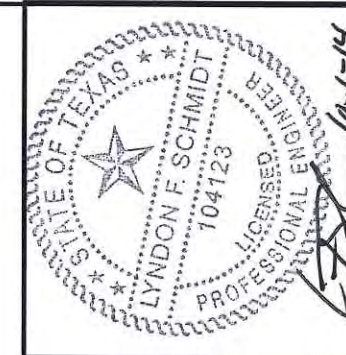




6605 Flotilla Street
City of Commerce
CA 90040



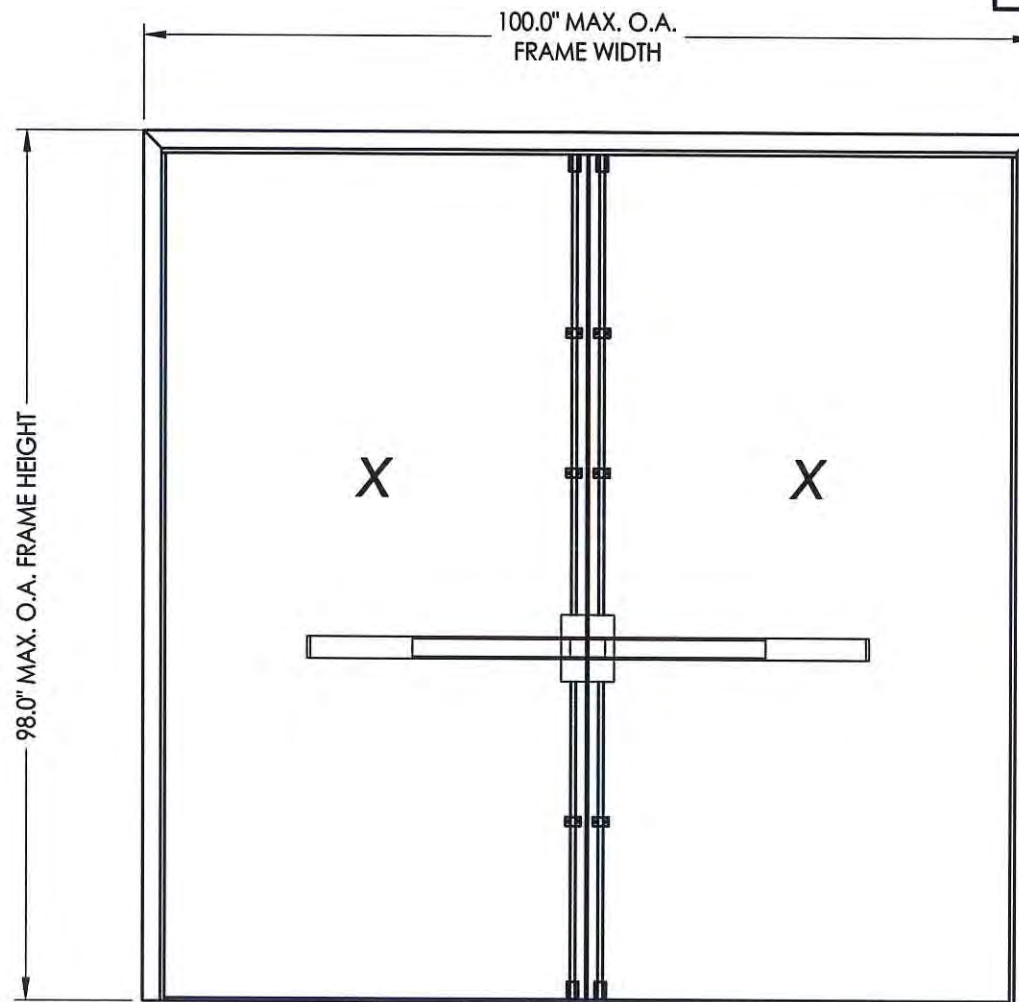
DKS SERIES 1800 STEEL COMMERCIAL DOUBLE DOOR OUTSWING "IMPACT"

EVALUATED FOR USE IN THE STATE OF TEXAS

The Cal-Royal Door described herein complies with the 2006 International Residential Code (IRC), Sections R301 and the 2006 International Building Code (IBC), Sections 1405.12, 1609 & 1714.5 (including Texas revisions) subject to the following conditions:

1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. This system has been tested and evaluated as a large missile impact protective system for installation in the Seaward, Inland I and Inland II areas. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E1996.
3. Allowable design pressure requirements must be equal to or less than the design pressure rating shown in the design pressure chart, sheet 1 of this drawing.
4. Conditions not covered by this drawing are subject to further engineering analysis.

| TABLE OF CONTENTS | |
|-------------------|---|
| SHEET# | DESCRIPTION |
| 1 | Typical elevation, design pressures & general notes |
| 2 | Door panel details |
| 3 | Horizontal cross sections |
| 4 | Vertical cross sections |
| 5 | Frame anchoring |
| 6 | Frame anchoring |
| 7 | Bill of materials and components |



Panic Bar Exit Device w/ Vertical Rods
"7700-V Series"

| MAX FRAME DIMENSION | LOCK TYPE | DESIGN PRESSURE (PSF) OUTSWING | |
|---------------------|--|--------------------------------|----------|
| | | POSITIVE | NEGATIVE |
| 100.0" x 98.0" | PANIC BAR EXIT DEVICE w/ VERTICAL RODS "7700-V Series" | +50.0 | -50.0 |

Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: CAL-ROYAL STEEL COMMERCIAL DOOR

PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

DATE: 10/1/14

SCALE: N.T.S.

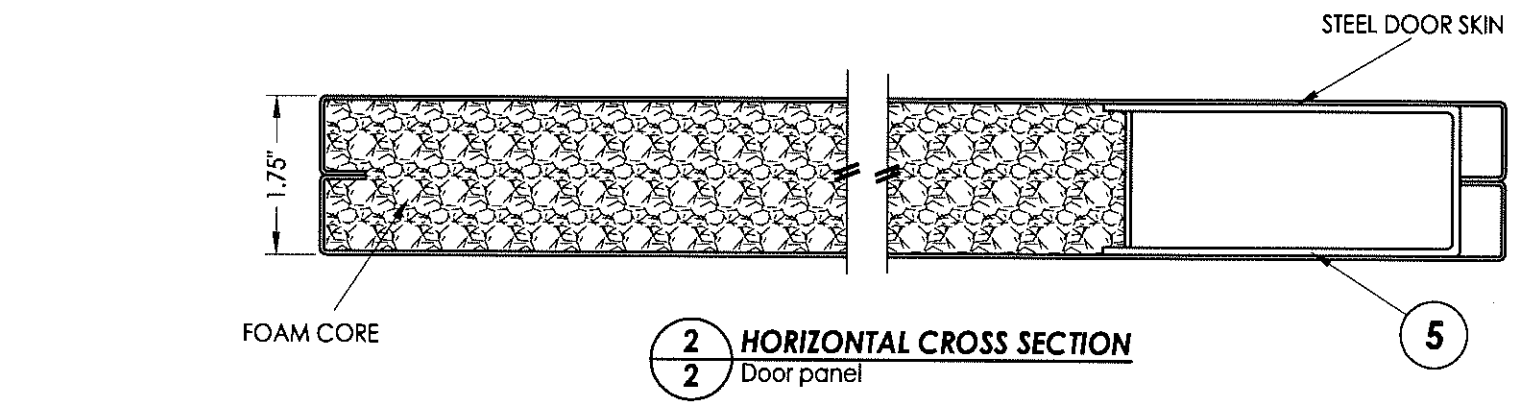
DWG. BY: JK

CHK. BY: LFS

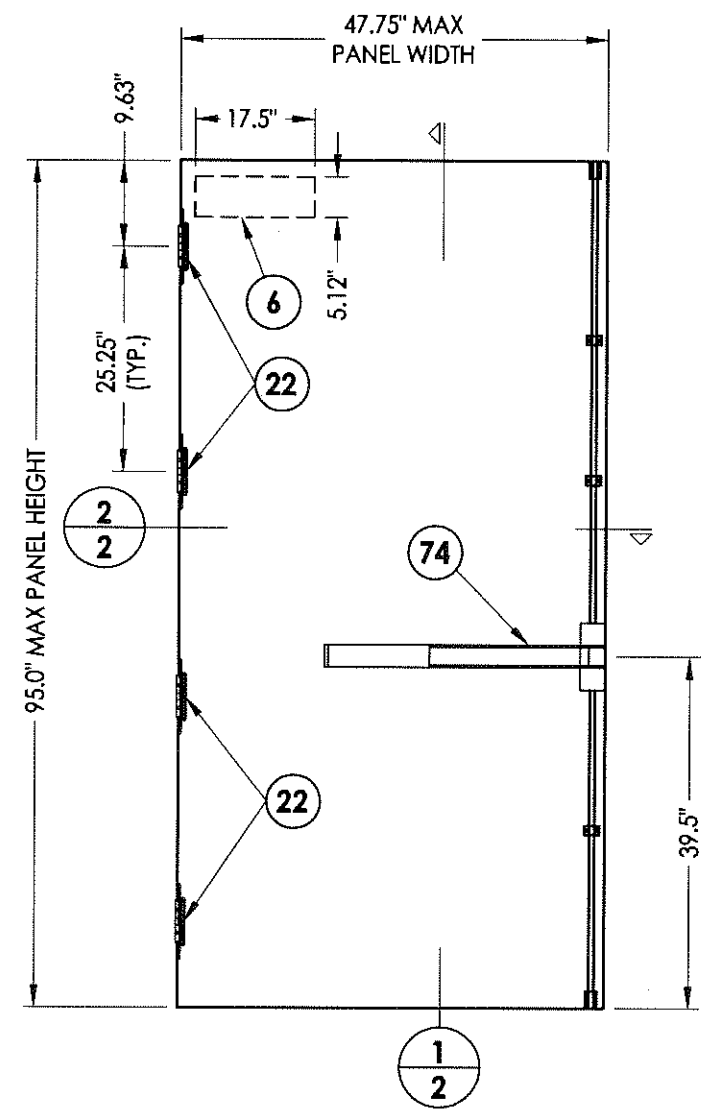
DRAWING NO.: TX-4486

SHEET 1 OF 7

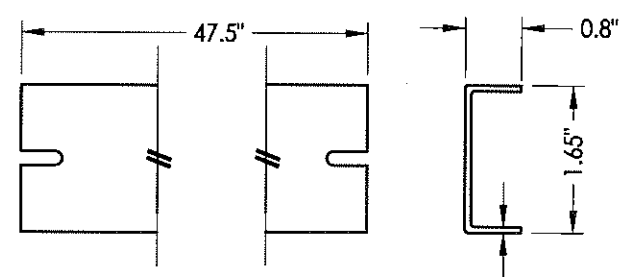
\\2012ess\RWBC\Clients\Cal-Royal NEW\Texas Dept of Ins\TDI - 472 Renewal\Drawings\Current\TEXAS 2014.dwg, 7.2



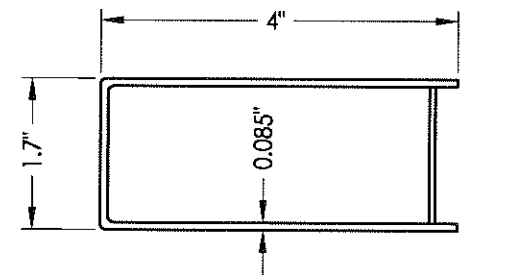
2 HORIZONTAL CROSS SECTION
2 Door panel



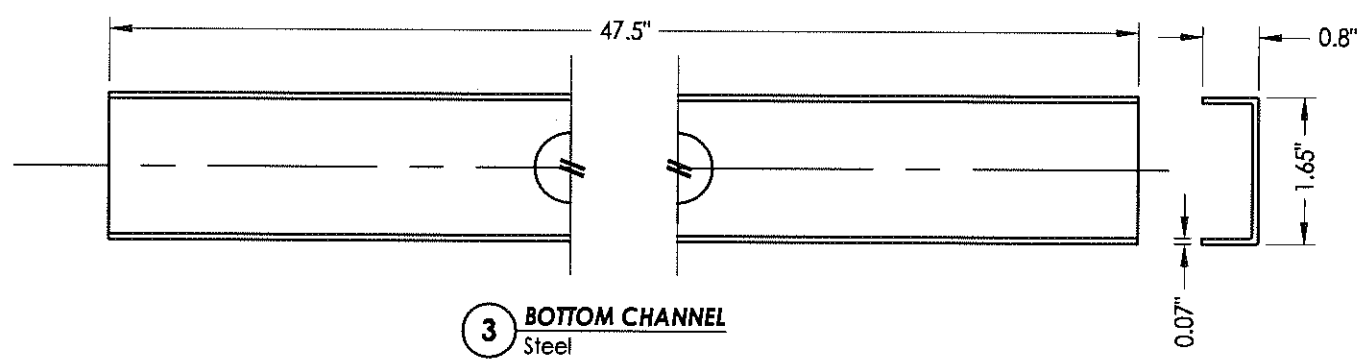
1 CAL-ROYAL STEEL DOOR PANEL



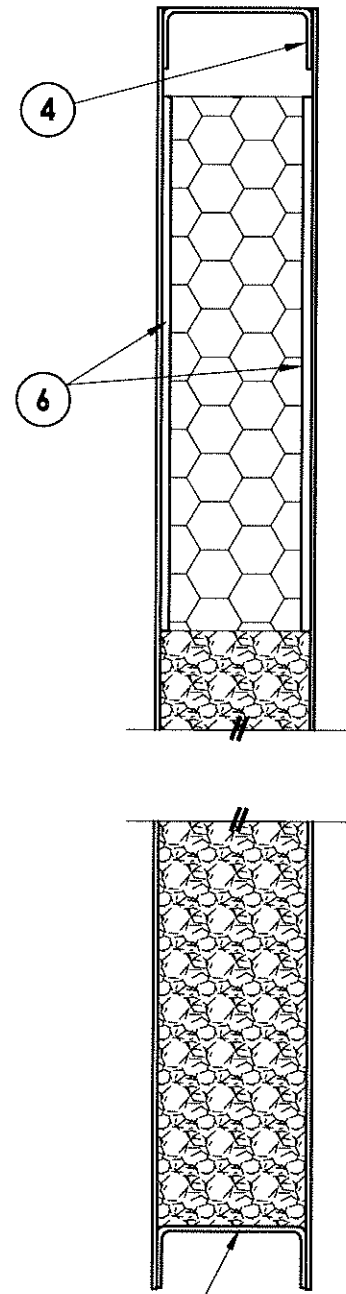
4 FLUSH TOP CHANNEL
Steel



5 STEEL LOCK BOX REINFORCEMENT
Panic Bar Prep (10.5" long)

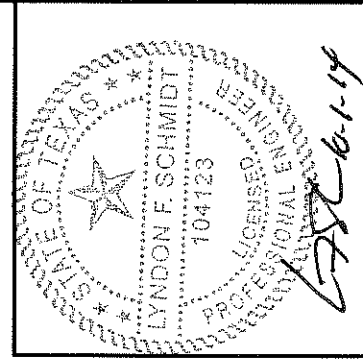


3 BOTTOM CHANNEL
Steel



1 VERTICAL CROSS SECTION
2 Door panel

STEEL DOOR SKIN (18 GA.): MIN. 0.045" THK.
STEEL GRADE: ASTM A1008 GALV. STEEL (Fy = 33,000 PSI MIN.)
CORE MATERIAL: EPS FOAM (POLYSTYRENE - 1.0 PCF MIN. DENSITY)

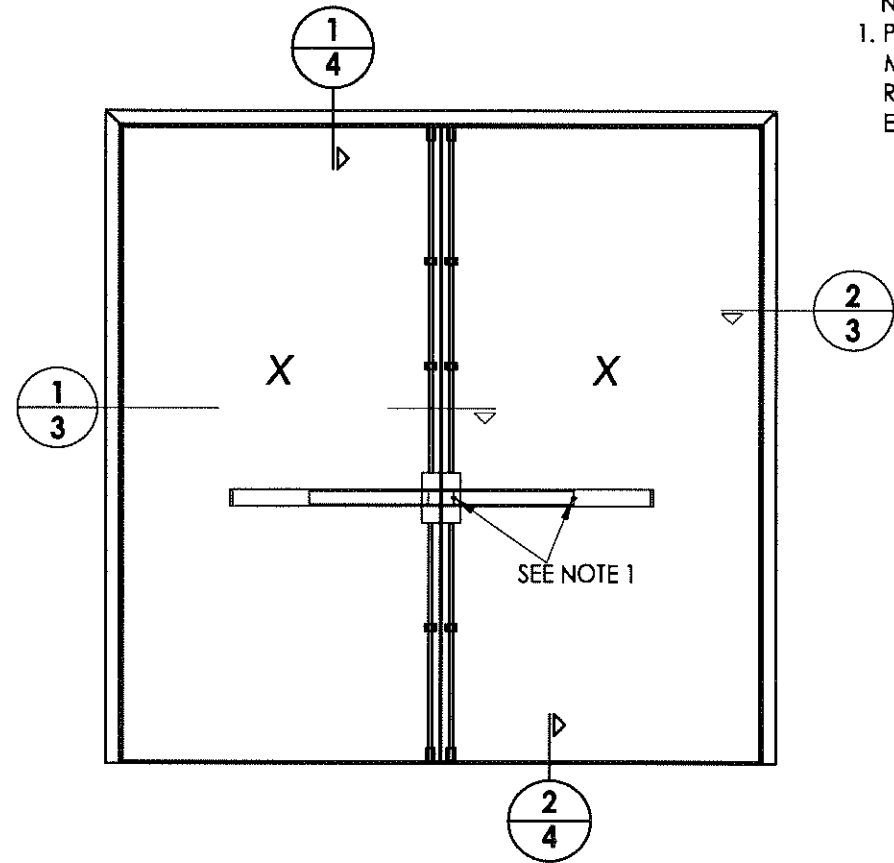


Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

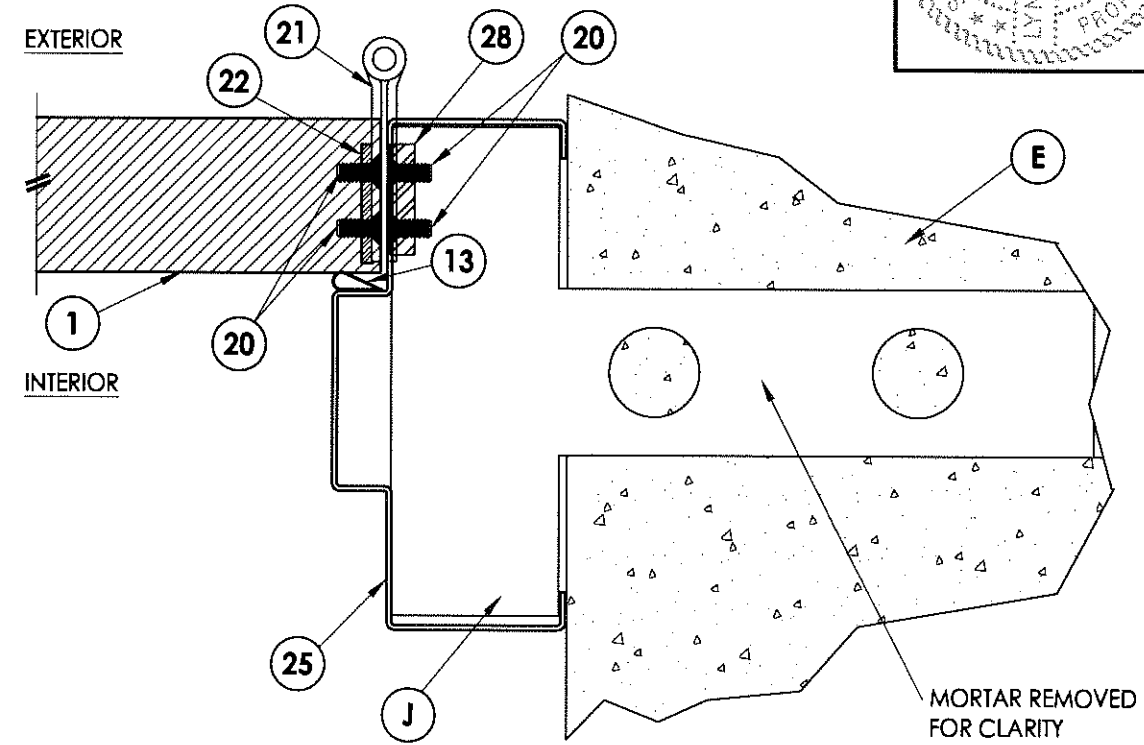
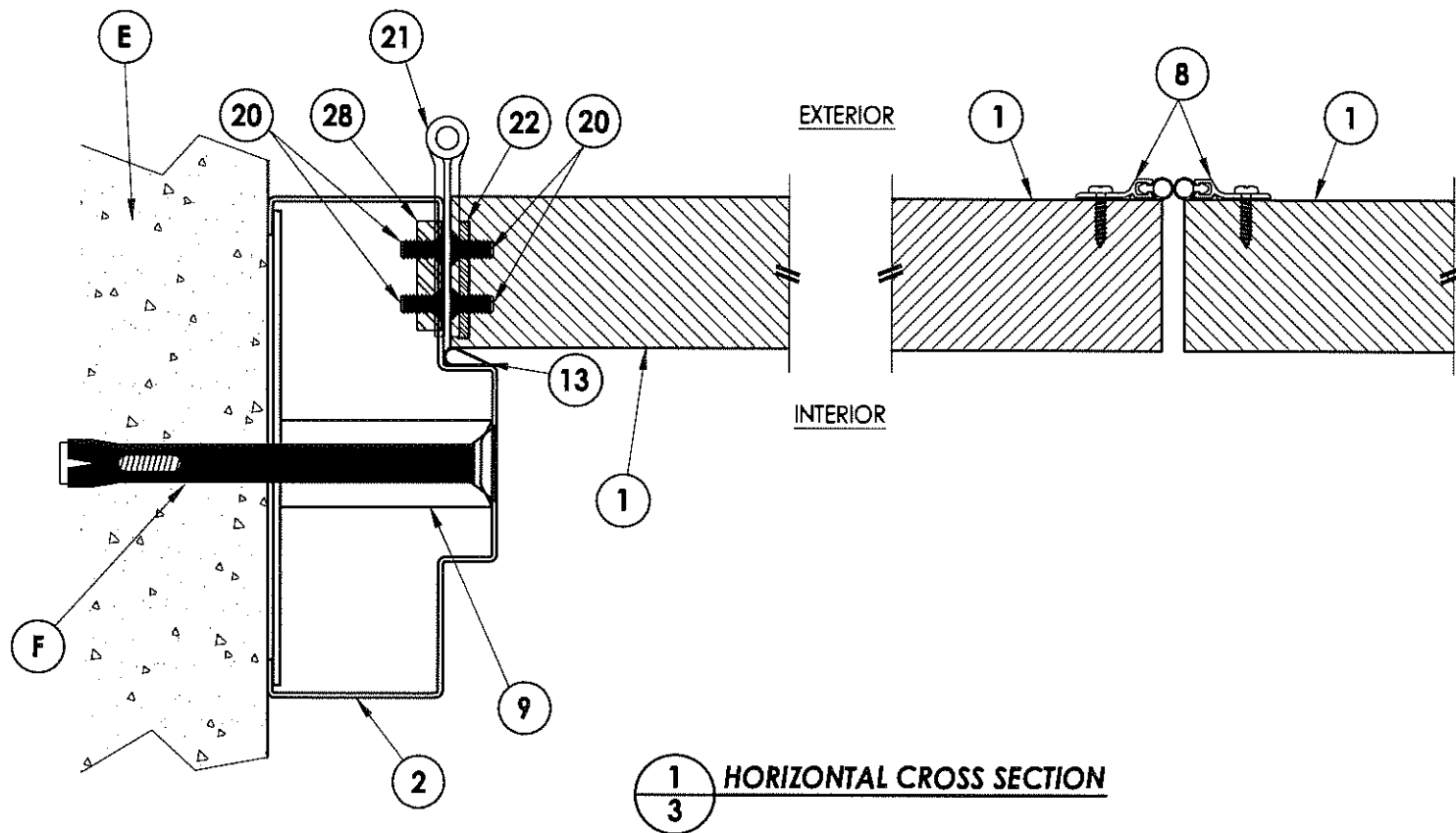
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Vairico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

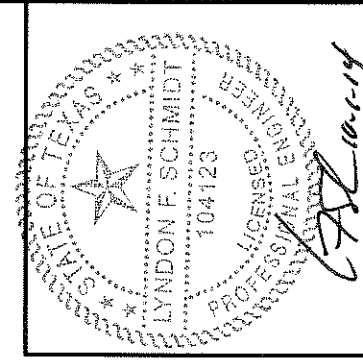
| | |
|--------------------------------------|------|
| PRODUCT: CAL-ROYAL | |
| STEEL COMMERCIAL DOOR | |
| PART OR ASSEMBLY: DOOR PANEL DETAILS | |
| NO. | DATE |
| BY | |
| REVISIONS | |
| DATE: 10/1/14 | |
| SCALE: N.T.S. | |
| DWG. BY: JK | |
| CHK. BY: LFS | |
| DRAWING NO.: TX-4486 | |
| SHEET 2 OF 7 | |



NOTE:
 1. PANIC BAR SET SCREWS (#12-24 x 5/16")
 MUST BE ACTIVATED TO ACHIEVE IMPACT
 RATING. LOCATE ONE SCREW AT THE
 END OF EACH PUSH BAR.



3 Masonry Construction
 Masonry "Tee" Anchor

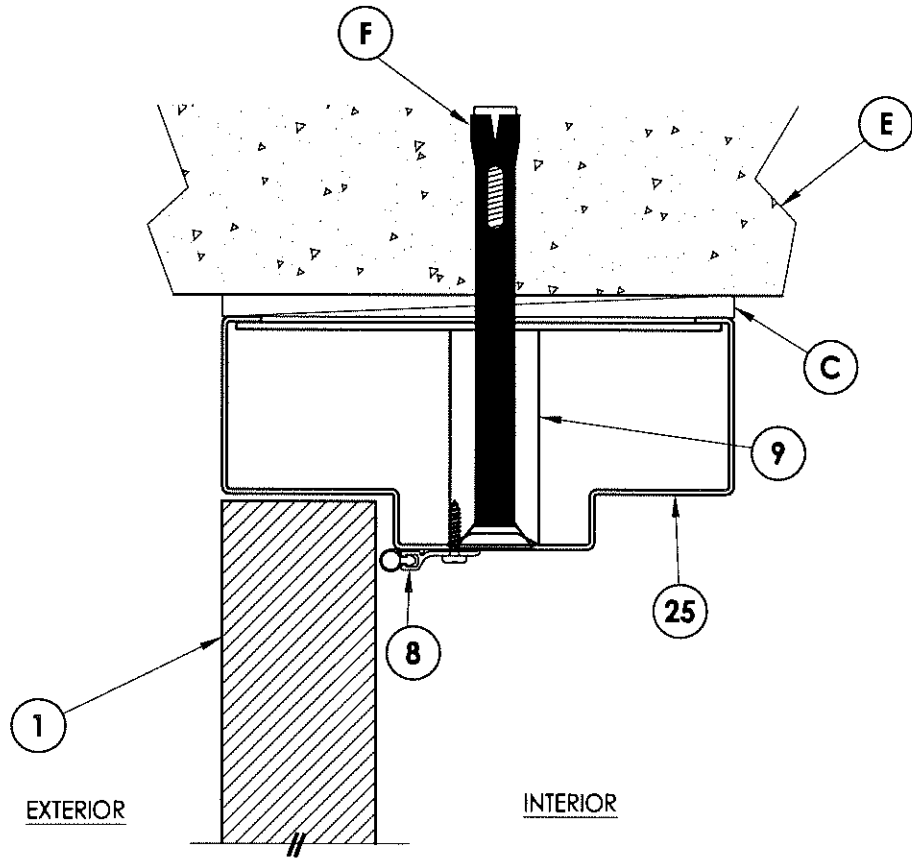


Documents Prepared By: Lyndon F. Schmidt, P.E.
 TEXAS P.E. #104123

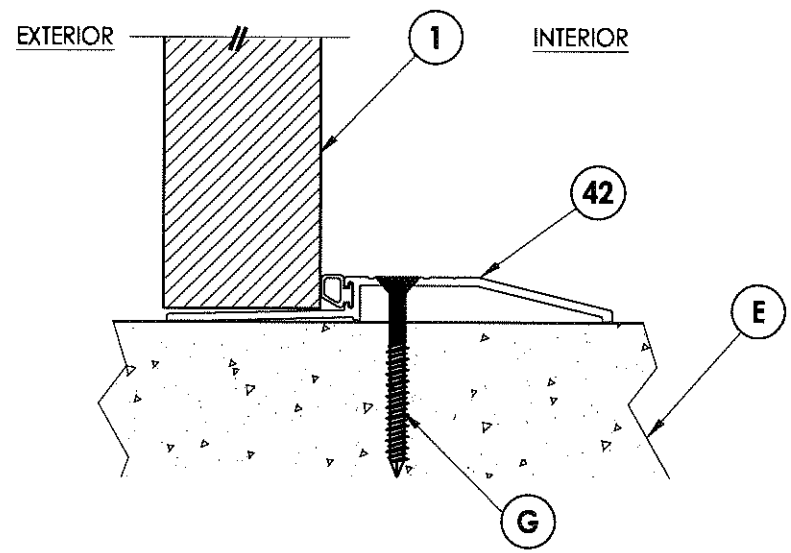
RW BUILDING CONSULTANTS, INC.
 P.O. Box 230 Valrico FL, 33585
 Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
 CERTIFICATE OF REGISTRATION # F-11852

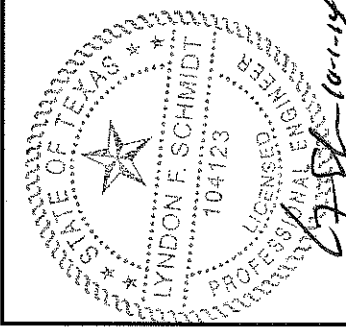
| | | |
|-------------------|------------------------------------|----|
| PRODUCT: | CAL-ROYAL STEEL COMMERCIAL DOOR | |
| PART OR ASSEMBLY: | HORIZONTAL CROSS SECTIONS | |
| NO. | DATE | BY |
| | | |
| REVISIONS | | |
| DATE: | 10/1/14 | |
| SCALE: | N.T.S. | |
| DWG. BY: | JK | |
| CHK. BY: | LFS | |
| DRAWING NO.: | TX-4486 | |
| SHEET | 3 OF 7 | |



1
4 VERTICAL CROSS SECTION



2
4 VERTICAL CROSS SECTION
Outswing configuration



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Veirico FL 33595
Phone No.: 813.659.9197

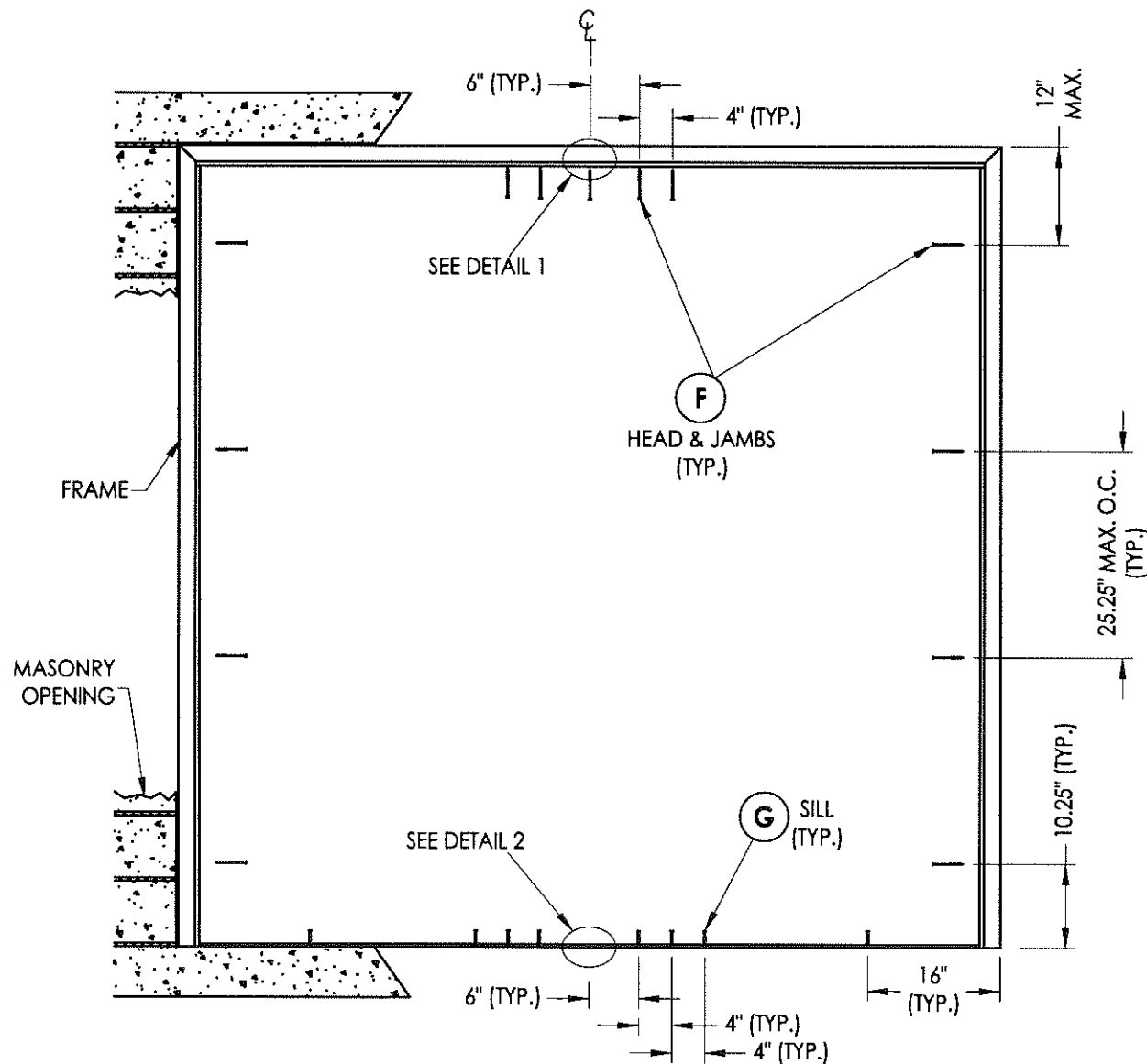
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: CAL-ROYAL
STEEL COMMERCIAL DOOR
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

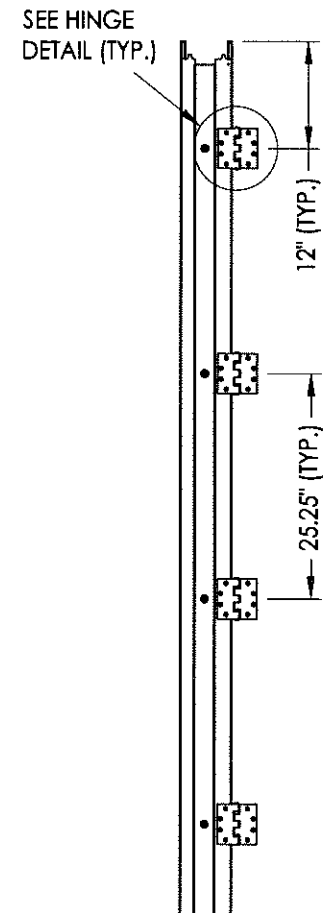
| NO. | DATE | BY |
|-----|------|----|
| | | |
| | | |
| | | |
| | | |

DATE: 10/1/14
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4486
SHEET 4 OF 7

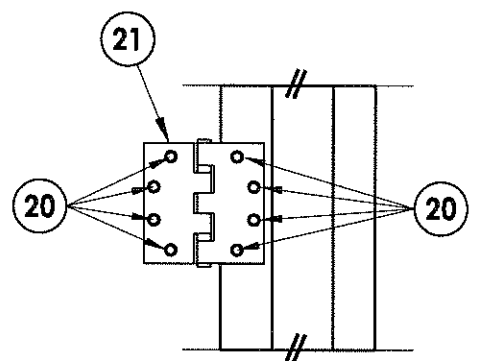
\\2012ess\RWBC\Clients\Cal-Royal NEW\Texas Dept of Ins\TDI - 472 Renewal\Drawings\Current\TEXAS 2014.dwg, 7.5



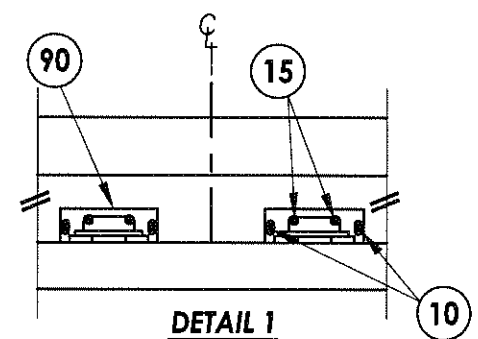
FRAME ANCHORING
Masonry Construction
Concrete Anchors



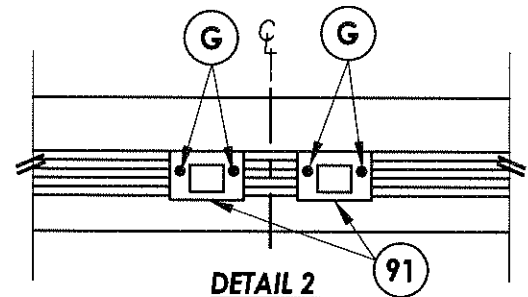
HINGE JAMB



HINGE DETAIL



DETAIL 1
Vertical rod latch strike plate
@ head



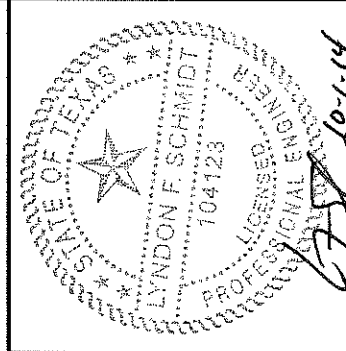
DETAIL 2
Vertical rod latch strike plate
@ sill

CONCRETE ANCHOR NOTES:

1. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements.
2. Concrete screw locations at the corners may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain the minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.
3. Concrete anchor table:

| ANCHOR TYPE | ANCHOR SIZE | MIN. EMBEDMENT | MIN. CLEARANCE TO MASONRY EDGE | MIN. CLEARANCE TO ADJACENT ANCHOR |
|-------------------------|-------------|----------------|--------------------------------|-----------------------------------|
| ITW TAPCON [®] | 1/4" | 1-3/4" | 2-1/2" | 2" |
| DYNABOLT SLEEVE ANCHOR | 3/8" | 1-1/2" | 2-1/4" | 4-1/2" |

4. Embedment may be through 1-1/4" face shell of hollow block.



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: CAL-ROYAL STEEL COMMERCIAL DOOR

PART OR ASSEMBLY: FRAME ANCHORING

| NO. | DATE | REVISIONS | BY |
|-----|------|-----------|----|
| | | | |
| | | | |

DATE: 10/1/14

SCALE: N.T.S.

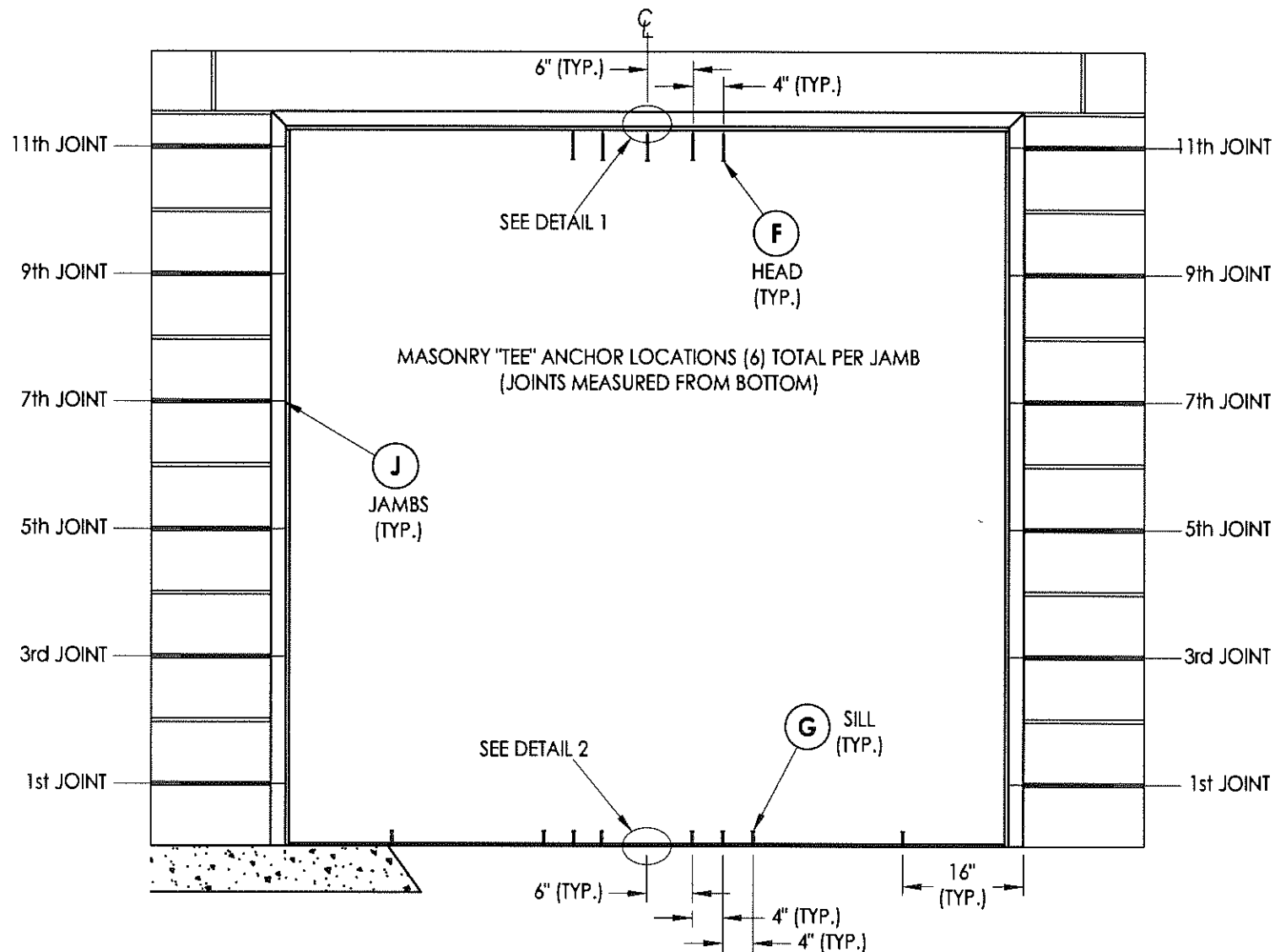
DWG. BY: JK

CHK. BY: LFS

DRAWING NO.: TX-4486

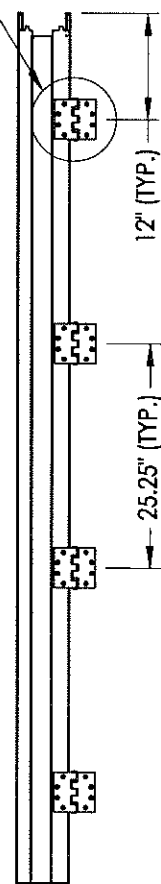
SHEET 5 OF 7

\\2012ess\RWBC\Clients\Cal-Royal NEW\Texas Dept of Ins\TDI - 472 Renewal\Drawings\Current\TEXAS 2014.dwg, 7.6

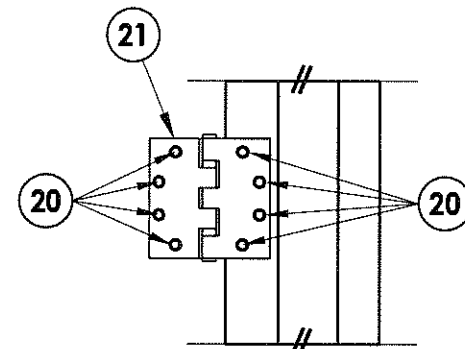


FRAME ANCHORING
Masonry Construction
Masonry "Tee" Anchors

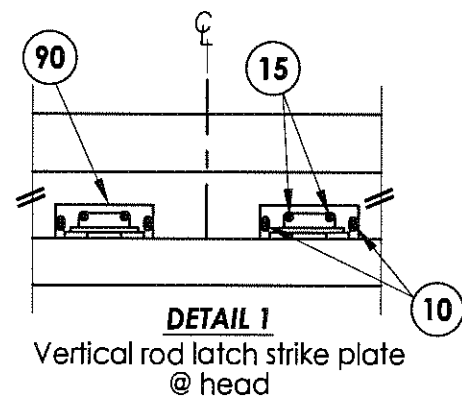
SEE HINGE
DETAIL (TYP.)



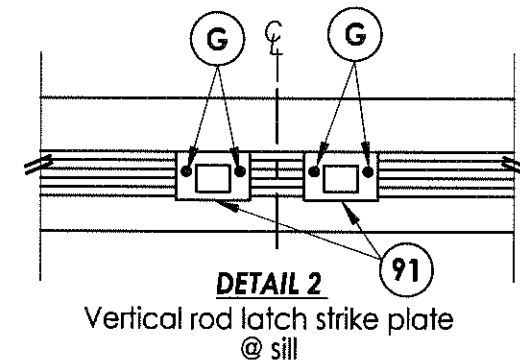
HINGE JAMB



HINGE DETAIL



DETAIL 1
Vertical rod latch strike plate
@ head

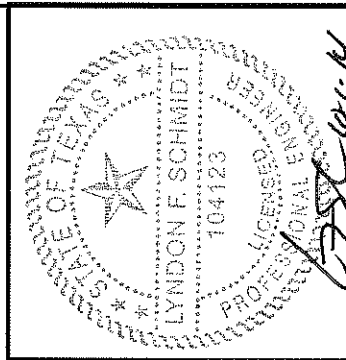


DETAIL 2
Vertical rod latch strike plate
@ sill

CONCRETE ANCHOR NOTES:

1. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements.
2. Concrete screw locations at the corners may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain the minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.
3. Concrete anchor table:

| ANCHOR TYPE | ANCHOR SIZE | MIN. EMBEDMENT | MIN. CLEARANCE TO MASONRY EDGE | MIN. CLEARANCE TO ADJACENT ANCHOR |
|------------------------|-------------|----------------|--------------------------------|-----------------------------------|
| ITW TAPCON® | 1/4" | 1-3/4" | 2-1/2" | 2" |
| DYNABOLT SLEEVE ANCHOR | 3/8" | 1-1/2" | 2-1/4" | 4-1/2" |



Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: CAL-ROYAL
STEEL COMMERCIAL DOOR

PART OR ASSEMBLY:
FRAME ANCHORING

| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
| | | | |
| | | | |
| | | | |

DATE: 10/1/14

SCALE: N.T.S.

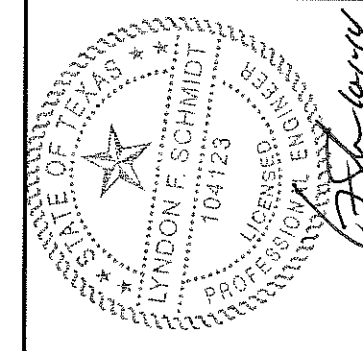
DWG. BY: JK

CHK. BY: LFS

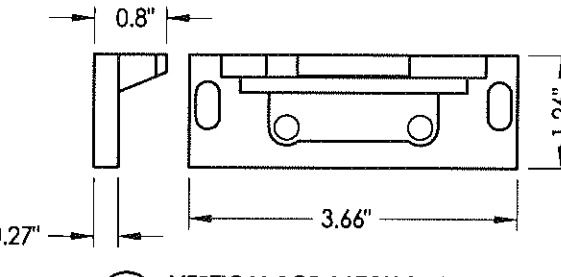
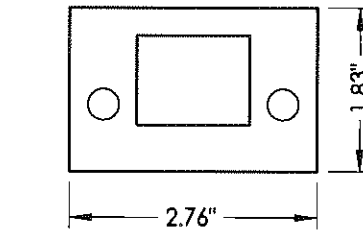
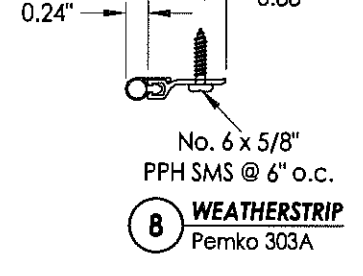
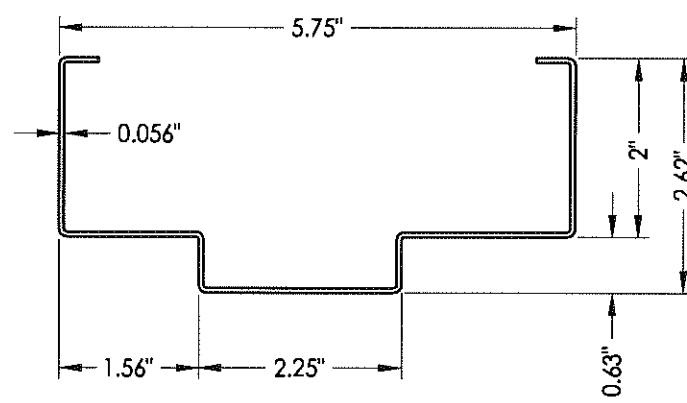
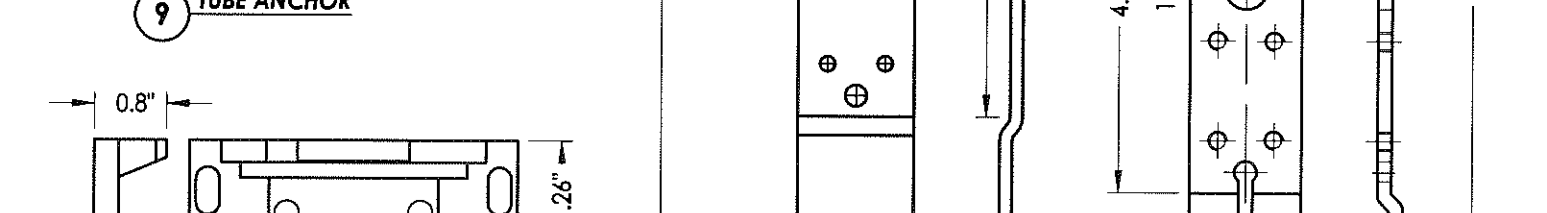
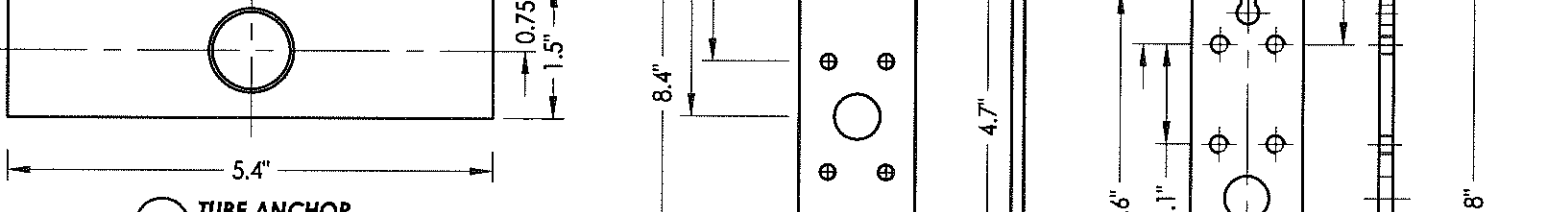
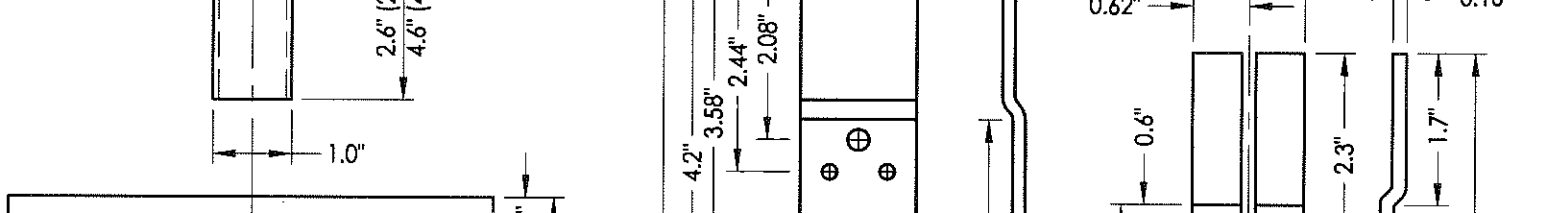
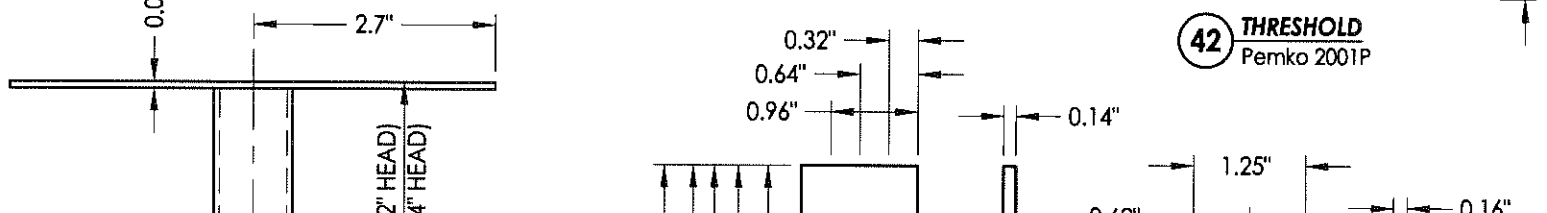
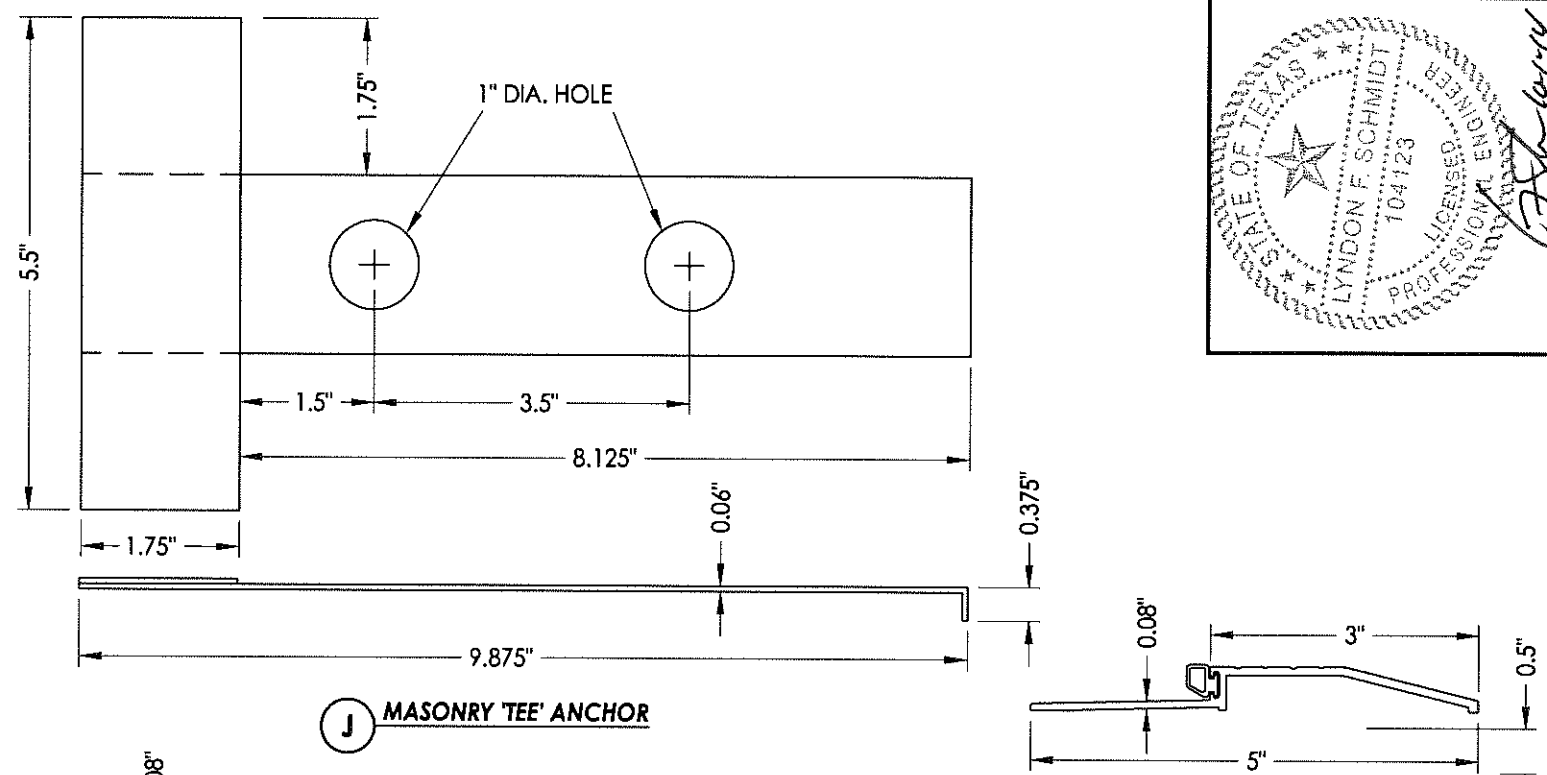
DRAWING NO.:
TX-4486

SHEET 6 OF 7

| BILL OF MATERIALS | | |
|-------------------|--|----------|
| ITEM # | DESCRIPTION | MATERIAL |
| C | 1/4" MAX. SHIM SPACE | - |
| E | MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90 | CONCRETE |
| F | 3/8" PFH ITW DYNABOLT SLEEVE ANCHOR | STEEL |
| G | 1/4" X 2-1/4" ITW PFH CONCRETE SCREW | STEEL |
| H | #8 X 1-1/2" PH WOOD SCREW | STEEL |
| J | MASONRY "TEE" ANCHOR | STEEL |
| 1 | CAL-ROYAL DOOR PANEL | - |
| 3 | DOOR BOTTOM CHANNEL | STEEL |
| 4 | DOOR TOP CHANNEL | STEEL |
| 5 | LOCK BOX REINFORCEMENT | STEEL |
| 6 | CLOSER REINFORCEMENT (11 gauge) | STEEL |
| 8 | WEATHERSTRIP - PEMKO 303A | NEOPRENE |
| 9 | TUBE ANCHOR | STEEL |
| 10 | #12-24 X 1" COMBINATION MACHINE / WOOD SCREW | STEEL |
| 11 | DOOR SWEEP - PEMKO 3151 | PVC |
| 13 | WEATHERSTRIP - COMPRESSION BULB 1/4" X 1/2" (PEMKO S88) | NEOPRENE |
| 15 | #8-24 X 3/4" COMBINATION MACHINE / WOOD SCREW | STEEL |
| 20 | #12-24 X 1/2" PFH MACHINE SCREW | STEEL |
| 21 | 4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE | STEEL |
| 22 | DOOR HINGE REINFORCEMENT | STEEL |
| 25 | HOLLOW FRAME 2" | STEEL |
| 28 | FRAME HINGE REINFORCEMENT | STEEL |
| 29 | DOOR BOTTOM REINFORCEMENT w/ STRIKE PLATE | STEEL |
| 42 | OUTSWING THRESHOLD - PEMKO 2001P | ALUM |
| 74 | CAL-ROYAL 7700-V SERIES VERTICAL ROD EXIT DEVICE | - |
| 90 | VERTICAL ROD LATCH STRIKE PLATE @ HEAD | STEEL |
| 91 | VERTICAL ROD LATCH STRIKE PLATE @ SILL | STEEL |



Documents Prepared By: Lyndon F. Schmidt, P.E.
 TEXAS P.E. #104123
RW BUILDING CONSULTANTS, INC.
 P.O. Box 230 Valrico, FL 33595
 Phone No.: 813.659.9197
 TEXAS BOARD OF PROFESSIONAL ENGINEERS
 CERTIFICATE OF REGISTRATION # F-11852



PRODUCT: CAL-ROYAL COMMERCIAL DOOR
 STEEL COMMERCIAL DOOR
 PART OR ASSEMBLY:
 BILL OF MATERIALS AND COMPONENTS

| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
| | | | |
| | | | |
| | | | |
| | | | |

DATE: 10/1/14
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.: TX-4486
 SHEET 7 OF 7