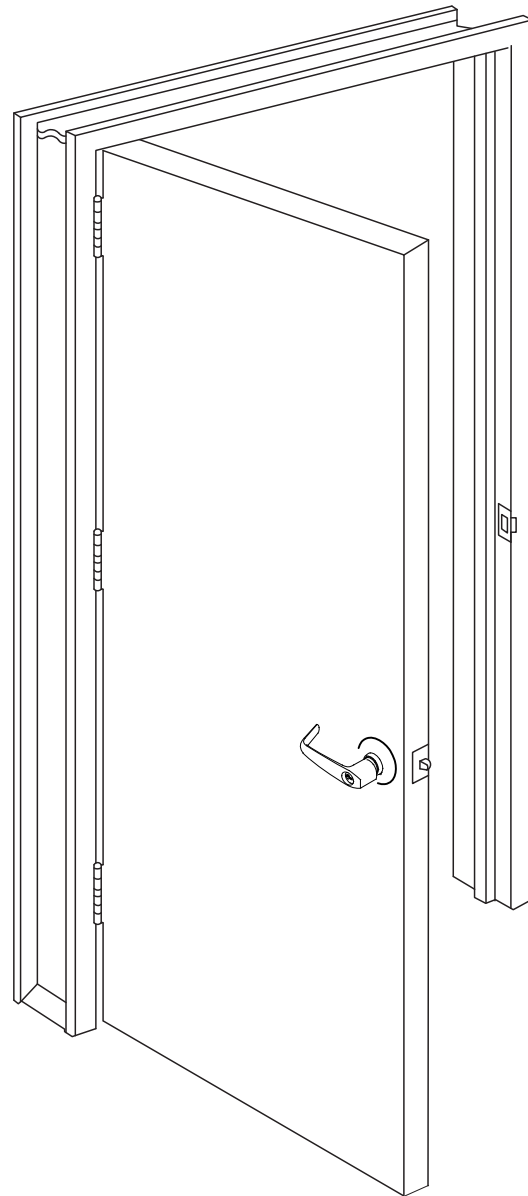


**ENGINEERING DETAILS for +/-70 PSF HURRICANE RATED ASSEMBLY
SERIES PIOCANE 70 Full Flush and Seamless 1³/₄" Doors
FOR USE IN FLORIDA INCLUDING MIAMI-DADE (HVHZ)**

Specifications

1. PIOCANE-70 doors shall be formed from two 16 gage A60 Galvannealed Steel per ASTM A924 and A653 and shall be 1-3/4" thick.
2. Doors shall have a core of rigid Expanded Polystyrene The core shall have a nominal density of 1 #/ft³,
3. Full Flush doors shall have vertical mechanical interlocking seams on hinge and lock edges. The seam shall be tack welded every 12". There shall be no seam on the faces of door.
4. Seamless doors shall have no seams on the faces or edges of doors. Vertical edges of doors shall be tack welded every 12" full height of the door.
5. All hinge reinforcements shall be 3/16" thick.
6. All doors shall be internally reinforced with a 12 gage plate both sides of the door for application of surface applied door closures and holders.
7. Frames shall be fabricated from 14 Gage steel with welded Corners and reinforced for approved hardware
8. All doors and frames shall be cleaned and given one coat of baked on rust- inhibitive metal primer in compliance with ANSI A250.10-2004
9. All fire rated doors, where indicated, shall be manufactured in accordance with UL or WHI procedures and bear the appropriate classification mark (label).
10. Piocane 70 Assembly is approved for use in the HVHZ areas of Florida and available in singles 4'-0" x 8'-0" and in Pairs 8'-0" x 8'-0" when used with approved Hardware and installation requirements. The FL # is 7971
11. Door construction complies with ANSI A250.8-2003 (SDI 100)
12. Hardware reinforcements are in accordance with ANSI A 250.6-2003. Locations are in accordance with ANSI/BHMA A156.115
13. Doors shall be packaged to minimize damage in transit and handling.
14. Piocane 70 Door and Frame details are available at www.floridabuilding.org .



Assembly shown for illustration only

**ENGINEERING DETAILS for HURRICANE RATED ASSEMBLY
 SERIES PIOCANE 70 Full Flush and Seamless 1³/₄" Doors
 FOR USE IN FLORIDA INCLUDING MIAMI-DADE (HVHZ)**

LIST OF APPROVED HARDWARE

1.	VON DUPRIN SERIES 9947 CONCEALED VERTICAL ROD DEVICE-
2.	VON DUPRIN SERIES 99 RIM EXIT DEVICE-
3.	VON DUPRIN SERIES XP 99 RIM EXIT DEVICE-
4.	VON DUPRIN 9954 HARDWARE MULLION.-
5.	SCHLAGE ND SERIES CYL.LOCK-
6.	SCHLAGE 600 SERIES DEAD LOCK-
7.	IVES 458 FLUSH BOLTS-
8.	HAGER MORTISE 4 1/2" HINGES-
9.	ZERO- #65A ALUM. RABBETED SADDLE -5" WIDE
10.	ZERO- #188S-BK -0.5" SILICONE SEAL WITH PSA-
11.	ZERO #118B CUSHION BRONZE 9/16" WITH TAPE
12.	ZERO # 52A- NEOPRENE DOOR SWEEP.
13.	ZERO # 328A -NEOPRENE DOOR SWEEP
14.	TAPCON 3/16" X 2 3/4" CONCRETE SCREWS-
15.	EXPANSION BOLTS-3/8" X 5"

PIONEER INDUSTRIES

SERIES PIOCANE FLUSH STEEL DOOR

INSTALLATION NOTES:

1. ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
3. INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF ±1/2 INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.
4. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM(S). MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER.
5. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
6. INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
7. FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL EXPANSION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.
8. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
9. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - A. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55
 - B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2700 PSI.
 - C. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).

GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE 2007 FLORIDA BUILDING CODE (FBC), INCLUDING HVHZ AND HAS BEEN EVALUATED ACCORDING TO THE FOLLOWING:
 - TAS 201-94
 - TAS 202-94
 - TAS 203-94
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
4. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
5. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED ON THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE.
6. WINDOW FRAME MATERIAL: 16 GA. STEEL

TABLE OF CONTENTS

SHEET	REVISION	SHEET DESCRIPTION
1	-	INSTALLATION & GENERAL NOTES
2	-	ELEVATION
3	-	MASONRY ANCHORS
4	-	VERTICAL SECTIONS
5	-	HORIZONTAL SECTIONS
6	-	HORIZONTAL SECTIONS
7	-	FRAME CORNER CONSTRUCTION & HINGE REINFORCEMENTS
8	-	BILL OF MATERIALS

DESIGN PRESSURE RATING

DESIGN PRESSURE - ALL SIZES	MISSILE IMPACT RATING
+70.0 / -70.0 PSF	SMALL AND LARGE MISSILE IMPACT RATED

REVISIONS

NO.	DESCRIPTION	BY	DATE

TITLE:
PIOCANE STEEL DOOR
INSTALLATION &
GENERAL NOTES

PREPARED BY:
CERTWORKS, LLC
 127 W. FAIRBANKS AVE., STE. 438
 WINTER PARK, FL 32789
 PH: (407) 644-6957 FX: (407) 644-2366

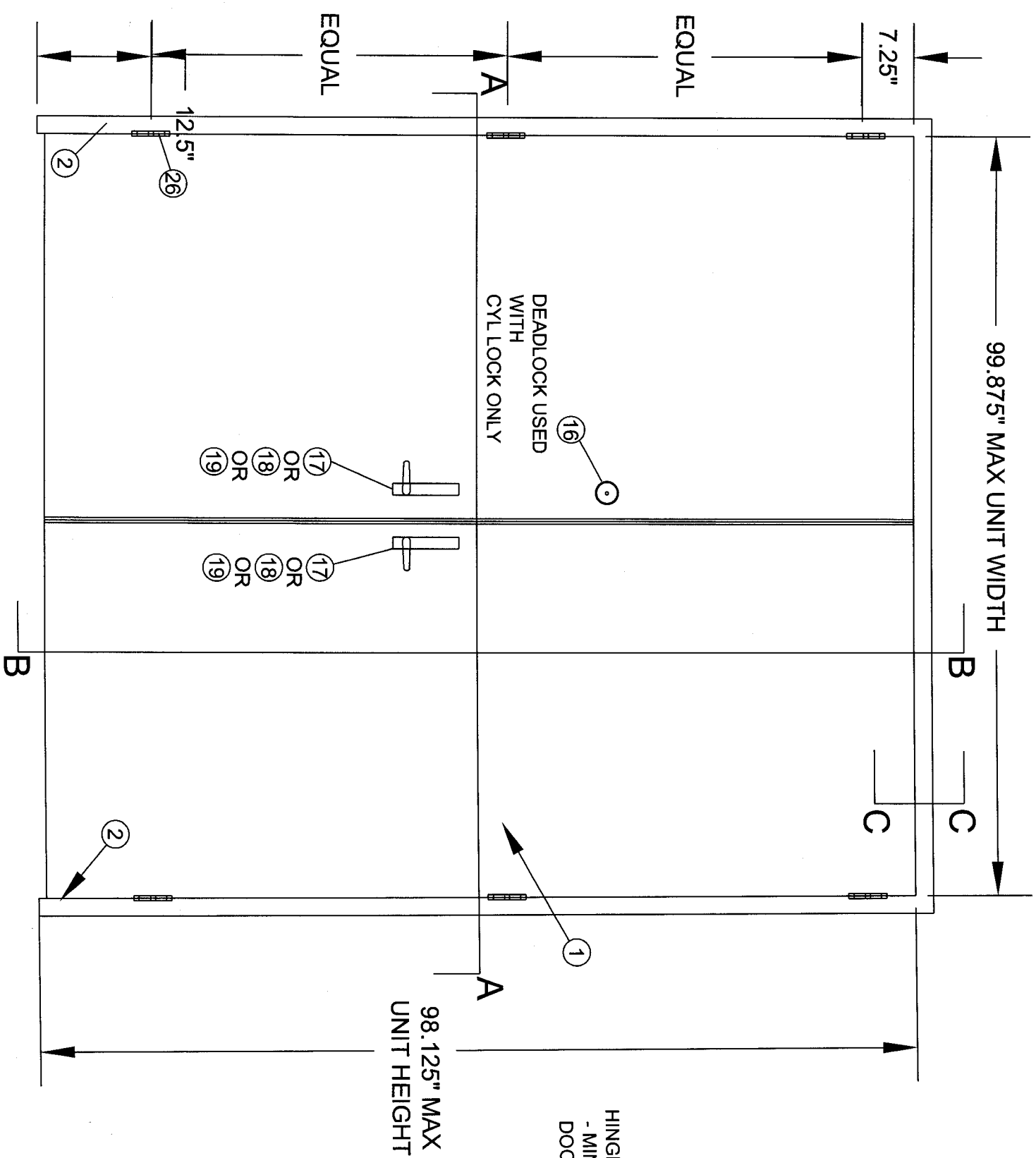
PIONEER INDUSTRIES
 171 SOUTH NEWMAN STREET
 HACKENSACK, NJ 07601
 PH: (201) 933-1900 FX: (201) 933-9580



DATE: 09.03.09
DWN BY: JLR
CHK BY: KSD
SCALE: NTS

DWG #: P1001
SHEET: 1 OF 8

EXTERIOR ELEVATION +/- 70 PSF



DESIGN PRESSURE RATING

	PRESSURE	WATER INFILTRATION	LARGE MISSILE IMPACT
POSITIVE	+70	YES	YES
NEGATIVE	-70	YES	YES

HINGE REQUIREMENTS
- MINIMUM 3 HINGE REQUIRED PER
DOOR LEAF

98.125" MAX
UNIT HEIGHT

99.875" MAX UNIT WIDTH

EQUAL

EQUAL

7.25"

12.5"

DEADLOCK USED
WITH
CYL LOCK ONLY

17 OR 18 OR 19

17 OR 18 OR 19

B

B

C

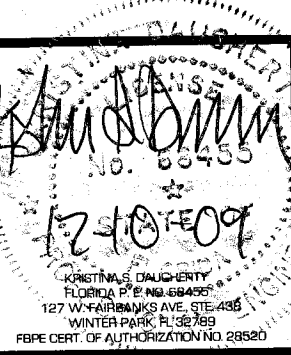
C

A

2

1

2



REVISIONS

NO.	DESCRIPTION	BY	DATE

TITLE:
PIOCANE STEEL DOOR
ELEVATION

PREPARED BY:
CERTWORKS, LLC
 127 W. FAIRBANKS AVE., STE. 438
 WINTER PARK, FL 32789
 PH: (407) 644-6957 FX: (407) 644-2366

PIONEER
WIN BIRD IS OPEN

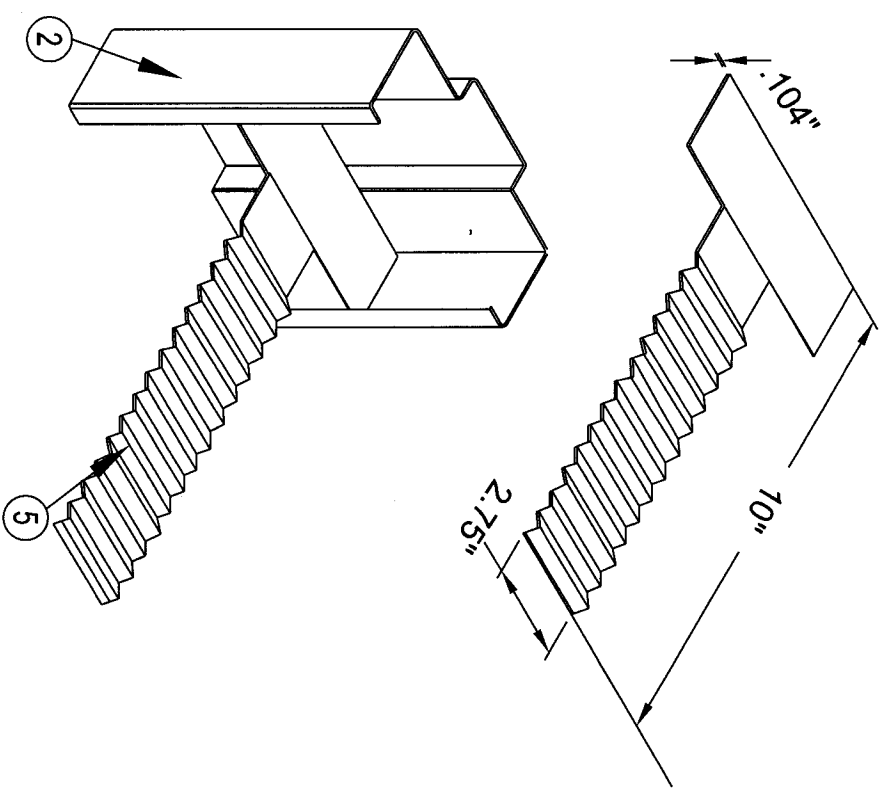
PIONEER INDUSTRIES
 171 SOUTH NEWMAN STREET
 HACKENSACK, NJ 07601
 PH: (201) 933-1900 FX: (201) 933-9580

DATE: 09.03.09
 DWN BY: JLR
 CHK BY: KSD
 SCALE: NTS

DWG #: **PI001**

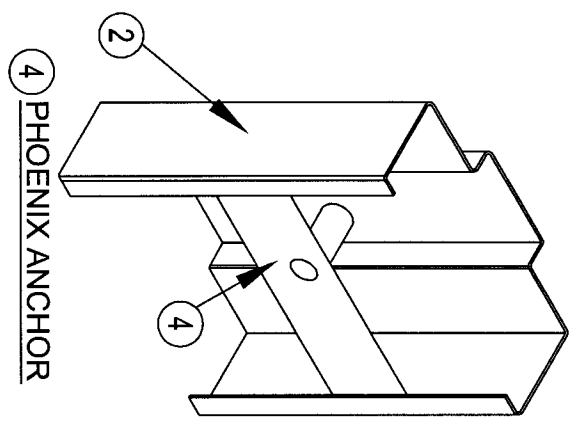
SHEET: 2 OF 8

MASONRY ANCHORS .



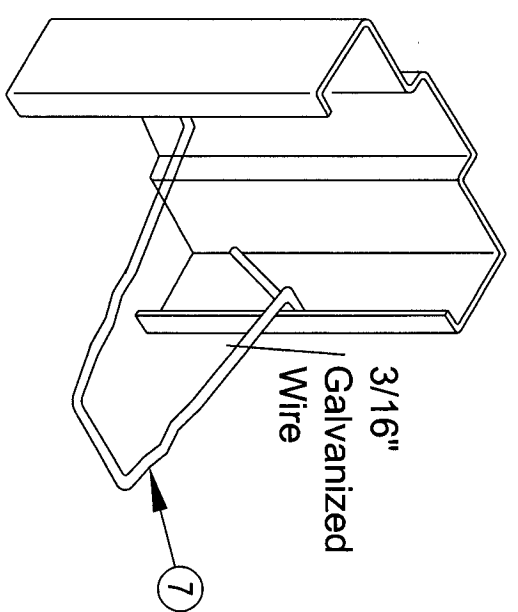
5 MASONRY T ANCHOR

ANCHOR QUANTITY:
4 PER JAMB 8 PER FRAME
SPACED FROM BOTTOM
6.875", 12.5", 36", 86"
(NOT TO EXCEED AS TESTED)



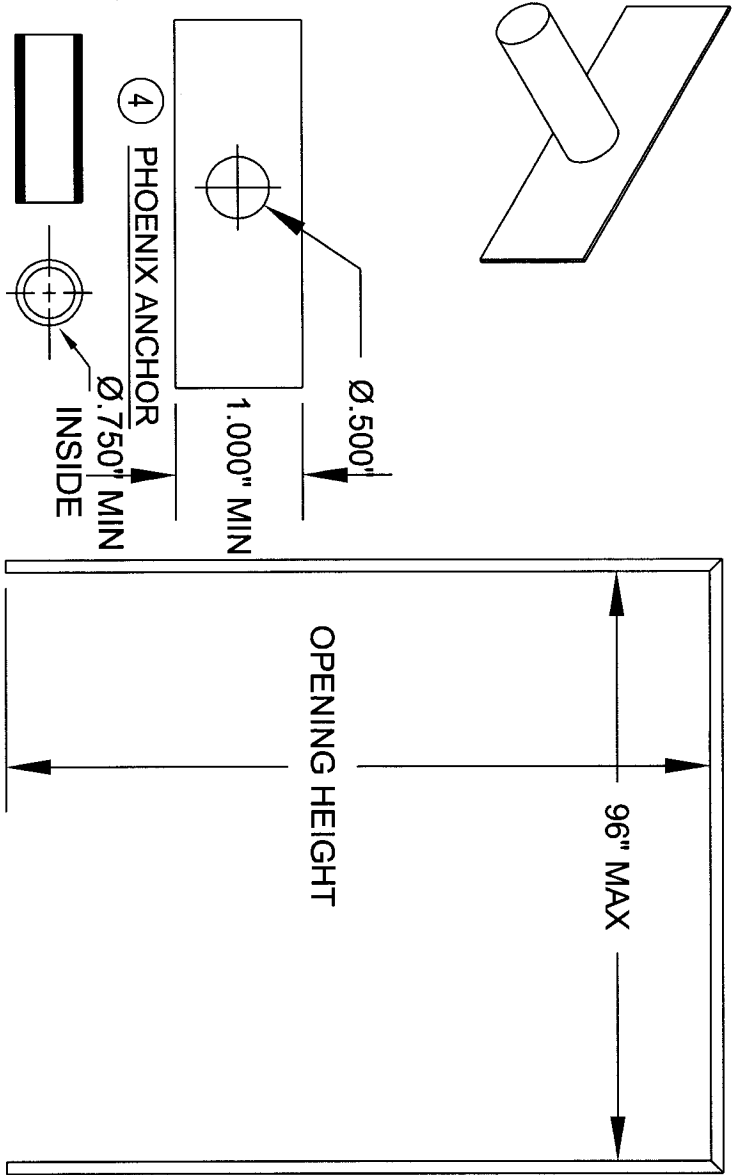
4 PHOENIX ANCHOR

ANCHOR QUANTITY:
4 PER JAMB 8 PER FRAME
SPACED FROM BOTTOM
6.875", 33.25", 64", 88.5"
(NOT TO EXCEED AS TESTED)



7 WIRE MASONRY ANCHOR


(Adjustable to desired jamb depth)
ANCHOR QUANTITY:
4 PER JAMB 8 PER FRAME
SPACED FROM BOTTOM
15.5", 37.5", 61.5", 87"
(NOT TO EXCEED AS TESTED)



REVISIONS

NO.	DESCRIPTION	BY	DATE

TITLE:
**PIOCANE STEEL DOOR
MASONRY ANCHORS**

PREPARED BY:
 **CERTWORKS, LLC**
 127 W. FAIRBANKS AVE., STE. 438
 WINTER PARK, FL 32789
 PH: (407) 644-6957 FX: (407) 644-2366

PIONEER NEW IDEAS AS APEN

PIONEER INDUSTRIES
 171 SOUTH NEWMAN STREET
 HACKENSACK, NJ 07601
 PH: (201) 933-1900 FX: (201) 933-9580

(Handwritten signature and date)
 KRISTINA S. DAUGHERTY
 FLORIDA P.E. NO. 68455
 127 W. FAIRBANKS AVE., STE. 438
 WINTER PARK, FL 32789
 FBPE CERT. OF AUTHORIZATION NO. 28820

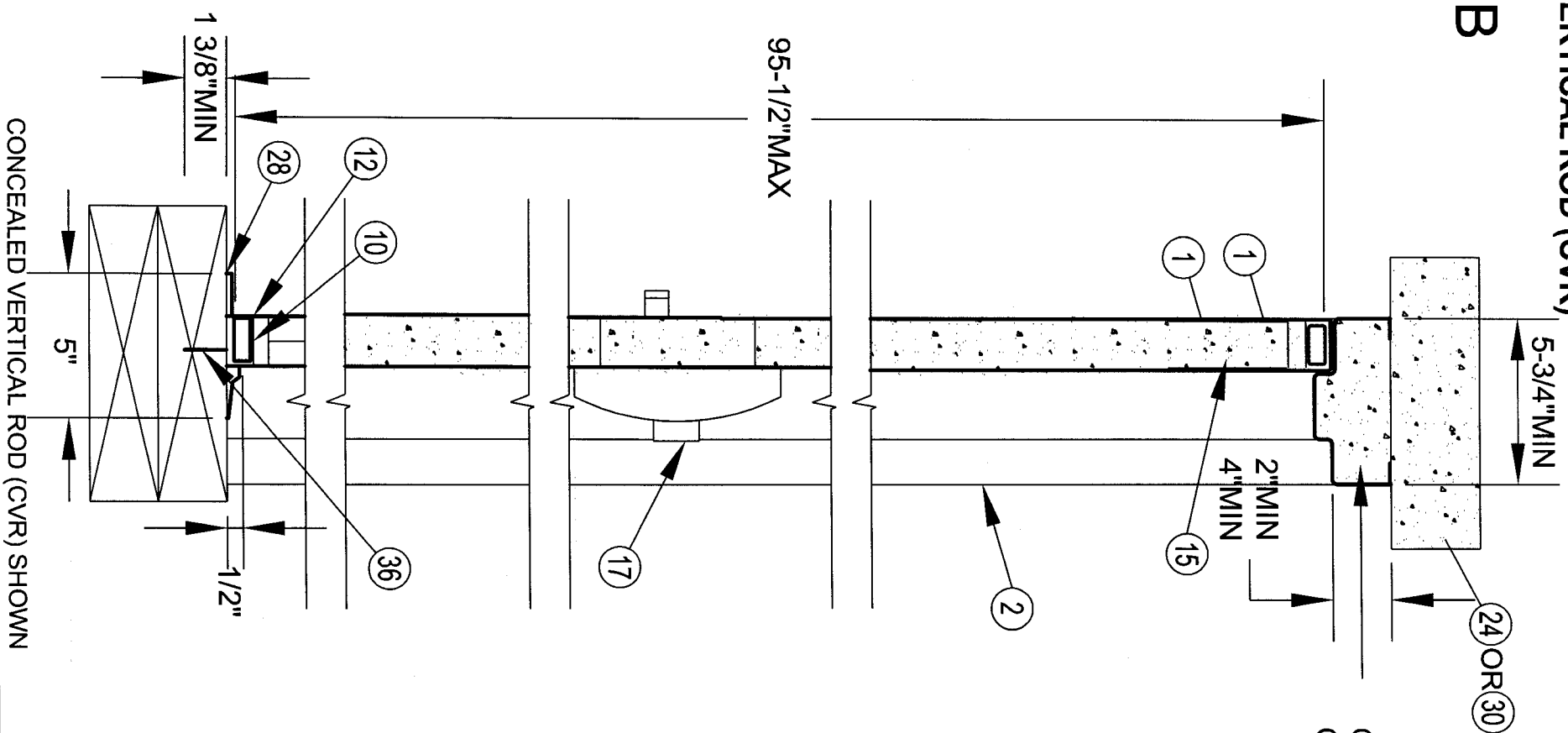
DATE: 09.03.09
 DWN BY: JLR
 CHK BY: KSD
 SCALE: NTS

DWG #:
PI001

SHEET: 3 OF 8

CONCEALED VERTICAL ROD (CVR)

SECTION B-B

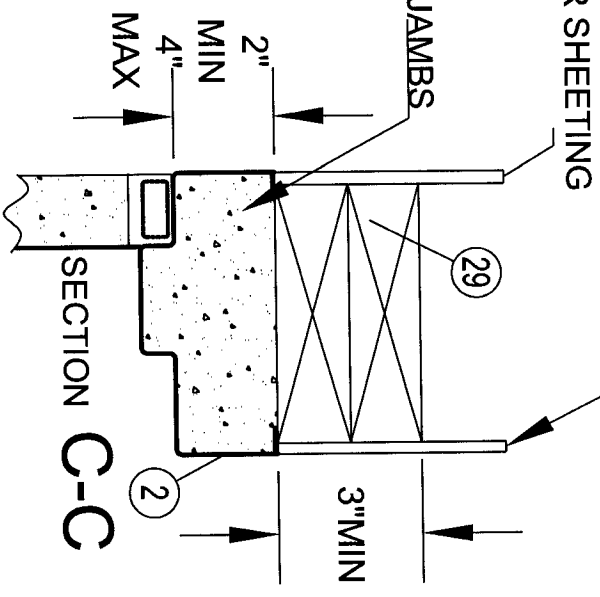


CONCEALED VERTICAL ROD (CVR) SHOWN

GROUTING OF HEAD AND JAMBS
OPTIONAL

EXTERIOR SHEETING

INTERIOR SHEETING



SECTION C-C

REVISIONS

NO.	DESCRIPTION	BY	DATE

TITLE:
**PIOCANE STEEL DOOR
VERTICAL SECTIONS**

PREPARED BY:
CERTWORKS, LLC
127 W. FAIRBANKS AVE., STE. 438
WINTER PARK, FL 32789
PH: (407) 644-6957 FX: (407) 644-2366

PIONEER
IRON ROD IS GREY

PIONEER INDUSTRIES
171 SOUTH NEWMAN STREET
HACKENSACK, NJ 07601
PH: (201) 933-1900 FX: (201) 933-9580

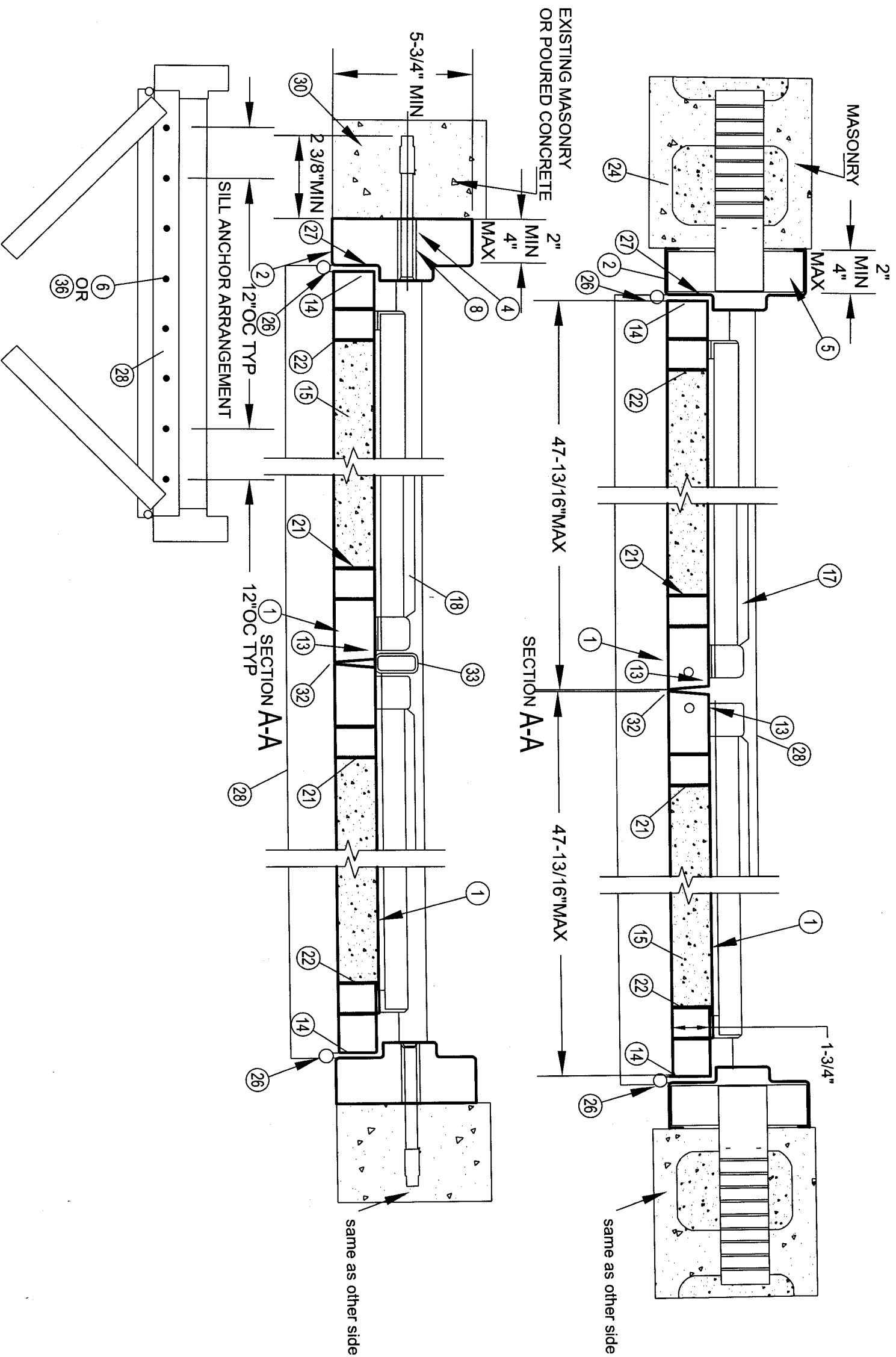
DATE: JLR
DWN BY: ABC
CHK BY: KSD
SCALE: NTS

12-10-09
KRISTINA S. DAUGHERTY
FLORIDA P.E. NO. 68455
127 W. FAIRBANKS AVE., STE. 438
WINTER PARK, FL 32789
FBPE CERT. OF AUTHORIZATION NO. 268820

DWG #:
PI001

SHEET: **4 OF 8**

PAIR DOORS WITH CONCEALED VERTICAL ROD OR RIM EXIT (SINGLE DOORS SAME AS ACTIVE DOOR).



PIONEER
BIRD BLOOD IS BROWN

PIONEER INDUSTRIES
171 SOUTH NEWMAN STREET
HACKENSACK, NJ 07601
PH: (201) 933-1900 FX: (201) 933-9580

TITLE:
PIOCANE STEEL DOOR
HORIZONTAL SECTIONS

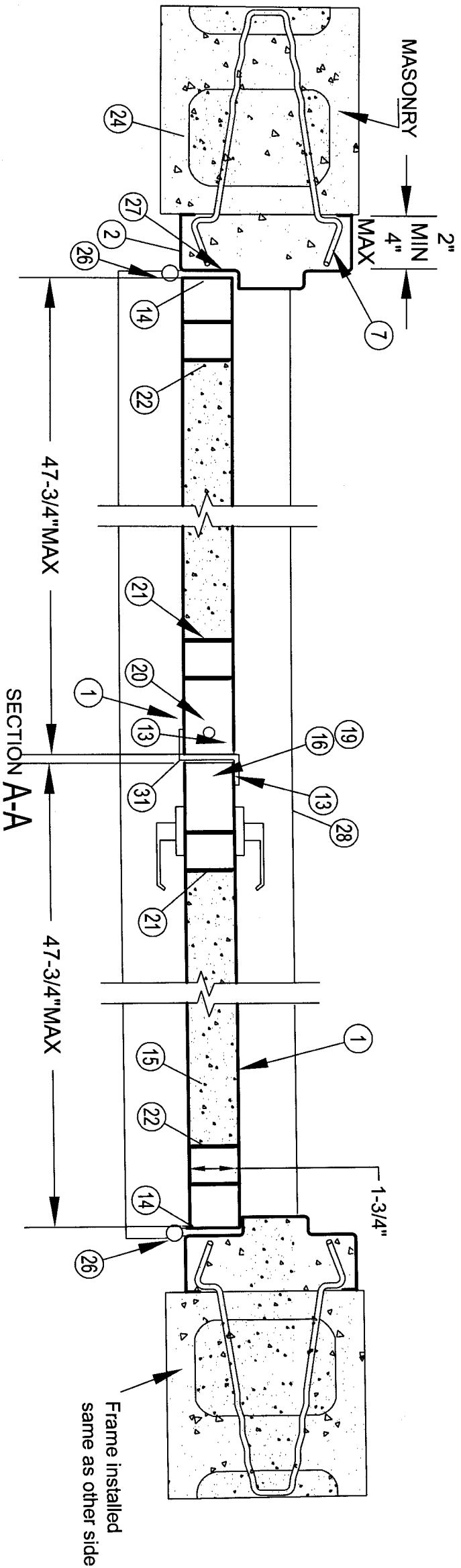
PREPARED BY:
CERTWORKS, LLC
127 W. FAIRBANKS AVE., STE. 438
WINTER PARK, FL 32789
PH: (407) 644-6957 FX: (407) 644-2366

REVISIONS			
NO.	DESCRIPTION	BY	DATE

[Signature]
No. 68455
12-10-09
KRISTINA S. BAUGHERTY
FLORIDA P.E. NO. 68455
127 W. FAIRBANKS AVE. STE. 438
WINTER PARK, FL 32789
FBPE CERT. OF AUTHORIZATION NO. 28520

DATE: 00.00.00
DWN BY: JLR
CHK BY: KSD
SCALE: NTS
DWG #: P1001
SHEET: 5 OF 8

PAIR DOORS WITH CYLINDRICAL LOCK, DEAD LOCK, FLUSH BOLTS AND Z ASTRAGAL.(SINGLE DOOR SAME AS ACTIVE DOOR)



PIONEER INDUSTRIES
171 SOUTH NEWMAN STREET
HACKENSACK, NJ 07601
PH: (201) 933-1900 FX: (201) 933-9580

TITLE:
PIOCANE STEEL DOOR
HORIZONTAL SECTIONS

PREPARED BY:
CERTWORKS, LLC
127 W. FAIRBANKS AVE., STE. 438
WINTER PARK, FL 32789
PH: (407) 644-6957 FX: (407) 644-2366

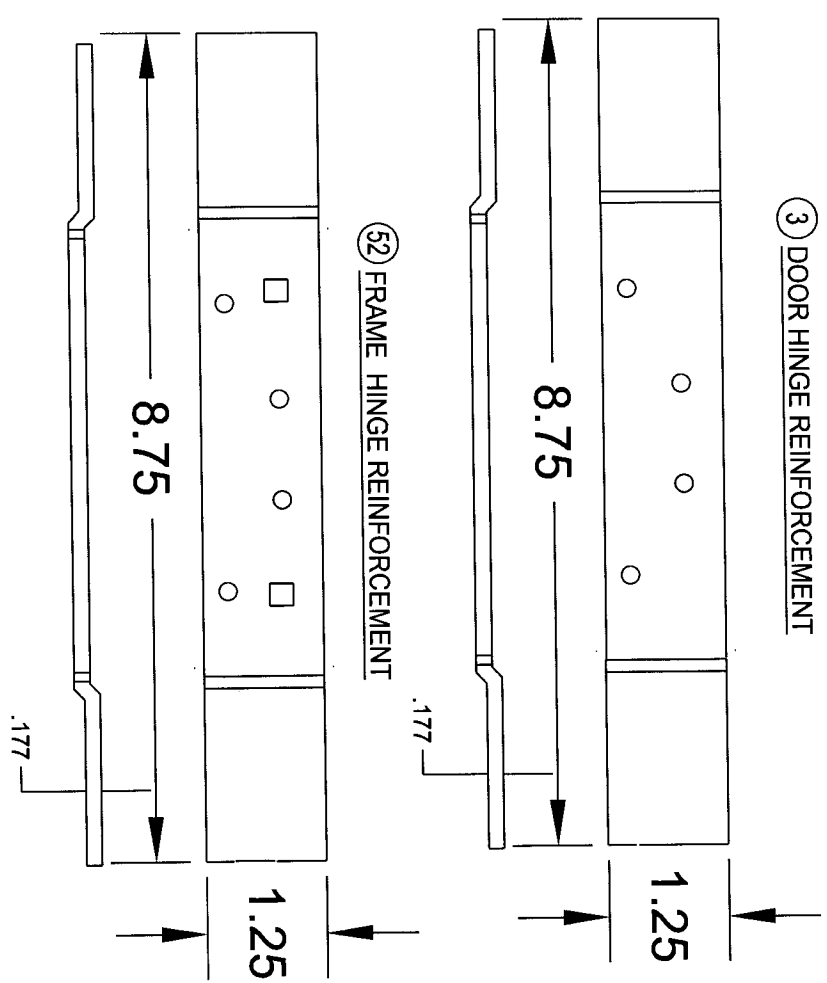
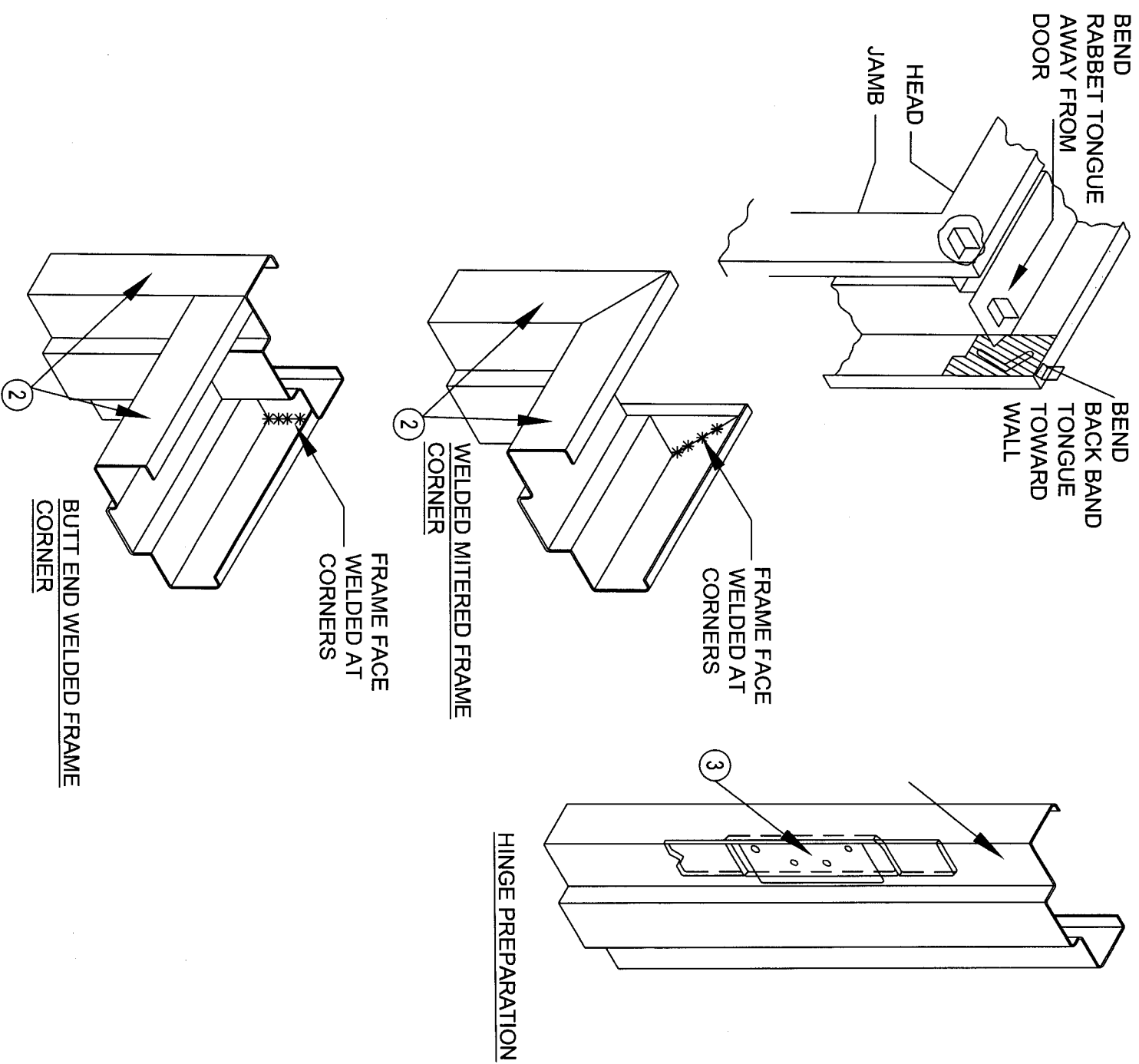
REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 09.03.09
DWN BY: JLR
CHK BY: KSD
SCALE: NTS
12-10-09
KRISTINA S. DAUGHERTY
FLORIDA P. E. NO. 68455
127 W. FAIRBANKS AVE. STE. 438
WINTER PARK, FL 32789
FBPE CERT. OF AUTHORIZATION NO. 88520

DWG #: PI001
SHEET: 6 OF 8

FRAME CORNER CONSTRUCTION AND HINGE REINFORCEMENTS.



NOTE:
 1. ALL DIMENSIONS ARE IN INCHES
 2. THK OF SHIM PLATE = 0.43"

REVISIONS

NO.	DESCRIPTION	BY	DATE

TITLE:
 PIOCANE STEEL DOOR
 FRAME CORNER CONSTRUCTION
 & HINGE REINFORCEMENTS

PREPARED BY:
 CERTWORKS, LLC
 127 W. FAIRBANKS AVE., STE. 438
 WINTER PARK, FL 32789
 PH: (407) 644-6957 FX: (407) 644-2366

PIONEER
QUAL BEHIND AS OPEN

PIONEER INDUSTRIES
 171 SOUTH NEWMAN STREET
 HACKENSACK, NJ 07601
 PH: (201) 933-1900 FX: (201) 933-9580

Kristina S. Daugherty
 12-10-09
 KRISTINA S. DAUGHERTY
 FLORIDA P.E. NO. 62455
 127 W. FAIRBANKS AVE., STE. 438
 WINTER PARK, FL 32789
 FBPE CERT. OF AUTHORIZATION NO. 89520

DATE: 09.03.09
 DWN BY: JLR
 CHK BY: KSD
 SCALE: NTS

DWG #: **PI001**

SHEET: **7 OF 8**

BILL OF MATERIALS

DESCRIPTION

ITEM	QUANTITY	DESCRIPTION
1	---	DOOR - 16 GA.(0.054")MIN., 14 GA.(0.068")MAX (COLD ROLLED OR GALVANNEALED STEEL)
2	---	FRAMES - 16 GA. (0.053") MIN., 12 GA. (0.094") MAX WELDED OR KD FRAME (COLD ROLLED, GALVANNEALED STEE) JAMB DEPTH 5-3/4" MIN, 12" MAX
3	AS INDICATED	7 GA.(0.177") MIN. FRAME HINGE REINFORCEMENT
4	AS INDICATED	16 GA. (0.053")MIN. PHOENIX ANCHOR/PIPE AND STRAP ANCHOR
5	AS INDICATED	12 GA.(0.094"MIN) MASONRY T ANCHOR
6	AS INDICATED	3/16" TAPCON 1-1/4" MINIMUM EMBEDMENT
7	AS INDICATED	3/16" DIAMETER STEEL WIRE ANCHORS
8	AS INDICATED	3/8" FLAT HEAD EXPANSION SHELL ANCHOR BOLTS SEE SHEET 3 FOR QUANTITY 3" MINIMUM EMBEDMENT
9	1	16 GA. (0.053") MIN., TOP END CHANNEL
10	1	16 GA. (0.053") MIN., BOTTOM END CHANNEL
11	1	12 GA. (0.094")MAX., TOP CAP
12	1	12 GA. (0.094")MAX., BOTTOM CAP
13	1	16 GA. (0.053") MIN DOOR LOCK REINFORCEMENT
14	1	7 GA DOOR HINGE REINFORCEMENT
15	1	1-11/16" 1 POUND NOMINAL DENSITY EXPANDABLE POLYSTYRENE BY BASF (STYROPOR)
16	1	SCHLAGE 600 SERIES DEADLOCK
17	2	VON DUPRIN CONCEALED VERTICAL ROD EXIT DEVICE PER DOOR LEAF
18	2	VON DUPRIN 99 OR XP99 RIM EXIT DEVICE PER DOOR LEAF
19	1	SCHLAGE ND SERIES CYLINDRICAL LOCK
20	2	IVES 458 TOP AND BOTTOM MANUAL FLUSHBOLTS
21	1	14 GA. (0.068") MIN. LOCK SIDE EXIT REINFORCING
22	1	14 GA. (0.068") MIN. HINGE SIDE EXIT REINFORCING
23	1	14 GA. (0.068") MIN. CONCEALED VERTICAL ROD TOP LOCK SIDE REINFORCING
24	1	8" CMU BLOCK FILLED WITH 2000 PSI MORTAR
25	---	---
26	AS INDICATED	4-1/2" X 4-1/2" X 0.134" OR 0.180" ; 5" X 5" X 0.146" OR 0.190"
27	1	STEEL HINGES-(IVES OR STANLEY)
28	1	ZERO WEATHERSTRIP PER FRAME MEMBER
29	1	ZERO ALUMINIUM THRESHOLD #65A, 1/2" TALL X 5" X NOMINAL DOOR WIDTH
30	1	POURED CONCRETE 2000 PSI (MIN)
31	1	14 GA Z ASTRAGAL
32	1	ZERO #328A PER DOOR LEAF AT MEETING EDGE OF PAIRS OF DOORS; NOT READ FOR SINGLE DOORS
33	1	VON DUPRIN #9954 HARDWARE MULLION
34	2	14 GA. (0.068") MIN OPTIONAL CLOSER REINFORCEMENT PER DOOR
35	1	FRAME HEAD REINFORCEMENT FOR PAIR DOOR FRAME
36	AS INDICATED	#10 SHEET METAL TYPE SCREW 1-3/8" MINIMUM EMBEDMENT
37	1	STRIKE JAMB REINFORCEMENT REQUIRED FOR SINGLE DOORS WITH RIM EXIT.



PIONEER INDUSTRIES
171 SOUTH NEWMAN STREET
HACKENSACK, NJ 07601
PH: (201) 933-1900 FX: (201) 933-9580

TITLE:
PIOCANE STEEL DOOR
BILL OF MATERIALS

PREPARED BY:
CERTWORKS, LLC
127 W. FAIRBANKS AVE., STE. 438
WINTER PARK, FL 32789
PH: (407) 644-6957 FX: (407) 644-2366

REVISIONS

NO	DESCRIPTION	BY	DATE

APPROVED
K. KRISTINA S. DANCIHERTY
REGISTERED PROFESSIONAL ARCHITECT
FLORIDA P.E. NO. 68455
127 W. FAIRBANKS AVE., STE. 438
WINTER PARK, FL 32789
FBPE CERT. OF AUTHORITY LIC. NO. 28520

DATE: 09.03.09
DWN BY: JLR
CHK BY: KSD
SCALE: NTS

DWG #: **PT001**

SHEET: 8 OF 8