APPLICATION FOR HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0735

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Guldmann

Manufacturer's Technical Representative: Kimberly Tonione

Mailing Address: 14401 McCormick Drive, Suite A, Tampa, FL 33626

Telephone: (813) 880-0619 Email: kit@guldmann.net

Product Information

Product Name: Guldmann GH3 Patient Lift

Product Type: Patient Lift System

Product Model Number: GH3

General Description: A patient lift system that includes a console containing the motor and pulleys; a strap that extends out of the console; a hanger bar that attaches to the strap and to which a sling or seat attaches; a hand-held control unit for patient lift and movement regulation; and fixed ceiling-mounted or wall-mounted tracks.

Applicant Information

Applicant Company Name: Guldmann

Contact Person: Kimberly Tonione

Mailing Address: 14401 McCormick Drive, Suite A, Tampa, FL 33626

Telephone: (813) 880-0619 Email: kit@guldmann.net

Title: Project Manager

Registered Design Professonal Preparing Engineering Recommendations

Company Name: FORELL / ELSESSER ENGINEERS, INC.

Name: Marco Scanu California License Number: S4454

Mailing Address: 160 Pine Street, Suite 600, San Francisco, CA 94111

Telephone: (415) 837-0700 Email: scanu@forell.com

HCAI 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, 2022 (CBSC 2022) 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 2022 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

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

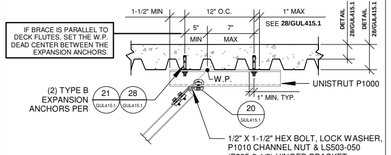
HCAI Approval

Date: 2/13/2025

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable):

METAL DECK DIMENSION & GAGE & TOPPING FILL THICKNESS AND TYPE FILL MUST CONFORM TO DETAIL 28/GUL415.1.

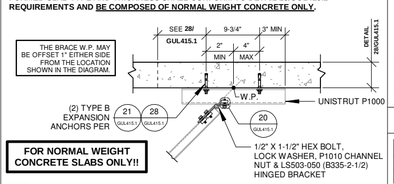


NOTE:

THE BRACE-STRUT ASSEMBLY MAY BE ANCHORED PARALLEL, SKEWED OR PERPENDICULAR TO THE METAL DECK RIBS BUT THE BRACE AND THE ANCHORED P1000 STRUT SHALL BE PARALLEL TO EACH OTHER. LENGTHEN THE P1000 STRUT AT SKEWED CONDITIONS SO THAT ANCHOR LOCATION WITHIN THE RIB COMPLIES TO THE REQUIREMENTS NOTED ABOVE.

11 BRACE CONN. AT METAL PAN DECK

FORMED SLAB TYPE AND THICKNESS SHALL CONFORM TO DETAIL 28/GUL415.1 REQUIREMENTS AND BE COMPOSED OF NORMAL WEIGHT CONCRETE ONLY.



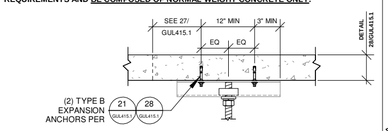
FOR NORMAL WEIGHT CONCRETE SLABS ONLY!!

NOTE:

THE BRACE-STRUT ASSEMBLY MAY BE ANCHORED PARALLEL, SKEWED OR PERPENDICULAR TO THE METAL DECK RIBS BUT THE BRACE AND THE ANCHORED P1000 STRUT SHALL BE PARALLEL TO EACH OTHER. LENGTHEN THE P1000 STRUT AT SKEWED CONDITIONS SO THAT ANCHOR LOCATION WITHIN THE RIB COMPLIES TO THE REQUIREMENTS NOTED ABOVE.

12 BRACE CONN. AT CONCRETE

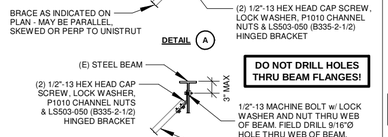
FORMED SLAB TYPE AND THICKNESS SHALL CONFORM TO DETAIL 28/GUL415.1 REQUIREMENTS AND BE COMPOSED OF NORMAL WEIGHT CONCRETE ONLY.



FOR NORMAL WEIGHT CONCRETE SLABS ONLY!!

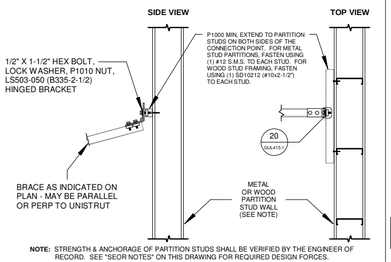
FOR INFO NOT NOTED SEE DETAIL 9A

13 TYPICAL HANGER AT FLAT SLAB



DO NOT DRILL HOLES THRU BEAM FLANGES!

14 BRACE CONN. AT STEEL FRAMING

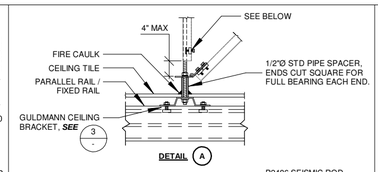


NOTE: STRENGTH & ANCHORAGE OF PARTITION STUDS SHALL BE VERIFIED BY THE ENGINEER OF RECORD. SEE "SEOR NOTES" ON THIS DRAWING FOR REQUIRED DESIGN FORCES.

15 BRACING TO STEEL FRAME WALL

ABV	= ABOVE	MET	= METAL
ASCE	= AMERICAN SOCIETY OF CIVIL ENGINEERING	MIN	= MINIMUM
CBC	= CALIFORNIA BUILDING CODE	NWC	= NORMAL WEIGHT CONCRETE
CEOR	= COMPONENT ENGINEER OF RECORD	PDF	= POWDER DRIVEN FASTENER
CONC.	= CONCRETE	PERP	= PERPENDICULAR
CONN.	= CONNECTION	RF	= ROOF
(E)	= EXISTING (OR "BY OTHERS")	SCHED	= SCHEDULE
FLR	= FLOOR	SEOR	= STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING
IOR	= INSPECTOR OF RECORD	SIM	= SIMILAR
LMAX	= MAXIMUM UNBRACED LENGTH OR CLEAR DISTANCE BETWEEN HINGES	STD	= STANDARD
LWC	= LIGHT-WEIGHT CONCRETE	w/	= WITH
MAX	= MAXIMUM		

16 STANDARD ABBREVIATIONS



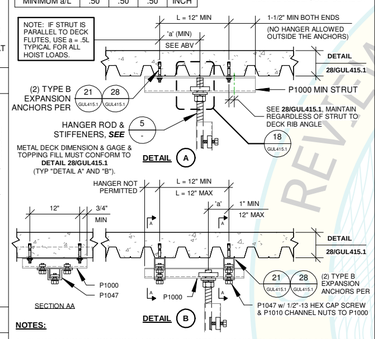
NOTES:

1. SEE **DETAIL 5** FOR GENERAL HANGER AND BRACE REQUIREMENTS.
2. "DETAIL A" OR "B" IS OPTIONAL, DEPENDING ON WHERE THE PARALLEL RAIL IS SET RELATIVE TO THE FINISH CEILING.

8 TYPICAL SUSPENSION ROD AT CEILING CONDITION

SCHEDULE - HANGER LOCATION 'a/L' LIMITS				
LOAD RATING	605	825	1,100	LBS
MINIMUM a/L	.50	.50	.50	INCH

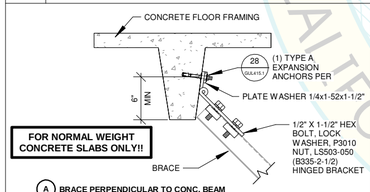
THE HANGER CAN BE NO CLOSER TO EITHER EXPANSION ANCHOR THAN DIMENSION 'a'. IF HANGER MUST BE CLOSER, USE "DETAIL B".



NOTES:

1. IF THE HANGER LOCATION 'a' CANNOT BE OBTAINED VIA "DETAIL A", "DETAIL B" MUST BE USED.
2. IF STRUT IS PARALLEL TO DECK FLUTES & a/L IS SET TO 0.50 MIN, "DETAIL B" IS NOT REQUIRED FOR ALL HOIST LOAD RATINGS.

9 SUSPENSION ROD CONN. CONC. & METAL PAN



10 BRACE CONNECTION AT CONC. FRAMING

GENERAL NOTES:

1. EARTHQUAKE DESIGN DATA:

DESIGN STANDARDS:	ASCE 7-16 2022 CBC
RISK CATEGORY:	IV
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:	S_{DS} = 2.00 MAXIMUM
COMPONENT IMPORTANCE FACTOR:	I_P = 1.5
COMPONENT AMPLIFICATION FACTOR:	a_P = 2.5
COMPONENT RESPONSE MODIFICATION FACTOR:	R_P = 4.5
HORIZONTAL SEISMIC DESIGN FORCE:	$F_P = 2.00W_P$
VERTICAL SEISMIC DESIGN FORCE:	$E_V = 0.40W_P$
LIMITING DEFLECTION:	L/360 FOR LIVE LOAD

DESIGN BASIS: ALLOWABLE STRESS DESIGN (ASD) IS USED FOR ALL MEMBERS EXCEPT LOAD FACTOR RESISTANCE DESIGN (LRFD) IS USED FOR ALL POST-INSTALLED ANCHORS.

2. AT THE DISCRETION OF THE SEOR, THIS PROJECT IS SUBJECT TO SPECIAL INSPECTIONS. SUBMIT REPORTS TO THE SEOR AND IOR. THE FOLLOWING SPECIAL TESTING AND INSPECTION SERVICES SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY HIRED BY THE OWNER:

2.1	REVIEW MILL CERTIFICATES *
2.2	TEST UNIDENTIFIED STEEL *
2.3	INSTALLATION TORQUE OF ALL BOLTING *
2.3.1	31 FT-LB FOR M10
2.3.2	50 FT-LB FOR 1/2" Ø
2.4	LOAD TESTING OF INSTALLED SYSTEM **

* - PERFORMED BY QUALIFIED TESTING AGENCY HIRED BY THE OWNER EXCEPT WHERE THE IOR CAN PERFORM THE REQUIRED TESTING

** - PERFORMED BY INSTALLER, REVIEW BY IOR

3. STEEL GRADES:

MISC SHAPES & PLATES:	ASTM A-36
PIPE:	ASTM A-53, GRADE B
MACHINE BOLTS:	ASTM A-307, SAE J429 GR 2
THREADED RODS:	ASTM A-193 GRADE B7 ZINC COATED ALL-THREAD ROD

4. WORKMANSHIP AND DETAILS SHALL CONFORM TO THE PRODUCT MANUFACTURER'S STANDARDS, AISC SPECIFICATIONS, ACI STANDARDS AND THE GOVERNING BUILDING CODE.

5. BOLT HOLES IN STEEL SHALL BE 1/16" LARGER IN DIAMETER THAN THE BOLT.

6. ANY FIREPROOFING REMOVED FROM THE (E) STEEL BEAMS SHALL BE REPLACED WITH SAME THICKNESS OF THE SAME OR BETTER MATERIAL AND MEET ALL APPLICABLE APPROVED PROJECT STANDARDS.

7. ALL UNISTRUT PARTS SHALL BE ELECTRO-GALVANIZED (EG) OR PRE-GALVANIZED (PG). CUT ENDS AND SCRATCHING OF GALVANIZING SHALL RECEIVE A COAT OF COLD GALVANIZING PAINT. B335-2 AND B335-4 HOLE HINGED CLIPS ARE PER THE EATON B-LINE PRODUCT LINE, DO NOT SUBSTITUTE.

8. ALL HARDWARE MAYBE SUBSTITUTED w/ EQUAL OR BETTER HARDWARE. SPECIFICATION OF THE HARDWARE SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE SEOR AND HCAI.

9. AT SYSTEM CONNECTIONS TO THE SUPER-STRUCTURE, DO NOT USE A SINGLE DEVICE TO ACCEPT MULTIPLE CONNECTIONS SUCH AS MULTIPLE HANGERS, HANGERS+BRACING, AND ANY SUCH COMBINATION. EACH HANGER AND/OR BRACE SHALL HAVE IT'S OWN ANCHORAGE TO THE SUPER-STRUCTURE.

10. GULDMANN PARTS MAY ONLY BE USED IF THE PART NUMBER IS REFERENCED ON THESE DRAWINGS.

11. FOR ALL EXPANSION ANCHORS, SEE (**DETAIL 28/GUL415.1**)

12. SHEET METAL SCREWS SHALL BE HILTI SELF DRILLING SCREWS PER ESR-2196. MINIMUM EDGE DISTANCE IS 1.5D, MINIMUM SPACING IS 3.0D, WHERE "D" IS NOMINAL SCREW DIAMETER.

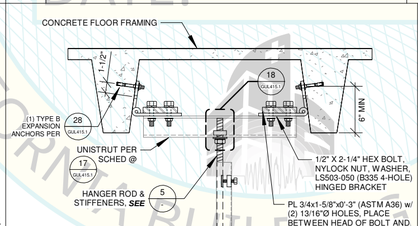
13. ALL STUDS AND TRACKS SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) PER ICC-ES REPORT ESR-3064P. ALL MEMBERS 43 MIL OR LIGHTER SHALL BE MANUFACTURED PER ASTM A653 SS GRADE 33 AND MEMBERS 54 MIL OR HEAVIER PER ASTM A653 SS GRADE 50, CLASS I. MEMBERS SHALL BE UNPLUNCHED.

14. FASTENING OF COLD FORMED METAL COMPONENTS SHALL BE WITH SELF-DRILLING SELF-TAPPING SCREWS, USING THE SIZE INDICATED ON THE DETAILS. SCREWS SHALL CONFORM TO ASTM C1513 AND HAVE A CORROSION-RESISTANCE COATING. SCREWS SHALL BE INSTALLED IN ACCORDANCE WITH THESE DETAILS AND THE MANUFACTURERS REQUIREMENTS AND FOLLOWING: SCREW THREADS SHALL TAP INTO AND SHALL ENGAGE THE ENTIRE THICKNESS OF ALL PIECES JOINED, AND NOT LESS THAN THREE COMPLETE THREADS SHALL PENETRATE BEYOND THE METALS JOINED. SCREW POINTS FOR SELF DRILLING SCREWS SHALL BE SELECTED SO THAT DRILLING IS COMPLETED BEFORE THE LEAD THREADS BEGIN ENGAGING METAL. PRE-DRILLED HOLE DIAMETERS SHALL NOT EXCEED THE DIAMETER OF THE DRILL POINT.

15. DO NOT MAKE ANY CONNECTIONS IN THE PROTECTED ZONE OF SEISMIC STEEL FRAMING. SEE PROJECT STRUCTURAL DRAWINGS FOR LOCATIONS. PROHIBITED CONNECTORS INCLUDE WELDED, BOLTED, SCREWED, POWDER DRIVEN OR ANY OTHER CONNECTOR.

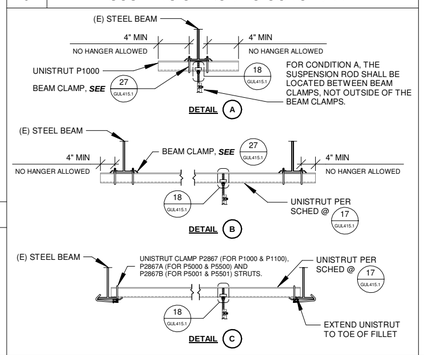
16. SEE **29/GUL415.1** FOR STATEMENT OF SPECIAL INSPECTIONS.

2 GENERAL NOTES

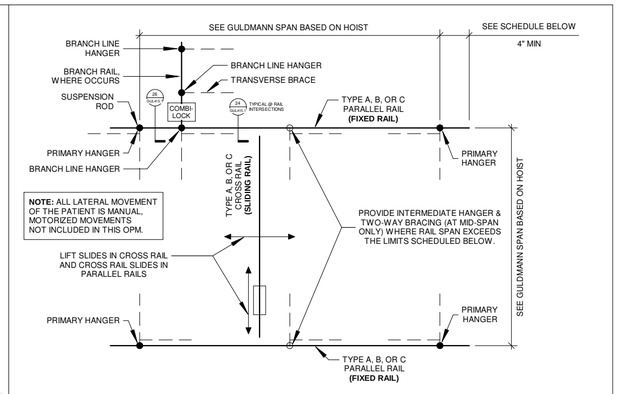


HANGER ROD CAN OCCUPY ANY POSITION BETWEEN B335 CLIPS.

6 SUSPENSION ROD TO CONC. BEAM



7 SUSPENSION ROD TO STEEL BEAMS

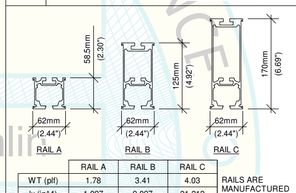


NOTES FOR DETAIL 1

1. PROVIDE TWO-WAY SEISMIC BRACING AT EACH PRIMARY HANGER LOCATION (4 PAIRS MINIMUM EACH INSTALLATION).
2. SEISMIC BRACES MAY BE ORIENTED 180° FROM THAT SHOWN.
3. BRACES MAY BE ± 10° FROM BEING PARALLEL TO THE RAILS AT ANY LOCATION.
4. ONE OR MORE BRANCH LINES MAY BE PROVIDED AT ANY LOCATION. PROVIDE HANGERS, BRACING, AND MAXIMUM SPANS AS PER **DETAIL 26/GUL415.1.**
5. SEE **DETAIL 5** ON THIS SHEET FOR HANGER AND BRACE REQUIREMENTS.

LOAD LIMIT	RAIL A			RAIL B			RAIL C	
	CANTILEVER (SINGLE/ CROSS)	CANTILEVER (FIXED)	SPAN (BETWEEN SUPPORTS)	CANTILEVER (SINGLE/ CROSS)	CANTILEVER (FIXED)	SPAN (BETWEEN SUPPORTS)	CANTILEVER (SINGLE/ CROSS)	CANTILEVER (FIXED)	SPAN (BETWEEN SUPPORTS)
605	10 ¾	16 ½	59	19	24 ¾	176	25	30 ¾	275
825	10	15 ¾	49	16 ½	22 ½	157	22 ¼	28 ¼	235
1100 (TWIN)	18 ¾	15 ¼	49	24 ¾	21 ¼	137	29 ½	25 ¾	205

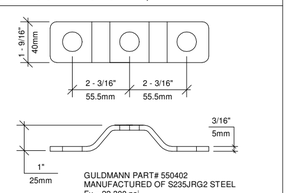
1 SCHEMATIC PLAN (ROOM COVER SYSTEM)



	RAIL A	RAIL B	RAIL C
WT (plf)	1.78	3.41	4.03
Ix (in^4)	1.097	9.097	21.212
Sx (in^3)	0.918	3.671	17.415
Iy (in^4)	1.130	1.971	2.355
Sy (in^3)	0.928	1.618	0.691

RAILS ARE MANUFACTURED OF 6063-T6 ALUMINUM
Fu = 30,000 psi
E = 10,100 psi

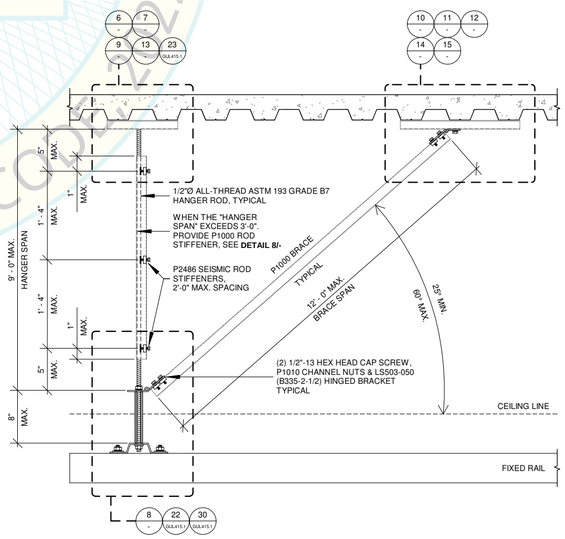
4 SUPPORT RAIL PROPERTIES-TYP



GULDMANN PART# 550402
MANUFACTURED OF S235JRG2 STEEL
Fy = 22,300 psi
(SWL limit = 1,430 LBS)

PART# INCLUDES M10 BOLTS AND ALL PARTS FOR BRACKET TO RAIL CONN. SEE GENERAL NOTES FOR TORQUES REQUIREMENTS

3 CEILING BRACKET DIMENSIONS



NOTES - TYPICAL LIMITS FOR HANGERS AND BRACING

1. ALL OF THE LIMITS POSTED HEREIN THIS DETAIL SHALL BE OBSERVED DURING INSTALLATION OF HANGERS AND BRACES.
2. ANGLE OF BRACE TO HORIZONTAL SHALL BE BETWEEN THE LIMITS POSTED HEREIN.
3. THE ANGLE OF THE BRACE RELATIVE TO PARALLEL RAIL SHALL BE 0° ± 10° (BRACE PARALLEL) AND 90° ± 10° (BRACE PERPENDICULAR), IN OTHER WORDS, THE BRACE MAY DEVIATE FROM TRUE PARALLEL AND/OR PERPENDICULAR BY 10° MAX.
4. LENGTH OF BRACE SHALL NOT EXCEED LIMIT POSTED HEREIN.
5. THE BRACE SHALL INTERSECT THE HANGER ROD AT AN ELEVATION NO MORE THAN 8" ABOVE THE PARALLEL RAIL CEILING BRACKET.
6. THE HANGER ROD SHALL INCLUDE A "ROD STIFFENER" IS THE OVERALL LENGTH (DEFINED ABOVE) EXCEEDS LIMIT POSTED HEREIN.

5 TYPICAL HANGER AND BRACE REQUIREMENTS

Guldmann Inc.
14401 McCormick Drive
Tampa FL. 33626 Unit A
Toll Free: 1(800)-664-8834
Fax: 1(813)-880-9558
Email: Info@Guldmann.net

NOTES

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SEOR PLEASE NOTE

1. The Engineer-of-Record (SEOR) to verify the building structure is adequate to support the new equipment and support framing loads to be installed per this drawing.

2. The equipment may be one of two types, or a combination of both:
Type 1: "Room Cover System" per **Detail 1** and **5/GUL145**, and/or
Type 2: "Upright Support" per Details on **GUL415.2**

3. **Type 1** "Room Cover System" loads: Select the values corresponding to the proposed Hoist Type and Rails to be used:

DESIGN LOADS BY HOIST RATING AND RAIL TYPE (Lbs)

Hoist / Rail	605 Lbs A	825 Lbs A	1,100 Lbs A	605 Lbs B	825 Lbs B	1,100 Lbs B	605 Lbs C	825 Lbs C	1,100 Lbs C	Basis
Hanger, Min	72	68	68	173	159	157	273	241	206	ASD
Hanger, Max	1,045	1,399	1,323	1,037	1,302	1,554	1,663	1,340	1,920	ASD
Brace, Total Axial	93	86	86	199	184	181	297	266	229	ASD
Brace, Horizontal Component	84	78	78	181	167	164	270	242	208	LRFD
Brace, Vertical Component	122	115	111	245	226	199	367	329	284	LRFD

Table Notes:

1. These loads are based on ASCE7-16 load combinations that include Dead, Live and Seismic Loadings. Additionally, hanger axial loads include dynamic load factors for movement and impact in the gravity cases.

2. "Hanger loads" represent the load in any given hanger and do not reflect design loads in the various anchorage devices. Hanger values less than zero indicate net compression considering all effects. These values do not include any Ωo amplification.

3. "Bracing" loads represent the load in any given brace and do not reflect design loads in the various anchorage devices. These values reflect the worst case for any brace angle, Θ where Θ can vary between 25 and 60 degrees from the horizontal. These values do not include any Ωo amplification.

4. **Type 2** "Upright Support" loads:

	Gravity	Gravity+ Seismic	
Vertical Force, at Base of Post	1,955	1,274	Lbs, LRFD
Lateral Force, Top of Post at Wall, Perpendicular to Wall	65	176	
Lateral Force, Top of Post at Wall, Parallel to Wall	65	176	
Out of Plane Lateral Force, anchors spaced along the length	20	20	

Table Notes:

1. Forces result from ASCE7-16 LRFD Load combinations. These values do not include any Ωo amplification.

2. The lateral force due to gravity is the force required for stability of the top of post.

REGISTERED PROFESSIONAL ENGINEER
MARCO SCANU
No. S4454
Exp. 12/31/26
STRUCTURAL
STATE OF CALIFORNIA

Revision Schedule

Date	Issued by	Number

DATE: 02/06/2025
DRAWN BY: CML
APPROVED BY:
PROJECT NAME: GULDMANN PLFT. ATTACHMENT
SHEET DESCRIPTION: CA 1/2" PAGE 1
SHEET NO: GUL415 (1 OF 3)

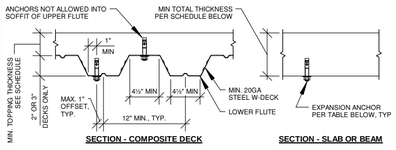
Guldmann Inc.
14401 McCormick Drive
Tampa FL, 33626 Unit A
Toll Free: 1(800)-664-8834
Fax: 1(813)-880-9558
Email: Info@Guldmann.net

NOTES

OPM-0735

EXPANSION ANCHOR GENERAL NOTES

1. ANCHORS SHALL BE HILTI KB-TZ2 PER ESR-4266, OR DEWALT POWER STUD+SD2 PER ESR-2502 OR SIMPSON STRONG BOLT STB2 PER ESR-3037 ONLY. DO NOT SUBSTITUTE ANCHORS FROM OTHER MANUFACTURERS, OTHER MODELS, OR OTHER DIAMETERS & HOLE DEPTHS. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE LISTED MANUFACTURERS ICC-ESR PRODUCT APPROVAL, IN ACCORDANCE WITH THE "SCHEDULE FOR ANCHORS AND MINIMUM REQUIREMENTS" BELOW, AND IN ACCORDANCE WITH THE DIAGRAMS BELOW.
2. ANCHORS SHALL BE INSTALLED INTO THE SOFFIT OF A METAL DECK & CONCRETE FILL SYSTEM, OR INTO THE SOFFIT OF A FORMED CONCRETE SLAB. METAL DECK SHALL BE 2 OR 3-INCH "W" TYPE COMPOSITE METAL DECKING ONLY. MINIMUM CONCRETE STRENGTH SHALL BE f'c = 3,000 PSI. FOR METAL DECK FLOOR SYSTEMS, CONCRETE MIX MAY BE NORMAL WEIGHT OR LIGHT WEIGHT CONCRETE. FOR FORMED FLOOR SYSTEMS, NORMAL WEIGHT CONCRETE ONLY SHALL BE USED.
3. ANCHOR PLACEMENT SHALL NOT VIOLATE THE MINIMUM SPACING AND EDGE DISTANCE LIMITS POSTED IN THE "SCHEDULE OF ANCHORS AND MINIMUM REQUIREMENTS" BELOW.
4. EXPANSION ANCHORS INSTALLED SHALL NOT NICK OR DAMAGE SLAB REINFORCING; USE NON-DESTRUCTIVE TESTING TO VERIFY REINFORCING LOCATIONS AND INSTALL NEW ANCHORS 1" CLEAR OF SUCH REINFORCING. SHOULD SLAB REINFORCING BE INADVERTENTLY DAMAGED, NOTIFY THE RDP IN RESPONSIBLE CHARGE IMMEDIATELY.
5. ANCHORS SHALL NOT BE USED IN PRESTRESSED CONCRETE UNLESS NON-DESTRUCTIVE TESTING METHODS ARE USED TO LOCATE PRESTRESS STEEL STRANDS, AND HOLES ARE LOCATED 1" CLEAR OF SUCH STRANDS. IF STRANDS ARE INADVERTENTLY NICKED OR DAMAGED, NOTIFY THE GENERAL CONTRACTOR AND RDP IN RESPONSIBLE CHARGE IMMEDIATELY.
6. THESE ANCHORS SHALL HAVE SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH THE SPECIAL INSPECTION REQUIREMENTS POSTED BELOW, **DETAIL 31/GUL415.1**.



NOTE: MIN. SPACING AND/OR EDGE DISTANCES CAN BE REDUCED IF NOTED ON SPECIFIC DETAILS.

SCHEDULE ANCHORS AND MINIMUM REQUIREMENTS										AT SOLID SLAB OR BEAMS			AT DECK SOFFITS
MAKE	TYPE	ANCHOR DIAMETER	MIN. EFFECTIVE EMBED. h_{ef}	MIN. DEPTH OF HOLE	MIN. TOPPING THICKNESS	MIN. TOTAL THICKNESS	MINIMUM SPACING	AT	MINIMUM EDGE DIST.	MIN. SPACING
HILTI KB-TZ2 per ESR-4266	A	1/2"	2-1/2"	3-1/4"	2-1/2"	5"	9-3/4" or 3"	@	2-5/8" or 3"	7-1/2"
	B	1/2"	3-1/4"	4-1/4"	2-1/2"	5-1/2"	5-1/4" or 3"	@	2-1/4" or 4-5/8"	9-3/4"
DeWalt PS-SDS per ESR-2502	A	1/2"	2"	2-3/4"	3-1/4"	4-1/2" or 6"	6" or 6"	@	4" or 2-5/8"	6"
	B	1/2"	3-1/4"	4"	3-1/4"	5-3/4"	6" or 6"	@	4" or 2-5/8"	9-3/4"
Simpson STB2 per ESR-3037	A	1/2"	2-1/2"	3"	1-1/2"	6" or 5 1/2"	6" or 6"	@	4" or 2-3/8"	7-1/2"
	B	1/2"	3-1/4"	4-1/8"	1-1/2"	6"	6" or 6"	@	4" or 2-3/8"	9-3/4"

28 EXPANSION ANCHOR GENERAL NOTES

GENERAL

1. SPECIAL INSPECTIONS SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE 2022 CALIFORNIA BUILDING CODE, CHAPTER 17A AND CHAPTER 19A, SECTION 1910A.5
2. QUALITY ASSURANCE TESTS AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE OWNER. THE OWNER SHALL RETAIN A TESTING AGENCY WHO SHALL PERFORM THE REQUIRED TESTS AND INSPECTIONS AND SHALL PREPARE WRITTEN SUMMARY REPORTS OF ANY TEST OR INSPECTION, AND SUBMIT SAME TO THE INSTALLER AND THE IOR.
3. THE EQUIPMENT INSTALLER SHALL NOTIFY THE OWNER'S TESTING AGENCY OF THE DATES OF ALL WORK IN NEED OF INSPECTION OR TESTING. NOTIFICATION SHALL BE SUFFICIENTLY IN ADVANCE TO ALLOW SCHEDULING OF INSPECTIONS AND TESTS, NOT LESS THAN 24 HOURS ADVANCE NOTIFICATION.
4. THE INSTALLER SHALL NOTIFY THE INSPECTOR OF RECORD (IOR) OF ANY PENDING INSPECTIONS AND TESTING, AND SHALL NOTIFY THE IOR OF ANY INSPECTIONS OR TESTS THAT FAIL THE ACCEPTANCE CRITERIA.

EXPANSION ANCHORS

1. SPECIAL INSPECTION SHALL BE AS WRITTEN IN THE ICC-ESR PRODUCT APPROVALS LISTED ABOVE. THE SPECIAL INSPECTOR SHALL MAKE PERIODIC INSPECTIONS AT LEAST ONCE OF EACH DAYS ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MEMBER THICKNESS, TIGHTENING TOURQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT AND ADHERENCE TO MANUFACTURERS PRINTED INSTALLATION REQUIREMENTS.
2. THE PERMITTED ANCHORS LISTED ABOVE ARE TORQUE CONTROLLED ANCHORS AND SHALL BE TESTED USING A CALIBRATED TORQUE WRENCH TO VERIFY INSTALLATION TORQUES OF 50 FT-LBS FOR ALL HILTI KB-TZ2 ANCHORS, 40 FT-LBS FOR DEWALT POWERSTUD+SD2 ANCHORS OR 60 FT-LBS FOR SIMPSON STRONG BOLT 2 ANCHORS.
3. VERIFY TORQUE FOR 100% OF THE ANCHORS INSTALLED IN ONE DAYS WORK.
4. ACCEPTANCE CRITERIA: TORQUE-CONTROLLED POST-INSTALLED ANCHORS SHALL BE TESTED WITH A CALIBRATED WRENCH AND SHALL ATTAIN THE SPECIFIED TORQUE WITH ONE-HALF (1/2) TURN OF THE NUT.

GULDMANN MANUFACTURED COMPONENTS

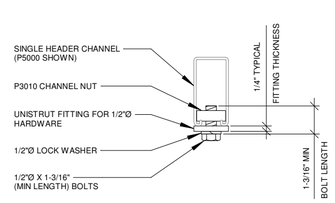
1. VERIFY THE GENERAL SIZE, SHAPE AND MATERIAL CERTIFICATIONS FOR GULDMANN RAILS, BRACKETS AND CUSTOM MANUFACTURED ALUMINUM & STEEL COMPONENTS. MATERIAL PROPERTIES ARE LISTED ON THE DETAILS.

UNISTRUT CONSTRUCTION

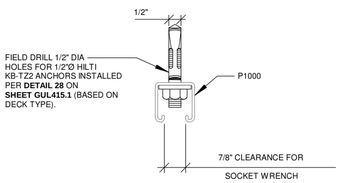
1. PERIODIC SPECIAL INSPECTION PER 2022 CBC SECTION 1705A.13.3 FOR SEISMIC RESISTANCE, INCLUDING CONNECTION ASSEMBLIES, SIZES AND GRADES AND ALL FASTENERS. THERE ARE NO WELDED CONNECTIONS.

29 STATEMENT OF SPECIAL INSPECTIONS

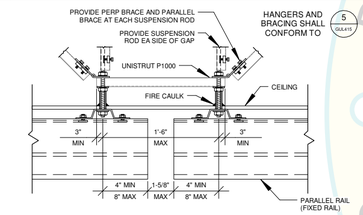
SEE DETAILS 9 THRU 15 ON GUL415 FOR CONN. TO STRUCTURE ABV



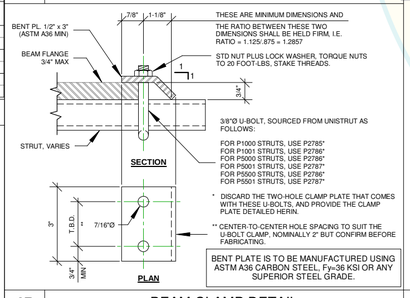
20 TYPICAL SINGLE UNISTRUT CHANNEL BOLTED CONNECTION



21 ANCHOR INTO CONCRETE

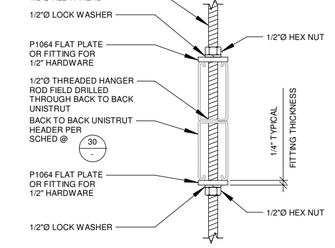


22 RAIL GAP FOR CURTAIN

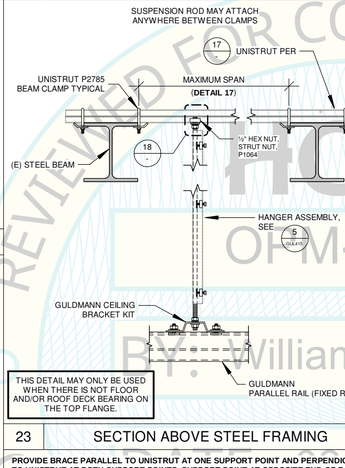


27 BEAM CLAMP DETAIL

SEE DETAILS 9 THRU 15 ON GUL415 FOR CONN. TO STRUCTURE ABV

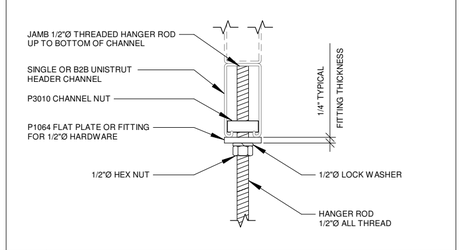


19 TYPICAL THROUGH-BOLT UNISTRUT CHANNEL HANGER ROD CONNECTION

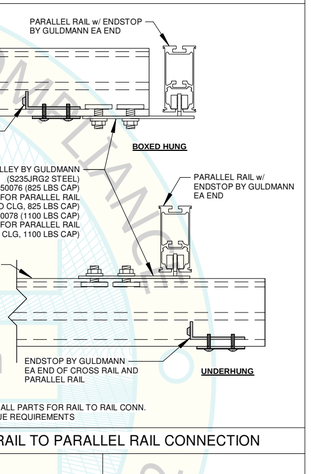


23 SECTION ABOVE STEEL FRAMING

SEE DETAILS 9 THRU 15 ON GUL415 FOR CONN. TO STRUCTURE ABV



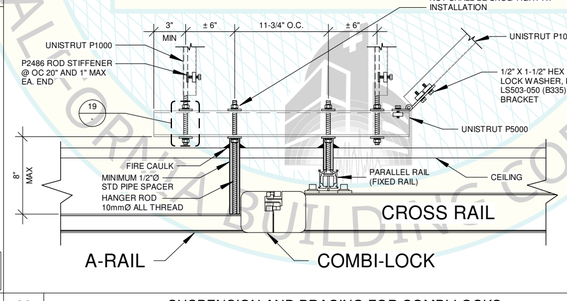
18 TYPICAL UNISTRUT CHANNEL HANGER ROD CONNECTION



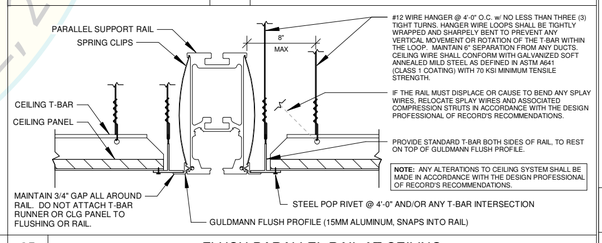
PART# INCLUDES M10 BOLTS AND ALL PARTS FOR RAIL TO RAIL CONN. SEE GENERAL NOTES FOR TORQUE REQUIREMENTS

24 CROSS RAIL TO PARALLEL RAIL CONNECTION

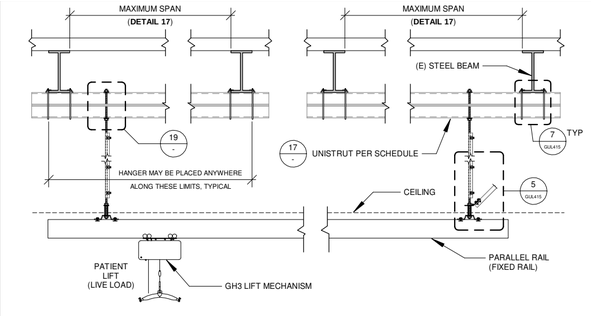
PROVIDE BRACE PARALLEL TO UNISTRUT AT ONE SUPPORT POINT AND PERPENDICULAR TO UNISTRUT AT BOTH SUPPORT POINTS. SUPPORT POINT AT OPPOSITE END OF RAIL WOULD THEN NOT REQUIRE A BRACE PARALLEL TO THE RAIL.



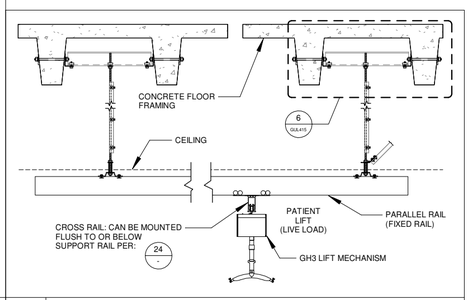
26 SUSPENSION AND BRACING FOR COMBI-LOCKS



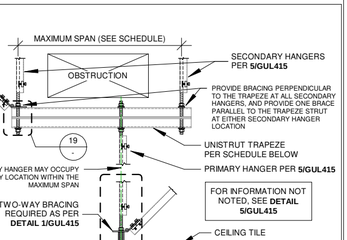
25 FLUSH PARALLEL RAIL AT CEILING

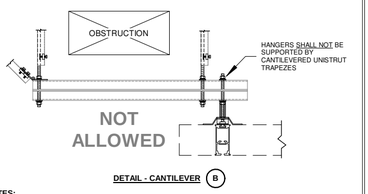


30 SCHEMATIC SECTION UNDER STEEL FRAMING



31 SCHEMATIC SECTION UNDER CONC. FRAMING





NOTES:

1. THE "PRIMARY HANGER" CONNECTS THE GULDMANN RAIL TO THE TRAPEZE ABOVE AND THE "SECONDARY HANGERS" CONNECT THE TRAPEZE TO THE STRUCTURE ABOVE. SEE DETAIL "A" ABOVE FOR ILLUSTRATION.
2. IN ALL CASES, PRIMARY HANGERS MUST BE CONNECTED TO A HORIZONTAL STRUT TO ALLOW DISTRIBUTION TO THE SECONDARY HANGERS AS SHOWN. THE MAXIMUM SPAN BETWEEN SECONDARY HANGERS SHALL MEET THE LIMITS POSTED IN THE SCHEDULE BELOW. THIS APPLIES TO THE CONDITIONS ILLUSTRATED HEREIN AND APPLIES WHEREVER THIS DETAIL IS INVOKED OR CALLED OUT.
3. EACH UNISTRUT TRAPEZE ASSEMBLY SHALL BE BRACED IN TWO DIRECTIONS USING APPROVED BRACING CONNECTED AT THE TOP OF THE STRUT AS ILLUSTRATED IN DETAIL "A" ABOVE. PROVIDE A BRACE PERPENDICULAR TO THE TRAPEZE AT EACH SECONDARY HANGER LOCATION AND PROVIDE A SINGLE BRACE PARALLEL TO THE TRAPEZE AT EITHER SECONDARY HANGER LOCATION.
4. CANTILEVERED TRAPEZE BEAM ARE NOT ALLOWED, SEE DETAIL "B". PRIMARY HANGERS SHALL BE LOCATED BETWEEN THE SECONDARY HANGER LOCATIONS, NO EXCEPTIONS.
5. PRIMARY & SECONDARY HANGERS AND ALL BRACING SHALL COMPLY WITH **DETAIL 5/GUL415** AND SHALL BE ANCHORED USING DETAILS CALLED OUT ON **5/GUL415**.

HOIST	MAXIMUM SPAN (CENTER TO CENTER OF HANGERS) - INCHES					
RATING	P1000	P1001	P5000	P5500	P5501	P5001
450	18	52	57	35	110	190
560	15	45	50	30	93	166
660	13	38	43	26	78	144
770	11	33	37	23	65	119
825	11	30	34	21	59	106
1,100	8	22	26	16	42	70

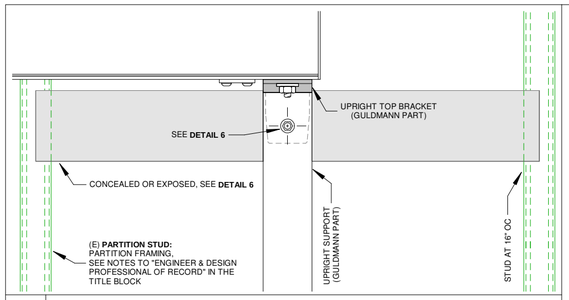
17 SUSPENSION POINT AT OBSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
MARCO SCALA
No. S4454
Exp. 12/31/26
STRUCTURAL
STATE OF CALIFORNIA

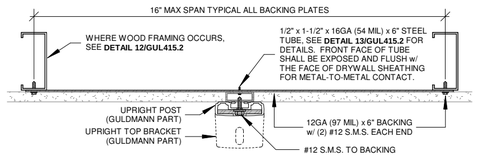
Revision Schedule

Date	Issued by	Number

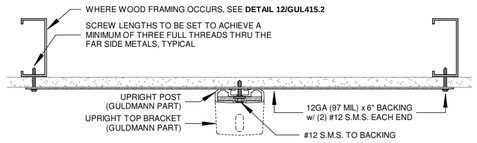
DATE: 02/06/2025
DRAWN BY: CML
APPROVED BY:
PROJECT NAME: GULDMANN PLFT. ATTACHMENT
SHEET DESCRIPTION: CA 1/2" PAGE 2
SHEET NO: GUL415.1 (2 OF 3)



5 | UPRIGHT BRACKET - FACE VIEW

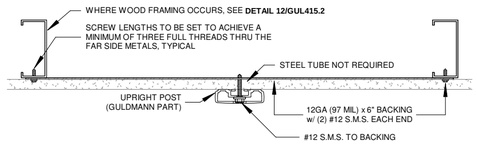


PLAN - CONCEALED BACKING

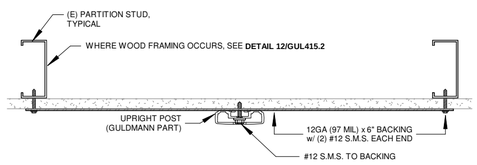


PLAN - EXPOSED BACKING

6 | PLAN DETAILS - TOP BRACKET ANCHORS

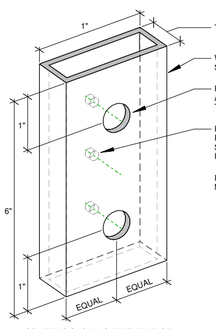


PLAN - CONCEALED BACKING



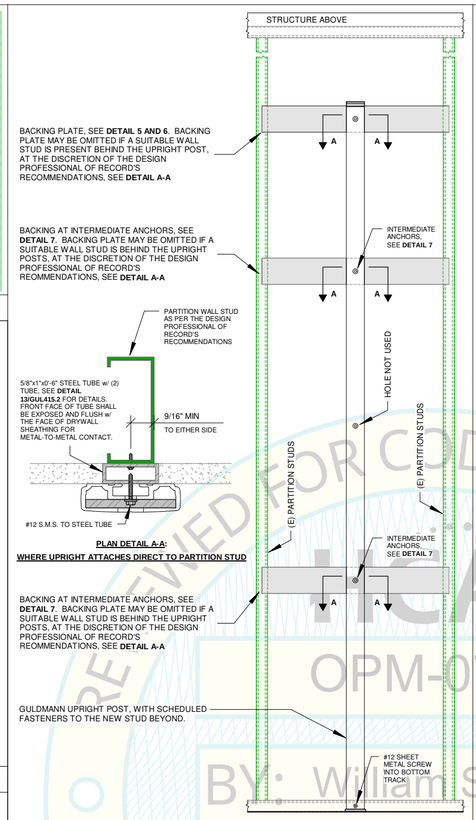
PLAN - EXPOSED BACKING

7 | PLAN DETAILS - INTERMEDIATE ANCHORS

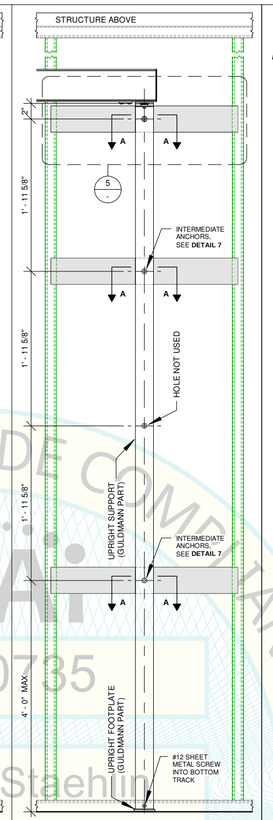


ISOMETRIC SHOWING "FRONT" FACE

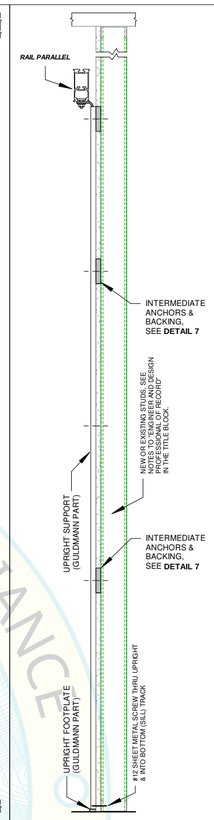
13 | STEEL TUBE DETAIL



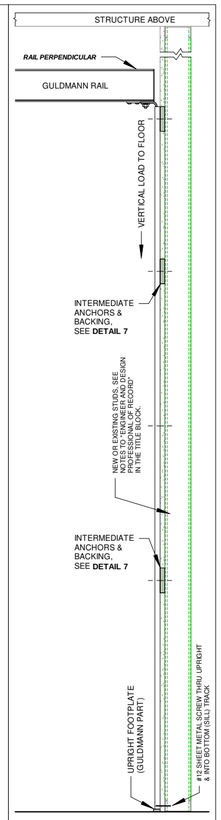
4 | PARTITION WALL ELEVATION



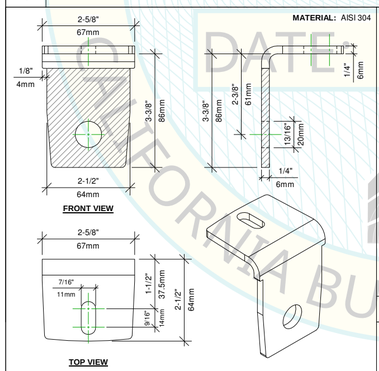
3 | UPRIGHT FACE VIEW



2 | UPRIGHT SIDE w/ RAIL PARRALLEL



1 | UPRIGHT SIDE w/ RAIL PERPENDICULAR



8 | UPRIGHT TOP BRACKET - SCHEMATIC

NOTES:

1. THE UPRIGHT SUPPORT SYSTEM MAY BE USED WHERE PARTITION WALLS ARE BUILT USING LIGHT-WOOD FRAME CONSTRUCTION, PROVIDED THE FOLLOWING REQUIREMENTS ARE FULFILLED:

2. THE STRENGTH OF THE PARTITION STUD FRAMING AND IT'S ANCHORAGE TO THE PRIMARY STRUCTURE SHALL BE VERIFIED BY THE ENGINEER AND THE DESIGN PROFESSIONAL OF RECORD IN ACCORDANCE WITH THE NOTES TITLED "ENGINEER AND DESIGN PROFESSIONAL OF RECORD" FOUND IN THE TITLE BLOCK OF THIS DRAWING.

3A. WHERE THE UPRIGHT POST OCCURS BETWEEN WALL STUDS, **DETAILS 6 & 7/GUL415.2** SHALL BE USED WITH THE SAME METAL BACKING PLATE THICKNESS AND SPAN LIMITS, AS MODIFIED IN ITEM 3B AND 3C:

3B. BACKING PLATE TO WOOD WALL STUDS: (2) SIMPSON SD10212 (#10X2-2/12") WOOD SCREWS FOR EXPOSED BACKINGS AND (2) SD10112 WOOD SCREWS FOR CONCEALED BACKING PLATES.

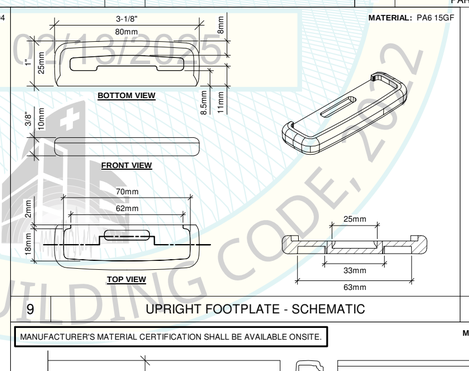
3C. UPRIGHT POST TO BACKING PLATE OR STEEL TUBE: #12 S.M.S. WITH AT LEAST 3 FULL THREADS SHOWING ON THE INTERIOR OF THE TUBE (OR BACKSIDE OF BACKING PLATE WHERE NO TUBE OCCURS). THE DRILL POINT MAY PENETRATE THE BACK WALL OF THE TUBE.

4A. WHERE THE UPRIGHT OCCURS DIRECTLY IN FRONT OF A WOOD WALL STUD, THE PLAN DETAIL OF **DETAIL 4/GUL415.2** SHALL BE USED AS MODIFIED IN ITEMS 4B AND 4C:

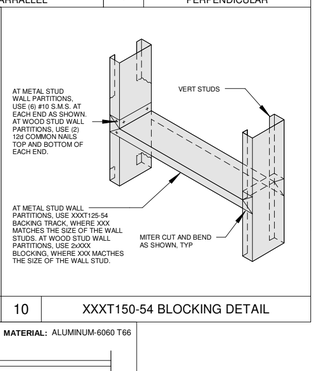
4B. FASTENERS FROM THE STEEL TUBE TO THE WOOD STUD SHALL BE (2) SD10112 AS DETAILED ON **DETAIL 13/GUL415.2**.

4C. FASTENERS FROM THE UPRIGHT POST TO THE STEEL TUBE SHALL BE (1) #12 S.M.S. AS DETAILED ON **DETAIL 13/GUL415.2**.

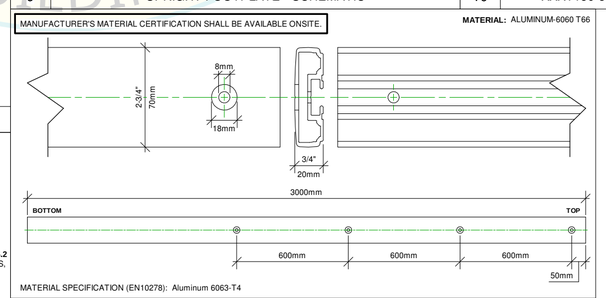
12 | WOOD FRAMED PARTITION WALLS



9 | UPRIGHT FOOTPLATE - SCHEMATIC



10 | XXXT150-54 BLOCKING DETAIL



11 | UPRIGHT POST - SCHEMATIC

Guldmann Inc.
14401 McCormick Drive
Tampa FL, 33626 Unit A
Toll Free: 1(800)-664-8834
Fax: 1(813)-880-9558
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NOTES

OPM-0735

NOTES ON UPRIGHT SUPPORT SYSTEM

1. THERE ARE TWO PERMITTED TYPES OF UPRIGHT POST INSTALLATION CONFIGURATIONS, AND THE REQUIREMENTS FOR EACH DIFFER AS NOTED BELOW:

TYPE 1 CONFIGURATIONS:
UPRIGHT POSTS AT EACH END OF EACH PARALLEL (FIXED) RAIL ANCHOR UPRIGHT POST TO THE PARTITION WALL USING THE FLAT PLATE BACKING **DETAILS 6/GUL415.2** OR **7/GUL415.2**.

TYPE 2 CONFIGURATIONS:
A BLENDED SYSTEM THAT UTILIZES A "ROOM COVER SYSTEM" PER **DETAIL 1/GUL415** IN COMBINATION WITH ONE OR MORE "UPRIGHT POSTS".

TYPE 2 NOTE A:
PROVIDE A HANGER AND TWO WAY BRACE FOR EACH SUSPENDED PARALLEL (FIXED) RAIL SUPPORT PER **1/GUL415** AND ASSOCIATED DETAILS.

TYPE 2 NOTE B:
UPRIGHT POSTS MAY REPLACE A CEILING MOUNTED HANGER AND TWO-WAY BRACE ON A ONE-FOR-ONE BASIS TO SUIT ROOM AND LIFT GEOMETRY, THAT IS ONE UPRIGHT POST MAY REPLACE ONE HANGER PLUS ONE TWO-WAY BRACING PAIR ANCHORED TO THE STRUCTURE ABOVE.

TYPE 2 NOTE C:
IF AN UPRIGHT POST IS USED AT BOTH ENDS OF A PARALLEL (FIXED) RAIL, ANCHOR THE UPRIGHT POST TO THE WALL FRAMING USING **DETAILS 1 THRU 7** ON THIS SHEET, THAT IS, VIA A FLAT-PLATE BACKING (CONCEALED OR EXPOSED). HOWEVER, IF AN UPRIGHT POST IS USED AT ONLY ONE END OF A PARALLEL (FIXED) RAIL (THE OPPOSITE END BEING SUPPORTED BY A HANGER/TWO-WAY BRACE), THE SAME **DETAILS 1 THRU 7** APPLY WITH ONE EXCEPTION:

- THE BACKING AT THE UPRIGHT BRACKET-TO PARTITION WALL SHALL BE A CONCEALED COLD FORMED TRACK PER **DETAIL 10/GUL415.2** WITH THE STEEL TUBE PER **DETAIL 13/GUL415.2**, UNLESS THE UPRIGHT BRACKET IS DIRECTLY CONNECTED TO A PARTITION STUD AS PER PLAN **DETAIL A-A** OF **DETAIL 4/GUL415.2**.

2. USE OF THE UPRIGHT POST REQUIRES THE PARTICIPATION OF THE STRUCTURAL AND DESIGN PROFESSIONAL OF RECORD TO VERIFY THE PARTITION WALL FRAMING AND ANCHORAGE, SEE "ENGINEER AND DESIGN PROFESSIONAL OF RECORD" NOTES BELOW.

STATEMENT OF SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS ARE REQUIRED FOR WORK SHOWN ON THIS DRAWING AND SHALL CONFORM TO THE REQUIREMENTS OF CBC SECTIONS 1704A.3, 1705A.1.1, 1705A.2, 1705A.2.6, 1705A.12, 1705A.13, 1705A.14 AND 2213A.1 AS FOLLOWS:

2. COLD-FORMED METALS AND FASTENERS
- Table 1705A.2.1, Item 3b: PERIODIC MATERIAL IDENITIFICATION FOR COLD FORMED METALS
- CBC 1705.12: COLD-FORMED METAL SIZES, ASSEMBLY AND FASTENING

3. MANUFACTURER'S PARTS
- Verify manufacturers certificates conform to the material properties and specifications shown here.

4. FIRE-PROTECTION
- For any alterations to existing project fire-protection work, provide special inspections per CBC Section 1705A.14

ENGINEER AND DESIGN PROFESSIONAL OF RECORD

1. The Design Professional of Record shall verify the integrity and design of partition wall framing (including wall studs, backings, head and sill anchorages) for all elements of the partition wall connected to and resisting loads from the Upright Post. See notes & loads posted on Drawing **GUL415**.

2. The Structural Engineer of Record (SEOR) shall verify the building structure is adequate to support the new equipment and support framing to be installed per this drawing. See notes & loads posted on Drawing **GUL415**.

Revision Schedule

Date	Issued by	Number

DATE: 02/06/2025
DRAWN BY: CML
APPROVED BY:
PROJECT NAME: GULDMANN PLFT. ATTACHMENT
SHEET DESCRIPTION: Upright Support (Seismic)
SHEET NO: GUL415.2 (3 OF 3)