ALLOWABLE SIZE/PRESSURE TABLE

DOOR TYPE	MAX. DOOR OPENING WIDTH (IN.)	MAX. DOOR OPENING HEIGHT (IN.)	MAX. D.L.O. WIDTH (IN.)	MAX. D.L.O. HEIGHT (IN.)	LOCK OPTION (3)	GLASS OPTION (1)	MISSILE LEVEL (2)	ALLOWABLE PRESSURE (+/- PSF)	
								DOORS IN 450, 451 OR 1600 FRAMES	DOORS IN IR500/501 FRAMES
DOUBLE	96	96	38 13/16	83 13/16	1 OR 2	1, 2 OR 5	D	110	90
	96	96	38 13/16	83 13/16	1	5	E	110	90
	72	108	30 13/16	95 3/16	1 OR 2	1 OR 2	D	110	90
	96	96	38 13/16	83 13/16	1 THRU 3	1, 2, 3 & 5	D	70	70
	72	96	30 13/16	83 13/16	1 THRU 3	4	D	60	60
SINGLE	48	96	38 13/16	83 13/16	1 OR 2	1, 2 OR 5	D	110	90
	48	96	38 13/16	83 13/16	1	5	E	110	90
	36	108	30 13/16	95 3/16	1 OR 2	1 OR 2	D	110	90
	48	96	38 13/16	83 13/16	1 THRU 3	1, 2, 3 & 5	D	70	70
	36	96	30 13/16	83 13/16	1 THRU 3	4	D	60	60

LOCK OPTIONS:

- OPTION 1 = ADAMS RITE 1850 3 POINT LOCK AT ACTIVE PANEL (ITEM #57) & ADAMS RITE FLUSHBOLTS AT HEAD AND SILL (ITEM #58) OF INACTIVE PANEL.
- OPTION 2 = KAWNEER 1686 DEADBOLT & PANIC DEVICE (ITEM #59) AT ACTIVE PANEL & KAWNEER 1686 PANIC DEVICE (ITEM #60) AT INACTIVE PANEL.
- OPTION 3 = SCHLAGE DEADBOLT WITH & EITHER FALCON HH 1690 OR VON DUPRIN HH9947 CVR PANIC DEVICE (ITEM #61) AT ACTIVE PANEL & EITHER FALCON HH 1690 OR VON DUPRIN HH9947 CVR PANIC DEVICE (ITEM #62) AT INACTIVE PANEL.

PRESSURE TABLE FOOTNOTES:

(1) FOR GLASS OPTIONS SEE GLAZING DETAILS ON SHEET 11.
(2) WHEN MISSILE LEVEL E IS REQUIRED ONLY LOCK OPTION 1 & GLASS OPTION 5 ARE APPLICABLE.

NOTE: THESE DOORS ARE NOT APPROVED FOR USE WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR. UNLESS UNITS ARE INSTALLED IN NON-HABITABLE AREAS WHERE THE UNIT & THE AREA ARE DESIGNED TO ACCEPT WATER INFILTRATION, UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG WHERE-BY THE OVERHANG(OH) RATIO IS EQUAL TO OR MORE THAN.

GENERAL NOTES:

1. THESE DOOR SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S).
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH ASTM E330, E283, E1886, E1996 & AMMA 1304 FOR LARGE MISSILE IMPACT DOORS.
5. THESE DOOR SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THESE DOORS.
7. ALL ANCHORS SECURING DOOR FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, A DIRECTIONALITY FACTOR OF KD = 0.85 MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR CD = 1.6 WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE SEPARATED OR COATED AS REQUIRED TO AVOID CORROSION OF EITHER MATERIAL.
11. TO THE BEST OF OUR KNOWLEDGE, THE DOOR SYSTEMS SHOWN HEREIN ARE QUALITY ASSURED BY AN APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH APPLICABLE STANDARDS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. DOOR ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
12. CERTIFICATION OF THESE DOOR SYSTEMS SHALL BE CONSIDERED VOID IF THEY ARE INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF THEY ARE INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH DOOR INSTALLATIONS.

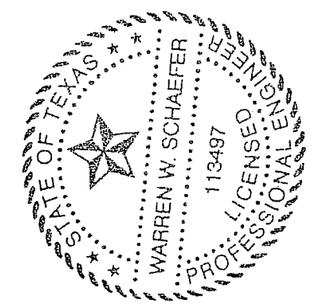
FRAME ANCHOR REQUIREMENTS TABLE

OPENING TYPE (SUBSTRATE)	FRAME & MULLION PLATE TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
FRAME SCREWS			
(2) MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 2 & G=0.55)	NO. 14 OR 1/4" GR. 5 COARSE THREAD SCREW OR 1/4" CONCRETE SCREW	1 1/4"	3/4"
MIN. 16 GA. 33 KSI METAL STUD	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 1/8" THK A36 STEEL	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
MIN. 0.100" THK 6063-T5 ALUM.	1/4" GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"
(3) MIN. C-90 CONCRETE FILLED BLOCK	(1) 1/4" CONCRETE SCREW	1 1/2"	2 1/2"
MIN. 3000 PSI CONCRETE	(1) 1/4" CONCRETE SCREW	1 3/4"	2 1/2"

(1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.), ITW RAMSET/RED HEAD TAPCONS (C.S. OR S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).
(2) 2X6 BUCKS SHALL BE OF A MINIMUM DEPTH REQUIRED TO MEET ANCHOR EDGE DISTANCE REQUIREMENTS BUT NO LESS THAN 4 1/4".
(3) CONCRETE FILLED BLOCK SUBSTRATE IS NOT APPLICABLE AT HEAD & SILL

CORNER CONSTRUCTION:

TRIFAB 450 OR 451 FRAME HEAD: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #17). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 10 X 1 19/32" PHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 10 X 9/16" FHTF SCREWS. CORNERS ARE SEALED WITH SILICONE SEALANT.
IR500/501 FRAME HEAD: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #18). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 12 X 1 7/8" FHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE MULLION WITH 3 NO. 12 X 1" PHTF SCREWS. CORNERS ARE SEALED WITH SILICONE SEALANT.
FRAME HEAD WITHIN 1600 SYSTEM 1 CURTAIN WALL: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #19). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 4 NO. 10 X 1 19/32" PHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 10 X 9/16" FHTF SCREWS. CORNERS ARE SEALED WITH SILICONE SEALANT.
SILL: VERTICAL MEMBERS RUN THROUGH WHILE THE THRESHOLD IS SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBER VIA A PIVOT ASSEMBLY OR CLIP (ITEM #30). THE CLIP IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 3 NO. 12-24 X 3/8" FHMS. THE THRESHOLD MEMBER IS ATTACHED TO THE CLIP BLOCK WITH 2 NO. 12-24 X 3/8" FHMS. CORNERS ARE SEALED WITH SILICONE SEALANT.
DOOR PANEL: VERTICAL STILES RUN THROUGH AND ARE SECURED TO THE RAILS AT THE TOP & BOTTOM WITH 1/4" THICK EXTRUDED CHANNELS. EACH CHANNEL IS FASTENED TO THE STILE & RAIL WITH 1/4-20 X 3/4" PHMS & 3/16" THICK STEEL NUT PLATES. THE INTERSECTION OF EACH CORNER JOINT WAS WELDED WITH A 1/2" DIA. PLUG WELD AND A 1 1/8" LONG FILLET WELD AT BOTH WEBS OF THE RAIL.



THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=24 | DATE: 03/19/13

DRAWING TITLE: IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

KAWNEER COMPANY, INC.
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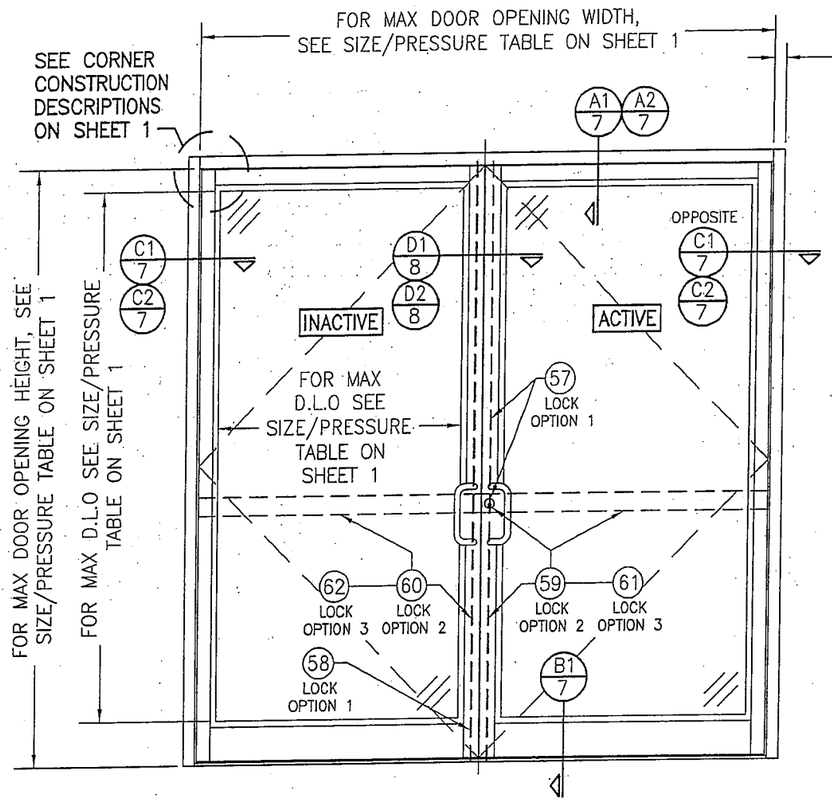
770-449-5555

CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO. 1821T | REV.
SHEET NO. 1 OF 12

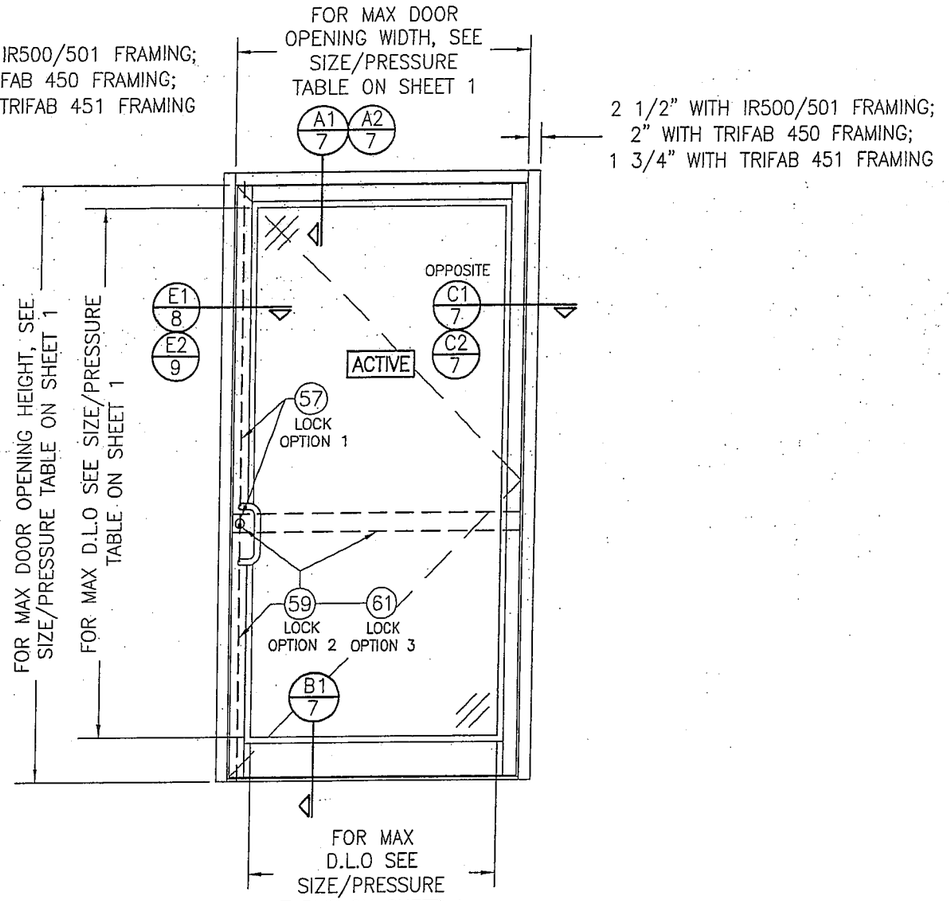


EXTERIOR ELEVATION:
DOUBLE DOOR WITH TRIFAB 450, 451 OR IR500/501 FRAMING

SCALE: 1/2" = 1'-0"

(FOR INSTALLATION REQUIREMENTS NOT SHOWN, SEE INSTALLATION ELEVATIONS ON SHEETS 4, 5 & 6)

(FOR HINGE REQUIREMENTS, SEE HINGE LOCATION DIAGRAMS ON SHEET 3)



EXTERIOR ELEVATION:
SINGLE DOOR WITH TRIFAB 450, 451 OR IR500/501 FRAMING

SCALE: 1/2" = 1'-0"

(FOR INSTALLATION REQUIREMENTS NOT SHOWN, SEE INSTALLATION ELEVATIONS ON SHEETS 4, 5 & 6)

(FOR HINGE REQUIREMENTS, SEE HINGE LOCATION DIAGRAMS ON SHEET 3)

ALLOWABLE DESIGN PRESSURE
SEE SIZE/PRESSURE TABLE ON SHEET 1

THE 450, 451 & 500/501 SUPPORT FRAMING MAY BE CONFIGURED FOR AND INSTALLED INTO A PUNCHED OPENING AS SHOWN OR BE PART OF A STORE FRONT FRAMING SYSTEM. IF PART OF A STORE FRONT FRAMING SYSTEM, THE LESSER OF THE ALLOWABLE PRESSURE SPECIFIED IN THE STORE FRONT APPROVAL AND THAT STATED HERE-IN SHALL CONTROL FOR THE OVERALL SYSTEM.

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=24 | DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

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CERTIFICATION
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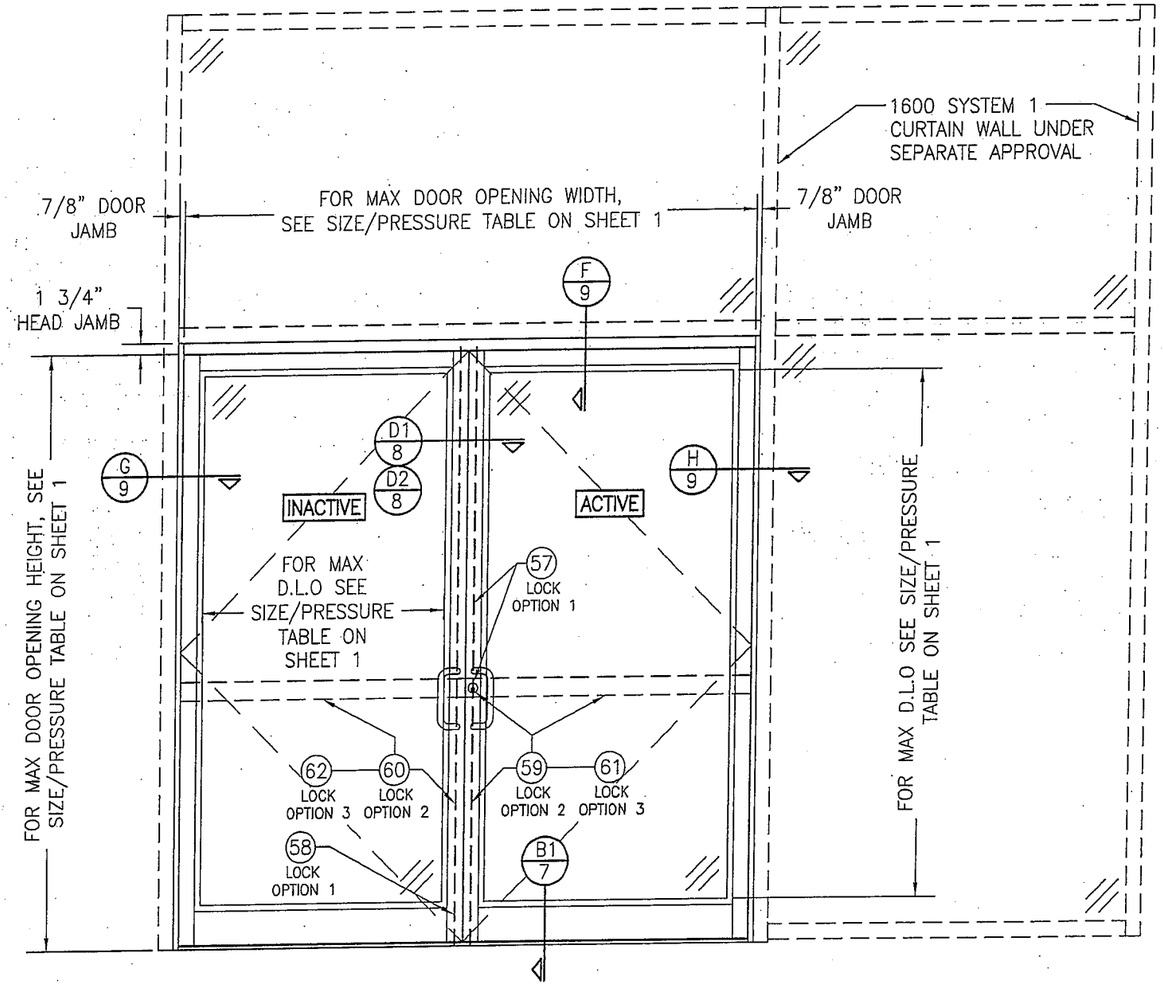
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO. 1821T | REV.
SHEET NO. 2 OF 12



EXTERIOR ELEVATION:
DOUBLE DOOR WITHIN 1600 SYSTEM 1 CURTAIN WALL

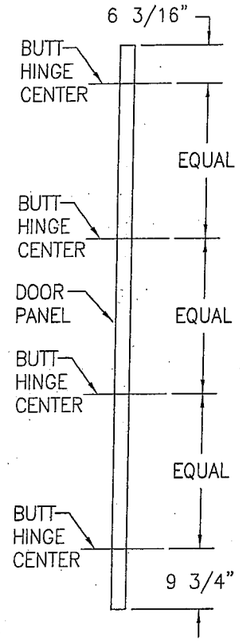
SCALE: 1/2" = 1'-0"

(FOR HINGE REQUIREMENTS, SEE HINGE LOCATION DIAGRAMS ON THIS SHEET.)

ALLOWABLE DESIGN PRESSURE
SEE SIZE/PRESSURE TABLE ON SHEET 1

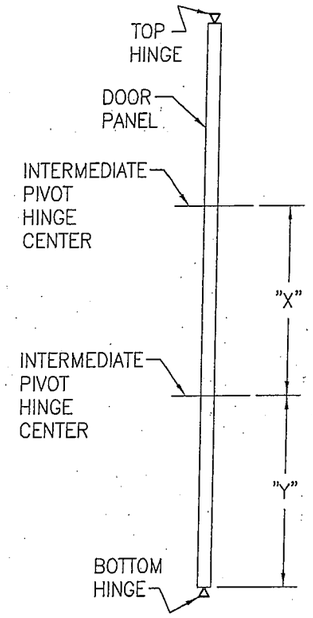
NOTES:

1. FOR DOOR INSTALLATION CONDITIONS NOT SHOWN, SEE INSTALLATION ELEVATIONS ON SHEET 4, 5 & 6.
2. DOUBLE DOOR SHOWN, SINGLE DOOR CONDITION ALSO APPLIES.
3. FOR CURTAIN WALL FRAMING REQUIREMENTS, SEE RESPECTIVE CURTAIN WALL APPROVAL.
4. ALTHOUGH DOOR SECTION IS SHOWN AT A SIDE JAMB, THE DOOR MAY BE LOCATED IN ANY BAY OF THE CURTAIN WALL.
5. THE LESSER ALLOWABLE PRESSURE FOR THE DOOR AND THAT FOR THE 1600 WALL SYSTEM SHALL CONTROL AS THE ALLOWABLE PRESSURE ON THE ASSEMBLY.



BUTT HINGE LOCATION DIAGRAM

SCALE: 1/2" = 1'-0"



PIVOT HINGE LOCATION DIAGRAM

SCALE: 1/2" = 1'-0"

"X" = DOOR OPENING HEIGHT/(NUMBER OF INTERMEDIATE HINGES + 1)

"Y" = "X" - 13/16"

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=24 | DATE: 03/19/13

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:
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CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
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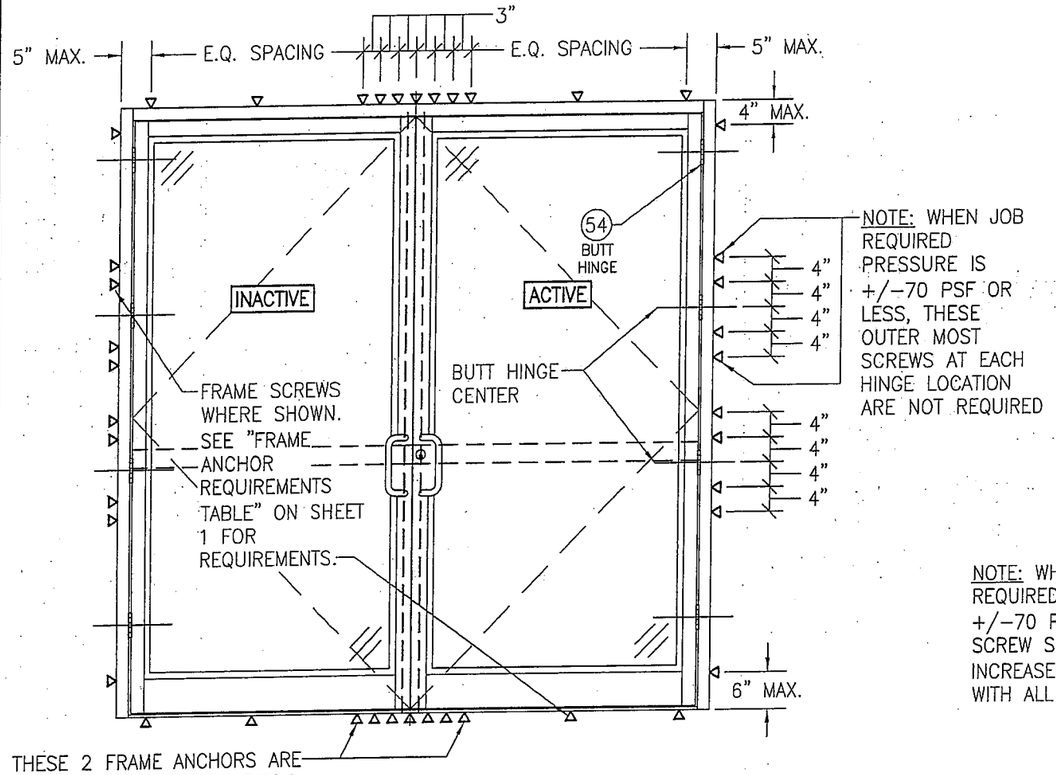
DRAWING NO. 1821T | REV.
SHEET NO. 3 OF 12

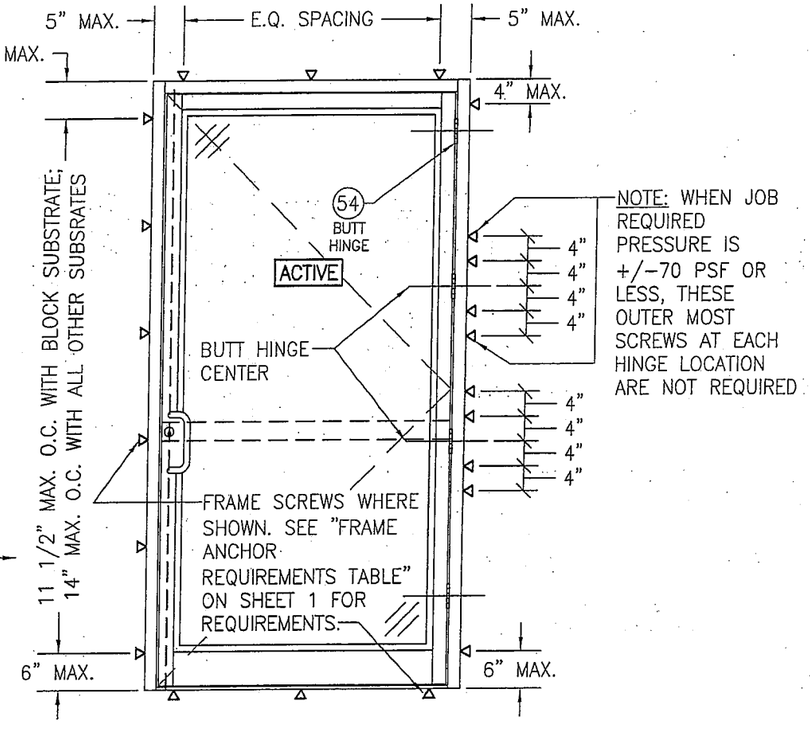


EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR DOUBLE DOORS WITH BUTT HINGES

SCALE: 1/2" = 1'-0"

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, SCREW SPACING MAY BE INCREASED TO 17" O.C. WITH ALL SUBSTRATES



EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR SINGLE DOORS WITH BUTT HINGES

SCALE: 1/2" = 1'-0"

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

THE CONDITIONS SHOWN IN THESE ELEVATIONS CONSIDER THE PERIMETER FRAMING TO BE INSTALLED TO A PUNCHED WALL OPENING OR CURTAIN WALL SYSTEM OPENING. WHEN DOOR PANELS ARE INSTALLED INTO A 450, 451 OR 500/501 STOREFRONT SYSTEM (NOT A PUNCHED OPENING), THE INSTALLATION REQUIREMENTS OF THE STORE FRONT APPROVAL SHALL CONTROL WITH THE DOOR PANELS BEING HINGED AND LOCKED TO THE FRAMING AS SHOWN HERE-IN.

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=24 | DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

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MAR 20 2013
WARREN W. SCHAEFER, P.E.
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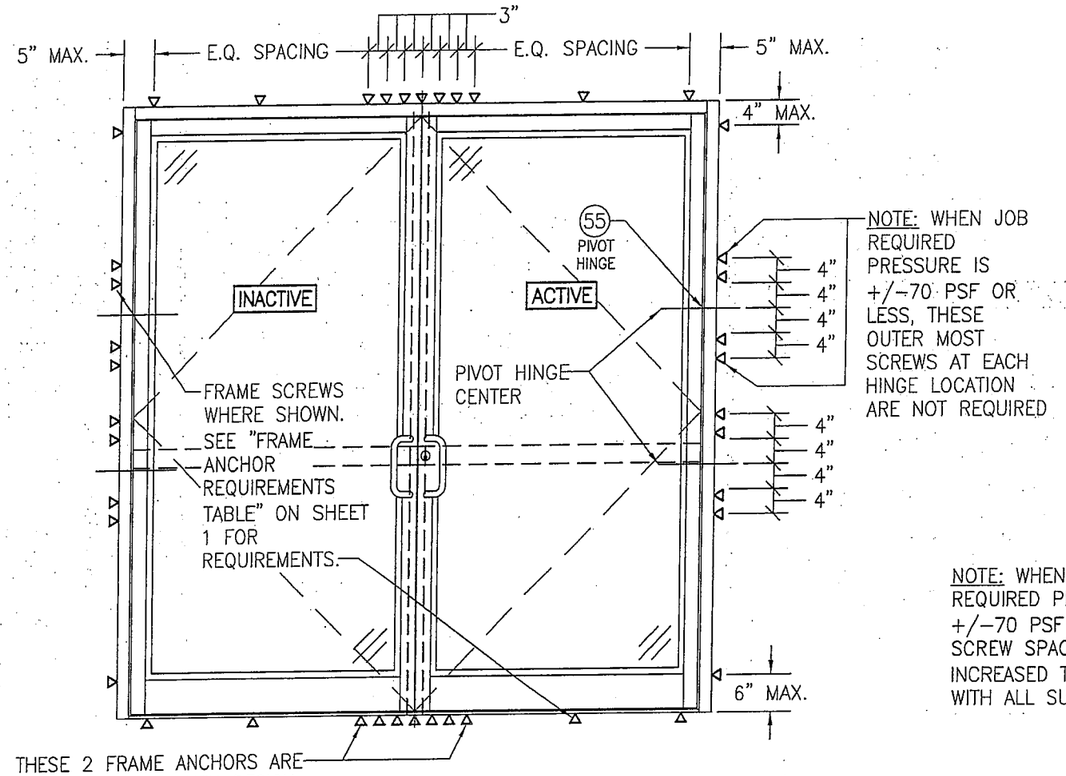
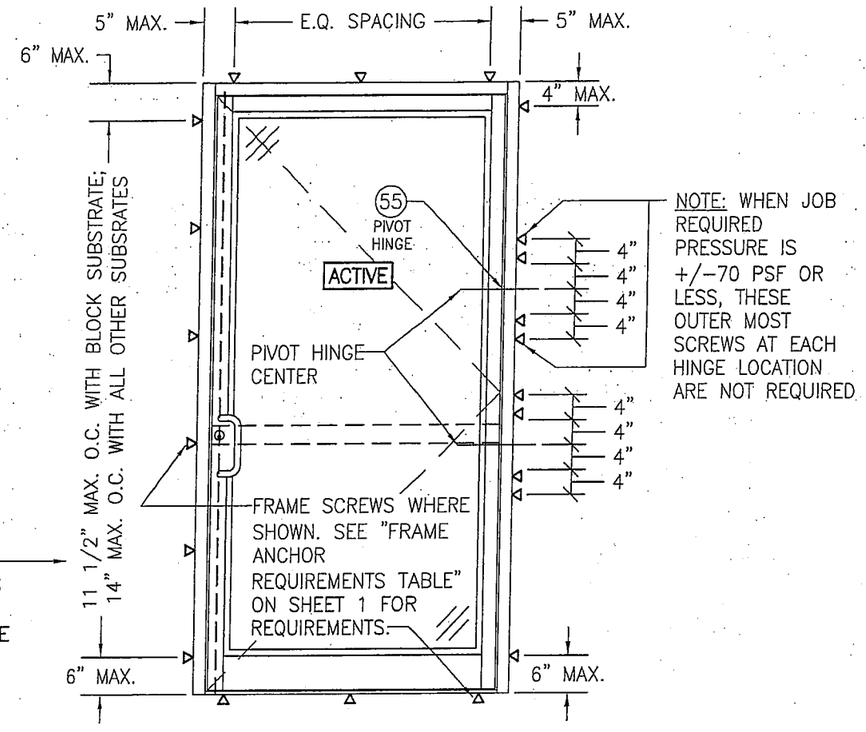
DRAWING NO. 1821T | REV.
SHEET NO. 4 OF 12



EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR DOUBLE DOORS
WITH PIVOT HINGES

SCALE: 1/2" = 1'-0"

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)



EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR SINGLE
DOORS WITH PIVOT HINGES

SCALE: 1/2" = 1'-0"

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

THE CONDITIONS SHOWN IN THESE ELEVATIONS CONSIDER THE PERIMETER FRAMING TO BE INSTALLED TO A PUNCHED WALL OPENING OR CURTAIN WALL SYSTEM OPENING. WHEN DOOR PANELS ARE INSTALLED INTO A 450, 451 OR 500/501 STOREFRONT SYSTEM (NOT A PUNCHED OPENING), THE INSTALLATION REQUIREMENTS OF THE STORE FRONT APPROVAL SHALL CONTROL WITH THE DOOR PANELS BEING HINGED AND LOCKED TO THE FRAMING AS SHOWN HERE-IN.

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
L.M.I. OUT-SWING DOORS
IR350/500 HW WIND ZONE 4

JOB INFORMATION:
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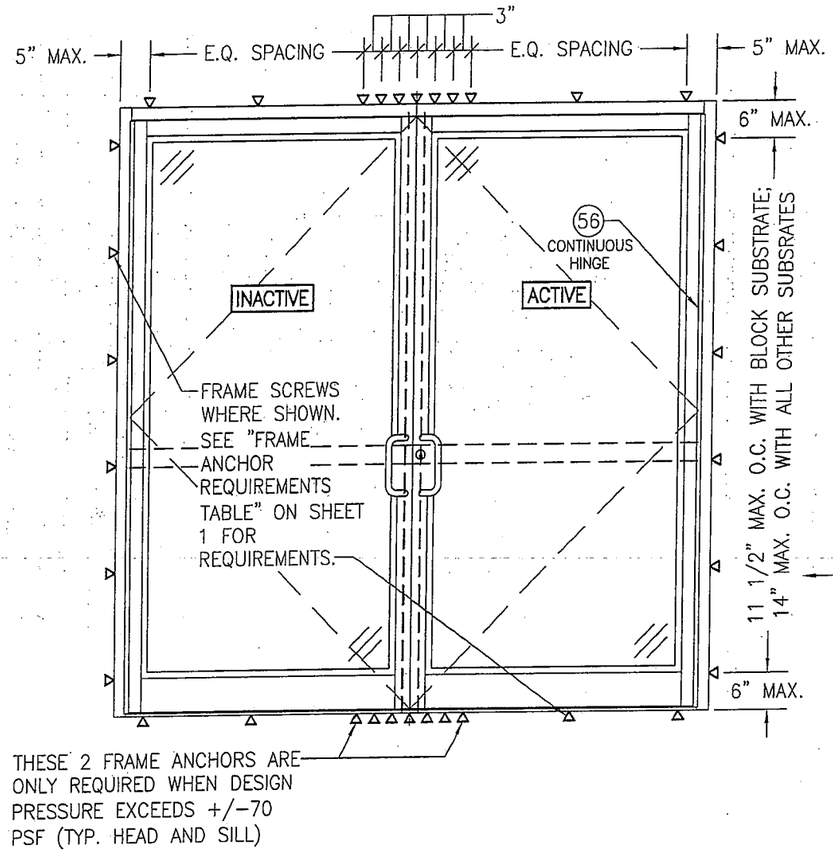
CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
FLA. REG. NO. 113497

DRAWING NO. 1821T | REV.

SHEET NO. 5 OF 12

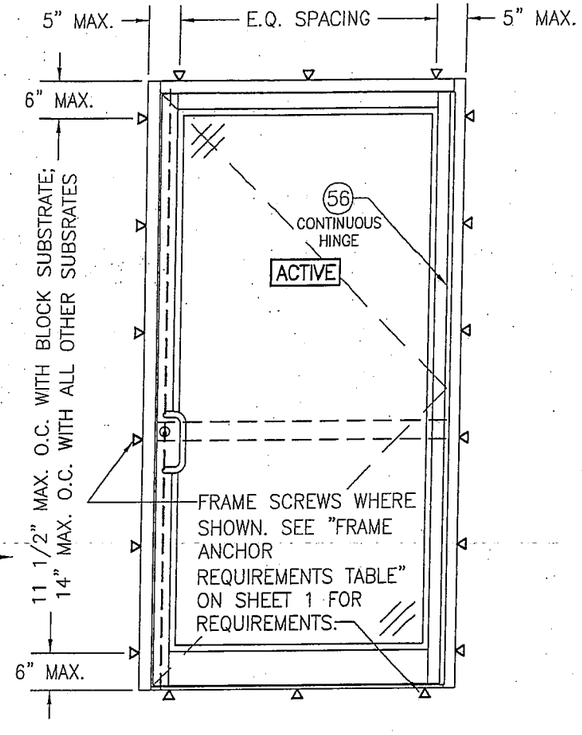


EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR DOUBLE DOORS WITH CONTINUOUS HINGES

SCALE: 1/2" = 1'-0"

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

NOTE: WHEN JOB REQUIRED PRESSURE IS +/-70 PSF OR LESS, SCREW SPACING MAY BE INCREASED TO 17" O.C. WITH ALL SUBSTRATES



EXTERIOR ELEVATION:
INSTALLATION REQUIREMENTS FOR SINGLE DOORS WITH CONTINUOUS HINGE

SCALE: 1/2" = 1'-0"

(FOR DOOR DETAIL NOT SHOWN, SEE ELEVATIONS ON SHEETS 2 & 3)

THE CONDITIONS SHOWN IN THESE ELEVATIONS CONSIDER THE PERIMETER FRAMING TO BE INSTALLED TO A PUNCHED WALL OPENING OR CURTAIN WALL SYSTEM OPENING. WHEN DOOR PANELS ARE INSTALLED INTO A 450, 451 OR 500/501 STOREFRONT SYSTEM (NOT A PUNCHED OPENING), THE INSTALLATION REQUIREMENTS OF THE STORE FRONT APPROVAL SHALL CONTROL WITH THE DOOR PANELS BEING HINGED AND LOCKED TO THE FRAMING AS SHOWN HERE-IN.

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=24 | DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:
KAWNEER COMPANY, INC.
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CERTIFICATION
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WARREN W. SCHAEFER, P.E.
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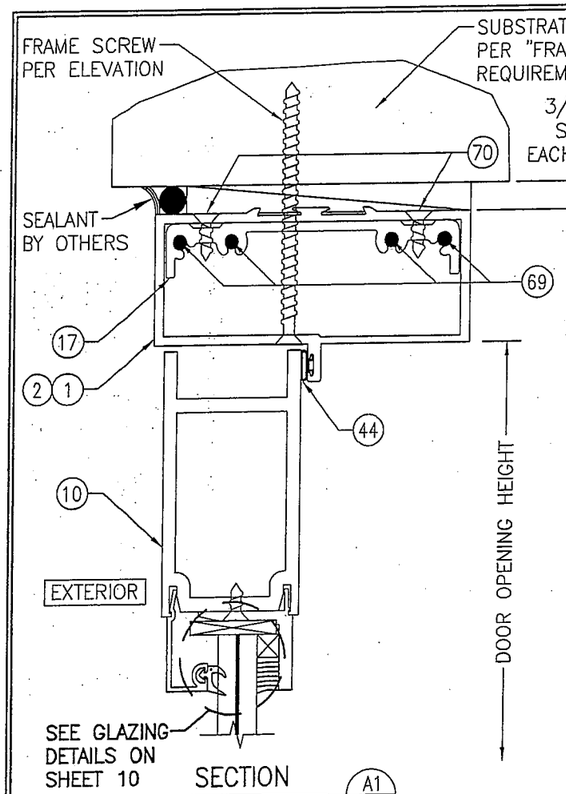
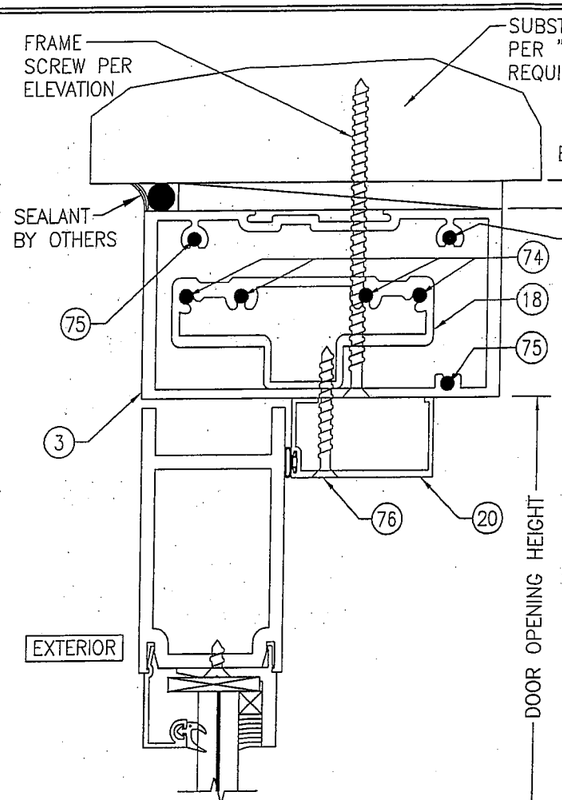
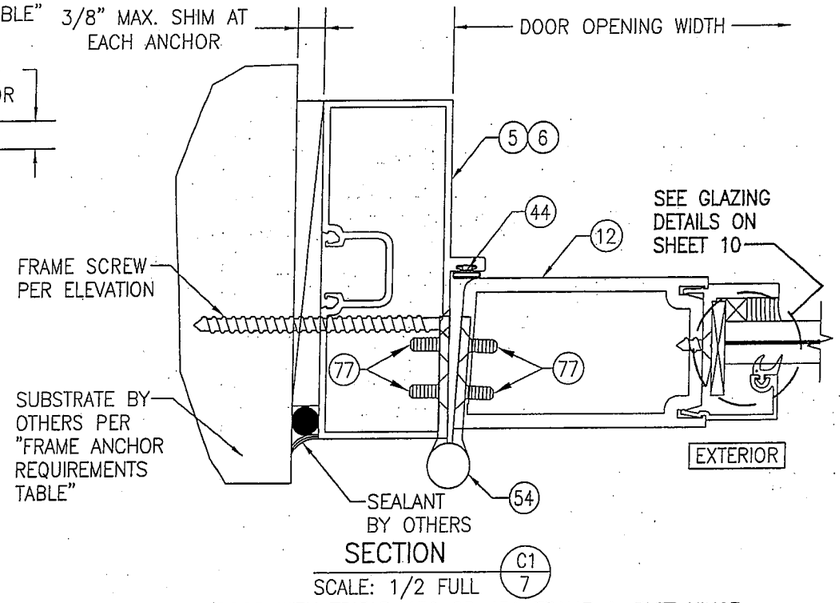
DRAWING NO. 1821T | REV.
SHEET NO. 6 OF 12



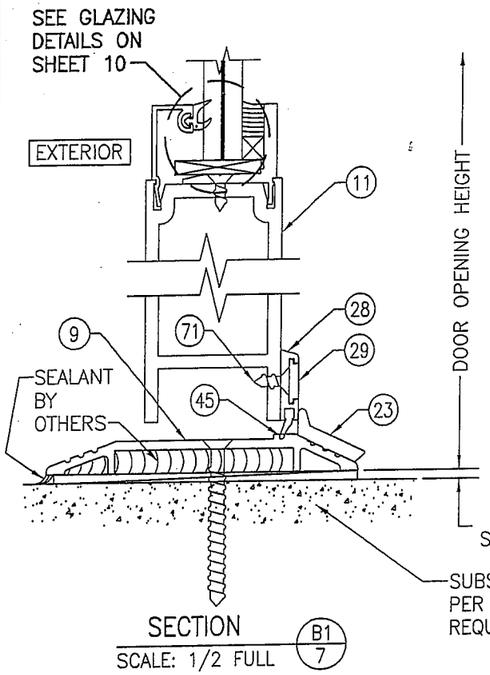
SECTION A1/7
SCALE: 1/2 FULL
(DOOR WITH TRIFAB 450 OR 451 FRAME)



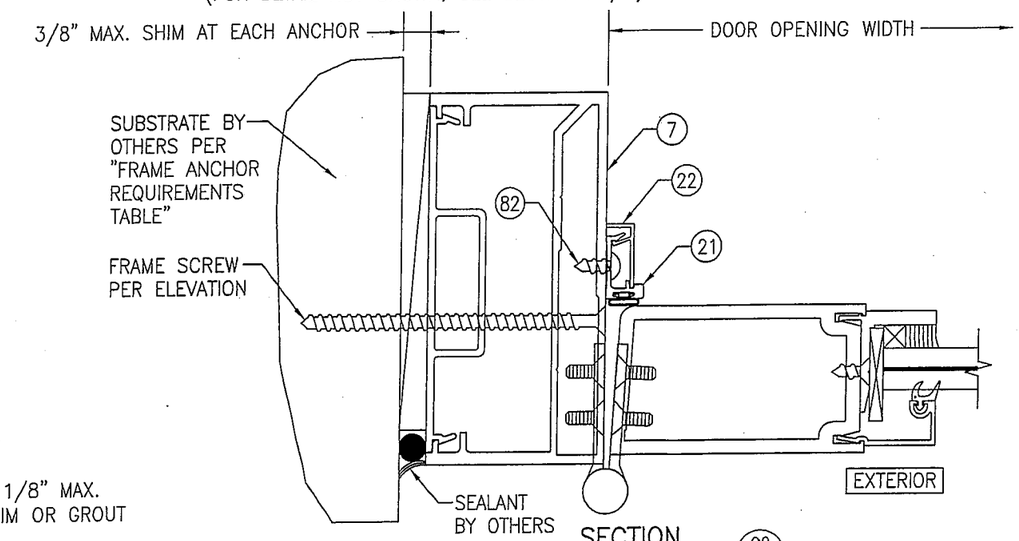
SECTION A2/7
SCALE: 1/2 FULL
(DOOR WITH IR500/501 FRAME)
(FOR DETAIL NOT SHOWN, SEE SECTION A1/7)



SECTION C1/7
SCALE: 1/2 FULL
(DOOR WITH TRIFAB 450 OR 451 FRAME & BUTT HINGE CONDITION. FOR PIVOT AND CONTINUOUS HINGE CONDITIONS SEE ALTERNATE HINGE SECTIONS ON SHEET 8)



SECTION B1/7
SCALE: 1/2 FULL



SECTION C2/7
SCALE: 1/2 FULL
(DOOR WITH IR500/501 FRAME & BUTT HINGE CONDITION. FOR PIVOT AND CONTINUOUS HINGE CONDITIONS SEE ALTERNATE HINGE SECTIONS ON SHEET 8)
(FOR DETAIL NOT SHOWN, SEE SECTION C1/7)

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

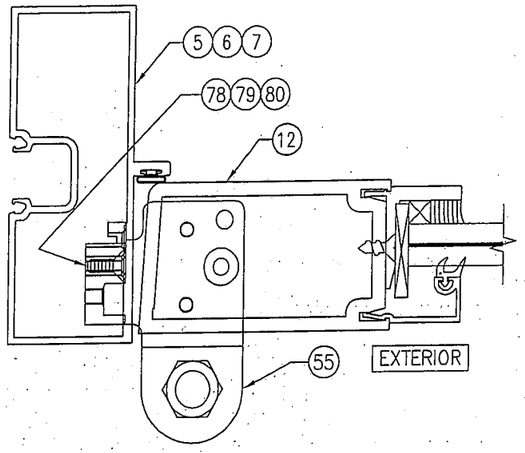
DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:
KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

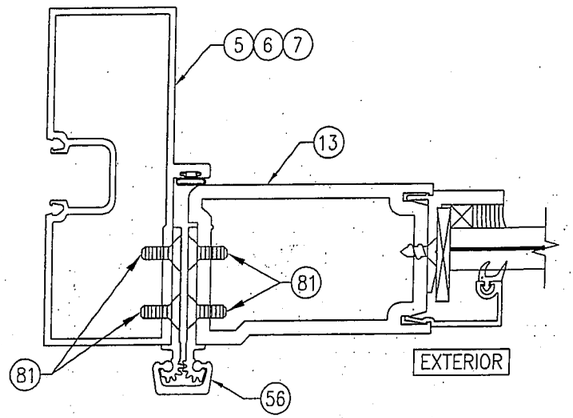
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

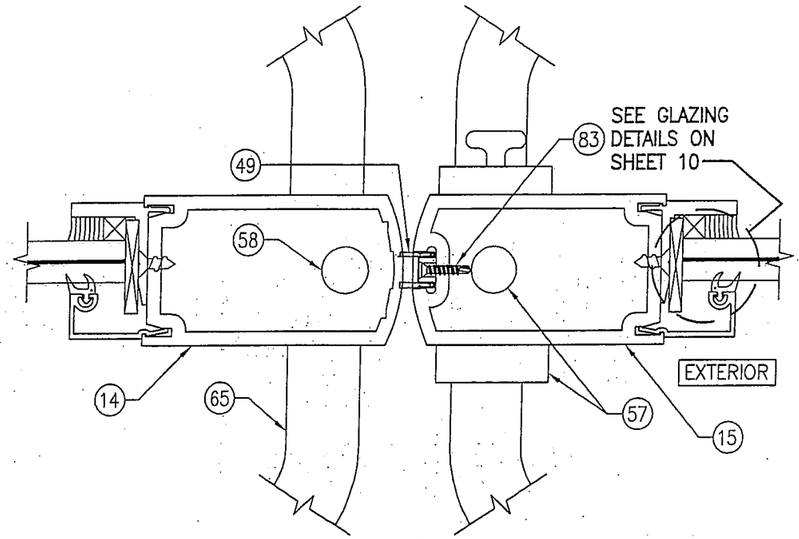
DRAWING NO. 1821T
REV.
SHEET NO. 7 OF 12



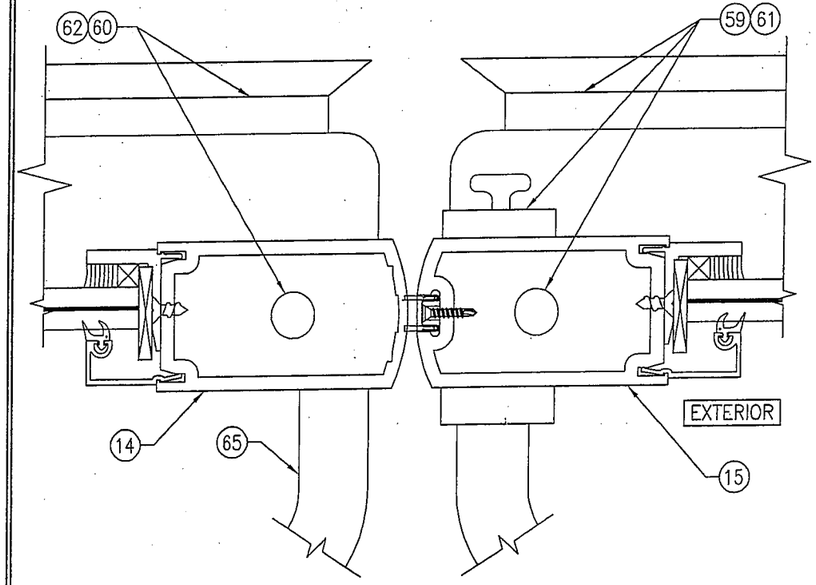
ALTERNATE HINGE SECTION
(PIVOT HINGE CONDITION)
(FOR DETAIL AND INSTALLATION NOT SHOWN, SEE SECTION C1/7)



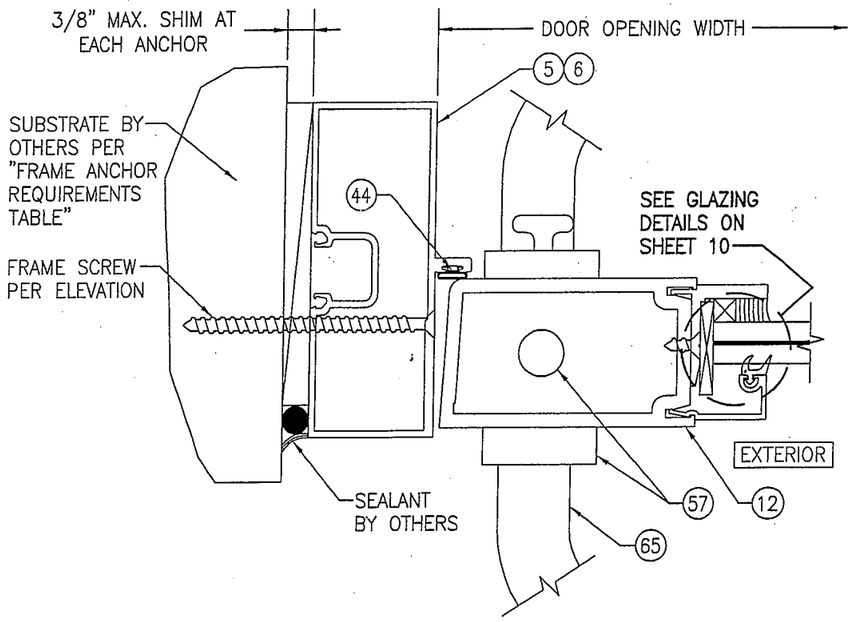
ALTERNATE HINGE SECTION
(CONTINUOUS HINGE CONDITION)
(FOR DETAIL AND INSTALLATION NOT SHOWN, SEE SECTION C1/7)



SECTION D1/8
SCALE: 1/2 FULL
(DOOR WITH LOCK OPTION 1)



SECTION D2/8
SCALE: 1/2 FULL
(DOOR WITH LOCK OPTIONS 2 & 3)
(FOR DETAIL NOT SHOWN, SEE SECTION D1/8)



SECTION E1/8
SCALE: 1/2 FULL
(DOOR WITH TRIFAB 450 OR 451 FRAME & LOCK OPTION 1. FOR LOCK OPTIONS 2 & 3 SEE ALTERNATE LOCK SECTION ON SHEET 9)

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:

KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
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W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
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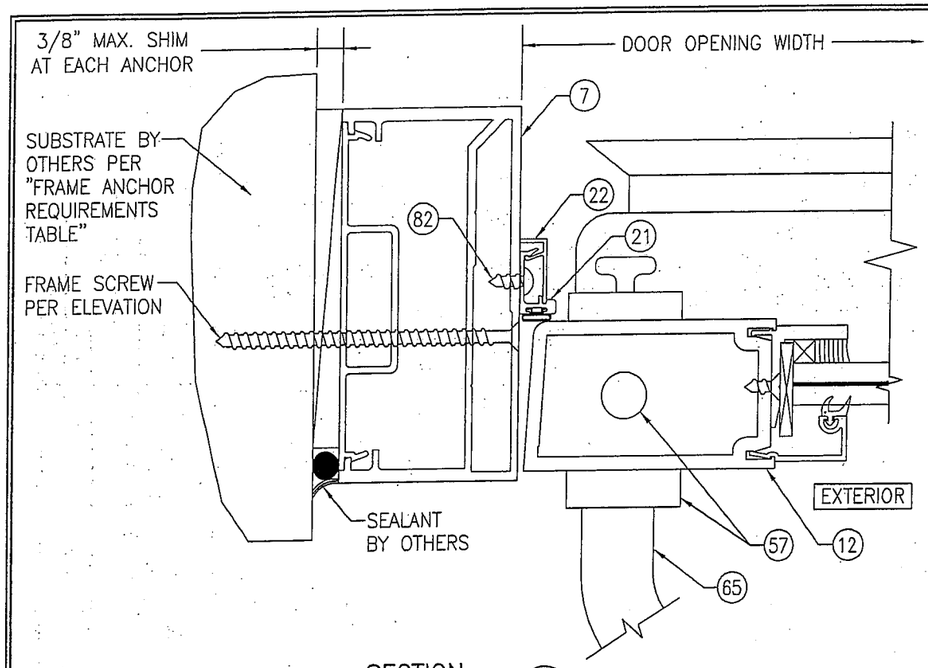
CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

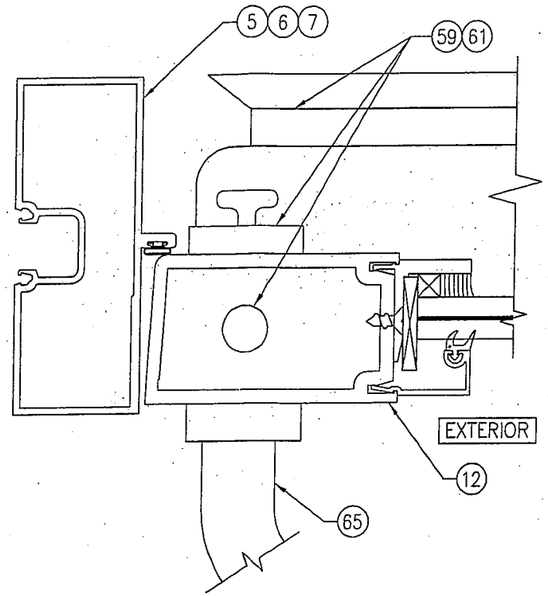
DRAWING NO. 1821T | REV.

SHEET NO. 8 OF 12

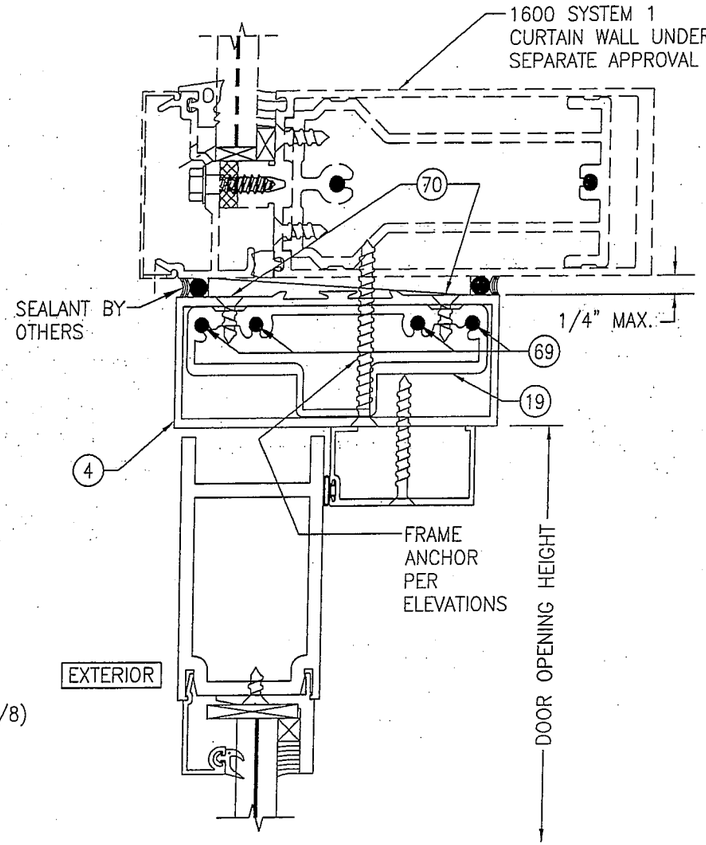


SECTION E2/9
SCALE: 1/2 FULL

(DOOR WITH IR500/501 FRAME & LOCK OPTION 1. FOR LOCK OPTIONS 2 & 3 SEE ALTERNATE LOCK SECTION ON THIS SHEET)
(FOR DETAIL NOT SHOWN, SEE SECTION E1/8)

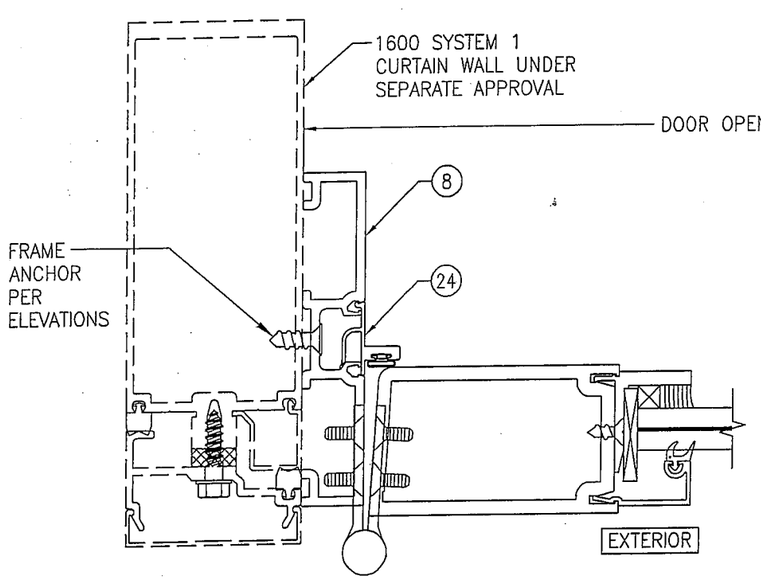


ALTERNATE LOCK SECTION
(LOCK OPTIONS 2 & 3)
(FOR DETAIL AND INSTALLATION NOT SHOWN, SEE SECTION E1/8)



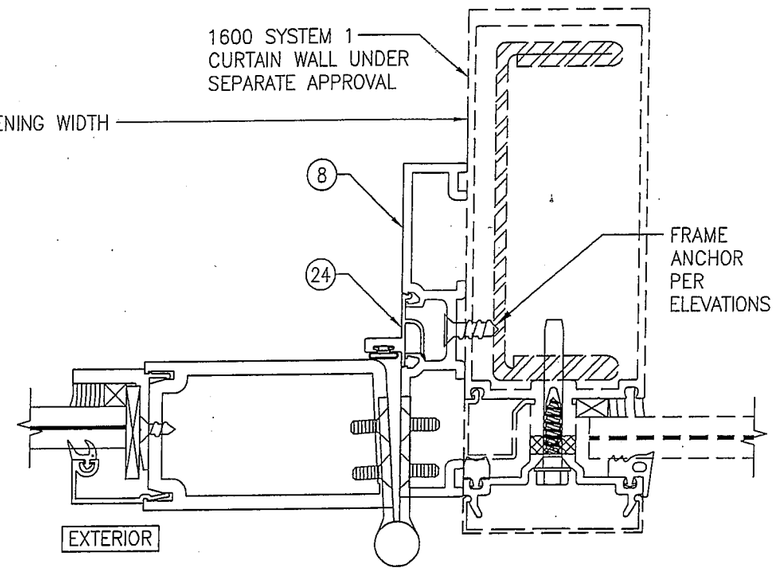
SECTION F/9
SCALE: 1/2 FULL

(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION G/9
SCALE: 1/2 FULL

(BUTT HINGE CONDITION SHOWN. PIVOT AND CONTINUOUS HINGE CONDITIONS ALSO APPLY)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)



SECTION H/9
SCALE: 1/2 FULL

(BUTT HINGE CONDITION SHOWN. PIVOT AND CONTINUOUS HINGE CONDITIONS ALSO APPLY)
(FOR DETAIL NOT SHOWN, SEE OTHER SECTIONS)

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=2 | DATE: 03/19/13

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:
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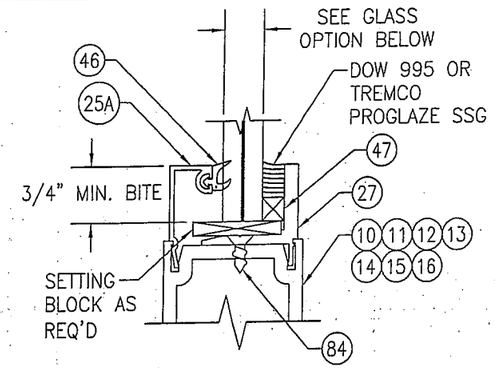
PHONE: 561-744-3424

CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

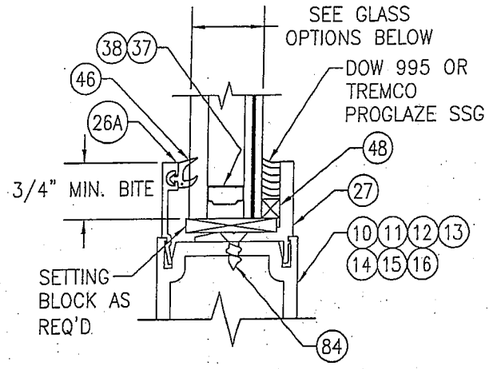
DRAWING NO. 1821T | REV.
SHEET NO. 9 OF 12



TYPICAL MONOLITHIC GLAZING DETAIL

(WET GLAZED)

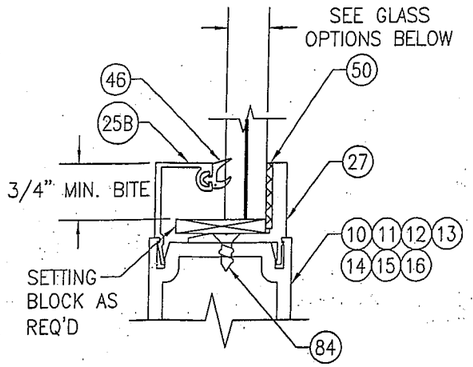
GLASS OPTION:
OPTION 1: 9/16" THICK LAMINATED GLASS (1/4" HT. ST./0.090" DUPONT SG/1/4" HT. ST.)



TYPICAL I.G. GLAZING DETAIL

(WET GLAZED)

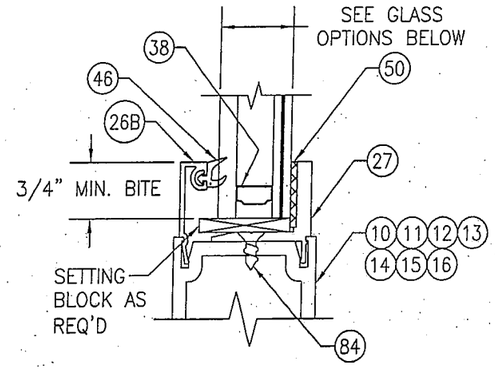
GLASS OPTIONS:
OPTION 2: 1" THICK I.G LAMINATED GLASS (1/4" TEMP EXTERIOR; 1/2" AIR SPACE; 1/8" HT. ST./0.090" DUPONT SG/1/8" HT. ST. INTERIOR)
OPTION 5: 1" THICK I.G LAMINATED GLASS (1/4" TEMP EXTERIOR; 1/4" AIR SPACE; 3/16" HT. ST./0.180" DUPONT SG/3/16" HT. ST. INTERIOR)



TYPICAL MONOLITHIC GLAZING DETAIL

(TAPE GLAZED)

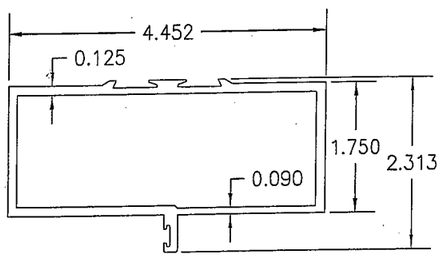
GLASS OPTIONS:
OPTION 3 9/16" THICK LAMINATED GLASS (1/4" HT. ST./0.090" DUPONT BUTACITE PVB/1/4" HT. ST.)



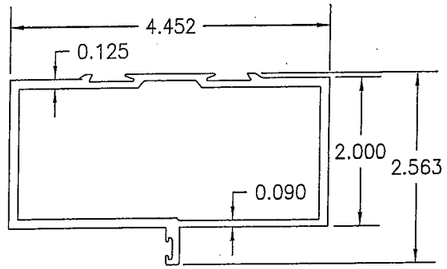
TYPICAL I.G. GLAZING DETAIL

(TAPE GLAZED)

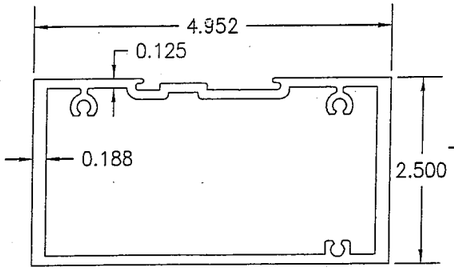
GLASS OPTIONS:
OPTION 4: 1" THICK I.G LAMINATED GLASS (1/4" TEMP EXTERIOR; 1/2" AIR SPACE; 1/8" HT. ST./0.090" DUPONT BUTACITE PVB/1/8" HT. ST. INTERIOR)



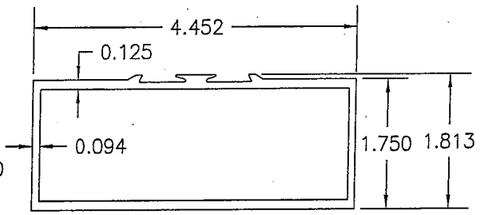
1 TRIFAB 450 HEAD FRAMING



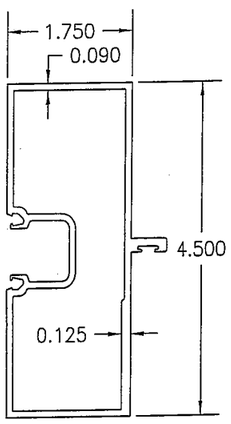
TRIFAB 451 HEAD FRAMING 2



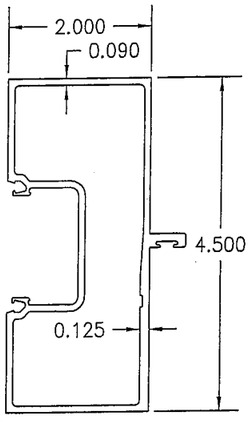
3 IR500/501 HEAD FRAMING



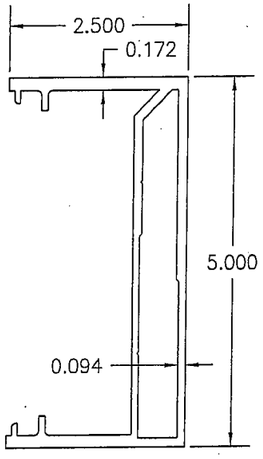
4 HEAD FRAME WITHIN CURTAIN WALL



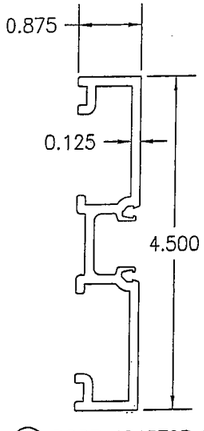
5 TRIFAB 450 JAMB FRAMING



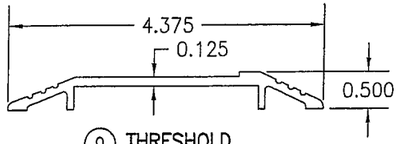
6 TRIFAB 451 JAMB FRAMING



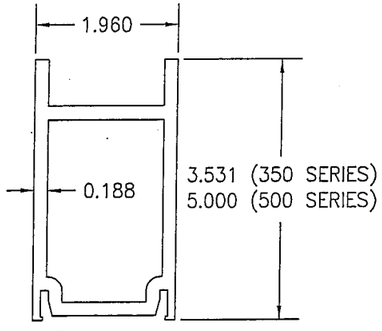
7 IR500/501 JAMB FRAMING



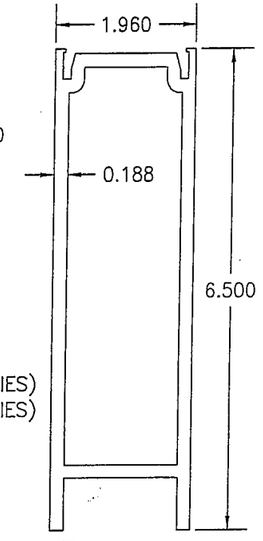
8 DOOR ADAPTOR WITHIN CURTAIN WALL SYSTEM



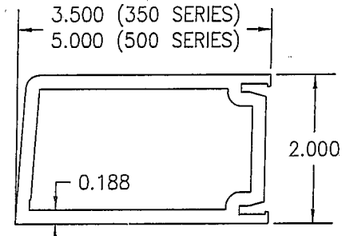
9 THRESHOLD



10 TOP RAIL



11 BOTTOM RAIL



12 JAMB STILE USED WITH BUTT OR PIVOT HINGES

NO.	REVISION DESCRIPTION	BY	DATE

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=2 | DATE: 03/19/13

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:

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555 GUTHRIDGE COURT
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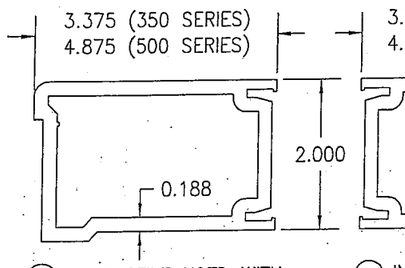
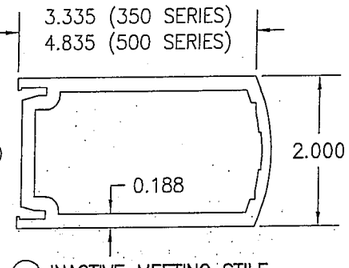
CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 1134977

DRAWING NO. 1821T | REV.

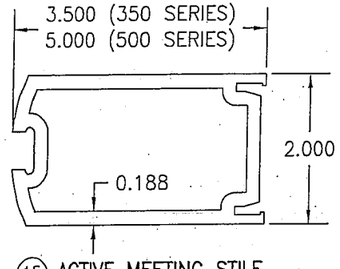
SHEET NO. 10 OF 12



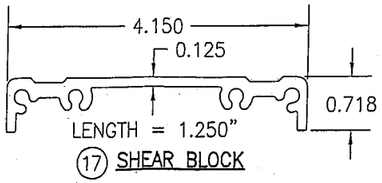
(13) JAMB STILE USED WITH CONTINUOUS HINGES



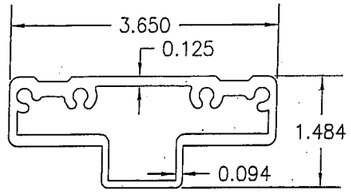
(14) INACTIVE MEETING STILE



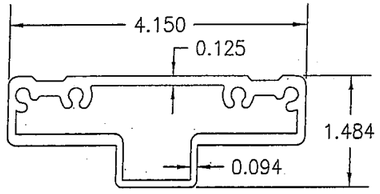
(15) ACTIVE MEETING STILE



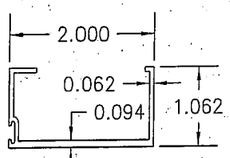
(17) SHEAR BLOCK



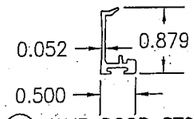
(18) SHEAR BLOCK



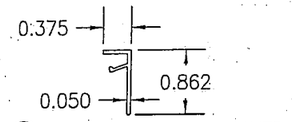
(19) SHEAR BLOCK



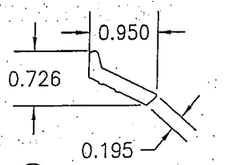
(20) TOP DOOR STOP



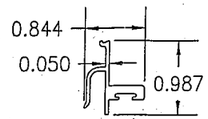
(21) JAMB DOOR STOP BODY



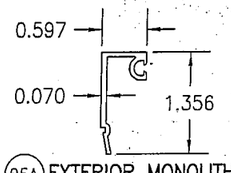
(22) JAMB DOOR STOP COVER



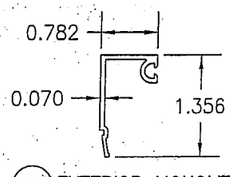
(23) THRESHOLD STOP



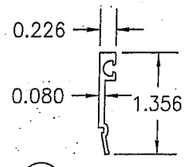
(24) JAMB DOOR STOP



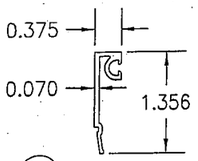
(25A) EXTERIOR MONOLITHIC GLAZING BEAD (WET GLAZED)



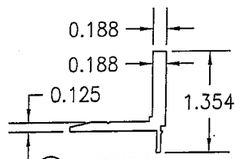
(25B) EXTERIOR MONOLITHIC GLAZING BEAD (TAPE GLAZED)



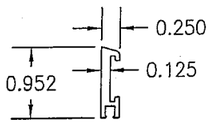
(26A) EXTERIOR I.G. GLAZING BEAD (WET GLAZED)



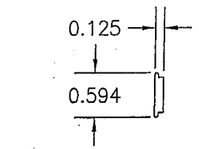
(26B) EXTERIOR I.G. GLAZING BEAD (TAPE GLAZED)



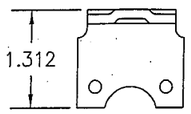
(27) INTERIOR GLAZING BEAD

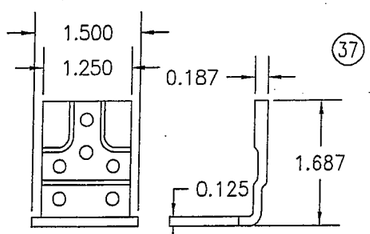


(28) DOOR BOTTOM WEATHER SWEEP BODY

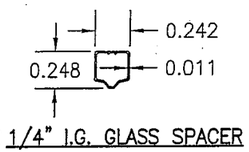


(29) DOOR BOTTOM WEATHER SWEEP SCREW COVER

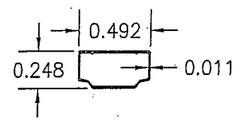




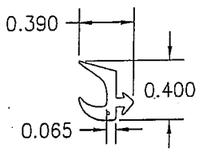
(30) THRESHOLD CLIP



(37) 1/4" I.G. GLASS SPACER



(38) 1/2" I.G. GLASS SPACER



(46) EXTERIOR GLAZING GASKET

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT-SWING DOORS

JOB INFORMATION:

KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F-14980)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO.	REV.
1821T	

SHEET NO.
11 OF 12

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
	PARTS	
1	TRIFAB 450 HEAD FRAMING	6063–T6 ALUMINUM
2	TRIFAB 451 HEAD FRAMING	6063–T6 ALUMINUM
3	IR500/501 HEAD FRAMING	6063–T6 ALUMINUM
4	HEAD FRAME WITHIN CURTAIN WALL SYSTEM	6063–T6 ALUMINUM
5	TRIFAB 450 JAMB FRAMING	6063–T6 ALUMINUM
6	TRIFAB 451 JAMB FRAMING	6063–T6 ALUMINUM
7	IR500/501 JAMB FRAMING	6063–T6 ALUMINUM
8	DOOR ADAPTOR WITHIN CURTAIN WALL SYSTEM	6063–T6 ALUMINUM
9	THRESHOLD	6063–T6 ALUMINUM
10	TOP RAIL	6063–T6 ALUMINUM
11	BOTTOM RAIL	6063–T6 ALUMINUM
12	JAMB STILE USED WITH BUTT OR PIVOT HINGES	6063–T6 ALUMINUM
13	JAMB STILE USED WITH CONTINUOUS HINGES	6063–T6 ALUMINUM
14	INACTIVE MEETING STILE	6063–T6 ALUMINUM
15	ACTIVE MEETING STILE	6063–T6 ALUMINUM
17	SHEAR BLOCK	6063–T6 ALUMINUM
18	SHEAR BLOCK	6063–T6 ALUMINUM
19	SHEAR BLOCK	6063–T6 ALUMINUM
20	TOP DOOR STOP	6063–T6 ALUMINUM
21	JAMB DOOR STOP BODY	6063–T6 ALUMINUM
22	JAMB DOOR STOP COVER	6063–T6 ALUMINUM
23	THRESHOLD STOP	6063–T6 ALUMINUM (PLACED @ MID–SPAN OF SILL)
24	JAMB DOOR STOP	6063–T6 ALUMINUM
25A	EXTERIOR MONOLITHIC GLAZING BEAD (WET GLAZED)	6063–T6 ALUMINUM
25B	EXTERIOR MONOLITHIC GLAZING BEAD (TAPE GLAZED)	6063–T6 ALUMINUM
26A	EXTERIOR I.G. GLAZING BEAD (WET GLAZED)	6063–T6 ALUMINUM
26B	EXTERIOR I.G. GLAZING BEAD (TAPE GLAZED)	6063–T6 ALUMINUM
27	INTERIOR GLAZING BEAD	6063–T6 ALUMINUM
28	DOOR BOTTOM WEATHER SWEEP BODY	6063–T6 ALUMINUM
29	DOOR BOTTOM WEATHER SWEEP SCREW COVER	6063–T6 ALUMINUM
30	THRESHOLD CLIP	1010–1020 H.R. STEEL
37	1/4" I.G. GLASS SPACER	3005 OR 3105 ALUMINUM
38	1/2" I.G. GLASS SPACER	3005 OR 3105 ALUMINUM
	SEALS & SEALANTS	
44	DOOR BULB WEATHERING	ALCRYN DUROMETER 70 +/–5 & RIGID PVC
45	DOOR SWEEP	NEOPRENE
46	EXTERIOR GLAZING GASKET	TREMCO TR–13536E EPDM DUROMETER 70 +/–5
47	5/16" X 5/16" GLAZING TAPE	POLYURETHANE FAOM DUROMETER 30 +/–5
48	1/4" X 1/4" GLAZING TAPE	POLYURETHANE FAOM DUROMETER 30 +/–5
49	ADJUSTABLE ASTRAGAL WEATHERING	5052–H32 ALUMINUM/NYLON/POLYURETHANE/EPDM
50	0.090" X 0.875" GLAZING TAPE	3M CONFORMABLE ACRYLIC FOAM
	HARDWARE	
54	BUTT HINGE	HAGER 037–264
55	TOP OFFSET PIVOT HINGE	KAWNEER NO. 050–322
	INTERMEDIATE PIVOT HINGE	KAWNEER NO. 037–233/037–234
	BOTTOM OFFSET PIVOT HINGE	KAWNEER NO. 050–326/050–327
56	CONTINUOUS HINGE	HAGER/ROTON 050–820

ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
	HARDWARE CONTINUED	
57	ACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 1)	ADAMS–RITE 1850 3–POINT LOCK SYSTEM WITH KAWNEER'S CYLINDER, THUMBTURN & PUSH PACKAGE
58	INACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 1)	ADAMS–RITE FLUSH BLOTS 50–079 TOP FLUSH BOLT 50–075 BOTTOM FLUSH BOLT
59	ACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 2)	KAWNEER 1686 PANIC DEVICE SYSTEM WITH KAWNEER'S DEADBOLT (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
60	INACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 2)	KAWNEER 1686 PANIC DEVICE (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS
61	ACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 3)	FALCON HH 1690 OR VON DUPRIN HH9947 CONSEALED VERTICAL ROD PANIC DEVICE SYSTEM WITH SCHLAGE'S DEADBOLT (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
62	INACTIVE DOOR LOCK ASSEMBLY (LOCK OPTION 3)	FALCON HH 1690 OR VON DUPRIN HH9947 CONSEALED VERTICAL ROD PANIC DEVICE SYSTEM (PANIC DEVICE ACTUATES TOP & BOTTOM SHOOTBOLTS)
65	PUSH–PULL HANDLE	AS REQ'D
	FASTENERS	
69	NO. 10 X 1 19/32" PHTF SCREW	4 PER SHEAR BLOCK
70	NO. 10 X 9/16" FHTF SCREW	2 PER SHEAR BLOCK
71	NO. 6 X 3/8" FHTF SCREW	WITHIN 2" FROM ENDS & 10" MAX. O.C.
74	NO. 12 X 1 7/8" FHTF SCREW	4 PER SHEAR BLOCK
75	NO. 12 X 1" PHTF SCREW	3 PER HORIZONTAL
76	NO. 8 X 3/8" PHTF SCREW	WITHIN 1" FROM ENDS & 16" MAX. O.C.
77	NO. 12–24 X 9/16" SCREW	8 PER HINGE
78	5/16"–18 X 5/8" SCREW	2 PER TOP PIVOT HINGE
79	NO. 12–24 X 9/16" SCREW	2 PER INTERMEDIATE PIVOT HINGE
80	1/4–20 X 3/8" SCREW	3 PER BOTTOM PIVOT HINGE
81	NO. 12–24 X 13/32" SCREW	2 9/16" FROM ENDS & 5 1/8" MAX. O.C.
82	NO. 8 X 3/8" FHTF SCREW	WITHIN 1" FROM ENDS & 9" MAX. O.C.
83	NO. 6–18 FHTF SCREW	10 PER LEAF
84	NO. 10 X 1/2" FHTF SCREW	WITHIN 3" FROM ENDS & 11 1/8" MAX. O.C.

STATE OF TEXAS
WARREN W. SCHAEFER
113497
LICENSED
PROFESSIONAL ENGINEER

DRAWN BY: W.R.M. | CHECKED BY: W.W.S.
PLOT: 1=2 | DATE: 03/19/13

NO.	REVISION DESCRIPTION	BY	DATE

JOB INFORMATION:

DRAWING TITLE
IR350/500 HW WIND ZONE 4 L.M.I. OUT–SWING DOORS

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (REG. NO. F–14980)
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CERTIFICATION
MAR 20 2013
WARREN W. SCHAEFER, P.E.
P.E. NO. 113497

DRAWING NO. 1821T | REV.
SHEET NO. 12 OF 12