



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0519-19

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: [X] New [] Renewal [] Update to Pre-CBC 2013 OPA Number:

Manufacturer Information

Manufacturer: BD Life Sciences

Manufacturer's Technical Representative: Hoeke Algra

Mailing Address: Marconilaan 6, 9207 JC Drachten, The Netherlands

Telephone: 011-31-512-510-710 Email: D.Hoeke.Algra@bd.com

Product Information

Product Name: BD Kiestra™ IdentifA - SusceptA

Product Type: Clinical microbiology automation

Product Model Number: SusceptA, IdentifA, IdentifA Manual Infeed, IdentifA TLA Connection, IdentifA WCA Connection

General Description: BD Kiestra™ IdentifA - SusceptA automates the clinical microbiology processes in pipetting the bacteria colony of a media plate, makes the solution and pipetting the solution to special consumables for external automated identification and susceptibility testing.

Applicant Information

Applicant Company Name: BD Kiestra B.V.

Contact Person: Hoeke Algra

Mailing Address: Marconilaan 6, 9207 JC Drachten, The Netherlands

Telephone: 011-31-512-510-710 Email: Hoeke.Algra@bd.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2019.

Signature of Applicant: [Handwritten Signature]

Date: December 12, 2018

Title: Technical Product Manager Company Name: BD Kiestra B.V.

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



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

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS Structural Engineers, Inc.

Name: Dieter T. Siebald California License Number: SE 4346

Mailing Address: 2495 Natomas Park Drive, Suite #650, Sacramento, CA 95833

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

OSHPD Special Seismic Certification Preapproval (OSP)

- Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)
- Special Seismic Certification is not preapproved

Certification Method(s)

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

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

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

List of Attachments Supporting the Manufacturer's Certification

- Test Report Drawings Calculations Manufacturer's Catalog
- Other(s) (Please Specify): Manufacturer's Certified Outline Drawings

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2019 & ALL PRE-2019 CODE BASED PROJECTS

Signature:  Date: 3/6/2020

Print Name: Jeffrey Kikumoto

Title: Structural Engineer

Condition of Approval (if applicable): _____

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

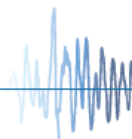
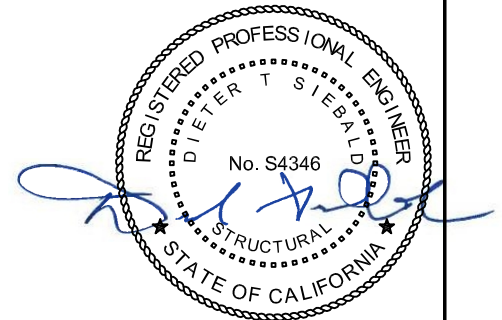


TABLE OF CONTENTS
 OPM-0519-19

| | PAGE |
|---|-------|
| GENERAL NOTES | 2 |
| ABBREVIATIONS | 5 |
| DESIGN CRITERIA | 6 |
| CONFIGURATIONS | 7 |
| BD Kiestra™ IDENTIFA MANUAL INFEED PLAN VIEW & ELEVATIONS | 8 |
| BD Kiestra™ IDENTIFA PLAN VIEW & ELEVATIONS | 9 |
| BD Kiestra™ SUSCEPTA PLAN VIEW & ELEVATIONS | 10 |
| BRACKET ASSEMBLY & DETAILS | 11-14 |
| ATTACHMENT DETAILS TO CONC FILL OVER MTL DECK (CASE 1) | 15 |
| ATTACHMENT DETAILS TO CONC FILL OVER MTL DECK (CASE 2) | 17 |
| ATTACHMENT DETAILS TO CONC SLAB ON GRADE (CASE 3) | 18 |

NOTES:

1. THESE DRAWINGS ARE PREPARED FOR BECTON, DICKSON AND COMPANY, DRACHTEN, THE NETHERLANDS. BY: Jeffrey Kikumoto
2. THE CONTRACTOR & INSPECTOR OF RECORD SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OFFICE OF STATEWIDE HEALTH PLANNING & 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



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

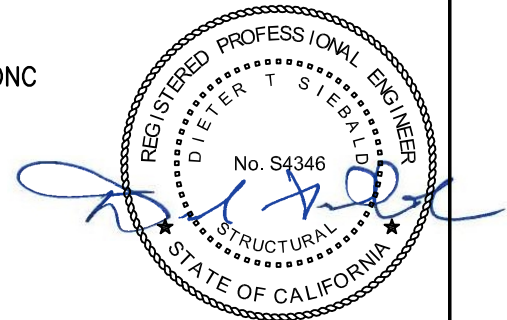
| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 1 of 18 |

L:\Jobs17\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:54pm Login:camachom DimScale:1 LTScale:6



GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE W/ THIS OPM SHALL BE BASED ON THE CBC 2019.
2. IT IS THE RESPONSIBILITY OF THE SEOR FOR A SITE SPECIFIC PROJECT TO VERIFY:
 - A. 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.
 - B. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPGS.
 - C. THAT THE FLR ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPCG SHOWN IN THE TEST TORQUE TABLE ON PG 3 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.
 - D. THAT THE INSTALLATION IS IN CONFORMANCE W/ THE CBC 2019 & W/ THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - E. 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.
 - 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-TZ EXPANSION ANCHORS AS NOTED COMPLYING W/ ESR-1917 REISSUED SEPTEMBER 2019.
 - 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 TABLE ON PG 3.
 - B. JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOBSITE TESTING IN ACCORDANCE W/ THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TORQUE 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 & THE 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 NUT SHALL BE RETORQUED TO INSTALLATION TORQUE AFTER EQUIP INSTALL. ALSO REFER TO 2019 CBC 1910A.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
 - C. 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 (½) TURN OF THE NUT.
 - D. AVOID DAMAGING (E) STL REINF IN CONC SLAB WHEN INSTALLING CONC EXPANSION ANCHORS.
 - E. PROVIDE FOR FULL THRD ENGAGEMENT OF NUT & WASHER.



SHEET TITLE: GENERAL NOTES



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

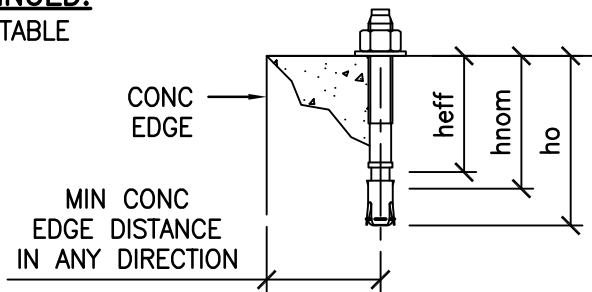
TEL (916) 920-2020
 www.cyseng.com

| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 2 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Mar06,2020-10:49am Login:camachom DimScale:12 LTScale:6

GENERAL NOTES CONTINUED:

3.F. EXPANSION ANCHOR TABLE



| CONDITION OF ANCHORAGE | ANCHOR DIA & TYPE (INCH) | INSTALLATION EMBED (INCH) hnom | EFFECTIVE EMBED (INCH) hef | HOLE DEPTH (INCH) ho | MIN CONC THK (INCH) h | MIN CONC EDGE DISTANCE (INCH) | MIN ANCHOR SPCG (INCH) | TEST TORQUE (FT-LBS) |
|------------------------|--------------------------|--------------------------------|----------------------------|----------------------|-----------------------|-------------------------------|------------------------|----------------------|
| CASE 1 STRUT R'S | 3/8 KB-TZ | 1 13/16 | 1 1/2 | 2 | 3/4 | 6 | 6.75"* | 25 |
| CASE 2, 3 | 1/2 KB-TZ | 2 3/8 | 2 | 2 5/8 | 3/4, 4 | 10 | 3 | 40 |

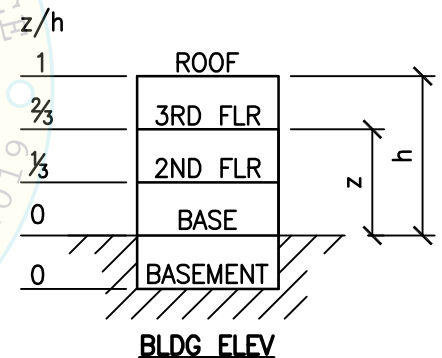
* PARALLEL W/ MTL DECK FLUTES

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

CASE 1: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3 1/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE ASTM A36 STL THRD ROD THRU CONC FILL & MTL DECK.

CASE 2: ATTACHMENT DETAILS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG. THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 3 1/4" SLWC TOPPING OVER 3" DEEP MIN 20 GA MTL DECK (f'c = 3000 PSI, MIN). ANCHORS SHALL BE CARBON STL & INTO CONC FILL.

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). ANCHORS SHALL BE CARBON STL.



BLDG FLEV



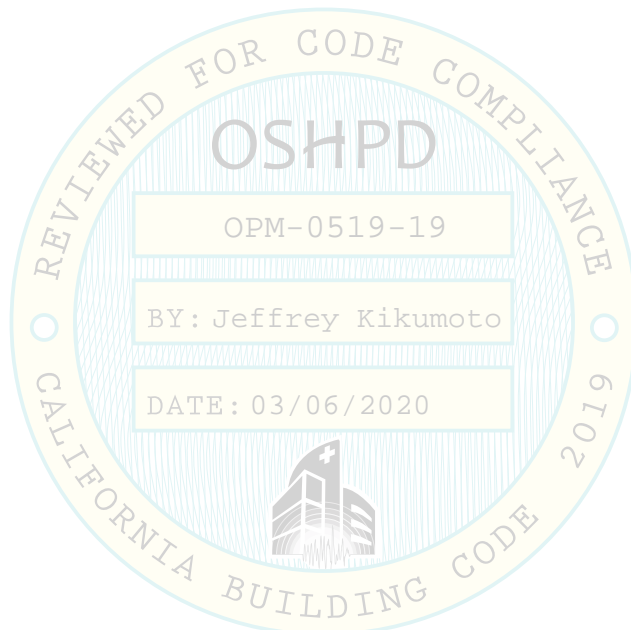
SHEET TITLE: GENERAL NOTES (CONTINUED)

| | | |
|--|--------------------------------------|--|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 3 of 18 |
|--|--------------------------------------|--|

L:\Jobs17\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:54pm Login:cmachom DimScale:1 LTScale:6

GENERAL NOTES CONTINUED:

5. BOLTS THRU CONC ON MTL DECK:
- A. BOLTS SHALL BE TORQUED BY $\frac{3}{4}$ 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.
 - B. THRU-BOLT HOLES SHALL BE $\frac{1}{16}$ " LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + $\frac{1}{16}$ ").
 - C. THRU-BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING IN ACCORDANCE W/ REQUIREMENTS FOR POST-INSTALLED ANCHORS. THRU-BOLTS W/ STL TO STL CONN IN TENSION DO NOT REQUIRE TESTING.



SHEET TITLE: ABBREVIATIONS



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

TEL (916) 920-2020
www.cyseng.com

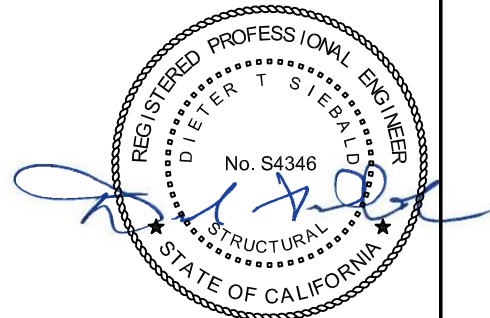
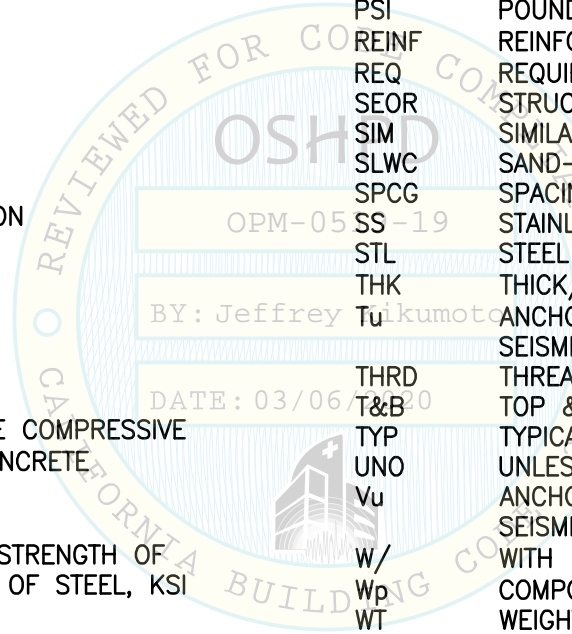
| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 4 of 18 |

L:\Jobs17\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020--02:54pm Login:cmachom DimScale:1 LTScale:6



ABBREVIATIONS:

| | | | |
|---------|---|---------|---|
| @ | AT | MFR | MANUFACTURER |
| AB | ANCHOR BOLT | MAX | MAXIMUM |
| ABV | ABOVE | MIN | MINIMUM |
| ADJ | ADJACENT | mm | MILLIMETER |
| AISC | AMERICAN INSTITUTE FOR STEEL CONSTRUCTION | MTL | METAL |
| ASCE | AMERICAN SOCIETY OF CIVIL ENGINEERS | NO. (#) | NUMBER OR POUNDS |
| ASTM | AMERICAN SOCIETY FOR TESTING & MATERIALS | NWC | NORMAL WEIGHT CONCRETE |
| BLDG | BUILDING | OP | OPERATING |
| BLW | BELOW | OPG | OPENING |
| BOTT | BOTTOM | OPM | OSHPD PRE-APPROVAL OF MANUFACTURER'S CERTIFICATION |
| BYD | BEYOND | OSHPD | OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT |
| CBC | CALIFORNIA BUILDING CODE | PERP | PERPENDICULAR |
| CG | CENTER OF GRAVITY | PG | PAGE |
| Ⓢ | CENTERLINE | Ⓢ | PLATE |
| CONC | CONCRETE | PSI | POUNDS PER SQUARE INCH |
| CONN | CONNECTION | REINF | REINFORCING/REINFORCEMENT |
| COORD | COORDINATE | REQ | REQUIRED |
| DBL | DOUBLE | SEOR | STRUCTURAL ENGINEER OF RECORD |
| DIM | DIMENSION | SIM | SIMILAR |
| DTL | DETAIL | SLWC | SAND-LIGHTWEIGHT CONCRETE |
| DIA (∅) | DIAMETER | SPCG | SPACING |
| (E) | EXISTING CONDITION | SS-19 | STAINLESS STEEL |
| EA | EACH | STL | STEEL |
| EE | EACH END | THK | THICK/THICKNESS |
| ELEV | ELEVATION | Tu | ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE AT LRFD |
| EQ | EQUAL | THRD | THREAD OR THREADED |
| EQUIP | EQUIPMENT | T&B | TOP & BOTTOM |
| EXTR | EXTERIOR | TYP | TYPICAL |
| f'c | MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE | UNO | UNLESS NOTED OTHERWISE |
| FLR | FLOOR | Vu | ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE AT LRFD |
| FT (') | FOOT/FEET | w/ | WITH |
| Fy | SPECIFIED YIELD STRENGTH OF REINFORCING, PS OF STEEL, KSI | Wp | COMPONENT OPERATING WEIGHT |
| GA | GAUGE | WT | WEIGHT |
| HSS | HOLLOW STRUCTURAL SECTION | | |
| ICC | INTERNATIONAL CODE COUNCIL | | |
| IN (") | INCH | | |
| INFO | INFORMATION | | |
| KG | KILOGRAM | | |
| KSI | KIPS PER SQUARE INCH | | |
| LBS | POUNDS | | |
| LRFD | LOAD AND RESISTANCE FACTOR DESIGN | | |



SHEET TITLE: DESIGN CRITERIA

| | | | |
|--|---|--------------------------------------|--|
| | CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833 | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 5 of 18 |
|--|---|--------------------------------------|--|

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:54pm Login:cmachom Dimscale:1 LTScale:6

DESIGN CRITERIA:

1. SUPPORT & ATTACHMENT DESIGN IS PER 2019 CBC AT LRFD LEVEL FORCES.

OTHER MECHANICAL OR ELECTRICAL COMPONENTS PER TABLE 13.6-1 OF ASCE 7-16 SUPPLEMENT #1 & ERRATA:

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

W_p AS NOTED ON DRAWINGS

UPPER FLRS ABV THE BASE OF BLDG

CASE 1: $S_{Ds} \leq 2.50$ $F_p = 2.50 W_p$ $z/h \leq 0.75$
 CASE 2: $S_{Ds} \leq 0.8$ $F_p = 0.8 W_p$ $z/h \leq 0.75$

FLRS AT OR BLW THE BASE OF BLDG

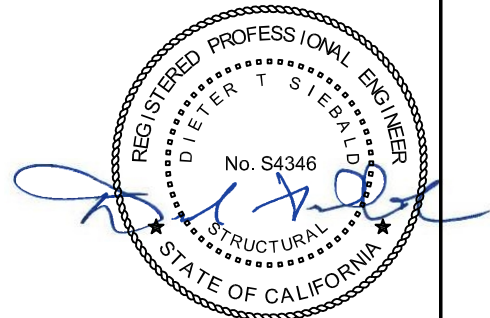
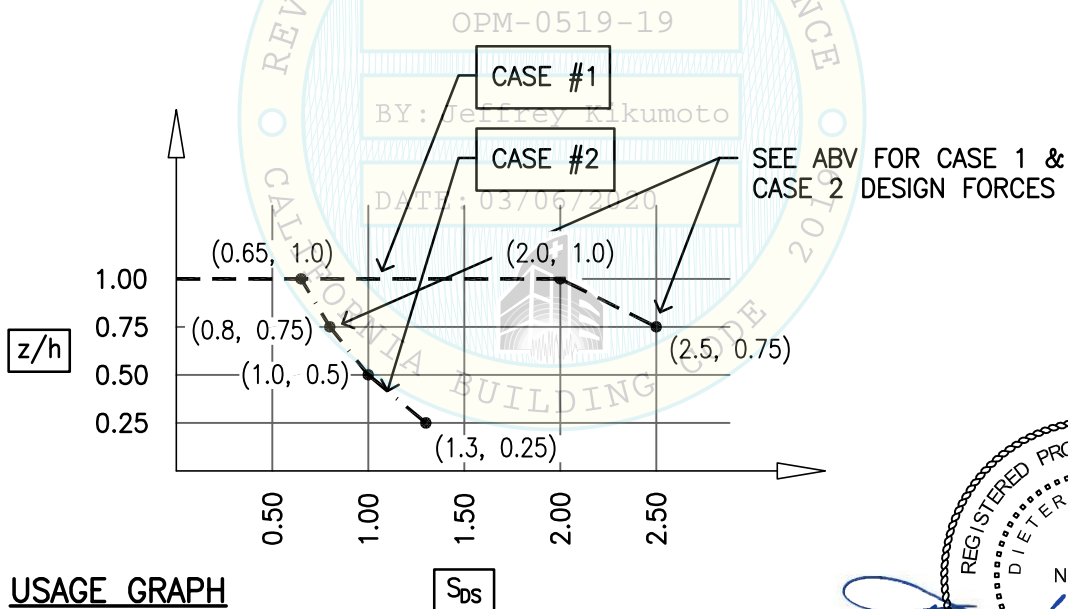
CASE 3: $S_{Ds} \leq 2.50$ $F_p = 1.125 W_p$ $z/h = 0$

LOAD COMBINATIONS

$(0.9 - 0.2 S_{Ds}) D - \Omega_0 F_p$ (FOR MAX TENSION)

$(1.2 + 0.2 S_{Ds}) D + \Omega_0 F_p$ (FOR MAX COMPRESSION)

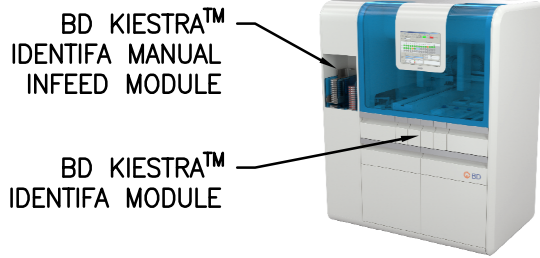
2. THIS PRE-APPROVAL MAY BE USED ONLY AT GEOGRAPHICAL LOCATIONS IN THE STATE OF CALIFORNIA WHERE S_{Ds} & z/h IS LESS THAN OR EQ TO THE VALUES NOTED ABV OR IN THE GRAPH BLW.



SHEET TITLE: GENERAL NOTES (CONTINUED)

| | | |
|--|--------------------------------------|--|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 6 of 18 |
|--|--------------------------------------|--|

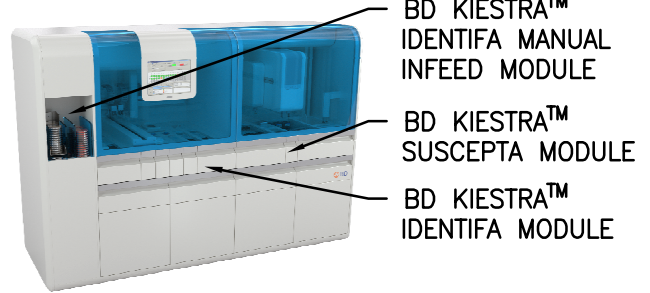
L:\Jobs17\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:54pm Login:cmachom DimScale:1 LTRScale:6



BD Kiestra™
 IDENTIFA MANUAL
 INFEEED MODULE

BD Kiestra™
 IDENTIFA MODULE

BD Kiestra™ IDENTIFA MANUAL
 INFEEED CONFIGURATION

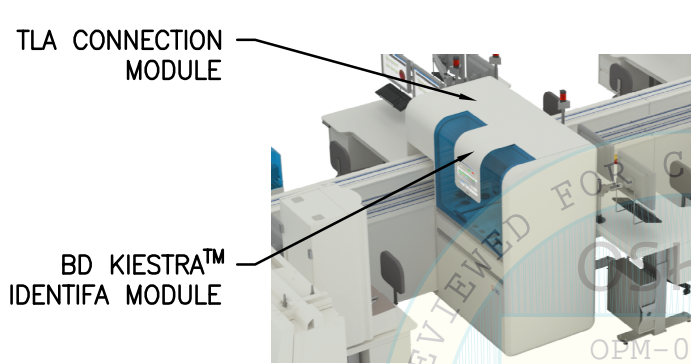


BD Kiestra™
 IDENTIFA MANUAL
 INFEEED MODULE

BD Kiestra™
 SUSCEPTA MODULE

BD Kiestra™
 IDENTIFA MODULE

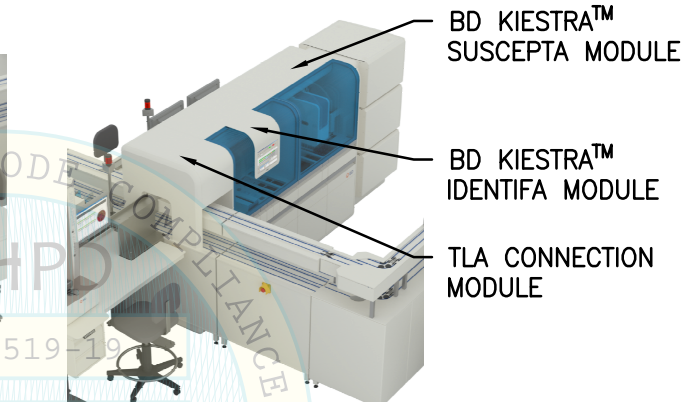
BD Kiestra™ IDENTIFA/SUSCEPTA
 MANUAL INFEEED CONFIGURATION



TLA CONNECTION
 MODULE

BD Kiestra™
 IDENTIFA MODULE

BD Kiestra™ TLA-IDENTIFA
 CONFIGURATION

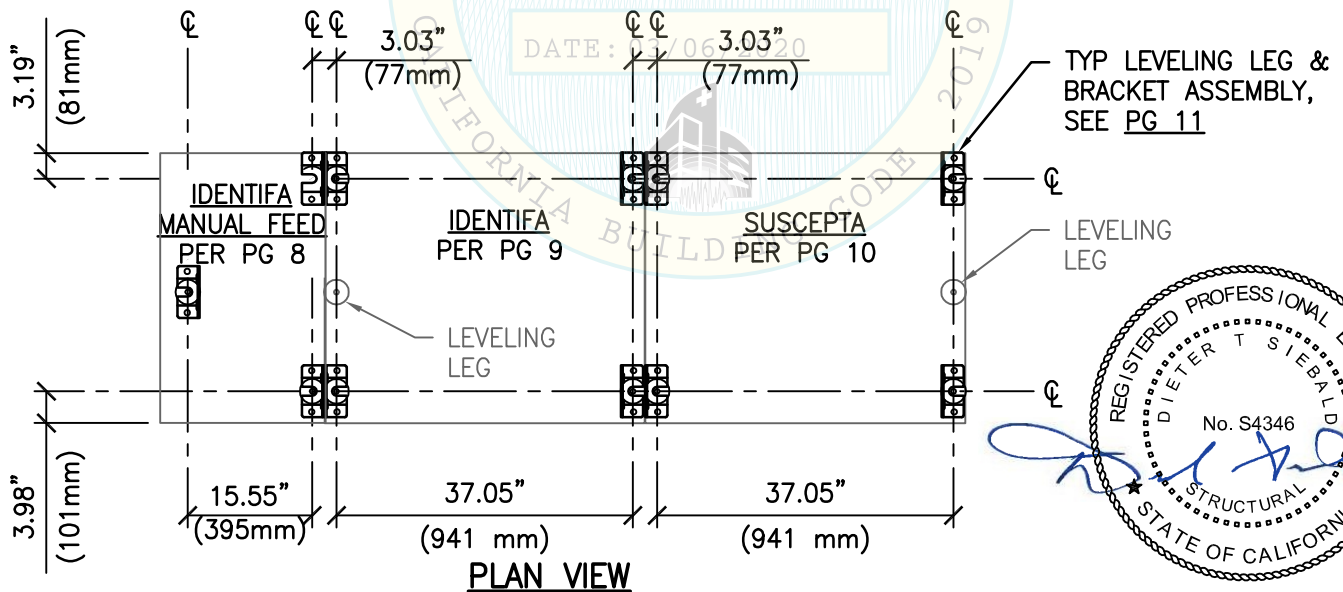


BD Kiestra™
 SUSCEPTA MODULE

BD Kiestra™
 IDENTIFA MODULE

TLA CONNECTION
 MODULE

BD Kiestra™ TLA-IDENTIFA/SUSCEPTA
 CONFIGURATION



SHEET TITLE: CONFIGURATIONS



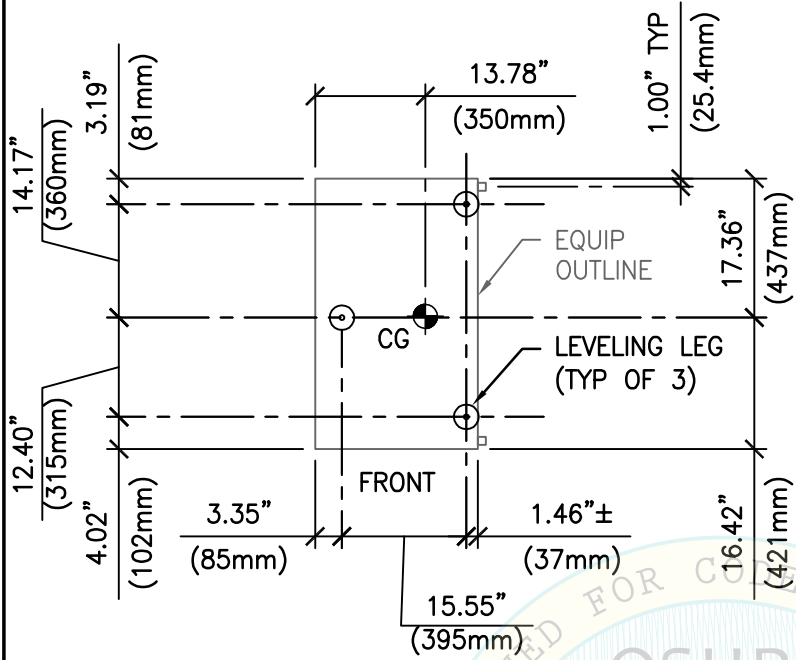
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

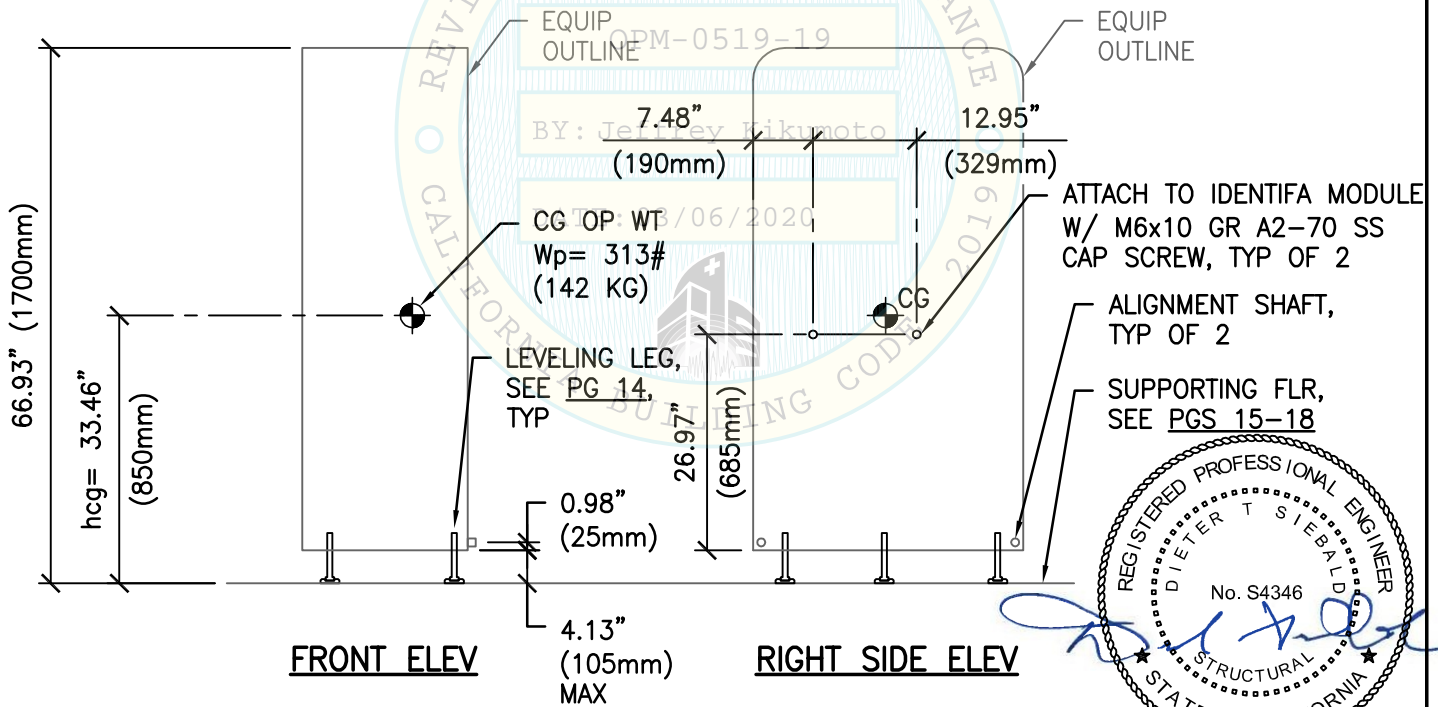
| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 7 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb19,2020-11:36am Login:cmachom DimScale:12 LTScale:6



NOTE:
 DIMS ARE TO EXTR OF EQUIP COVERS.

PLAN VIEW



ATTACH TO IDENTIFA MODULE
 W/ M6x10 GR A2-70 SS
 CAP SCREW, TYP OF 2

ALIGNMENT SHAFT,
 TYP OF 2

SUPPORTING FLR,
 SEE PGS 15-18



SHEET TITLE: BD Kiestra™ IDENTIFA MANUAL INFEEED
 PLAN VIEW & ELEVATIONS



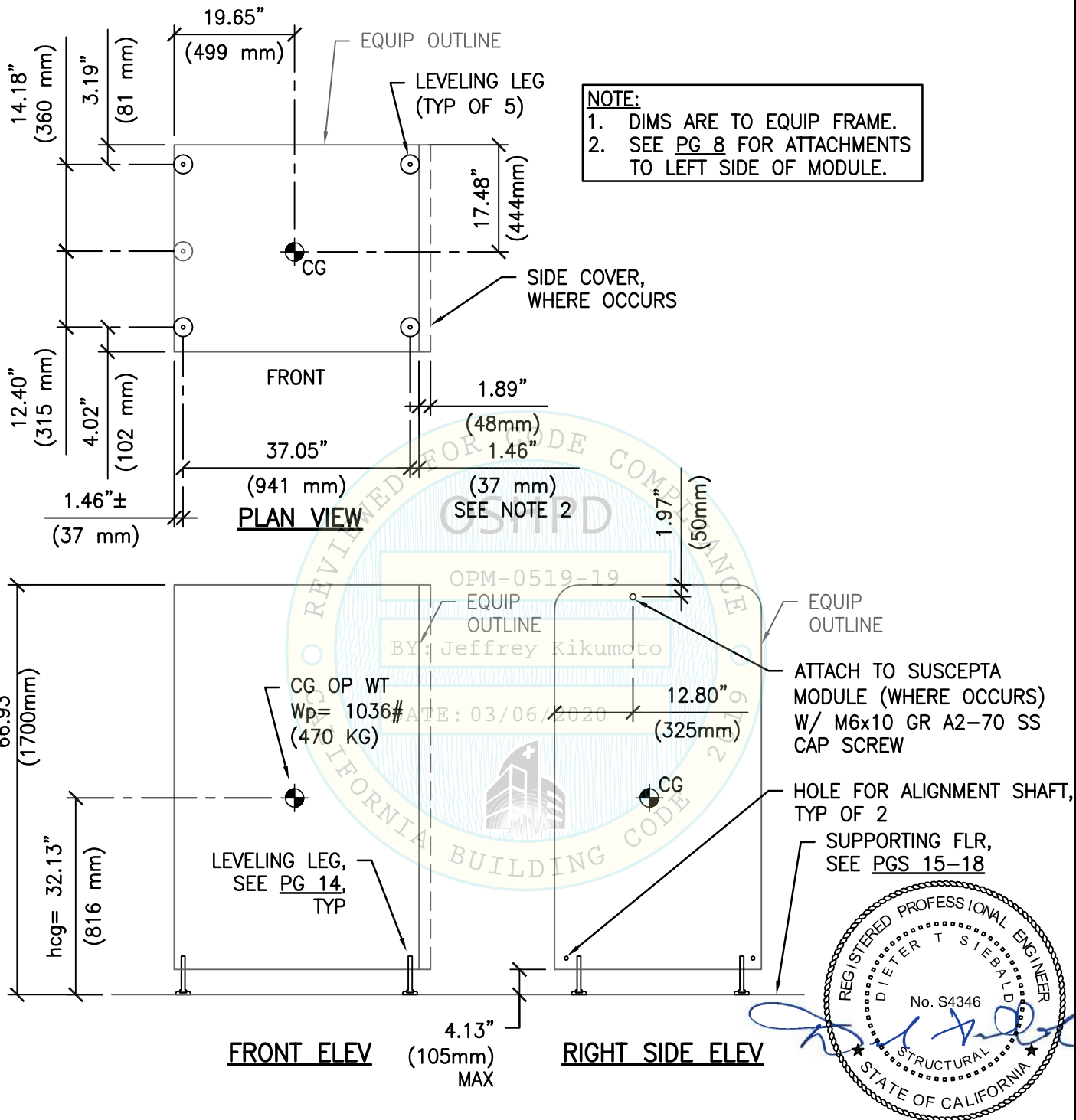
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 8 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020--02:54pm Login:camachom Dimscale:1 LTScale:6



SHEET TITLE: BD Kiestra™ IDENTIFA
 PLAN VIEW & ELEVATIONS



CYS STRUCTURAL ENGINEERS, INC.

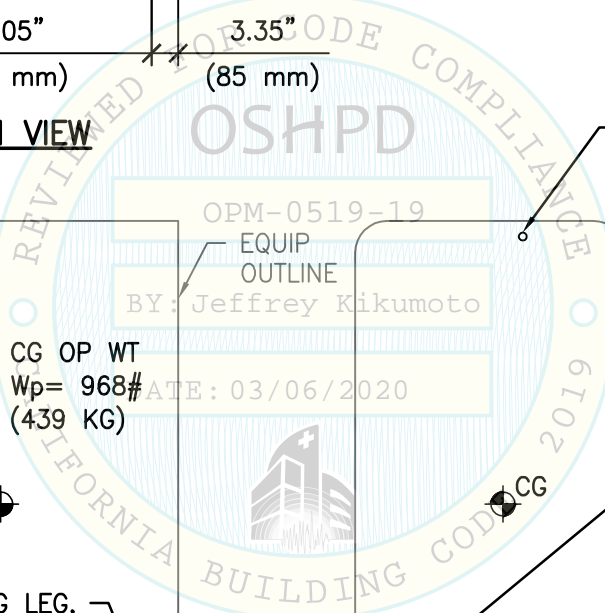
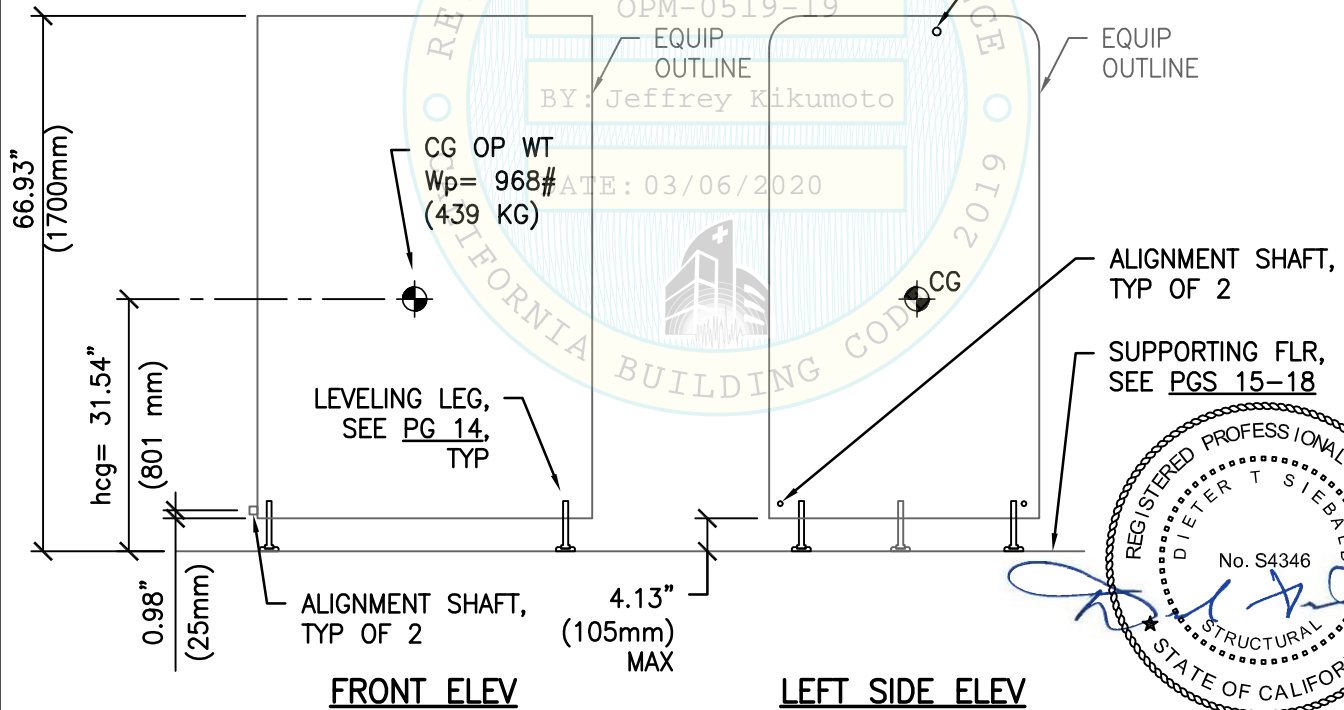
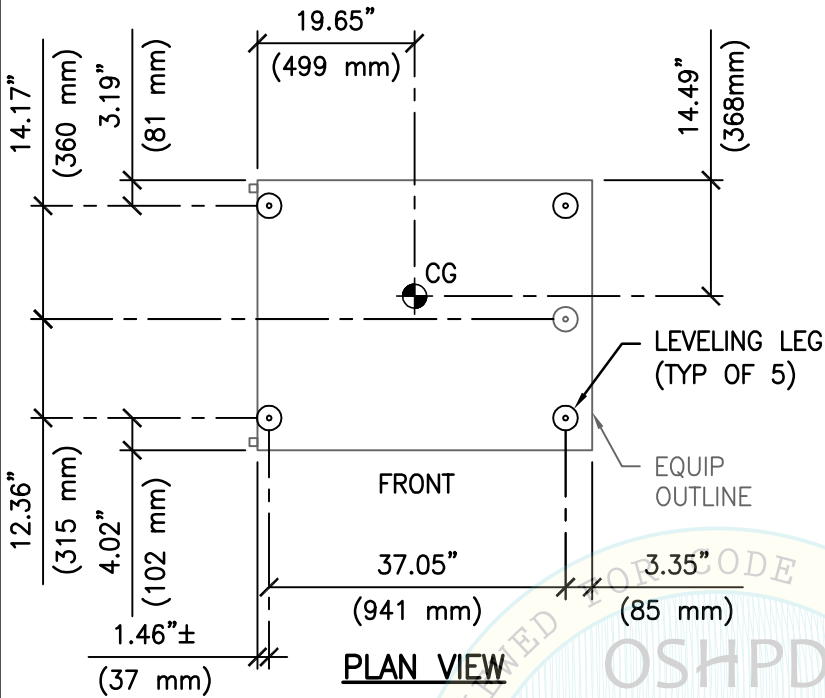
2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 9 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:54pm Login:ccmcmachom DimScale:1 LTScale:6

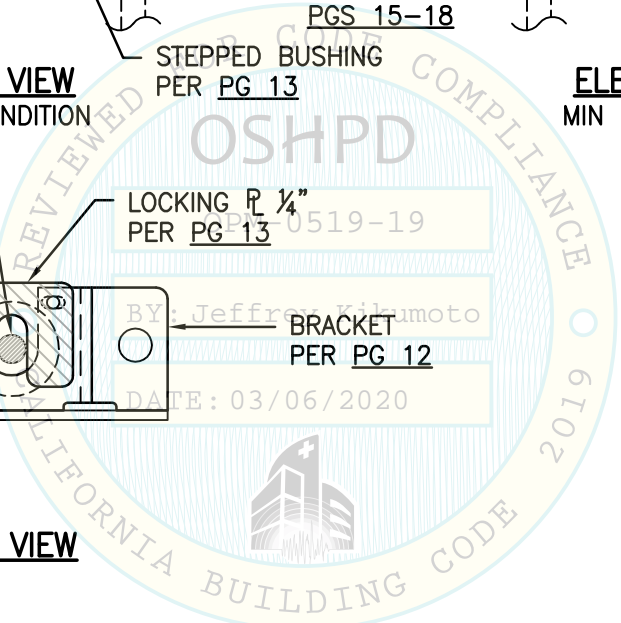
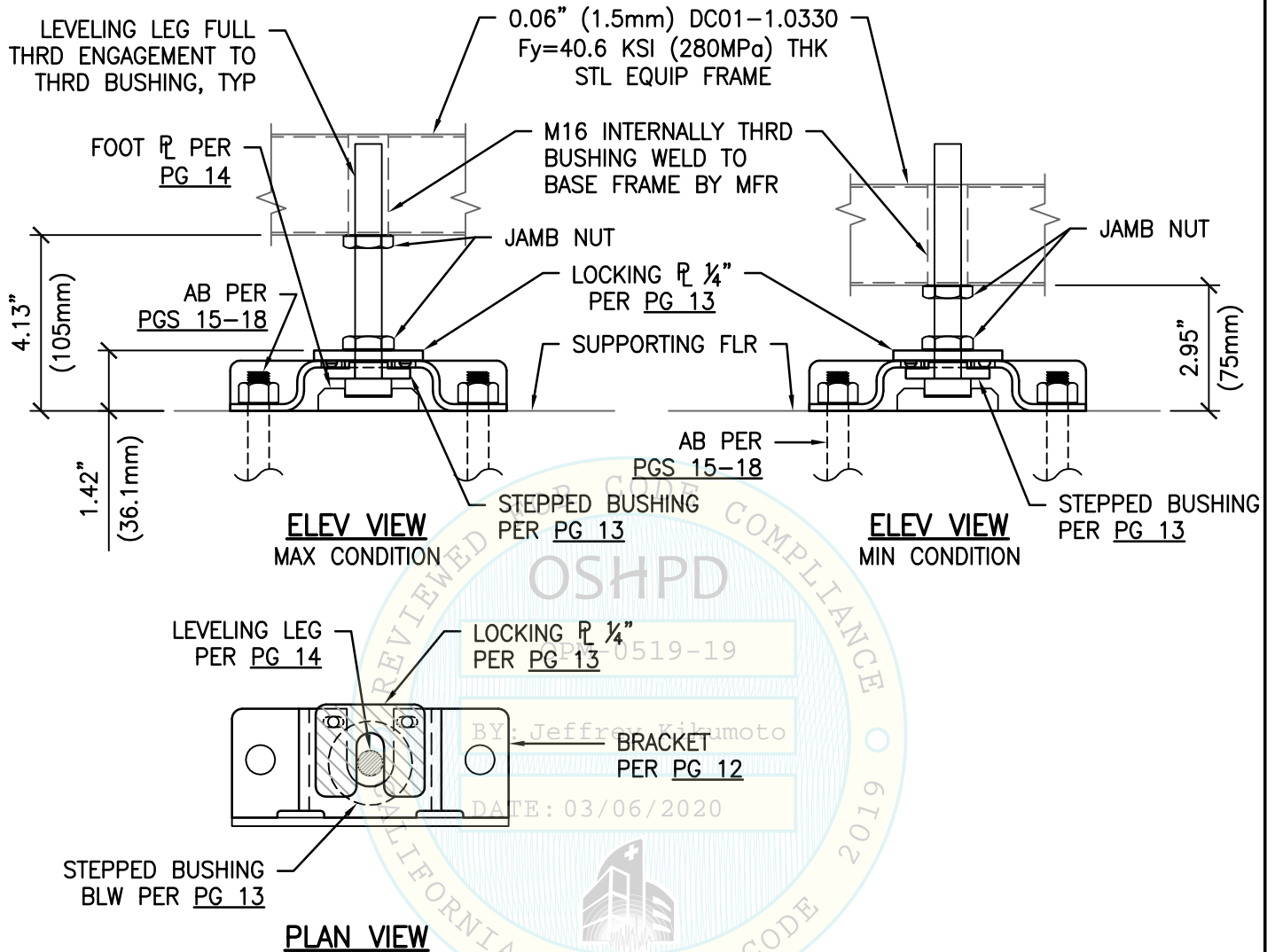
NOTE:
 DIMS ARE TO EXTR OF EQUIP COVERS.



SHEET TITLE: BD Kiestra™ SUSCEPTA
 PLAN VIEW & ELEVATIONS

| | | |
|--|--------------------------------------|---|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 10 of 18 |
|--|--------------------------------------|---|

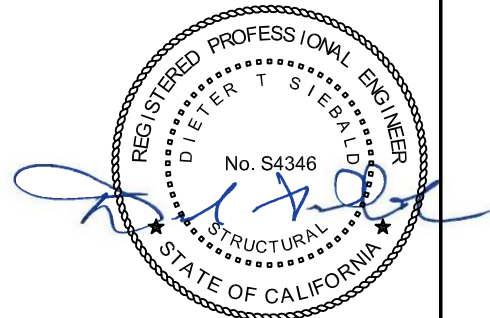
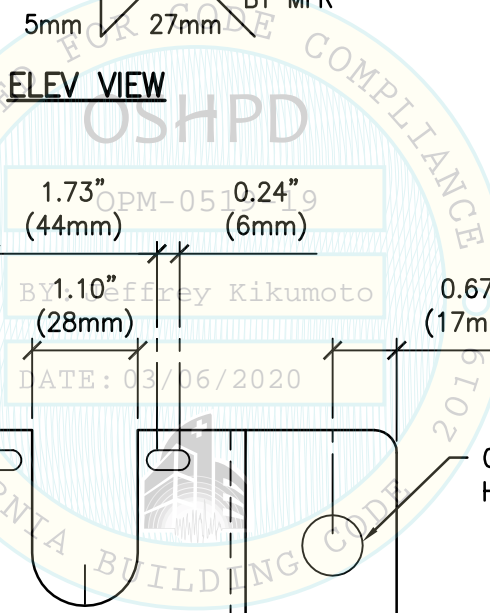
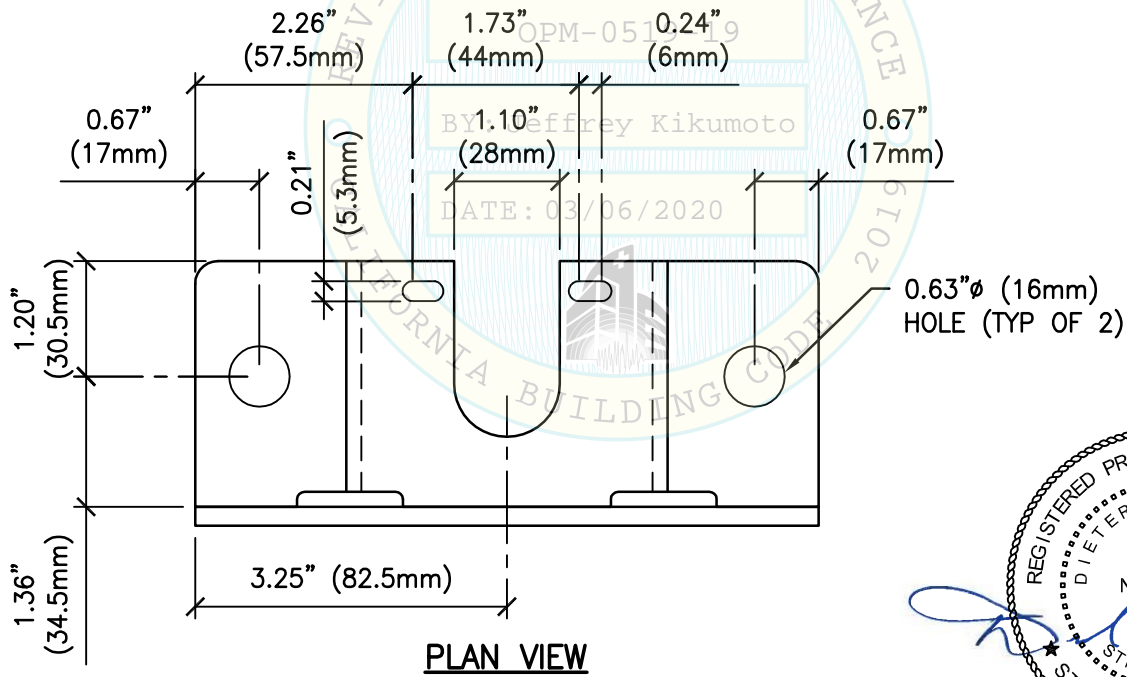
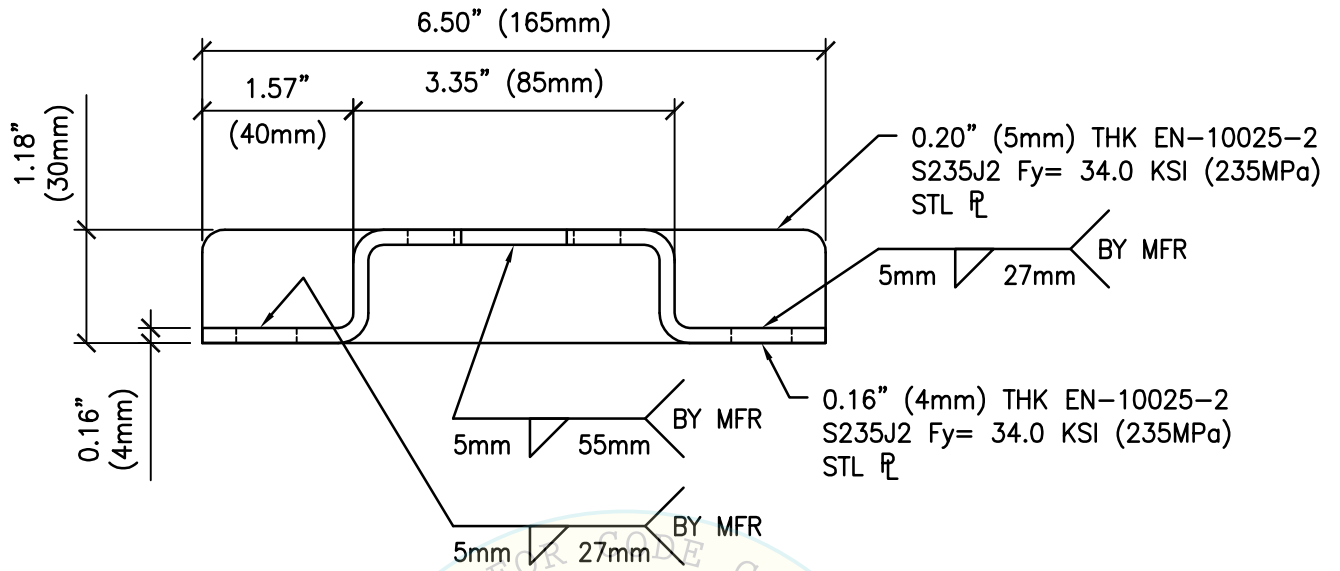
L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-03:22pm Login:carmachom Dimscale:1 LTScale:6



SHEET TITLE: BRACKET ASSEMBLY DETAIL

| | |
|--|------------------|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | Job No: 17115 |
| | Date: 02-05-2020 |
| | Page: 11 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020--02:55pm Login:camachom Dimscale:1 LTScale:6

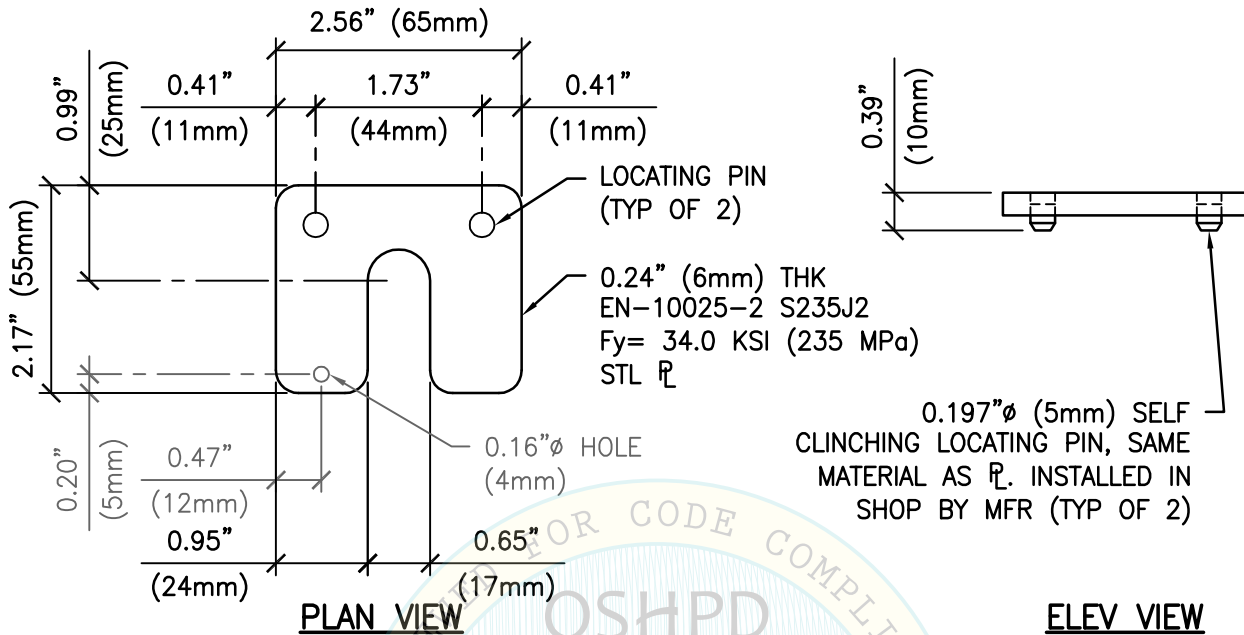


SHEET TITLE: BRACKET DETAIL

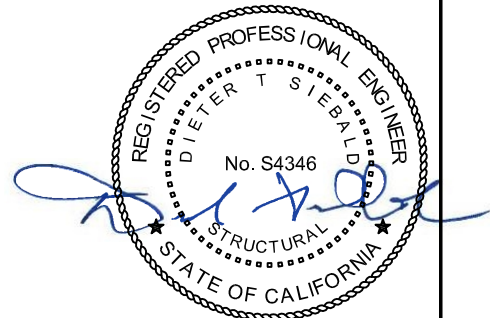
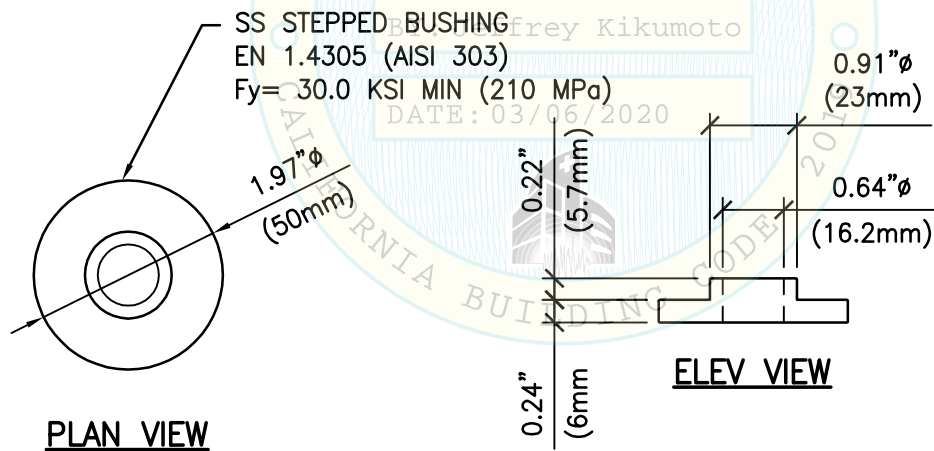
| | | |
|--|--------------------------------------|---|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 12 of 18 |
| | | |
| | | |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:camachom DimScale:1 LTScale:6

LOCKING PLATE DETAIL



STEPPED BUSHING DETAIL



SHEET TITLE: LOCKING PLATE DETAIL & STEPPED BUSHING DETAIL



CYS STRUCTURAL ENGINEERS, INC.

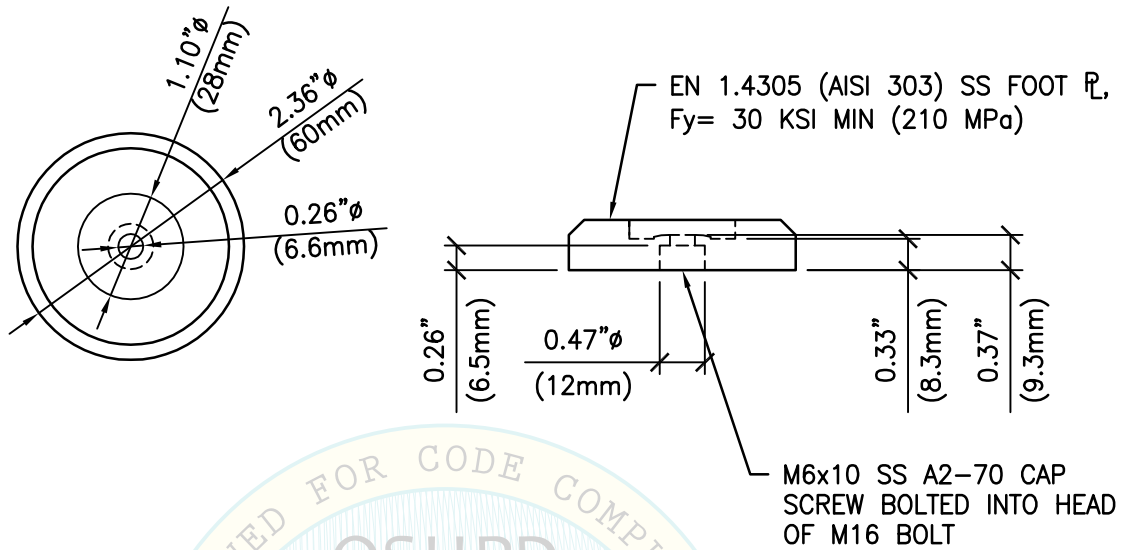
2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

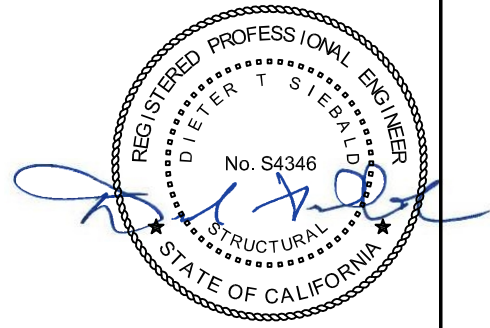
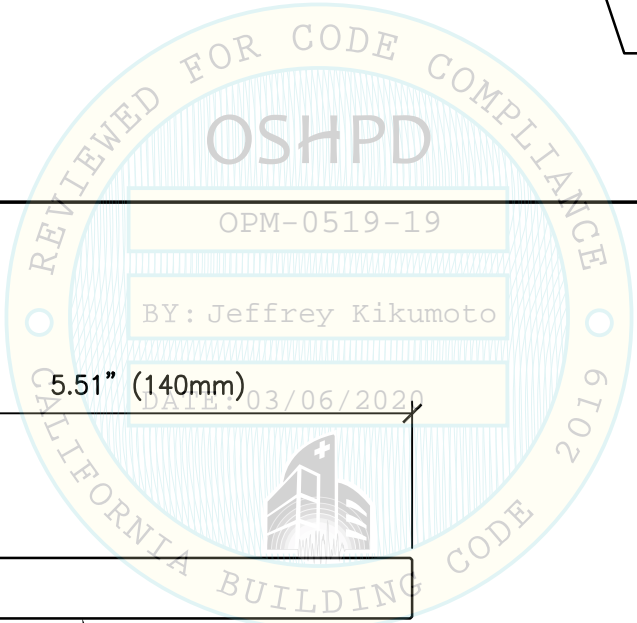
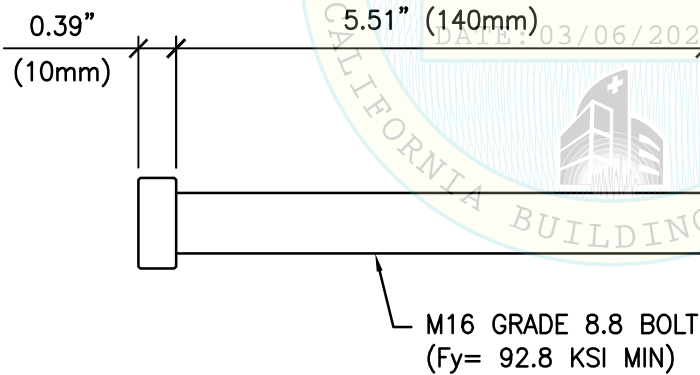
| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 13 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:ccmchom DimScale:1 LTScale:6

FOOT PLATE DETAIL



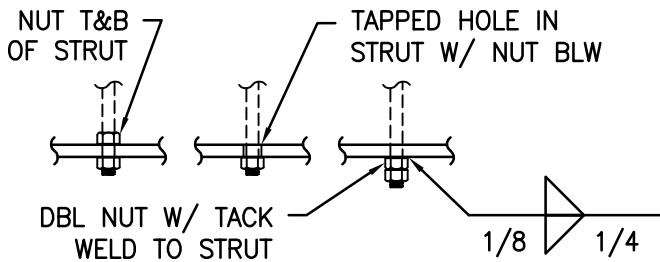
THREADED BOLT DETAIL



SHEET TITLE: LEVELING LEG DETAILS

| | | |
|--|--------------------------------------|---|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 14 of 18 |
| | | |
| | | |

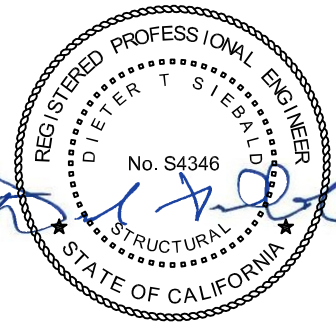
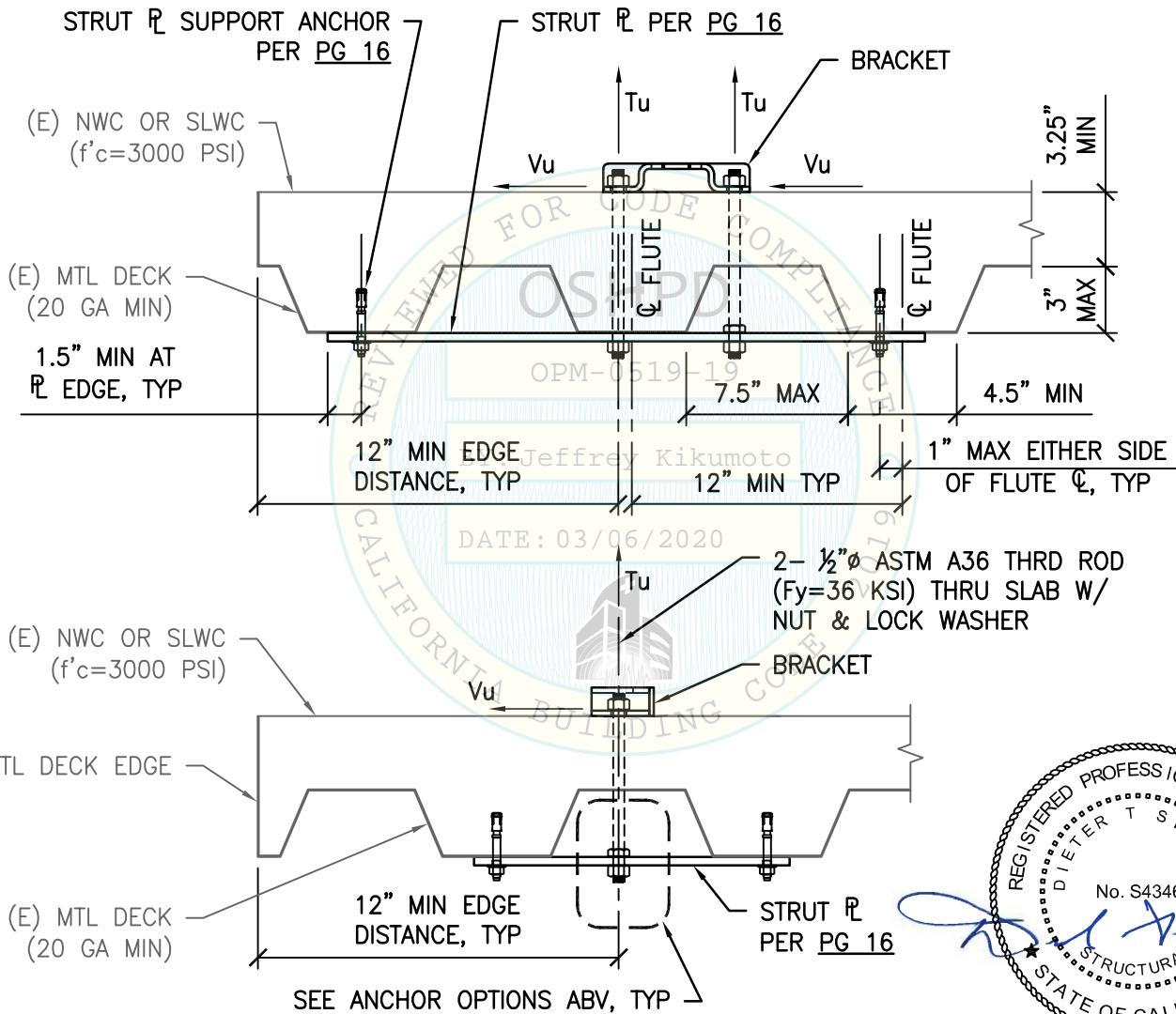
L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:camachom DimScale:1 LTScale:6



ANCHOR OPTIONS

| MAX ANCHOR FORCES AT LRFD AT EA AB (LBS) | |
|--|-------|
| Tu | Vu |
| CASE 1 z/h ≤ 0.75 | 1385# |
| | 624# |

($\Omega_o = 1.5$) OVERSTRENGTH FACTOR IS APPLIED TO SHEAR FORCE ONLY



SHEET TITLE: ATTACHMENT DETAIL
CONCRETE FILL OVER METAL DECK (CASE 1)



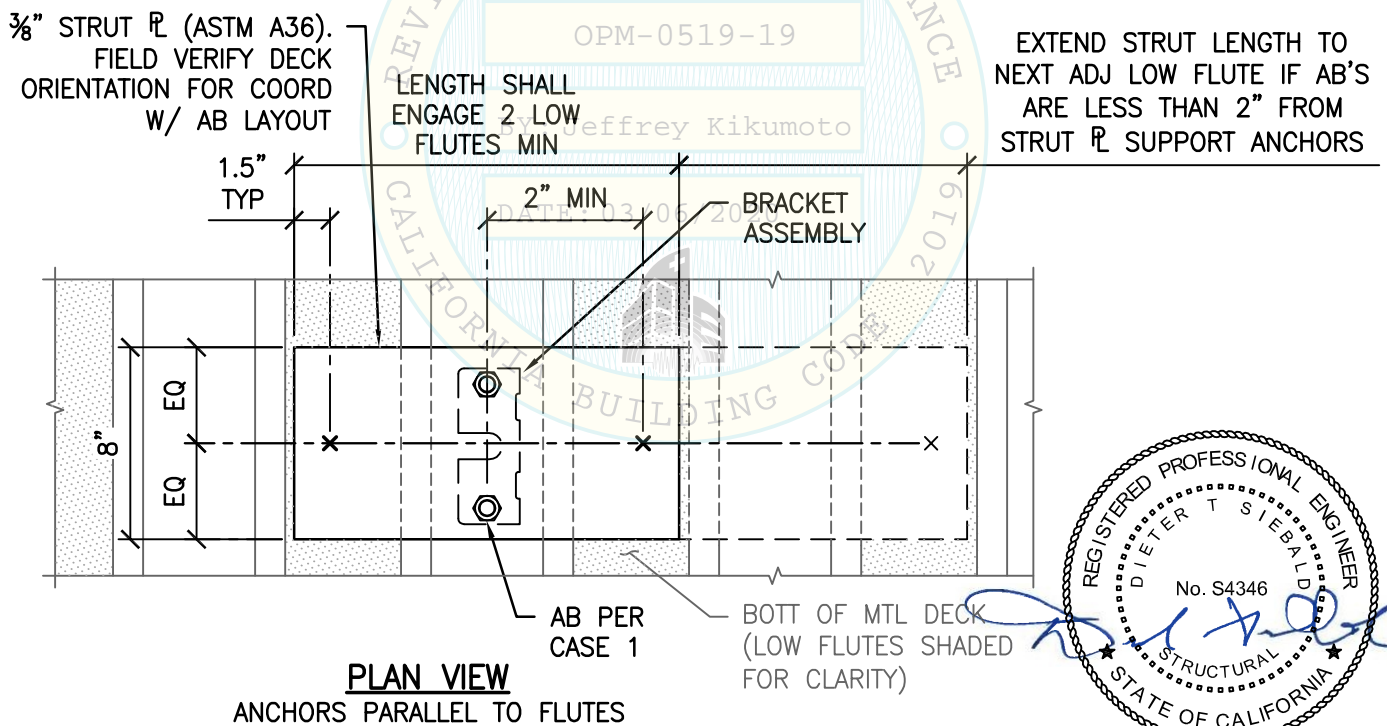
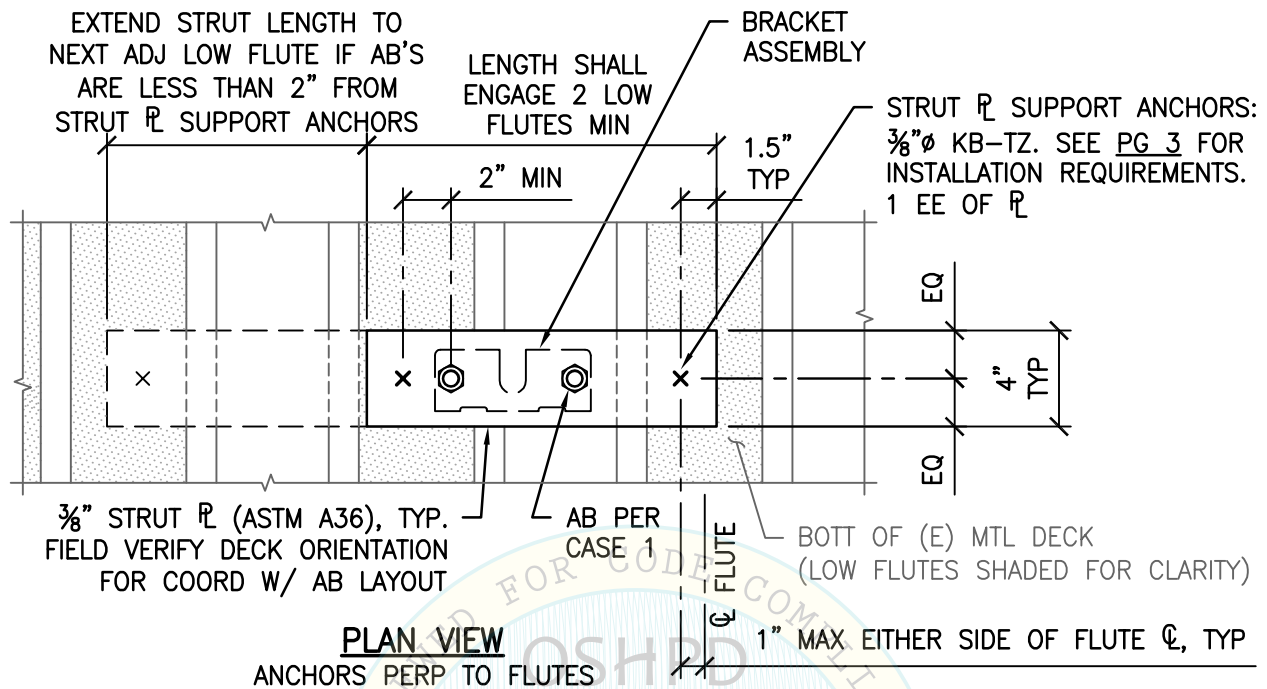
CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
SACRAMENTO, CA 95833

TEL (916) 920-2020
www.cyseng.com

| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 15 of 18 |

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:camachom DimScale:1 LTScale:6



SHEET TITLE: ATTACHMENT DETAIL
 CONCRETE FILL OVER METAL DECK (CASE 1)



CYS STRUCTURAL ENGINEERS, INC.

2495 NATOMAS PARK DRIVE, SUITE 650
 SACRAMENTO, CA 95833

TEL (916) 920-2020
 www.cyseng.com

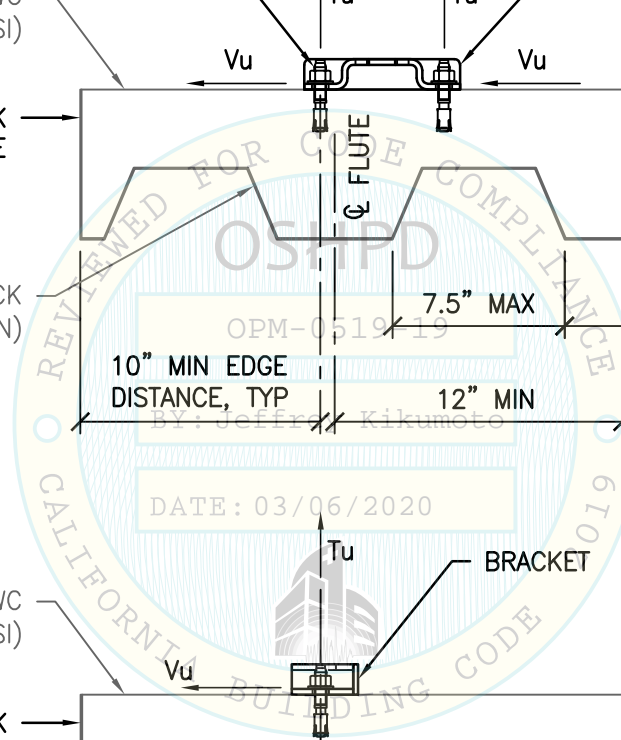
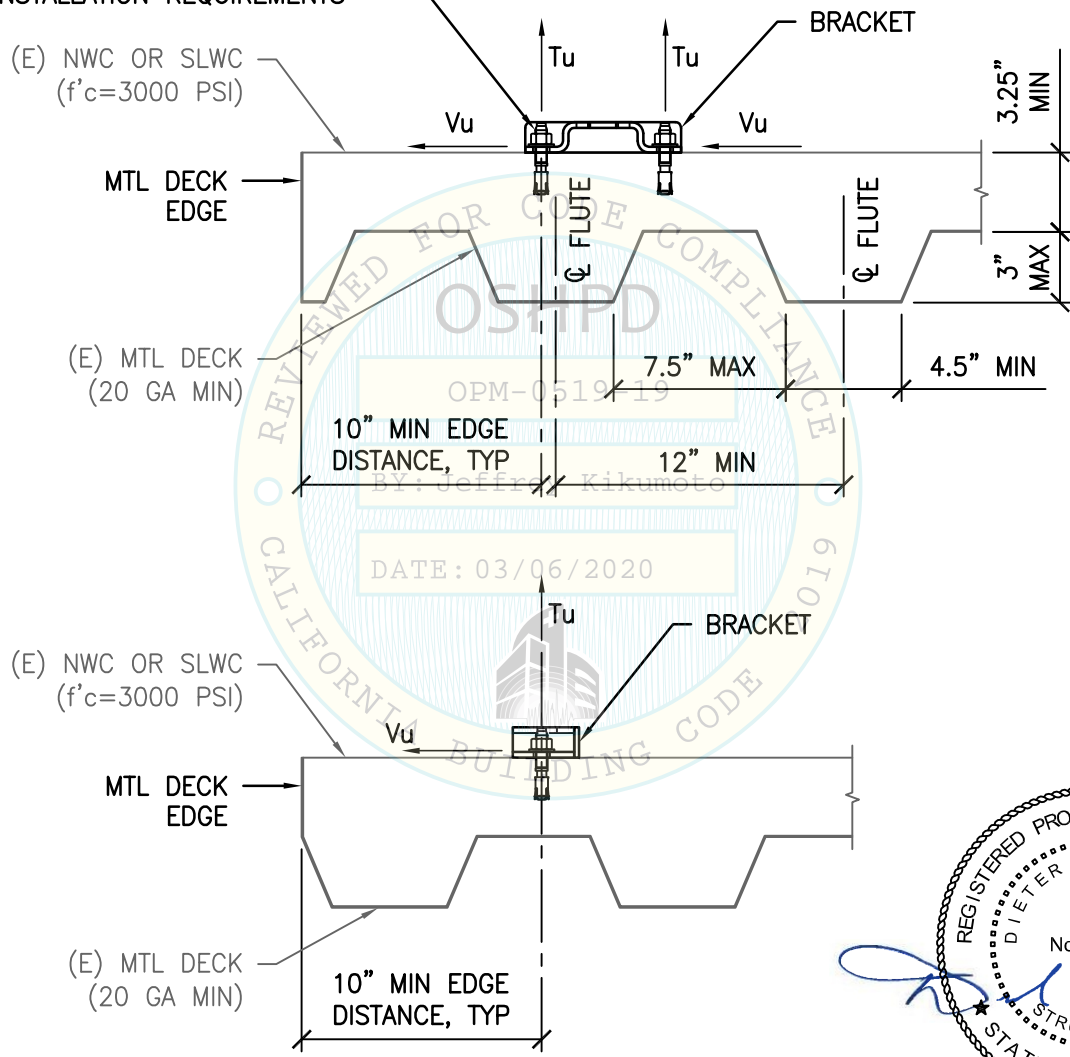
| | |
|---------|------------|
| Job No: | 17115 |
| Date: | 02-05-2020 |
| Page: | 16 of 18 |

L:\Jobs\17\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:camachom Dimscale:1 LTScale:6

| MAX ANCHOR FORCES AT LRFD AT EA AB (LBS) | | |
|--|------|------|
| | Tu | Vu |
| CASE 2 z/h ≤ 0.75 | 597# | 200# |

INCLUDES OVERSTRENGTH FACTOR ($\Omega_0=1.5$)

1/2"Ø EXPANSION BOLTS, TYP
 OF 2. SEE PGS 2&3 FOR
 INSTALLATION REQUIREMENTS



SHEET TITLE: ATTACHMENT DETAIL
 CONCRETE FILL OVER METAL DECK (CASE 2)

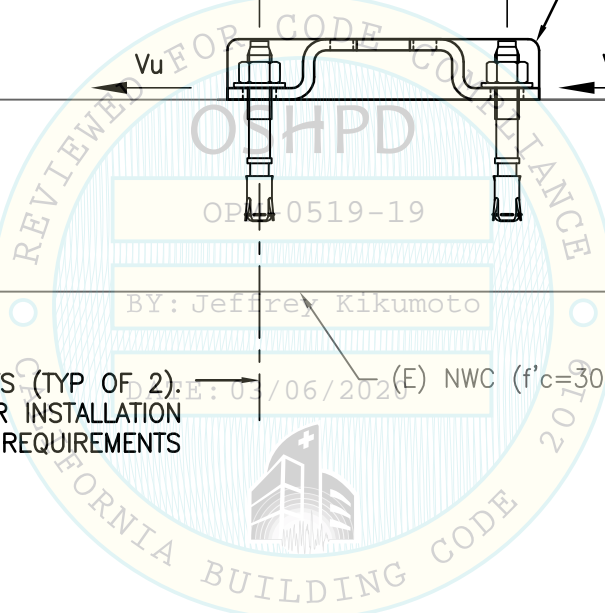
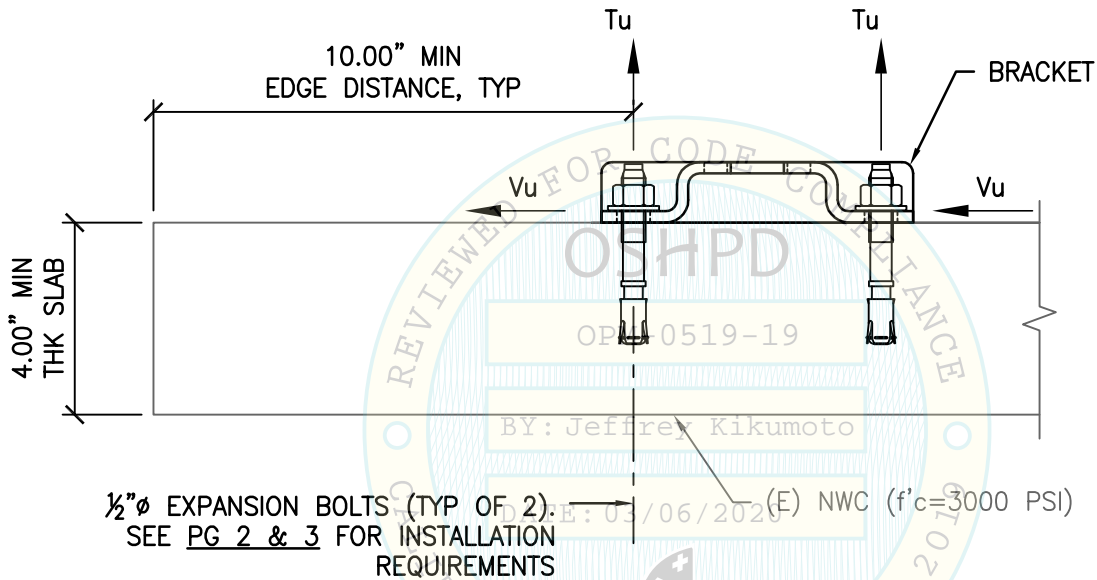
| | | |
|--|--------------------------------------|---|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 17 of 18 |
|--|--------------------------------------|---|

L:\Jobs17\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:camachom DimScale:1 LTScale:6



| MAX ANCHOR FORCES AT LRFD AT EA AB (LBS) | | |
|--|------|------|
| | Tu | Vu |
| CASE 3 z/h ≤ 0 | 919# | 281# |

INCLUDES OVERSTRENGTH FACTOR ($\Omega_0=1.5$)



SHEET TITLE: ATTACHMENT DETAIL
 CONCRETE SLAB ON GRADE (CASE 3)

| | | |
|--|--------------------------------------|---|
| <p>CYS STRUCTURAL ENGINEERS, INC. 2495 NATOMAS PARK DRIVE, SUITE 650 SACRAMENTO, CA 95833</p> | TEL (916) 920-2020 www.cyseng.com | Job No: 17115 Date: 02-05-2020 Page: 18 of 18 |
|--|--------------------------------------|---|

L:\Jobs\17115 BD Kiestra - Wagtail\STRU\S1_Wagtail.dwg Time:Feb05,2020-02:55pm Login:camachom DimScale:1 LTScale:6