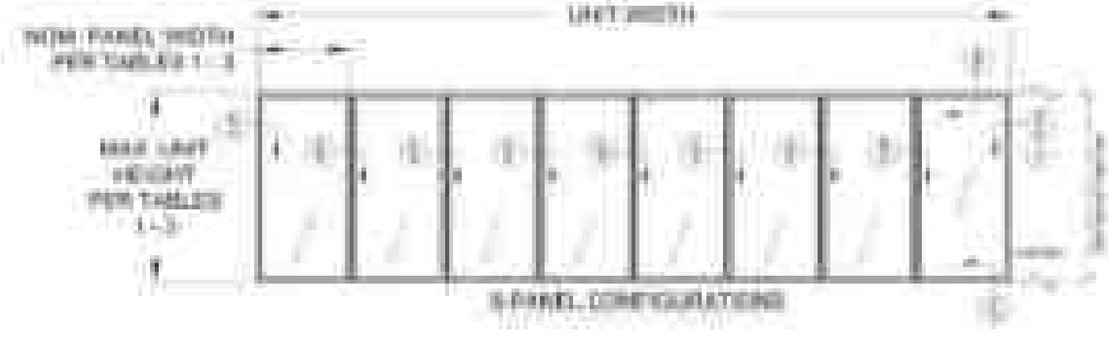












CONFIGURATIONS NOTES:

1) ALL CONFIGURATIONS SHOWN ARE ALSO AVAILABLE AS POCKET CONFIGURATIONS AT EITHER OR BOTH JAMB LOCATIONS. EXAMPLE: 4-PANEL DOOR IN POCKET (2) CONFIGURATION CAN BE 4-PANEL DOOR IN POCKET, 2-PANEL DOOR IN POCKET CONFIGURATION CAN BE 2-PANEL.
2) POCKET WALL OR CAVITY IS NOT PART OF THIS APPROVAL AND IS TO BE DESIGNED BY OTHERS AND REVIEWED BY THE AUTHORITY HAVING JURISDICTION.
3) FOR NOM. PANEL WIDTH, SEE TABLES 1 - 3.

DETAIL LETTER
SHEET NUMBER

'H' = OPERABLE PANEL
'OP' = INOPERABLE PANEL
'P' = POCKET

GLO WIDTH = NOMINAL PANEL WIDTH - 4 1/8"
GLAZE WIDTH = GLO WIDTH - 1.5"
GLO HEIGHT = DOOR UNIT HEIGHT - 7 13/16"
GLAZE HEIGHT = GLO HEIGHT - 1.5"
PANEL HEIGHT = DOOR UNIT HEIGHT - 3 13/16"

REVISIONS	
DESCRIPTION	
SHEET NO.	
DRAWING TITLE SHEET	
DRAWING TITLE	MULTI-PANEL GLASS DOOR ELEVATIONS
DRAWING NO.	
SCALE	
DATE	
DRAWN BY	
CHECKED BY	
APPROVED BY	

PGT



DETAIL A1

DETAIL B1

DETAIL C1

DETAIL D1

CONCRETE/CMU PER ANCHOR REQUIREMENT

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3 BELOW

EMBEDMENT

EDGE DISTANCE

ANCHOR PLATE AT EVERY ANCHOR LOCATION

1/4" MAX.

HORIZONTAL SECTION
(XXX SHOWN)

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3. ANCHOR LENGTH TO BE 4 MIN. OF 3 THREADS BEYOND THE METAL SUBSTRATE

DETAIL B2

DETAIL A2

DETAIL C2

DETAIL D2

2X WOOD BUCKSTRIP OR FINWRAP, SEE ANCHOR NOTE 3, SHEET 1

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3 BELOW

EDGE DISTANCE

1/4" MAX.

EMBEDMENT

PANEL WIDTH

CONCRETE/CMU PER ANCHOR REQUIREMENT

ASTRAGAL MAY BE INSTALLED IN EITHER INTERIOR OR EXTERIOR DIRECTION. ALL PARTS REMOVED.

HORIZONTAL SECTION
(XO SHOWN)

NOTES:
1) DETAILS APPLY TO C-3 AND 4 TRACK CONFIGURATIONS.
2) REFER TO ANCHOR NOTES, SHEET 1.
3) SEE SHEET 1A FOR ANCHOR LOCATION & SPACING. FOR ANCHOR QUANTITIES, SEE TABLES 1 - 3.
4) CONTINUOUS ANCHOR PLATE, 1"(W) MIN. IS REQUIRED AT ALL FRAME ANCHOR LOCATIONS.
5) PANEL WIDTH DOES NOT INCLUDE INTERLOCK OR ASTRAGAL ADD-ON.
6) ALL REINFORCEMENTS ARE APPROXIMATELY THE FULL LENGTH OF THE EXTRUSION. REFER TO TEST REPORTS FOR EXACT DIMENSIONS.
7) SEE SHEET 1A FOR SCREEN DETAILS.

PGT

TYPE: ELEVATED DOOR SERIES

SHEET TITLE: DETAILS

SHEET NO.: A-1

REVISIONS

DATE

BY

DESCRIPTION

NO.

PROFESSIONAL ENGINEER

STATE OF FLORIDA

No. 69758

ANTHONY LYNN MILLER

DETAIL E1

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3, THIS SHEET

CONCRETE/CMU PER ANCHOR REQUIREMENT

EDGE DISTANCE

EMBED-MENT

1/4" MAX.

1X OR 2X WOOD BLOCKING/TRIP, SEE ANCHOR NOTE 3, SHEET 1

ANCHOR PLATE AT EVERY ANCHOR LOCATION

PANEL HEIGHT

1/4" MAX. SPACER AS NEEDED, SEE ANCHOR NOTE 3, SHEET 1

EMBED-MENT

EDGE DISTANCE

CONCRETE/CMU PER ANCHOR REQUIREMENT

DETAIL F1

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3, THIS SHEET

DETAIL E2

2X WOOD BLOCKING/TRIP OR FRAMING, SEE ANCHOR NOTE 3, SHEET 1

EDGE DISTANCE

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3, THIS SHEET

EMBEDMENT

1/4" MAX.

HEADER RAIL AT THE PANEL LENGTH EQUAL TO THE WIDTH OF THE PANEL AND INSTALLED WITH #12X1-1/4 SMS 6" FROM EACH END

HEADER RAIL OUTSIDE OF THE PANEL LENGTH EQUAL TO DISTANCE BETWEEN END OF PANEL AND JAMB.

EACH SEGMENT INSTALLED WITH #12X1-1/2 SMS AND 6" FROM EACH END

PANEL HEIGHT

2X WOOD BLOCKING/TRIP (IF) FRAMING, SEE ANCHOR NOTE 3, SHEET 1

EMBEDMENT

EDGE DISTANCE

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3, THIS SHEET

DETAIL F2

DETAIL E3

EDGE DISTANCE

CONCRETE/CMU PER ANCHOR REQUIREMENT

EMBEDMENT

1/4" MAX.

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3, THIS SHEET

DETAIL E4

MULLION, ALUMINUM/STEEL FRAMING OR STEEL STUD, MAY BE VERTICAL OR HORIZONTAL, SEE SUBSTRATE PROPERTIES, TABLE A, SHEET 1

EDGE DISTANCE

EMBEDMENT

1/4" MAX.

TYP. ANCHOR TYPE, EMBEDMENT AND EDGE DISTANCE PER SUBSTRATE, SEE TABLE A, SHEET 1 & NOTE 3, THIS SHEET

SILL RISER VARIES WITH REQUIRED POSITIVE DESIGN PRESSURE, SEE SHEET 9

42 SILL RISER (2-1/2" TOTAL SILL HEIGHT)

43 SILL RISER (3-1/2" TOTAL SILL HEIGHT)

44 SILL RISER (4-1/16" TOTAL SILL HEIGHT)

45 SILL RISER (4-5/8" TOTAL SILL HEIGHT)

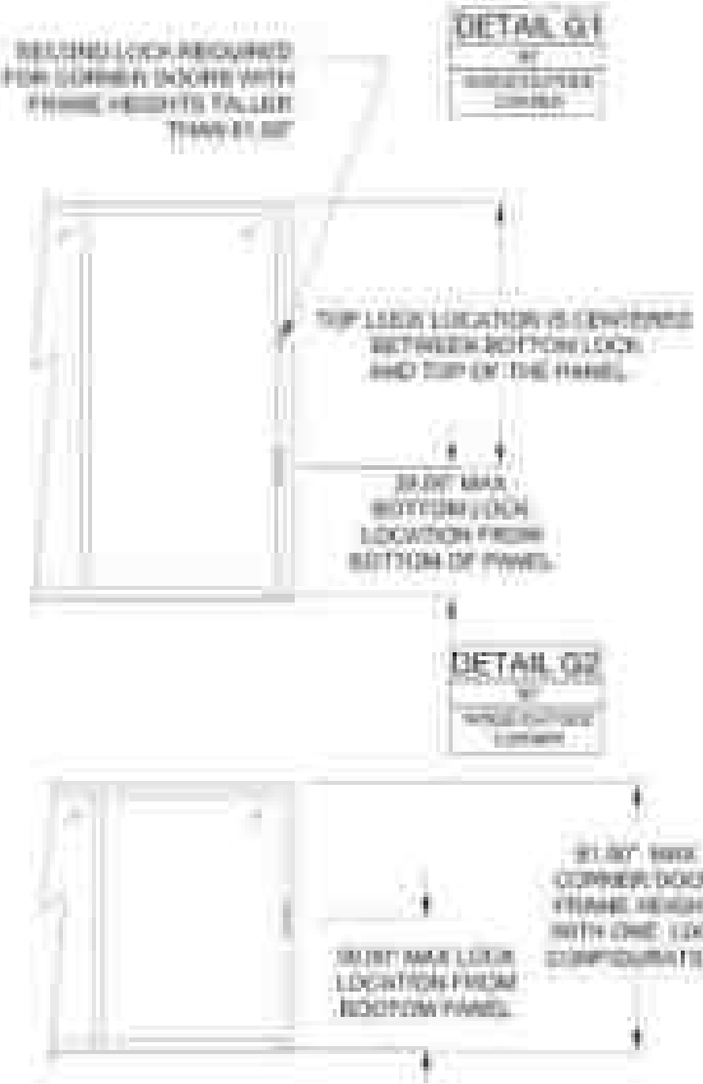
NOTES:
1) DETAILS APPLY TO 2, 3 AND 4 TRACK CONFIGURATIONS.
2) REFER TO ANCHOR NOTES, SHEET 1.
3) SEE SHEETS 12, 13, 14, 15 AND 16 FOR ANCHOR LOCATION & SPACING FOR ANCHOR QUANTITIES, SEE TABLES 1 - 3.
4) CONTINUOUS ANCHOR PLATE, ITEM #6, IS REQUIRED AT ALL FRAME ANCHOR LOCATIONS.
5) SEE SHEET 18 FOR SCREEN DETAILS.

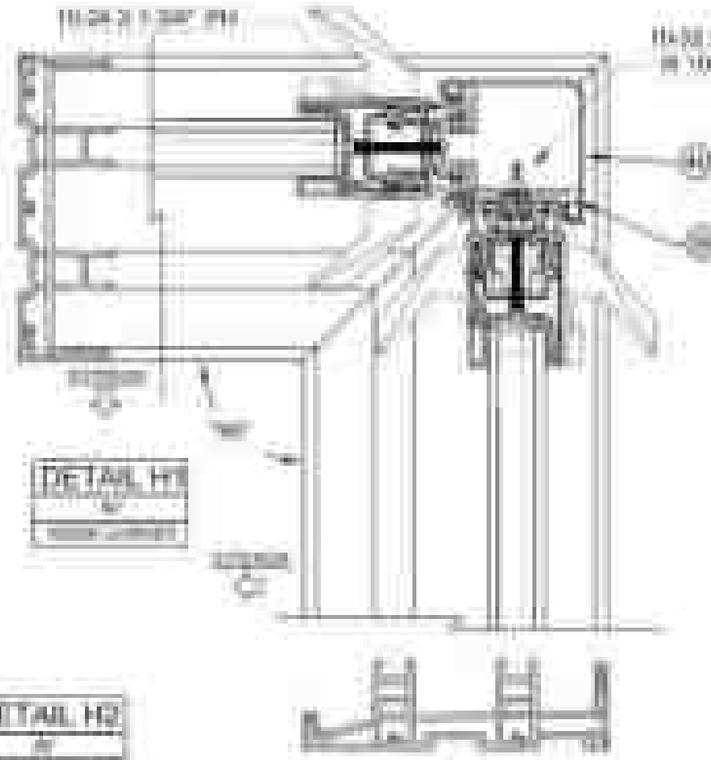
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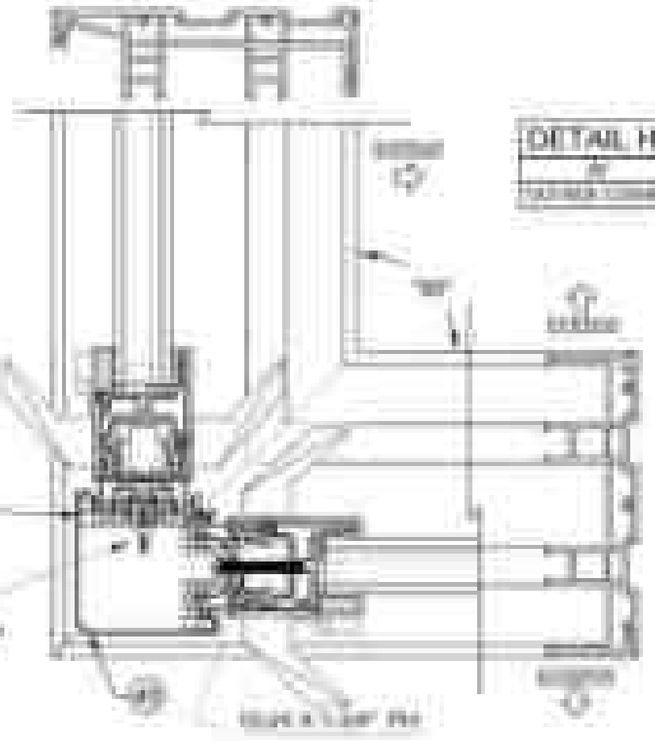
PGT

GRADE A IMPACT VINYL SLIDING DOOR WITH INTEGRAL SCREEN

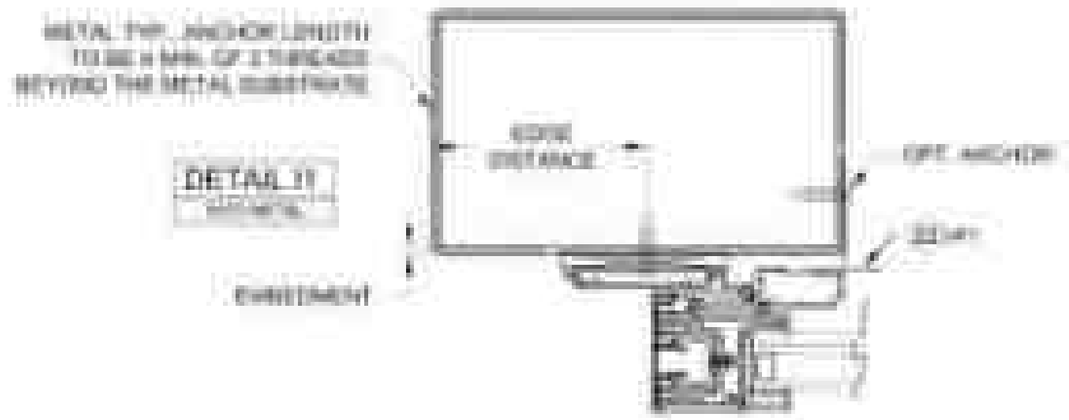
REGISTERED PROFESSIONAL ENGINEER



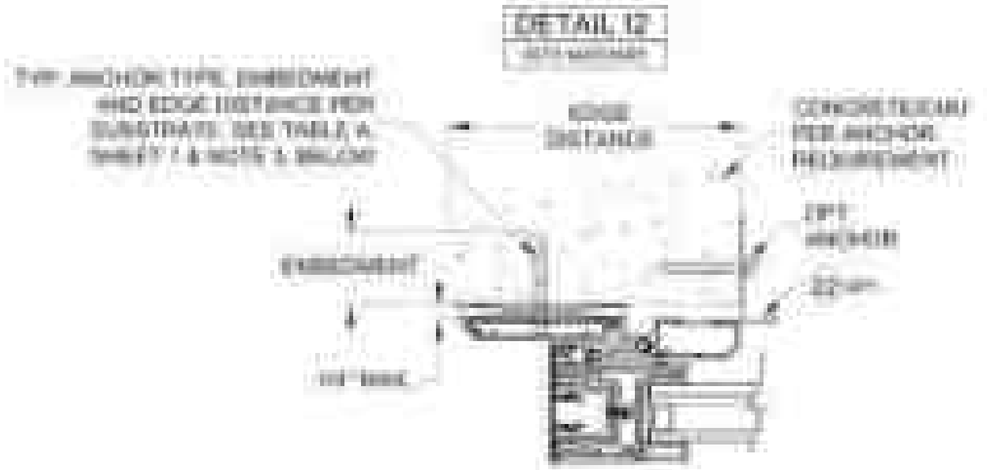




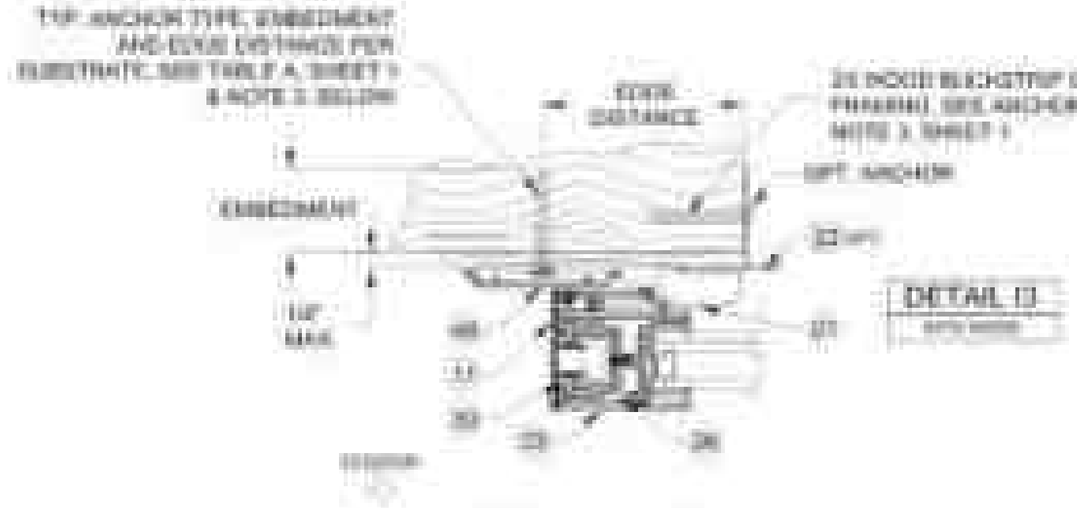
NOTES:
1) DETAILS APPLY TO 2, 3 AND 4 TRACK CONFIGURATIONS.
2) SEE SHEETS 15 & 16 FOR ANCHOR LOCATION & SPACING FOR ANCHOR QUANTITIES. SEE TABLES 1 - 3.
3) CORNER KEEPER(S) MAY BE EITHER TO THE INTERIOR OR EXTERIOR DEPENDING ON CONFIGURATION.



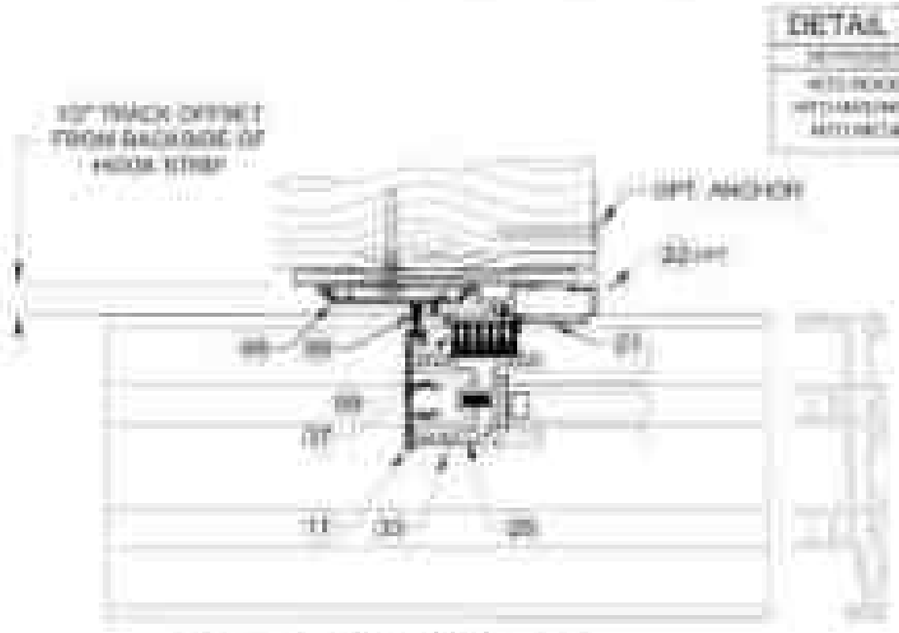
EXTERIOR POCKET



EXTERIOR POCKET



EXTERIOR POCKET



EXTERIOR POCKET

NOTES:
1) DETAILS APPLY TO 2, 3 AND 4 TRACK CONFIGURATIONS.
2) REFER TO ANCHOR NOTES, SHEET 1.
3) SEE SHEET 14 FOR ANCHOR LOCATION & SPACING FOR ANCHOR QUANTITIES, SEE TABLES 1.
4) SEE TABLES 1 - 3 FOR REINFORCEMENT REQUIREMENTS.
5) EXTERIOR POCKETS APPLICABLE FOR ALL INSTALLATION METHODS.
6) POCKET WALL OR CAVITY IS NOT PART OF THIS APPROVAL AND IS TO BE DESIGNED BY OTHERS AND REVIEWED BY THE AUTHORITY HAVING JURISDICTION.

PGT

IMPACT VINYL SLIDING GLASS DOOR WITH INTEGRAL HORIZONTAL MULLION

SHEET 13 OF 14

REVISIONS

DATE

BY

NO.

STATE OF FLORIDA

PROFESSIONAL ENGINEER

TABLE 1

Design Pressure (DP) and Anchor Quantities Required, (for all approved configurations on Sheet 1)

Use this row for: (Glass Type) + (Spacer Material Size)			(Door Unit Height)											
			90" (Up to 90" / 7'-6" Height)				96" (90.01" to 96" / 8'-0" Height)				108" (96.01" to 108" / 9'-0" Height)			
			Active Stile Width				Active Stile Width				Active Stile Width			
			A	B	C	D	A	B	C	D	A	B	C	D
Approved Design Values	24" (Up to 24" Stile Width)	Design Pressure	+60 / -60 psf				+50 / -50 psf				+40 / -40 psf			
		Insert/Size	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1
		Jamb	2	3	4	5	2	3	4	5	3	4	5	6
		P-Jamb	2	2	2	2	2	2	2	2	3	3	3	3
	30" (Over 24" to 30" Stile Width)	Design Pressure	+60 / -60 psf				+50 / -50 psf				+40 / -40 psf			
		Insert/Size	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1
		Jamb	3	4	5	6	3	4	5	6	4	5	6	7
		P-Jamb	2	2	2	2	2	2	2	2	3	3	3	3
	36" (Over 30" to 36" Stile Width)	Design Pressure	+60 / -60 psf				+50 / -50 psf				+40 / -40 psf			
		Insert/Size	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1
		Jamb	3	4	5	6	3	4	5	6	4	5	6	7
		P-Jamb	2	2	2	2	2	2	2	2	3	3	3	3
	42" (Over 36" to 42" Stile Width)	Design Pressure	+60 / -60 psf				+50 / -50 psf				+40 / -40 psf			
		Insert/Size	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1	CO+1
		Jamb	3	4	5	6	3	4	5	6	4	5	6	7
		P-Jamb	2	2	2	2	2	2	2	2	3	3	3	3

USED IN EXAMPLE ON SHEET 9

ANCHORAGE TYPE PER SUBSTRATE REQUIRED TO ACHIEVE THE DESIGN PRESSURE, USING THE ANCHOR QUANTITIES LISTED BELOW. SEE TABLE A, SHEET 1 FOR COMPLETE ANCHOR LIMITATIONS.

THE MAXIMUM DP AT THESE ANCHOR QUANTITIES. ADDITIONALLY, THE MAXIMUM POSITIVE DP DUE TO THE SILL HEIGHT MUST ALSO BE CONSIDERED, SEE TABLE B1, THIS SHEET

OF ANCHORS THROUGH THE HEAD & SILL. (EX. FOR CO+1, 3 ANCHORS CLUSTERED AT PANEL MEETING POINT AND 1 ANCHOR REQUIRED AT MIDSPAN OF PANEL)

TOTAL # OF ANCHORS THROUGH THE JAMB

THE # OF ANCHORS REQUIRED THROUGH THE P-JOIOL PERPENDICULAR TO THE GLASS.

TABLE NOTES

1) IF WATER INFILTRATION RESISTANCE IS REQUIRED, THE LESSER VALUES OF EITHER TABLE 1 AND TABLE B1 DETERMINES THE WATER LIMITED (+) DP. WATER TEST PRESSURE IS 15% OF THAT VALUE.

2) IF WATER INFILTRATION RESISTANCE IS NOT REQUIRED OR OVERHANG IS PER FIG 1, A SILL RISER IS NOT REQUIRED. IN THAT CASE, #SPS SHOWN IN TABLE 1 MAY BE USED.

3) SEE SILL RISER TYPES ON SHEET 4. SEE SHEETS 10-16 FOR ANCHOR LOCATION & SPACING.

4) SHEET APPLIES TO 2, 3, AND 4 PANEL CONFIGURATIONS.

5) REFER TO ANCHOR NOTES, SHEET 1.

DLO WIDTH = NOMINAL PANEL WIDTH - 4.719"
GLASS WIDTH = DLO WIDTH + 1.5"
DLO HEIGHT = DOOR UNIT HEIGHT - 4.125"
GLASS HEIGHT = DLO HEIGHT + 1.25"
PANEL HEIGHT = DOOR UNIT HEIGHT - 2 (3.219")

TABLE B1:

Water-Limited (+) Design Pressure

Sill Riser	Nom. Sill Height	Max. (+) DP Allowed
None	1-1/2"	See Note 2
4D	3-1/2"	+36.7 psf
4E	5-1/2"	+60.0 psf
4H	8-1/16"	+60.0 psf
4K	11-5/8"	+60.0 psf

FIG 1

OVERHANG DEPTH

OVERHANG HEIGHT

DOOR ASSEMBLIES INSTALLED WHERE THE OVERHANG (OH) LENGTH IS EQUAL TO OR GREATER THAN THE OVERHANG HEIGHT IS EXEMPTED FROM WATER INFILTRATION RESISTANCE.

IGCI

TRIPLE GLAZED DOOR UNITS

SLIDING DOOR

SHEET 2 OF 8

DRAWING NO.

REVISIONS

TABLE 1

Design Pressure (DP) and Anchor Quantities Required, (for all approved configurations on Sheet 3)

Glass Type 2 and 4 (Aluminum Interlock Stile)			Sizes (W Width / H Height)																			
			W1 (2-1/4" / 2-1/2" Stiles)				W2 (4-1/4" / 2-1/2" Stiles)				W3 (6-1/4" / 2-1/2" Stiles)				W4 (8-1/4" / 2-1/2" Stiles)				W5 (10-1/4" / 2-1/2" Stiles)			
			Anchor Group				Anchor Group				Anchor Group				Anchor Group				Anchor Group			
			A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1/4	79-1/8" (6.25 Width)	Design Pressure	+50 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf			
		Head/Sill	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1
		Jamb	4	4	5	5	4	4	5	5	4	4	4	5	4	4	4	4	4	4	4	4
		# Locks	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10
2/3	79-1/8" (6.25 Width)	Design Pressure	+50 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf			
		Head/Sill	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1
		Jamb	5	5	6	6	5	5	5	6	5	4	5	6	5	5	5	5	5	4	5	6
		# Locks	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10
1/2	79-1/8" (6.25 Width)	Design Pressure	+50 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf			
		Head/Sill	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1
		Jamb	6	6	6	6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	6
		# Locks	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10
3/4	79-1/8" (6.25 Width)	Design Pressure	+50 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf			
		Head/Sill	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1
		Jamb	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10
		# Locks	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10
1	79-1/8" (6.25 Width)	Design Pressure	+50 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf				+40 / -50 psf			
		Head/Sill	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1	C2+1
		Jamb	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10
		# Locks	7	7	7	7	7	7	7	7	6	6	6	6	7	7	6	6	6	6	10	10

TABLE NOTES:

1) IF WATER INFILTRATION RESISTANCE IS REQUIRED, THE LESSER VALUES OF EITHER TABLE 3 AND TABLE 3A DETERMINES THE WATER LIMITED (+) DP. WATER TEST PRESSURE IS 15% OF THAT VALUE.

2) IF WATER INFILTRATION RESISTANCE IS NOT REQUIRED OR OVERHANG IS PER FIG 1, A SILL RISER IS NOT REQUIRED. IN THAT CASE, +DP'S SHOWN IN TABLE 3 MAY BE USED.

3) SEE SILL RISER TYPES ON SHEET 4. SEE SHEETS 12-16 FOR ANCHOR LOCATIONS & SPACING.

4) SHEET APPLIES TO 2, 3 AND 4 TRACK CONFIGURATIONS.

5) REFER TO ANCHOR NOTES, SHEET 1.

DLO WIDTH = NOMINAL PANEL WIDTH - 4-7/8"
GLASS WIDTH = DLO WIDTH + 1.5"
DLO HEIGHT = DOOR UNIT HEIGHT - 4-13/16"
GLASS HEIGHT = DLO HEIGHT + 1.5"
PANEL HEIGHT = DOOR UNIT HEIGHT - 2-1/2"

TABLE 3A

Water Limited (+) Design Pressure		
Sill Riser	Nom. Sill Height	Max. (+) DP Allowed
None	1-11/16"	See Note 2
#2	2-1/2"	+38.7 psf
#3	3-1/2"	+60.0 psf
#4	4-1/16"	+60.0 psf
#5	4-5/8"	+60.0 psf

Fig 1



DOOR ASSEMBLIES INSTALLED WHERE THE OVERHANG (OH) LENGTH IS EQUAL TO OR GREATER THAN THE OVERHANG HEIGHT IS EXEMPTED FROM WATER INFILTRATION RESISTANCE.

PGT

WINDOWS AND DOORS

1660 S. STEARMAN AVE. ENGLEWOOD, FL 34224

SERIES/MODEL: WINGUARD

DRAWING TITLE: DESIGN PRESSURE AND ANCHORAGE

DRAWING NO. 0.0

SHEET NO. 2 OF 16

DATE: 11/19/2020

SCALE: AS NOTED

REVISIONS

TABLE 1

Design Pressure (DP) and Anchor Quantities Required

Unit Size Width (in) — Glass Type: 2, 3 and 5 — NO Horizontal Mullion	Case 1 (or 2) Right					
	A) [illegible]	B) [illegible]	C) [illegible]	D) [illegible]	E) [illegible]	F) [illegible]
	Exterior Glass	Exterior Glass	Exterior Glass	Exterior Glass	Exterior Glass	Exterior Glass
	A | B | C | D	A | B | C | D	A | B | C | D	A | B | C | D	A | B | C | D	A | B | C | D
24	Design Pressure (+/-) DP; Anchors					
28	Design Pressure (+/-) DP; Anchors					
32	Design Pressure (+/-) DP; Anchors					
40	Design Pressure (+/-) DP; Anchors					
48	Design Pressure (+/-) DP; Anchors					
56	Design Pressure (+/-) DP; Anchors					

For these sizes, use table 2 on sheet 8

Unit Size Width (in)	Case 1 (or 2) Right							
	A) [illegible]			B) [illegible]			C) [illegible]	
	Exterior Glass			Exterior Glass			Exterior Glass	
	A	B	C	A	B	C	A	B	C
24									
28									
32									
40									
48									
56									

*GLASS 2 & 5 ONLY

TABLE NOTES

1) IF WATER INFILTRATION RESISTANCE IS REQUIRED, THE LESSER VALUES OF EITHER TABLE 1 AND TABLE 1(a) DETERMINES THE WATER LIMITED (+) DP. WATER TEST PRESSURE IS 75% OF THAT VALUE.

2) IF WATER INFILTRATION RESISTANCE IS NOT REQUIRED OR OVERHANG IS PER FIG 1, A SILL RISER IS NOT REQUIRED. IN THAT CASE, +DP'S SHOWN IN TABLE 1 MAY BE USED.

3) SEE SILL RISER TYPES ON SHEET 4. SEE SHEETS 15-16 FOR RISER LOCATION & SPACING.

4) SHEET APPLIES TO 2, 3 AND 4 TRACK CONFIGURATIONS.

5) REFER TO ANCHOR NOTES, SHEET 1.

DLO WIDTH = NOMINAL PANEL WIDTH - 4.75"
GLASS WIDTH = DLO WIDTH + 1.5"
DLO HEIGHT = DOOR UNIT HEIGHT - 2 1/2"
GLASS HEIGHT = DLO HEIGHT + 1.5"
PANEL HEIGHT = DOOR UNIT HEIGHT - 3 1/2"

TABLE 1(a)

Unit Size	Water Limited (+) Design Pressure	
	Nom. Sill Height	Max. (+) DP Allowed
Frame	1 1/2 1/2"	Table Notes 2
42	3 1/2"	+80.0 psf
43	3 1/2"	+80.0 psf
44	4 1/16"	+80.0 psf
45	4 1/2"	+80.0 psf

FIG. 1

DRY LENGTH

DOOR ASSEMBLIES INSTALLED WHERE THE OVERHANG (DRY LENGTH) IS EQUAL TO OR GREATER THAN THE OVERHANG HEIGHT IS EXEMPTED FROM WATER INFILTRATION RESISTANCE

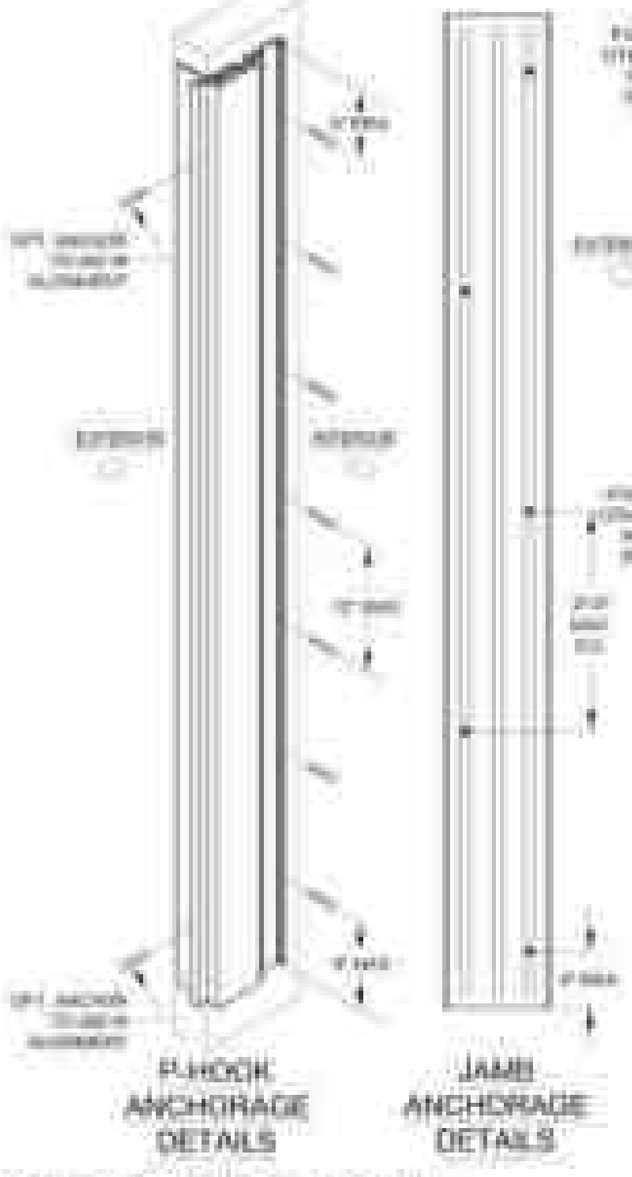
OVERHANG HEIGHT

IGT

INTERNATIONAL GLASS TECHNOLOGY

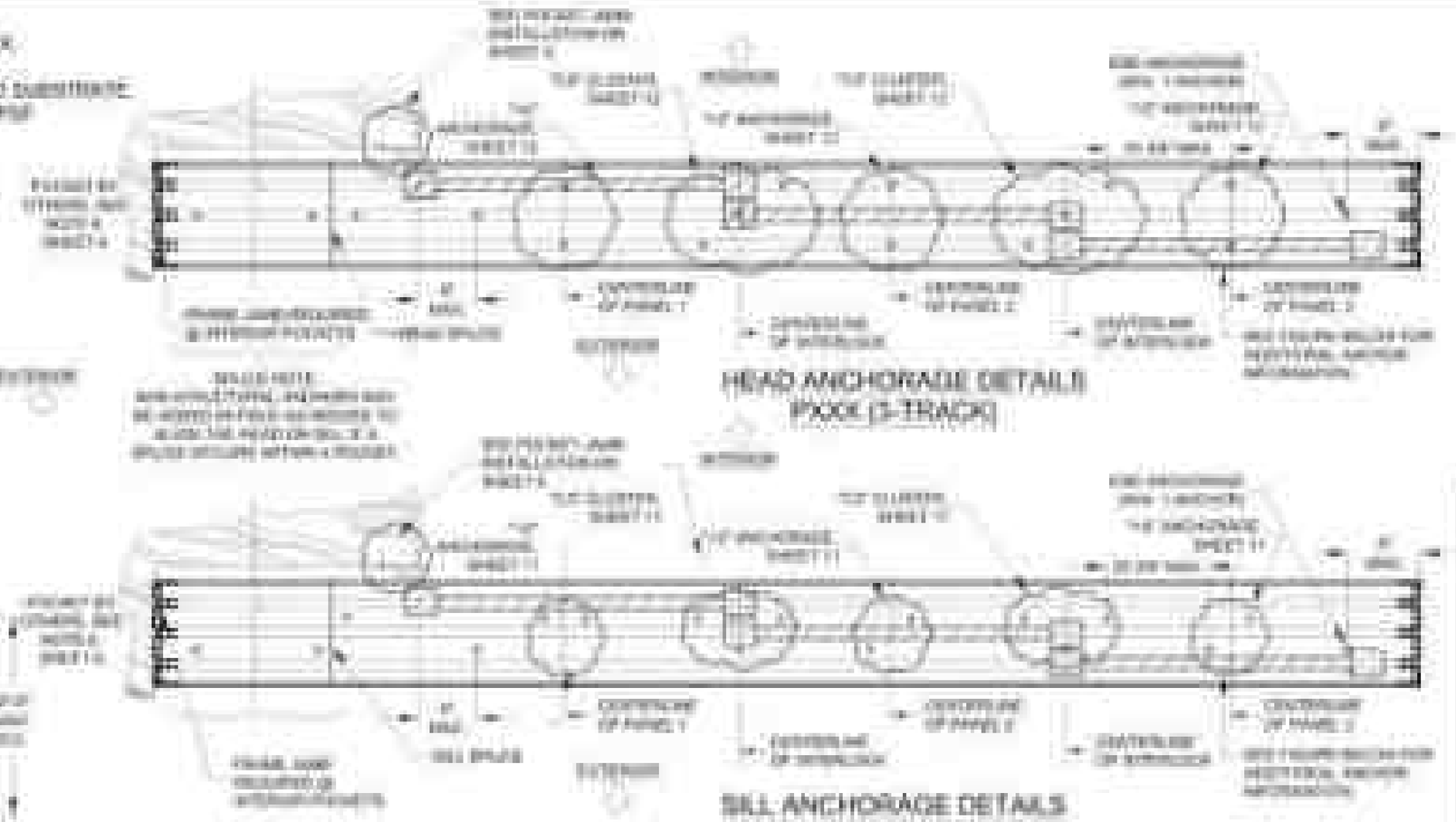
EXAMPLE

3-PANEL, 3-TRACK, STRAIGHT CONFIGURATION - PXXX
INTERIOR MOUNT PXXX(T) W/ 3 @ 40" NOM PANELS
LAMINATED GLAZING, WATCH'EM GROUP A IN WOOD SUBSTRATE
PROJECT DESIGN PRESSURE REQUIRED: +46.2/-58.6 PSF



P-HOOK ANCHORAGE DETAILS

JAMB ANCHORAGE DETAILS



HEAD ANCHORAGE DETAILS
PXXX (3-TRACK)

SILL ANCHORAGE DETAILS
PXXX (3-TRACK)

FOR PRODUCT REFERENCES, ALSO SEE:
A) SHEET 3 FOR ALLOWABLE CONFIGURATIONS AND EXACT LOCATIONS OF CROSS-SECTION DRAWINGS
B) SHEET 7 FOR SPECIFIC GLAZING PANELS
C) SHEET 11 FOR ALLOWABLE PANEL TYPES AND SALL NUMBERS
D) SHEETS 19 FOR EXTRUSION DRAWINGS
E) SHEET 25 FOR A BILL OF MATERIALS

1) KNOWING THE PRODUCT'S REQUIREMENTS, SCAN THROUGH TABLES 1 FOR A DESIGN PRESSURE THAT MEETS OR EXCEEDS THE REQUIREMENT OF +46.2/-58.6 AT A NOM. PANEL SIZE OF 84" x 84" FROM TABLE 1, SHEET 8. THE DESIGN PRESSURE IS +60/-60 WHICH EXCEEDS THE PROJECT DESIGN PRESSURE REQUIREMENTS.

FOR PXXX(T) INSTALLATION USING WAY ANCHOR IN GROUP A (SEE TABLE 4), TABLE 1 SHOWS ANCHOR REQUIREMENTS OF:

Fastener	Qty
#8 SS	3
1/4" SS	3

2) ANCHOR LOCATION DETAILS CAN BE FOUND ON:
HEAD CLUSTER ANCHORS: SHEET 12 FOR THE "C3" CLUSTER ANCHORS AT THE INTERLOCK
HEAD INTERMEDIATE ANCHORS: SHEET 12 FOR THE "I-2" ANCHORS AT THE MIDSPAN OF EACH PANEL
SILL CLUSTER ANCHORS: SHEET 13 FOR THE "C3" CLUSTER ANCHORS AT THE INTERLOCK
SILL INTERMEDIATE ANCHORS: SHEET 13 FOR THE "I-2 ANCHORS AT THE MIDSPAN OF EACH PANEL
JAMB: 5 ANCHORS, SHEET 14 FOR GMA LAYOUT
P-HOOK: 7 ANCHORS, SHEET 14 FOR GEMETRIC LAYOUT

3) INSTALLATION DETAILS INTO WOOD CAN BE FOUND ON:
HEAD & SILL: SHEET 5
JAMB: SHEET 6
P-HOOK: SHEET 7

END PANEL ANCHOR EXCEPTION



FOR SILL (SHOWN) AND HEAD, ANCHORS AT THE MIDPOINT OF END PANELS ARE ONLY REQUIRED IF THE O.C. DISTANCE TO THE NEXT ANCHOR CLUSTER IS OVER 25-1/8". OTHERWISE ANCHORS ARE NOT REQUIRED AS PER THE FIGURE ABOVE.

PGT

WHOLESALE DOOR & WINDOW MANUFACTURERS

PXXX, ULTIMATE GLAZING DOOR SERIES

3-TRACK SLIDING DOOR

ANCHORAGE DETAILS

DRAWING NO. 25-0111

SHEET 8 OF 25

REVISIONS

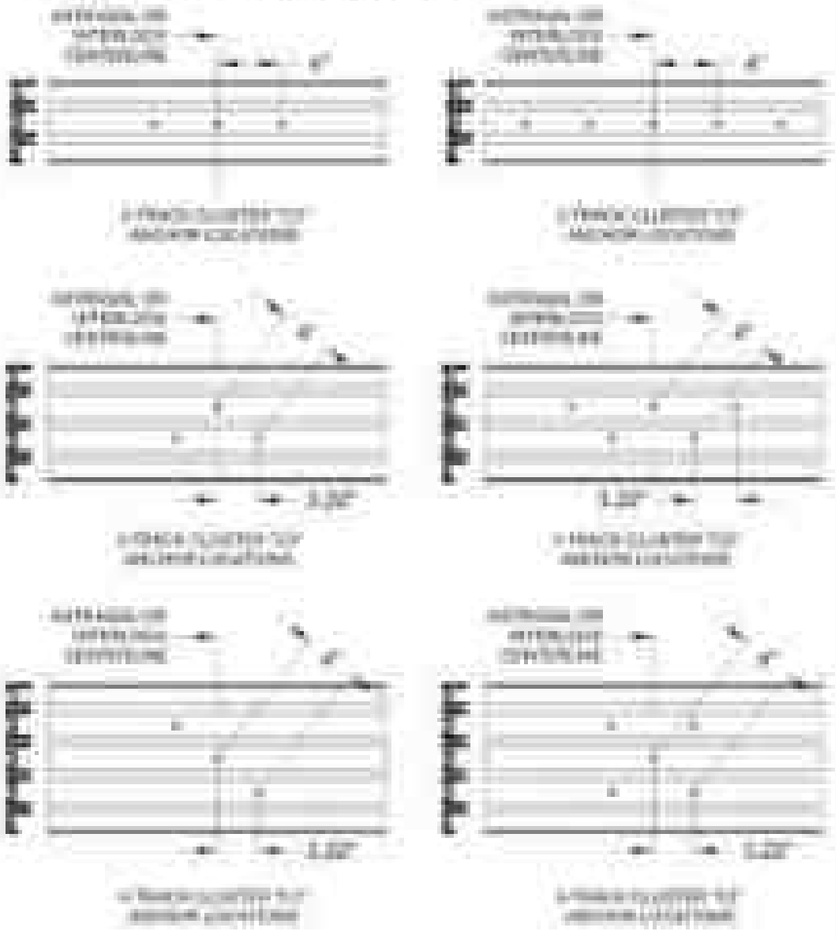
DATE

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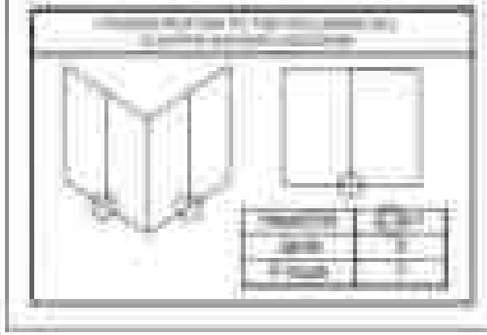
DESCRIPTION

STATE OF FLORIDA
REGISTERED PROFESSIONAL ENGINEER

SILL CLUSTER ANCHORS LAYOUT

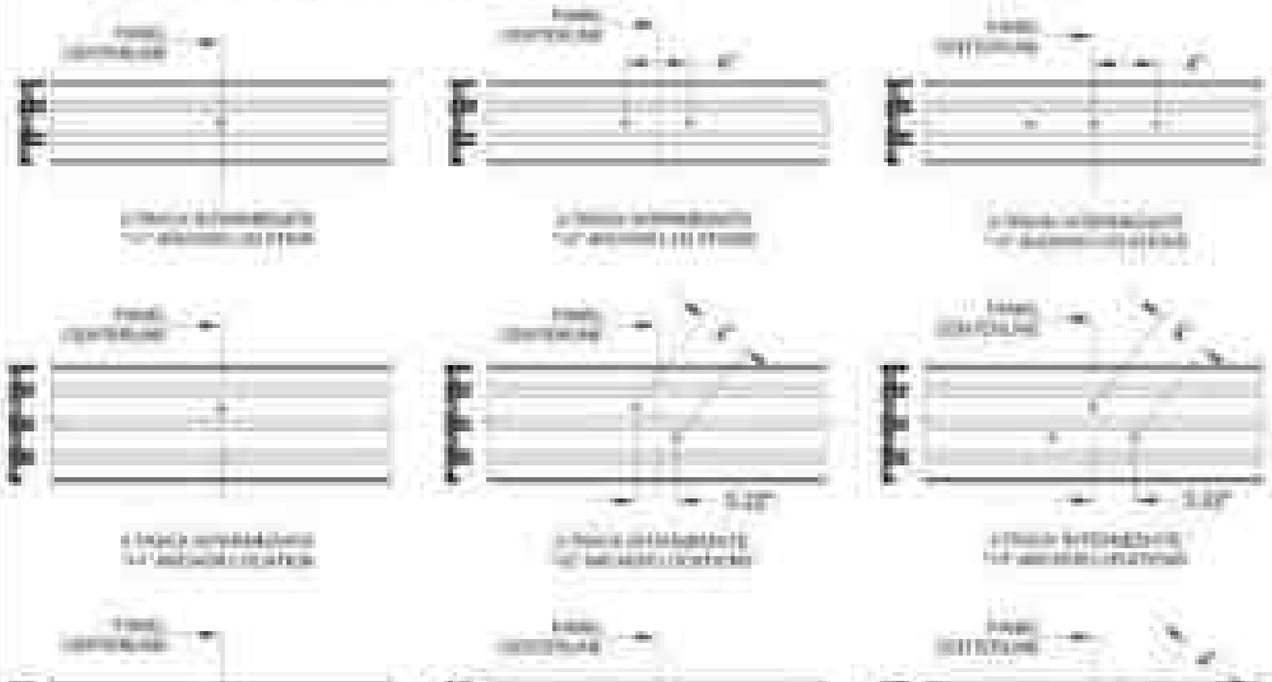


NOTES:
1) ALL DIMENSIONS SHOWN ARE BASED ON MINIMUM ALLOWED.
2) TRACK TO TRACK DISTANCE IS 2 7/8" FOR ALL SILLS.

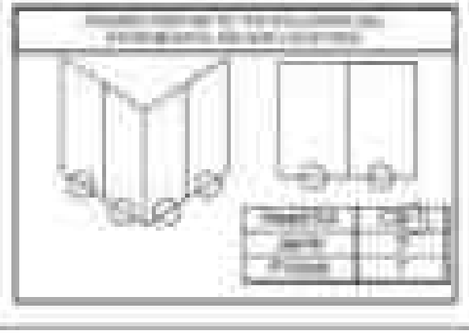




SILL "V" INTERMEDIATE ANCHORS LAYOUT



NOTES:
1) ALL DIMENSIONS SHOWN ARE BASED ON MINIMUM ALLOWED.
2) TRACK TO TRACK DISTANCE IS 2 7/8" FOR ALL SILLS.



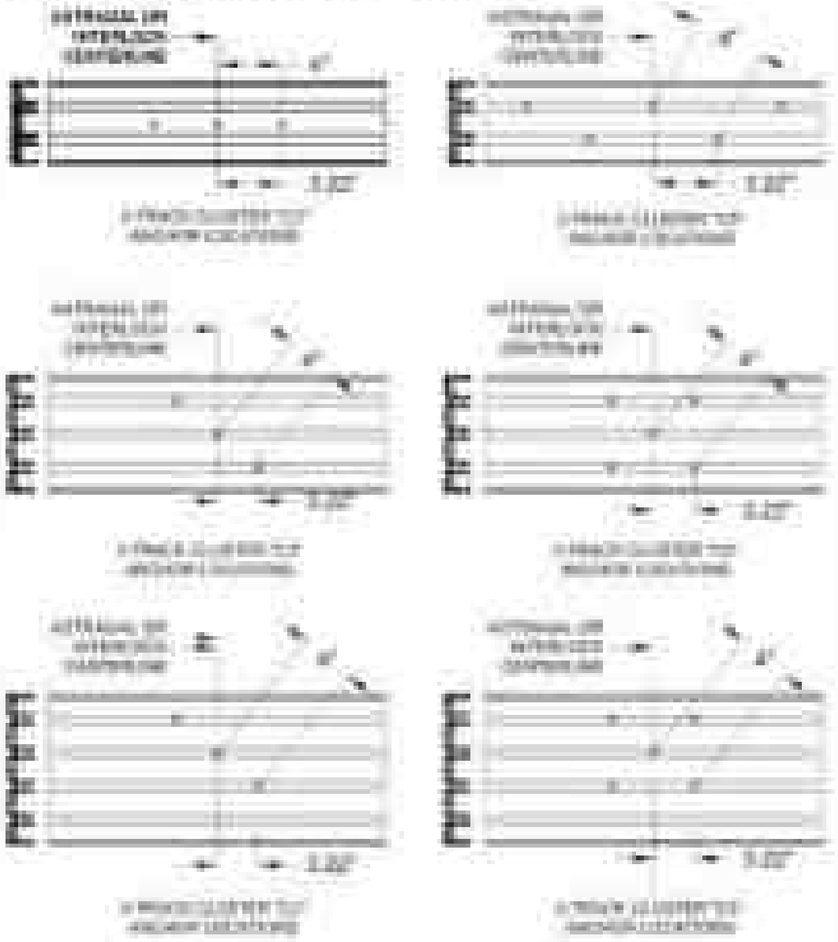


NO CHANGES THIS SHEET		
REVISION		
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
DATE		

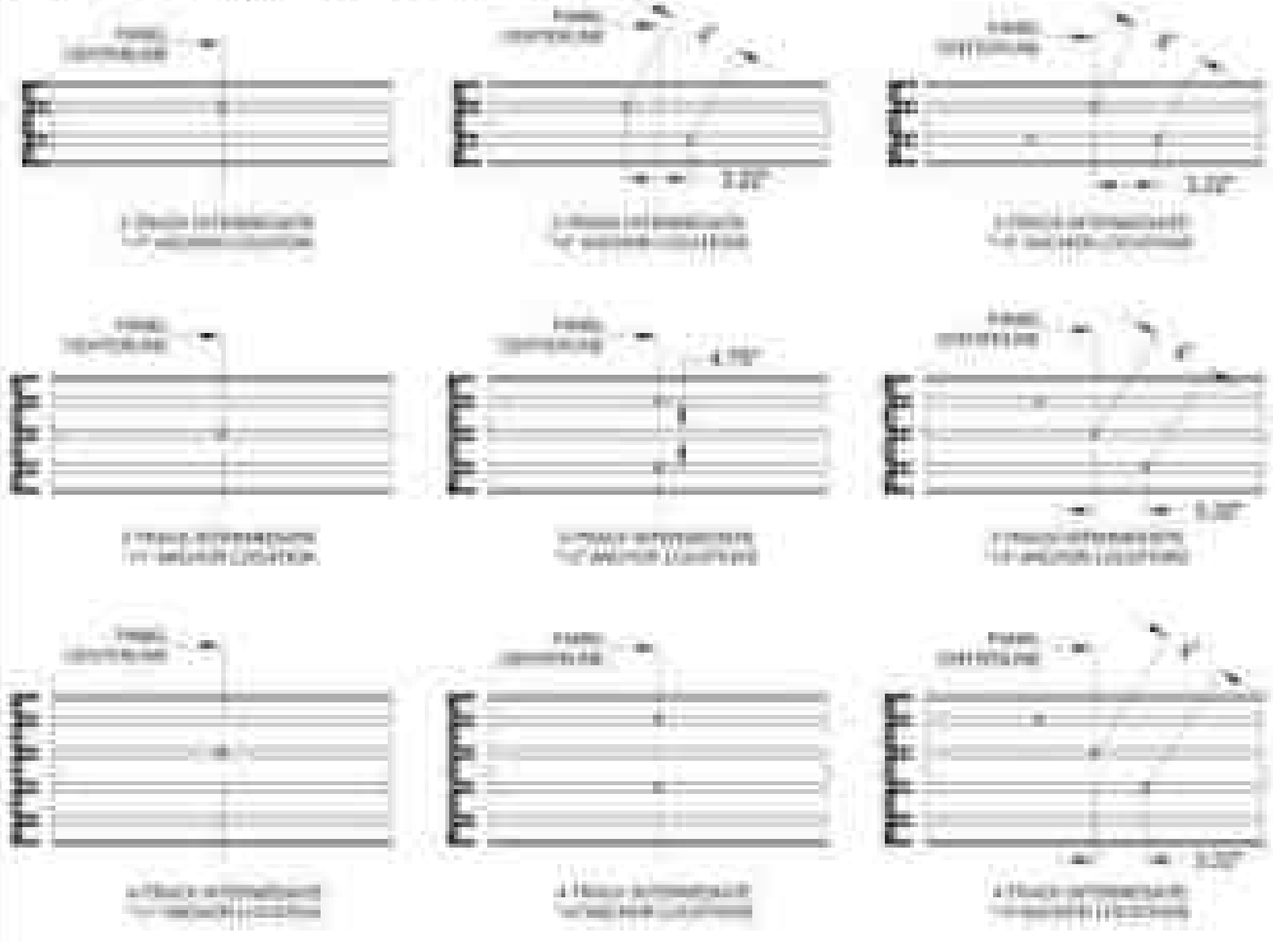
PGT

WINGUARD PVC SILLS

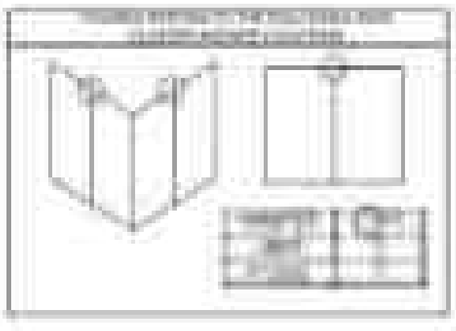
HEAD CLUSTER ANCHORS LAYOUT



HEAD "V" INTERMEDIATE ANCHORS LAYOUT

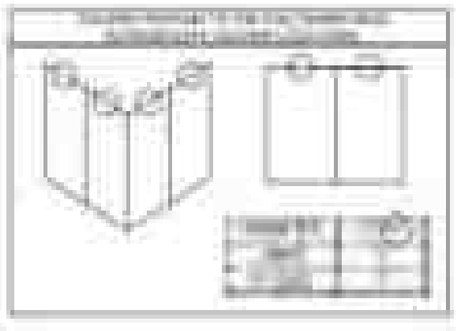


NOTES:
1) ALL DIMENSIONS SHOWN ARE BASED ON MINIMUM ALLOWED.
2) TRACK TO TRACK DISTANCE IS 2.375" FOR ALL HEADS.

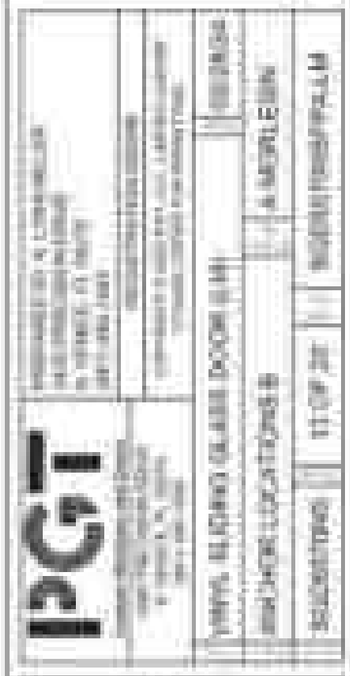




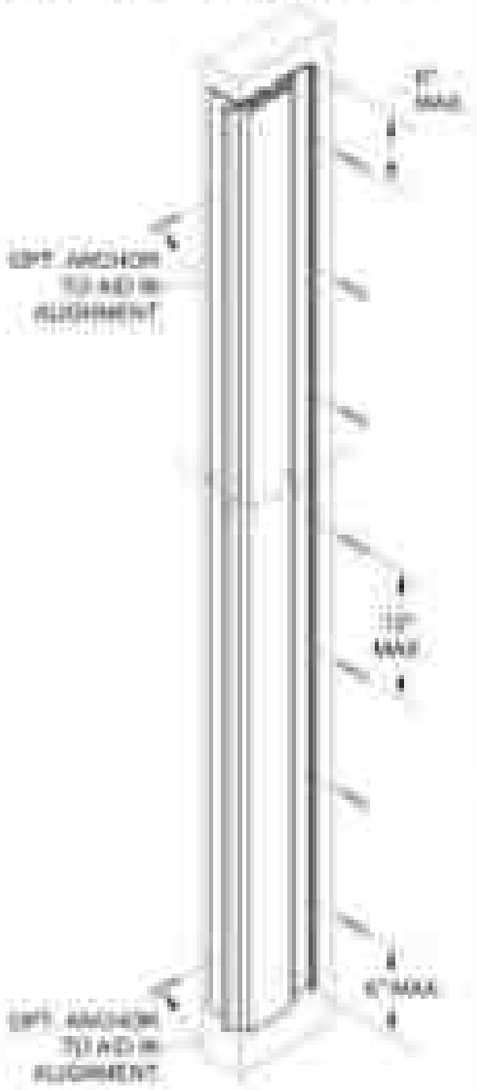
NOTES:
1) ALL DIMENSIONS SHOWN ARE BASED ON MINIMUM ALLOWED.
2) TRACK TO TRACK DISTANCE IS 2.375" FOR ALL HEADS.



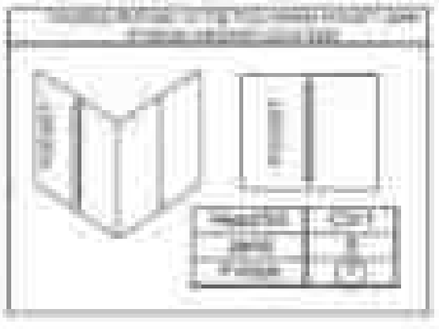




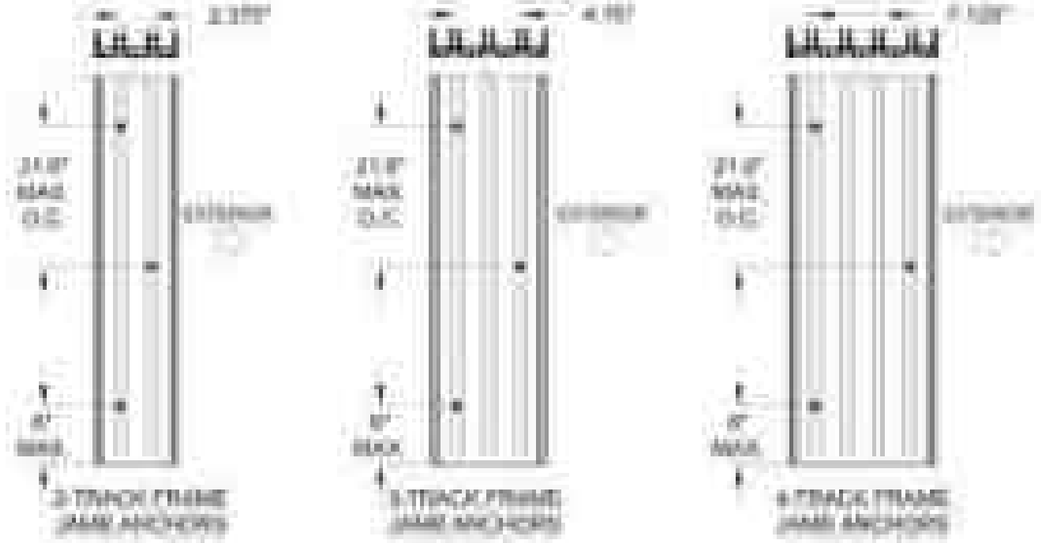
P-HOOK ANCHORS LAYOUT

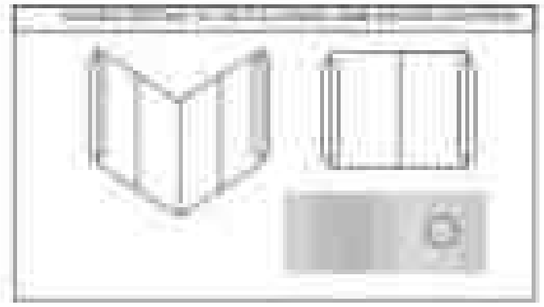


NOTES:
1) SEE TABLES 1 - 3 FOR EXACT QUANTITY OF ANCHORS REQUIRED IN THE P-HOOK.

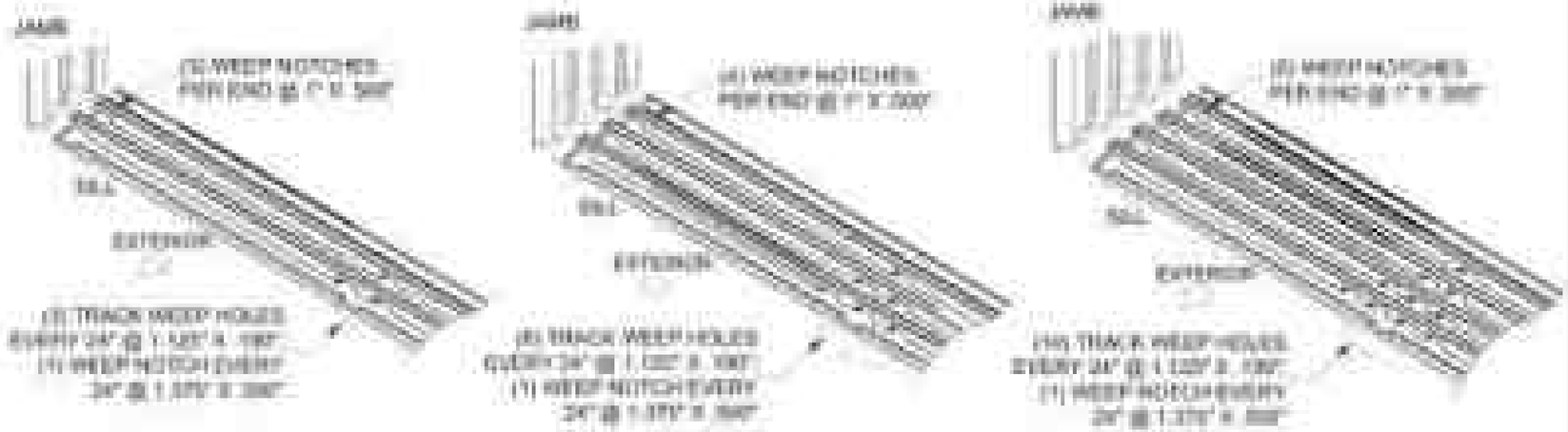


JAMB ANCHORS LAYOUT (PARTIAL VIEW)





NOTES:
1) STANDARD ANCHOR LOCATIONS SHOWN. FOR 3 AND 4-TRACK JAMBS, ANCHORS MAY BE LOCATED IN ADJACENT TRACKS (SIMILAR TO THE 2-TRACK JAMB) AS REQUIRED TO MEET MIN. EDGE DISTANCE CONSTRAINTS.

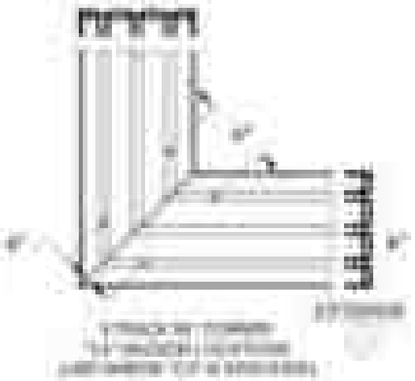


SILL WEEPHOLE LAYOUT (2, 3 & 4 TRACKS)

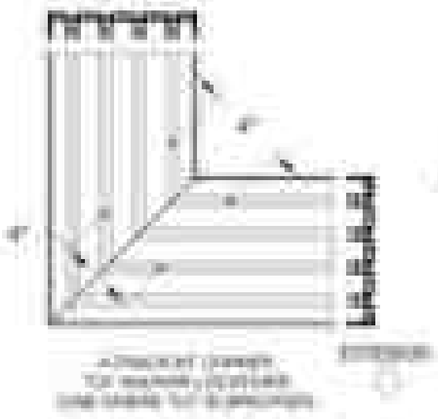
HEAD 90° CORNER CLUSTER ANCHORS LAYOUT:

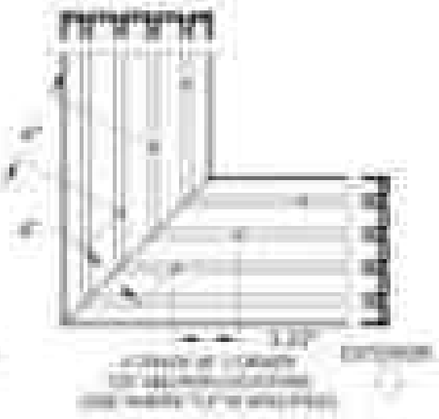




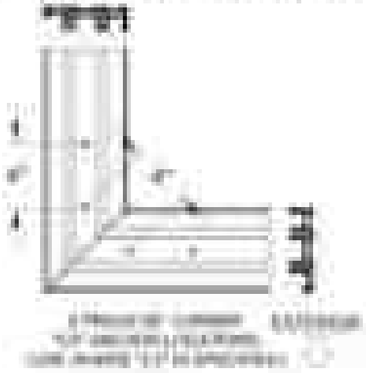


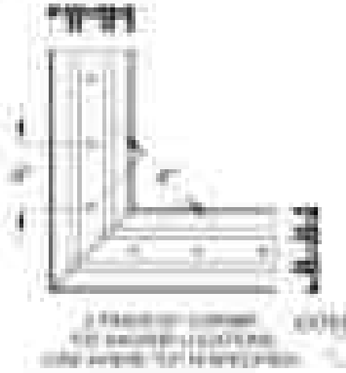


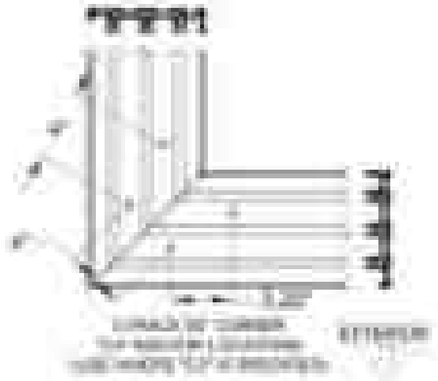


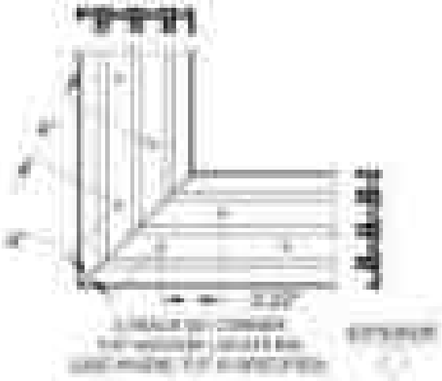


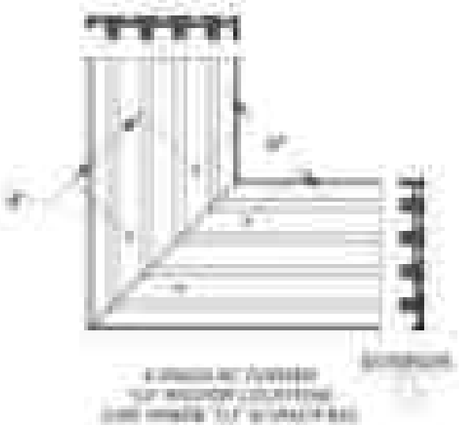
SILL 90° CORNER CLUSTER ANCHORS LAYOUT:

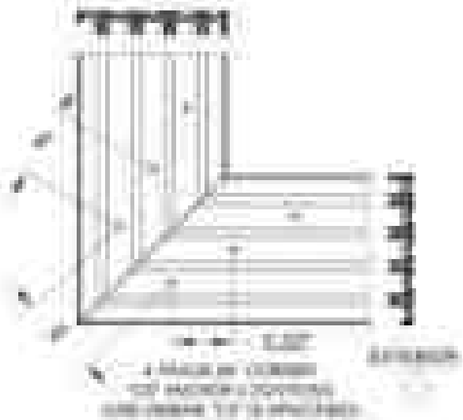












NOTES:

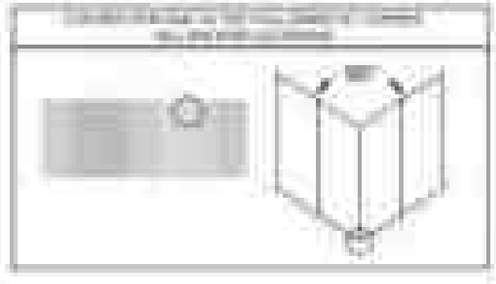
1) ALL DIMENSIONS SHOWN ARE BASED ON MINIMUM ALLOWED.

2) DETAILS DEPICT ANCHOR QUANTITY AND SPACING AND WOULD BE SIMILAR FOR OUTSIDE DRAWING AND INSIDE CORNER CONFIGURATIONS.

3) TRACK-TO-TRACK DISTANCE IS 6.375" FOR ALL HEADS AND SILLS.





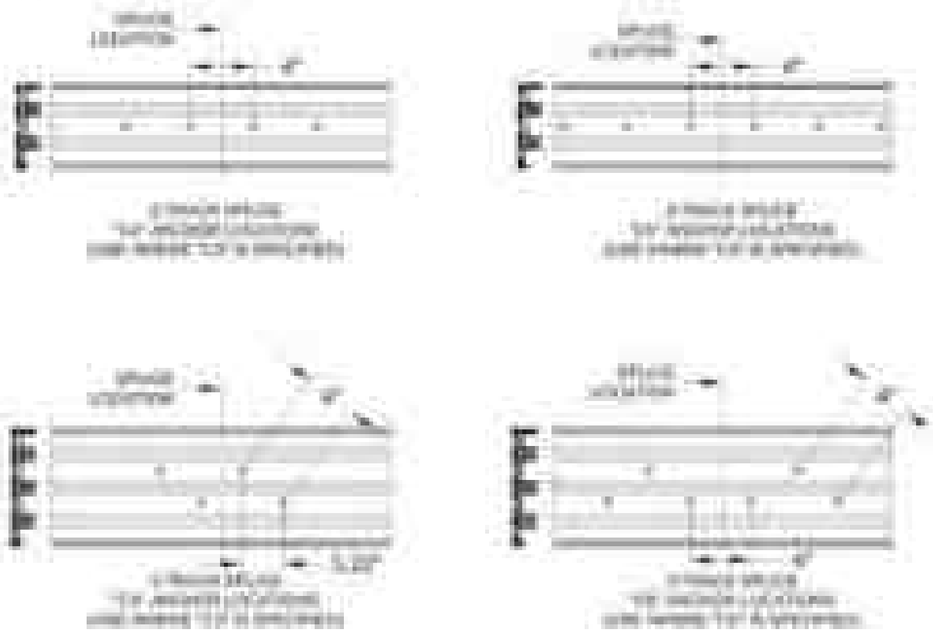


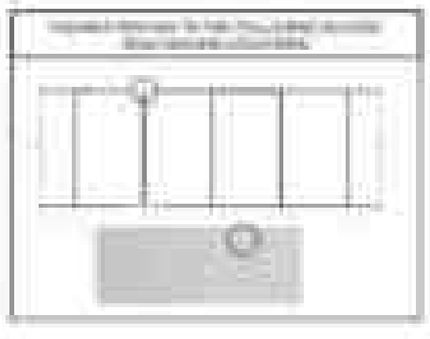


HEAD SPLICE ANCHORS @ INTERLOCK



SILL SPLICE ANCHORS @ INTERLOCK





NOTES:

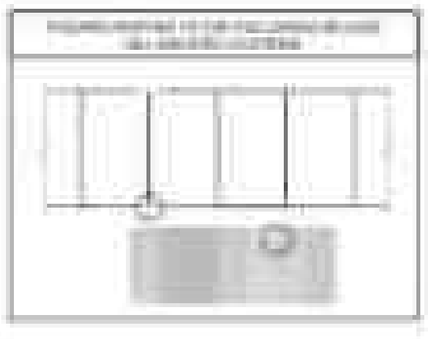
1) ALL DIMENSIONS SHOWN ARE BASED ON MINIMUM ALLOWED.

2) ABOVE FIGURES ARE FOR SPLICES OCCURRING AT THE INTRAIN OR INTERLOCK. FOR SPLICES OCCURRING INSIDE OF A POCKET, SEE THE EXAMPLE ON SHEET 10.

3) POCKET WALL OR CAVITY IS NOT PART OF THIS APPROVAL AND IS TO BE DESIGNED BY OTHERS AND REVIEWED BY THE AUTHORITY HAVING JURISDICTION.

4) TRACK TO TRACK DISTANCE IS 3.375" FOR ALL HEADS AND SILLS.





PGT



PANEL STILE TYPES			
EF			
F			
PP			
K			
L			
SM			

PANEL STILE TYPES			
B			
E			
P			
A			
CO			
C			

PANEL STILE TYPES			
RR			
R			
SO			
SI			

PANEL STILE TYPES			
D			
M			
JO			
JI			

PANEL STILE TYPES			
LR			
TO			
UO			

PANEL STILE TYPES			
N			
TI			
UI			
V			

PANEL STILE TYPES			
AT			
TA			
CS			
SC			
AS			
SA			
CF			
FC			
CS			
TC			

SCREEN PANEL TYPES			
C			
M			
J			
SD			
A			
U			
DS			



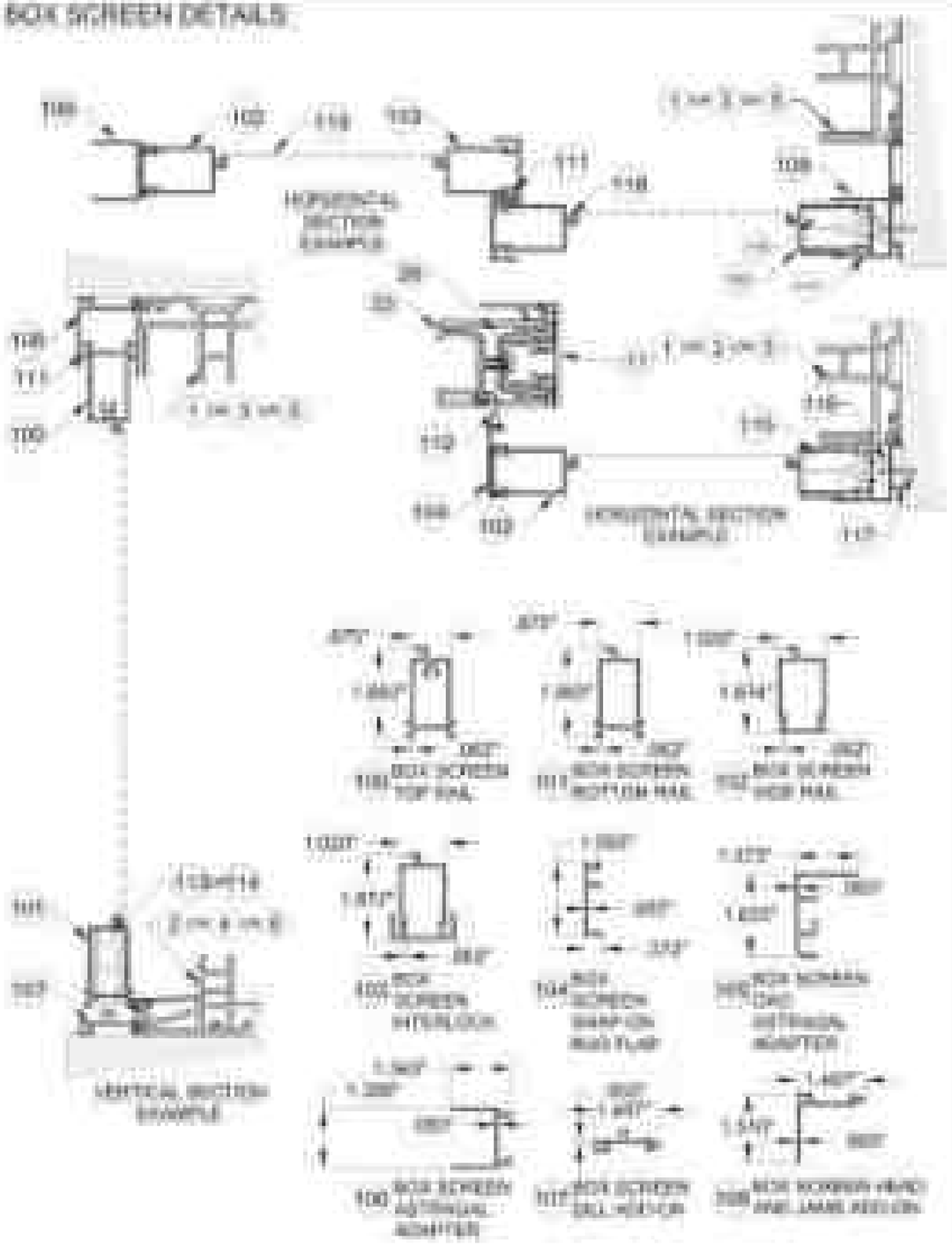
PANEL TYPE "F" SHOWN

PANEL NOTES:

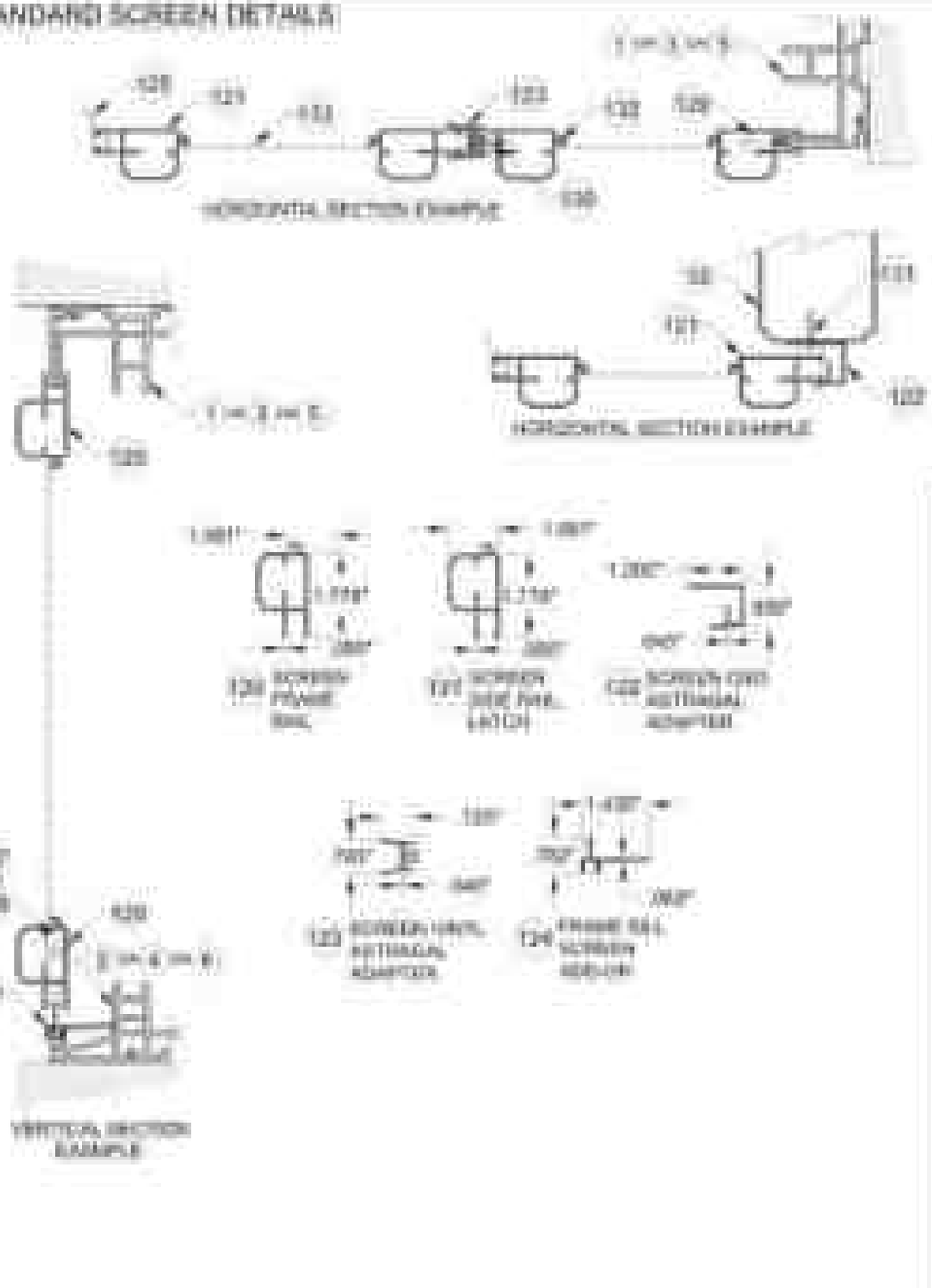
1) SEE OPTIMIZATION TABLES 1 - 3, SHEETS 8-10 FOR PANEL SIZES & DESIGN PRESSURE.
2) PANEL TYPES NOT SHOWN ARE NOT REQUIRED FOR ANY CONFIGURATIONS AND ARE NOT AVAILABLE.
3) MAXIMUM NOMINAL PANEL WIDTH FOR ALL PANEL CONFIGURATIONS IS 60".

PGT

BOX SCREEN DETAILS



STANDARD SCREEN DETAILS



PCI

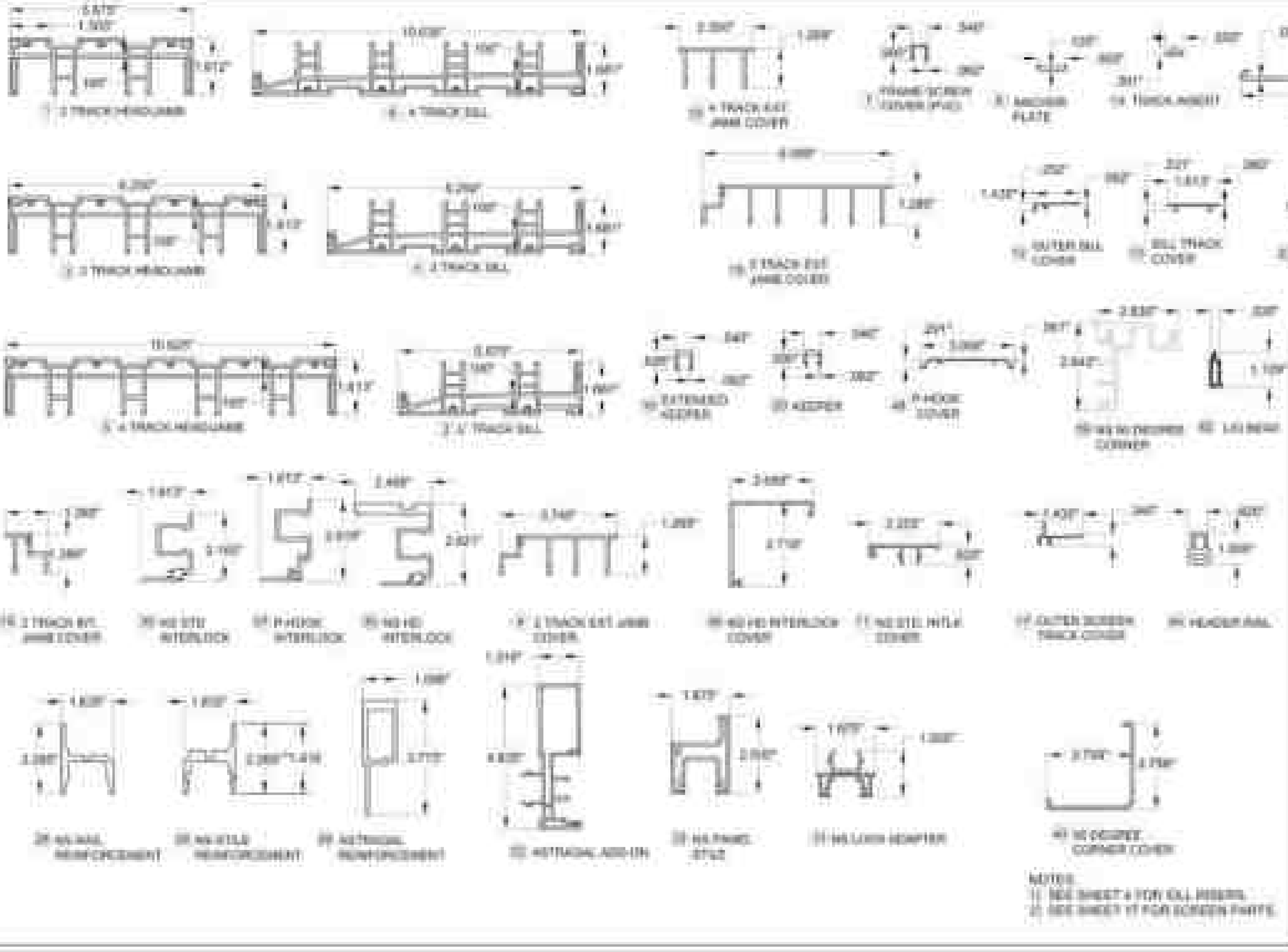

NOTES:
1) SEE SHEET 4 FOR SILL RISERS.
2) SEE SHEET 17 FOR SCREEN PARTS.
PGT

TABLE C1

#	Part #	Description	Material
1	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]