# **APPROVAL/REVIEW NOTES:**

- ALL DETAILS IN THIS DRAWING SET. INCLUDING BUT NOT LIMITED TO. SIZES. MATERIALS. DIMENSIONS. AND QUANTITIES, ARE SUBJECT TO CHANGE BASED ON FINAL DUO-GARD REVIEW AND APPROVAL. DUO-GARD RESERVES THE RIGHT TO MAKE ANY CHANGES AND/OR DESIGN DECISIONS BASED ON THE INFORMATION PROVIDED ON THIS FORM AT OUR DISCRETION.
- 2. THE DRAWINGS AND INFORMATION CONTAINED IN THIS DRAWING PACKAGE ARE PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER. THEY MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES, INC.
- UNLESS IT IS NOTED TO THE CONTRARY ON THESE DRAWINGS WHEN RETURNED FROM APPROVAL, IT WILL BE ASSUMED THAT ALL INFORMATION SHOWN HEREIN HAS THE AFFIRMATION OF THE APPROVAL AUTHORITY.
- FABRICATION OF MATERIALS SHOWN IN THESE DRAWINGS WILL NOT PROCEED UNTIL DUO-GARD AND ALL REQUIRED PARTIES HAVE REVIEWED THE DRAWINGS AND APPROVED THEM FOR RELEASE. DUO-GARD RESERVES THE RIGHT TO REJECT DRAWINGS BASED ON MISSING, INCOMPLETE, AND/OR INACCURATE INFORMATION.

### **GENERAL NOTES:**

D

В

- DUO-GARD ASSUMES THAT ALL SITE CONDITIONS ARE PER PROVIDED SPECIFICATION DRAWINGS UNLESS NOTED OTHERWISE.
- FIELD MEASUREMENTS. IF REQUIRED. WILL BE TAKEN BY INSTALLING CONTRACTOR AND SUPPLIED TO DUO-GARD ON THIS FORM PRIOR TO FABRICATION OR MATERIALS WILL BE FIELD CUT.
- 3. PERIMETER MOUNTING FRAME AND/OR PURLINS (ALL BY OTHERS) MUST BE VALIDATED (BY OTHERS) TO PROPERLY RESIST THE LOADS IMPOSED BY THE CANOPY GLAZING SYSTEM.

### **INSTALLATION NOTES:**

- INSTALLATION SHALL BE PERFORMED BY DUO-GARD OR BY A FULLY TRAINED INSTALLER AUTHORIZED BY DUO-GARD INDUSTRIES. INC.
- 2. ALL FRAMING WORK SHALL BE TRUE TO LINE, LEVEL, AND PLUMB PRIOR TO INSTALLATION OF GLAZING.
- 3. NO ITEMS MAY ATTACH OR BE SUSPENDED FROM DUO-GARD PRODUCTS.
- UPON COMPLETION OF THE INSTALLATION. THE INSTALLER SHALL REMOVE ALL PACKAGING MATERIALS AND LEAVE WORK AND WORK AREAS CLEAN AND IN SATISFACTORY CONDITION.

### **PRODUCT SPECIFIC NOTES:**

- ALL HARDWARE TO BE EITHER STAINLESS STEEL OR BI-METAL, ALL MILL FINISH, UNLESS NOTED OTHERWISE. SEE TABLES #5 & #6 ON SHEET 3 FOR SPECIFIC SLEEKLINE HARDWARE DETAILS.
- ALL EXPOSED FLASHINGS WILL MATCH THE EXTRUSION COLOR UNLESS NOTED OTHERWISE.
- ALL ALUMINUM FRAMING EXTRUSIONS TO BE 6005-T5 ALLOY AND TEMPER.
- ALL EXPOSED ALUMINUM FRAMING EXTRUSIONS TO BE FINISHED. SOME COMPONENTS, SUCH AS SLEEKLINE INSERTS, WILL BE MILL FINISH.
- A SEPARATOR BETWEEN DUO-GARD GLAZING COMPONENTS AND FRAMING (BY OTHERS) IS NOT INCLUDED AS A STANDARD. BUT MAY BE PROVIDED AT AN ADDITIONAL COST.

### **ABBREVIATION KEY**

TYP. = TYPICAL T.B.D. = TO BE DETERMINED

O.C. = ON CENTER PCSS = POLYCARBONATE STRUCTURED SHEET

€ = CENTERLINE U.N.O. = UNLESS NOTED OTHERWISE

DIM(S) = DIMENSION(S)REQ'D = REQUIRED

### TABLE #1 - TEST REPORT CERTIFICATION **TEST DESCRIPTION** TEST STANDARD **RESULTS** FLAMMABILITY **ASTM D1929 IGNITION TEMPERATURE** 550°C / 1022°F **ASTM D2843 DENSITY OF SMOKE** 57.7% ASTM D635 **BURN EXTENT** CC1 PANEL SYSTEM PERFORMANCE - CONTACT DUO-GARD FOR RESULTS AND QUESTIONS STANDARD TEST METHOD FOR STRUCTURAL PERFORMANCE ASTM E330 TAS 204-94 STANDARD TEST METHOD FOR STRUCTURAL PERFORMANCE

# TABLE #2 - PROJECT DATA

PROJECT NAME:

LOCATION:

DGI PROJECT #:

REQUESTER:

**INSTALLER: OTHERS DUO-GARD** 

POLYCARBONATE TYPE:

POLYCARBONATE COLOR:

**EXTRUSION FINISH:** 

**DESIGN STANDARD:** 

**BUILDING CODE:** 

## **WIND LOADS**

WIND SPEED (m.p.h.):

**EXPOSURE FACTOR:** 

**IMPORTANCE FACTOR:** 

# **ROOF LIVE**

MIN. ROOF LIVE LOAD (p.s.f.):

### **ROOF SNOW**

GROUND SNOW LOAD (p.s.f.):

**IMPORTANCE FACTOR I:** 

**EXPOSURE FACTOR Ce:** 

TEMPERATURE FACTOR Ct:

SPEC PROVIDED? YES NO YES **DRAWINGS PROVIDED?** NO

**DRAWINGS:** 

# SHEET SCHEDULE

SHEET 1: TITLE SHEET

SHEET 2: LOADING INFORMATION

SHEET 3: GENERAL INFORMATION

**SHEET 4: INSTALLATION GUIDELINES** 

SHEET 5: OVERALL LAYOUT

SHEET 6: SECTION DETAILS 1

SHEET 7: GLAZING DETAILS 1

SHEET 8: GLAZING DETAILS 2

# **APPROVAL STATUS**

**APPROVED** 

APPROVED AS NOTED

**CORRECT AND RESUBMIT** 

SIGNATURE:

SIGNER (PLEASE PRINT):

DATE:



THIS DRAWING IS PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER. IT MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES INC. **STANDARD** SLEEKLINE

DRAWINGS REV. 5 REV.6

DATE REV. PHASE/NOTES REV. 1 REV. 2 REV. 3 REV.4

ROJECT NUMBER DRW'G. DATE PRJT. ENG

ROJECT NAME

CHECKED

PRJT. MGR.

Title Sheet

PRJT. PHASE

DESCRIPTION (SHEET NAME): CANOPY DO NOT SCALE DRAWING CHK. DATE

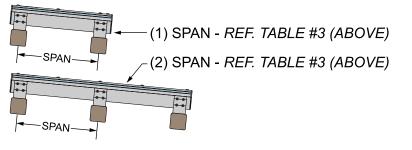
DETAILS SERIES 3900 ALL UNITS IN INCHES U.N.O. SHEET 01 OF

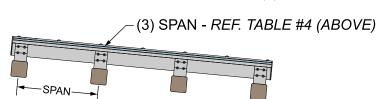
REGISTERED ENGINEER

2

	TABLE #3 - "SBC2" PURLIN SPACING   (≤ 2 SPAN)							TABLE #4 - "	'SBC2" PURL	IN SPA	CING	(3+ SI	PAN)*	
MAX. PURLIN						(p.s.f.)	MAX. PURLIN		DOWNWARD DESIGN LOAD (p.s.f.)					
	SPACING IS: _	" O.C.	≤ 60	70	80	100	120	SPACING IS:	" O.C.	≤ 60	70	80	100	120
WIND SPEED WIND UPLIFT (m.p.h.) (p.s.f.)		PU	RLIN S	PACINO	3 (inche	es)	WIND SPEED (m.p.h.)	WIND UPLIFT (p.s.f.)	PU	RLIN S	PACING	3 (inche	es)	
	115	57	89	84	81	75	71	115	57	112	108	102	95	88
	120	62	84	84	81	75	71	120	62	108	108	102	95	88
	125	67	84	84	81	75	71	125	67	108	108	102	95	88
	130	72	81	81	81	75	71	130	72	102	102	102	95	88
	135	78	81	81	81	75	71	135	78	102	102	102	95	88
	140	84	75	75	75	75	71	140	84	95	95	95	95	88
	150	96	75	75	75	75	71	150	96	95	95	95	95	88
	160	109	71	71	71	71	71	160	109	88	88	88	88	88

\*NOTE: VALUES LISTED ABOVE ARE FOR (3) SPANS OR MORE





# DESIGN CRITERIA - SEE TABLES #3 & #4 (ABOVE)

- DESIGN STANDARD: ASCE 7-10 ALLOWABLE STRESS DESIGN
- ALL ALUMINUM FRAMING IS 6005-T5 OR EQUIVALENT (NON WELDED)
- MULLION BEND STRESS IS LIMITED TO 21 ksi, DEFLECTION IS LIMITED TO L/120 OR 1"
- FOR DOWNWARD DESIGN LOADS, USE APPROPRIATE LOAD COMBINATIONS TO DETERMINE WORST CASE
- DESIGN WIND LOAD CRITERIA (COMPONENTS AND CLADDING)
  - EXPOSURE C
  - OPEN STRUCTURE
  - ELEVATION Z < 25'
  - MONOSLOPED ROOF, ROOF ANGLE ASSUMED 9.46° (2:12 PITCH)
- DATA IN TABLES ABOVE APPROPRIATE FOR A MAXIMUM OF 2:12 (9.46°) AND A MINIMUM OF 1/2:12 (2.46°)
- UPLIFT PRESSURES AND DOWNWARD LOADS ARE AT SERVICE LEVEL
- MULLION BRACKET IS CONNECTED TO STRUCTURE WITH (4) #12 TEK SCREWS AT EACH SUPPORT (MIN. SUPPORT MEMBER WALL THICKNESS = 1/8" STEEL/ALUM.)
- ALL SBC2 MULLIONS ARE SPACED AT MAXIMUM 2 FT. ON CENTER

THE APPROPRIATE COMBINATION OF DATA FROM ALL TABLES SHOWN ON THIS PAGE WILL ULTIMATELY DETERMINE WHAT STRUCTURE IS REQUIRED TO PROPERLY SUPPORT THE SLEEKLINE SYSTEM. CONTACT DUO-GARD TO DISCUSS PROJECT SPECIFIC DETAILS. SEE AREA BELOW FOR PROJECT SPECIFIC COMMENTS.

ADDITIONAL PROJECT SPECIFIC COMMENTS:

# TABLE #5 - ALLOWABLE PANEL LOADS | F.O.S. = FACTOR OF SAFETY

1/4" POLYCARRONATE LEOS = 20 1/4" POLYCARRONATE LEOS = 15

1/4 FOLICANDONATE   1.0.3.	<b>–</b> 2.0	1/4 FOLICANDONATE   1.0.3 1.3				
DOWNWARD LOAD		DOWNWARD LOAD				
TEST FAIL LOAD (p.s.f.)	210	TEST FAIL LOAD (p.s.f.)	210			
ALLOWABLE LOAD (p.s.f.)	105	ALLOWABLE LOAD (p.s.f.)	140			
UPLIFT LOAD		UPLIFT LOAD				
TEST FAIL LOAD (p.s.f.)	170	TEST FAIL LOAD (p.s.f.)	170			
ALLOWABLE LOAD (p.s.f.)	85	ALLOWABLE LOAD (p.s.f.)	113			
		l .				

3/8" POLYCARBONATE   <b>F.O.S</b>	. = 2.0	3/8
DOWNWARD LOAD		
TEST FAIL LOAD (p.s.f.)	390	
ALLOWABLE LOAD (p.s.f.)	195	
UPLIFT LOAD		
TEST FAIL LOAD (p.s.f.)	200	
ALLOWABLE LOAD (p.s.f.)	100	

ALLOWABLE LOAD (p.s.f.)	113
3/8" POLYCARBONATE   F.O.S.	= 1.5
DOWNWARD LOAD	
TEST FAIL LOAD (p.s.f.)	390
ALLOWABLE LOAD (p.s.f.)	260
UPLIFT LOAD	
TEST FAIL LOAD (p.s.f.)	200
ALLOWABLE LOAD (p.s.f.)	133

\*\*PROJECT REQUIRES A MIN. "THICK PANEL WITH A F.O.S. OF

\*\*NOTE: PANEL THICKNESS MAY BE ADJUSTED BASED ON PROJECT SPECIFIC CRITERIA

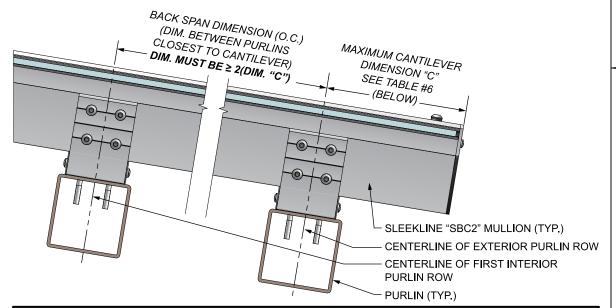


TABLE #6 - ALLOWABLE SYSTEM CANTILEVER							
DESIGN LOAD RANGE	MAX. DIM. "C"	MIN. BACK SPAN DIM. @ MAX. DIM. "C"					
< 80 p.s.f.	40"	80" O.C.					
80 p.s.f. ≤ $x$ ≤ 120 p.s.f.	35"	70" O.C.					
***MAXIMUM SYSTEM CANTILEVER (DIM. "C") FOR THIS PROJECT IS"							

\*\*\*NOTE: REFER TO TABLE #9 FOR SPECIFIC LOCATIONS OF ALL CANTILEVER DIMENSIONS FOR THIS PROJECT

CANOPY

DETAILS SERIES 3900



THIS DRAWING IS PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER. IT MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES INC. **STANDARD** 

SLEEKLINE

DRAWINGS

DATE

ENG.

REV. 1 DESCRIPTION (SHEET NAME): ROJECT NUMBER REV. 2 Loading Information REV.3 DRW'G. DATE PRJT. ENG REV.4 CHECKED CHK. DATE REV.5 PRJT. MGR. PRJT. PHASE REV.6

REV. PHASE/NOTES

ROJECT NAME

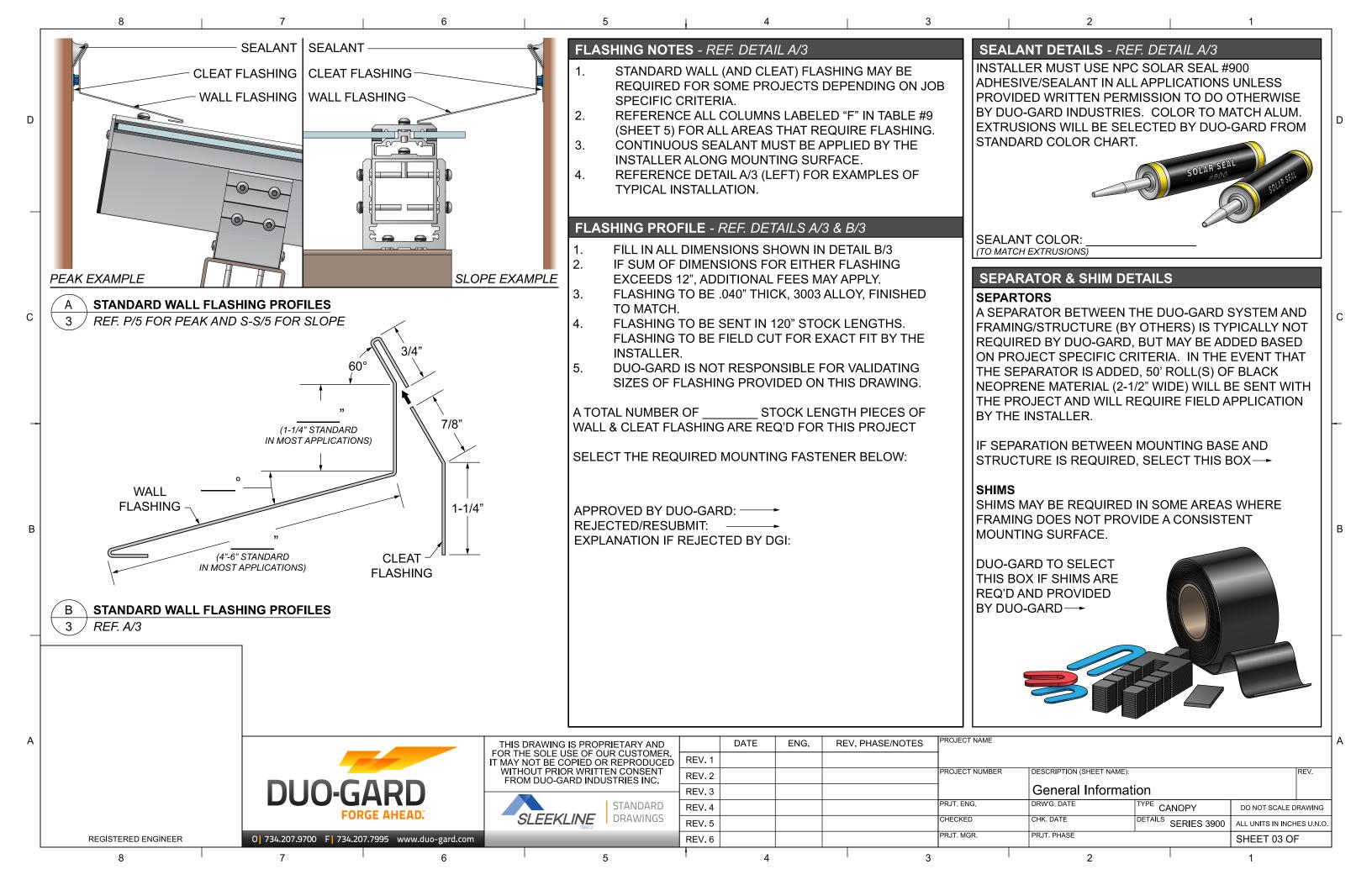
REGISTERED ENGINEER 0 734.207.9700 F 734.207.7995 www.duo-gard.com

RFV

DO NOT SCALE DRAWING

ALL UNITS IN INCHES U.N.O.

SHEET 02 OF



## RECOMMENDED TOOLS FOR INSTALLATION:

### POWER MITER SAW

NEGATIVE 6 DEGREE CARBIDE TIP NON-FERROUS METAL CUTTING BLADE FOR ALUMINUM CHANNEL CUTTING

#### 2. **DRILL MOTOR**

- 3/8" DRILL BIT FOR WEEP HOLES
- 1/4" DRILL BIT FOR MOUNTING HOLES

### **SCREW GUN**

- 5/16" HEX BIT
- 1/4" BIT FOR LAG SCREWS IF REQUIRED
- T25 TORX BIT FOR TORX SCREWS

# CIRCULAR SAW (MIN 7-1/4")

- FINE TOOTH PLYWOOD CUTTING BLADE FOR POLYCARBONATE PANELS
- **CAULK GUN**
- AIR COMPRESSOR WITH BLOW GUN 6.
- **UTILITY KNIFE** 7.
- 8. **SEALANT BY SOLAR SEAL®**

# **SHIM MATERIAL:**

- **ALUMINUM**
- EPDM OR HEAVY DUROMETER RUBBER
- **PLASTIC**
- WOOD (ONLY IF PERMITTED BY CODE)

IF ANY QUESTIONS OCCUR DURING THE REVIEW OF THESE INSTALLATION DOCUMENTS, OR DURING CONSTRUCTION, NOTIFY DUO-GARD IMMEDIATELY.

DO NOT DEVIATE FROM INSTALLATION DOCUMENTS

## MATERIAL DELIVERY, UNLOADING, AND STORAGE:

- MATERIAL IS TYPICALLY DELIVERED IN CUSTOM BUILT OPEN FRAMED WOOD CRATES. LENGTH WILL VARY BUT TYPICAL CRATE IS 12' TO 20' LONG
- A FORKLIFT IS RECOMMENDED FOR UNLOADING/OFF LOADING
- ALUMINUM SHOULD BE STORED IN A SECURE LOCATION
- POLYCARBONATE SHALL BE TARPED TO PROTECT FROM CONSTRUCTION DEBRIS AND DUST
- **DO NOT** STORE POLYCARBONATE IN DIRECT HEAT OR **SUNLIGHT**
- REMOVE PLASTIC FILM FROM POLYCARBONATE SURFACES PRIOR TO INSTALLATION
- VERIFY UV RATED SIDE OF POLYCARBONATE FACES OUT TOWARD THE SUN

### TIPS:

- AFTER DRILLING, REMOVE SHAVINGS FROM BASE CHANNEL
- STAGGER OR OVERLAP LENGTHS (BASE, CAP) TO **AVOID STACKING ON JOINTS**
- DO NOT CAULK OVER OR BLOCK WEEP HOLES

## STEEL STRUCTURE PREP:

IF BUILDING STRUCTURE IS COMPOSED OF STEEL 1/4" THICK OR GREATER, INSTALLER MUST PRE-DRILL W/#11 DRILL BIT FOR ALL FASTENER LOCATIONS.

TIP: UTILIZE PRE-PUNCHED HOLES IN ALUMINUM EXTRUSION AS A GUIDE.

# **REUSE:**

SALVAGE ALL CUT OFF ALUMINUM EXTRUSION LENGTHS (BASE CHANNEL, CAP, ETC.) FOR POSSIBLE INSTALLATION ELSEWHERE

### **NORMAL MAINTENANCE:**

- **DO NOT** USE AMMONIA BASED CLEANING PRODUCTS ON ANY POLYCARBONATE SURFACE
- WASH WITH A MILD SOAP OR DETERGENT
- USE A SPONGE OR SOFT CLOTH
- RINSE WITH CLEAN WATER

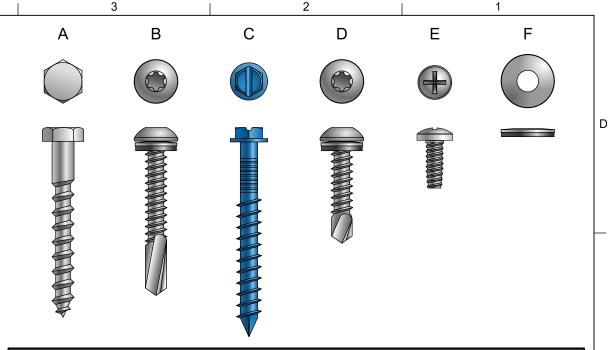


TABLE #7 - SERIES 3900 STANDARD HARDWARE DETAILS							
ITEM #	DESCRIPTION	FINISH	SUBSTRATE MATERIAL				
Α	1/4" x 2" LAG SCREW (S/S)	MILL	WOOD				
В	#12 x 1-1/2" TORX TEK 5 SCREW WITH NEO. WASHER (BI-METAL)	MILL	METAL				
С	1/4" x 2-1/4" HWH TAPCON SCREW	BLUE	CONCRETE/C.M.U. GROUT FILLED				
D	#12 x 1" TORX TEK 3 SCREW WITH NEOPRENE WASHER (BI-METAL)	MILL	ALUMINUM				
Е	#10 x 1/2" PAN HEAD SCREW (S/S)	MILL					
F	1/4" I.D. NEOPRENE WASHER (S/S)	MILL					

<b>TABLE</b>	TABLE #8 - HARDWARE APPLICATION DETAILS					
ITEM#	STANDARD APPLICATION FOR HARDWARE					
Α	ATTACHES BASE CHANNEL TO WOOD SUBSTRATE					
В	ATTACHES MOUNTING BASE TO TUBE AND METAL SUBSTRATE					
С	ATTACHES FLASHING TO CONCRETE/C.M.U.* SUBSTRATE					
D	ATTACHES BASE CHANNEL TO TUBE AND CAP TO INSERT					
Е	ATTACHES ALL ALUMINUM END CAPS					
F	REQUIRED FOR ALL MOUNTING BASE ATTACHMENT FASTENERS. TORX SCREWS HAVE PRE-INSTALLED WASHERS					

REV.

DO NOT SCALE DRAWING

ALL UNITS IN INCHES U.N.O.

SHEET 04 OF

\*NOTE: C.M.U. MUST BE GROUT FILLED



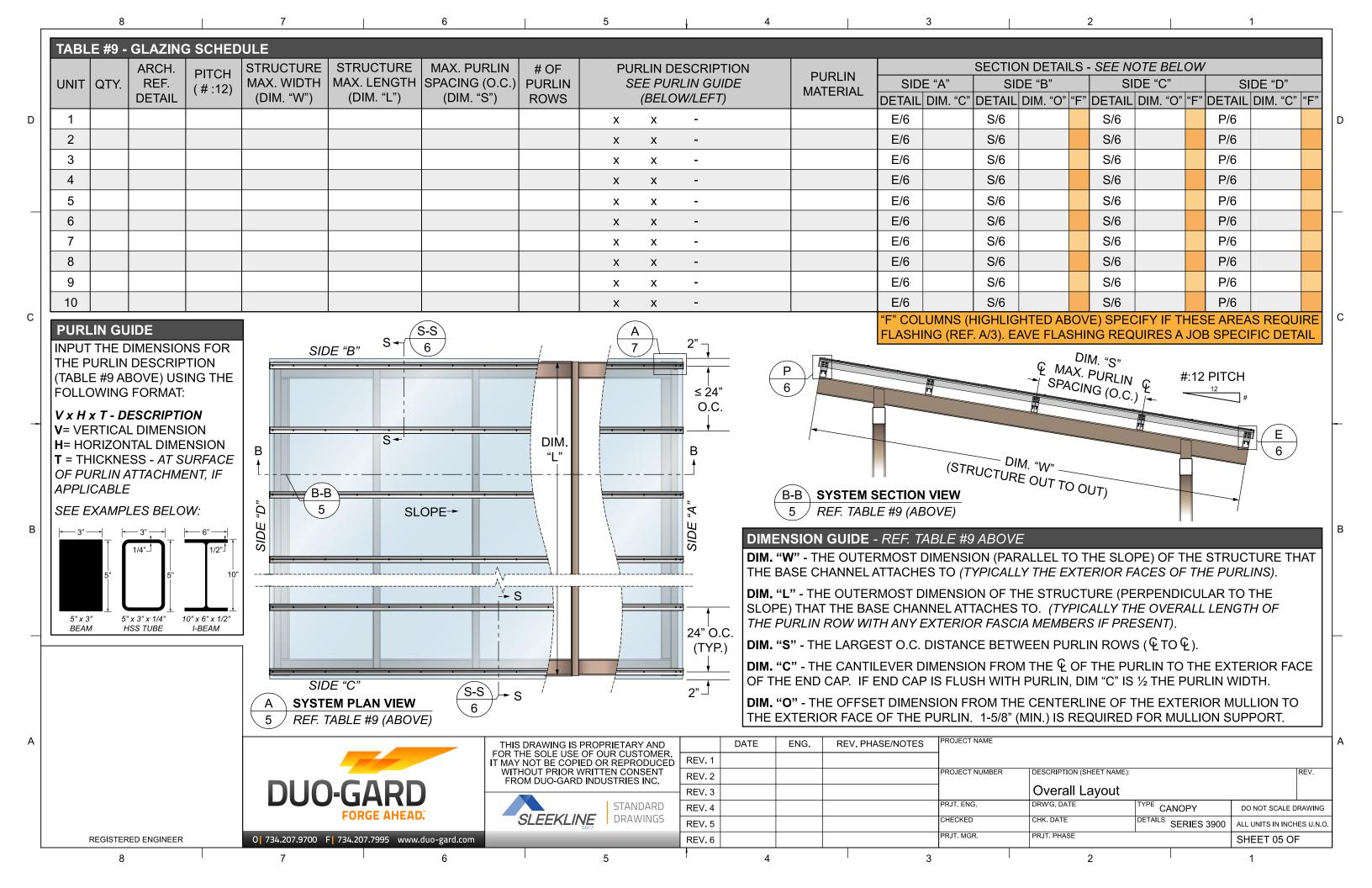
THIS DRAWING IS PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER. IT MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES INC. **STANDARD** SLEEKLINE DRAWINGS

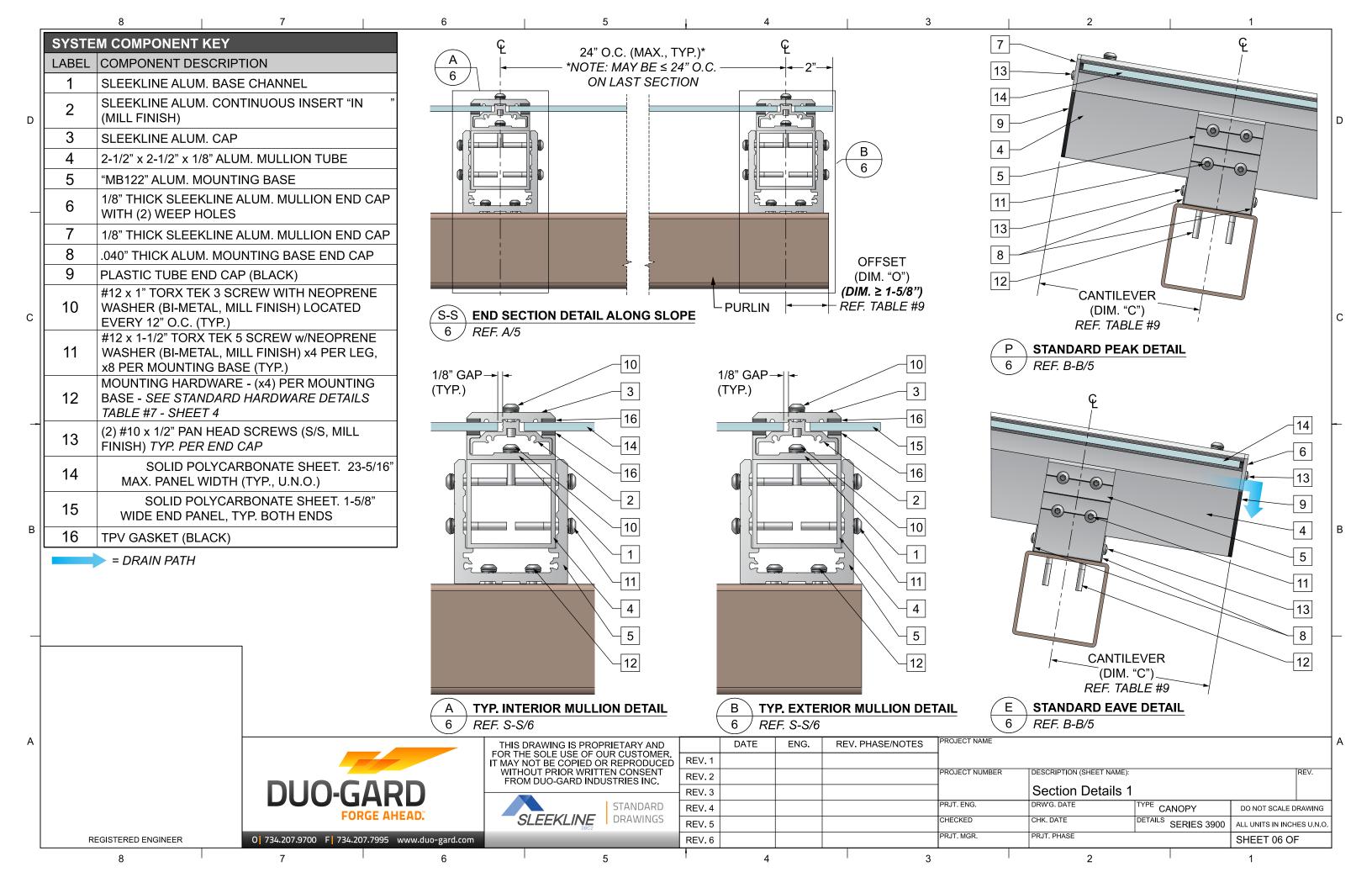
REV.1 REV. 2 REV. 3 REV.4 REV. 5

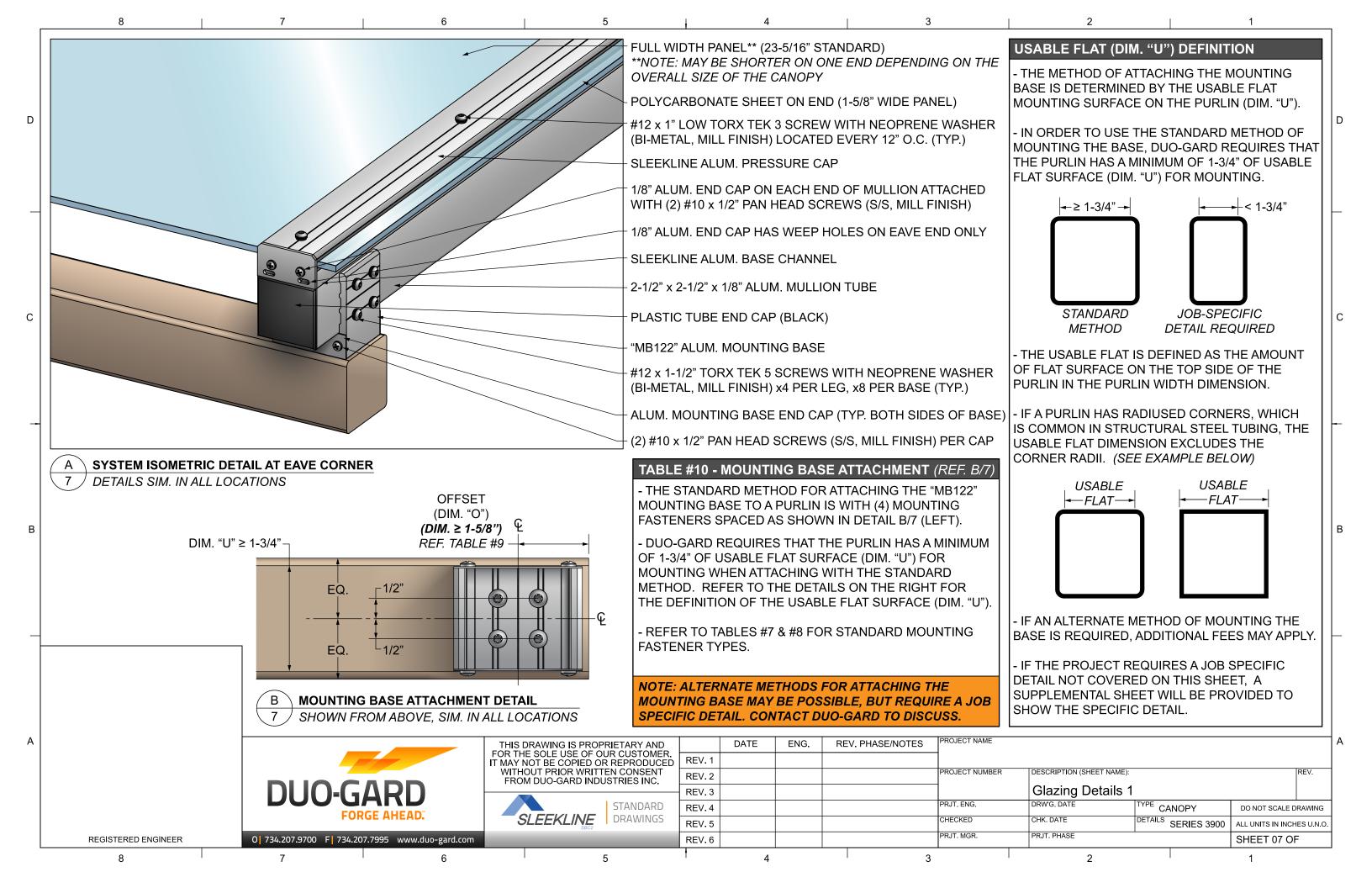
DATE ENG. REV. PHASE/NOTES DESCRIPTION (SHEET NAME): ROJECT NUMBER Installation Guidelines PRJT. ENG DRW'G DATE CANOPY CHECKED CHK. DATE DETAILS SERIES 3900 PRJT. PHASE PRJT. MGR. REV.6

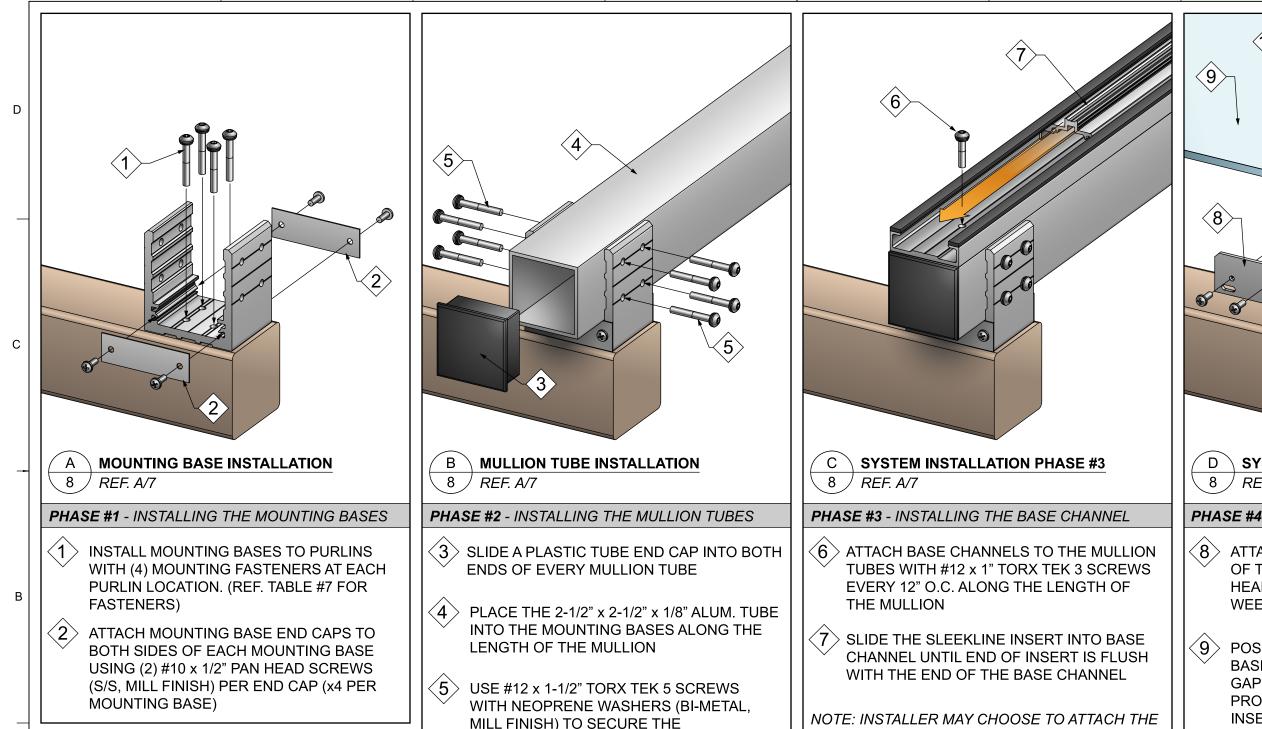
REGISTERED ENGINEER

0 734.207.9700 F 734.207.7995 www.duo-gard.com









SYSTEM INSTALLATION PHASE #4 <sup>'</sup> REF. A/7 PHASE #4 - INSTALLING REMAINING SYSTEM

- $\langle 8 \rangle$  ATTACH THE 1/8" END CAPS TO EACH END OF THE MULLIONS USING (2) #10 x 1/2" PAN HEAD SCREWS. END CAP AT EAVE HAS WEEP HOLES
- POSITION THE PANELS ON TOP OF THE BASE CHANNEL GASKET, LEAVING A 1/8" GAP BETWEEN THE PANEL EDGE AND THE PROTRUDING EXTERIOR FACE OF THE INSERT ALONG THE MULLION (REF. A/6)
- FASTEN THE PRESSURE CAP WITH #12 x 1" TORX TEK SCREWS THRU THE INSERT ALONG THE LENGTH OF THE MULLION



THIS DRAWING IS PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER. IT MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES INC.



MULLION TUBE TO EACH MOUNTING BASE

(x4 PER LEG, x8 PER MOUNTING BASE)

**STANDARD** 

REV. 1 DESCRIPTION (SHEET NAME): REV. 2 Glazing Details 2 REV.3 DRW'G. DATE REV. 4 CANOPY DO NOT SCALE DRAWING CHECKED CHK. DATE DETAILS SERIES 3900 REV.5 ALL UNITS IN INCHES U.N.O. PRJT. MGR. PRJT. PHASE SHEET 08 OF REV.6

ROJECT NAME

REGISTERED ENGINEER 0 734.207.9700 F 734.207.7995 www.duo-gard.com

#4 & #5.

DATE

BASE CHANNEL TO THE MULLION TUBE PRIOR

MOUNTING BASES/STRUCTURE. IF THAT IS THE

CASE. STEP #6 WOULD OCCUR BEFORE STEPS

REV. PHASE/NOTES

TO ATTACHING THE MULLION TUBE TO THE

