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

OFFICE USE ONLY

APPLICATION #: OPM-0776

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [ ] Renewal/Update

Manufacturer Information

Manufacturer: Abbott

Manufacturer's Technical Representative: Eric Kristiansen

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (214) 458-4420 Email: Eric.Kristiansen@abbott.com

Product Information

Product Name: Alinity c, Alinity i, Alinity hq, Alinity hs

Product Type: Automated laboratory blood analyzers

Product Model Number: Alinity c, Alinity i, Alinity hq, Alinity hs

General Description: Automated Laboratory Instruments used for hematology anlaysis

REVIEWED FOR CODE COMPLIANCE
HCAI
OPM-0776
BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE

Applicant Information

Applicant Company Name: Abbott

Contact Person: Eric Kristiansen

Mailing Address: 1921 Hurd Drive, Irving, TX 75038

Telephone: (214) 458-4420 Email: Eric.Kristiansen@abbott.com

Title: Engineer

Registered Design Professonal Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: Dieter Siebald California License Number: S4346

Mailing Address: 2710 Gateway Oaks Drive, Suite 190N, Sacramento, CA 95833

Telephone: (916) 920-2020 Email: dieters@cyseng.com

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950 ☐ ASHRAE 171 ☐ FEMA 461

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2025 (CBSC 2025) 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 2025 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

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

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OPM-0776
BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE, 2025

HCAI Approval

Date: 8/29/2026

Name: William Staehlin Title: Senior Structural Engineer

Condition of Approval (if applicable):

OPM–0776
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NOTES:

THESE DRAWINGS ARE PREPARED FOR ABBOTT LABORATORIES, AN ILLINOIS CORPORATION, ABBOTT PARK, ILLINOIS.

1. THE CONTRACTOR SHALL OBTAIN A COPY OF THIS PRE–APPROVAL FROM THE OSHPD WEBSITE AND PROVIDE ONE COPY FOR THE INSPECTOR OF RECORD.

2. THIS PRE–APPROVAL COVERS THE SUPPORTS AND ATTACHMENTS OF THE LABORATORY EQUIPMENT TO THE STRUCTURE.

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REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: GENERAL NOTES

Rev	Description	Date

Job No:	26015
Date:	08/072026
By:	CYS
Page:	101

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GENERAL NOTES:

1. THIS OSHPD PRE–APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2025 "A" CHAPTERS.
   THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2025 "A" CHAPTERS.
2. IT IS THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD FOR A SITE SPECIFIC PROJECT TO VERIFY:
   A. THE ADEQUACY OF THE NEW OR (E) STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EACH EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
   B. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPENINGS.
   C. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR (E) ANCHORS. THE SPACING SHOWN IN THE TEST LOADS IN TABLE 1 ON THIS PG IS THE REQ MIN SPACING OF THE GIVEN DIA ANCHORS. THE REQ SPACING FROM ANCHORS OF OTHER DIA & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
   D. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2025 "A" CHAPTERS & W/ THE DTLS SHOWN IN THIS PRE–APPROVAL.
   E. THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DTLS, & THE MATERIAL & GA OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFORMATION SHOWN ON THE PRE–APPROVAL DOCUMENTS.
   F. THAT THE CONC SLAB TO WHICH THE EQUIP IS ANCHORED SHALL MEET THE REQUIREMENTS OF THE APPLICABLE ICC REPORT & THIS OPM.
3. EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STL HILTI KB–TZ2 EXPANSION ANCHORS COMPLYING W/ ESR–4266 MOST RECENT EDITION OR CARBON STEEL SIMPSON STRONG–BOLT 2 EXPANSION ANCHORS COMPLYING W/ ESR–3037 MOST RECENT EDITION.
   A. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE W/ THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLES ON THIS PG. PROVIDE FULL THRD ENGAGEMENT FOR NUT & WASHER.
   B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TORQUE 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR & REPORT OF TEST RESULTS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD, OWNER & ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE. IF ANY ANCHOR FAILS THE TEST, TEST ALL ANCHORS. THE TEST SHALL BE PERFORMED 24 HOURS OR MORE AFTER INSTALLATION. TESTING MAY BE DONE PRIOR TO EQUIP INSTALLATION, HOWEVER, THE NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIP INSTALL. ALSO, REFER TO 2025 CBC 1910A.5 "TESTS FOR POST–INSTALLED ANCHORS IN CONCRETE".
   C. FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLIES FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
      - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED W/IN THE FOLLOWING LIMITS: WEDGE TYPE:
        ONE–HALF (½) TURN OF THE NUT.
   D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
   E. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE, SEE TABLES 1&2.

TABLE 1 – SEISMIC BRACKET EXPANSION ANCHORS

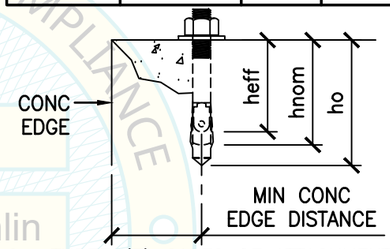
CONDITION OF ANCHORAGE	ANCHOR MFR & TYPE	ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	TEST LOAD TORQUE (FT–LBS)	ESR REPORT #
CASE 2	HILTI KB–TZ2	½	2½	2	2¾	4	12	5½	50	4266
	SIMPSON SB2	½	2¾	2¼	3	4	12	5½	60	3037
CASE 3	HILTI KB–TZ2	½	2½	2	2¾	4	12	5½	50	4266
	SIMPSON SB2	½	2¾	2¼	3	4	12	5½	60	3037

GENERAL NOTES CONTINUED:

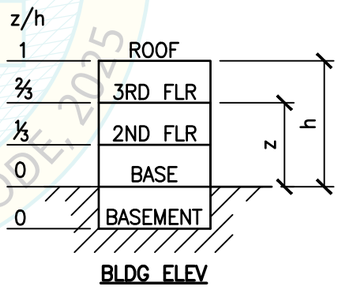
4. BOLTS THROUGH CONC ON MTL DECK:
   A. BOLTS SHALL BE TORQUED BY ¾ TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED, UNO. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQ TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
   B. THRU–BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16")
   C. THRU–BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING IN ACCORDANCE W/ REQUIREMENTS FOR POST–INSTALLED ANCHORS. THRU–BOLTS W/ STL TO STL CONNECTION IN TENSION DO NOT REQUIRE TESTING.
5. EXPANSION ANCHORS TO BOTT OF CONC FILL OVER MTL DECK:
   A. HILTI KB–TZ2 (ICC ESR–4266) TORQUE TEST LOAD FOR CASE 1.
   B. SIMPSON STRONG–BOLT 2 (ICC ESR–3037) TORQUE TEST LOAD FOR CASE 1.

TABLE 2 – EXPANSION ANCHORS TO BOTTOM OF CONC FILL OVER METAL DECK

CONDITION OF ANCHORAGE	ANCHOR MFR & TYPE	ANCHOR DIA (INCH) da	INSTALLATION EMBED (INCH) hnom	EFFECTIVE EMBED (INCH) hef	HOLE DEPTH (INCH) ho	MIN CONC THICKNESS (INCH) h_{min}	MIN CONC EDGE DISTANCE (INCH)	MIN AB SPACING (INCH)	MAX INSTALLATION TORQUE (FT–LBS)	ESR REPORT #
CASE 1	HILTI KB–TZ2	¼	1¾	1½	2	3¼	1*	10*	4	4266
	SIMPSON SB2	¼	1¾	1½	1⅞	3¼	1¾*	10*	4	3037



6. THREE (3) CASES OF ATTACHMENT ARE SPECIFIED & PRESENTED IN THIS PRE–APPROVAL:



BLDG ELEV

CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h≤0.95). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3¼" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE A325 STL THRD ROD THRU CONC FILL & MTL DECK.

CASE 2: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG (z/h=0.45). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3¼" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE CARBON STEEL EXPANSION ANCHORS INTO CONCRETE FILL.

CASE 3: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG (z/h≤0.00). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB (f'c = 3000 PSI, MIN). ANCHORS SHALL BE CARBON STEEL EXPANSION ANCHORS.

7. THIS PRE–APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS LESS THAN OR EQUAL TO VALUES PUBLISHED IN COMPONENT SCHED ON PG 201.
8. FABRICATION LENGTH AND HOLE PLACEMENT TOLERANCES SHALL BE ±1/16". HOLE TOLERANCE SHALL BE +1/16"

REGISTERED PROFESSIONAL ENGINEER DIETER T SIEBALD No. S4346 STRUCTURAL STATE OF CALIFORNIA

NOT SEOR

ICC-ES CODE COMPLIANCE
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Reviewed by William Staehlin
DATE: 08/29/2026
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DESIGN CRITERIA

SUPPORT & ATTACHMENT DESIGN IS PER 2025 CBC AND ASCE 7-22 AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-22:

$C_{PM} = F_p/W_p = 0.4\ S_{DS}\ I_p \left[\frac{H_f}{R\mu}\right]\left[\frac{C_{AR}}{R_{po}}\right]$ ASCE 7-22 (13.3-1)

$C_{PM} = F_p/W_p\ (MAX) = 1.6\ S_{DS}\ I_p$ ASCE 7-22 (13.3-2)

$C_{PM} = F_p/W_p\ (MIN) = 0.3\ S_{DS}$ ASCE 7-22 (13.3-3)

$C_{VM} = F_v/W_p = \pm 0.2\ S_{DS}$ ASCE 7-22 (12.4-4a)

$Hf_{MIN} = 1.0$ AT OR BELOW GRADE PLANE

$Hf_{MAX} = 1+2.5\ (z/h) = 3.375$ ABOVE GRADE $z/h = 0.95$

$R\mu_{MIN} = 1.0$ AT OR BELOW GRADE PLANE

$R\mu_{MAX} = 1.3$ ABOVE GRADE FOR UNSPECIFIED BUILDING SFRS

$[Hf/R\mu]_{MAX} = 2.60$ ABOVE GRADE $z/h = 0.95$

$[Hf/R\mu]_{MIN} = 1.00$ AT OR BELOW GRADE PLANE

SUPPORT & ATTACHMENT DESIGN IS PER 2025 CBC AT LRFD LEVEL FORCES PER TABLE 13.6-1 OF ASCE 7-22. "OTHER MECHANICAL OR ELECTRICAL COMPONENTS"

$C_{AR} = 1.0$
$R_{po} = 1.5$
$I_p = 1.5$
$\Omega_o = 2.0$
W_p = AS NOTED ON "COMPONENT PLANS & ELEVATIONS" PAGES

W_P AS NOTED ON COMPONENT SCHEDULE ON PG 201

LOAD COMBINATIONS

$(0.9 - 0.2\ S_{DS})\ D - \Omega_o\ F_p$ (FOR MAX TENSION)

$(1.2 + 0.2\ S_{DS})\ D + \Omega_o\ F_p$ (FOR MAX COMPRESSION)

TABLE 3 (LRFD)

	S_{DS}	z/h	H_f	$C_{PM} = F_p/W_p$	$C_{VM} = F_v/W_p$
CASE 1	1.90	0.95	3.38	1.97	0.38
CASE 2	0.80	0.45	2.13	0.61	0.16
CASE 3	1.90	0.00	1.00	0.86	0.38

ABBREVIATIONS:

@	AT
ABV	ABOVE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
BLW	BELOW
BYD	BEYOND
CBC	CALIFORNIA BUILDING CODE
CG	CENTER OF GRAVITY
℄	CENTERLINE
CONC	CONCRETE
CONN	CONNECTION
COORD	COORDINATE
DBL	DOUBLE
DIA (ø)	DIAMETER
(E)	EXISTING CONDITION
EA	EACH
ELEV	ELEVATION
ES	EACH SIDE
EQUIP	EQUIPMENT
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE
FLR	FLOOR
FT (')	FOOT/FEET
Fy	SPECIFIED MINIMUM YIELD STRESS OF STEEL
GA	GAUGE
IN (")	INCH
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MTL	METAL
NO. (#)	NUMBER OR POUNDS
NWC	NORMAL WEIGHT CONCRETE
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT
PSI	POUNDS PER SQUARE INCH
SEOR	STRUCTURAL ENGINEER OF RECORD
SLWC	SAND-LIGHTWEIGHT CONCRETE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
Tu	ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD
THRD	THREAD OR THREADED
TYP	TYPICAL
Vu	ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD
W/	WITH
Wp	OPERATING WEIGHT
WT	WEIGHT

FRACTION & UNIT CONVERSIONS (PROVIDED FOR REFERENCE ONLY)

FRACTION	DECIMAL	mm
1/32	0.03	0.8
1/16	0.06	1.6
3/32	0.09	2.4
1/8	0.13	3.2
5/32	0.16	4.0
3/16	0.19	4.8
7/32	0.22	5.6
1/4	0.25	6.4
9/32	0.28	7.1
5/16	0.31	7.9
11/32	0.34	8.7

FRACTION	DECIMAL	mm
3/8	0.38	9.5
13/32	0.41	10.3
7/16	0.44	11.1
15/32	0.47	11.9
1/2	0.50	12.7
17/32	0.53	13.5
9/16	0.56	14.3
19/32	0.59	15.1
5/8	0.63	15.9
21/32	0.66	16.7
11/16	0.69	17.5

FRACTION	DECIMAL	mm
23/32	0.72	18.3
3/4	0.75	19.1
25/32	0.78	19.8
13/16	0.81	20.6
27/32	0.84	21.4
7/8	0.88	22.2
29/32	0.91	23.0
15/16	0.94	23.8
31/32	0.97	24.6

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	PAGE NO.	COMPONENT	CG LOCATION W/O TRACK(1) $\bar{x}_1$ (IN)	$\bar{y}_1$ (IN)	$\bar{z}_1$ (IN)	WEIGHT W_p (LBS)
FLOOR SUPPORTED MODULES	210.01	ALINITY c MODULE	19.84"	25.71"	23.23"	1569#
	210.02	ALINITY i MODULE	20.01"	18.26"	22.22"	1374#
	210.03	ALINITY hq MODULE	10.14"	14.19"	26.82"	672#
	210.04	ALINITY hs MODULE	12.59"	15.06"	26.89"	816#

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SHEET TITLE: COMPONENT SCHEDULE

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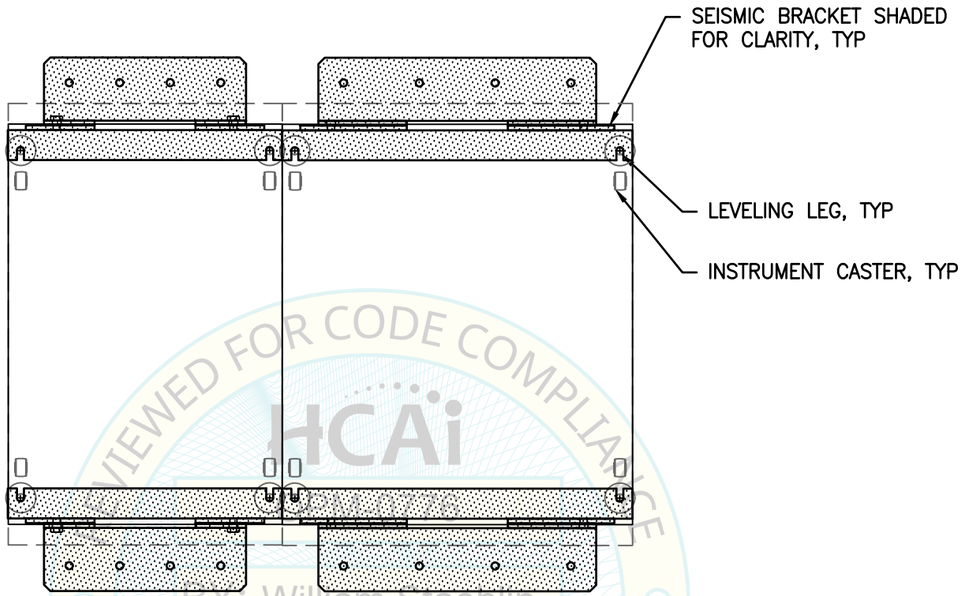
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ALINITY hq
SEE PG 210.03

ALINITY hs
SEE PG 210.04

PLAN VIEW

NOTE:
COMBINATION & NUMBER OF hs & hq INSTRUMENTS IS DEPENDENT UPON THE NEEDS OF THE HOSPITAL FACILITY & NOT A FUNCTION OF SEISMIC RETENTION. EA INSTRUMENT HAS ITS OWN SEISMIC BRACKETS FOR SEISMIC RETENTION. THIS GRAPHIC DEPICTS A GENERAL UNDERSTANDING OF THE SEISMIC RESTRAINTS.

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SHEET TITLE: COMPONENT CONFIGURATIONS

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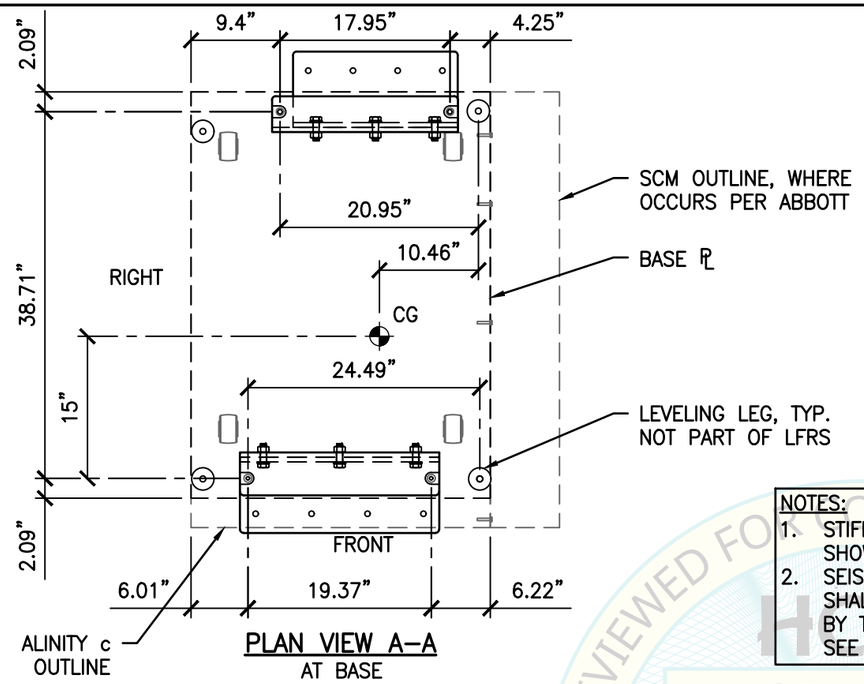
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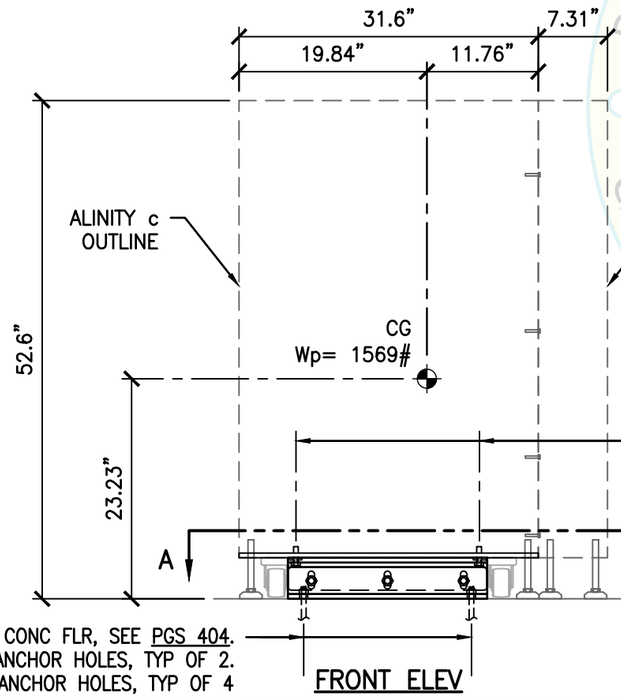
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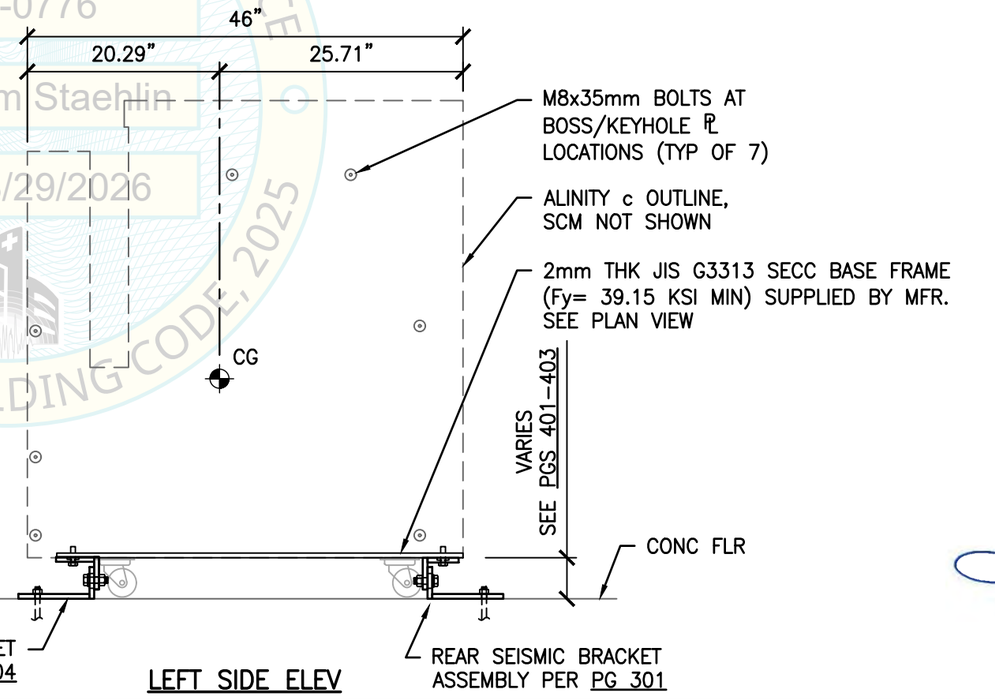
PLAN VIEW A–A
AT BASE

NOTES:
1. STIFFENER PL & LEVELING LEGS NOT SHOWN IN ALL VIEWS FOR CLARITY.
2. SEISMIC BRACKET & HARDWARE SHALL BE FURNISHED & INSTALLED BY THE GENERAL CONTRACTOR, UNO. SEE NOTE 3 ON PG 1.



FOR ANCHORAGE TO CONC FLR, SEE PGS 404.
FOR CASE 1, USE OUTER ANCHOR HOLES, TYP OF 2.
FOR CASES 2 & 3, USE ALL ANCHOR HOLES, TYP OF 4

FRONT ELEV



FRONT SEISMIC BRACKET ASSEMBLY PER PG 304

LEFT SIDE ELEV

REAR SEISMIC BRACKET ASSEMBLY PER PG 301

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OPM-0776
BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE, 2025

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR SUPPORTED MODULE: ALINITY c MODULE BASE PLAN & ELEVATIONS

ABBOTT

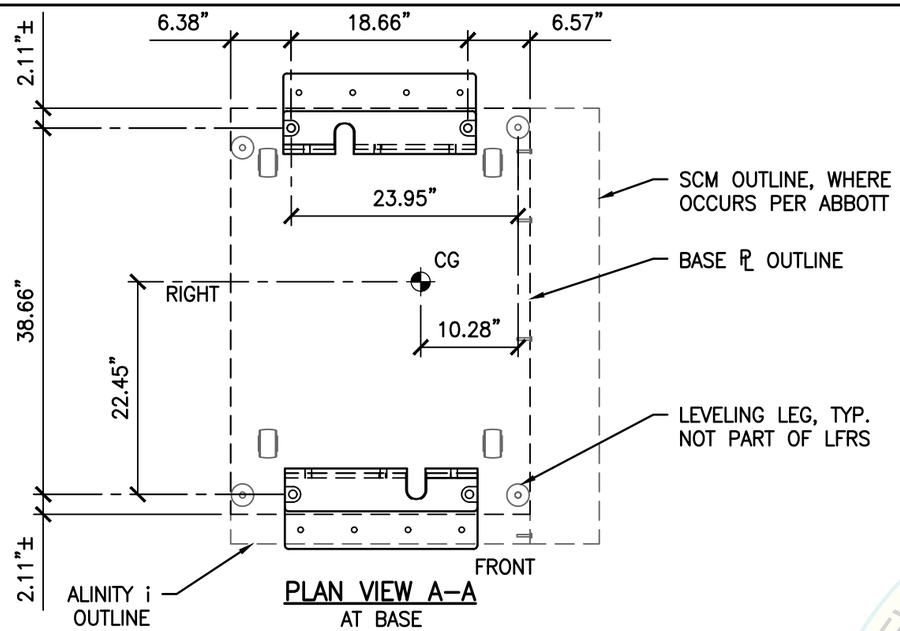
ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS

CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

Rev	Description	Date

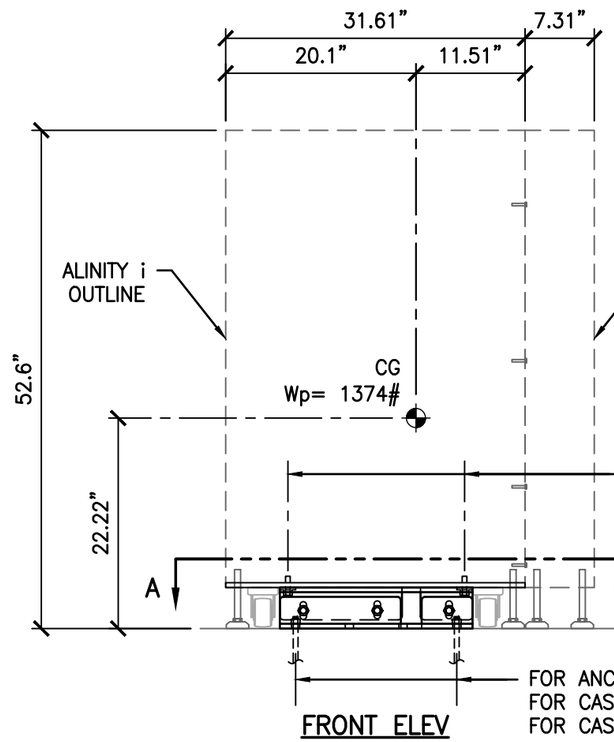
Job No:	26015
Date:	08/072026
By:	CYS
Page:	210.01

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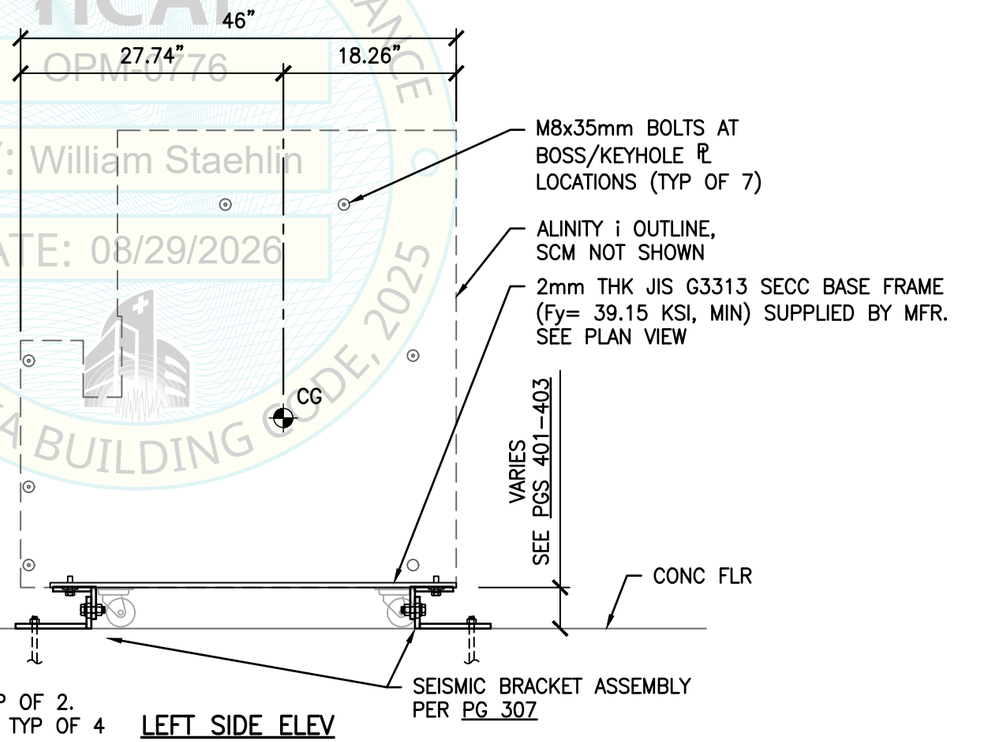


PLAN VIEW A–A
AT BASE

NOTES:
1. STIFFENER PL & LEVELING LEGS NOT SHOWN IN ALL VIEWS FOR CLARITY.
2. SEISMIC BRACKET & HARDWARE SHALL BE FURNISHED & INSTALLED BY THE GENERAL CONTRACTOR, UNO.



FRONT ELEV



LEFT SIDE ELEV

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DIETER T SIEBALD
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STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR SUPPORTED MODULE: ALINITY i MODULE
BASE PLAN & ELEVATIONS

ABBOTT

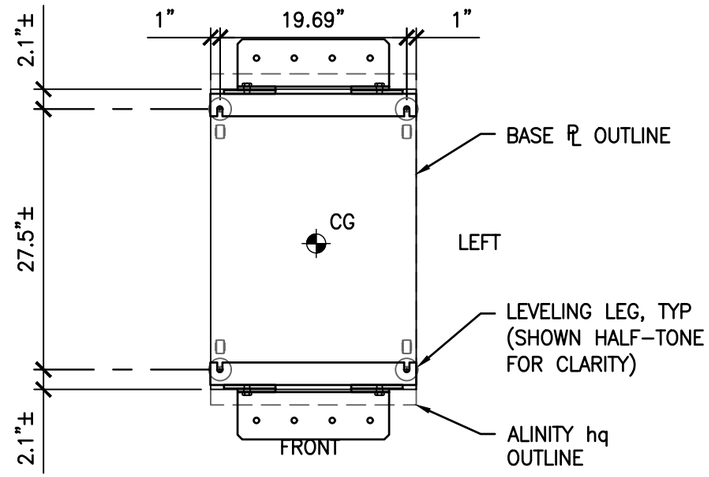
ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

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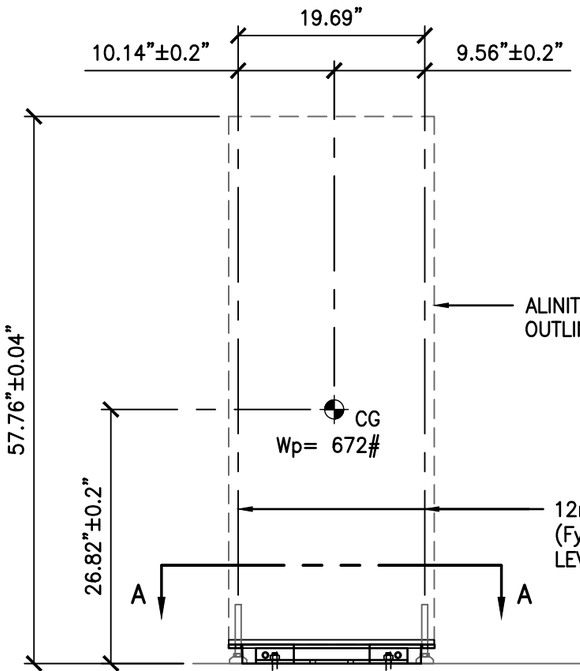
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By:	CYS
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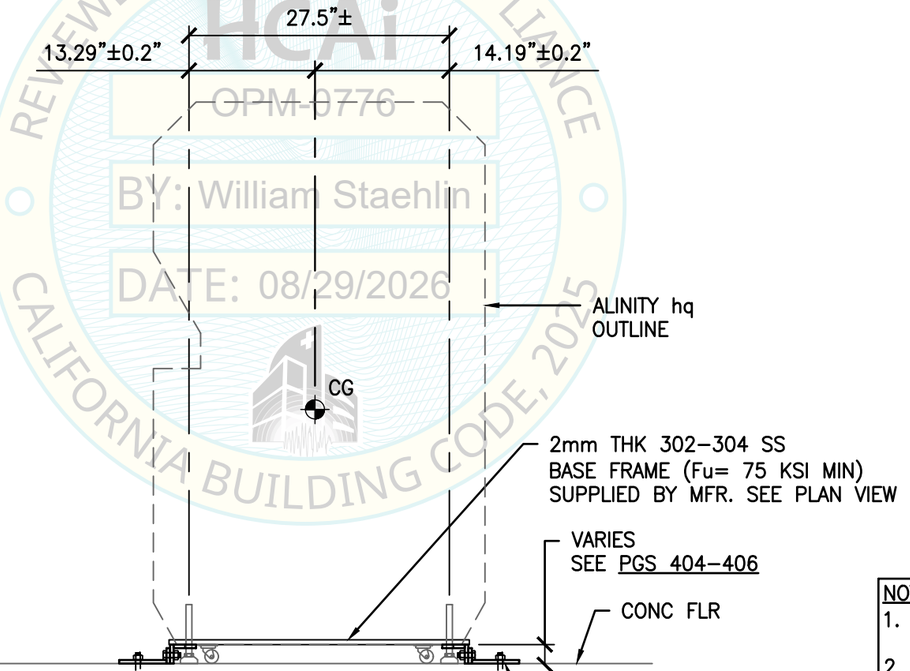
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PLAN VIEW A–A
AT BASE



FRONT ELEV



LEFT SIDE ELEV

NOTES:
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2. SEISMIC BRACKET & HARDWARE SHALL BE FURNISHED & INSTALLED BY THE GENERAL CONTRACTOR, UNO.

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BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE, 2025

SHEET TITLE: FLOOR SUPPORTED MODULE: ALINITY hq MODULE
BASE PLAN & ELEVATIONS

ABBOTT

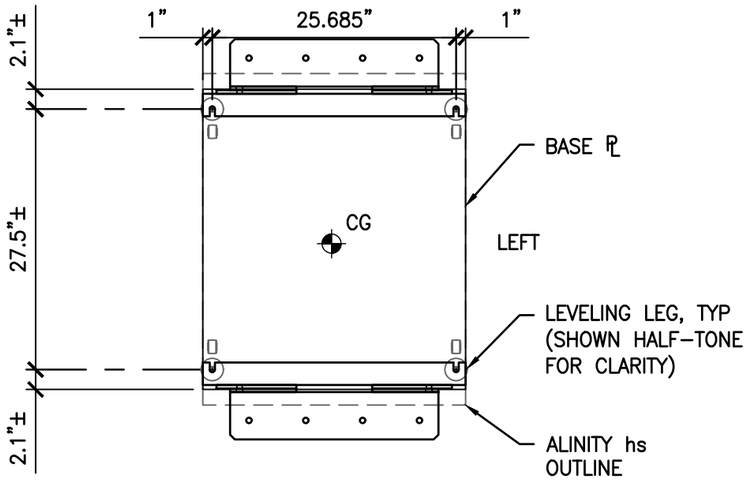
ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

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2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
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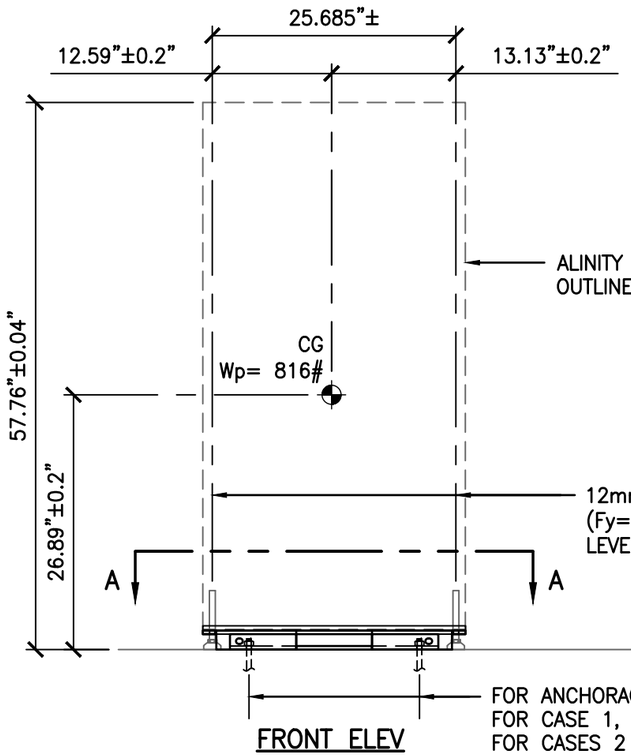
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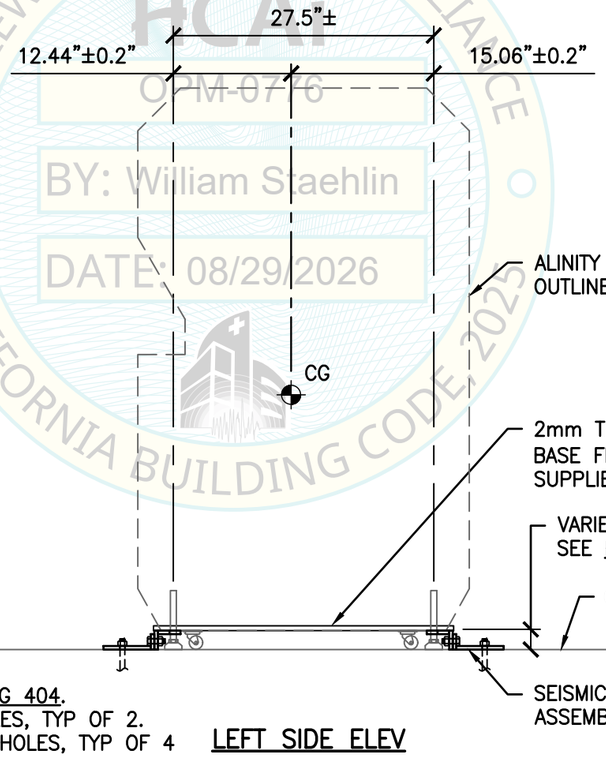


PLAN VIEW A–A
AT BASE



FRONT ELEV

FOR ANCHORAGE TO CONC FLR, SEE PG 404.
FOR CASE 1, USE OUTER ANCHOR HOLES, TYP OF 2.
FOR CASES 2 & 3, USE ALL ANCHOR HOLES, TYP OF 4



LEFT SIDE ELEV

NOTES:
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CALIFORNIA BUILDING CODE 2025

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: FLOOR SUPPORTED MODULE: ALINITY hs MODULE
BASE PLAN & ELEVATIONS

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

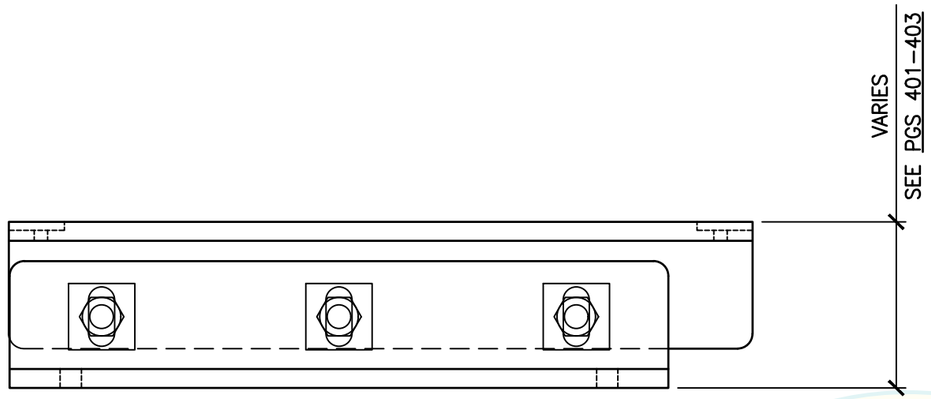
CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
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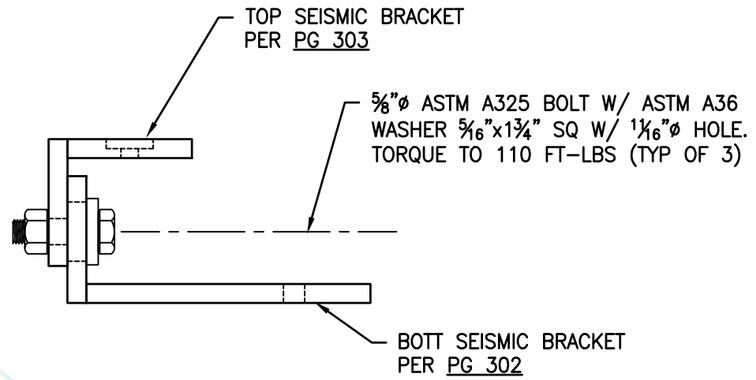
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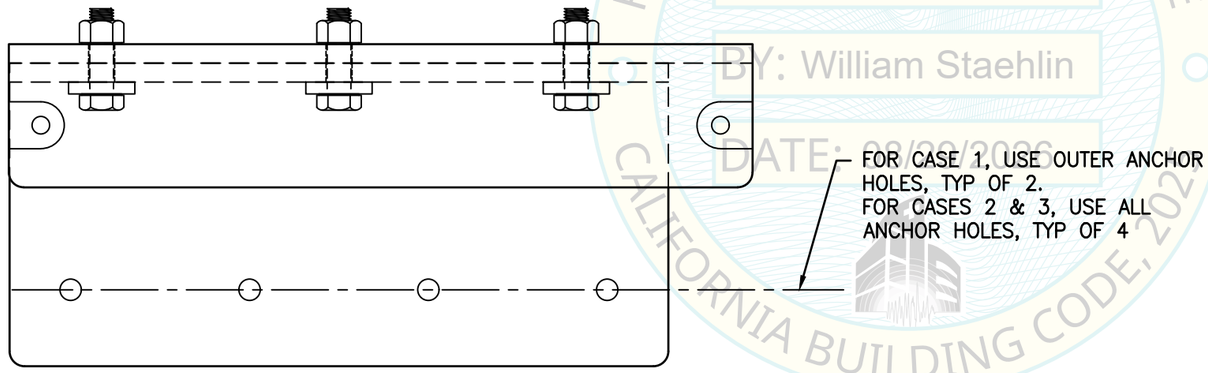
REAR BRACKET ASSEMBLY:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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OPM-0776
BY: William Staehlin
DATE: 08/29/2026
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REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ALINITY c MODULE
REAR SEISMIC BRACKET ASSEMBLY DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

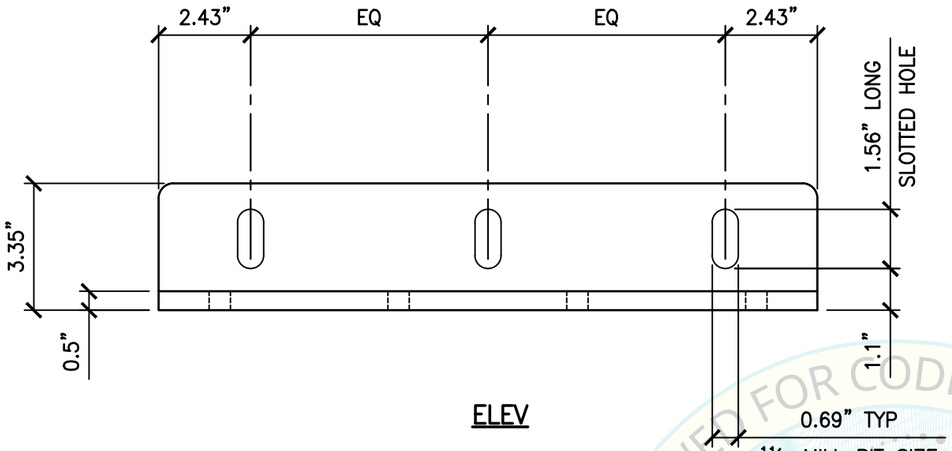
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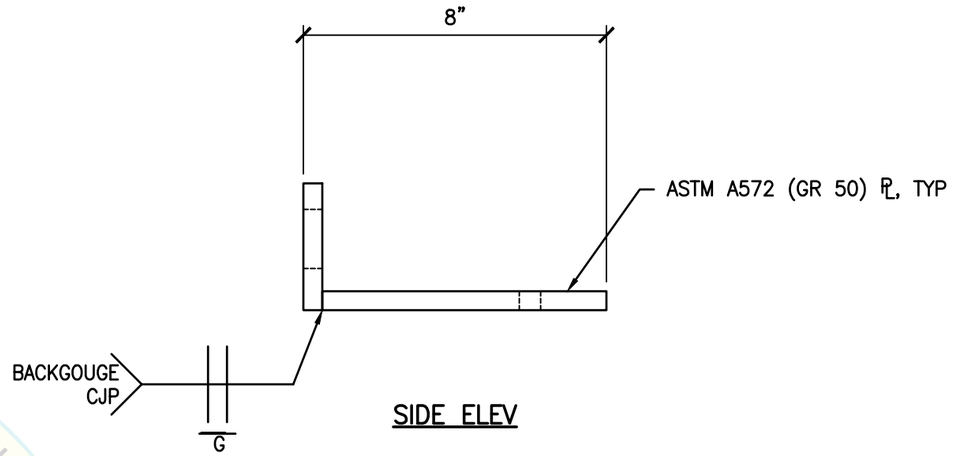
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By:	CYS
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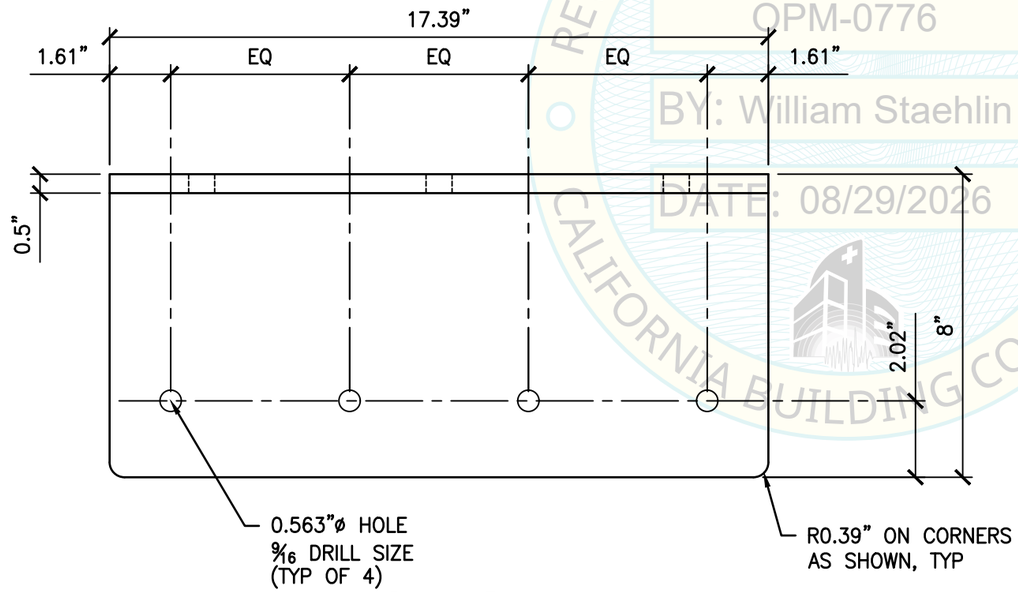
BOTTOM BRACKET DETAIL:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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HCAi
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BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE, 2025

REGISTERED PROFESSIONAL ENGINEER
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No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ALINITY c MODULE
REAR BOTTOM SEISMIC BRACKET FABRICATION DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

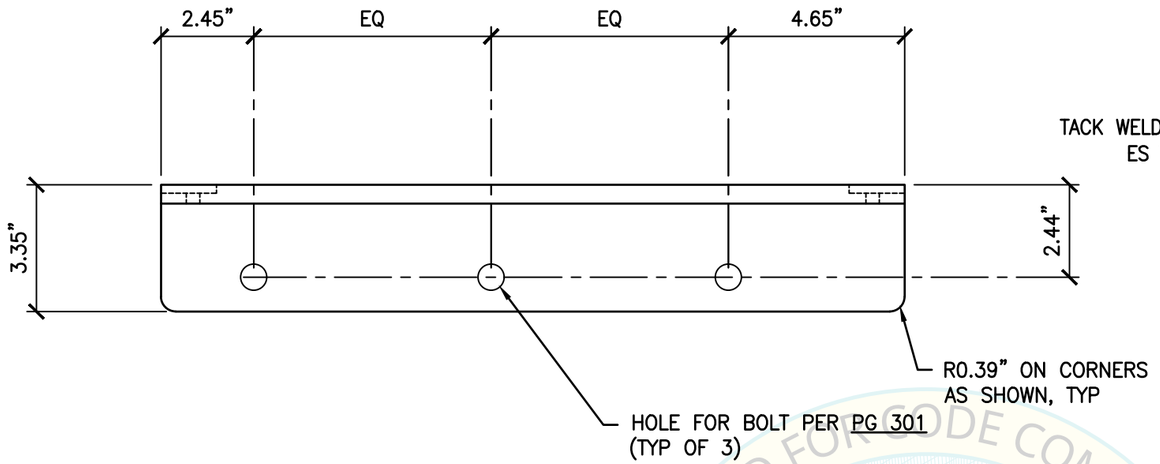
CYS STRUCTURAL ENGINEERS, INC.
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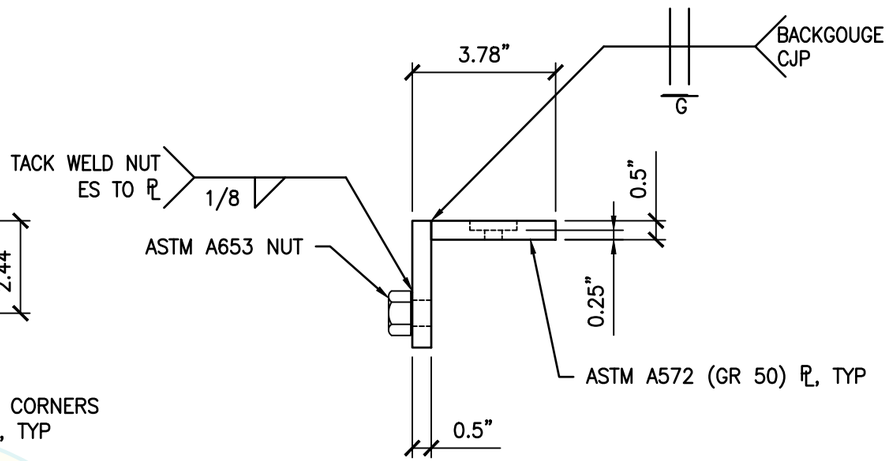
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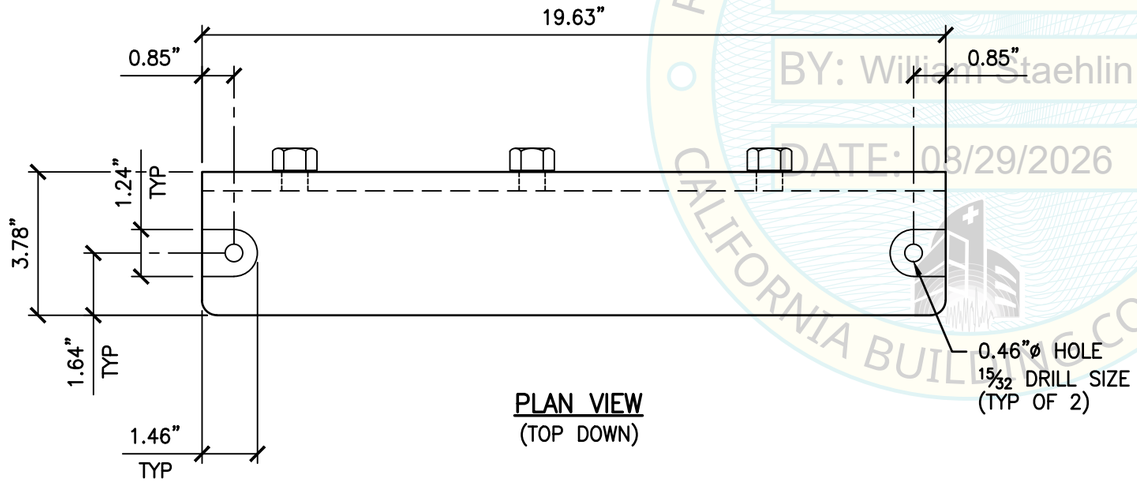
TOP BRACKET DETAIL:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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HCAi
OPM-0776
BY: William Staehlin
DATE: 08/29/2026
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No. S4346
STRUCTURAL
STATE OF CALIFORNIA

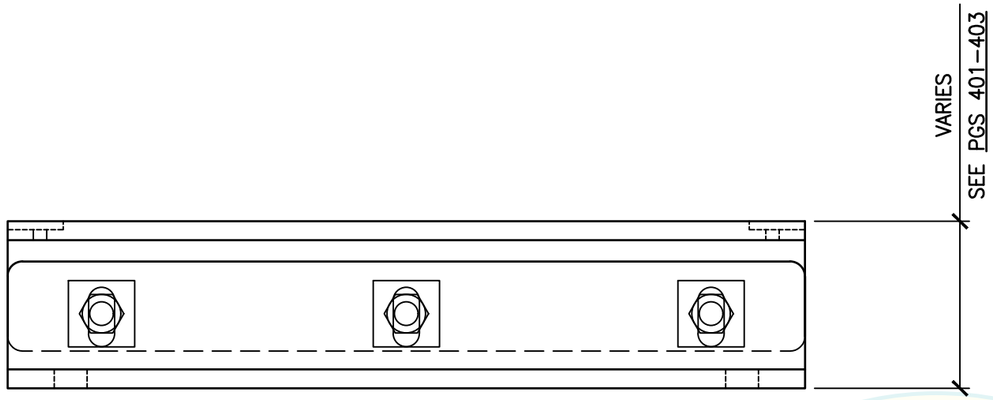
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SHEET TITLE: ALINITY c MODULE REAR TOP SEISMIC BRACKET FABRICATION DETAIL	Rev	Description	Date
ABBOTT ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS	CYS STRUCTURAL ENGINEERS, INC. 2710 GATEWAY OAKS DRIVE, SUITE 190N TEL (916) 920-2020 SACRAMENTO, CA 95833 www.cyseng.com		

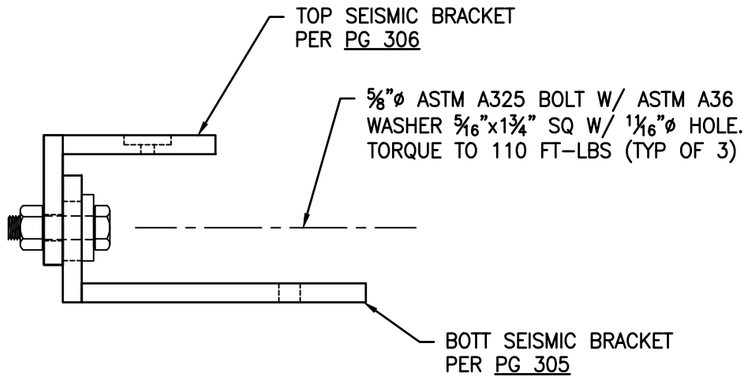
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Date:	08/072026
By:	CYS
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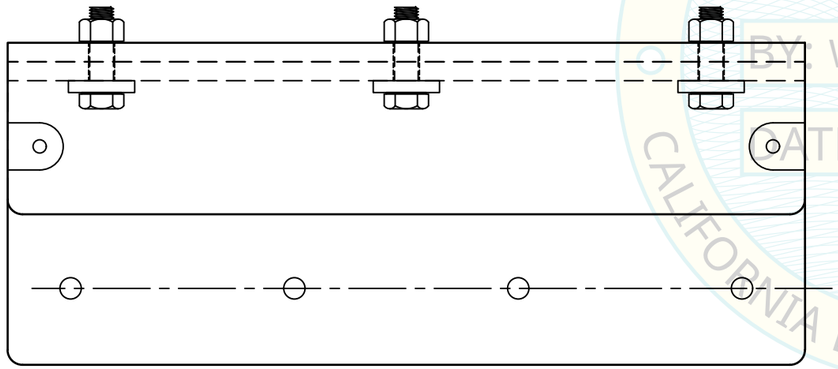
FRONT BRACKET ASSEMBLY:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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OPM-0776
BY: William Staehlin
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STATE OF CALIFORNIA

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SHEET TITLE: ALINITY c MODULE
FRONT SEISMIC BRACKET ASSEMBLY DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

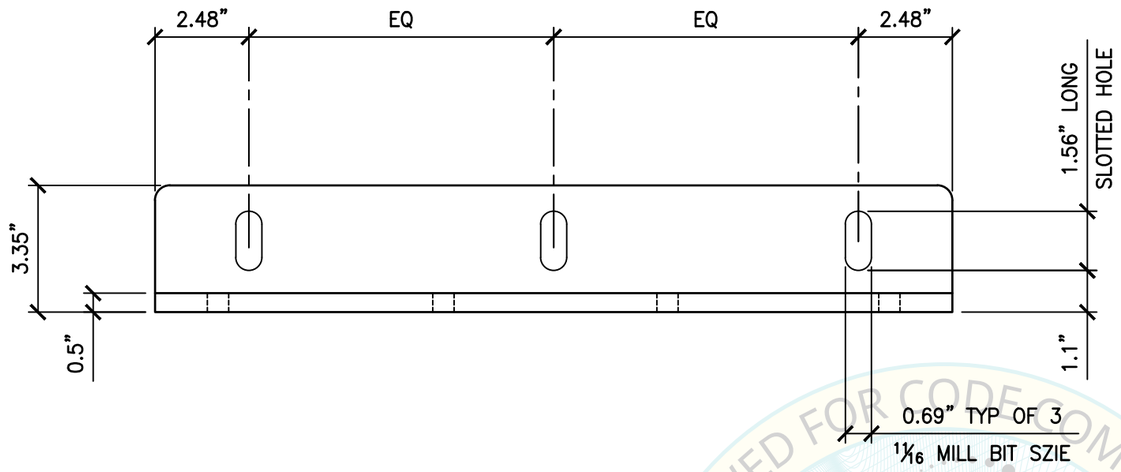
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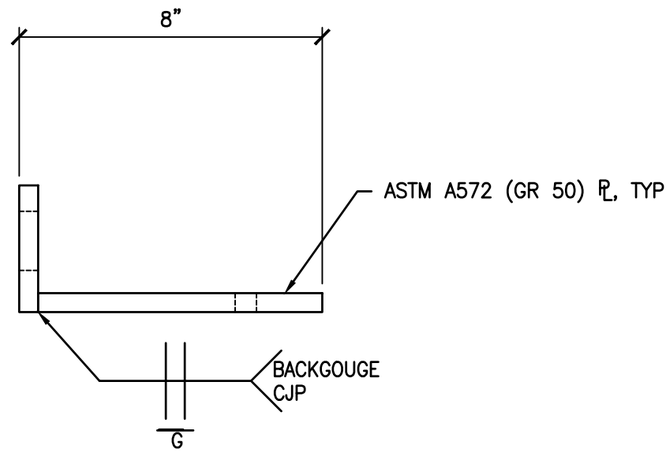
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Date:	08/072026
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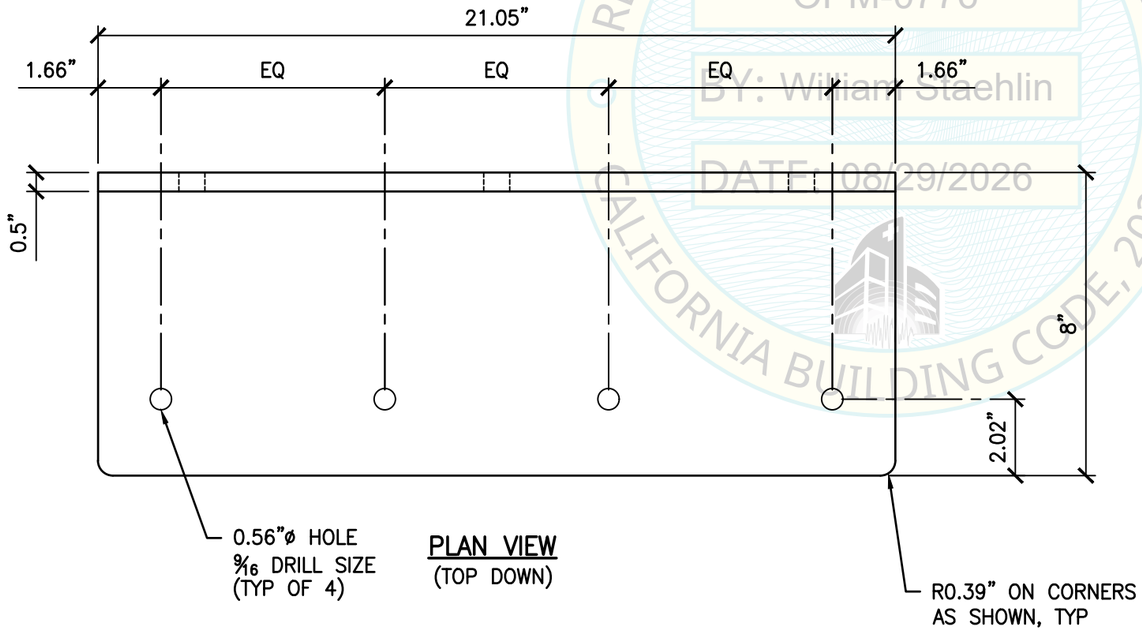
BOTTOM BRACKET DETAIL:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

HCAi
OPM-0776
BY: William Staehlin
DATE: 08/29/2026
REVIEWED FOR CODE COMPLIANCE
CALIFORNIA BUILDING CODE, 2025

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STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ALINITY c MODULE
FRONT BOTTOM SEISMIC BRACKET FABRICATION DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

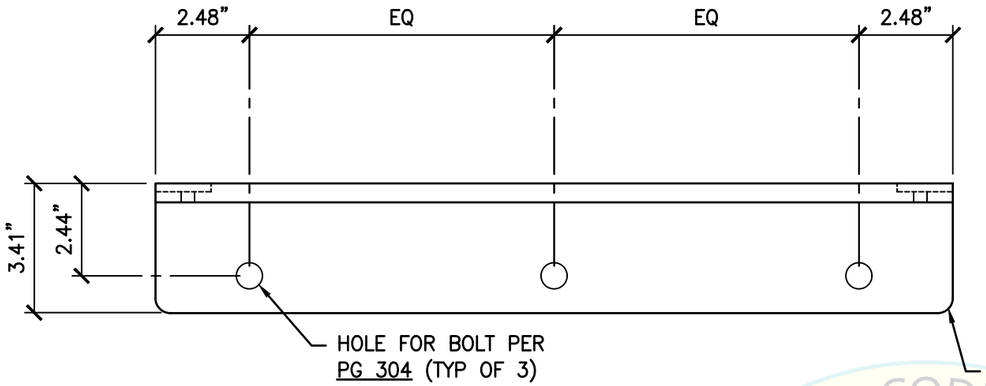
CYS STRUCTURAL ENGINEERS, INC.
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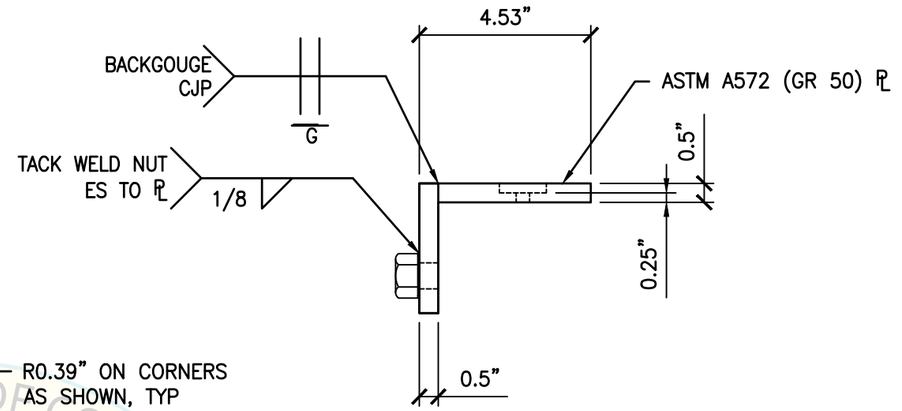
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By:	CYS
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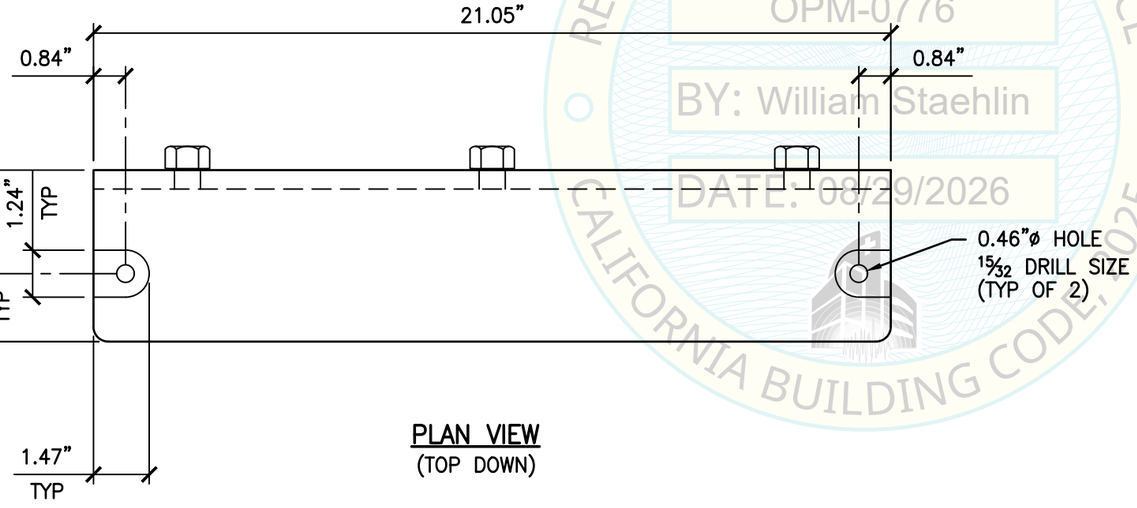
TOP BRACKET DETAIL:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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SHEET TITLE: ALINITY c MODULE
FRONT TOP SEISMIC BRACKET FABRICATION DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

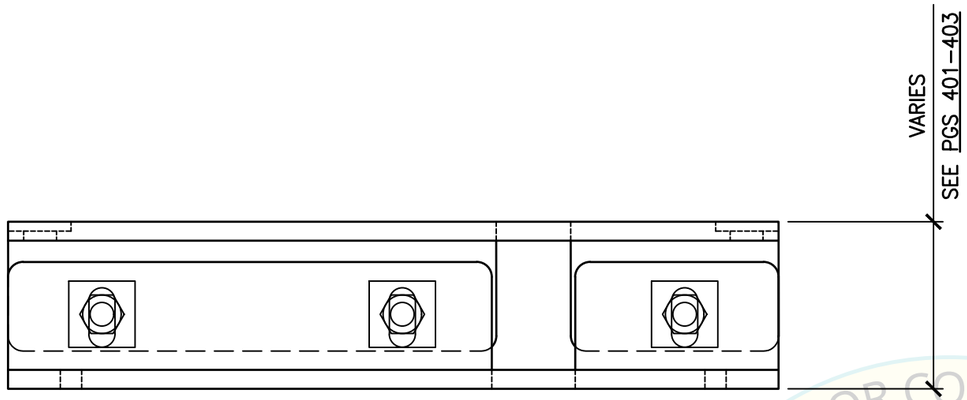
CYS STRUCTURAL ENGINEERS, INC.
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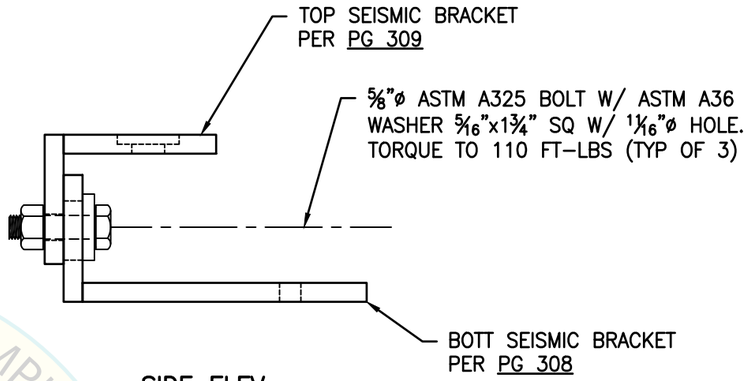
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Date:	08/072026
By:	CYS
Page:	306

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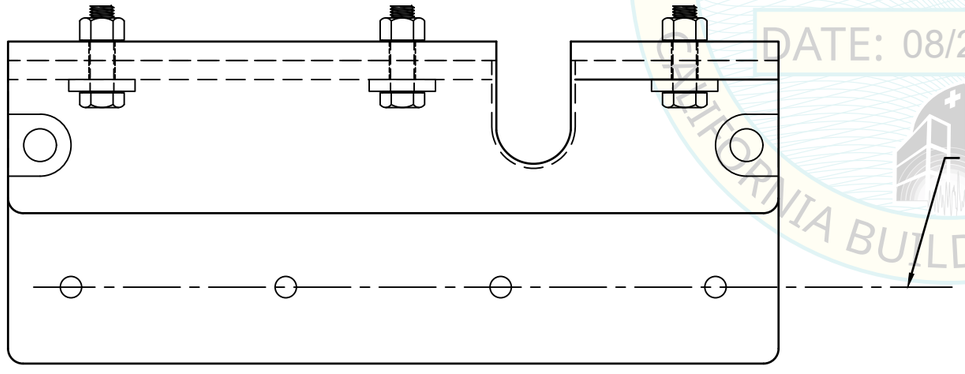
SEISMIC BRACKET ASSEMBLY:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ALINITY i MODULE
SEISMIC BRACKET ASSEMBLY DETAIL

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ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

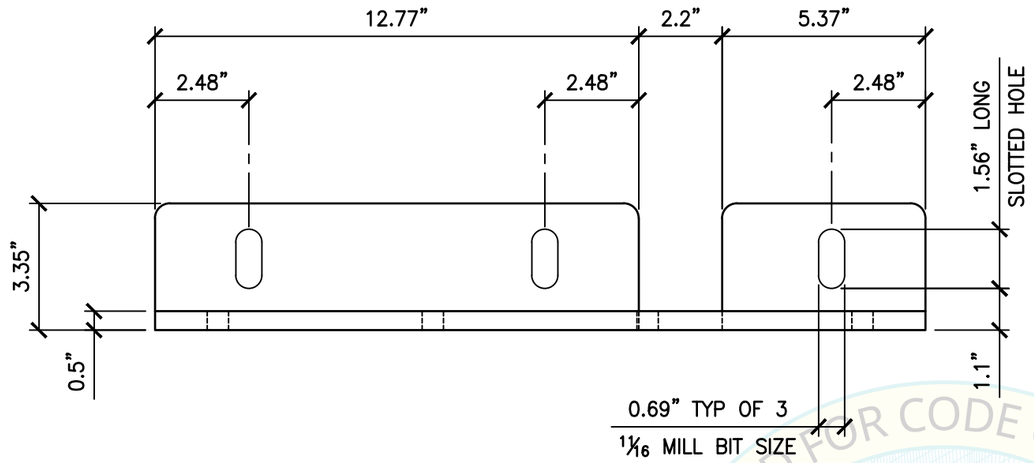
CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

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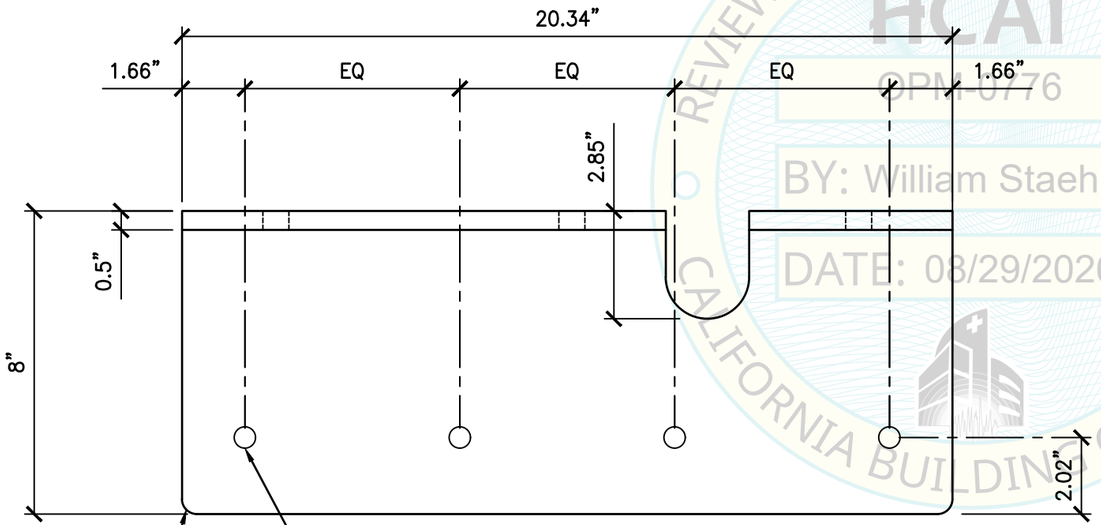
Job No:	26015
Date:	08/072026
By:	CYS
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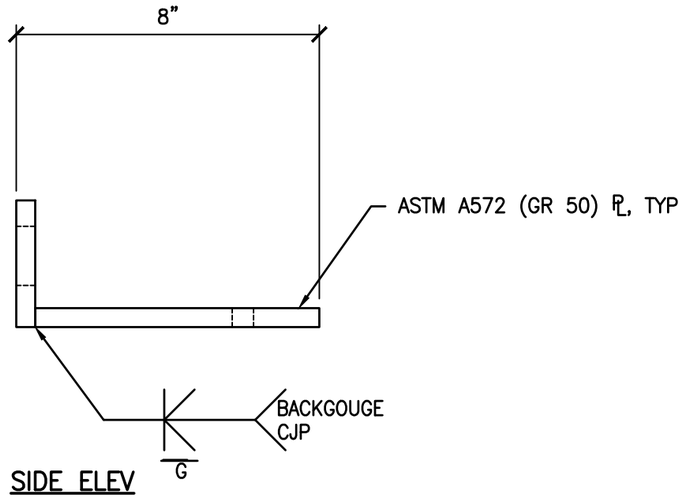
BOTTOM BRACKET DETAIL:



ELEV



PLAN VIEW
(TOP DOWN)



SIDE ELEV

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HCAi
OPM-0776
BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE, 2025

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ALINITY i MODULE
BOTTOM SEISMIC BRACKET FABRICATION DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

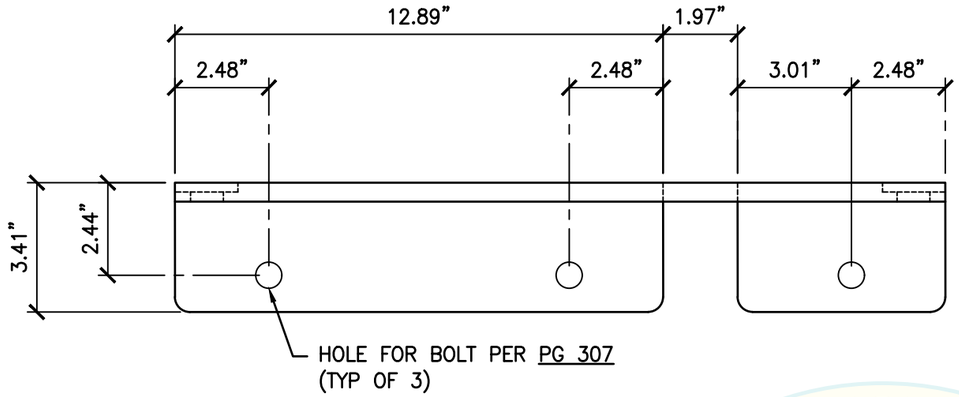
CYS STRUCTURAL ENGINEERS, INC.
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SACRAMENTO, CA 95833
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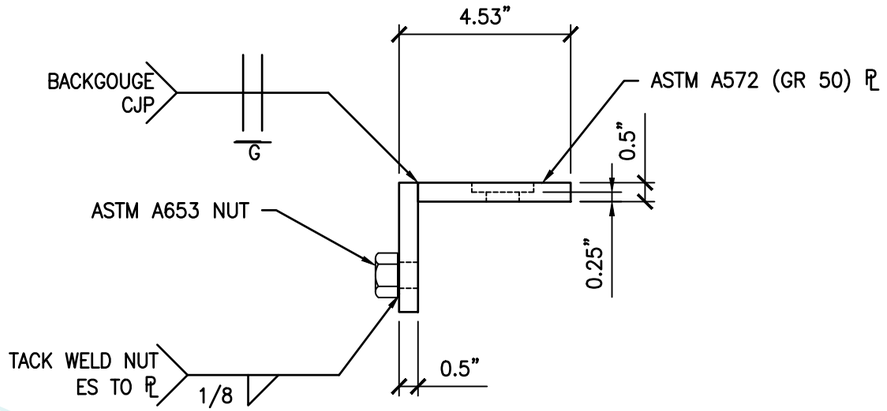
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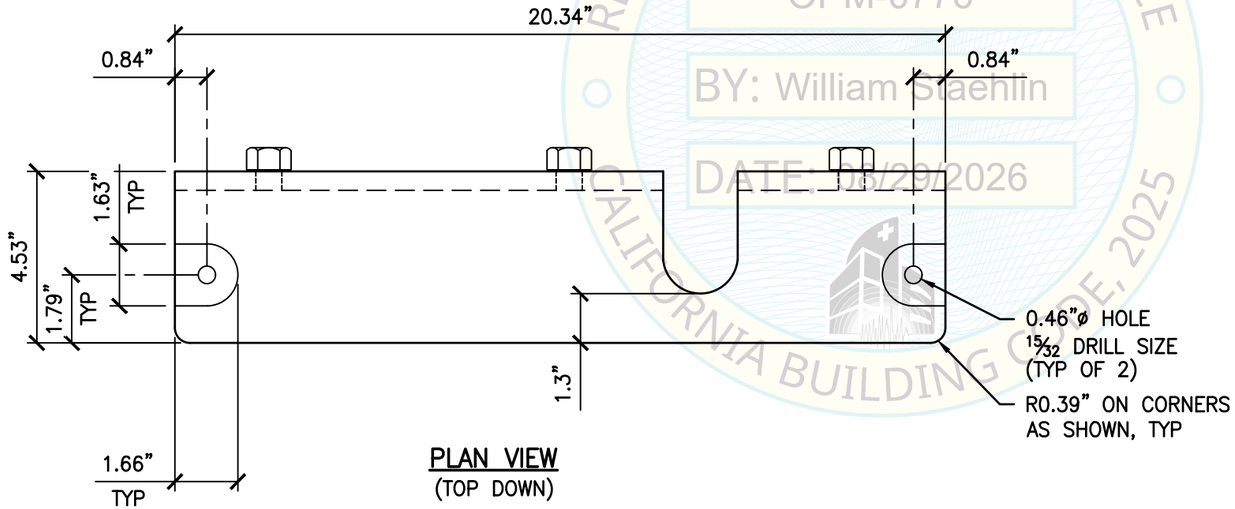
TOP BRACKET DETAIL:



ELEV



SIDE ELEV



PLAN VIEW
(TOP DOWN)

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TOP SEISMIC BRACKET FABRICATION DETAIL

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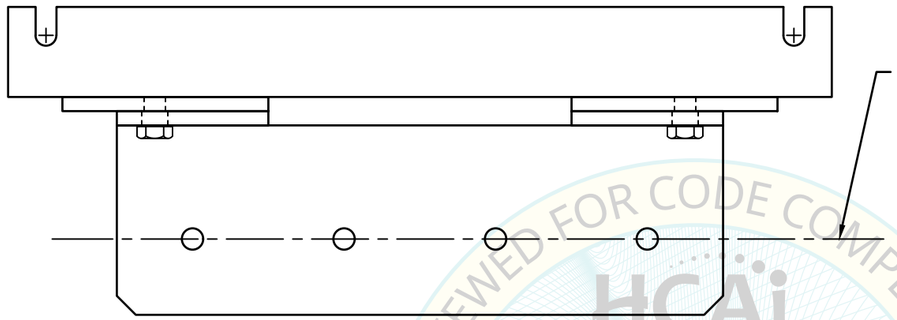
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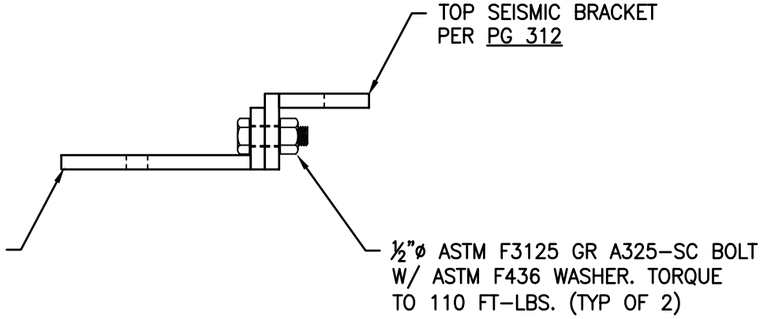


FOR CASE 1, USE OUTER ANCHOR HOLES, TYP OF 2.
FOR CASES 2 & 3, USE ALL ANCHOR HOLES, TYP OF 4

PLAN VIEW
(TOP DOWN)



ELEV



SIDE ELEV

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SHEET TITLE: ALINITY hq MODULE
SEISMIC BRACKET ASSEMBLY DETAIL

ABBOTT

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EQUIPMENT SUPPORT & ATTACHMENTS

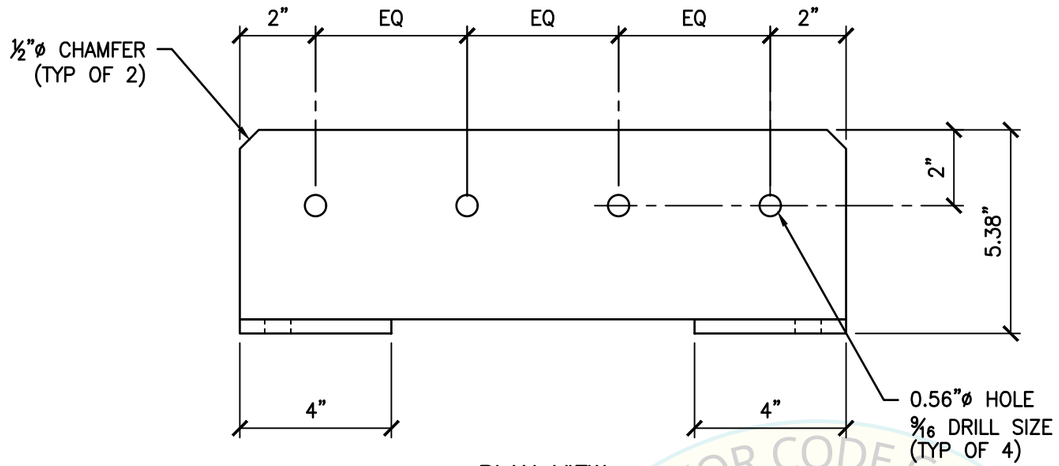
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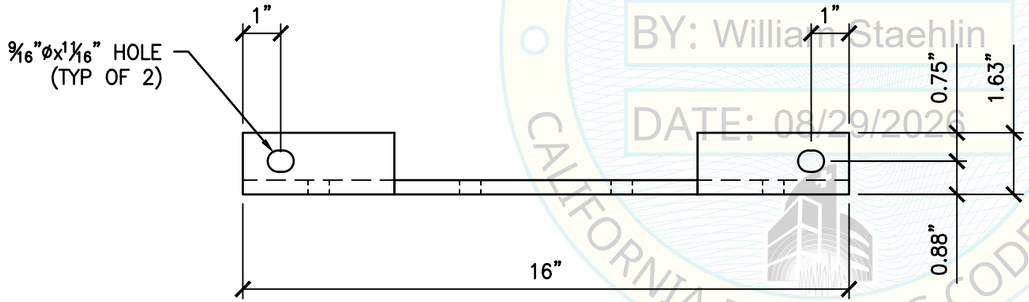
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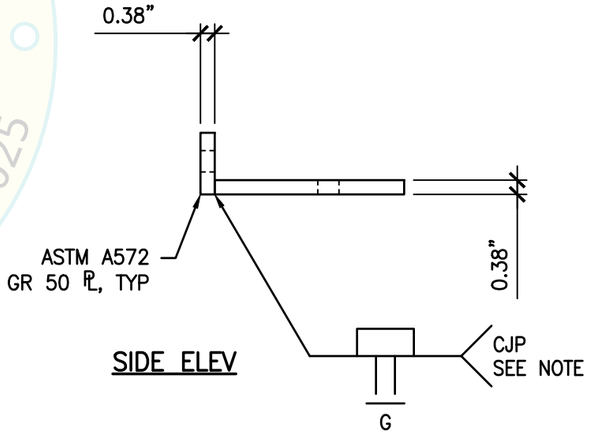
BOTTOM BRACKET DETAIL:



PLAN VIEW
(TOP DOWN)



ELEV



SIDE ELEV

NOTE:
REMOVE BACKER BAR. MACHINE RE-ENTRANT CORNER FOR FIT-UP AS SHOWN. NO RADIUS

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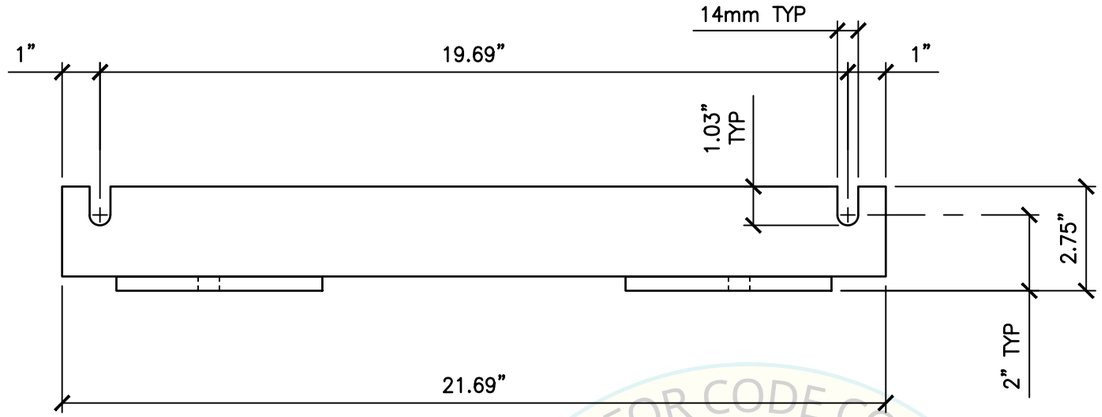
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SHEET TITLE: ALINITY hq MODULE BOTTOM SEISMIC BRACKET FABRICATION DETAIL	Rev	Description	Date
ABBOTT ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS			
CYS STRUCTURAL ENGINEERS, INC. 2710 GATEWAY OAKS DRIVE, SUITE 190N TEL (916) 920-2020 SACRAMENTO, CA 95833 www.cyseng.com			

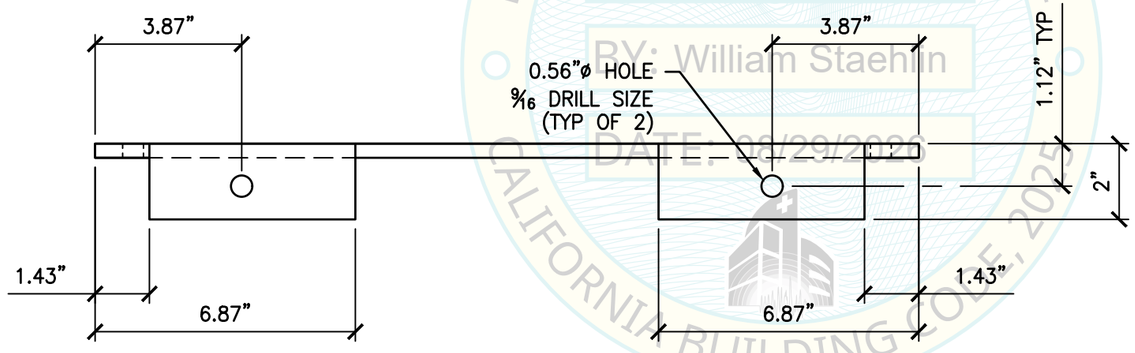
Job No:	26015
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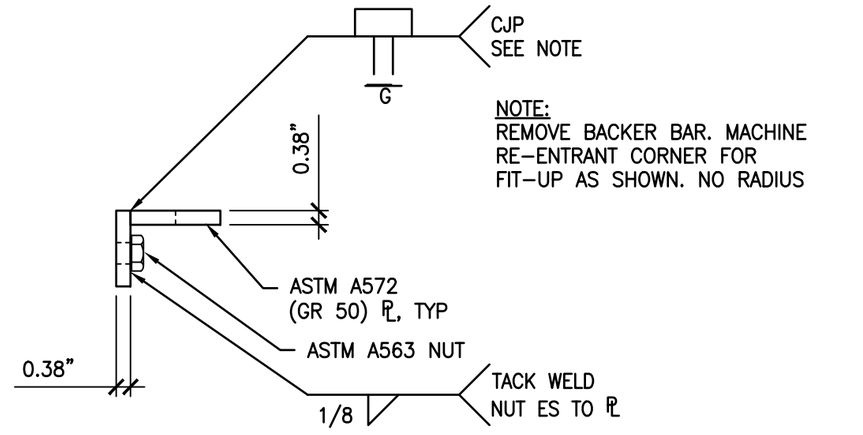
TOP BRACKET DETAIL:



PLAN VIEW
(TOP DOWN)



ELEV



SIDE ELEV

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SHEET TITLE: ALINITY hq MODULE
TOP SEISMIC BRACKET FABRICATION DETAIL

ABBOTT

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EQUIPMENT SUPPORT & ATTACHMENTS

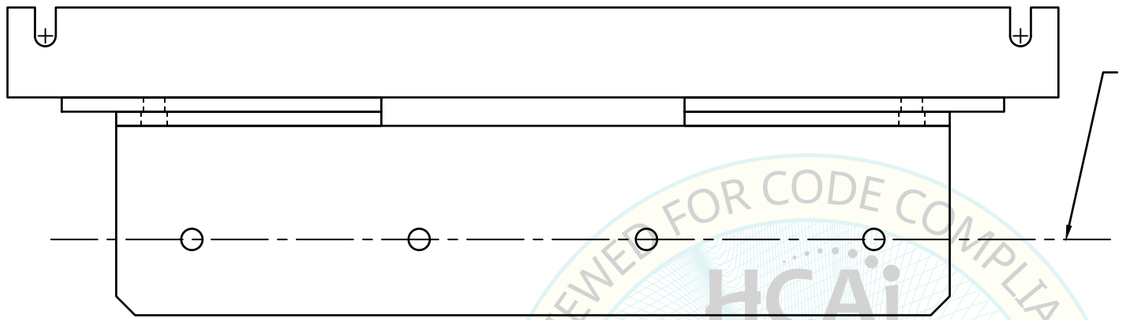
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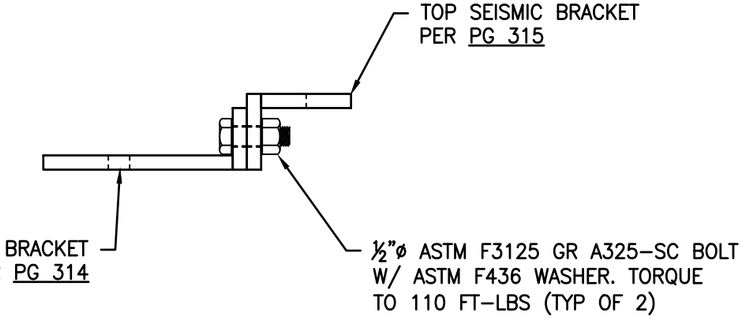


FOR CASE 1, USE OUTER ANCHOR HOLES, TYP OF 2.
FOR CASES 2 & 3, USE ALL ANCHOR HOLES, TYP OF 4

PLAN VIEW
(TOP DOWN)



ELEV



SIDE ELEV

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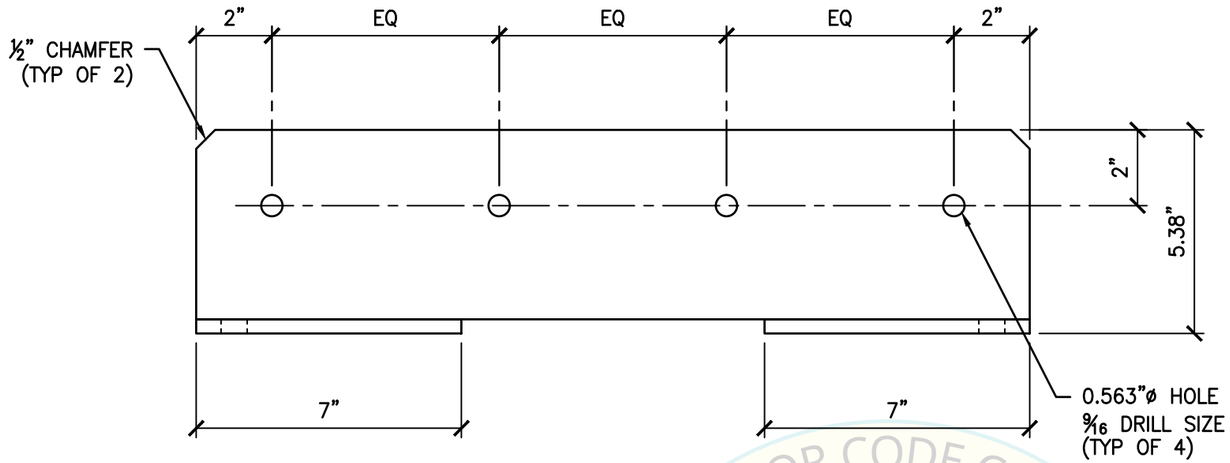
REGISTERED PROFESSIONAL ENGINEER
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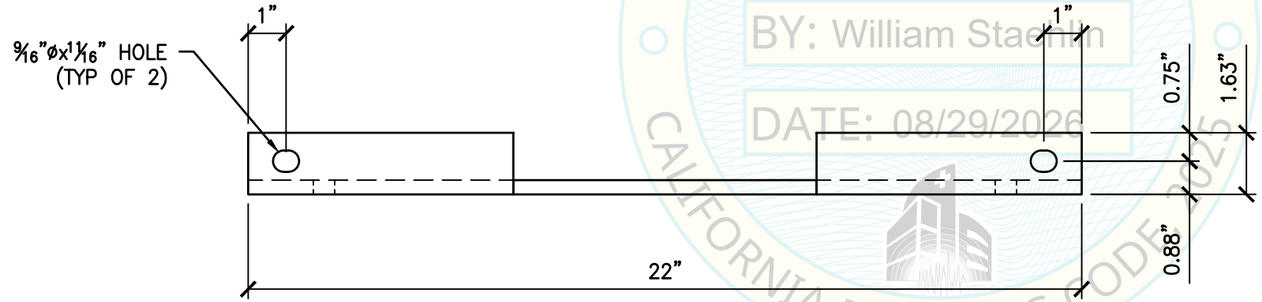
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	CYS STRUCTURAL ENGINEERS, INC. 2710 GATEWAY OAKS DRIVE, SUITE 190N TEL (916) 920-2020 SACRAMENTO, CA 95833 www.cyseng.com				Page: 313

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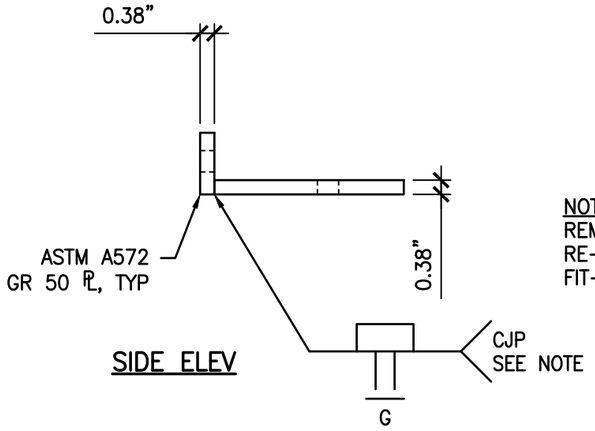
BOTTOM BRACKET DETAIL:



PLAN VIEW
(TOP DOWN)



ELEV



SIDE ELEV

NOTE:
REMOVE BACKER BAR. MACHINE RE-ENTRANT CORNER FOR FIT-UP AS SHOWN. NO RADIUS

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STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ALINITY hs MODULE
BOTTOM SEISMIC BRACKET FABRICATION DETAIL

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

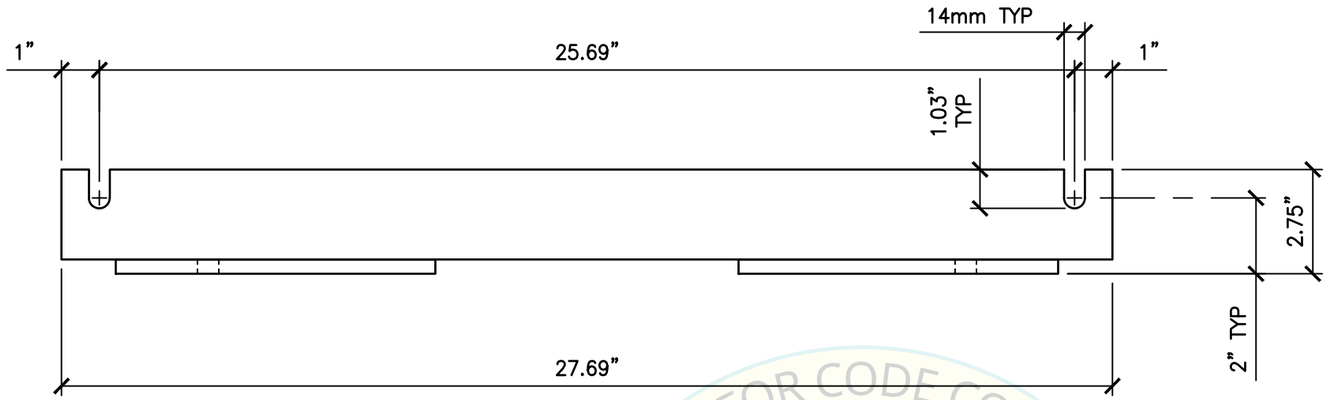
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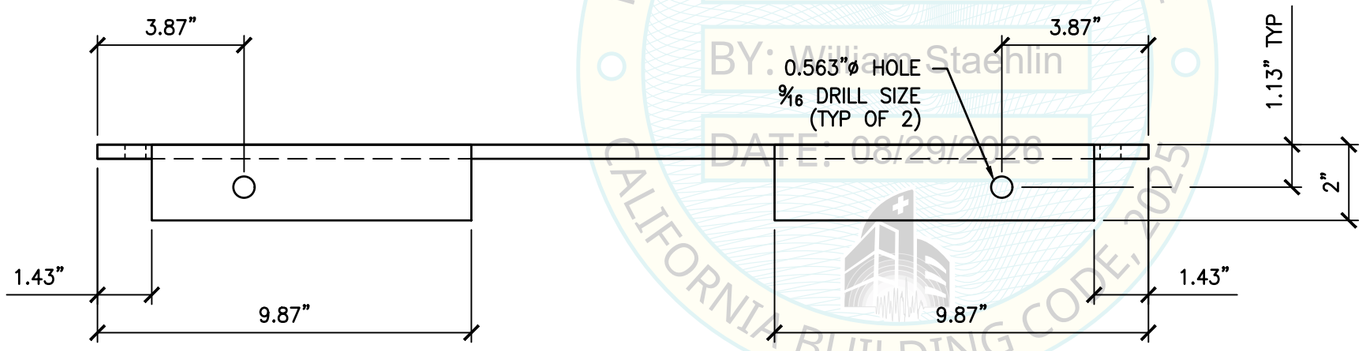
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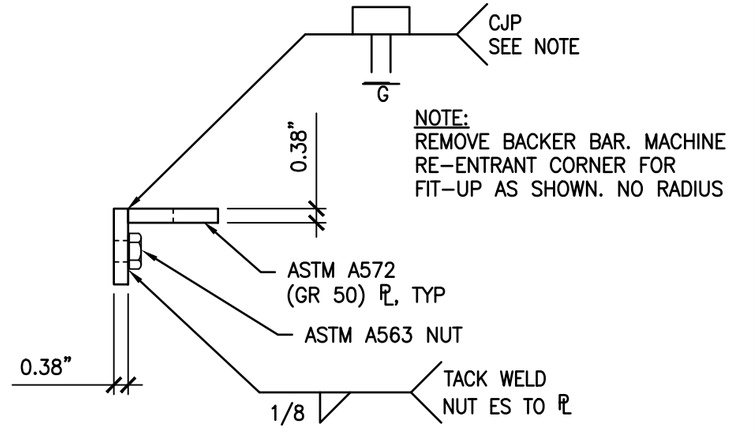
TOP BRACKET DETAIL:



PLAN VIEW
(TOP DOWN)



ELEV



SIDE ELEV

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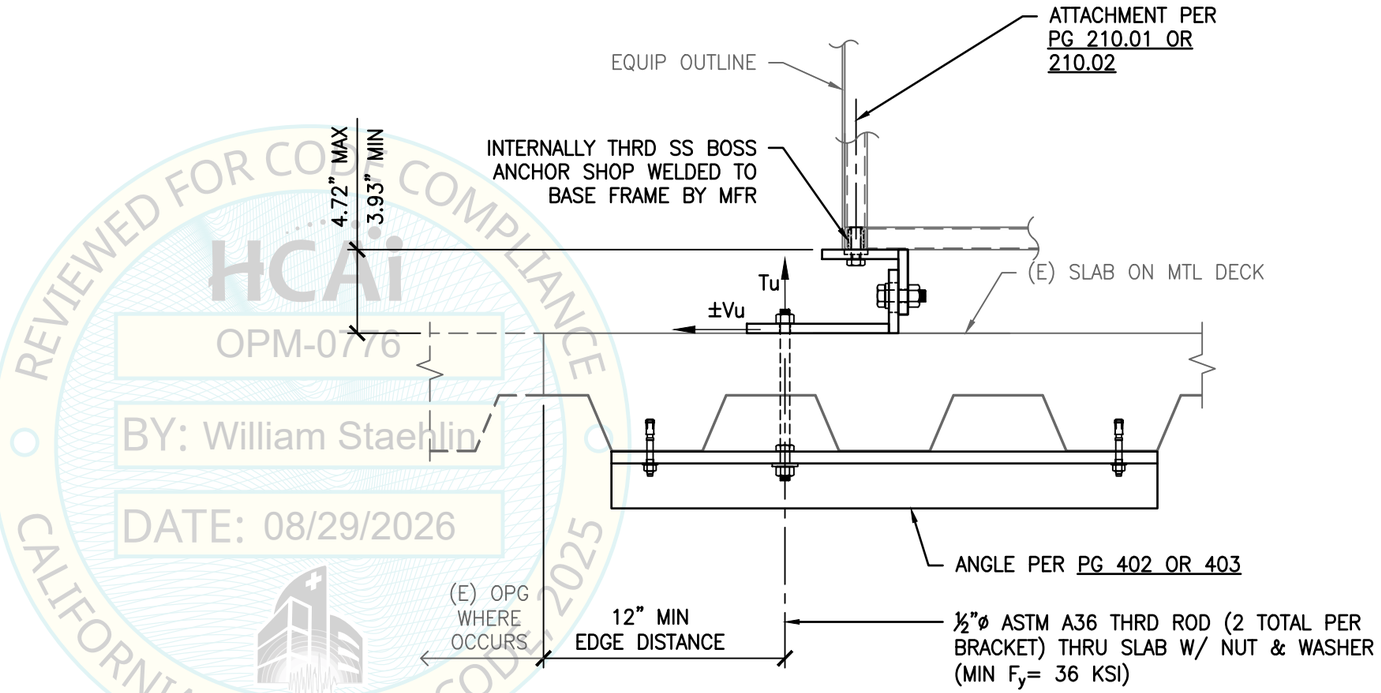
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ABBOTT ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS			
CYS STRUCTURAL ENGINEERS, INC. 2710 GATEWAY OAKS DRIVE, SUITE 190N TEL (916) 920-2020 SACRAMENTO, CA 95833 www.cyseng.com			

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Date:	08/072026
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 0.45$	2493#	1734#

SHEAR Vu INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o)



CASE 1 – SUSPENDED FLR W/ THRU-BOLTS

NOTE:
SUPPORTS & ATTACHMENTS INSTALLATION BY GENERAL CONTRACTOR.

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STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ATTACHMENT DETAIL TO SUPPORTING FLOOR
ALINITY c & i CASE 1

ABBOTT

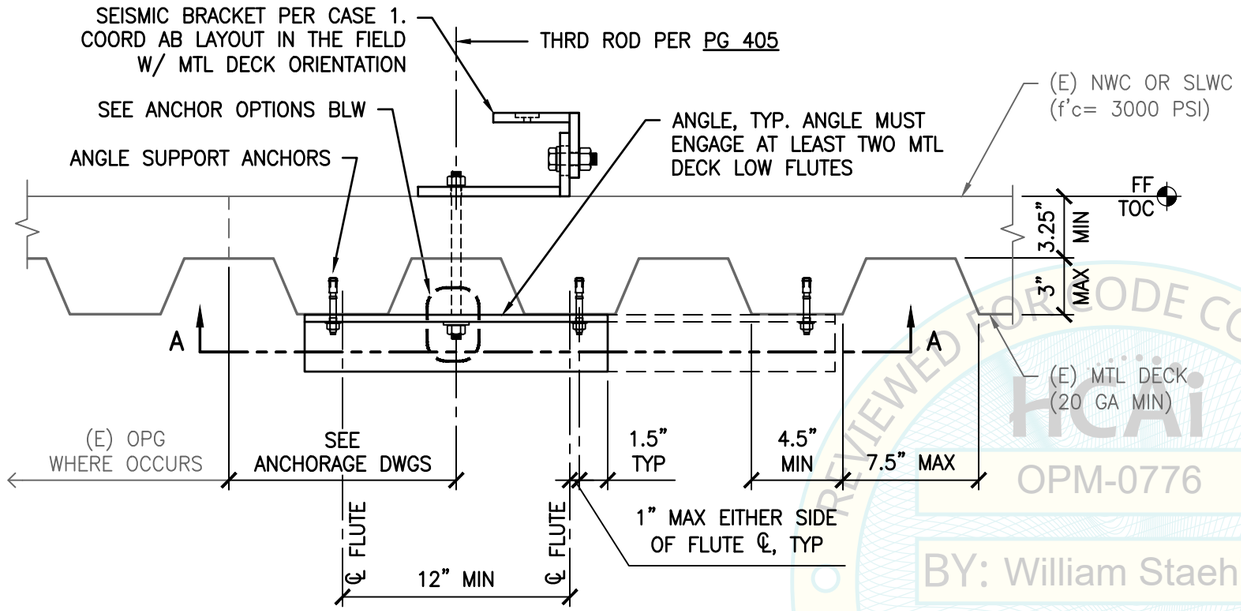
ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

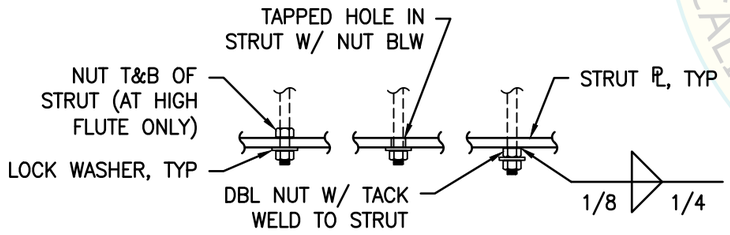
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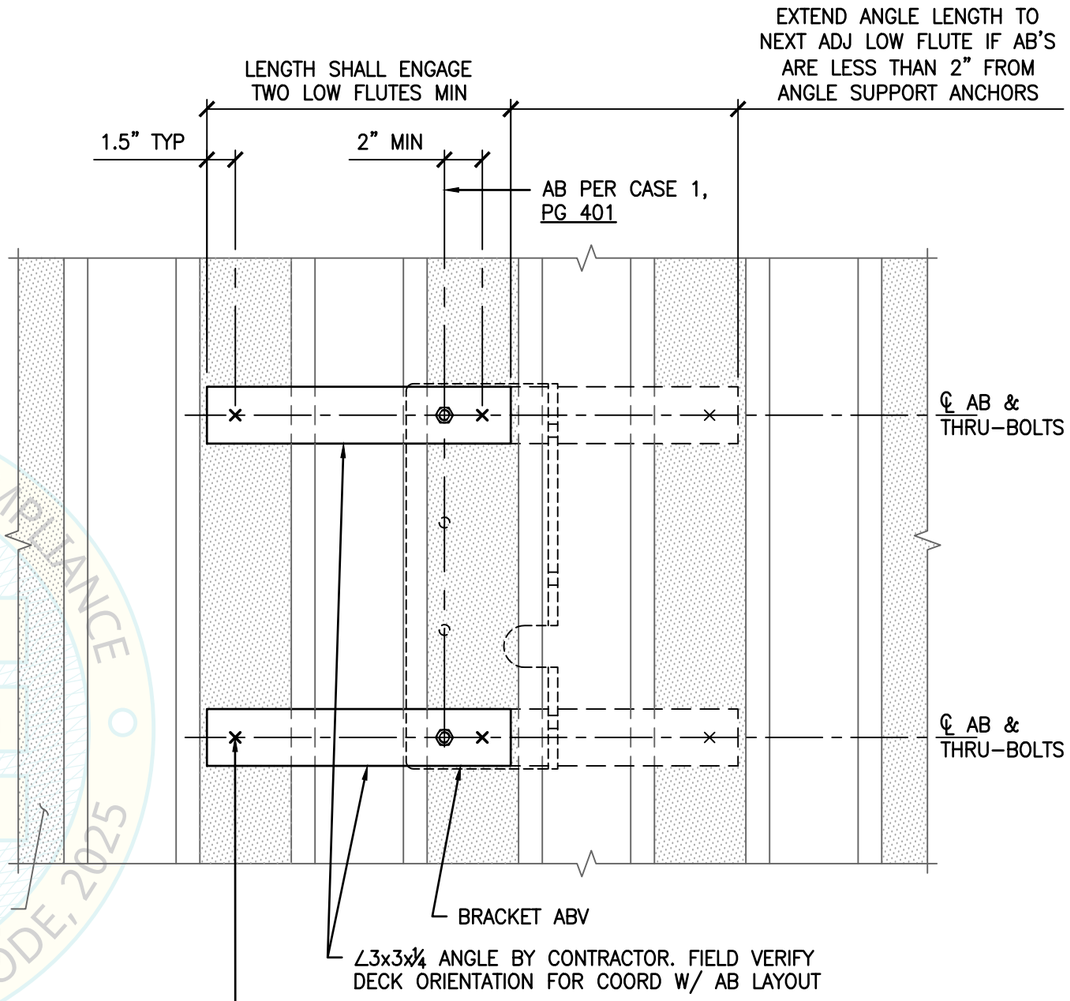
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ANCHOR OPTIONS



SECTION A-A

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SHEET TITLE: ATTACHMENT DETAIL TO SUPPORTING FLOOR
ALINITY c & i CASE 1

ABBOTT

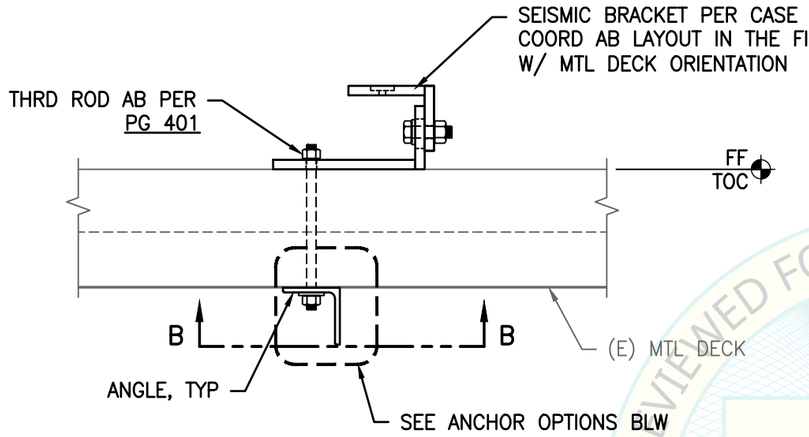
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EQUIPMENT SUPPORT & ATTACHMENTS

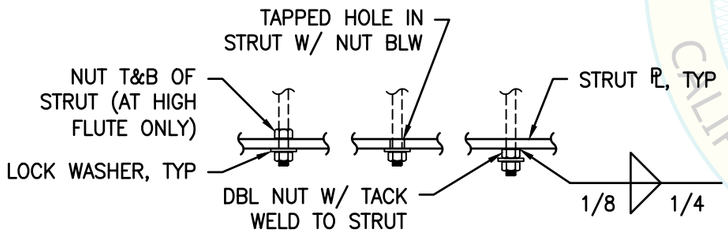
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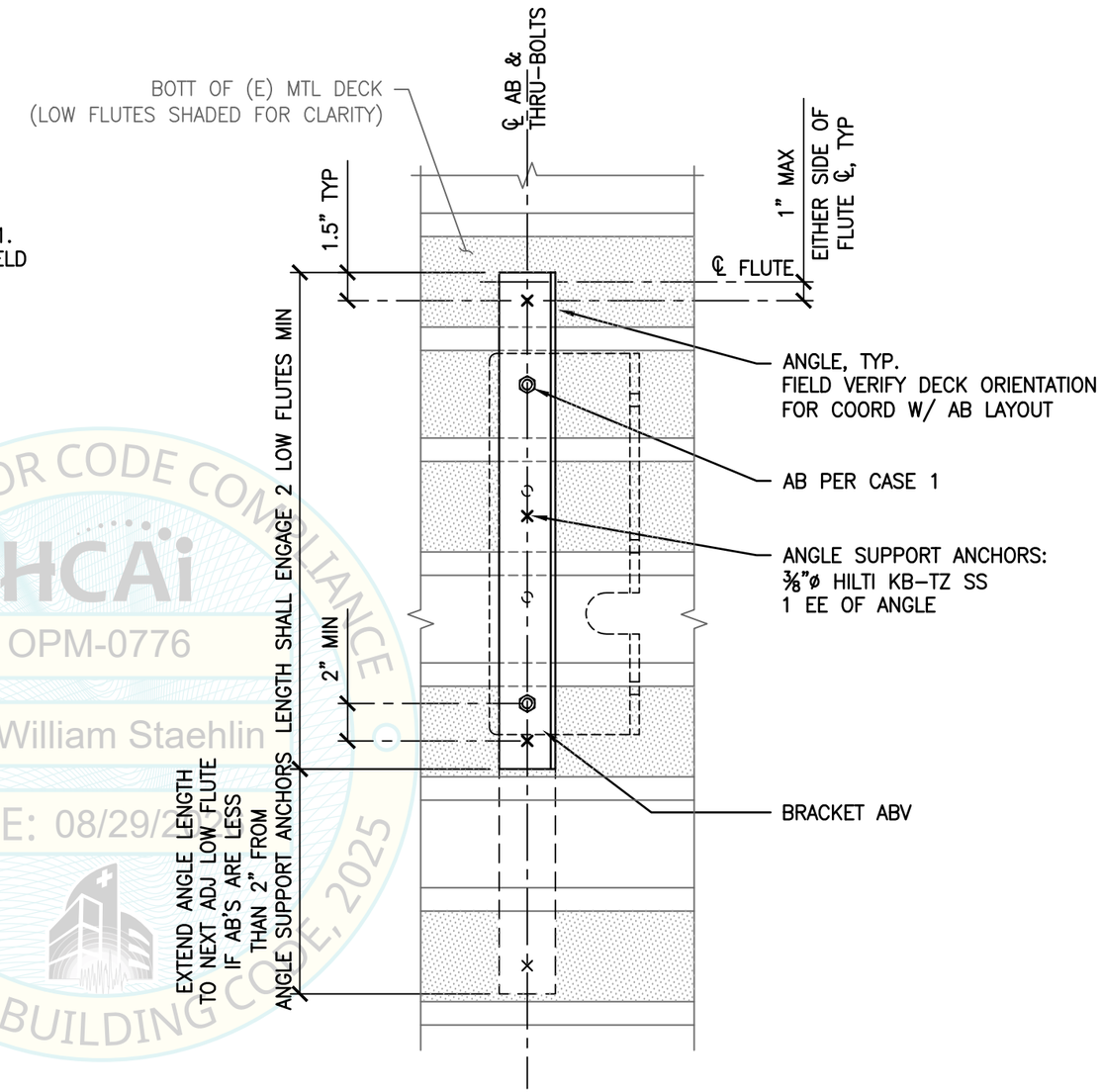
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By:	CYS
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ANCHOR OPTIONS



SECTION B-B

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SHEET TITLE: ATTACHMENT DETAIL TO SUPPORTING FLOOR
ALINITY c & i CASE 1

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

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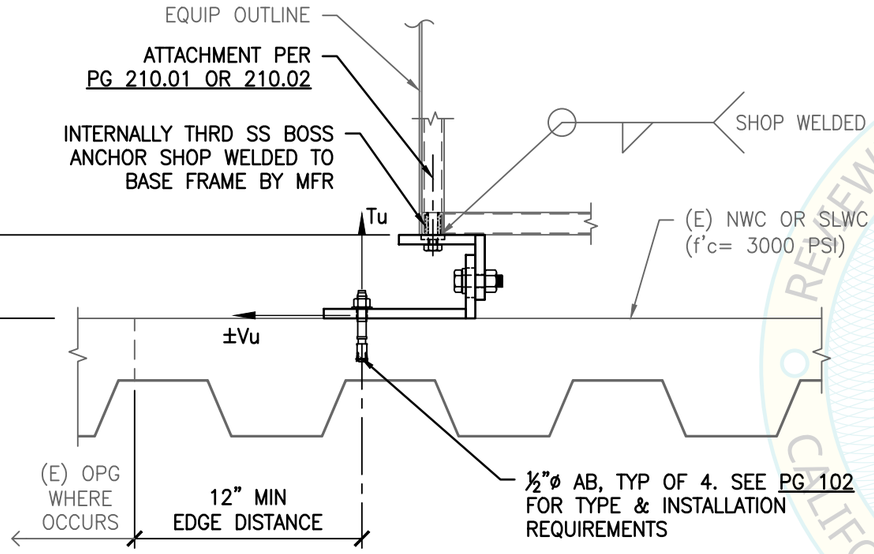
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By:	CYS
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h ≤ 0.45	682#	301#

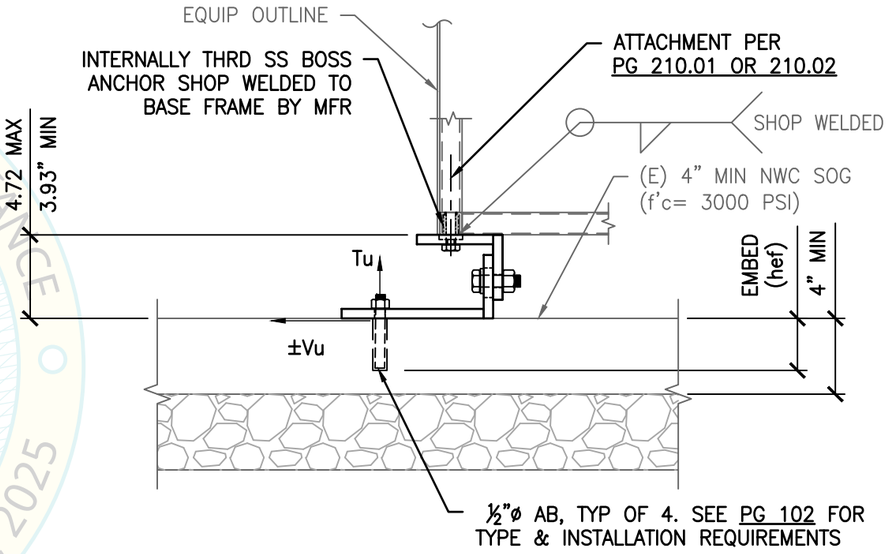
INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 2 – SUSPENDED FLR W/ ANCHOR BOLTS INTO CONC FILL

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 3 z/h = 0.00	1146#	466#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 3 – SOG OR SUSPENDED FLR
(SLAB AT OR BLW GRADE)

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HCAi
OPM-0776
BY: William Staehlin
DATE: 08/29/2026
CALIFORNIA BUILDING CODE, 2025

REGISTERED PROFESSIONAL ENGINEER
DIETER T SIEBALD
No. S4346
STRUCTURAL
STATE OF CALIFORNIA

NOT SEOR

SHEET TITLE: ATTACHMENT DETAIL TO SUPPORTING FLOOR
ALINITY c & i CASES 2 & 3

ABBOTT

ABBOTT ALINITY c, i, hq & hs INSTRUMENTS
EQUIPMENT SUPPORT & ATTACHMENTS

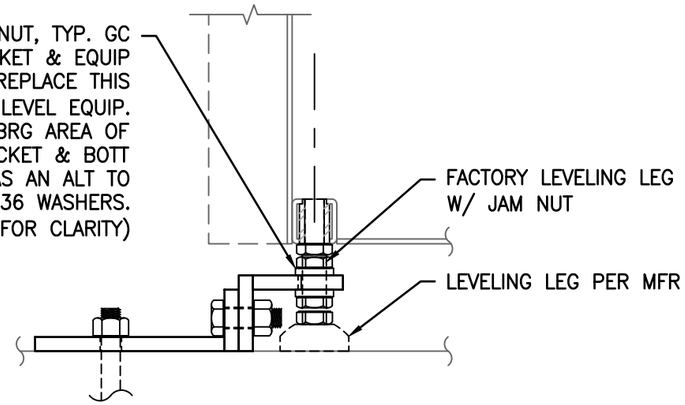
CYS STRUCTURAL ENGINEERS, INC.
2710 GATEWAY OAKS DRIVE, SUITE 190N
SACRAMENTO, CA 95833
TEL (916) 920-2020
www.cyseng.com

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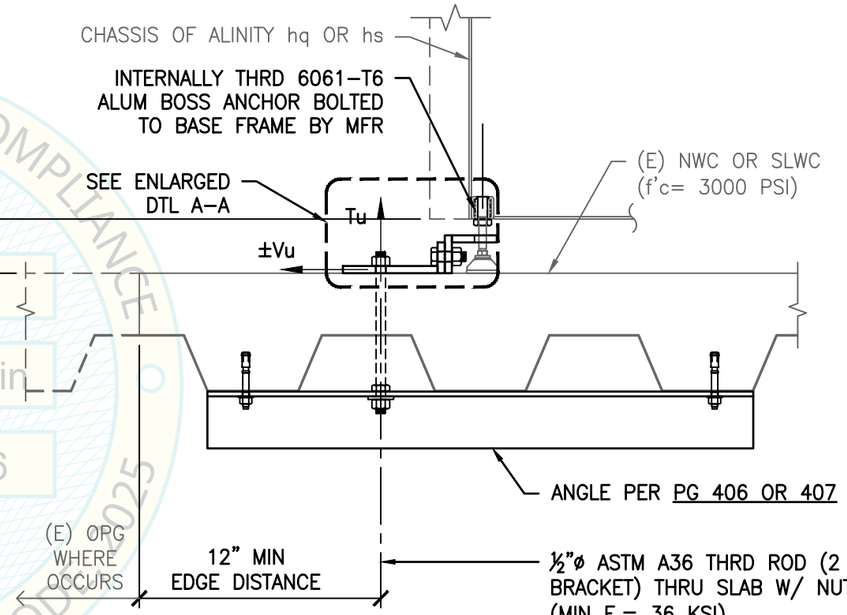
GC SHALL PROVIDE & INSTALL JAM NUT, TYP. GC SHALL OMIT TOP NUT IF CLR BLW BRACKET & EQUIP IS LESS THAN THE HT OF A NUT & REPLACE THIS NUT W/ SS FINGER SHIMS AS REQ TO LEVEL EQUIP. SHIMS MUST BE SAME DIMS AS BRG AREA OF BRACKET FLG. WHEN CLR BTW T.O. BRACKET & BOTT OF COMPONENT IS 7mm OR LESS. AS AN ALT TO SHIMS USE STACKED HARDENED F436 WASHERS. (SHIMS OR WASHERS NOT SHOWN FOR CLARITY)



	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 1 $z/h \leq 0.95$	685#	217#

SHEAR Vu INCLUDES MATERIAL OVERSTRENGTH FACTOR (Ω_o)

ENLARGED DTL A–A



CASE 1 – SUSPENDED FLR W/ THRU–BOLTS

NOTES:
1. SUPPORTS & ATTACHMENTS INSTALLATION BY CONTRACTOR.
2. LEVELING LEGS & BOLTS CONNECTING BRACKETS NOT SHOWN FOR CLARITY.

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SHEET TITLE: ATTACHMENT DETAIL TO SUPPORTING FLOOR ALINITY hq & hs CASE 1

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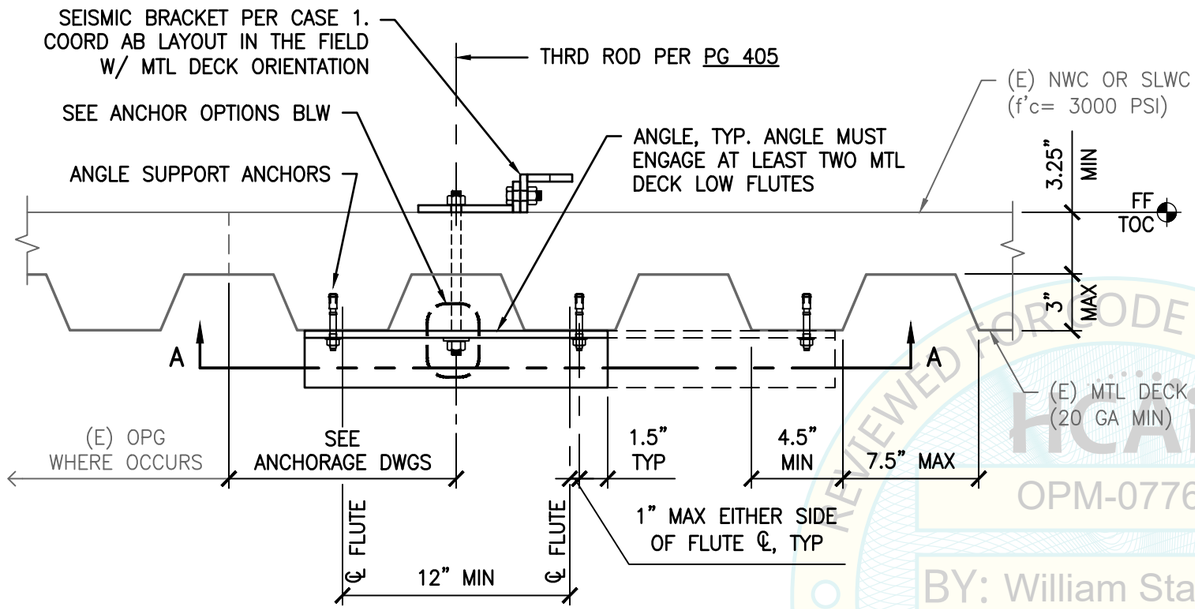
ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS

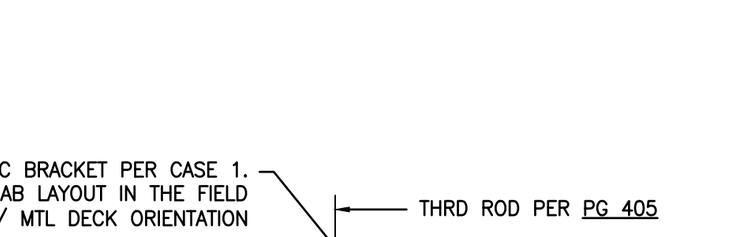
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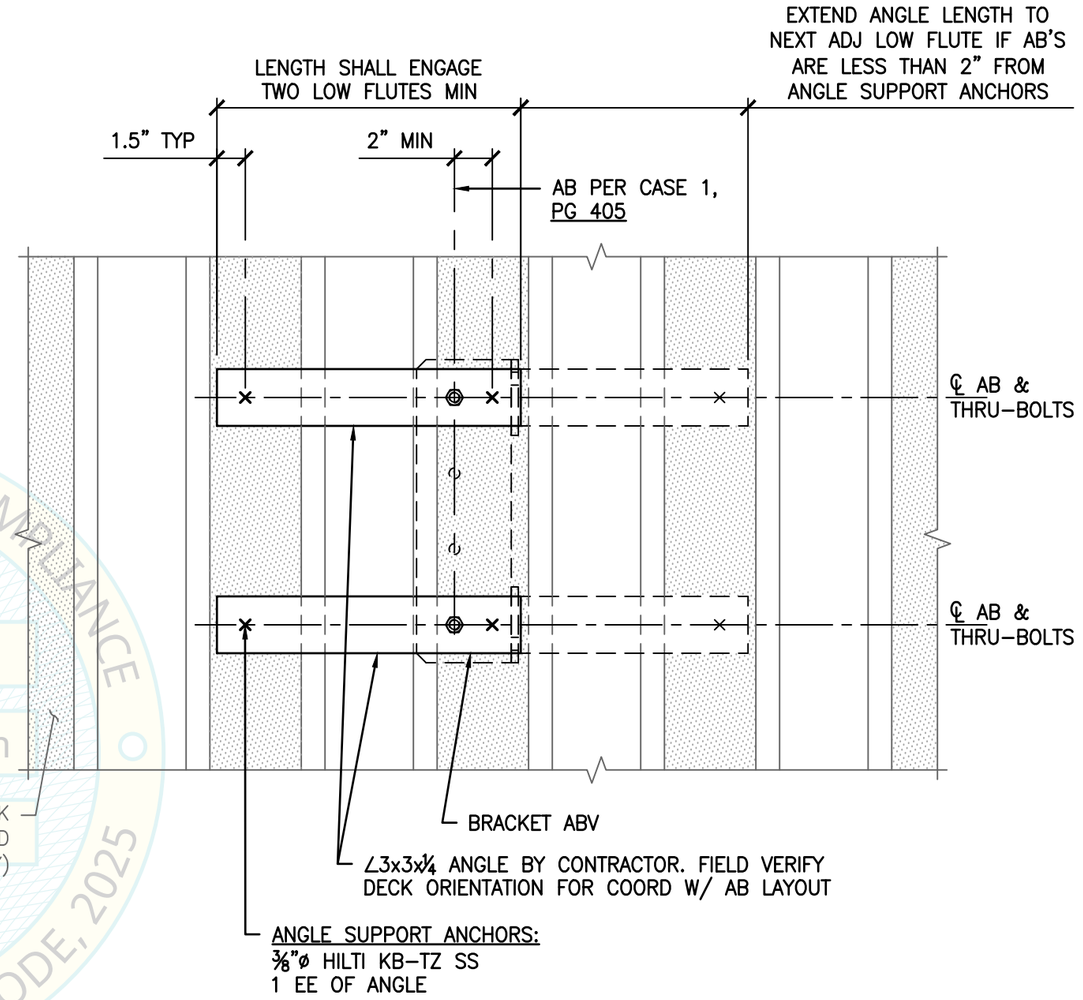
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ANCHOR OPTIONS



SECTION A-A

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STATE OF CALIFORNIA

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ABBOTT

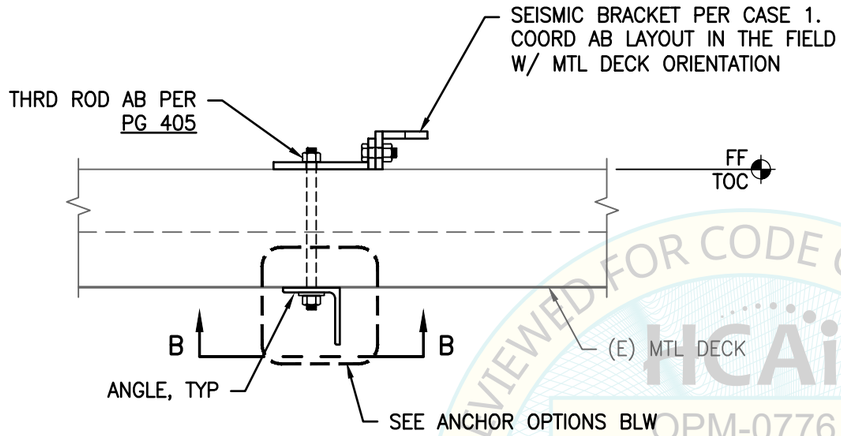
ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS

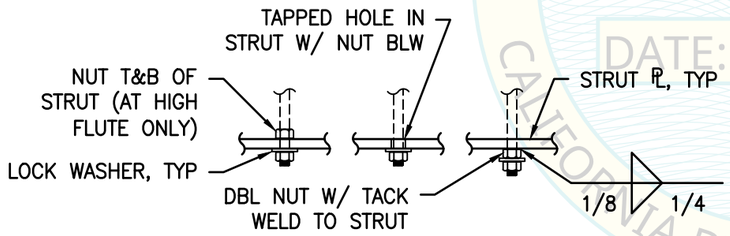
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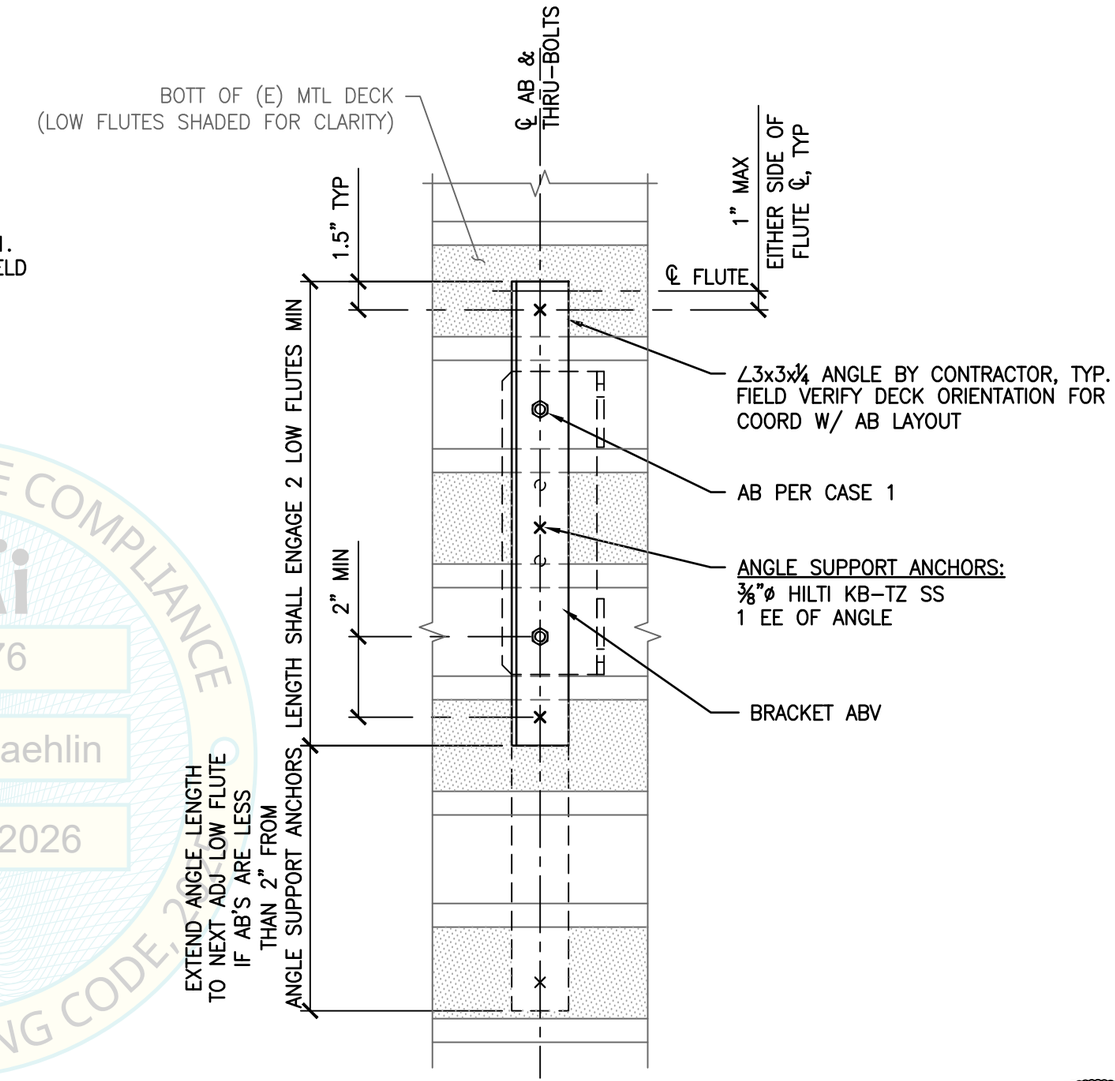
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ANCHOR OPTIONS



SECTION B-B

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STRUCTURAL
STATE OF CALIFORNIA

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SHEET TITLE: ATTACHMENT DETAIL TO SUPPORTING FLOOR ALINITY hq & hs CASE 1		
ABBOTT	ABBOTT ALINITY c, i, hq & hs INSTRUMENTS EQUIPMENT SUPPORT & ATTACHMENTS	
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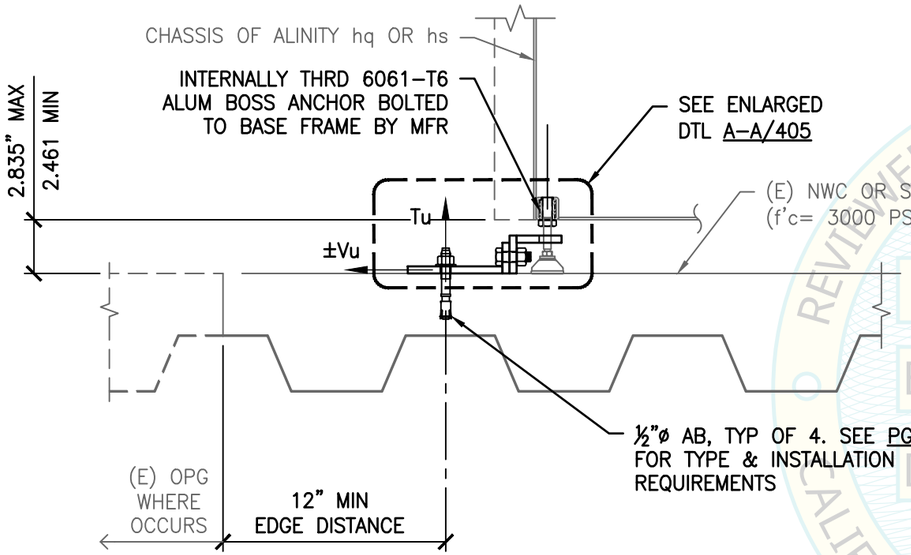
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	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 2 z/h ≤ 0.45	685#	217#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)

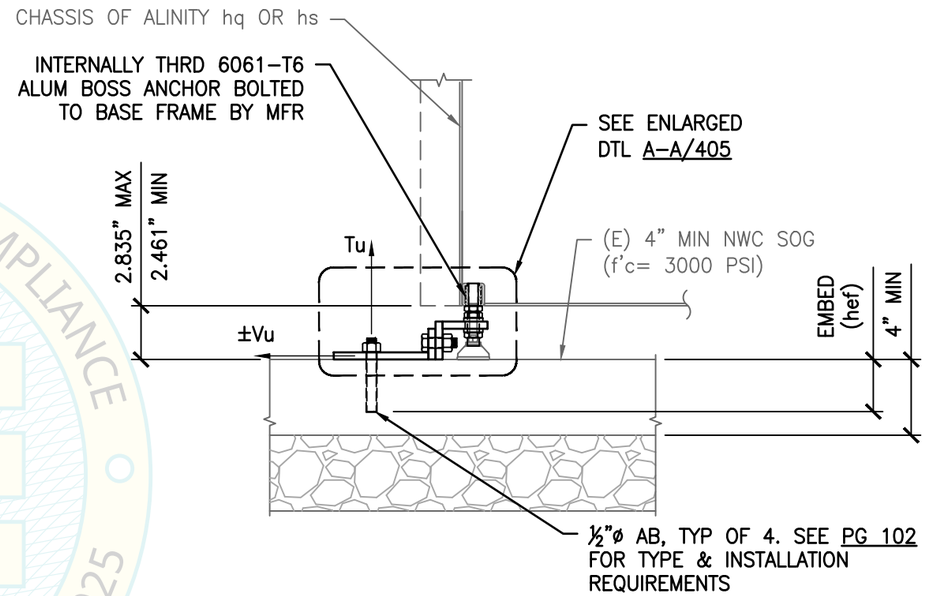


CASE 2 – SUSPENDED FLR W/ ANCHOR BOLTS INTO CONC FILL

NOTES:
1. SUPPORTS & ATTACHMENTS INSTALLATION BY CONTRACTOR.
2. LEVELING LEGS & BOLTS CONNECTING BRACKETS NOT SHOWN FOR CLARITY.

	MAX ANCHOR FORCES AT LRFD AT EA AB	
	Tu	Vu
CASE 3 z/h = 0.00	1075#	305#

INCLUDES OVERSTRENGTH FACTOR (Ω_o)



CASE 3 – SOG
(SLAB AT OR BLW GRADE)

NOTES:
1. SUPPORTS & ATTACHMENTS INSTALLATION BY CONTRACTOR.
2. LEVELING LEGS & BOLTS CONNECTING BRACKETS NOT SHOWN FOR CLARITY.

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