



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

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

OFFICE USE ONLY

APPLICATION #: OPM-0742

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: New Renewal/Update

Manufacturer Information

Manufacturer: Becton, Dickinson and Company

Manufacturer's Technical Representative: Dustin Diemert

Mailing Address: 7 Loveton Circle, Sparks, MD 21152

Telephone: (443) 839-3883 Email: dustin_diemert@bd.com

Product Information

Product Name: BD Bactec FXI

Product Type: Blood Culture System

Product Model Number: BD Bactec FXI

General Description: Blood Culture System that detects & grows organisms in blood samples

Applicant Information

Applicant Company Name: Becton, Dickinson and Company

Contact Person: Dustin Diemert

Mailing Address: 7 Loveton Circle, Sparks, MD 21152

Telephone: (443) 839-3883 Email: dustin_diemert@bd.com

Title: Staff Engineer Mechanical, PLM & Cost Engineering Lead

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STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.
Name: Dieter Siebald California License Number: S4346
Mailing Address: 2495 Natomas Park Drive, Suite 650, Sacramento, CA 95833
Telephone: (916) 920-2020 Email: dieters@cyseng.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: 10/6/2024
Name: William Staehlin Title: Senior Structural Engineer
Condition of Approval (if applicable): _____

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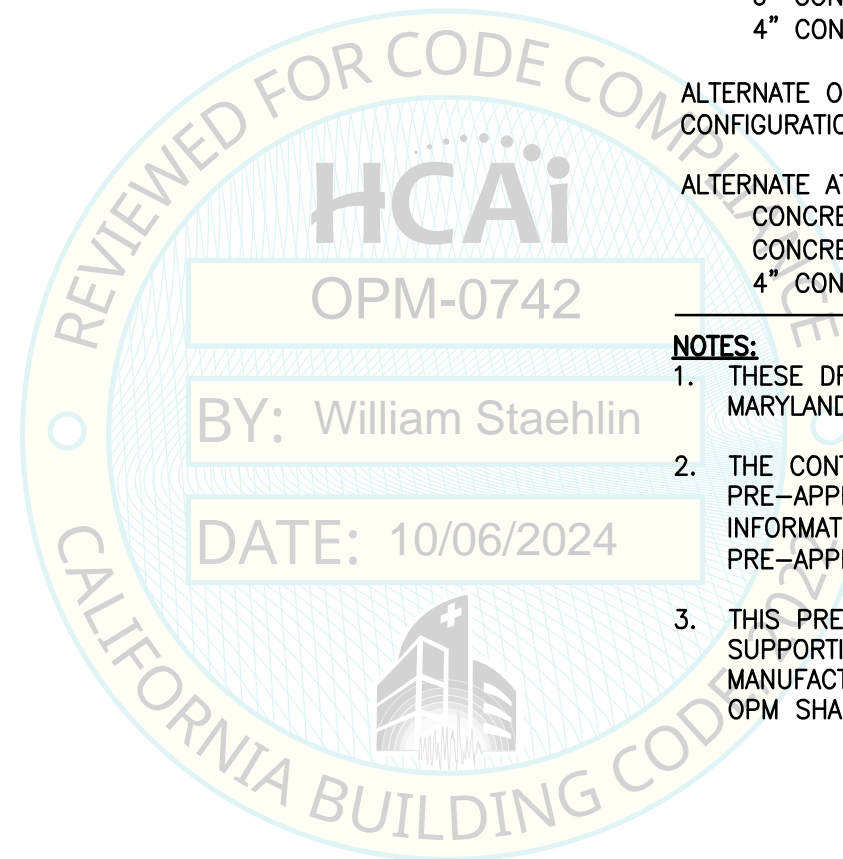


TABLE OF CONTENTS
OPM-0742

| | PAGE |
|--|------|
| GENERAL NOTES | 2 |
| ABBREVIATIONS, SYSTEM OVERVIEW & DESIGN CRITERIA | 3 |
| CONFIGURATION PLAN & ELEVATIONS | 4 |
| SEISMIC BRACKET ASSEMBLY & DETAILS | 5 |
| SEISMIC BRACKET DETAILS | 7 |
| ATTACHMENT DETAILS | |
| CONCRETE FILL OVER METAL DECK (CASE 1) | 9 |
| 6" CONCRETE SLAB ON GRADE (CASE 2) | 10 |
| 4" CONCRETE SLAB ON GRADE (CASE 3) | 10 |
| ALTERNATE OPTION W/ ADDITIONAL SEISMIC BRACKETS | |
| CONFIGURATION PLAN & ELEVATIONS | 11 |
| ALTERNATE ATTACHMENT DETAILS | |
| CONCRETE FILL OVER METAL DECK (CASE 4) | 12 |
| CONCRETE FILL OVER METAL DECK (CASE 5) | 13 |
| 4" CONCRETE SLAB ON GRADE (CASE 6) | 13 |

NOTES:

1. THESE DRAWINGS ARE PREPARED FOR BD LIFE SCIENCES – DIAGNOSTIC SYSTEMS, SPARKS, MARYLAND.
2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE CALIFORNIA DEPARTMENT OF HEALTH CARE ACCESS & INFORMATION (HCAI) OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT (OSHPD) PRE-APPROVAL PROGRAMS WEBSITE.
3. THIS PRE-APPROVAL COVERS THE SUPPORTS & ATTACHMENTS OF THE EQUIPMENT TO THE SUPPORTING STRUCTURE. THE EQUIPMENT & ATTACHMENT HARDWARE ARE SUPPLIED BY THE MANUFACTURER. THE EXPANSION ANCHORS, THRU-BOLTS & STRUT PLATES SHOWN IN THIS OPM SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR.

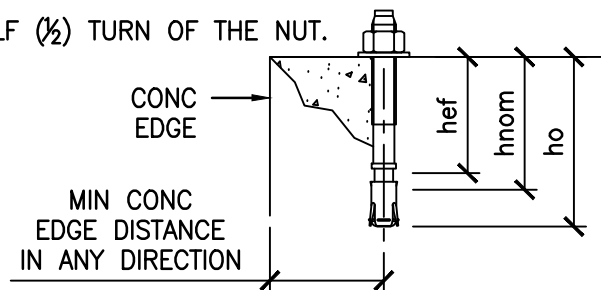


SHEET TITLE: TABLE OF CONTENTS

| | | | | | | |
|--|---|--|-----|-------------|------|------------------|
| | BD Life Sciences - Diagnostic Systems BD Bactec FXI™ | CYS STRUCTURAL ENGINEERS, INC. 2710 GATEWAY OAKS DRIVE, SUITE 190N TEL (916) 920-2020 SACRAMENTO, CA 95833 www.cyseng.com | Rev | Description | Date | Job No: 24017 |
| | | | | | | Date: 10-03-2024 |
| | | | | | | Page: 1 of 13 |

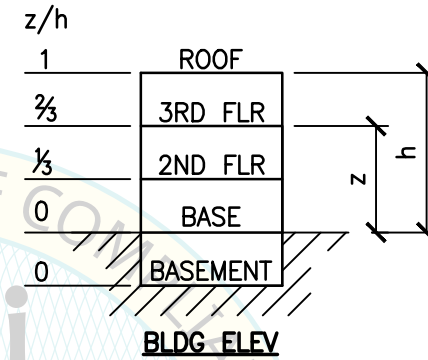
GENERAL NOTES:

- THIS HCAI/OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2022. THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2022.
- IT IS THE RESPONSIBILITY OF THE SEOR FOR A SITE SPECIFIC PROJECT TO VERIFY:
 - THE ADEQUACY OF THE NEW OR EXISTING STRUCTURE TO RESIST THE FORCES & WT SPECIFIED FOR EA EQUIP IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
 - THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPGS.
 - THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPCG SHOWN IN THE TEST LOADS TABLE ON PG 2 IS THE REQ MIN SPCG OF THE GIVEN DIA ANCHORS. THE REQ SPCG FROM ANCHORS OF OTHER DIAMETERS & EMBEDMENTS MAY VARY & SHALL BE EVALUATED BY THE SEOR.
 - THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2022 & W/ THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - THAT THE ACTUAL EQUIP'S WT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, & THE MATERIAL & GAGE OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE W/ THE INFO SHOWN ON THE PRE-APPROVAL DOCUMENTS.
- EXPANSION ANCHORS INSTALLED IN NWC OR SLWC SHALL BE CARBON STEEL HILTI KB-TZ2 EXPANSION ANCHORS COMPLYING W/ ESR-4266 REISSUED DECEMBER 2022. PROVIDE FULL THREAD ENGAGEMENT OF NUT & WASHER.
 - 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 TABLE ON PG 2.
 - JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOBSITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TEST 50% OF THE INSTALLED ANCHORS. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE SPECIAL INSPECTOR. TESTING & SPECIAL INSPECTION OF EXPANSION ANCHORS SHALL BE PERFORMED BY THE FACILITY OWNER PER CBC 1704A & 1910A.5 & CAC 7-149. ALL REPORTS SHALL BE SENT 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 2022 CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
 - FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - TORQUE WRENCH METHOD:** THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS:
WEDGE TYPE: ONE-HALF (1/2) TURN OF THE NUT.



| CONDITION OF ANCHORAGE | ANCHOR DIA (INCH) | INSTALLATION EMBED (INCH) hnom | EFFECTIVE EMBED (INCH) hef | HOLE DEPTH (INCH) ho | MIN CONCRETE THK (INCH) h | MIN CONCRETE EDGE DISTANCE (INCH) | MIN ANCHOR SPCG (INCH) | TEST TORQUE (FT-LBS) |
|------------------------|-------------------|--------------------------------|----------------------------|----------------------|---------------------------|-----------------------------------|------------------------|----------------------|
| CASES 1 & 4 STRUT PL | 3/8" | 2 1/2" | 2" | 2 3/4" | SEE PGS 9 & 12 | | | 30 |
| CASE 2 | 1/2" | 3" | 2 1/2" | 3/4" | 6" | 8" | 13" | 50 |
| CASES 3, 5 & 6 | 1/2" | 2 1/2" | 2" | 2 3/4" | 4" | 8" | 13" | 50 |

- AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
 - PROVIDE FOR FULL THRD ENGAGEMENT OF NUTS & WASHER.
- BOLTS THRU CONC ON MTL DECK:
 - BOLTS SHALL BE TORQUED BY 3/4 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.
 - THRU-BOLT HOLES SHALL BE 1/16" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16").
 - 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.
 - SIX (6) CASES OF ATTACHMENT ARE SPECIFIED & PRESENTED IN THIS PRE-APPROVAL:



CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG USING THRU-BOLTS. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). z/h ≤ 0.85.

CASE 2: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 6" NWC SLAB (f'c = 3000 PSI, MIN). z/h = 0.

CASE 3: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB (f'c = 3000 PSI, MIN). z/h = 0.

CASE 4: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG USING THRU-BOLTS. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). z/h ≤ 1.00.

CASE 5: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG USING ANCHOR BOLTS INTO THE CONCRETE FILL. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). z/h ≤ 0.50.

CASE 6: ATTACHMENT DETAILS LOCATED AT OR BLW THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB (f'c = 3000 PSI, MIN). z/h = 0.

- THIS PRE-APPROVAL MAY BE USED ONLY AT GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{DS} & z/h ARE AS NOTED IN THE DESIGN CRITERIA ON THE FOLLOWING PAGE.



SHEET TITLE: GENERAL NOTES



BD Life Sciences - Diagnostic Systems
BD Bactec FXI™



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: 10-03-2024 |
| | | | By: DTS |
| | | | Page: 2 of 13 |

ABBREVIATIONS:

| | | | | | |
|---------|--|----------------|---|----------------|--|
| ⊙ | AT | f'c | MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE | OP | OPERATING |
| ∠ | ANGLE | | | OPG | OPENING |
| AB | ANCHOR BOLT | FLG | FLANGE | OPM | OSPHD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION |
| ABV | ABOVE | FLR | FLOOR | | OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT |
| ASCE | AMERICAN SOCIETY OF CIVIL ENGINEERS | FT (') | FOOT/FEET | OSHPD | PERPENDICULAR |
| ADJ | ADJACENT | F _p | HORIZONTAL SEISMIC FORCE PER ASCE 7-16 SEISMIC FORCE REQUIREMENTS | PERP | PAGE |
| AISI | AMERICAN IRON & STEEL INSTITUTE | F _y | SPECIFIED MINIMUM YIELD STRESS OF STEEL | PG | PLATE |
| ALUM | ALUMINUM | GA | GAUGE | PSI | POUNDS PER SQUARE INCH |
| ASTM | AMERICAN SOCIETY FOR TESTING & MATERIALS | GR | GRADE | REQ | REQUIRED |
| BLDG | BUILDING | HCAI | DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION | SEOR | STRUCTURAL ENGINEER OF RECORD |
| BLW | BELOW | HT | HEIGHT | SLWC | SAND-LIGHTWEIGHT CONCRETE |
| BOTT | BOTTOM | ICC | INTERNATIONAL CODE COUNCIL | SPCG | SPACING |
| CBC | CALIFORNIA BUILDING CODE | IN (") | INCH | SPEC | SPECIFICATION |
| CBC | CALIFORNIA BUILDING CODE | INFO | INFORMATION | SS | STAINLESS STEEL |
| CG | CENTER OF GRAVITY | KSI | KIPS PER SQUARE INCH | STL | STEEL |
| ⊕ | CENTERLINE | LBS | POUNDS | THK | THICK/THICKNESS |
| CONC | CONCRETE | LRFD | LOAD AND RESISTANCE FACTOR DESIGN | THRD | THREAD OR THREADED |
| CONT | CONTINUOUS | MAX | MAXIMUM | T.O. | TOP OF |
| COORD | COORDINATE | MFR | MANUFACTURER | Tu | ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE |
| CRS | COLD-ROLLED STEEL | MIN | MINIMUM | TYP | TYPICAL |
| DBL | DOUBLE | mm | MILLIMETER | T&B | TOP & BOTTOM |
| DEG | DEGREE | MTL | METAL | UNO | UNLESS NOTED OTHERWISE |
| DIA (∅) | DIAMETER | NO. (#) | NUMBER OR POUNDS | VERT | VERTICAL |
| DTL | DETAIL | NWC | NORMAL WEIGHT CONCRETE | Vu | ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE |
| (E) | EXISTING CONDITION | | | W/ | WITH |
| EA | EACH | | | W _p | OPERATING WEIGHT |
| EE | EACH END | | | WT | WEIGHT |
| ELEV | ELEVATION | | | | |
| EQ | EQUAL | | | | |
| EQUIP | EQUIPMENT | | | | |
| ES | EACH SIDE | | | | |
| EXTR | EXTERIOR | | | | |

SYSTEM OVERVIEW & DESIGN CRITERIA:

1. THE BD BACTEC FXI™ UNIT INCLUDES THREE (3) MODULES THAT CAN BE INTERCONNECTED (ANALYZER MODULE RT, ANALYZER MODULE LT, WORKFLOW MODULE). INSTALLATION CONFIGURATIONS ARE SHOWN IN TABLE BLW:

| CONFIGURATION | LEFT MODULE | CENTER MODULE | RIGHT MODULE |
|---------------|-------------|---------------|--------------|
| 1 | ANALYZER LT | WORKFLOW | - |
| 2 | - | WORKFLOW | ANALYZER RT |
| 3 | ANALYZER LT | WORKFLOW | ANALYZER RT |

2. SUPPORT & ATTACHMENT DESIGN IS PER 2022 CBC AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-16 "INCLUDING ALL ERRATA AND SUPPLEMENTS":

$a_p = 1.0$ $R_p = 1.5$ $I_p = 1.5$ $\Omega_0 = 1.5$ (FOR CONC ANCHORS ONLY)

$W_p = \text{MAX OP WT (PER PG 4)}$

UPPER FLRS ABV THE BASE OF BLDG, $z/h \leq 0.85$
 CASE 1: $S_{Ds} = 2.50$ $F_p = 2.70 W_p$

FLRS AT OR BLW THE BASE OF BLDG, $z/h \leq 0$
 CASE 2: $S_{Ds} = 2.50$ $F_p = 1.125 W_p$

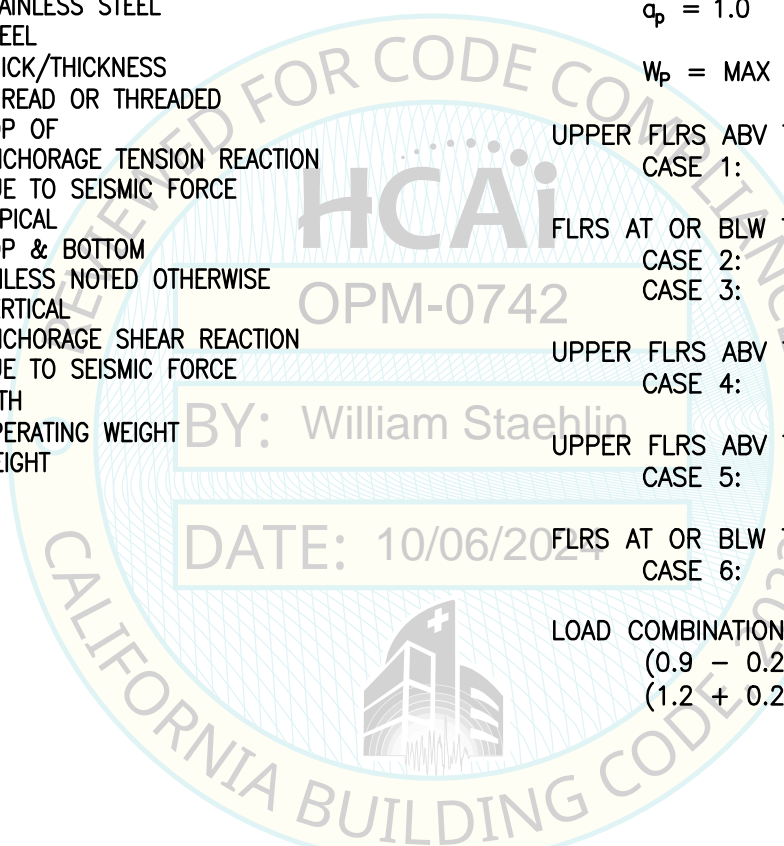
CASE 3: $S_{Ds} = 2.10$ $F_p = 0.945 W_p$

UPPER FLRS ABV THE BASE OF BLDG, $z/h \leq 1.00$
 CASE 4: $S_{Ds} = 2.50$ $F_p = 3.00 W_p$

UPPER FLRS ABV THE BASE OF BLDG, $z/h \leq 0.50$
 CASE 5: $S_{Ds} = 1.10$ $F_p = 0.88 W_p$

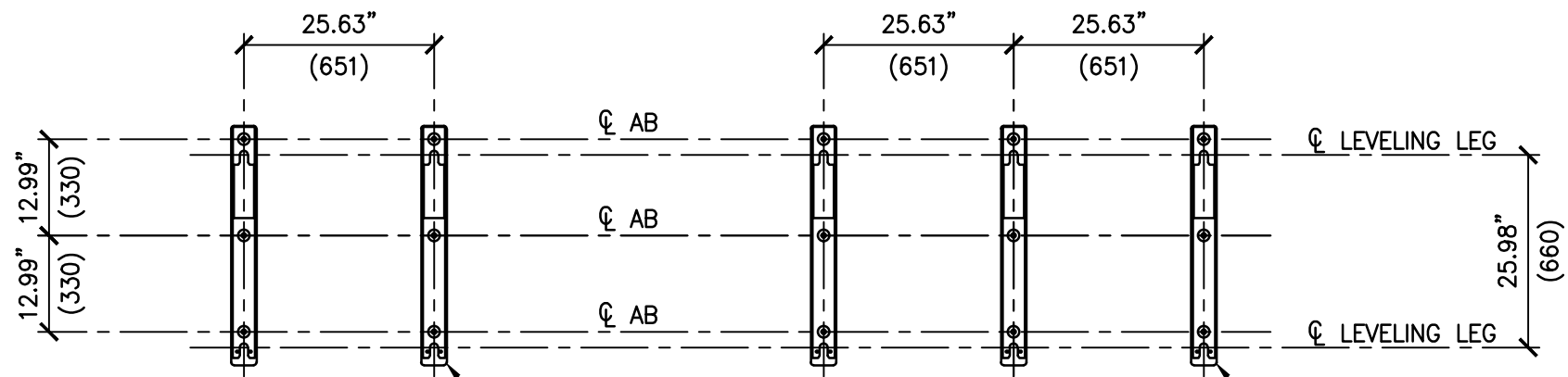
FLRS AT OR BLW THE BASE OF BLDG, $z/h \leq 0$
 CASE 6: $S_{Ds} = 2.50$ $F_p = 1.125 W_p$

LOAD COMBINATIONS
 (0.9 - 0.2 S_{Ds}) D - Ω₀ F_p (FOR MAX TENSION)
 (1.2 + 0.2 S_{Ds}) D + Ω₀ F_p (FOR MAX COMPRESSION)



| | | | | | | | | | |
|--|--|--|--|---|-------------|------|---------------|------------------|---------|
| SHEET TITLE: ABBREVIATIONS, SYSTEM OVERVIEW & DESIGN CRITERIA | | | | Rev | Description | Date | Job No: 24017 | | |
|  BD Life Sciences - Diagnostic Systems BD Bactec FXI™ | | | | CYS STRUCTURAL ENGINEERS, INC. 2710 GATEWAY OAKS DRIVE, SUITE 190N TEL (916) 920-2020 SACRAMENTO, CA 95833 www.cyseng.com | | | | Date: 10-03-2024 | By: DTS |
| | | | | | | | | Page: 3 of 13 | |

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SINGLE ANALYZER CONFIGURATION

SEE PG 6 FOR TYP BD SUPPLIED GTRN LOCKING PLATE & SEISMIC BRACKETS, 2- TOTAL

DUAL ANALYZER CONFIGURATION

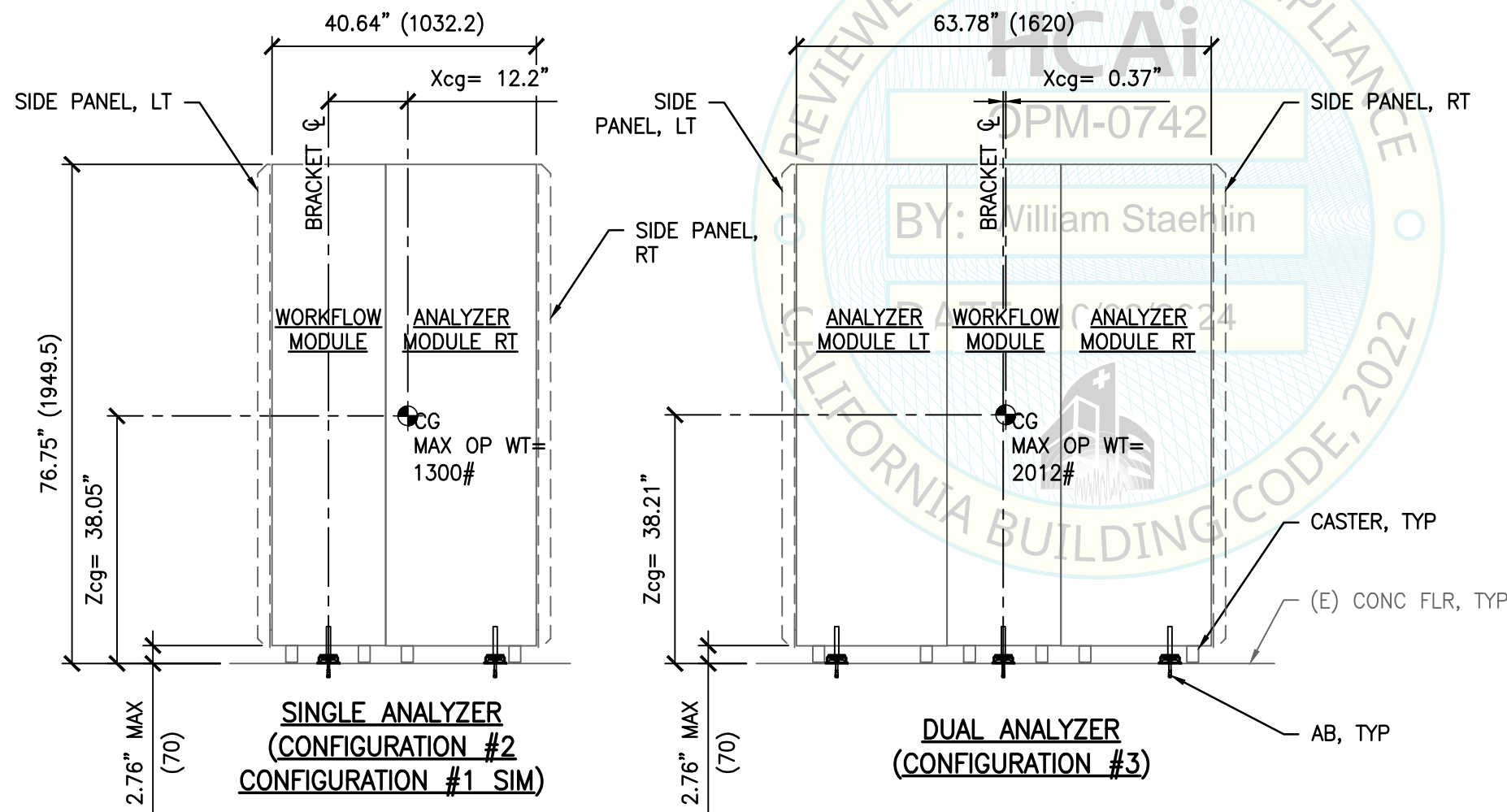
SEE PG 6 FOR TYP BD SUPPLIED GTRN LOCKING PLATE & SEISMIC BRACKETS, 3- TOTAL

PLAN VIEW

| CONFIGURATION # | CG LOCATION & MAX OP WT | | | | |
|-----------------|-------------------------|---------|--------------|----------------|----------------|
| | INSTRUMENT | WT (LB) | Xcg (mm) | Ycg (mm) | Zcg (mm) |
| | WORKFLOW MODULE | 520 | 0.48" (12.1) | 15.33" (389.5) | 37.4" (950) |
| | ANALYZER MODULE LT | 712 | 20.12" (511) | 13.03" (331) | 38.52" (978.3) |
| | ANALYZER MODULE RT | 712 | 20.83" (529) | 13.03" (331) | 38.52" (978.3) |
| 1&2 | SINGLE ANALYZER CONF | 1300 | 12.2" (310) | 13.92" (353.5) | 38.05" (966.4) |
| 3 | DUAL ANALYZER CONF | 2012 | 0.37" (9.5) | 13.61" (345.6) | 38.21" (970.6) |

NOTES:

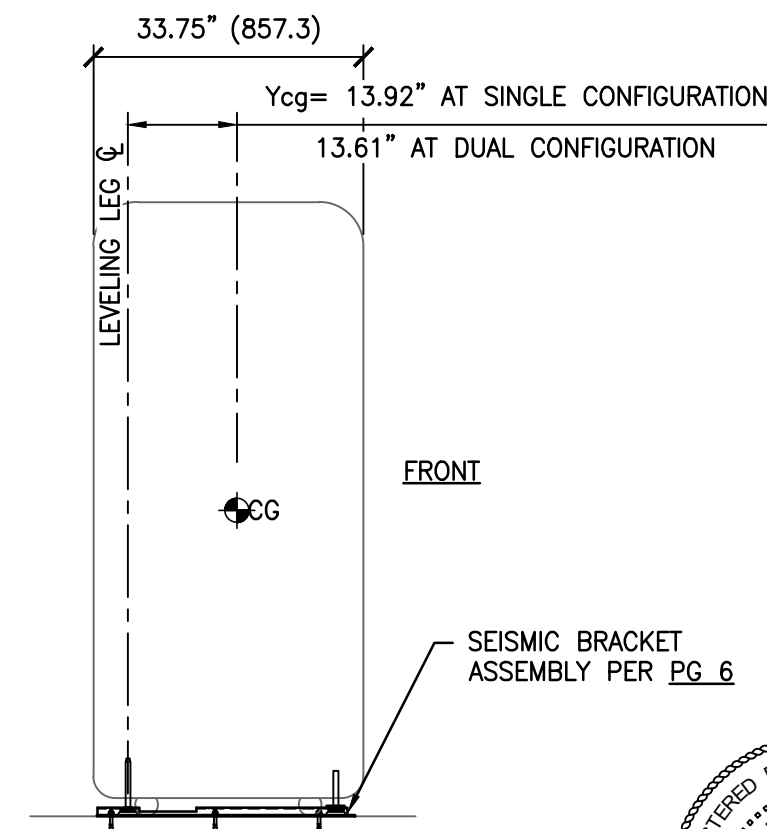
1. THE MODULE WEIGHTS ARE PROVIDED FOR REFERENCE ONLY.
2. THE SINGLE & DUAL ANALYZER CONFIGURATIONS MAX OP WT INCLUDE 2- SIDE PANELS THAT WEIGH 34# EA.



SINGLE ANALYZER (CONFIGURATION #2 CONFIGURATION #1 SIM)

DUAL ANALYZER (CONFIGURATION #3)

FRONT ELEV



RIGHT SIDE ELEV



SHEET TITLE: CONFIGURATION PLAN & ELEVATIONS



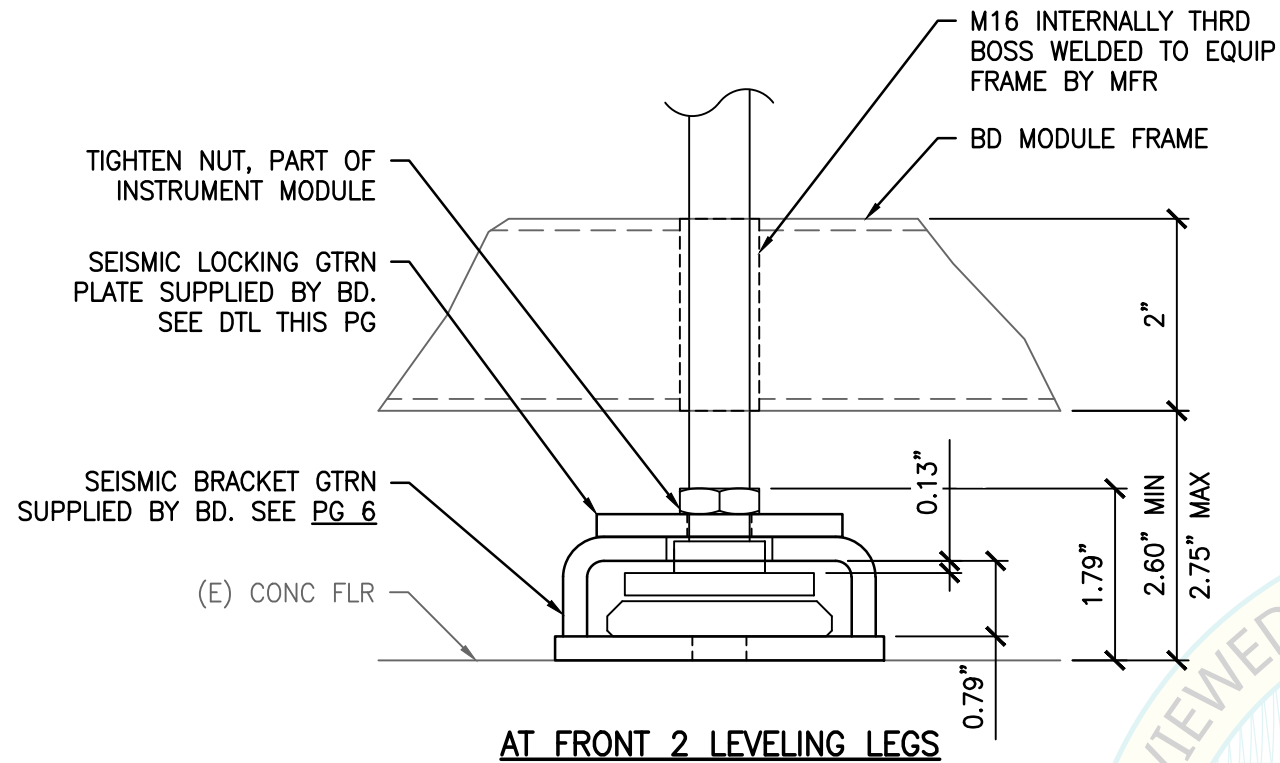
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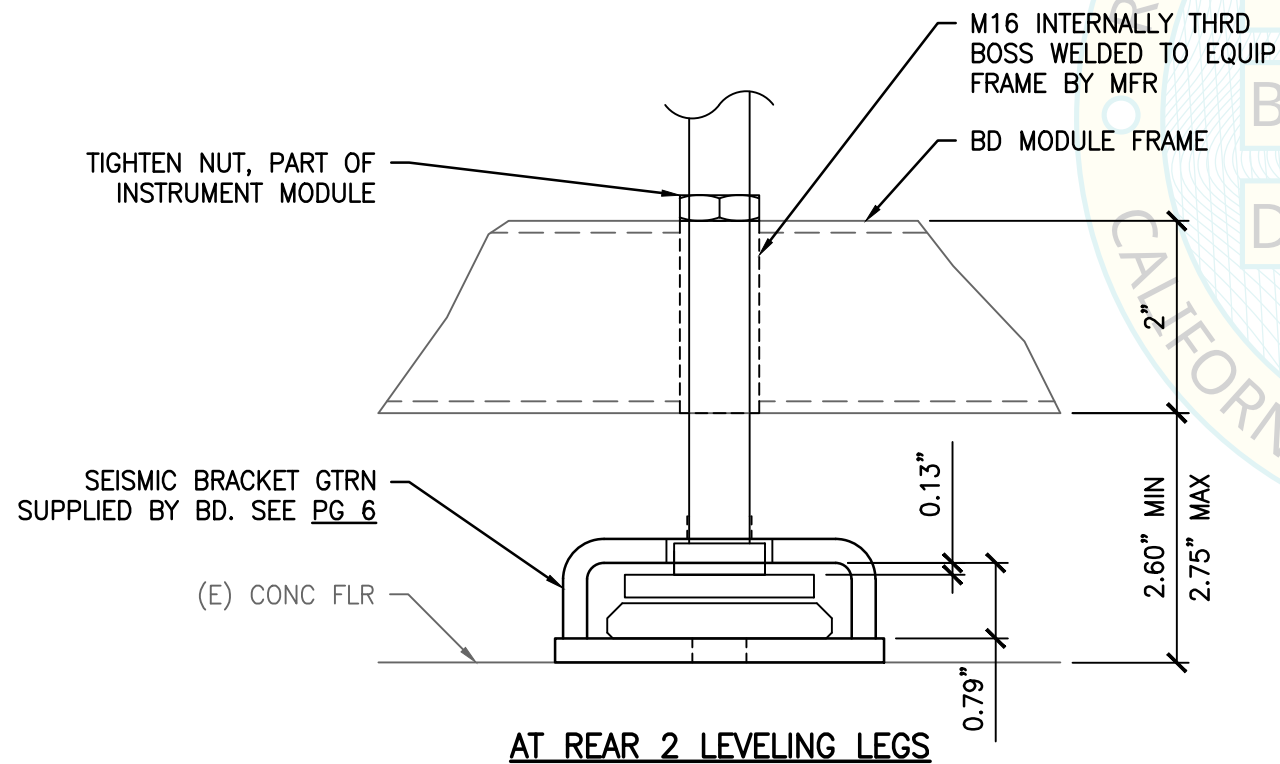
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| | | | 24017 |
| | | | Date: 10-03-2024 |
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| | | | Page: 4 of 13 |

SEISMIC BRACKET ASSEMBLY:

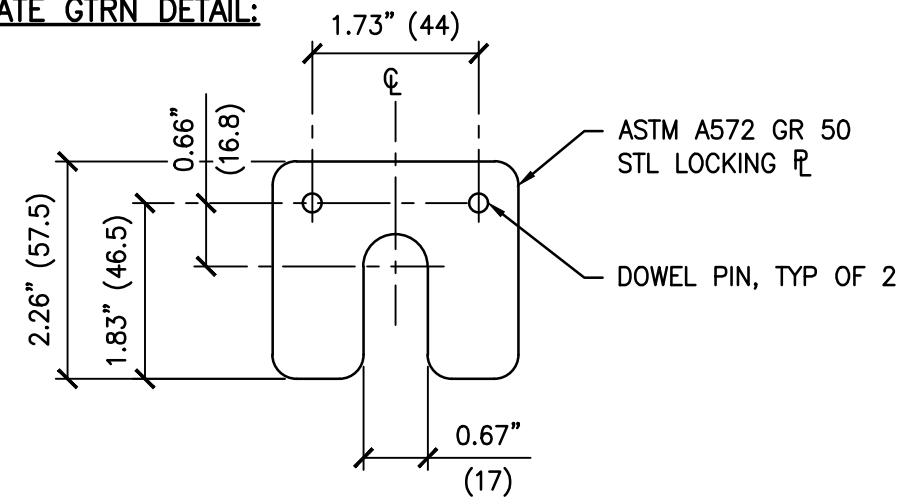


AT FRONT 2 LEVELING LEGS

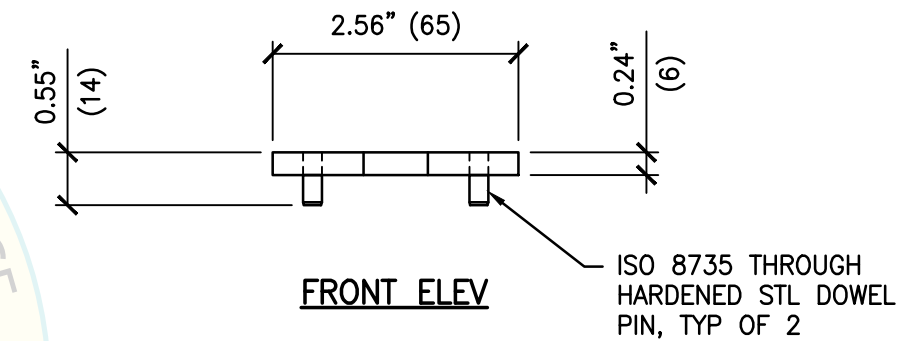


AT REAR 2 LEVELING LEGS

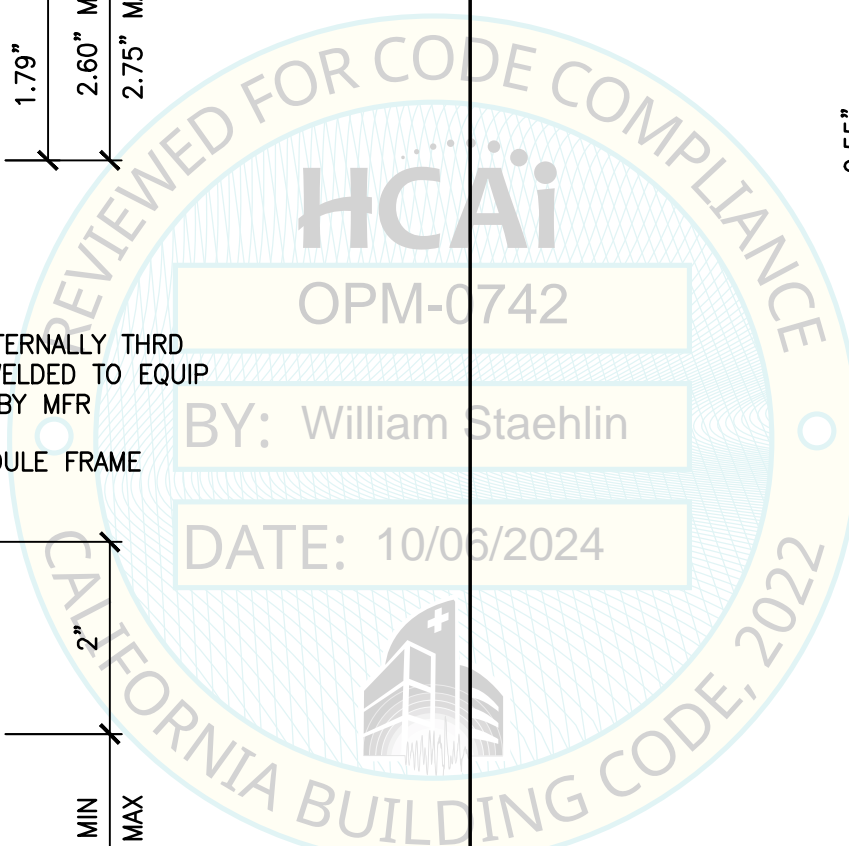
SEISMIC LOCKING PLATE GTRN DETAIL:



PLAN VIEW



FRONT ELEV



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SHEET TITLE: SEISMIC BRACKET ASSEMBLY & DETAILS



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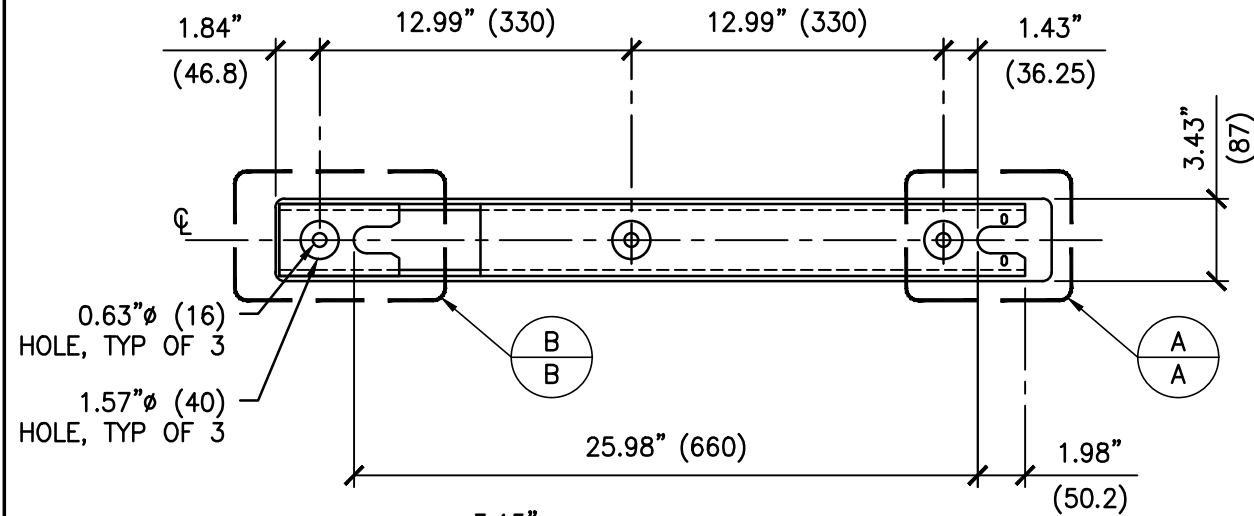
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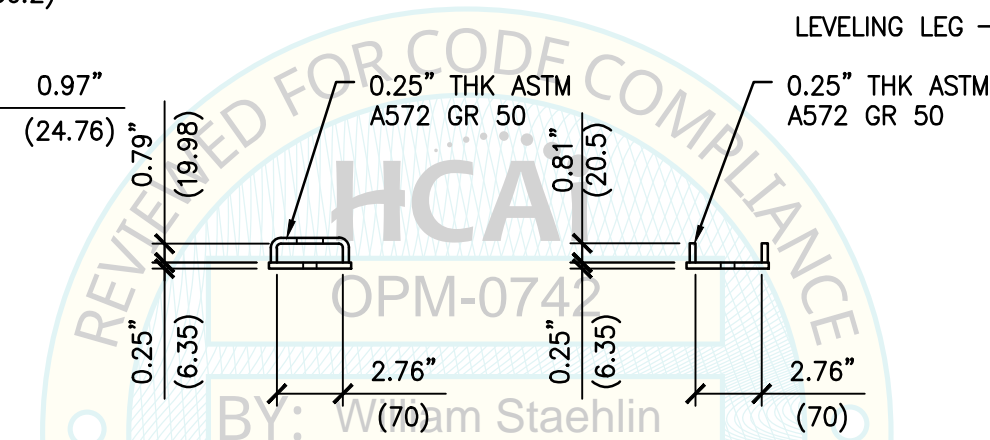
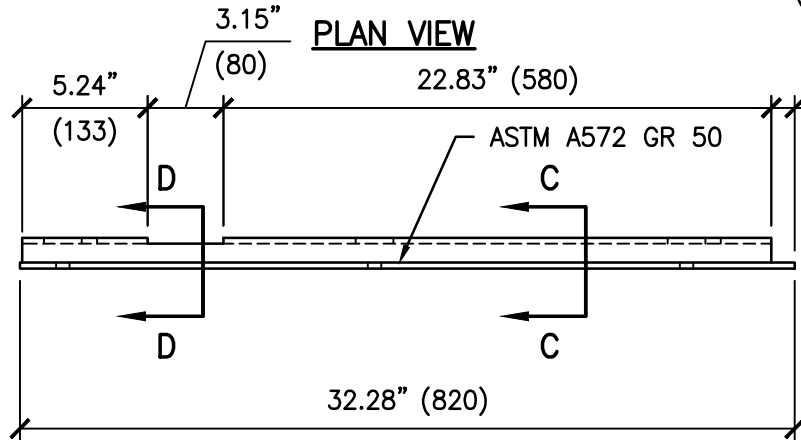
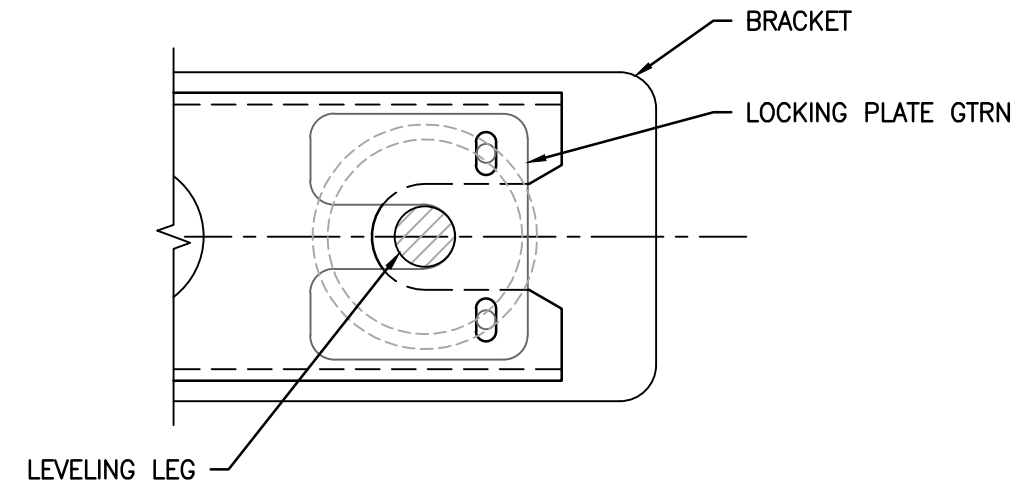
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| | | | Page: 5 of 13 |

SEISMIC BRACKET GTRN DETAIL:

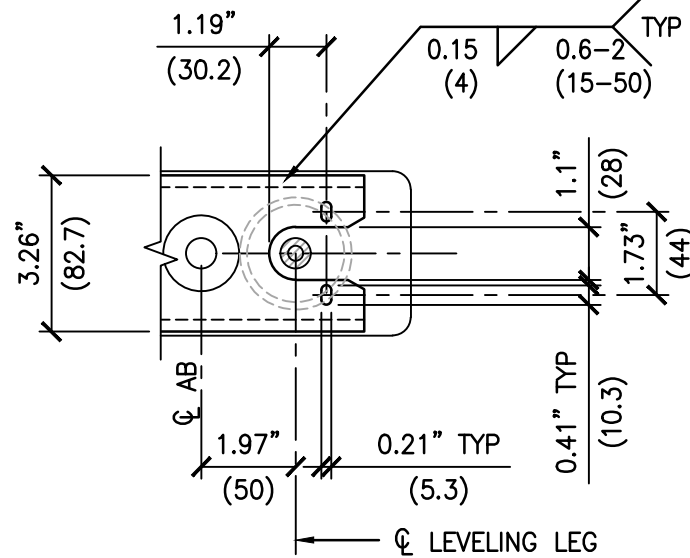


LEVELING LEG W/ LOCKING PLATE: (FRONT LEVELING LEGS ONLY)

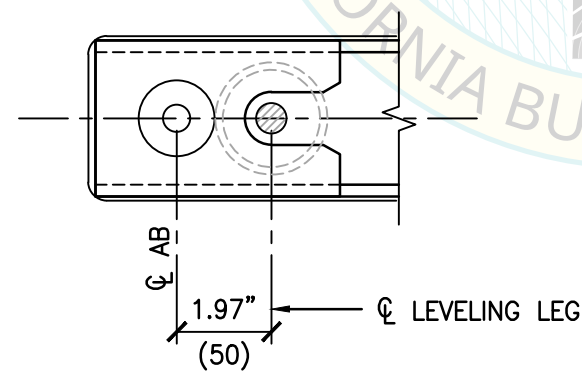


PLAN VIEW

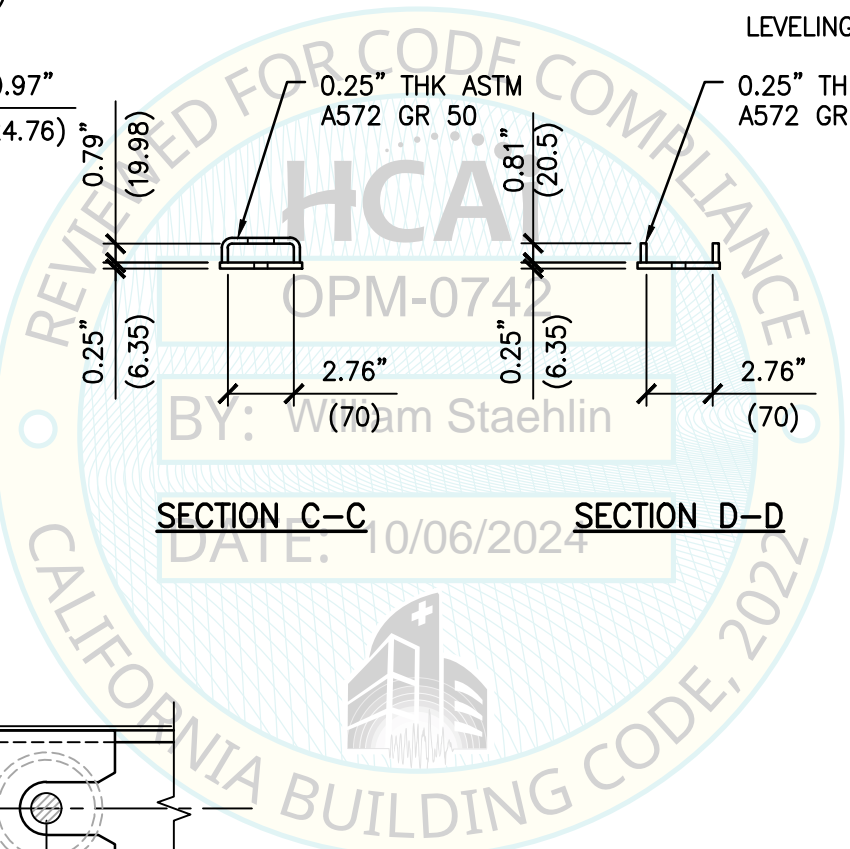
FRONT VIEW



DETAIL A-A



DETAIL B-B



SHEET TITLE: SEISMIC BRACKET DETAILS



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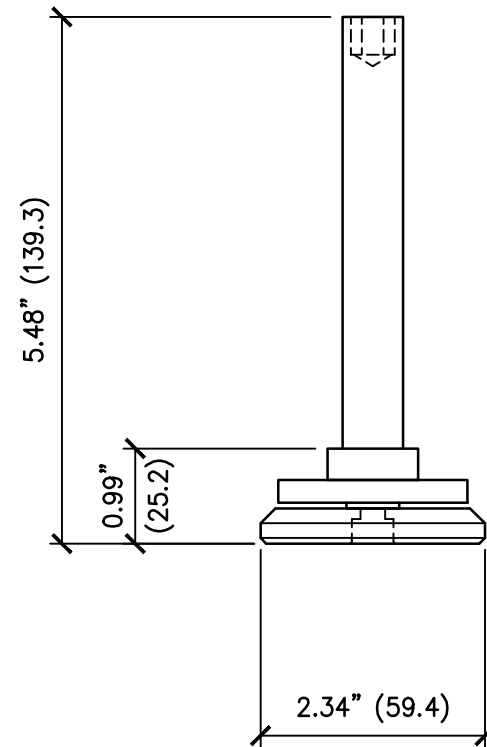


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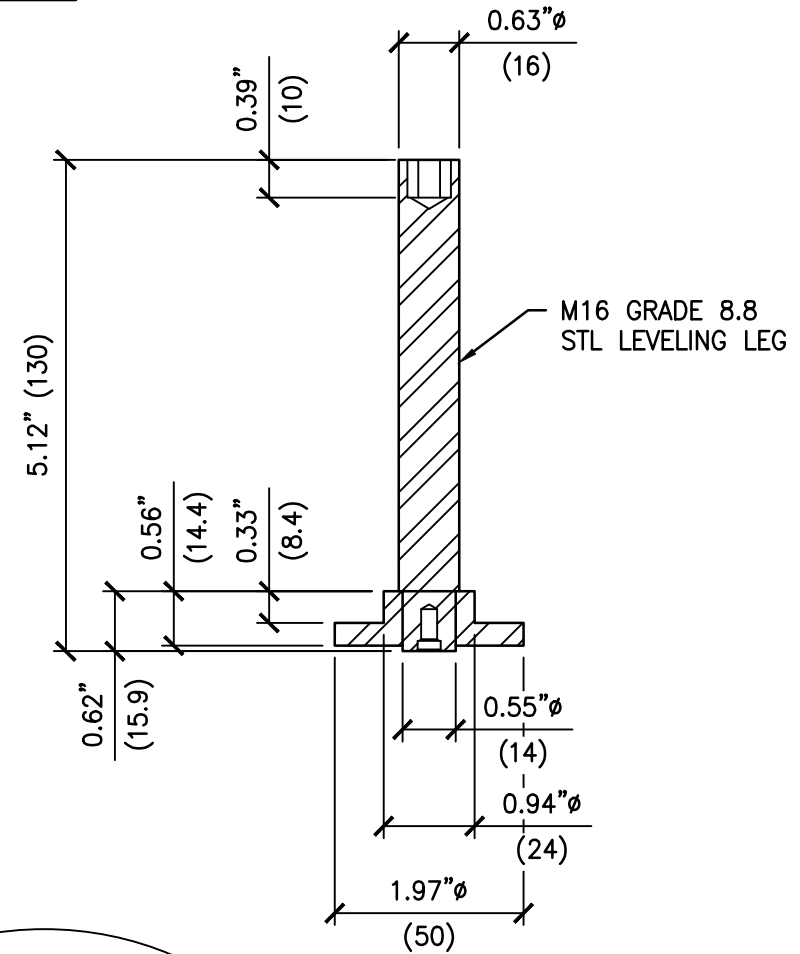
| Rev | Description | Date | Job No: | 24017 |
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| | | | Date: | 10-03-2024 |
| | | | By: | DTS |
| | | | Page: | 6 of 13 |

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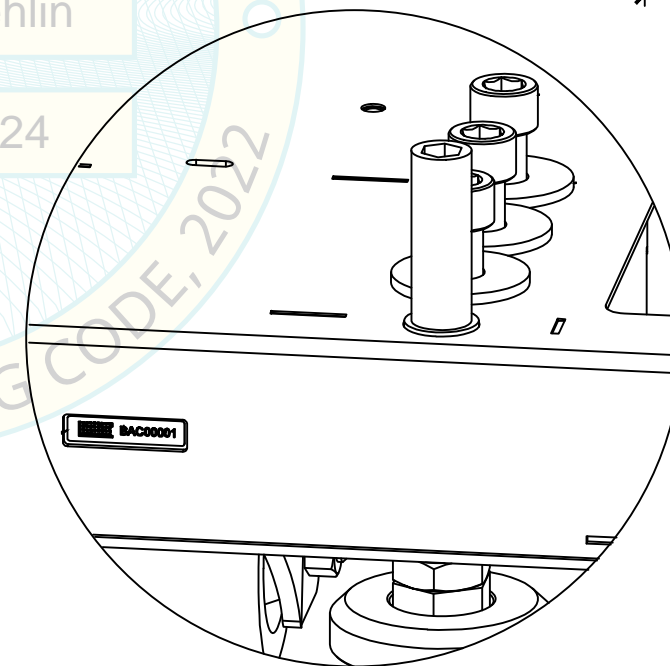
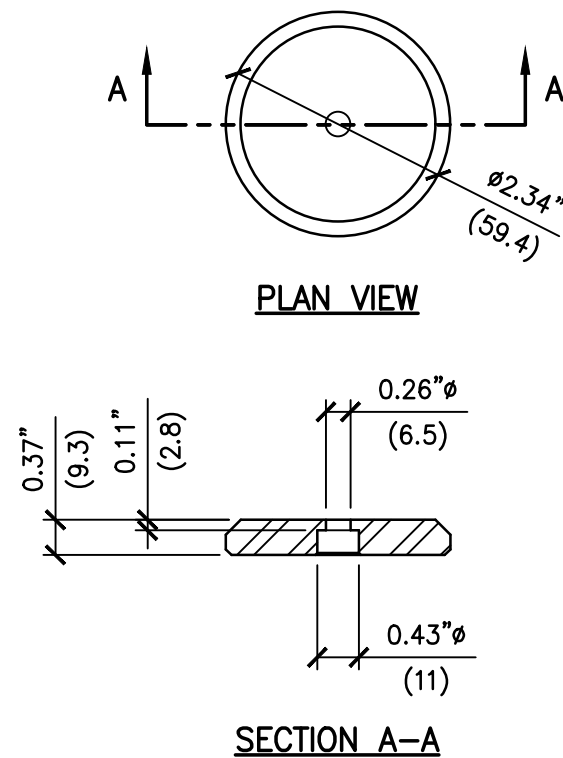
FRONT LEVELER ASSEMBLY:



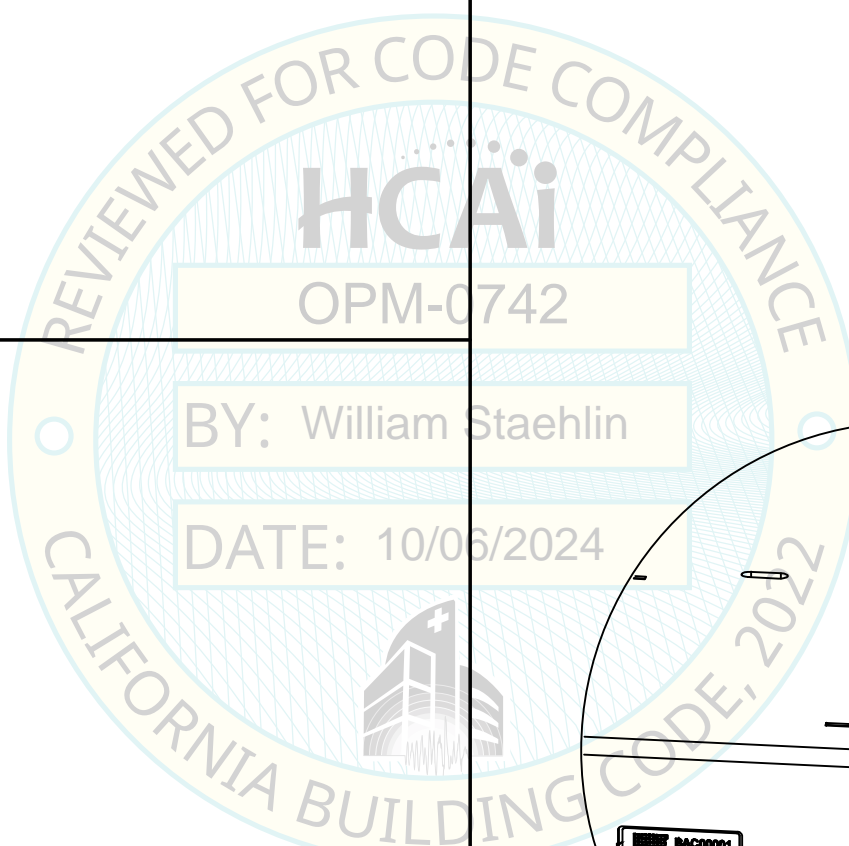
FRONT STEM LEVELER DETAIL:



FOOT LEVELER DETAIL:



**FRONT LEVELER
3D VIEW**



SHEET TITLE: FRONT LEVELER ASSEMBLY & DETAILS

| Rev | Description | Date | Job No: |
|-----|-------------|------|------------------|
| | | | 24017 |
| | | | Date: 10-03-2024 |
| | | | By: DTS |
| | | | Page: 7 of 13 |

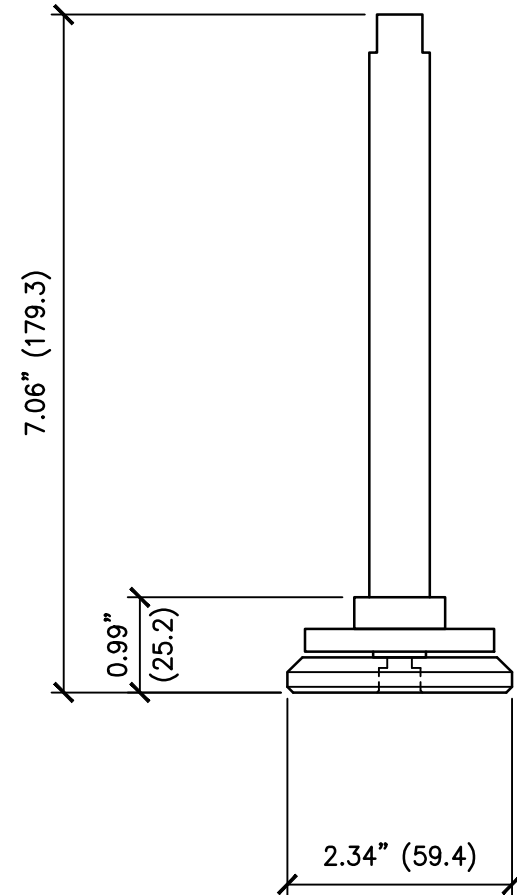


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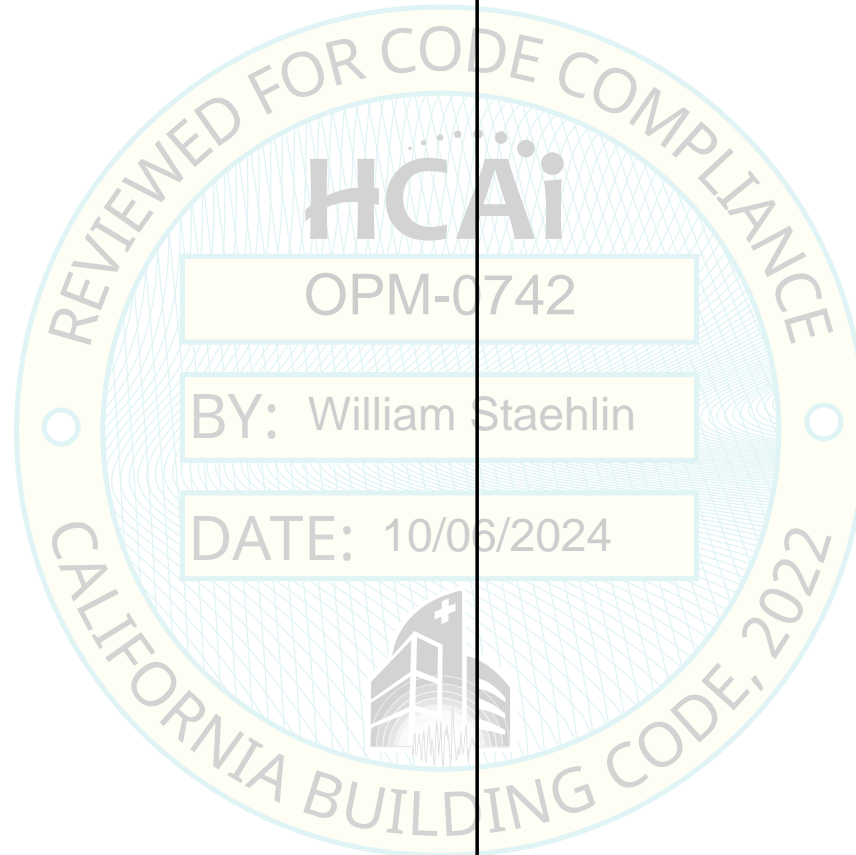
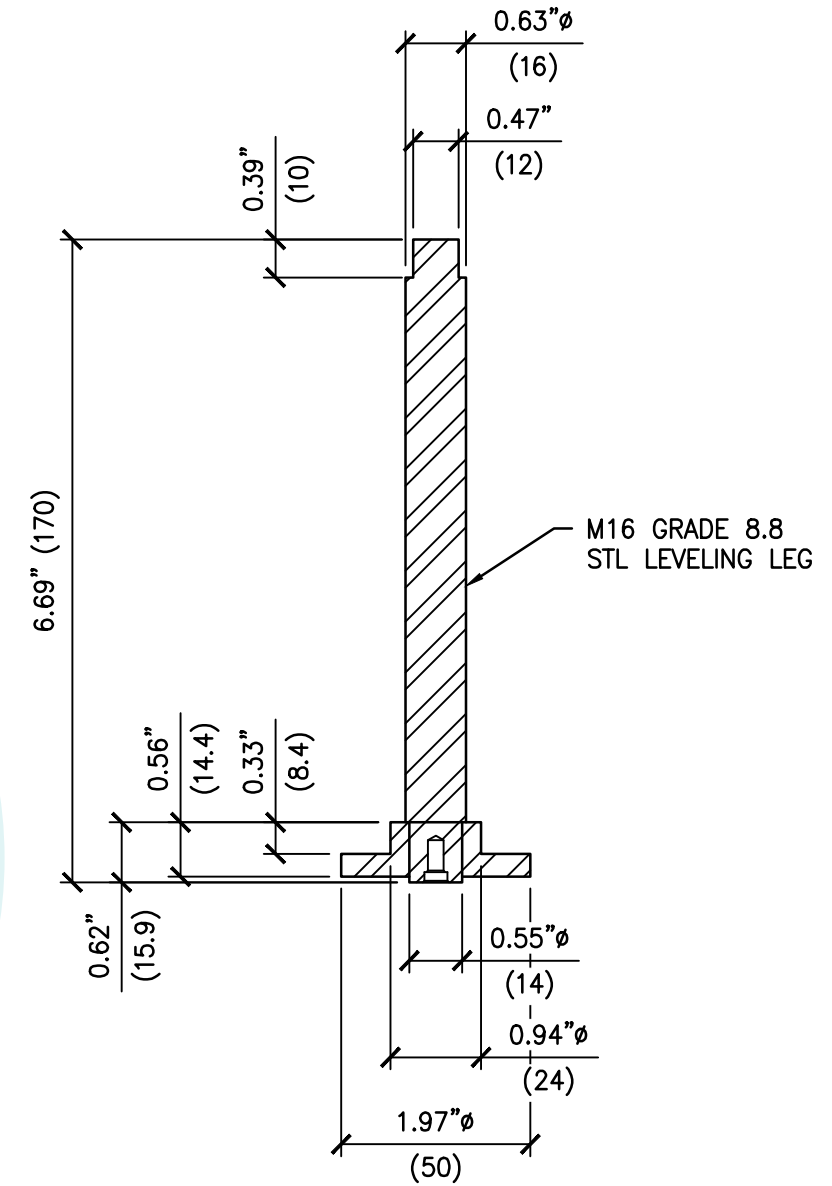


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REAR LEVELER ASSEMBLY:



REAR STEM LEVELER DETAIL:



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SHEET TITLE: REAR LEVELER ASSEMBLY & DETAIL



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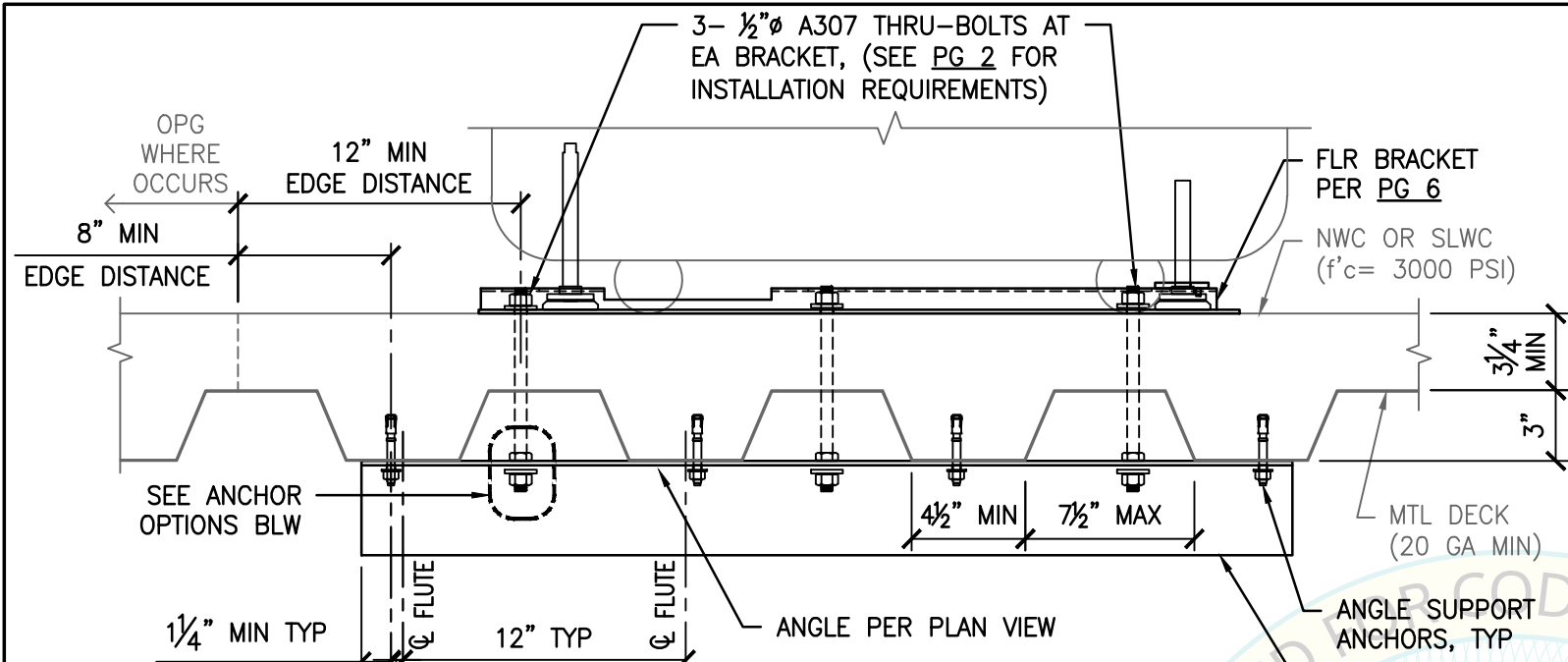


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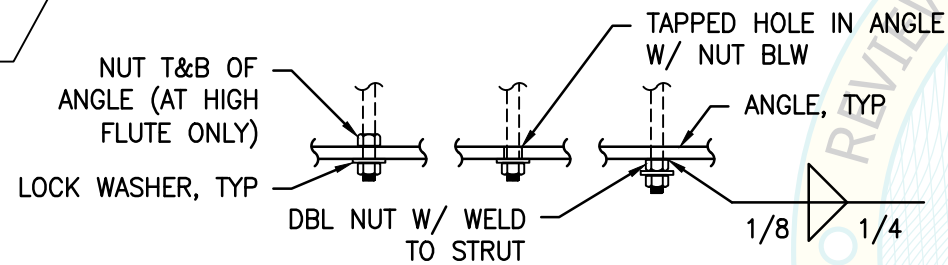
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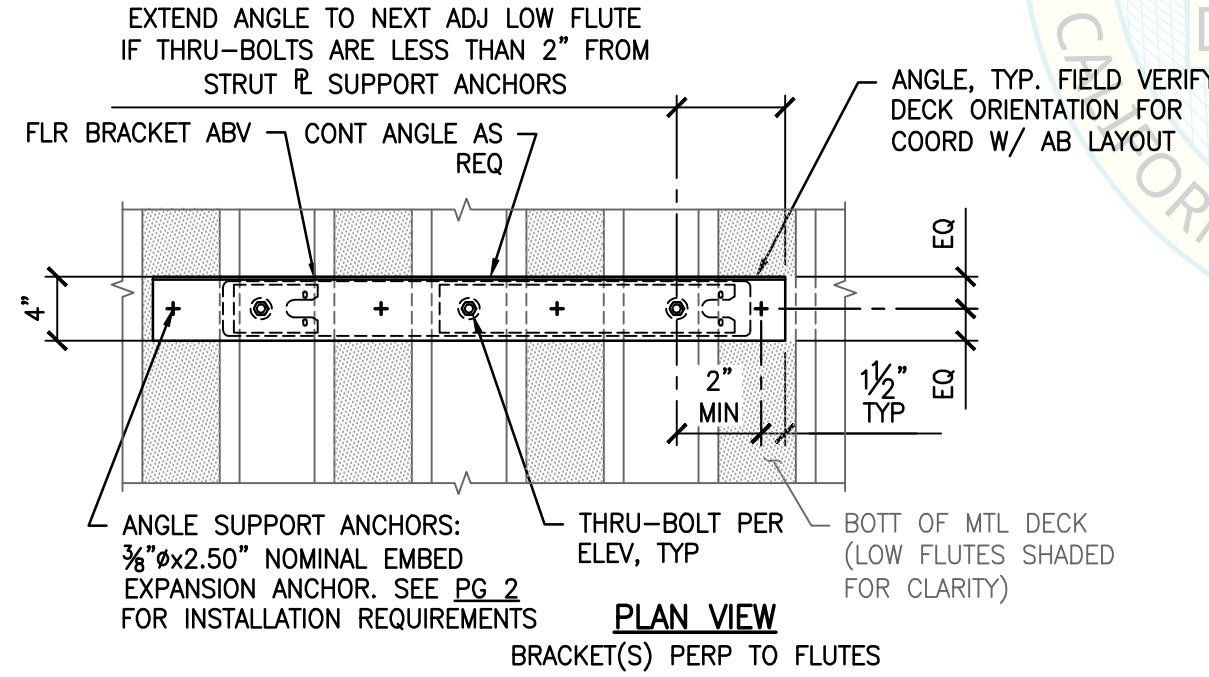
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|-----|-------------|------|---------|------------|
| | | | Date: | 10-03-2024 |
| | | | By: | DTS |
| | | | Page: | 8 of 13 |



SUSPENDED FLR W/ THRU-BOLTS

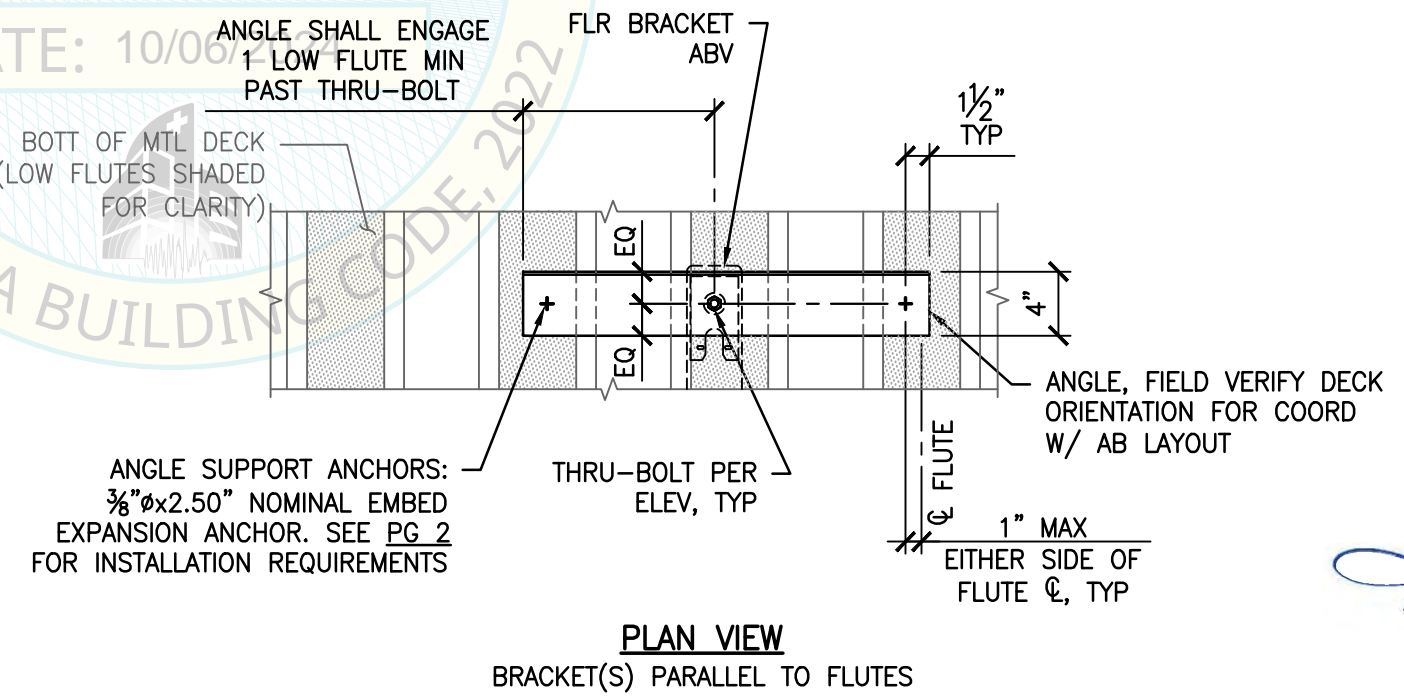


ANCHOR OPTIONS



PLAN VIEW

BRACKET(S) PERP TO FLUTES



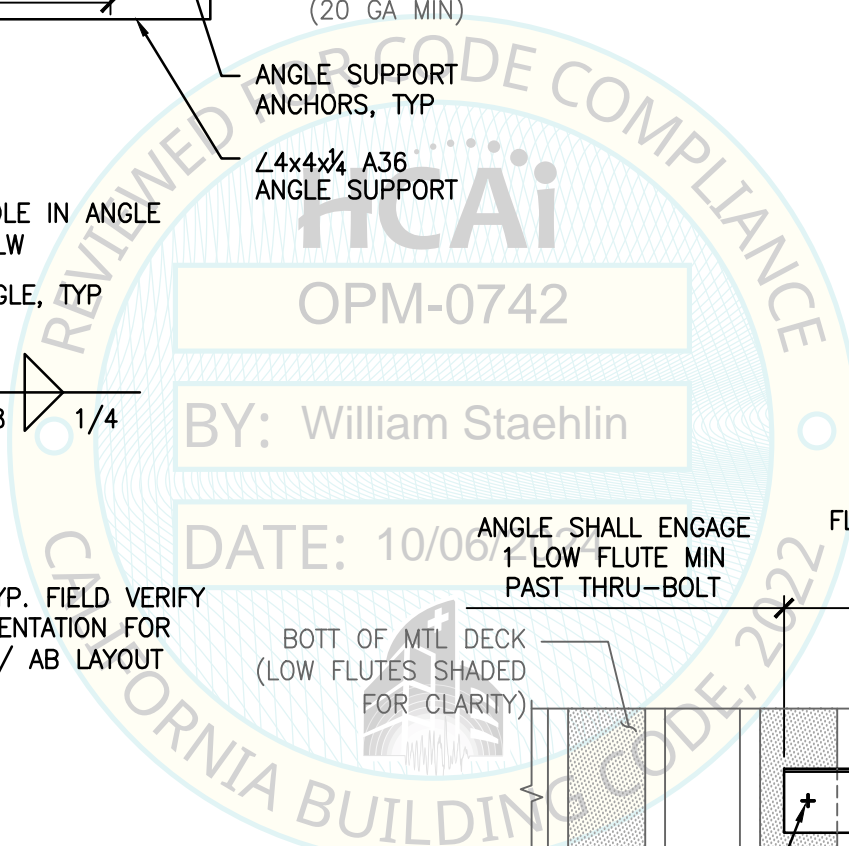
PLAN VIEW

BRACKET(S) PARALLEL TO FLUTES

| | | MAX LRFD FORCES AT EA ANCHOR | |
|--------------------|--------------------------------|------------------------------|-------|
| $S_{Ds} \leq 2.50$ | | T_u | V_u |
| CASE 1 | $z/h \leq 0.85$ W/O Ω_o | 3071# | 620# |
| CASE 1 | $z/h \leq 0.85$ W/ Ω_o | N/A | 930# |

OVERSTRENGTH FACTOR (Ω_o) INCLUDED ONLY IN SHEAR VALUE.

NOTE:
 USE 2- BRACKETS AT SINGLE ANALYZER CONFIGURATION, SEE PG 4.
 USE 3- BRACKETS AT DUAL ANALYZER CONFIGURATION, SEE PG 4.



| | | | | | |
|---|--|--|-------------|------------------|---------------|
| SHEET TITLE: ATTACHMENT DETAILS CONCRETE FILL OVER METAL DECK (CASE 1) | | Rev | Description | Date | Job No: 24017 |
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| | | | | Page: 9 of 13 | |

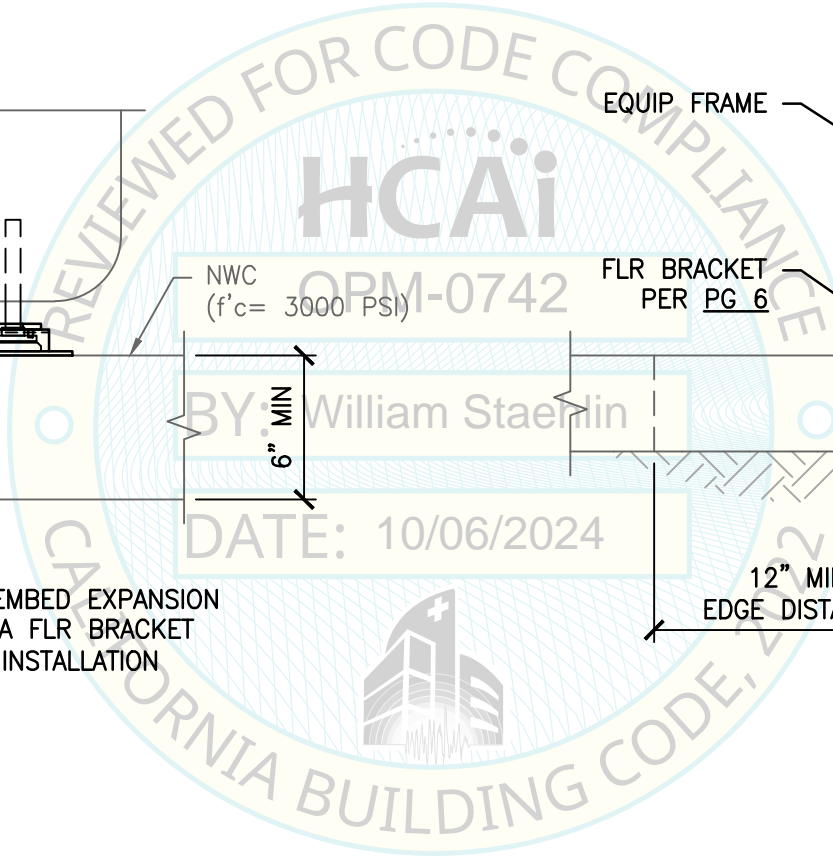
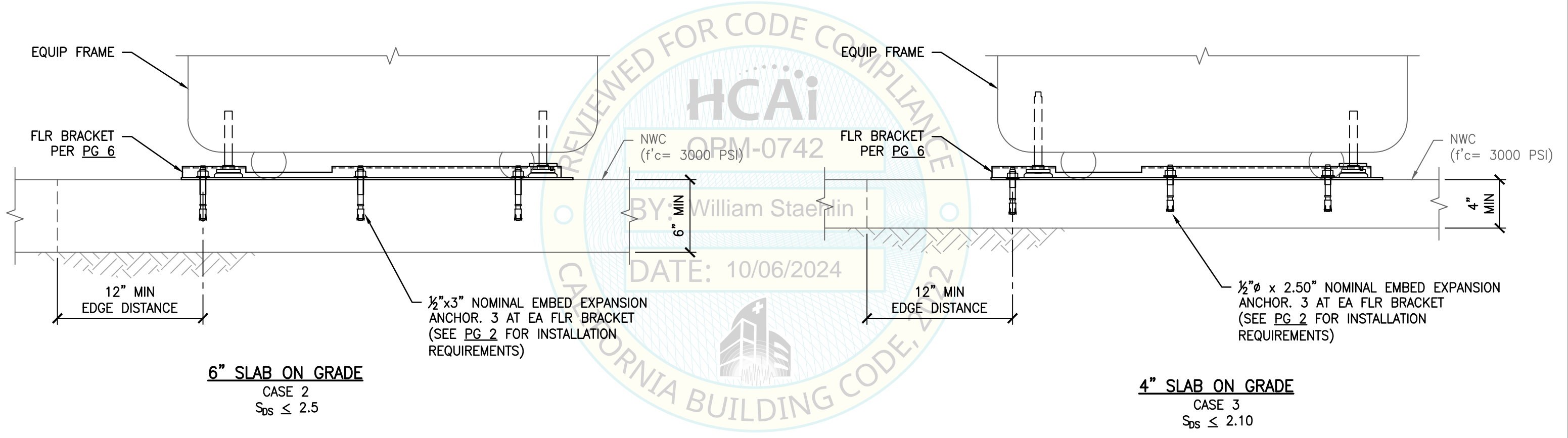
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MAX LRFD FORCES
AT EA ANCHOR

| z/h = 0 | T _u | V _u |
|----------------------------------|----------------|----------------|
| CASE 2 S _{DS} ≤ 2.50 | 1874# | 388# |
| CASE 3 S _{DS} ≤ 2.10 | 1530# | 326# |

OVERSTRENGTH FACTOR
(Ω_o) INCLUDED

NOTE:
USE 2- BRACKETS AT SINGLE ANALYZER
CONFIGURATION, SEE PG 4.
USE 3- BRACKETS AT DUAL ANALYZER
CONFIGURATION, SEE PG 4.



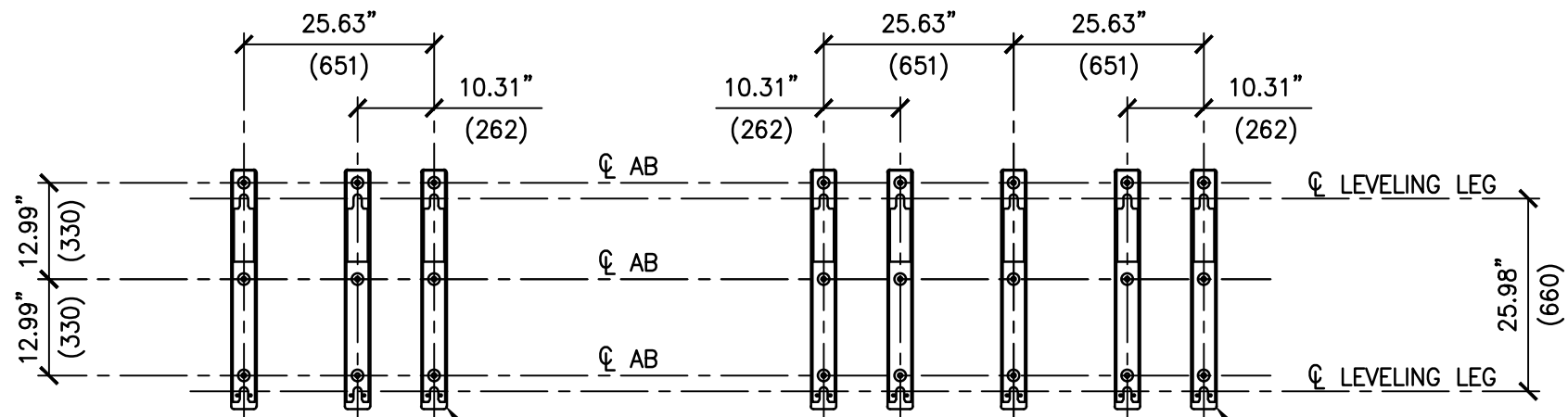
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SHEET TITLE: ATTACHMENT DETAILS
6" CONCRETE SLAB ON GRADE (CASE 2) & 4" CONCRETE SLAB ON GRADE (CASE 3)

| Rev | Description | Date | Job No: |
|-----|-------------|------|------------------|
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| | | | Date: 10-03-2024 |
| | | | By: DTS |
| | | | Page: 10 of 13 |

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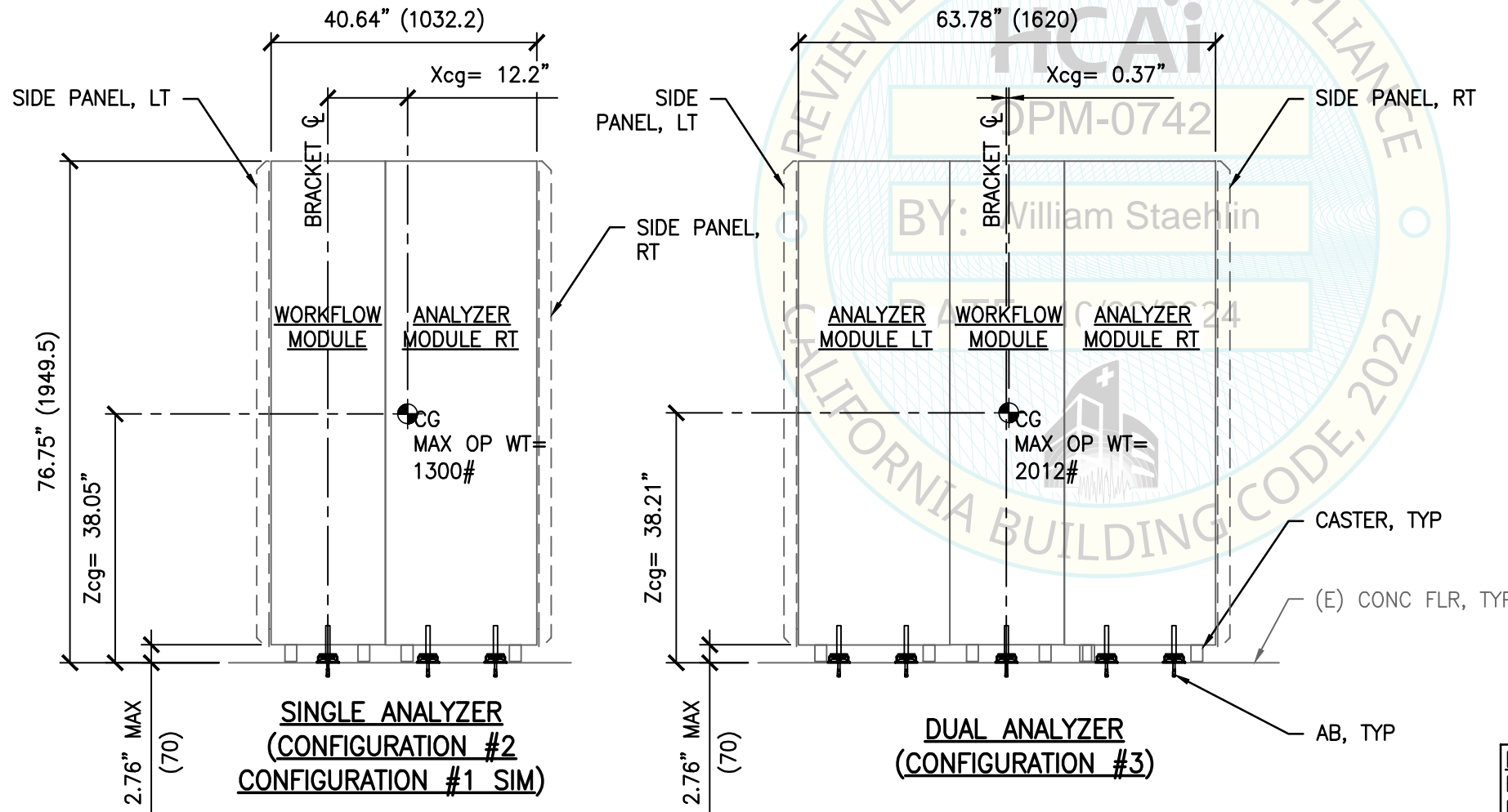
SINGLE ANALYZER CONFIGURATION

SEE PG 6 FOR TYP BD SUPPLIED GTRN LOCKING PLATE & SEISMIC BRACKETS, 3- TOTAL

DUAL ANALYZER CONFIGURATION

SEE PG 6 FOR TYP BD SUPPLIED GTRN LOCKING PLATE & SEISMIC BRACKETS, 5- TOTAL

PLAN VIEW



SINGLE ANALYZER (CONFIGURATION #2 CONFIGURATION #1 SIM)

DUAL ANALYZER (CONFIGURATION #3)

FRONT ELEV

NOTE:
FOR INFO NOT SHOWN OR NOTED, REFER TO PG 4.



SHEET TITLE: ALTERNATE OPTION W/ ADDITIONAL SEISMIC BRACKETS: CONFIGURATION PLAN & ELEVATIONS



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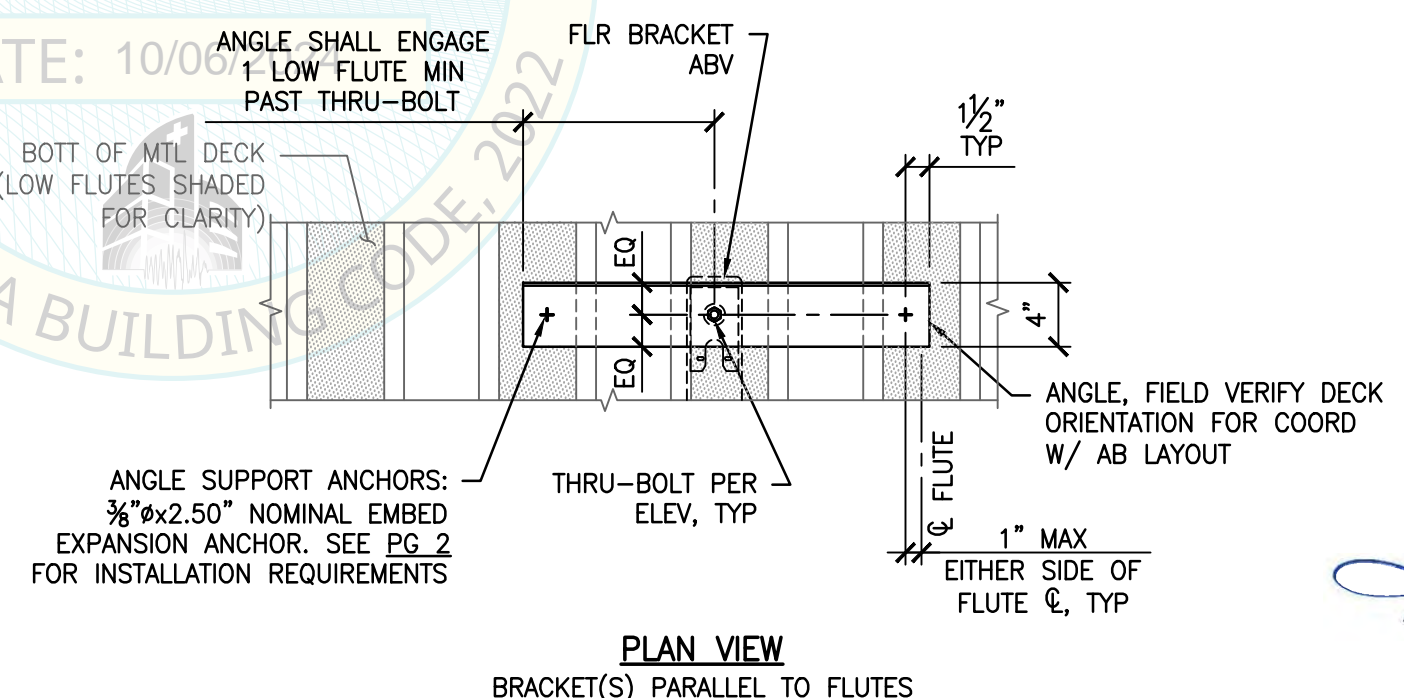
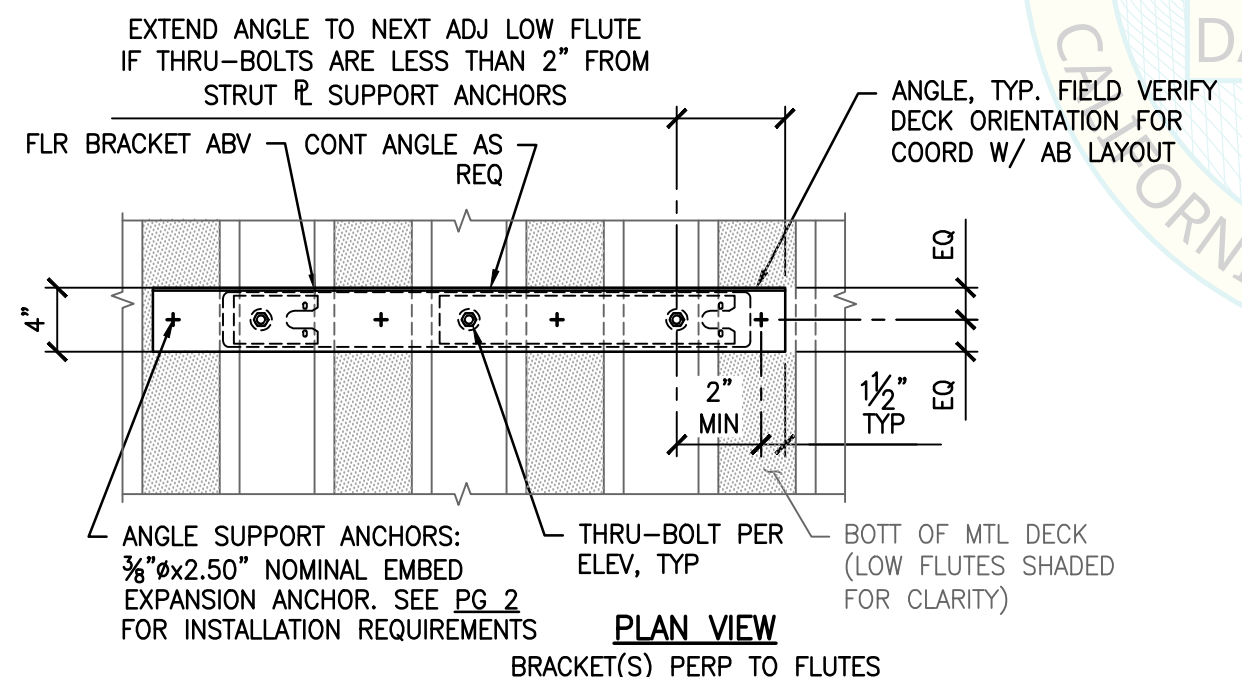
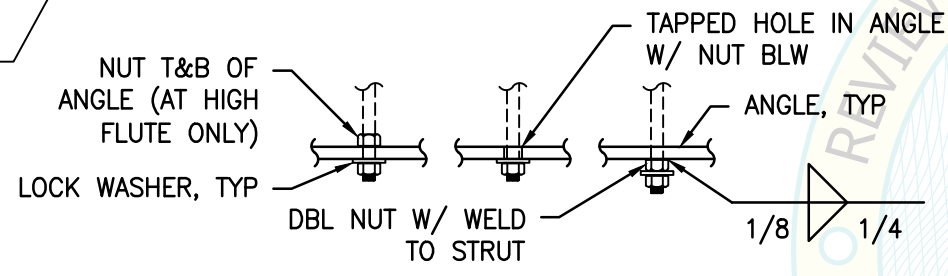
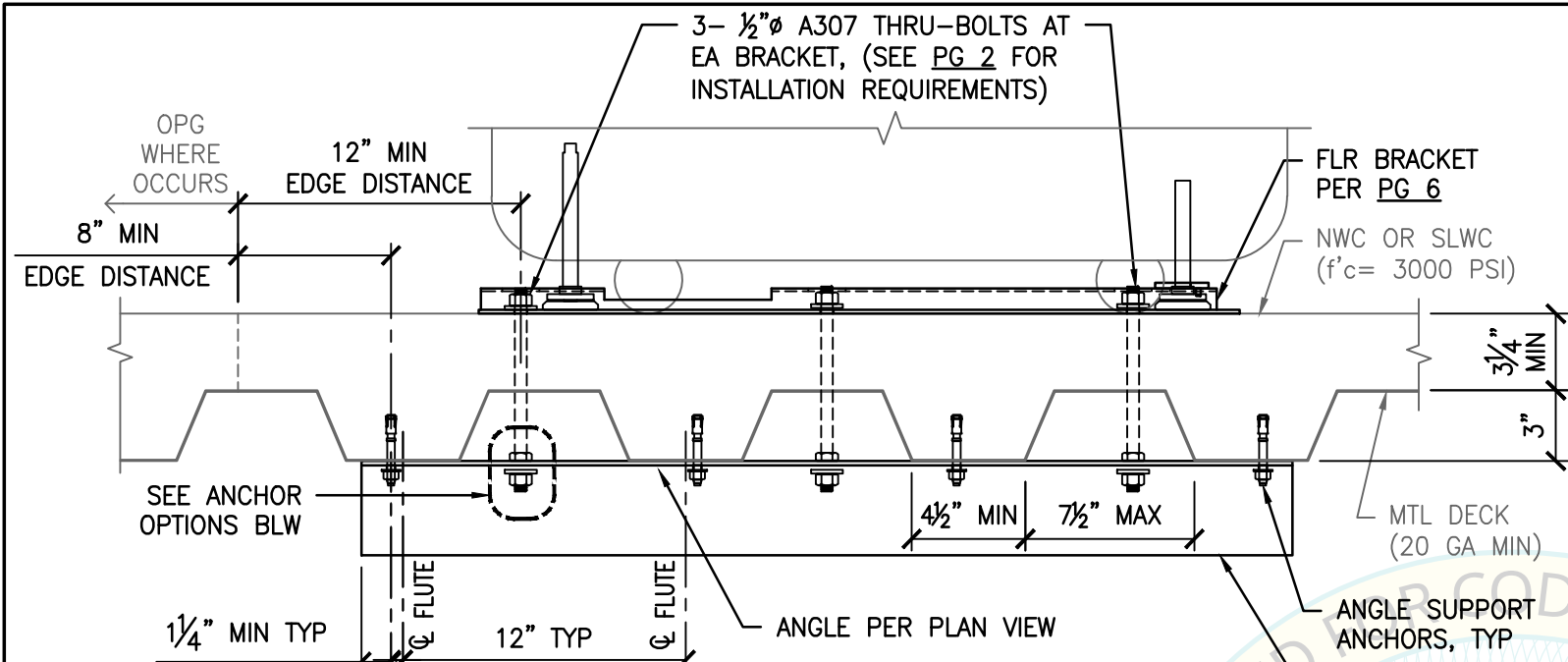


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| | | | Date: 10-03-2024 |
| | | | By: DTS |
| | | | Page: 11 of 13 |

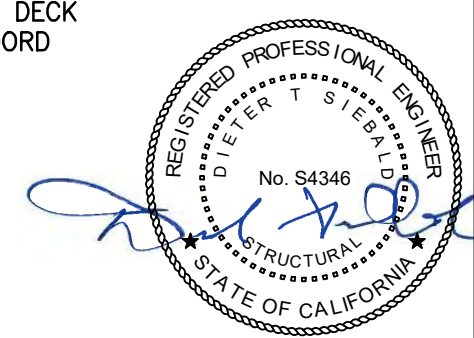
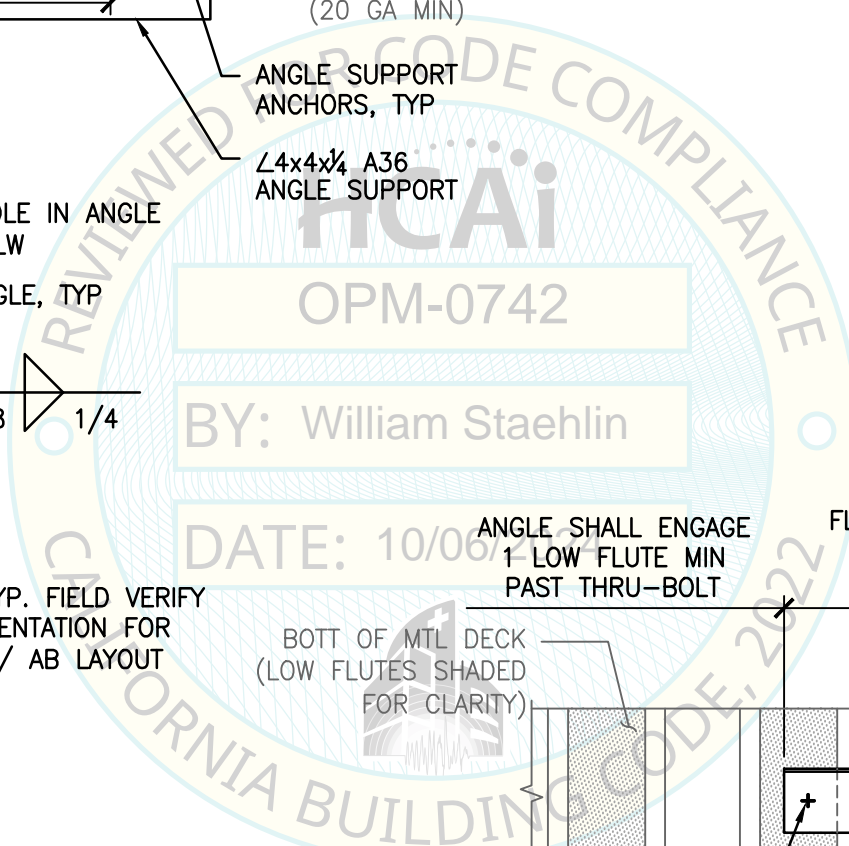
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| | | MAX LRFD FORCES AT EA ANCHOR | |
|---|-------|------------------------------|--|
| $S_{Ds} \leq 2.50$ | T_u | V_u | |
| CASE 4 $z/h \leq 1.0$ W/O Ω_o | 2284# | 459# | |
| CASE 4 $z/h \leq 1.0$ W/ Ω_o | N/A | 689# | |

OVERSTRENGTH FACTOR (Ω_o) INCLUDED ONLY IN SHEAR VALUE.

NOTE:
 USE 3- BRACKETS AT SINGLE ANALYZER CONFIGURATION, SEE PG 11.
 USE 5- BRACKETS AT DUAL ANALYZER CONFIGURATION, SEE PG 11.



SHEET TITLE: ALTERNATE ATTACHMENT DETAILS
 CONCRETE FILL OVER METAL DECK (CASE 4)



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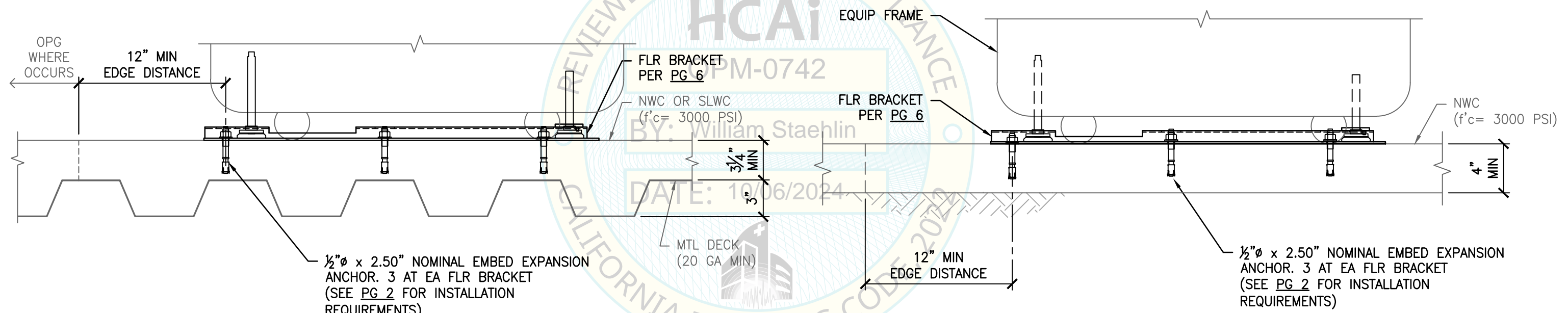
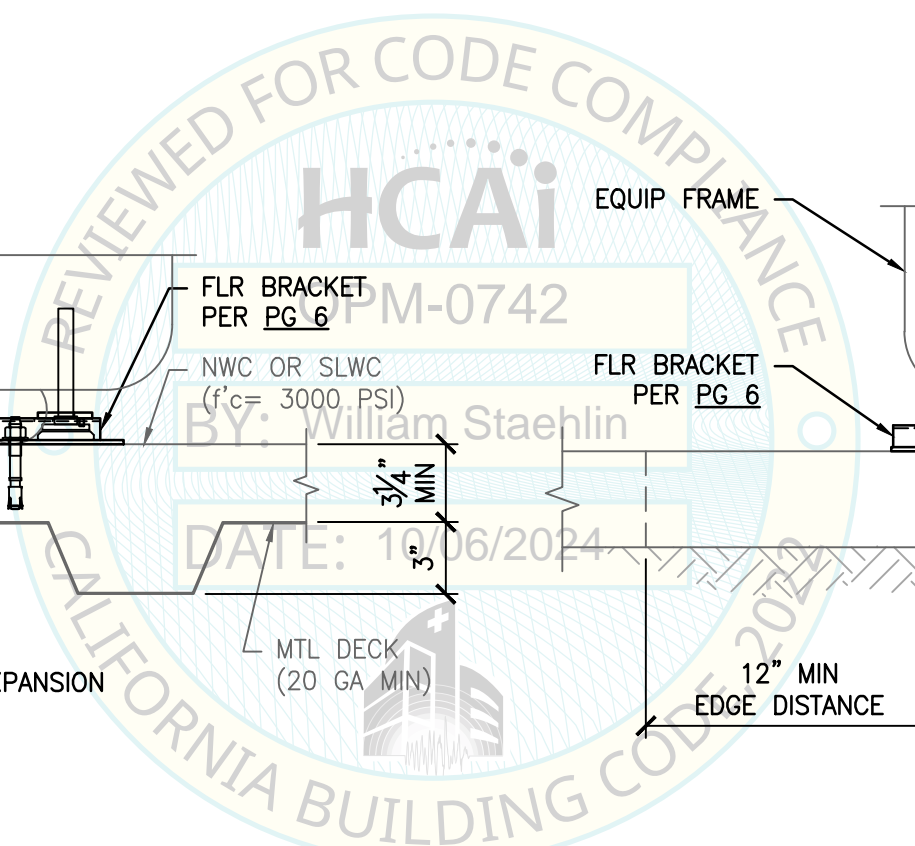
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| Rev | Description | Date | Job No: |
|-----|-------------|------|------------------|
| | | | 24017 |
| | | | Date: 10-03-2024 |
| | | | By: DTS |
| | | | Page: 12 of 13 |

| | MAX LRFD FORCES AT EA ANCHOR | |
|---|------------------------------|----------------|
| | T _u | V _u |
| CASE 5 z/h=0.50 & S _{ps} ≤ 1.1 | 902# | 202# |
| CASE 6 z/h=0 & S _{ps} ≤ 2.50 | 1249# | 258# |

OVERSTRENGTH FACTOR (Ω) INCLUDED

NOTE:
USE 3- BRACKETS AT SINGLE ANALYZER CONFIGURATION, SEE PG 11.
USE 5- BRACKETS AT DUAL ANALYZER CONFIGURATION, SEE PG 11.



SUSPENDED FLR W/ EXPANSION ANCHORS
CASE 5
S_{ps} ≤ 1.10

4" SLAB ON GRADE
CASE 6
S_{ps} ≤ 2.50



| | | | | | | | | |
|--|--|--|--|--|-------------|------|---------------|------------------|
| SHEET TITLE: ALTERNATE ATTACHMENT DETAILS CONCRETE FILL OVER METAL DECK (CASE 5) & 4" CONCRETE SLAB ON GRADE (CASE 6) | | | | Rev | Description | Date | Job No: 24017 | |
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| | | | | Page: 13 of 13 | | | | |

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