QUANTAPANEL®
INSULATING GLASS SYSTEM

Because you don't need brand-new windows.
Your windows need brand-new technology.

The QUANTAPANEL® Insulating Glass System (IGS) is an advanced, modern day version of what was once known as a storm window, which, when installed over an existing window, delivers equivalent to superior energy savings as that delivered by a "state-of-the-art" (i.e., Energy Star) replacement window. QUANTA offers two basic product lines: the **QUANTAPANEL® 500 Series** (exterior installation – designed primarily for single family residences and multi-family dwellings with less than 5 stories); and the **QUANTAPANEL® 600 Series** (interior installation – designed for historic structures and high rise multi-family buildings).

The functionality of each product is designed to mirror the functionality of the underlying prime window (i.e., Double Hung Style for DH windows, Horizontal Slider for HS windows, etc.). These products have been installed on numerous private and public buildings.

QUANTAPANEL® is a registered trademark of QUANTA Technologies, Inc.

Projected Energy Savings: Baltimore, MD

RESFEN[1] modeling was performed for two home types: (a) an older, SMALLER, 1800 ft^2 single story home with little or no insulation, and (b) a LARGER, newer 2300 ft^2 2-story home possessing moderate insulation. For each home type, four (4) base cases were created to determine the energy savings impact of Energy Star Replacement Windows and QUANTAPANEL® IGS units versus the following existing prime window types: single pane wood, double pane wood, single pane metal, and double pane metal.

The table below summarizes the calculated energy savings delivered by each retrofit option (Replacement Energy Star Windows, Exterior QUANTAPANELs and Interior QUANTAPANELs). **NOTE: The % Savings represents the impact of each option on the household's annual SPACE HEATING and COOLING Energy Consumption (Typically 50% of a household's utility expenses) - Baseline Energy Consumption is that due to the existing prime windows.**

UNDERLYING PRIME WINDOW	Case	SMALLER HOME (%)Savings	LARGER HOME (%)Savings
Single glazing, wood	QP500 EXT[2]	18.8%	32.2%
	QP600 INT[3]	19.9%	33.7%
	Estar REPL[4]	17.5%	32.5%
Double glazing, wood	QP500 EXT	8.8%	17.3%
	QP600 INT	9.6%	19.0%
	Estar REPL	4.5%	12.4%
Single glazing, metal	QP500 EXT	24.0%	38.9%
	QP600 INT	24.8%	40.0%
	Estar REPL	22.2%	38.8%
Double glazing, metal	QP500 EXT	14.1%	25.7%
	QP600 INT	14.9%	27.1%
	Estar REPL	9.3%	20.8%

Note that in all cases, the performance of QUANTAPANEL IGS is equivalent or superior to that of an Energy Star® replacement window. In addition to energy savings, a substantial improvement in occupant comfort is also realized.

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[1] RESFEN6 *"Program for Calculating the Heating and Cooling Energy Use of Windows in Residential Buildings"*, Windows and Daylighting Group, Building Technologies Department, Lawrence Berkeley National Laboratory, copyright 1997-2012. Developed under contract to U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Contract No. DE-AC03-76SF00098.

Link to RESFEN6 software on LBNL site: http://windows.lbl.gov/software/resfen/resfen.html

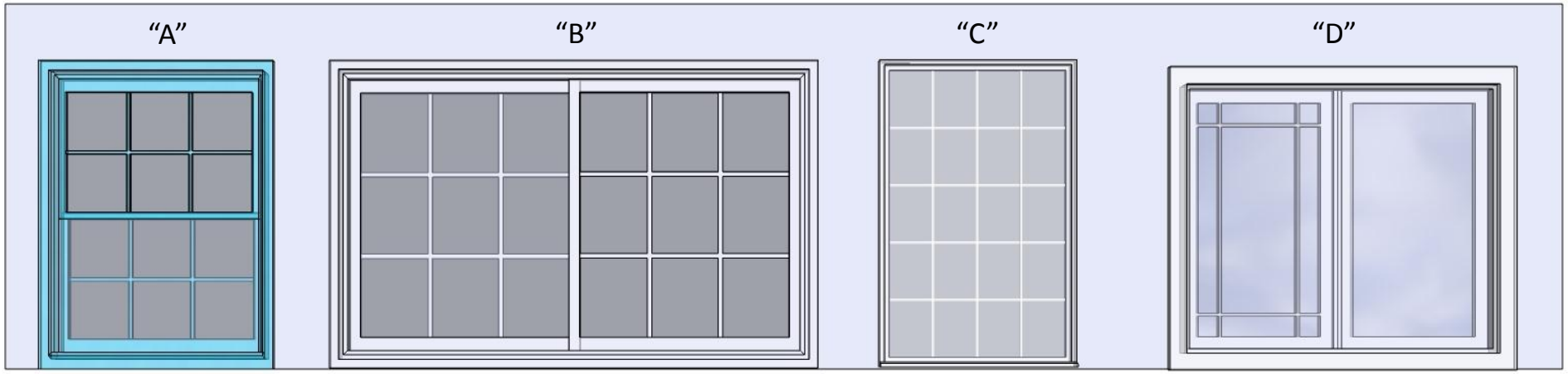
Link to RESFEN6 documentation and program description: http://windows.lbl.gov/software/resfen/6/RESFEN60UserManual.pdf

Papers employing RESFEN6 for Energy Star Windows:
Arasteh et. al., "RESFEN6 Modeling Assumptions for the 2008 ENERGY STAR Window Analysis", Lawrence Berkeley National Laboratory under contract to U.S. Department of Energy, Contract No. DE-AC03-76SF00098. April 2008. http://windows.lbl.gov/estar2008/

Homan et al., "**Technical Support for ENERGY STAR Windows Version 6.0 Specification Revision**", Lawrence Berkeley National Laboratory and D&R International, July 1, 2012..

[2] QUANTAPANEL 500 Series EXTERIOR installed IGS.
[3] QUANTAPANEL 600 Series INTERIOR installed IGS.
[4] EnergyStar® Replacement window (U = 0.30, SHGC = 0.22).

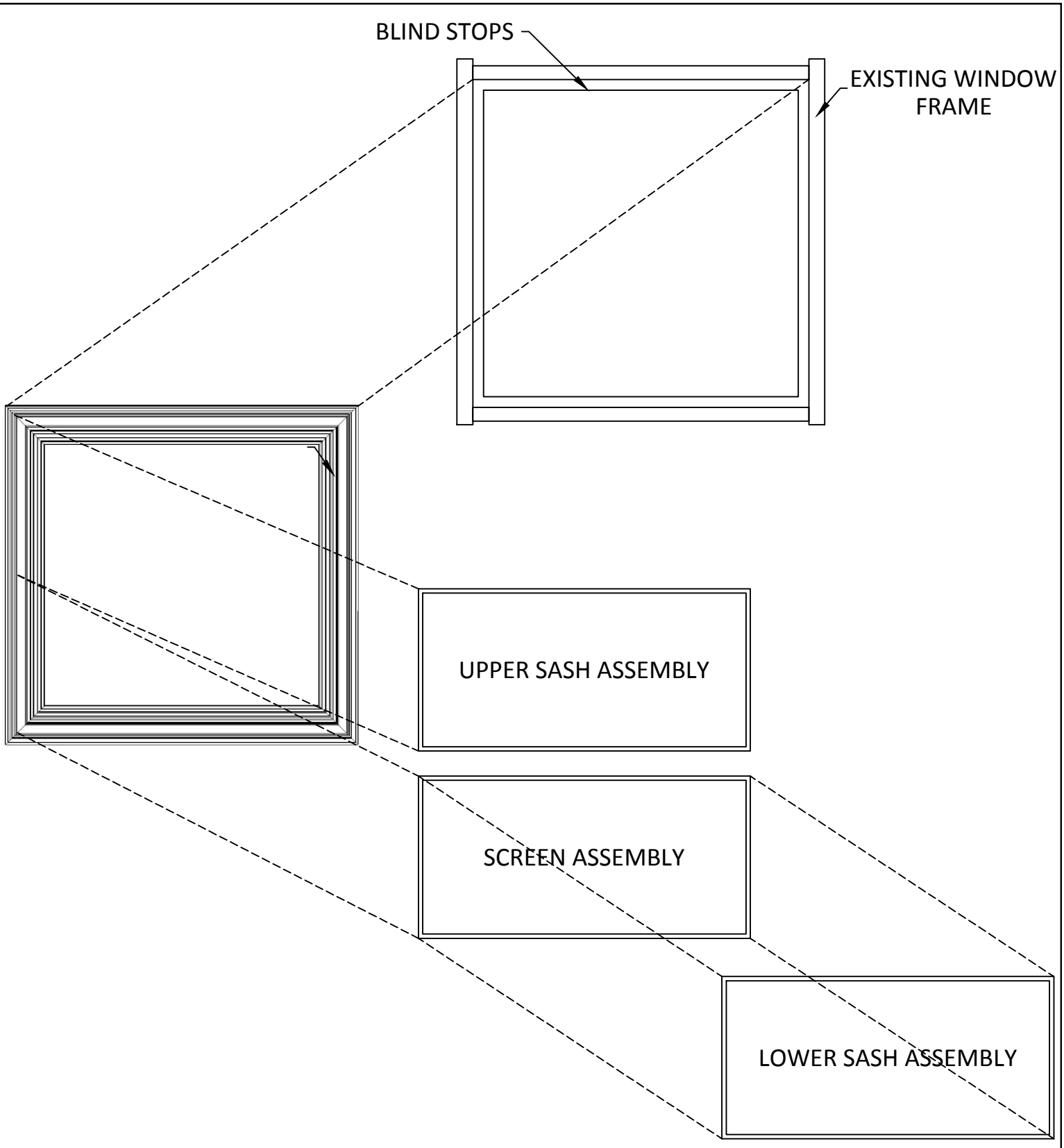
QUANTAPANEL® IGS *Typical Window Configuration*



Double Hung Prime Window | Horizontal Slider Prime Window | Fixed Picture Window | Casement Prime Window

APPLICATION	UNIT DESIGNATION	REF DOC	DIMEN/QUANTITY
"A" (typical)	QUANTAPANEL® 504-DH IGS	QP 504DH_DWG	As specified; this unit installs on the exterior of operable, vertically sliding (double or single hung) windows.
"B" (typical)	QUANTAPANEL® 506-SL IGS	QP 506SL_DWG	As specified; this unit installs on the exterior of operable, horizontally sliding windows.
"C" (typical)	QUANTAPANEL® 502-PW IGS	QP 502PW_DWG	As specified; thus unit installs on the exterior of non-operable fixed (picture) windows.
"D" (typical)	QUANTAPANEL® 608-JP IGS	QP 602JP(6201CONFIG)	As specified; this unit installs on the exterior of the sash of operable casement windows.

QUANTAPANEL® INSULATING GLASS SYSTEM



QUANTAPANEL®

605-DH INSULATING GLASS SYSTEM

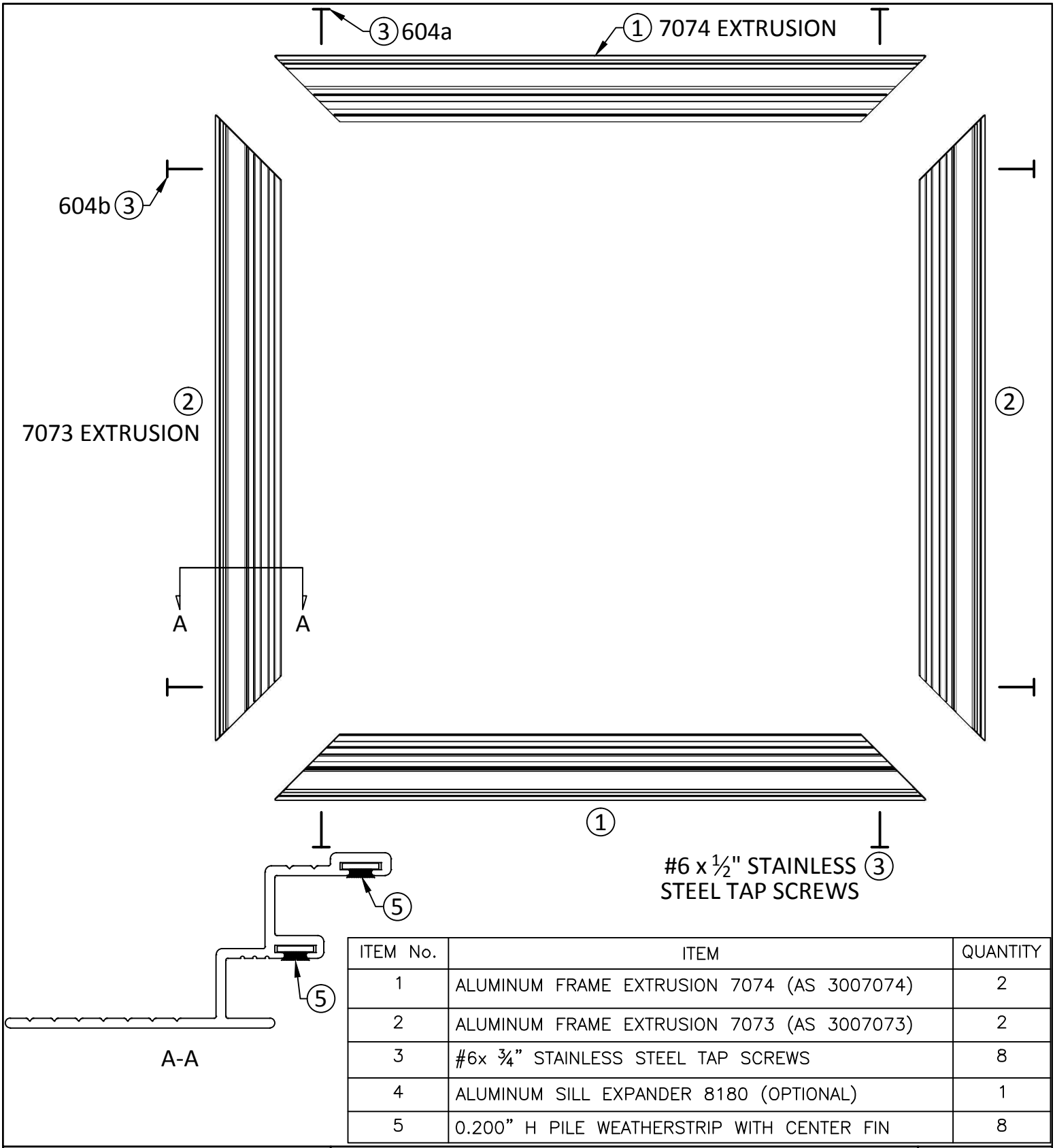
FULL ASSEMBLY

NOTES:

DATE

SCALE

DRAWN BY



ITEM No.	ITEM	QUANTITY
1	ALUMINUM FRAME EXTRUSION 7074 (AS 3007074)	2
2	ALUMINUM FRAME EXTRUSION 7073 (AS 3007073)	2
3	#6x ¾" STAINLESS STEEL TAP SCREWS	8
4	ALUMINUM SILL EXPANDER 8180 (OPTIONAL)	1
5	0.200" H PILE WEATHERSTRIP WITH CENTER FIN	8

QUANTAPANEL®

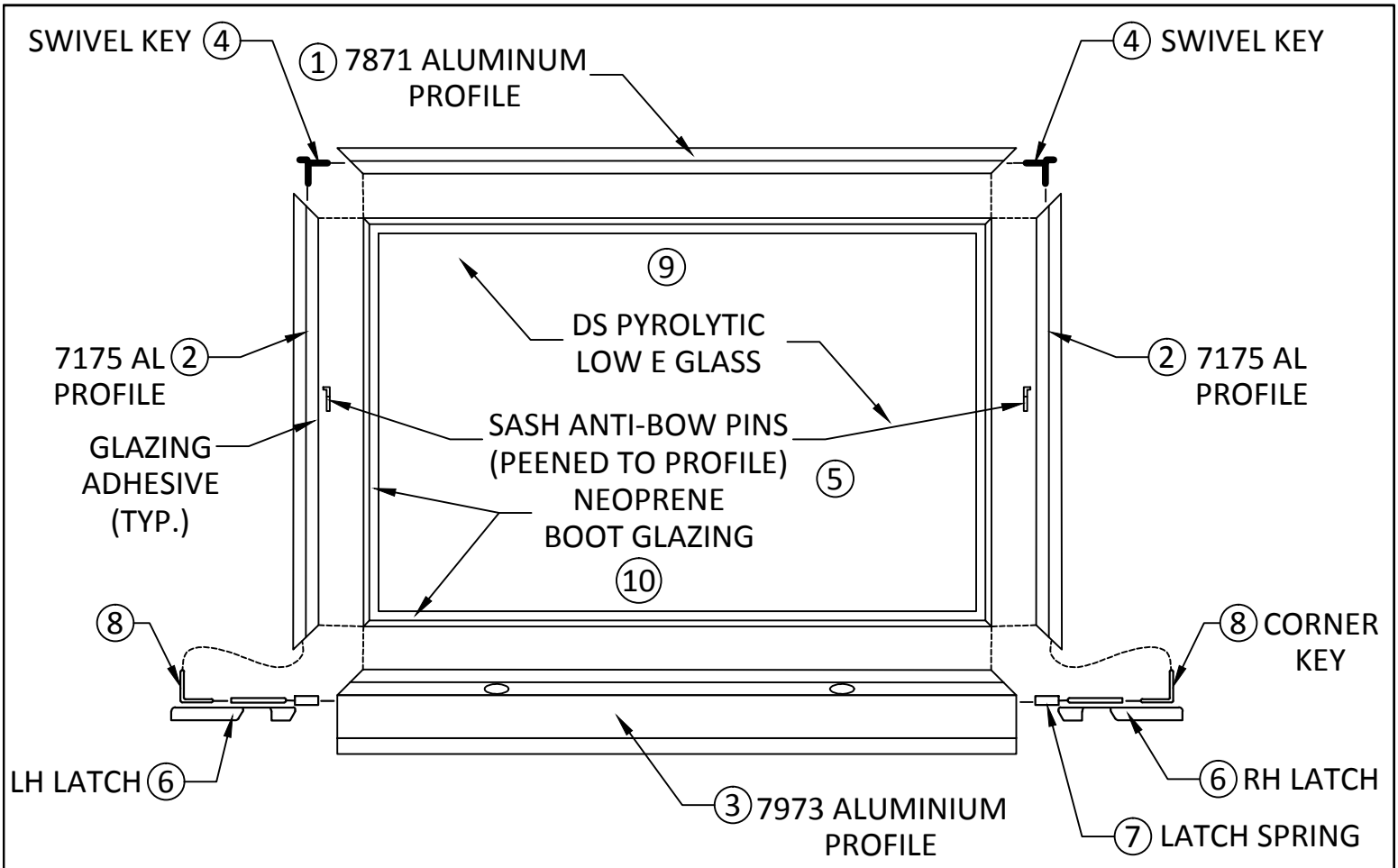
504-DH INSULATING GLASS SYSTEM
FRAME ASSEMBLY

NOTES:

DATE

SCALE

DRAWN BY



UPPER SASH ASSEMBLY

ITEM No.	ITEM	QUANTITY
1	ALUMINUM SASH EXTRUSION 7871 (AS 3007871)	1
2	ALUMINUM SASH EXTRUSION 7175 (AS 3007175)	2
3	ALUMINUM SASH EXTRUSION 7973 (AS 3007973)	1
4	SWIVEL KEY	2
5	SASH ANTI–BOW PINS	2
6	LATCHES (1 RH, 1 LH)	2
7	LATCH SPRINGS	2
8	CORNER KEY	2
9	DS PYROLYTIC LOW E GLASS	1
10	NEOPRENE BOOT GLAZING	4

QUANTAPANEL®

504-DH INSULATING GLASS SYSTEM

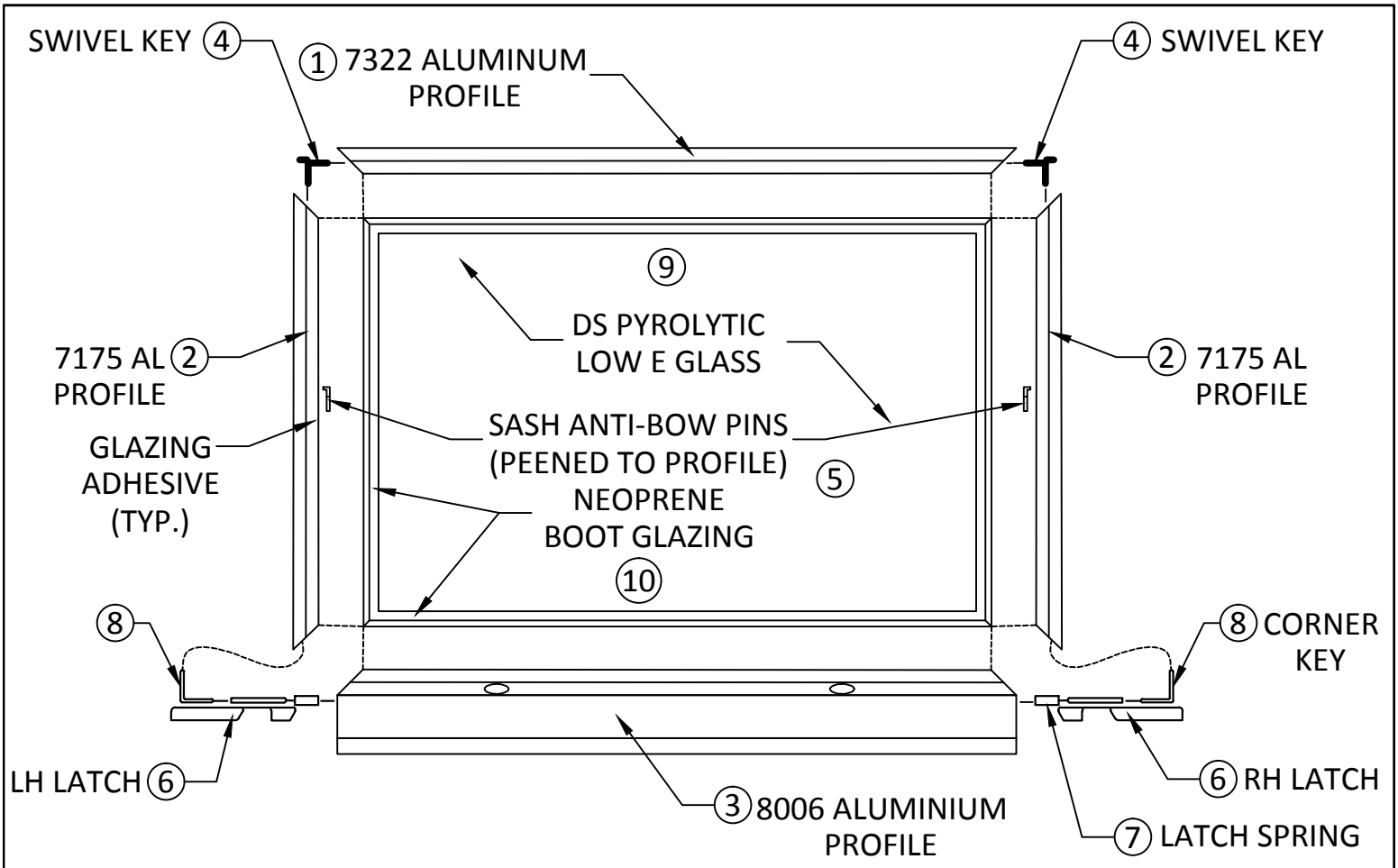
UPPER SASH ASSEMBLY

NOTES:

DATE

SCALE

DRAWN BY



LOWER SASH ASSEMBLY

ITEM No.	ITEM	QUANTITY
1	ALUMINUM SASH EXTRUSION 7322 (AS 3007322)	1
2	ALUMINUM SASH EXTRUSION 7175 (AS 3007175)	2
3	ALUMINUM SASH EXTRUSION 8006 (AS 3008006)	1
4	SWIVEL KEY	2
5	SASH ANTI–BOW PINS	2
6	LATCHES (1 RH, 1 LH)	2
7	LATCH SPRINGS	2
8	CORNER KEY	2
9	DS PYROLYTIC LOW E GLASS	1
10	NEOPRENE BOOT GLAZING	4

QUANTAPANEL®

504-DH INSULATING GLASS SYSTEM

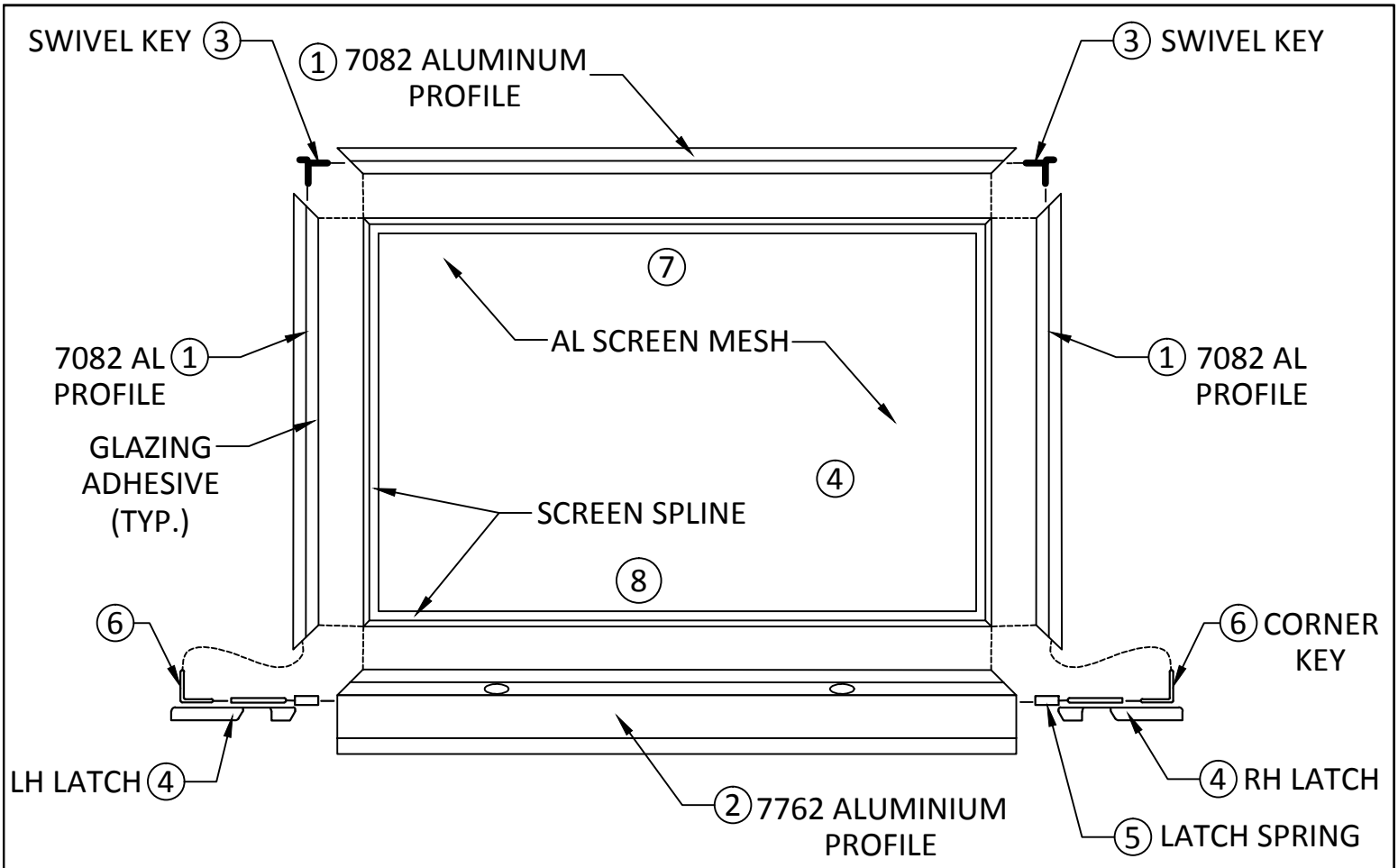
LOWER SASH ASSEMBLY

NOTES:

DATE

SCALE

DRAWN BY



SCREEN SASH ASSEMBLY

ITEM No.	ITEM	QUANTITY
1	ALUMINUM SASH EXTRUSION 7082 (AS 3007082)	3
2	ALUMINUM SASH EXTRUSION 7762 (AS 64498)	1
3	SWIVEL KEY	2
4	LATCHES (1 RH, 1 LH)	2
5	LATCH SPRINGS	2
6	CORNER KEY	2
7	AL SCREEN MESH	1
8	SCREEN SPLINE	1

QUANTAPANEL®

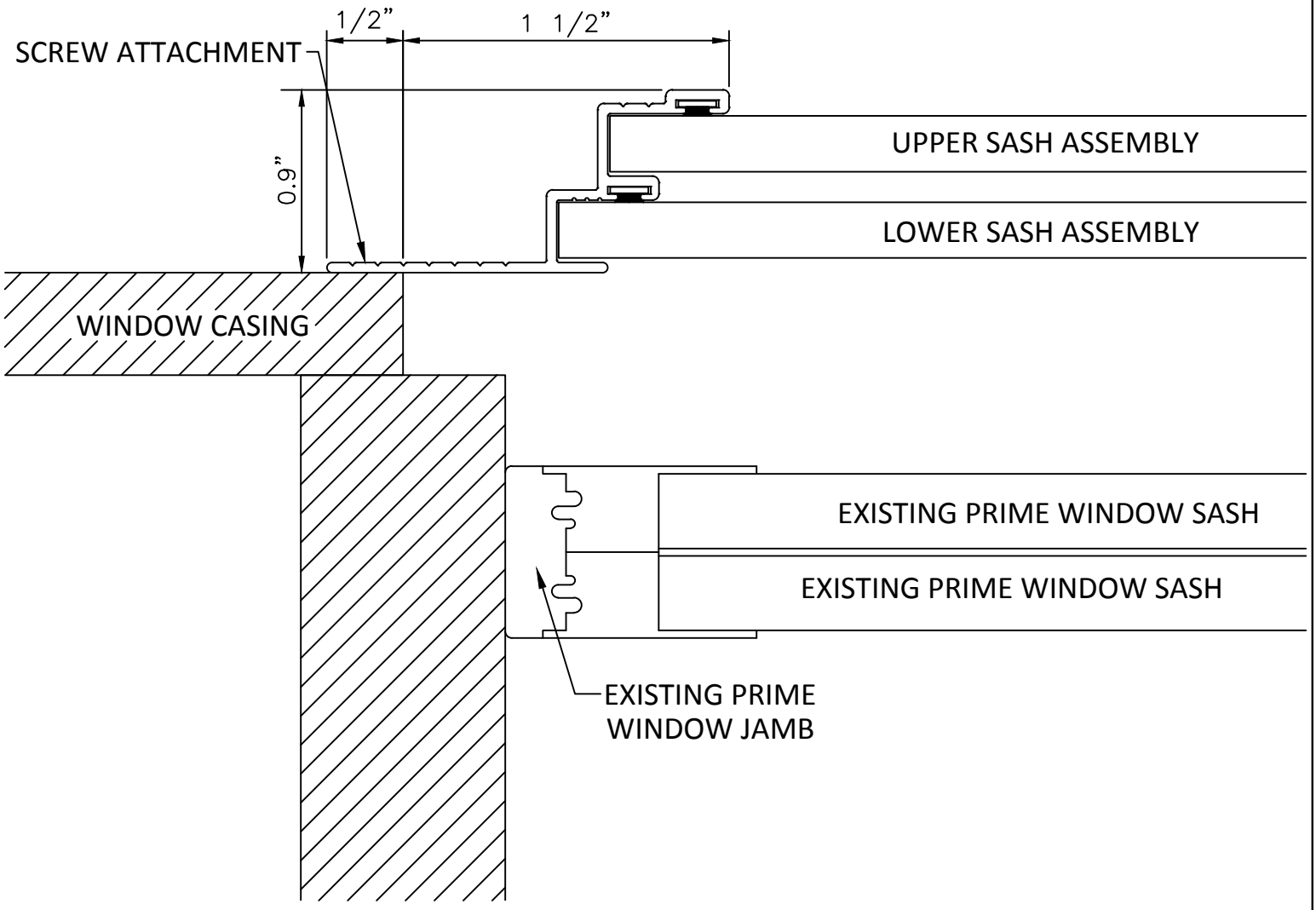
504-DH INSULATING GLASS SYSTEM
SCREEN ASSEMBLY

NOTES:

DATE

SCALE

DRAWN BY



OVERLAP INSTALLATION

QUANTAPANEL®

504-DH INSULATING GLASS SYSTEM

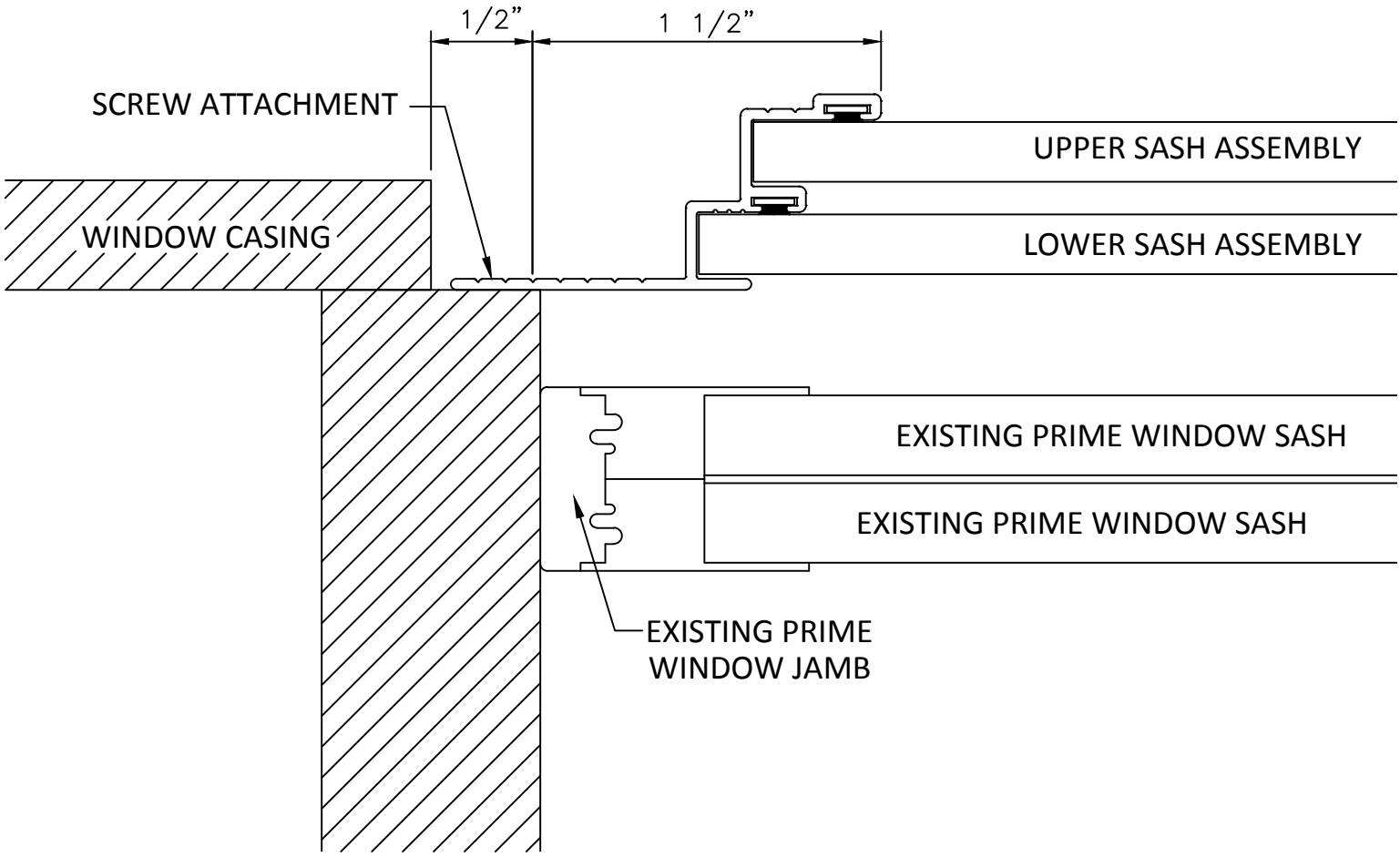
DETAIL - INSTALLED

NOTES:

DATE

SCALE

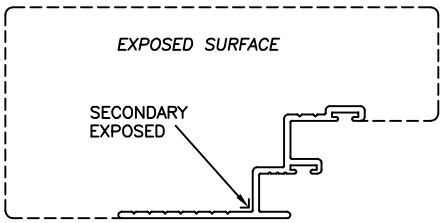
DRAWN BY



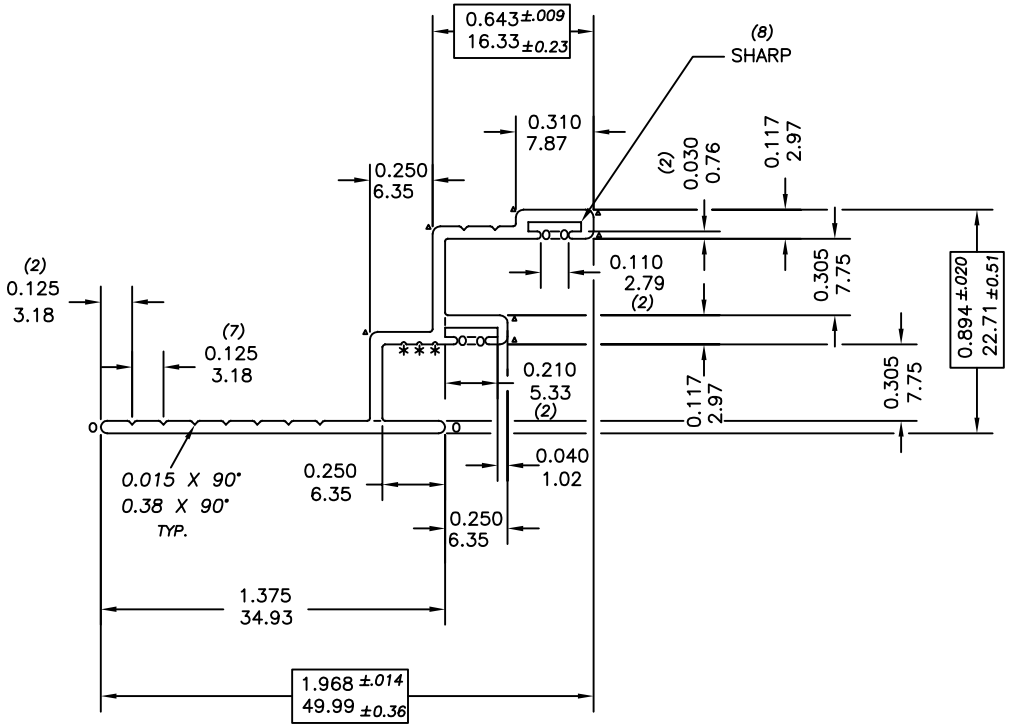
BLIND STOP INSTALLATION

QUANTAPANEL®	NOTES:	DATE
		SCALE
504-DH INSULATING GLASS SYSTEM DETAIL - INSTALLED		DRAWN BY

CUSTOMER	PART NO.	DIE NO.	DASH
TRI–STATE	839902	AS–3007073	1
DESCRIPTION: 2–T SIDES	TARRIF# ———	PROPOSAL# –	
SAPA: 5675 Kennedy Road Mississauga, Ontario L4Z 2H9	DATE / SYM / REVISION		



ACTUAL SIZE



sapa:		UNSPECIFIED WALL THICKNESS	0.050(1.27) ±0.006(0.15)	
EST. AREA 0.173 IN² 112 MM²		OUT PER. – IN – MM		
EST. WT. 0.208 LBS/FT. 0.309 KG/M		FACTOR 35		
EST. PER. 7.313 IN 186 MM		C.C.D. 2.144 IN 54 MM		
DWN BY NICK	ALLOY 6063–T5	SCALE 2:1	DATE 5–20–10	
ALL CORNERS .016"R (0.41mm) R UNLESS OTHERWISE NOTED.		STANDARD ALUMINUM ASSOCIATION TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED		

CUSTOMER'S SUPPLIED CAD FILE

UNMARKED RADII = RADIUS TO SUIT
BREAK CORNERS = 0.000 (0.00) R.
(o) = FULL R.(6)
(▲) = 0.031(0.79) R.(7)

(*) = 0.010(0.25) R. X 0.010(0.25)D. SAPA I.D. MARKS

QUANTAPANEL
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QUANTAPANEL 504-DH
(Wynnewood, PA)

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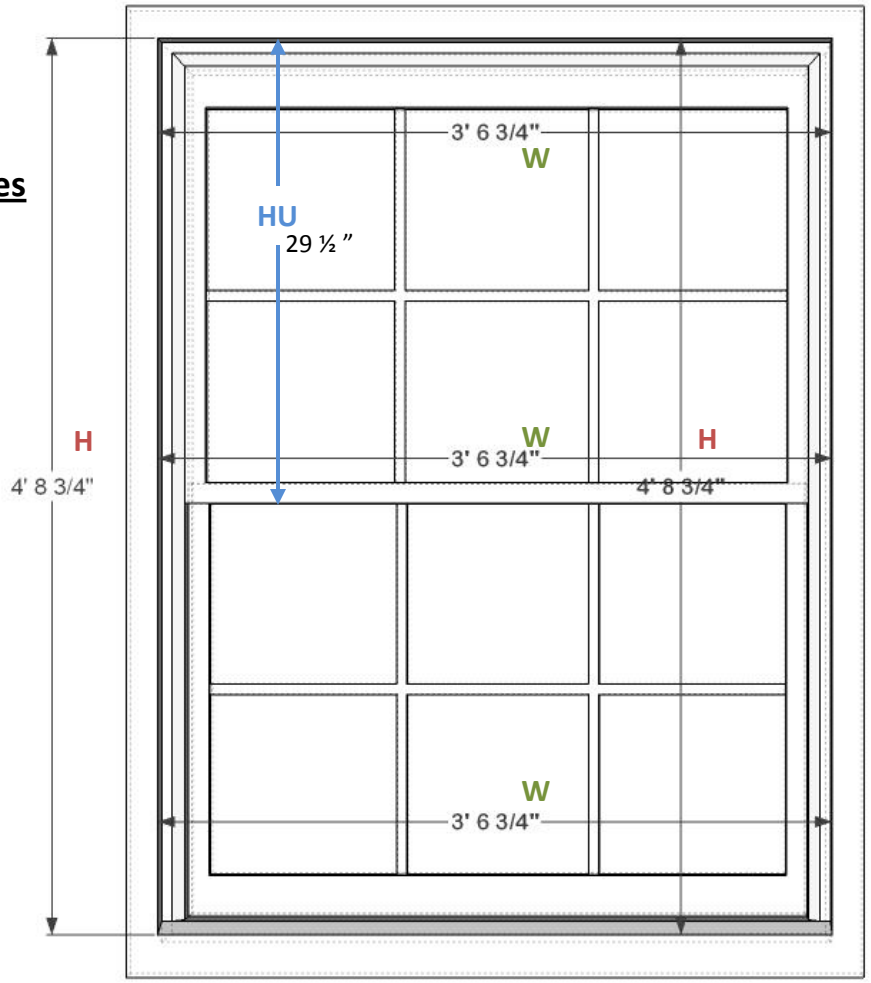
Measurement Guidelines for QUANTAPANEL® 500 Series

1. Measurements should be taken to the nearest 1/8th inch.
2. Take two (2) measurements of the HEIGHT of the opening and two or three (2 – 3) measurements of the WIDTH as shown in the diagram. Record the smallest WIDTH and smallest HEIGHT to the nearest 1/8th inch.
3. To ensure alignment with the meeting rails of the existing double hung window, measure from the top of the opening to the bottom of the existing meeting rail. Record this value as HEIGHT UPPER (UP) to the nearest 1/8th inch.
4. A Sill Expander is optional, it provides the ability to extend an additional 3/8 inch during installation to *square up* against the sill.
4. The Installation Methods for the 500 Series can be any of the following:
   BLIND STOP (we subtract 1/8th in. on the Width);
   OVERLAP (we add 1 in. to your Opening Height & Width);
   MAKE SIZE (we produce to exact tip-tip measurements).
5. The Installation Reference can be used to identify the floor/room/location. This information will be printed on the product label and packaging documents.



ITEM	MODEL (STYLE) 504 (DOUBLE HUNG) 502 (PICTURE) 506 (SLIDER) 508 (SKYLIGHT) 602 (INTERIOR PIC) 604 (INTERIOR DH) 606 (INTERIOR SL) 608 (JALOUSIE)	EXISTING OPENING		HEIGHT UPPER (ORIEL CONFIG)	SILL EXPANDER TYPE: 0, 1"	INSTALL METHOD BLINDSTOP OVERLAP MAKE SIZE INTERIOR	NON-STANDARD	QUANTITY	INSTALLATION REFERENCE
		WIDTH (W)	HEIGHT (H)						
1	504DH	42 ¾	56 ¾	29 ½	1”	MAKE SIZE		1	KITCHEN