



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD PREAPPROVAL OF
MANUFACTURER'S CERTIFICATION (OPM)**

OFFICE USE ONLY

APPLICATION #: OPM-0346

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: Omniceil, Inc.

Manufacturer's Technical Representative: Todd Kijowski

Mailing Address: 51 Pennwood Place, Suite 400, Warrendale, PA 15086

Telephone: (724) 741-7777 Email: Todd.Kijowski@omnicell.com

Product Information

Product Name: Tall Frame

Product Type: Automated Medication Dispensing Cabinets

Product Model Number: One-cell, two-cell, and three-cell cabinets

General Description: Medication storage and dispensing cabinets

Applicant Information

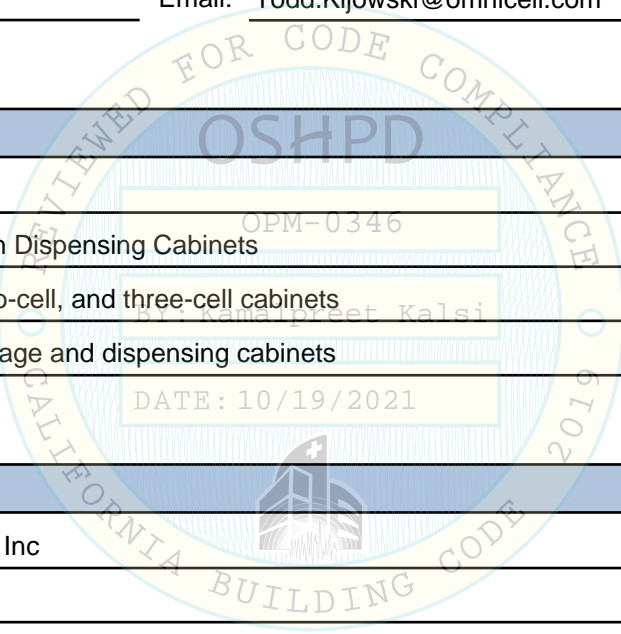
Applicant Company Name: Omincell, Inc

Contact Person: Todd Kijowski

Mailing Address: 51 Pennwood Place, Suite 400, Warrendale, PA 15086

Telephone: (724) 741-7777 Email: todd.Kkjowski@omnicell.com

Title: Engineer 5



"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

Registered Design Professional Preparing Engineering Recommendations

Company Name: DEGENKOLB ENGINEERS
 Name: Chad Closs California License Number: S5946
 Mailing Address: 225 Broadway, Suite 1325, San Diego, CA 92101
 Telephone: (858) 699-5412 Email: ccloss@degenkolb.com

OSHPD Special Seismic Certification Preapproval (OSP)

Special Seismic Certification is preapproved under OSP OSP Number: _____

Certification Method

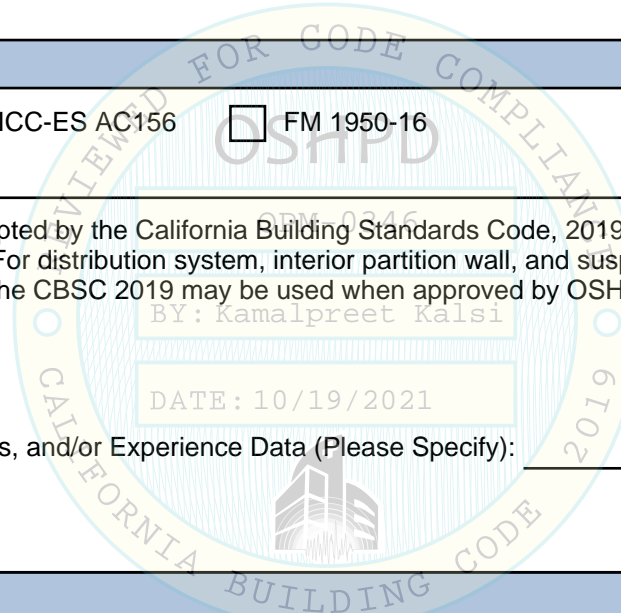
Testing in accordance with: ICC-ES AC156 FM 1950-16
 Other(s) (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHPD prior to testing.

- Analysis
- Experience Data
- Combination of Testing, Analysis, and/or Experience Data (Please Specify): _____

OSHPD Approval

Date: 10/19/2021
 Name: Kamalpreet Kalsi Title: Senior Structural Engineer
 Condition of Approval (if applicable): _____





OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION

OPM-0346-19

OMNICELL ONE-, TWO- AND THREE-CELL CABINETS

DEGENKOLB ENGINEERS
225 Broadway, Suite 1325
San Diego, CA 92101
619.515.0299 PHONE
619.515.0298 FAX



ONE-CELL CABINET MODELS

MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050

GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CALIFORNIA BUILDING CODE (CBC). THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019 WITH THIS OPM SHALL BE BASED ON THE CBC 2019.

2. PRE-APPROVED DESIGN AND MATERIALS CONFORM WITH THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE. DETAILS WITHIN THIS APPROVAL MAY BE USED ANYWHERE IN THE STATE OF CALIFORNIA WHERE $S_{Ds} \leq 2.00$ FOR CASE 1 & 2, AND WHERE S_{Ds} AND z/h IS LESS THAN THE SPECIFIED VALUES ON PAGE 5 FOR CASE 3.

3. SEISMIC FORCES ON EQUIPMENT DETERMINED PER THE 2019 CBC & ASCE 7-16 SECTION 13.3. ALL LOADS IN THIS PRE-APPROVAL ARE AT STRENGTH LEVEL AND SHALL BE USED FOR STRENGTH DESIGN.

CASE 1 (EQUIPMENT ABOVE GRADE TO ROOF THROUGH BOLT OPTION):

$S_{Ds}=2.00$, $a_p=1.0$, $R_p=1.5$, $I_p=1.5$, $\Omega_o=1.5$, $z/h \leq 1.0$
i. $F_p=2.40W_p$, $F_v=0.44W_p$

CASE 2 (EQUIPMENT AT OR BELOW GRADE, EXPANSION ANCHOR OPTION):

$S_{Ds}=2.00$, $a_p=1.0$, $R_p=1.5$, $I_p=1.5$, $\Omega_o=1.5$, $z/h = 0.0$
i. $F_p=0.90W_p$, $F_v=0.40W_p$

CASE 3 (EQUIPMENT ABOVE GRADE TO ROOF, EXPANSION ANCHOR OPTION):

$S_{Ds} \leq$ VARIES, $a_p=1.0$, $R_p=1.5$, $I_p=1.5$, $\Omega_o=1.5$, $z/h \leq 1.0$
 $S_{Ds} \leq$ VARIES, $a_p=1.0$, $R_p=1.5$, $I_p=1.5$, $\Omega_o=1.5$, $z/h \leq 0.5$
SEE PAGE 5

4. THE STRUCTURAL ENGINEER-OF-RECORD (S.E.O.R.) IS RESPONSIBLE FOR THE FOLLOWING:

- a. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY SLAB OPENINGS OR EDGES.
- b. VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS.
- c. DESIGN ANY SUPPLEMENTARY MEMBERS AND THEIR ATTACHMENTS WHICH THE UNIT IS ANCHORED TO. VERIFY THE ADEQUACY OF ANY EXISTING MEMBERS AND THEIR ATTACHMENTS WHICH THE UNIT IS ANCHORED TO FOR THE FORCES EXERTED ON THEM BY THE UNIT IN ADDITION TO ALL OTHER LOADS AND FORCES.
- d. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC AND WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL. VERIFY THAT THE EQUIPMENT'S ACTUAL WEIGHT, CG LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS AND THE MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN IN THIS PRE-APPROVAL.

- 5. THE MANUFACTURER SUPPLIED BASE BRACKETS HAVE BEEN EVALUATED FOR THE WORST CASE LOADING PER THE 2019 CBC. STRUCTURAL ENGINEER-OF-RECORD (S.E.O.R.) SHALL EVALUATE BRACKET ANCHORAGE FOR CONDITIONS THAT VARY FROM THIS PRE-APPROVAL.
- 6. CONTRACTOR/INSPECTOR OF RECORD MUST VERIFY ANCHOR SPACING TO EXISTING ADJACENT ANCHORS IS TO BE GREATER THAN 8".
- 7. THIS OPM COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE UNIT TO THE STRUCTURE.
- 8. EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HILTI KB-TZ2 (ICC ESR 4266) AND DEWALT POWER-STUD+ SD2 (ICC ESR 2502). INSTALL ANCHORS IN ACCORDANCE WITH THE ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS. TEST AT LEAST 50% OF ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATIONS. TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD (IOR) AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO OSHPD.

TEST PER THE FOLLOWING METHOD:

- a. TORQUE WRENCH TEST: TEST ANCHORS TO THE REQUIRED TORQUE LOAD GIVEN IN TABLE BELOW WITHIN THE LIMIT OF ONE-HALF TURN OF THE NUT.

ANCHOR TEST LOAD VALUES

ANCHOR TYPE	ANCHOR DIAMETER	EMBED h_{ef}	TORQUE LOAD (FT-LBS)	f_c MIN (PSI)	MINIMUM EDGE DIST REQ.	MINIMUM SPACING REQ.	CONCRETE TYPE
HILTI KB-TZ2	3/8"	2"	30	3,000	36"	3 1/2"	SAND LWC OR NWC
DEWALT SD2	3/8"	2"	20	3,000	36"	3 1/2"	SAND LWC OR NWC

9. IF ANY ANCHOR FAILS DURING TESTING, UNIT MUST BE MOVED SO THAT NO ANCHOR IS WITHIN 8" OF AN ABANDONED ANCHOR.

- 10. A MANUFACTURER PROVIDED PERMANENT PLAQUE MUST BE AFFIXED ON THE UNIT STATING THE FOLLOWING: "WEIGHT OF CONTENTS SHALL NOT EXCEED 10 PCF". WEIGHT OF CONTENTS USED FOR DESIGN IS 10 PCF. VERIFY IN FIELD BEFORE INSTALLATION.
- 11. FOR BOLTS THROUGH CONCRETE ON METAL DECK
 - A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER THE SNUG TIGHT CONDITION (SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) IS ACHIEVED.
 - B. THROUGH BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.
- 12. INSTALLATION PROCEDURE:
 - a. MOUNT BASE BRACKET PROVIDED BY OMNICELL TO FLOOR WITH THROUGH BOLTS OR EXPANSION ANCHORS RESPECTIVELY. REFERENCE MFR'S INSTALLATION GUIDE FOR PROPER SPACING
 - b. ROLL UNIT ONTO BASE BRACKET WITH DOWEL PIN INSERTING INTO BACK CASING OF UNIT.
 - c. PIN UNIT AT FRONT WITH END PLATE, CONNECTING IT TO BOTH THE UNIT CASING AND THE CASE BRACKET.



ONE-CELL CABINET MODELS

MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

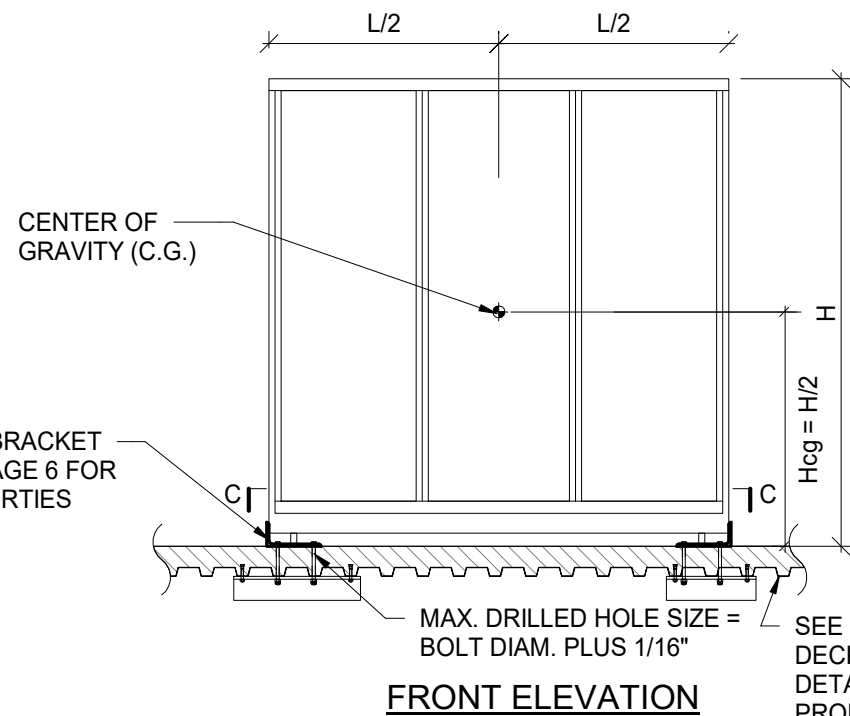
TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

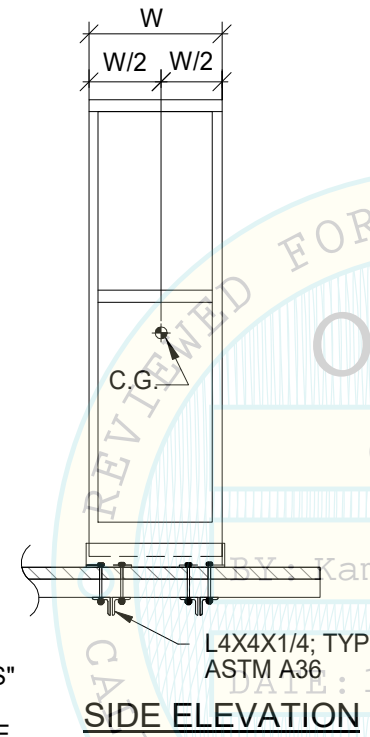
THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050

CASE 1 - ONE, TWO AND THREE CELL TALL CABINETS ABOVE GRADE



FRONT ELEVATION



SIDE ELEVATION

MODEL	Wp (LBS)	FORCES			CABINET PROPERTIES		
		Rult (LBS)	Vult (LBS/BOLT)	Tult (LBS/BOLT)	L (in)	W (in)	H (in)
ONE-CELL CABINETS	1,365	2,132	426	2,176	26 1/2	27	77.5
TWO-CELL CABINETS	2,485	2,532	483	2,889	51 1/2	27	77.5
THREE-CELL CABINETS	3,650	3,436	710	3,952	76 1/2	27	77.5

$F_p = 2.40 W_p [S_{DS} \leq 2.00, I_p = 1.5, R_p = 1.5, a_p = 1.0, \Omega_o = 1.5, z/h \leq 1.0]$

$F_v = 0.40 W_p$

Rult = MAXIMUM BRACKET PIN UPLIFT FORCE AT STRENGTH LEVEL

Vult = MAXIMUM SHEAR PER THROUGH BOLT AT STRENGTH LEVEL

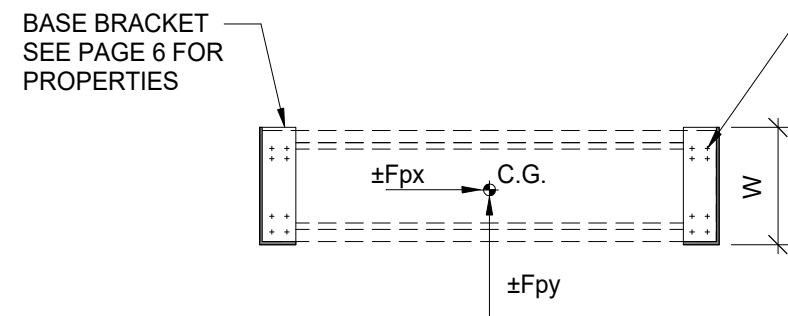
Tult = MAXIMUM THROUGH BOLT TENSION FORCE AT STRENGTH LEVEL

Wp = TOTAL WEIGHT; INCLUDES 10 pcf CONTENTS PER NOTE 10 ON PAGE 1

SEE PAGE 6 FOR FORCE VECTORS

NOTES:

1. THE DESIGN OF SUPPORTS AND ATTACHMENTS CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE.
2. Rult, Vult AND Tult GIVEN ARE FACTOR LOADS AT STRENGTH LEVEL. FINAL DEMAND FORCES FOR BEARING ON CONCRETE AND BREAK OUT OF CONCRETE SHOULD INCLUDE OVERSTRENGTH FACTOR Ω_o AS DEFINED BY ASCE 7-16.
3. SEE GENERAL NOTES SECTION ON PAGE 1.
4. FOR THE SUPPORT AND ATTACHMENT DESIGN, THE MOST CRITICAL LOAD COMBINATION IS $(0.9 - 0.2S_{DS}) \times DL$.
5. SEE PAGE 6 FOR LOCATION OF APPLIED FORCES IN BASE BRACKET.
6. SEE PAGE 6 AND PAGE 7 FOR MANUFACTURER BRACKET INFORMATION.
7. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES Rult, Vult AND Tult, AT THEIR DISCRETION, BASED ON PROJECT SPECIFIC SEISMIC DEMANDS SUBJECT TO OSHPD REVIEW/PERMIT.
8. TOTAL WEIGHT (Wp) IS A MAXIMUM. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM SHOWN.
9. EQUIPMENT MANUFACTURER MUST DESIGN UNIT TO MAKE Hcg EQUAL OR LESS THAN THE HEIGHT DIMENSION SHOWN.
10. SEE "MINIMUM STEEL DECK REQUIREMENTS" DETAIL FOR SLAB PROPERTIES ON PAGE 3



PLAN SECTION C-C



ONE-CELL CABINET MODELS

MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

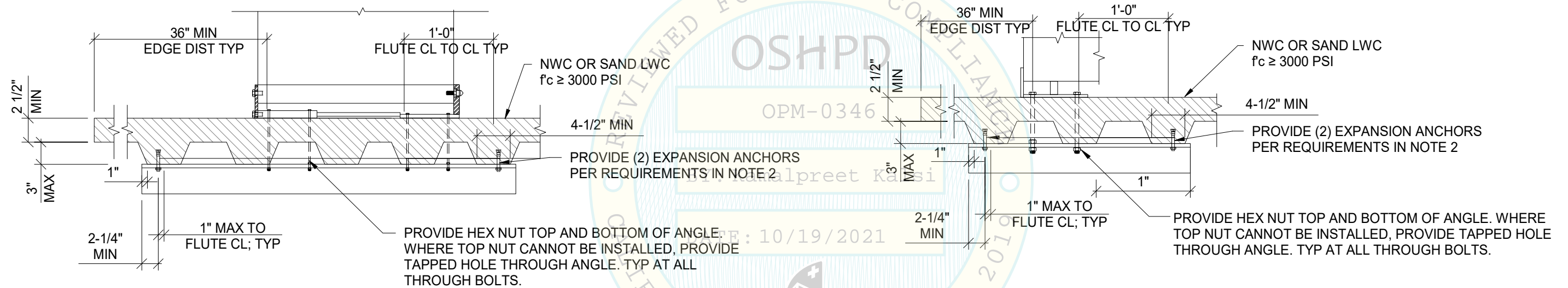
TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050

MINIMUM STEEL DECK REQUIREMENTS



THROUGH BOLT ASSEMBLY WHEN METAL DECK RIBS ARE PERPENDICULAR TO THE BRACKET

THROUGH BOLT ASSEMBLY WHEN METAL DECK RIBS ARE PARALLEL TO THE BRACKET

NOTES:

1. PROVIDE 36" MINIMUM DISTANCE TO EDGE OF SLAB OR OPENINGS
2. PROVIDE (2) 3/8" Ø HILTI KB-TZ2 W/ 2" EMBED EXPANSION ANCHORS TO SUPPORT ANGLE. INSTALL ON THE SLAB RIB INDEPENDENT FROM THROUGH BOLTS. EXTEND ANGLE AS REQUIRED. DO NOT INSTALL EXPANSION ANCHORS IN SLAB RIBS WHERE THROUGH BOLTS ARE PRESENT.
3. W- STEEL DECK TO BE 20 GAGE MIN.



ONE-CELL CABINET MODELS

MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

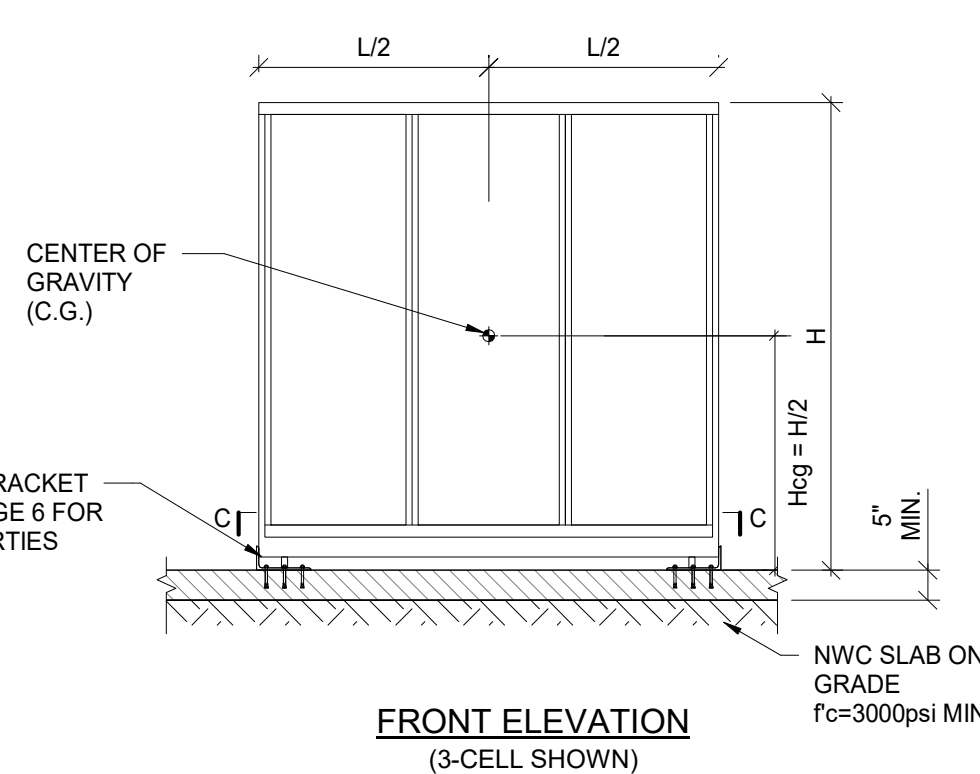
TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050

CASE 2 - ONE, TWO AND THREE CELL TALL CABINETS ON GRADE

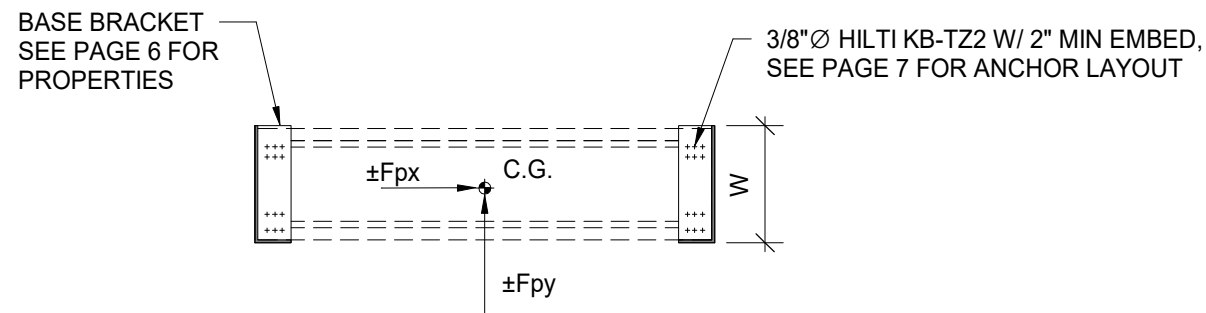


CENTER OF GRAVITY (C.G.)

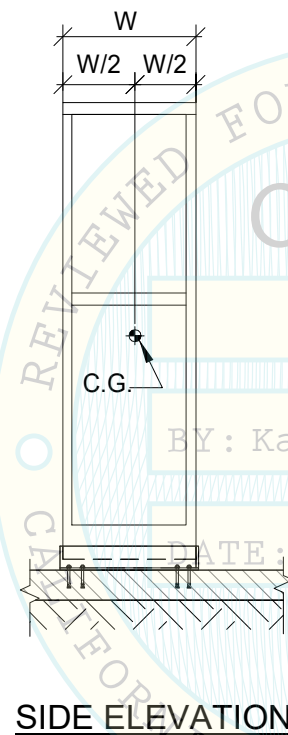
BASE BRACKET SEE PAGE 6 FOR PROPERTIES

FRONT ELEVATION
(3-CELL SHOWN)

NWC SLAB ON GRADE
 $f'_c=3000\text{psi MIN}$



PLAN SECTION C-C



SIDE ELEVATION

MODEL	Wp (LBS)	FORCES			CABINET PROPERTIES		
		Rult (LBS)	Ω_0 Vult (LBS/BOLT)	Ω_0 Tult (LBS/BOLT)	L (in)	W (in)	H (in)
ONE-CELL CABINETS	1,365	746	364	740	26 1/2	27	77.5
TWO-CELL CABINETS	2,485	854	329	964	51 1/2	27	77.5
THREE-CELL CABINETS	3,650	1,146	297	1,019	76 1/2	27	77.5

$F_p=0.90 W_p$ [$S_{DS} \leq 2.00, I_p=1.5, R_p=1.5, a_p=1.0, \Omega_0=1.5, z/h = 0$]
 $F_v=0.40 W_p$
 Rult = MAXIMUM BRACKET PIN UPLIFT FORCE AT STRENGTH LEVEL
 Vult = MAXIMUM SHEAR PER EXPANSION ANCHOR AT STRENGTH LEVEL
 Tult = MAXIMUM EXPANSION ANCHOR TENSION FORCE AT STRENGTH LEVEL
 Wp = TOTAL WEIGHT; INCLUDES 10 pcf CONTENTS PER NOTE 10 ON PAGE 1
 SEE PAGE 6 FOR FORCE VECTORS

NOTES:

1. THE DESIGN OF SUPPORTS AND ATTACHMENTS CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE.
2. Rult, Vult AND Tult GIVEN ARE FACTORED LOADS AT STRENGTH LEVEL. FINAL DEMAND FORCES FOR ANCHORAGE TO CONCRETE SHOULD INCLUDE OVERSTRENGTH FACTOR Ω_0 AS DEFINED BY ASCE 7-16.
3. FOR THE SUPPORT AND ATTACHMENT DESIGN, THE MOST CRITICAL LOAD COMBINATION IS $(0.9 - 0.2S_{DS}) \times DL$.
4. SEE GENERAL NOTES SECTION ON PAGE 1.
5. SEE PAGE 6 FOR LOCATION OF APPLIED FORCES IN BASE BRACKET.
6. SEE PAGE 6 AND PAGE 7 FOR MANUFACTURER BRACKET INFORMATION.
7. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES Rult, Vult AND Tult, AT THEIR DISCRETION, BASED ON PROJECT SPECIFIC SEISMIC DEMANDS SUBJECT TO OSHPD REVIEW/PERMIT.
8. TOTAL WEIGHT (Wp) IS A MAXIMUM. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM SHOWN.
9. EQUIPMENT MANUFACTURER MUST DESIGN UNIT TO MAKE Hcg EQUAL OR LESS THAN THE HEIGHT DIMENSION SHOWN.



OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION

OPM-0346-19

OMNICELL ONE-, TWO- AND THREE-CELL CABINETS

DEGENKOLB ENGINEERS
225 Broadway, Suite 1325
San Diego, CA 92101
619.515.0299 PHONE
619.515.0298 FAX



ONE-CELL CABINET MODELS

MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

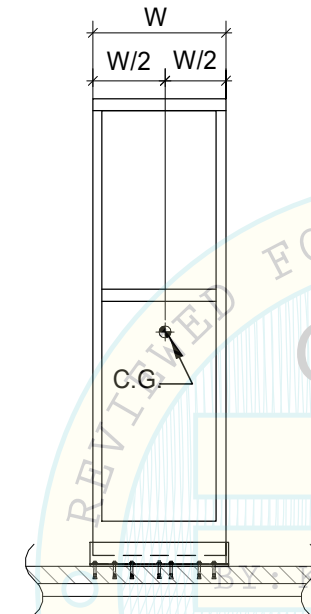
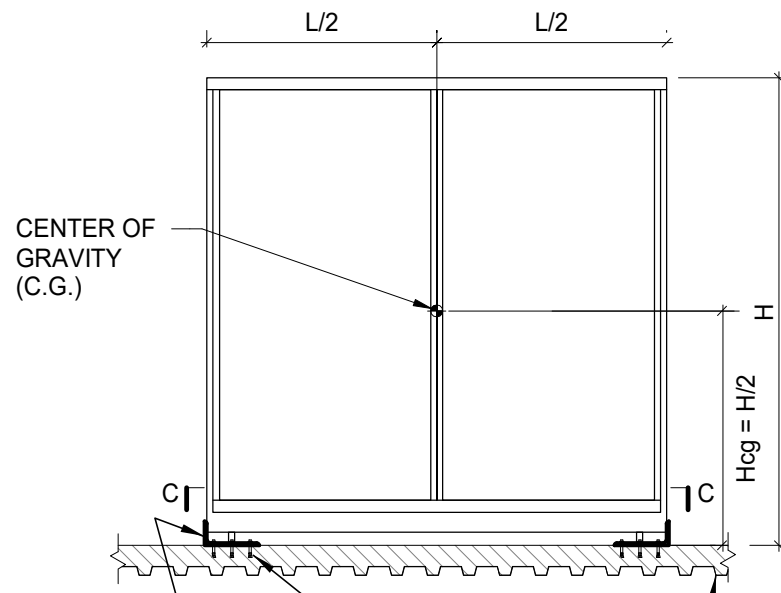
TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

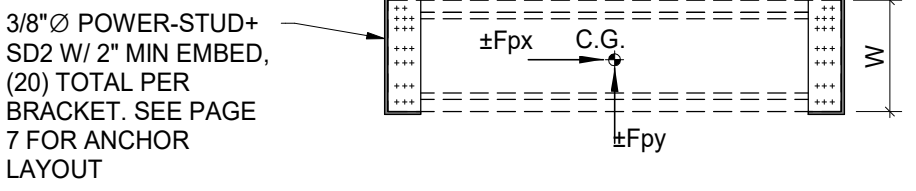
THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050

CASE 3 - ONE-, TWO-, AND THREE-CELL TALL CABINETS ABOVE GRADE



CENTER OF GRAVITY (C.G.)
MAX. DRILLED HOLE SIZE = BOLT DIAM. PLUS 1/16"
SEE "MINIMUM STEEL DECK REQUIREMENTS" DETAIL FOR SLAB PROPERTIES ON PAGE 3
BASE BRACKET, SEE PAGE 6 FOR PROPERTIES
FRONT ELEVATION (2-CELL SHOWN)
SIDE ELEVATION



PLAN SECTION C-C

BASE BRACKET SEE PAGE 6 FOR PROPERTIES

MODEL	Wp (LBS)	FORCES					CABINET PROPERTIES			
		Rult (LBS)	Ωo Vult (LBS/BOLT)	Ωo Tult (LBS/BOLT)	Fp (LBS)	Fv (LBS)	L (in)	W (in)	H (in)	MAX SDS
ONE-CELL CABINETS	1,365	1,047	151	575	1,720	287	26 1/2	27	77.5	1.05
TWO-CELL CABINETS	2,485	917	124	556	2,535	422	51 1/2	27	77.5	0.85
THREE-CELL CABINETS	3,650	841	145	574	2,847	475	76 1/2	27	77.5	0.65

SDS = VARIES, Ip=1.5, Rp=1.5, ap=1.0, Ωo=1.5, z/h ≤ 1

MODEL	Wp (LBS)	FORCES					CABINET PROPERTIES			
		Rult (LBS)	Ωo Vult (LBS/BOLT)	Ωo Tult (LBS/BOLT)	Fp (LBS)	Fv (LBS)	L (in)	W (in)	H (in)	MAX SDS
ONE-CELL CABINETS	1,365	1,084	151	575	1,747	437	26 1/2	27	77.5	1.60
TWO-CELL CABINETS	2,485	919	124	556	2,485	621	51 1/2	27	77.5	1.25
THREE-CELL CABINETS	3,650	903	145	574	2,920	730	76 1/2	27	77.5	1.00

SDS = VARIES, Ip=1.5, Rp=1.5, ap=1.0, Ωo=1.5, z/h ≤ 0.5

Rult = MAXIMUM BRACKET PIN UPLIFT FORCE AT STRENGTH LEVEL
Vult = MAXIMUM SHEAR PER EXPANSION ANCHOR AT STRENGTH LEVEL
Tult = MAXIMUM EXPANSION ANCHOR TENSION FORCE AT STRENGTH LEVEL
Wp = TOTAL WEIGHT; INCLUDES 10 pcf CONTENTS PER NOTE 10 ON PAGE 1
SEE PAGE 6 FOR FORCE VECTORS

NOTES:

1. THE DESIGN OF SUPPORTS AND ATTACHMENTS CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE.
2. Rult, Vult AND Tult GIVEN ARE FACTORED LOADS AT STRENGTH LEVEL. FINAL DEMAND FORCES FOR BEARING ON CONCRETE AND BREAK OUT OF CONCRETE SHALL INCLUDE OVERSTRENGTH FACTOR Ωo AS DEFINED BY ASCE 7-16.
3. SEE GENERAL NOTES SECTION ON PAGE 1.
4. FOR THE SUPPORT AND ATTACHMENT DESIGN, THE MOST CRITICAL LOAD COMBINATION IS (0.9 - 0.2SDS)xDL
5. SEE PAGE 6 FOR LOCATION OF APPLIED FORCES IN BASE BRACKET.
6. SEE PAGE 6 AND PAGE 7 FOR MANUFACTURER BRACKET INFORMATION.
7. S.E.O.R. MAY RECALCULATE MAX. ANCHOR FORCES Rult, Vult AND Tult, AT THEIR DISCRETION, BASED ON PROJECT SPECIFIC SEISMIC DEMANDS SUBJECT TO OSHPD REVIEW/PERMIT.
8. TOTAL WEIGHT (Wp) IS A MAXIMUM. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM SHOWN.
9. EQUIPMENT MANUFACTURER MUST DESIGN UNIT TO MAKE Hcg EQUAL OR LESS THAN THE HEIGHT DIMENSION SHOWN.
10. SEE "MINIMUM STEEL DECK REQUIREMENTS" DETAIL FOR SLAB PROPERTIES ON PAGE 3



ONE-CELL CABINET MODELS

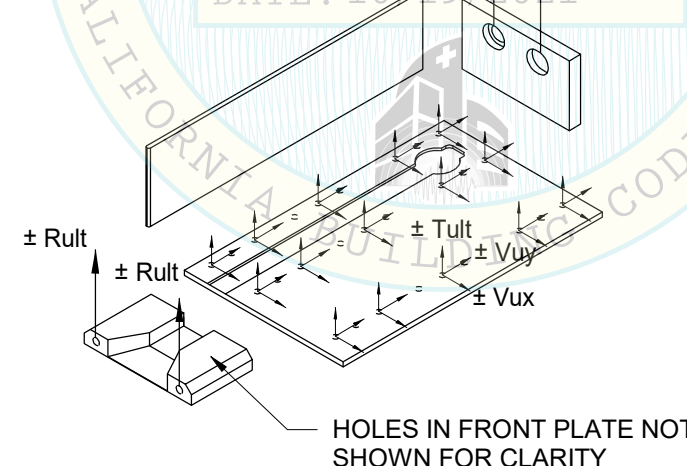
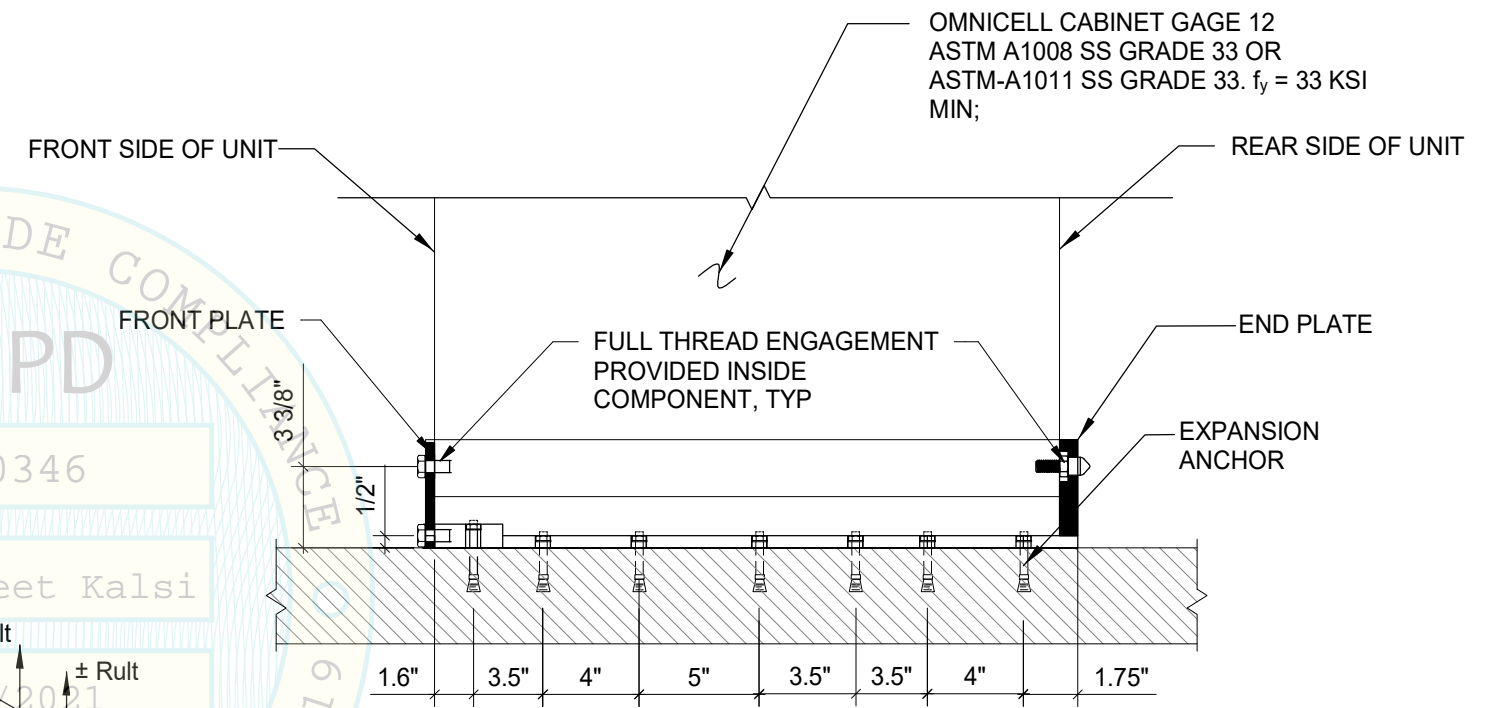
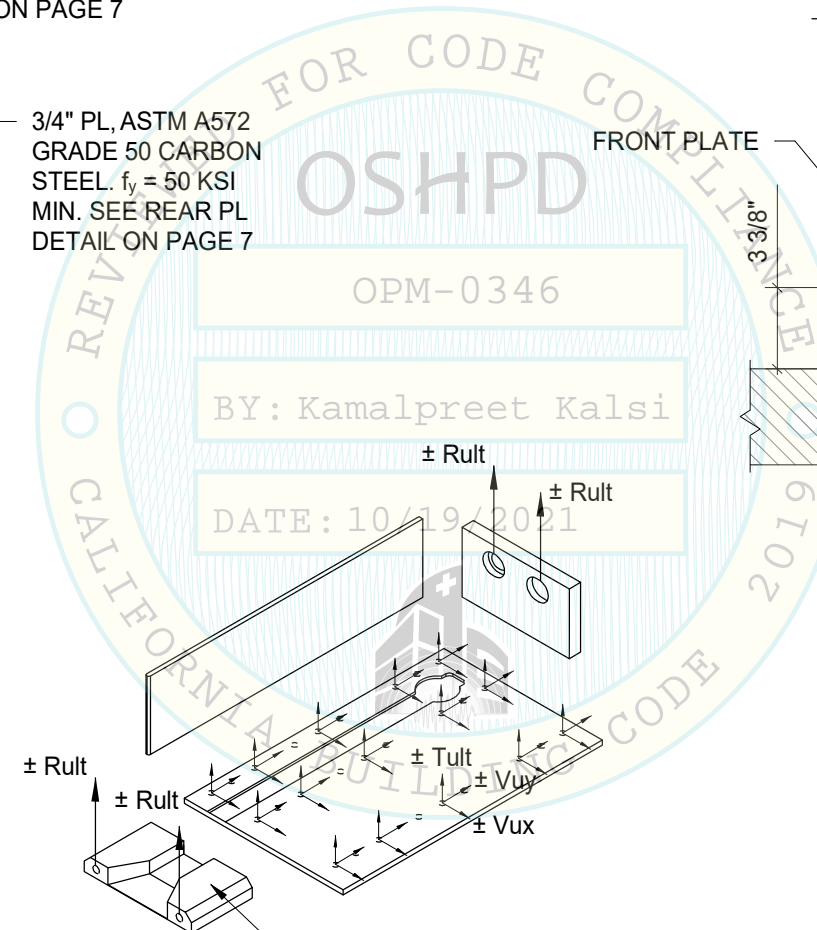
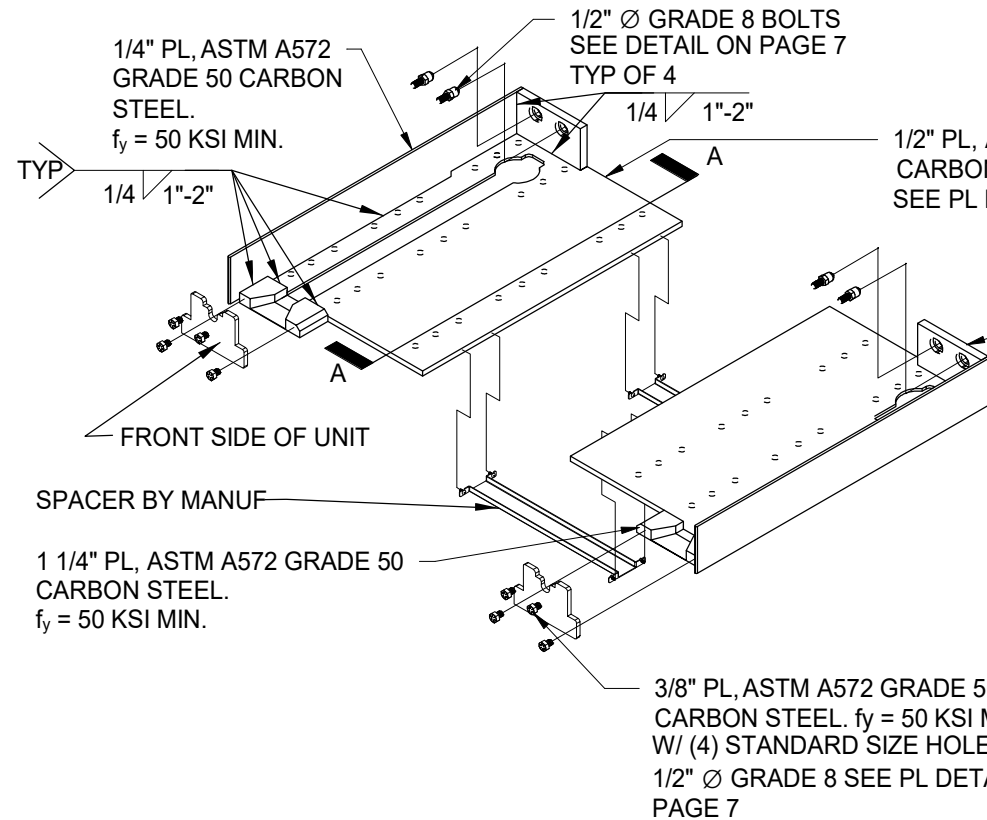
MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050



FORCE DISTRIBUTION IN BASE BRACKET

NOTES:

1. BRACKET DIMENSIONS ARE APPROXIMATE
2. AS DEFINED BY AISC 360-16, THE DIAMETER OF STANDARD SIZE HOLES EQUALS THE BOLT DIAMETER + 1/16".
3. SEE PAGES 2, 4 AND 5 FOR BRACKET FORCES.
4. PL'S SHOWN SUPPLIED BY MFR



ONE-CELL CABINET MODELS

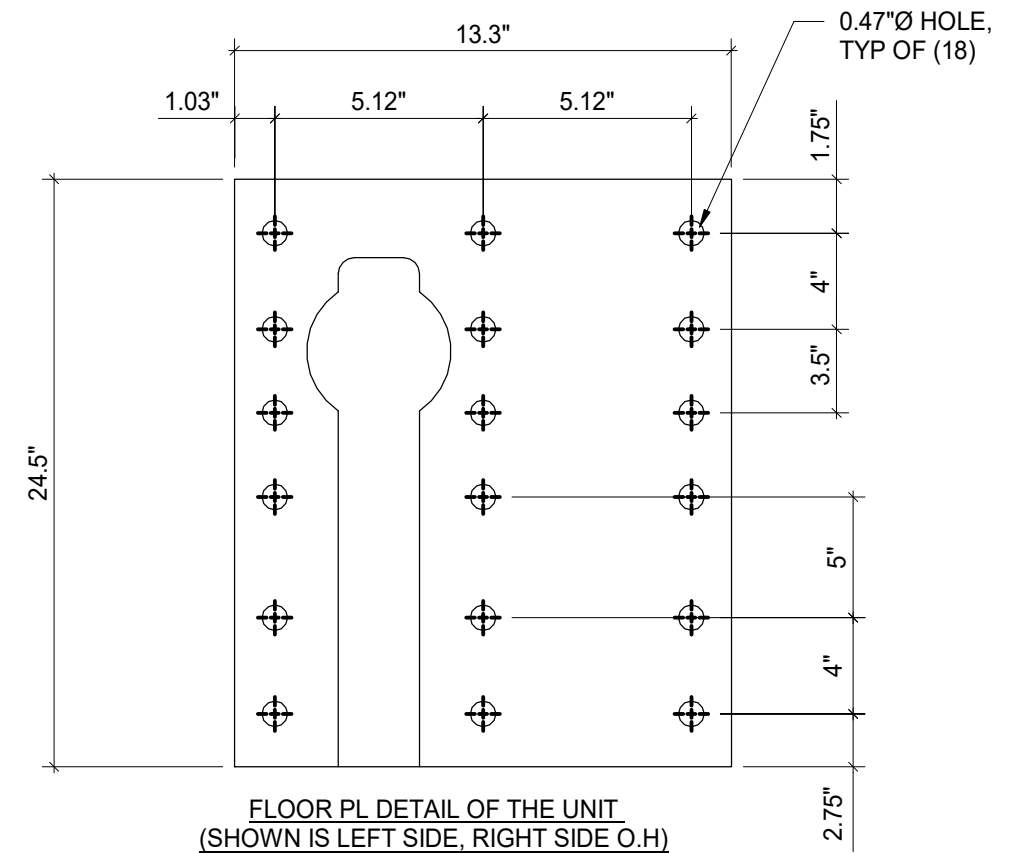
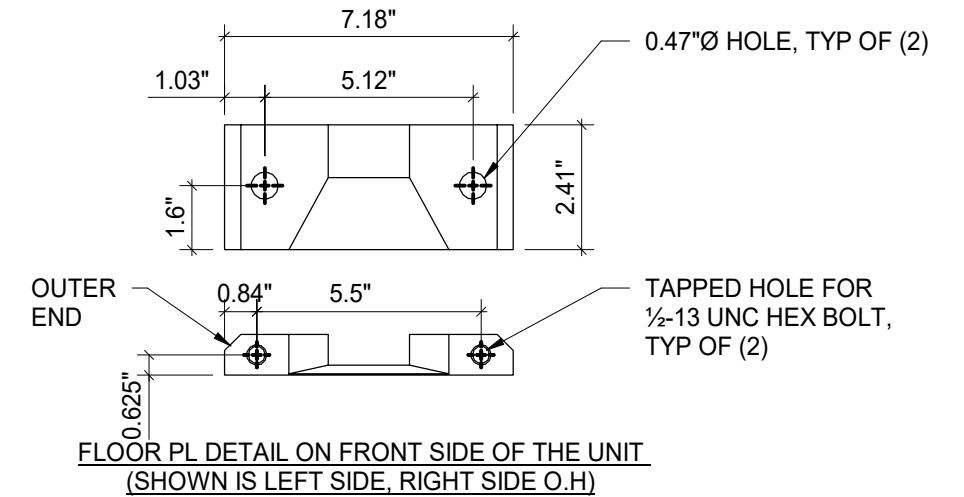
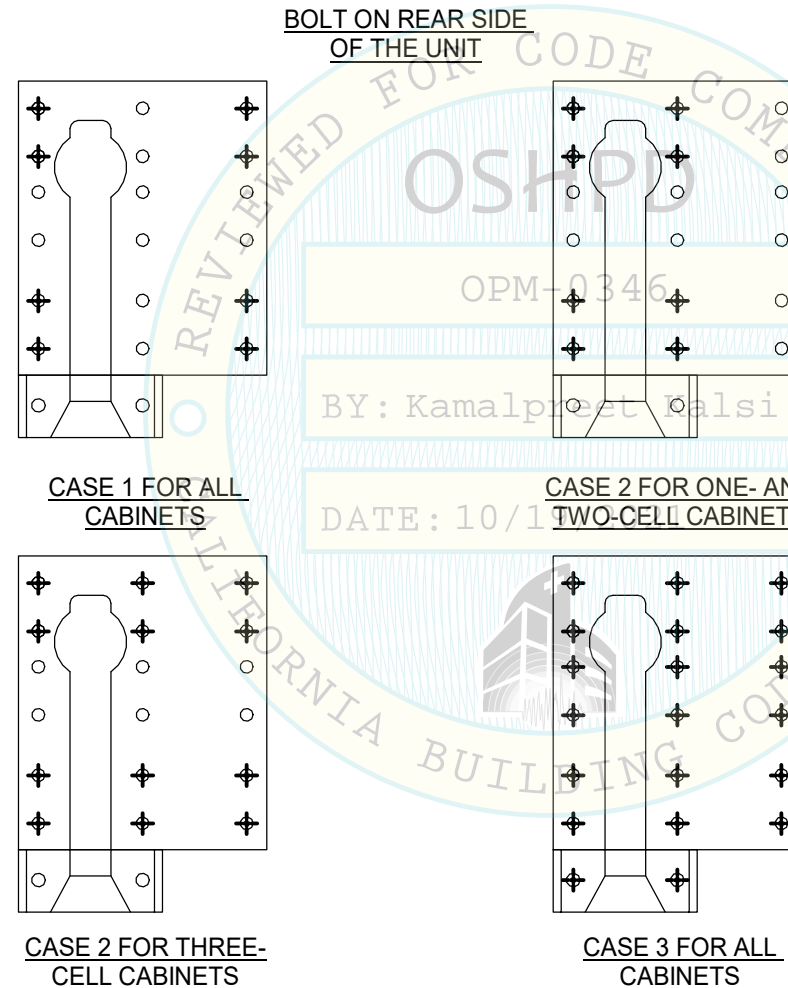
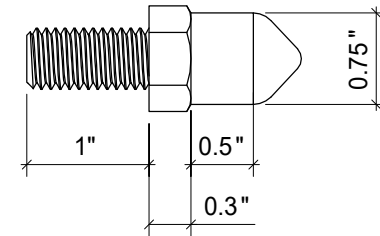
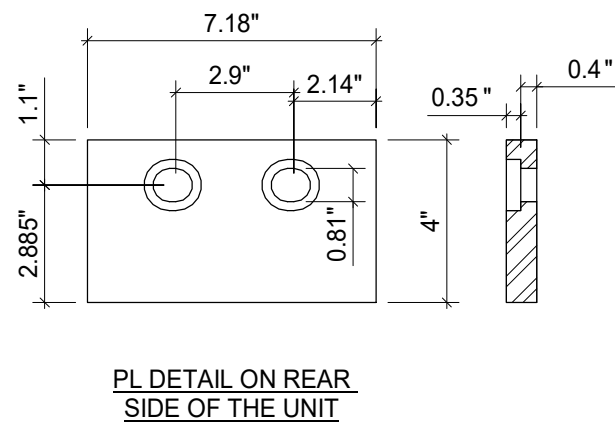
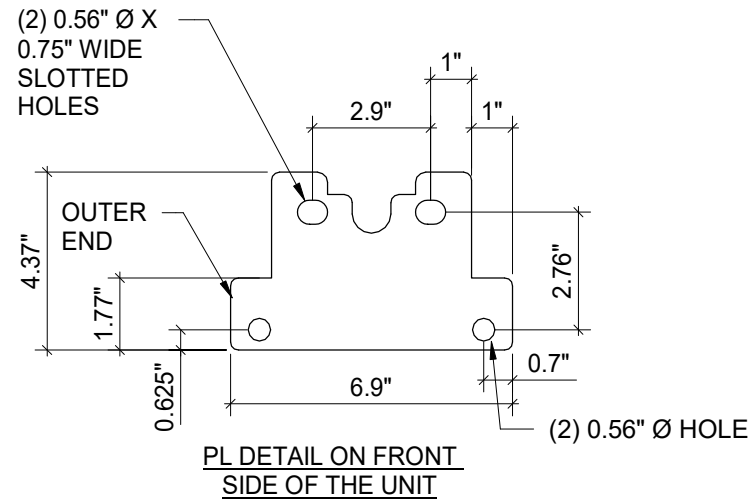
MED-FRM-101, MED-AUX-101, SUP-AUX-101, SUP-FRM-101, CSM-FRM-101, CSM-FRM-104, CSM-FRM-107, CSM-FRM-110, NAC-FRM-104, NAC-FRM-105, NAC-FRM-109, NAC-FRM-110, NAC-FRM-111, MED-FRM-022, MED-FRM-023, MED-FRM-030, MED-FRM-040, MED-FRM-041, MED-FRM-042

TWO-CELL CABINET MODELS

MED-FRM-102, MED-AUX-102, SUP-AUX-102, SUP-FRM-102, CSM-FRM-102, CSM-FRM-105, CSM-FRM-108, CSM-FRM-111, NAC-FRM-106, NAC-FRM-107, NAC-FRM-108, MED-FRM-024, MED-FRM-025, MED-FRM-031, MED-FRM-032, MED-FRM-036, MED-FRM-037, MED-FRM-043, MED-FRM-044, MED-FRM-045

THREE-CELL CABINET MODELS

MED-FRM-103, MED-AUX-103, SUP-AUX-103, SUP-FRM-103, CSM-FRM-103, CSM-FRM-106, CSM-FRM-109, CSM-FRM-112, MED-FRM-026, MED-FRM-027, MED-FRM-028, MED-FRM-033, MED-FRM-034, MED-FRM-035, MED-FRM-047, MED-FRM-048, MED-FRM-049, MED-FRM-050



NOTE:
1. BRACKET DIMENSIONS ARE APPROXIMATE.

BOLT AND ANCHOR LAYOUT