



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

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

OFFICE USE ONLY

APPLICATION #: OPM-0463-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: bioMérieux, Inc.

Manufacturer's Technical Representative: Mark Fanning

Mailing Address: 595 Anglum Road, Hazelwood, MO 63042

Telephone: (314) 506-8039

Email: Mark.FANNING@biomerieux.com

Product Information

Product Name: Virtuo®

Product Type: Clinical instrument classified as other mechanical or electrical components per ASCE 7-10 Table 13.6-1.

Product Model Number: _____

General Description: Automated clinical instrument for blood culture detection used in a hospital microbiology laboratory.

Applicant Information

Applicant Company Name: bioMérieux, Inc.

Contact Person: Mark Fanning

Mailing Address: 595 Anglum Road, Hazelwood, MO 63042

Telephone: (314) 506-8039

Email: Mark.FANNING@biomerieux.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant: Mark Fanning

Date: 12/19/2017

Title: Principal Lead Engineer, Mech

Company Name: bioMérieux, Inc.

"Access to Safe. Quality Healthcare Environments that Meet

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-700 (REV 12/16/15)

09/04/2018

OPM-0463-13: Reviewed for Code Compliance by Jeffrey Kikumoto

OSHPD

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

Registered Design Professional Preparing Engineering Recommendations

Company Name: CYS STRUCTURAL ENGINEERS, INC.

Name: David M. Calia California License Number: S5614

Mailing Address: 2495 Natomas Park Drive, Suite 650

Telephone: (916) 920-2020 Email: davidc@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): Calculations in accordance with the 2016 CBC.

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 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): _____

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

Signature: Jeffrey Kikumoto Date: 09-04-2018

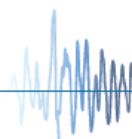
Print Name: Jeffrey Kikumoto

Title: SSE

Condition of Approval (if applicable): _____

"Access to Safe. Quality Healthcare Environments that Meet

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-700 (REV 12/16/15)



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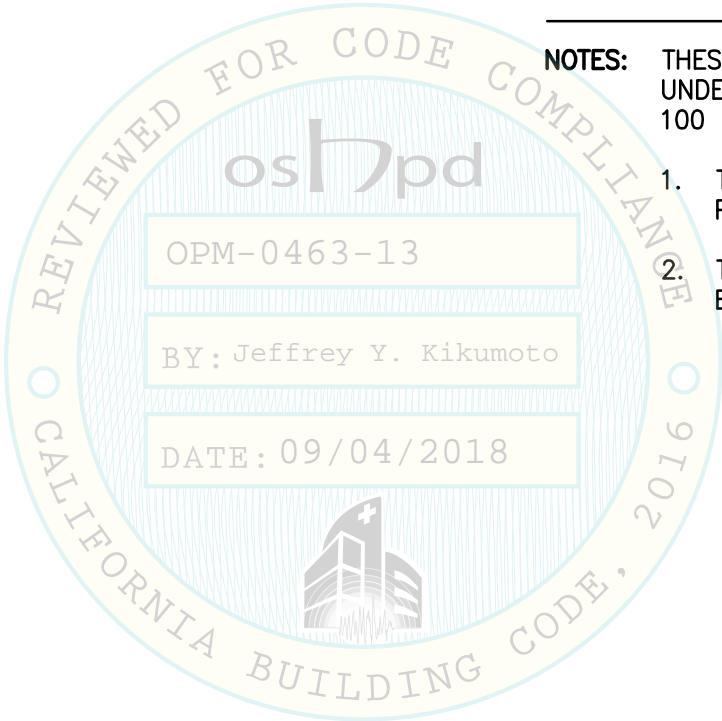
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NOTES: THESE DRAWINGS ARE PREPARED FOR bioMérieux, INC., A COMPANY DULY ORGANIZED UNDER THE LAWS OF MISSOURI, HAVING ITS PRINCIPAL PLACE OF BUSINESS AT 100 RODOLPHE STREET, DURHAM, NC 27712

1. THE CONTRACTOR & THE INSPECTOR SHALL OBTAIN A COPY OF THIS PRE-APPROVAL FROM THE OSHPD WEBSITE.
2. THIS PRE-APPROVAL COVERS THE SUPPORTS & ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.



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bioMérieux
VIRTUO
EQUIPMENT SUPPORTS & ATTACHMENTS

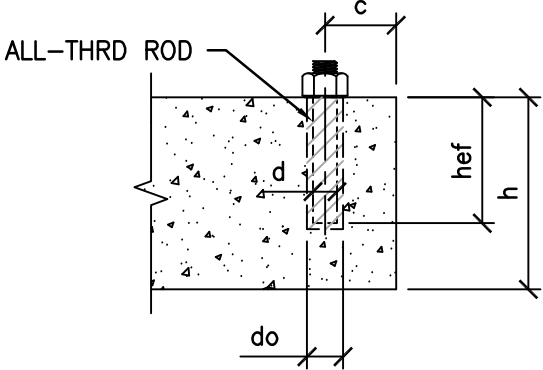


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TEL (916) 920-2020
www.cyseng.com

GENERAL NOTES:

1. THIS OSHPD PRE-APPROVAL OF MANUFACTURER’S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
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 EXISTING STRUCTURE TO RESIST THE FORCES & WEIGHT SPECIFIED FOR EA COMPONENT IN ADDITION TO ALL OTHER LOADS. PROVIDE & DESIGN SUPPLEMENTARY MEMBERS AS REQ.
 - B. THAT THE ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY SLAB EDGES OR OPGS.
 - C. THAT THE ANCHORS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY NEW OR EXISTING ANCHORS. THE SPACING SHOWN IN THE TEST VALUES TABLE ON THIS PAGE IS THE REQ SPACING FROM ANCHORS OF OTHER DIAMETERS & EMBEDMENTS WILL VARY.
 - D. THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2016 CBC & WITH THE DETAILS SHOWN IN THIS PRE-APPROVAL.
 - E. THAT THE ACTUAL EQUIPMENT’S WEIGHT, CENTER OF GRAVITY (CG) LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS, & THE MATERIAL & GAGE OF THE EQUIP WHERE ATTACHMENTS ARE MADE, AGREE WITH THE INFORMATION SHOWN ON THE PRE-APPROVAL DOCUMENTS.
- 3A. EXPANSION ANCHORS INSTALLED IN NORMAL WEIGHT OR SAND-LIGHTWEIGHT CONC SHALL BE STAINLESS STEEL HILTI KB-TZ EXPANSION ANCHORS COMPLYING WITH ICC-ES ESR-1917 REISSUED MAY 2017. ADHESIVE ANCHORS INSTALLED IN NORMAL WEIGHT CONC SHALL BE ASTM F593 CW1 (316) INSTALLED USING HILTI HIT-RE 500 V3 ADHESIVE COMPLYING WITH ICC-ES ESR-3814 RE-ISSUED JANUARY 2017.
- B. INSTALLATION: INSTALL THE POST-INSTALLED DRILLED-IN CONC ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE ICC EVALUATION REPORT FOR THE SPECIFIC ANCHOR & THE PARAMETERS GIVEN IN THE TABLES ON THIS PAGE.
- C. TESTING:
- JOB TESTING: FOR VERIFYING SATISFACTORY INSTALLATION WORKMANSHIP, PERFORM JOB SITE TESTING IN ACCORDANCE WITH THE TEST LOAD TABLE PROVIDED IN THIS DOCUMENT. TEST 50% OF THE INSTALLED ANCHORS. FOR TENSION TESTING, THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK OR CALIBRATED SPRING LOADING DEVICES. FOR TORQUE TESTING, THE TEST LOAD SHALL BE APPLIED WITH A CALIBRATED TORQUE WRENCH. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE INSPECTOR OF RECORD. 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. ALSO REFER TO CBC 1910A.5.5 "TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE".
 - FAILURE/ACCEPTANCE CRITERIA: THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 - HYDRAULIC RAM METHOD: APPLY & HOLD TEST LOAD FOR A MIN OF 15 SECONDS. THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD WHERE WASHERS ARE USED. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE OR BY A CONTINUOUS LOSS OF JACKING PRESSURE.
 - TORQUE WRENCH METHOD (EXPANSION ANCHORS ONLY): THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS: WEDGE TYPE: ONE-HALF (½) TURN OF THE NUT.

3D. TEST VALUES: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT.



ADHESIVE ANCHOR
(THRD ROD / REINFORCING BAR)

| POST-INSTALLED <u>ADHESIVE</u> ANCHOR SCHEDULE | | | | | | | |
|--|-----------------------|-------------------------------|--------------------------------|------------------------------------|---------------------------|-------------------------|------------------------|
| ANCHOR TYPE & DIA (INCH) d | HOLE DIA (INCH) do | EFFECTIVE EMBED (INCH) hef | MIN CONC THICKNESS (INCH) h | MIN CONC EDGE DISTANCE (INCH) c | MIN AB SPACING UNO (INCH) | TENSION TEST LOAD (LBS) | CONDITION OF ANCHORAGE |
| ½"Ø HILTI HAS-R (ASTM F593 CW1 316 SS) ALL THRD ROD | 0.5625 | 2.75 | 4 | 12 | 6.75 | 2550 | CASE 2 |

| POST-INSTALLED <u>MECHANICAL</u> ANCHOR SCHEDULE | | | | | | | | | |
|--|-----------------------------------|--------------------------------|-------------------------|--------------------------------|-------------------------------|-------------------------------------|--------------------|-----------------|------------------------|
| ANCHOR TYPE & DIA (INCH) | INSTALLATION EMBED (INCH) hnom | EFFECTIVE EMBED (INCH) heff | HOLE DEPTH (INCH) ho | MIN CONC THICKNESS (INCH) h | MIN CONC EDGE DISTANCE (INCH) | MIN AB SPACING UNO (INCH) | TEST LOAD | | CONDITION OF ANCHORAGE |
| | | | | | | | TENSION LOAD (LBS) | TORQUE (FT-LBS) | |
| KB-TZ 304 SS 0.375"Ø | 2.3125 | 2.00 | 2.625 | SEE DTLS | 12 | 6.75 PARALLEL TO MTL DECK FLUTES | 1190 | 25 | CASE 1 |
| KB-TZ CS 0.5"Ø | 2.375 | 2.00 | 2.625 | SEE DTLS | 12 | 6.75 PARALLEL TO MTL DECK FLUTES | — | 40 | CASE 1 & CASE 2 |



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| SHEET TITLE: GENERAL NOTES | | | | Rev | Description | Date | Job No: 17136 |
|  bioMérieux VIRTUO EQUIPMENT SUPPORTS & ATTACHMENTS | | | | | | | Date: 8/31/2018 |
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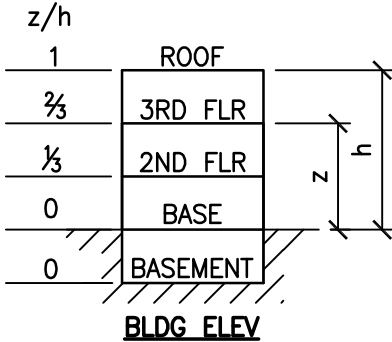
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GENERAL NOTES CONTINUED:

4. TWO (2) CONDITIONS OF SUPPORTS & ATTACHMENTS ARE SPECIFIED & PRESENTED IN THIS PRE-APPROVAL:



CASE 1: SUPPORTS & ATTACHMENTS DTLS LOCATED AT UPPER FLRS ABV THE BASE OF A BLDG ($z/h \leq 1.0$), IT IS ASSUMED THAT THE FLRS ARE BUILT OF A MIN 3/4" NWC OR SLWC TOPPING OVER MTL DECK ($f'c = 3000$ PSI, MIN).

CASE 2: SUPPORTS & ATTACHMENTS DTLS LOCATED AT OR BLW THE BASE OF A BLDG ($z/h = 0$). THE FLRS ARE ASSUMED TO BE BUILT OF A MIN 4" NWC SLAB ($f'c = 3000$ PSI, MIN).

5. THIS PRE-APPROVAL MAY BE USED AT ANY GEOGRAPHICAL LOCATION IN THE STATE OF CALIFORNIA WHERE S_{ps} IS LESS THAN OR EQ TO 2.50.
6. COORDINATE THE ANCHOR BOLT LAYOUT WITH THE COMPONENT IN THE FIELD PRIOR TO SETTING ANCHOR BOLTS.
7. ANCHOR BRACKETS SHALL BE PAINTED WITH A RUST INHIBITIVE PRIMER FOLLOWED BY A COLOR COAT SELECTED BY THE HOSPITAL FACILITY OR MATCH THE COLOR OF THE BASE OF THE EQUIP IF A COLOR IS NOT SPECIFIED BY THE HOSPITAL.
8. FASTENERS AND ASSOCIATED HARDWARE SHALL BE FIELD PAINTED TO MATCH BRACKETS AFTER INSTALLATION IS COMPLETE.
9. STRUCTURAL STEEL SHAPES & CONNECTORS SHALL CONFORM TO THE FOLLOWING, UNO:
- A. PLATES, ANGLES, BARS & MISCELLANEOUS SHAPES ASTM A36
 - B. PLATES AS NOTED ASTM A572 GR 50
 - C. MACHINE BOLTS ASTM A307
10. CONTRACTOR SHALL FURNISH & INSTALL THE SEISMIC SUPPORTS & ATTACHMENTS (INCLUDING SEISMIC BRACKETS, EXPANSION ANCHORS, THRU-BOLTS, STRUT PLATES BLW SLABS, HIGH STRENGTH BOLTS, ETC.) IN CONJUNCTION WITH COMPONENT SETTING INSTRUCTIONS FROM bioMérieux FIELD INSTALLATION PERSONNEL.
11. DRAWING SCALES ARE NOT PROVIDED. DO NOT SCALE OFF OF THESE DRAWINGS. THE INTENT OF THESE DRAWINGS IS TO SHOW HOW TO FABRICATE THE SEISMIC BRACKET TO ANCHOR THE EQUIP SPECIFIED. THE REPRESENTATIONS OF THE EQUIP ARE ONLY INTENDED TO SHOW THE COORDINATION WITH THE SEISMIC BRACKETS.
12. BOLTS THRU CONC ON MTL DECK:
- A. BOLTS SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER SNUG TIGHT (THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQ TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNO.
 - B. THRU BOLT HOLES SHALL BE 1/8" LARGER THAN BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/8")
 - C. THRU BOLTS IN CONC SHALL RECEIVE SPECIAL INSPECTION & TESTING (THRU BOLTS WITH STEEL TO STEEL CONN IN TENSION DO NOT REQUIRE TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.
13. TAKE CARE TO AVOID DAMAGING REBAR OR POST-TENSIONING TENDONS WHEN INSTALLING ANCHORS TO CONC.

WELDING NOTES:

1. WELDING OF SEISMIC BRACKETS SHALL BE PERFORMED BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). THE USE OF E70-T4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION. WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND STRUCTURAL WELDING CODE-STEEL OF THE AMERICAN WELDING SOCIETY (AWS D1.1-10). SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENT. SUBMIT WELDING PROCEDURES AND SPECIFICATIONS TO OWNER'S TESTING LABORATORY FOR REVIEW & APPROVAL PRIOR TO BEGINNING SEISMIC BRACKET FABRICATION.
2. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360-10, SECTION J2.2b.

DESIGN CRITERIA

DESIGN OF SUPPORTS & ATTACHMENTS FOR ALL EQUIP COMPONENTS IS PER 2016 CBC

ASCE 7-10 TABLE 13.6-1
OTHER MECHANICAL OR ELECTRICAL COMPONENTS

$S_{ps} = 2.5$

$I_p = 1.5$

$a_p = 1.0$

$R_p = 1.5$

$\Omega_o = 1.5$

W_p AS NOTED ON COMPONENT BASE PLAN & ELEV. SEE PG 7.

SEISMIC LOADS FOR CASE 1 - UPPER FLRS ABV THE BASE, $z/h \leq 1.0$ (LRFD)

$F_p = 3.00 W_p$

$F_v = 0.50 W_p$

SEISMIC LOADS FOR CASE 2 - SLAB AT OR BLW BASE, $z/h = 0$ (LRFD)

$F_p = 1.12 W_p$

$F_v = 0.50 W_p$



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|  bioMérieux VIRTUO EQUIPMENT SUPPORTS & ATTACHMENTS | | | | | | | Date: 8/31/2018 |
| | | | | | | | By: MTC |
| | | | | | | | Page: 3 of 10 |
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ABBREVIATIONS:

| | | | |
|---------|--|---------|---|
| @ | AT | L | LENGTH |
| AB | ANCHOR BOLT | LBS | POUNDS |
| ABV | ABOVE | LRFD | LOAD & RESISTANCE FACTOR DESIGN |
| ADJ | ADJACENT | LFRS | LATERAL FORCE RESISTING SYSTEM |
| AISC | AMERICAN INSTITUTE FOR STEEL CONSTRUCTION | MAX | MAXIMUM |
| ASCE | AMERICAN SOCIETY OF CIVIL ENGINEERS | MB | MACHINE BOLT |
| ASD | ALLOWABLE STRENGTH DESIGN | MFR | MANUFACTURER |
| ASTM | AMERICAN SOCIETY FOR TESTING & MATERIALS | MIN | MINIMUM |
| AWS | AMERICAN WELDING SOCIETY | MTL | METAL |
| BLDG | BUILDING | NO. (#) | NUMBER OR POUNDS |
| BLK | BLOCK | NTS | NOT TO SCALE |
| BLW | BELOW | NS&FS | NEAR SIDE & FAR SIDE |
| BOTT | BOTTOM | NWC | NORMAL WEIGHT CONCRETE |
| BTW | BETWEEN | OPG | OPENING |
| CBC | CALIFORNIA BUILDING CODE | OSHPD | OFFICE OF STATEWIDE HEALTH PLANNING & DEVELOPMENT |
| CG | CENTER OF GRAVITY | PG | PAGE |
| CJP | COMPLETE JOINT PENETRATION | PL | PLATE |
| CLR | CLEAR OR CLEARANCE | PSI | POUNDS PER SQUARE INCH |
| CLSE | CALIFORNIA LICENSED STRUCTURAL ENGINEER | R | RADIUS |
| CL | CENTERLINE | REQ | REQUIRED |
| CONC | CONCRETE | SEOR | STRUCTURAL ENGINEER OF RECORD |
| CONN | CONNECTION | SIM | SIMILAR |
| COORD | COORDINATE | SLWC | SAND-LIGHTWEIGHT CONCRETE |
| CTR | CENTER | SOG | SLAB ON GRADE |
| DBL | DOUBLE | SQ | SQUARE |
| DIA (Ø) | DIAMETER | SS | STAINLESS STEEL |
| DIM | DIMENSION | STL | STEEL |
| DTL | DETAIL | T&B | TOP & BOTTOM |
| DWG | DRAWING | TEMP | TEMPORARY |
| (E) | EXISTING CONDITION | THRD | THREAD OR THREADED |
| EA | EACH | TOC | TOP OF CONCRETE |
| EE | EACH END | Tu | ANCHORAGE TENSION REACTION DUE TO SEISMIC FORCE |
| ELEV | ELEVATION | TYP | TYPICAL |
| EQ | EQUAL | UNO | UNLESS NOTED OTHERWISE |
| EQUIP | EQUIPMENT | V | ANCHORAGE SHEAR REAC |
| f'c | MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE | VERT | VERTICAL |
| FF | FINISHED FLOOR | Vu | ANCHORAGE SHEAR REACTION DUE TO SEISMIC FORCE |
| FLG | FLANGE | W/ | WITH |
| FLR | FLOOR | Wp | COMPONENT SELF-WEIGHT |
| FRMG | FRAMING | | |
| FT (') | FOOT/FEET | | |
| Fy | SPECIFIED YIELD STRENGTH OF REINFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KSI | | |
| GA | GAUGE | | |
| HEIGHT | HT | | |
| ICC | INTERNATIONAL CODE COUNCIL | | |
| IN (") | INCH | | |
| KSI | KIPS PER SQUARE INCH | | |



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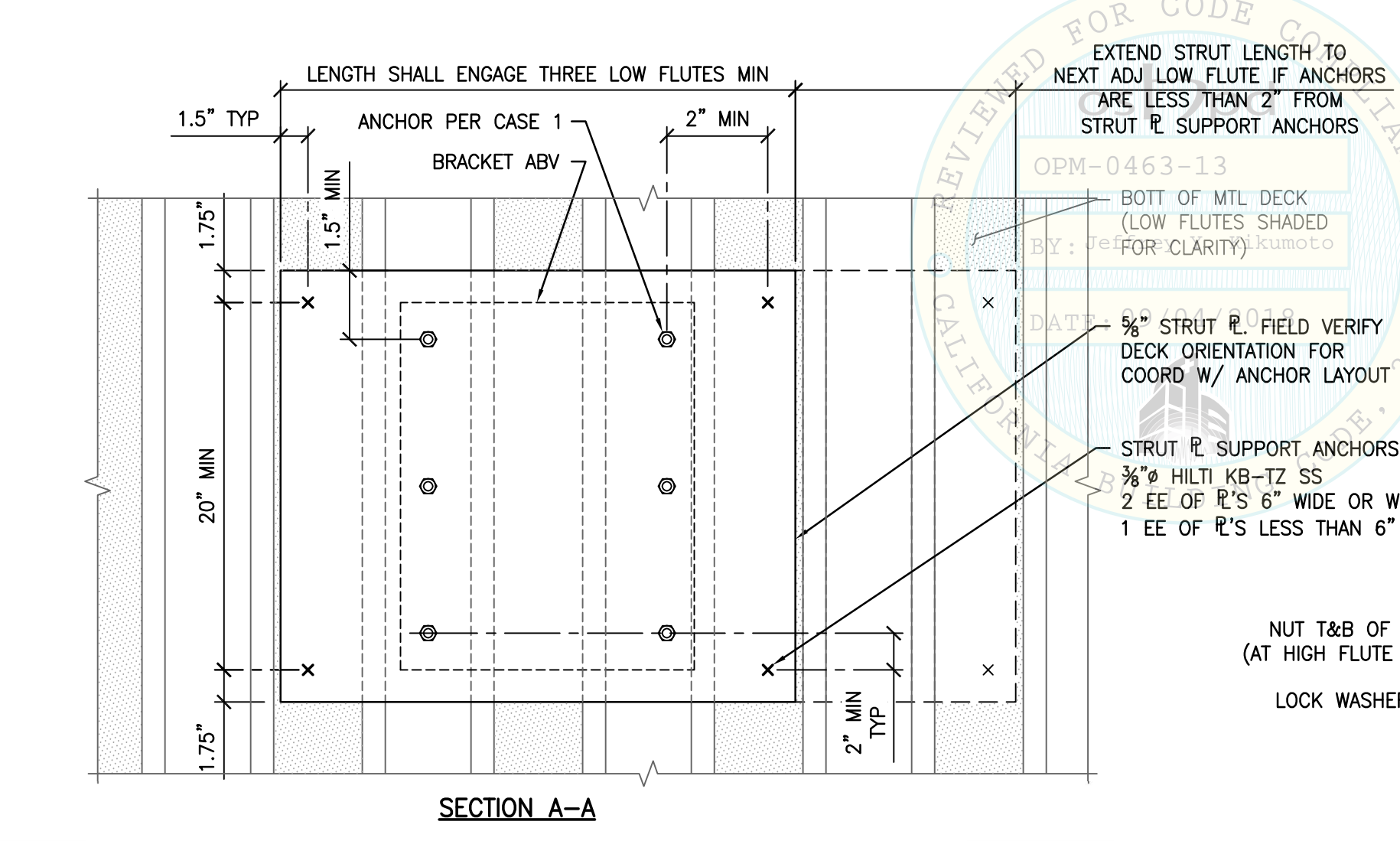
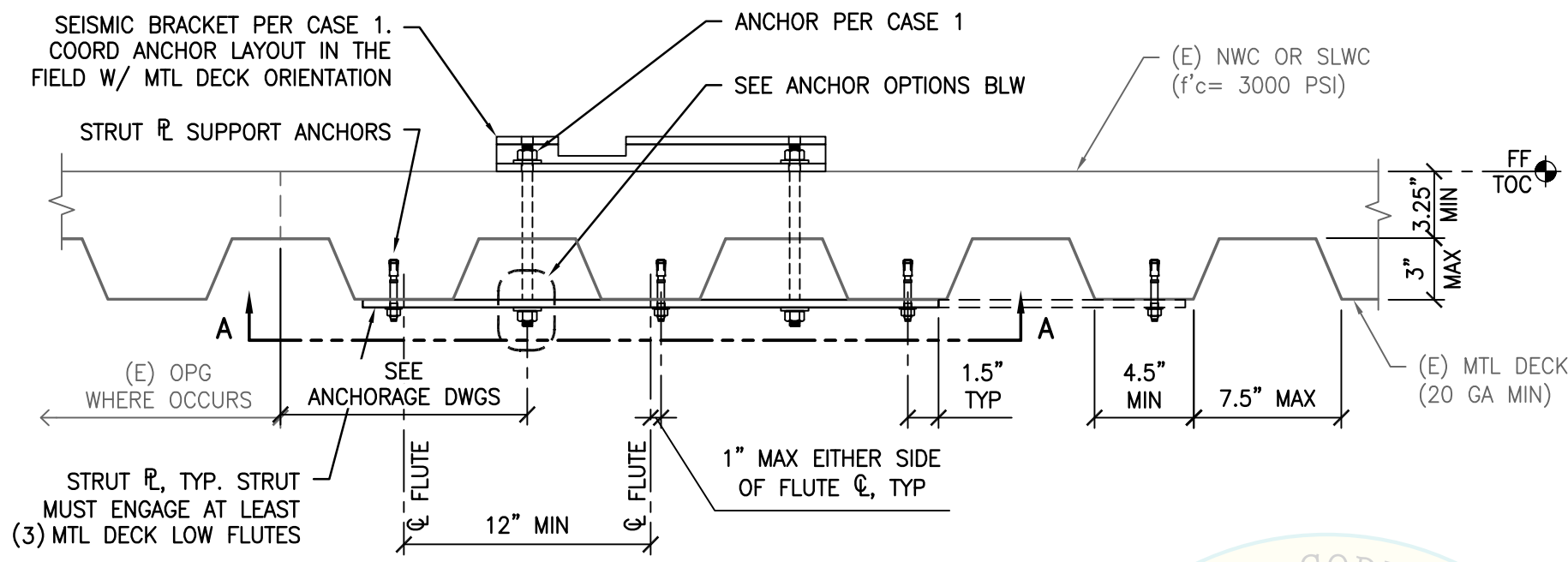


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EXTEND STRUT LENGTH TO
NEXT ADJ LOW FLUTE IF ANCHORS
ARE LESS THAN 2\"/>

OPM-0463-13

BOTT OF MTL DECK
(LOW FLUTES SHADED
FOR CLARITY)

DATE: 09/04/2018

BY: Jeffrey Kikumoto

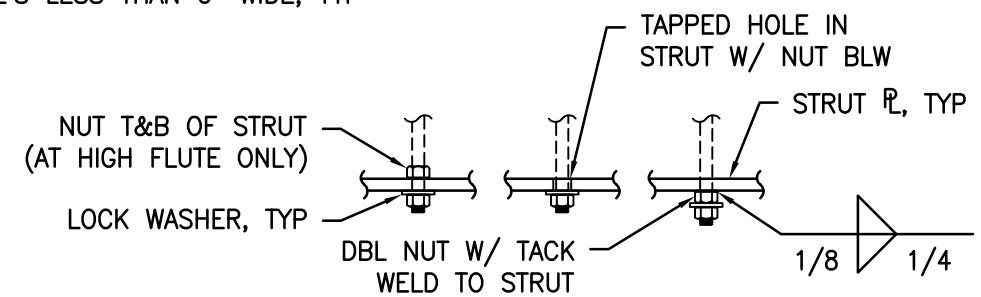
STRUT R SUPPORT ANCHORS:
3/8\"/>

2 EE OF R'S 6\"/>

1 EE OF R'S LESS THAN 6\"/>

NOTE:
GENERAL CONTRACTOR TO PROVIDE
& INSTALL THE FOLLOWING:

- STRUT PLATE
- ANCHORS



ANCHOR OPTIONS



SHEET TITLE: TYPICAL STRUT DETAILS



bioMérieux
VIRTUO
EQUIPMENT SUPPORTS & ATTACHMENTS

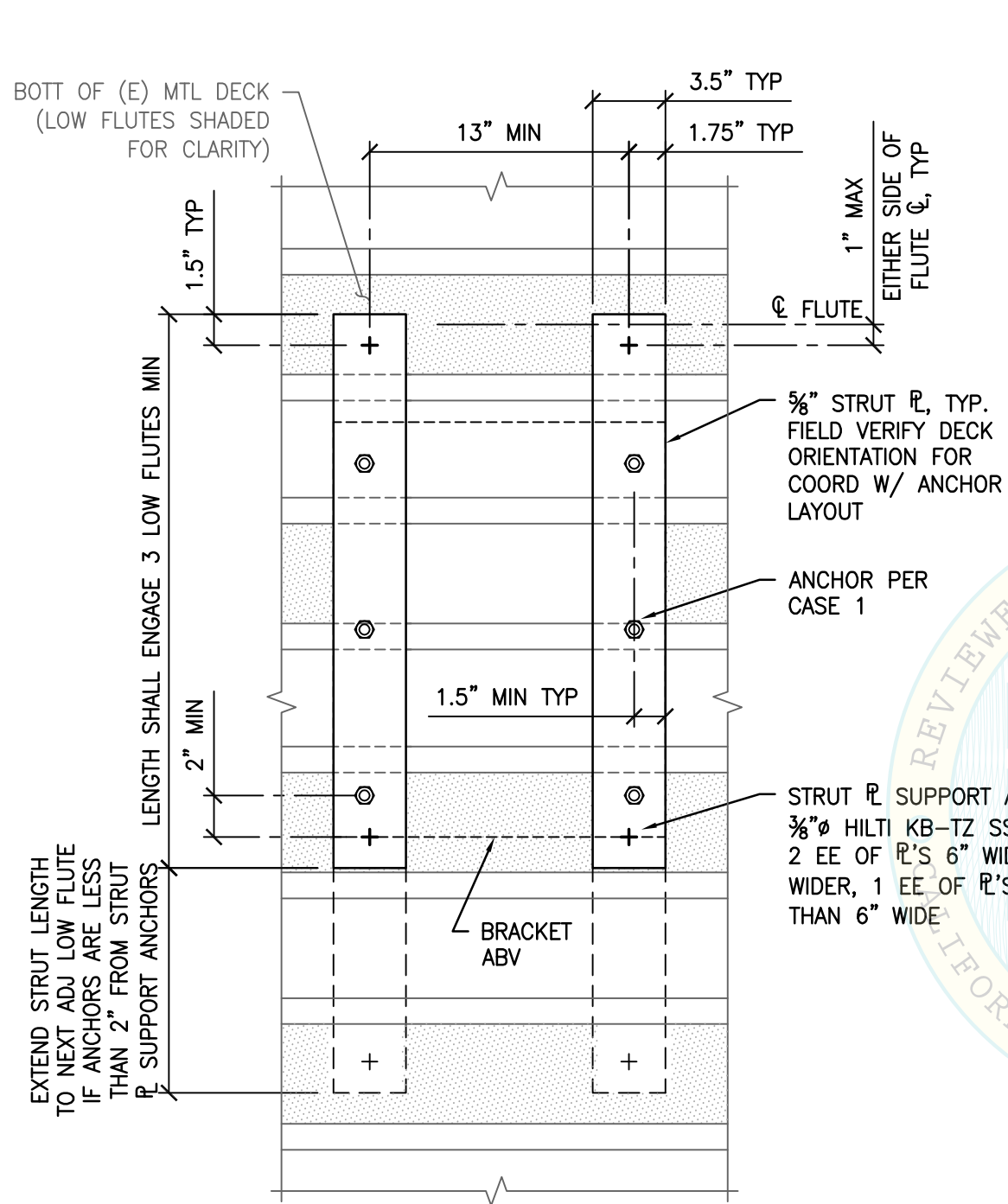


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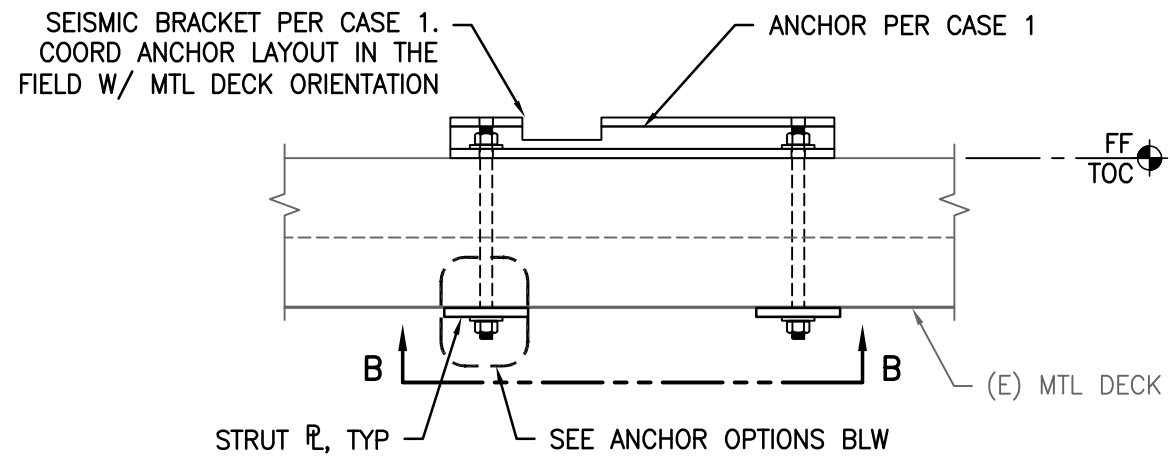
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SECTION B-B



NUT T&B OF STRUT
(AT HIGH FLUTE ONLY)

OPM-0463 LOCK WASHER, TYP

Jeffrey Y. Kikumoto

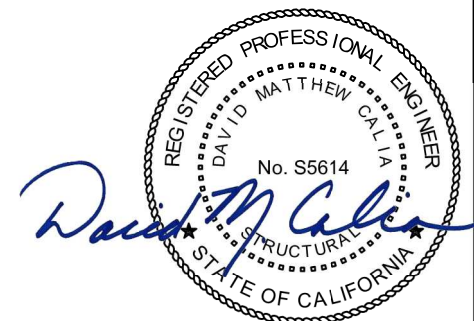
DATE: 09/04/2018

STRUT PL SUPPORT ANCHORS:
3/8\"/>

ANCHOR OPTIONS

NOTE:
GENERAL CONTRACTOR TO PROVIDE
& INSTALL THE FOLLOWING:

- STRUT PLATE
- ANCHORS



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SHEET TITLE: TYPICAL STRUT DETAILS



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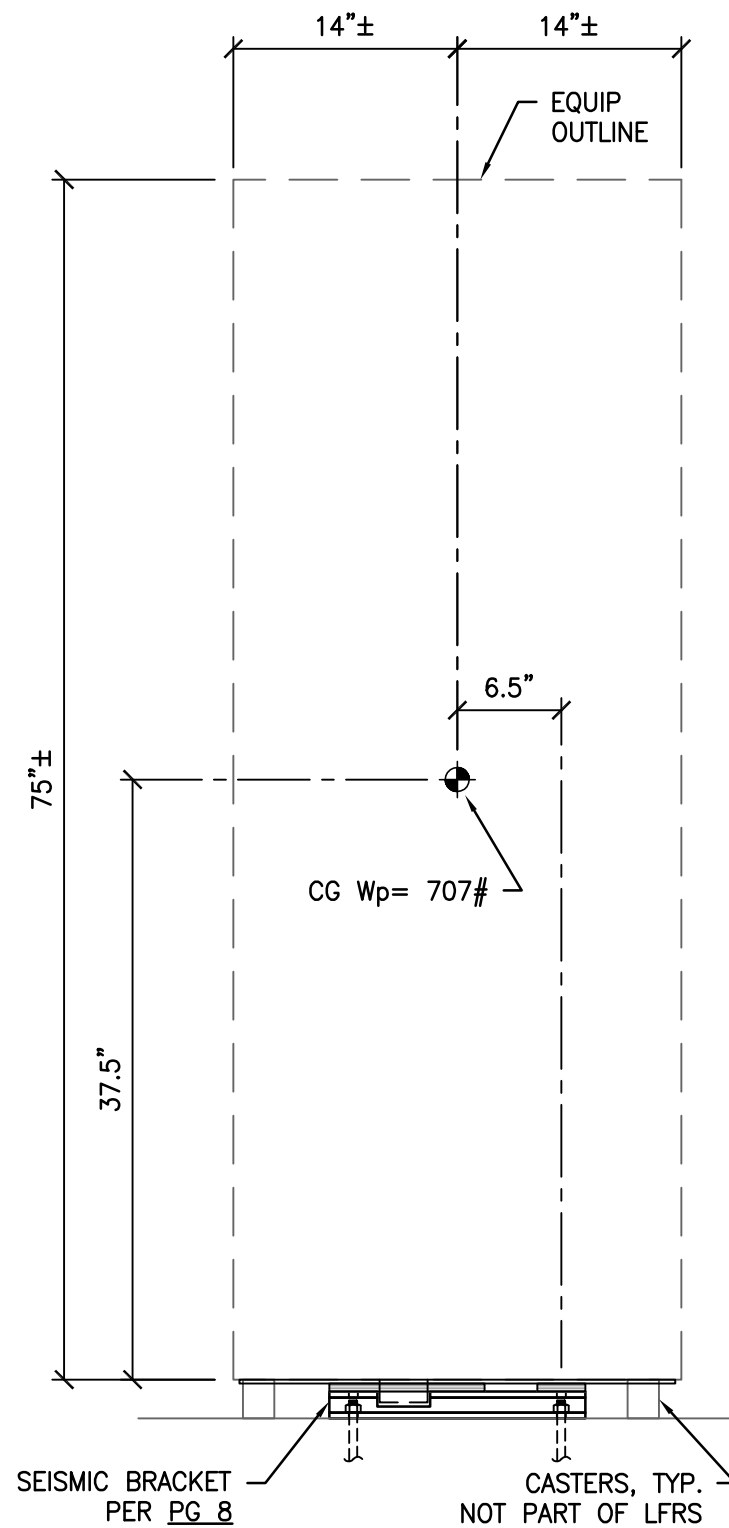
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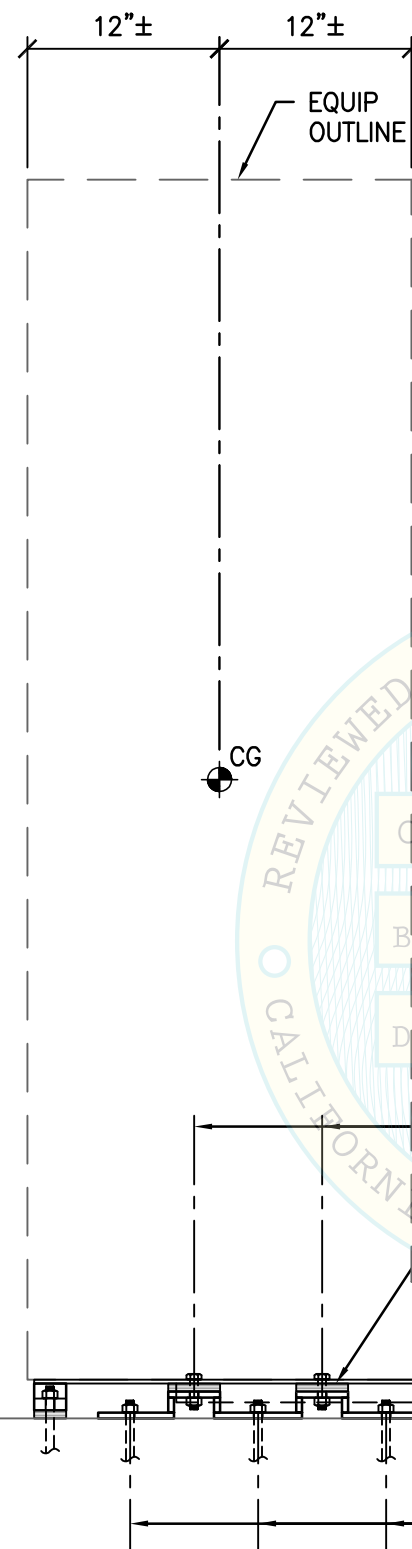
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| | | | By: | MTC |
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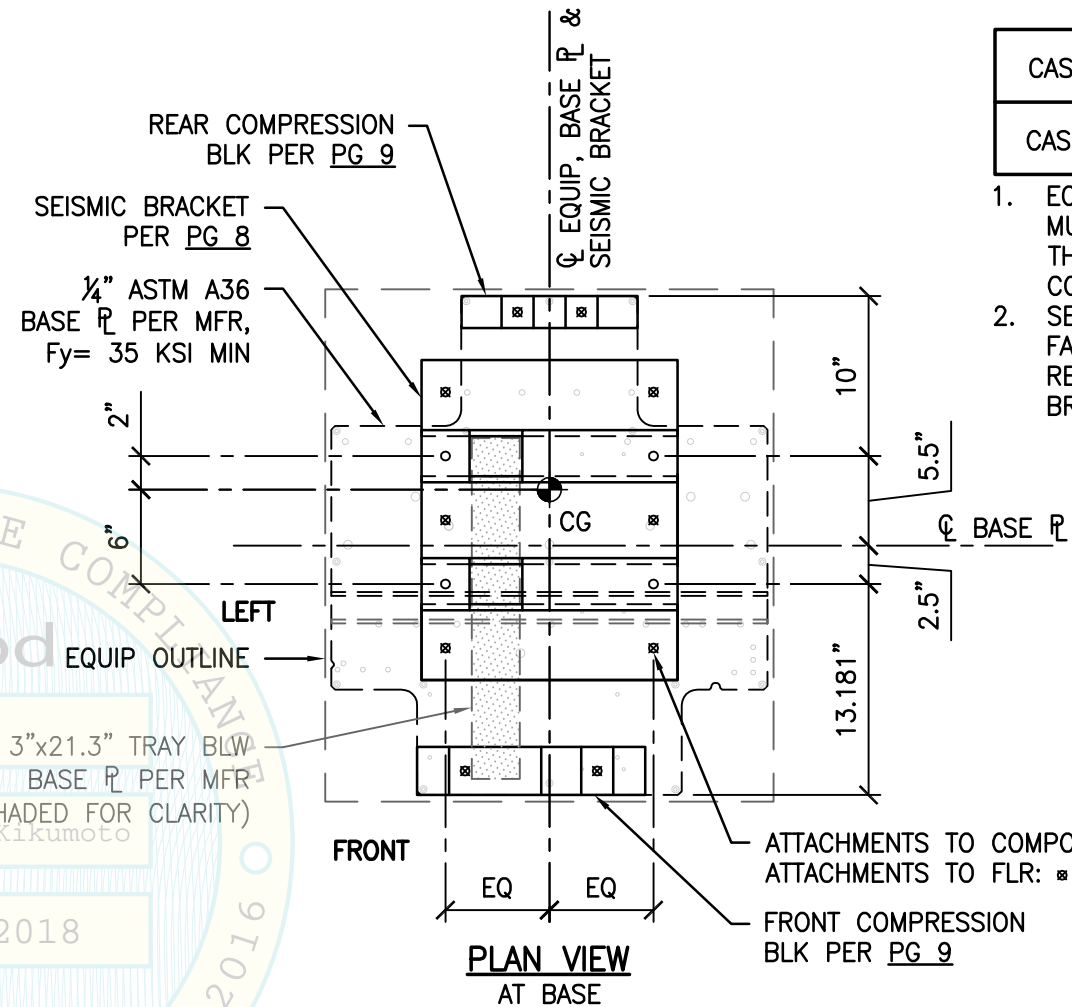
L:\Jobs\17\136 bioMérieux - Virtuo OPM\ACAD\STRU\S1.dwg Time:Aug31,2018--09:50am Login:camachom DimScale:1 LTScale:6



FRONT ELEV



LEFT ELEV



PLAN VIEW
AT BASE

MAX ANCHOR FORCES AT
LRFD AT EA COMPONENT
ATTACHMENT TO SUPPORT

| | T _{max} | V _{max} |
|--------|------------------|------------------|
| CASE 1 | 4715# | 957# |
| CASE 2 | 2639# | 539# |

1. ECCENTRICITY & PRYING ACTION MUST BE CONSIDERED BASED ON THE SEISMIC BRACKET CONFIGURATION.
2. SEE PGS 8 & 9 FOR THE FABRICATION & INSTALLATION REQUIREMENTS OF THE SEISMIC BRACKET.

NOTE:
CUT BEHIND THE FRONT
COMPRESSION BLK & IN
FRONT OF SEISMIC BRACKET.



NOT SEOR

SHEET TITLE: VIRTUO
BASE PLAN & ELEVATIONS



bioMérieux
VIRTUO
EQUIPMENT SUPPORTS & ATTACHMENTS



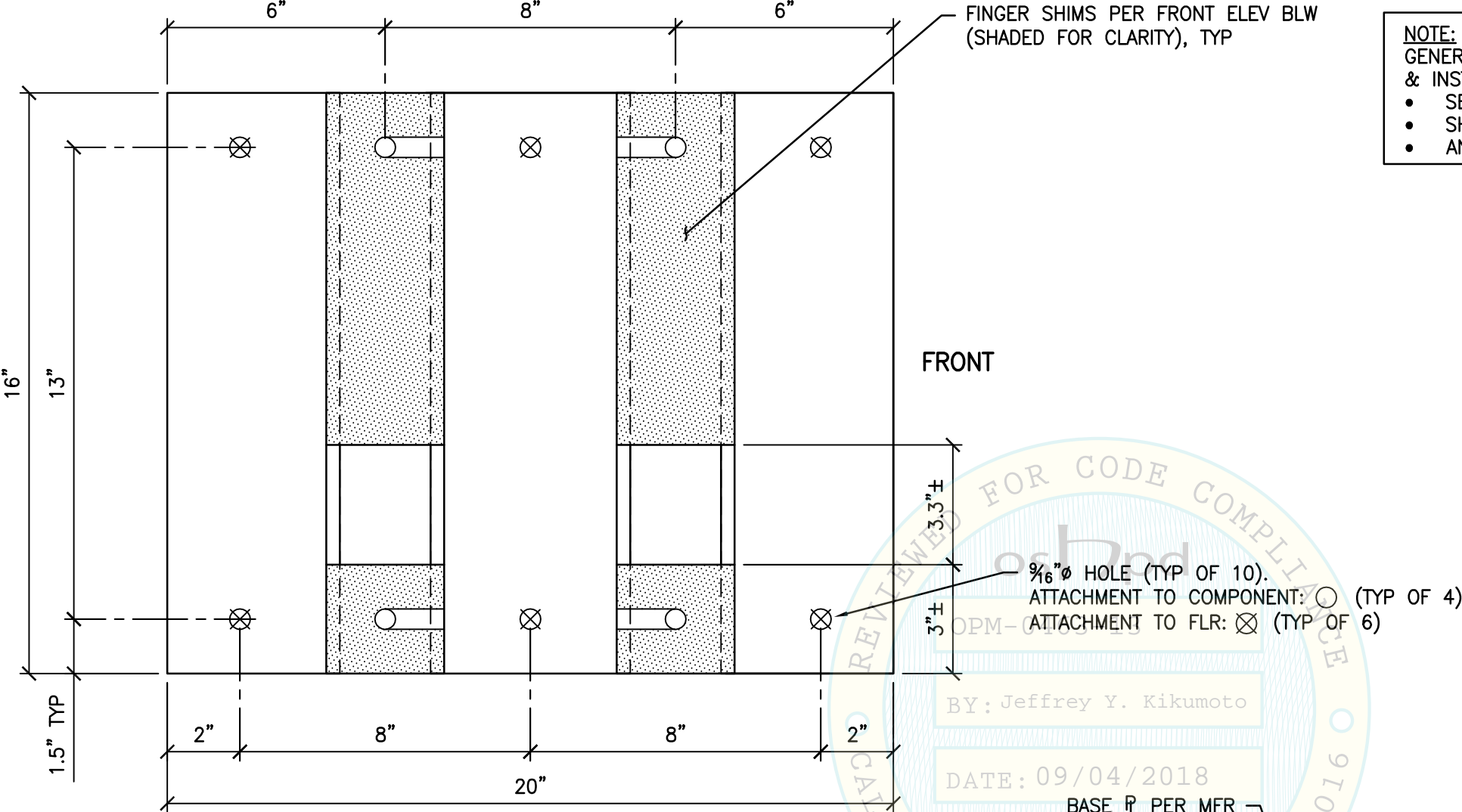
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SACRAMENTO, CA 95833

TEL (916) 920-2020
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| Rev | Description | Date | Job No: | 17136 |
|-----|-------------|------|---------|-----------|
| | | | Date: | 8/31/2018 |
| | | | By: | MTC |
| | | | Page: | 7 of 10 |

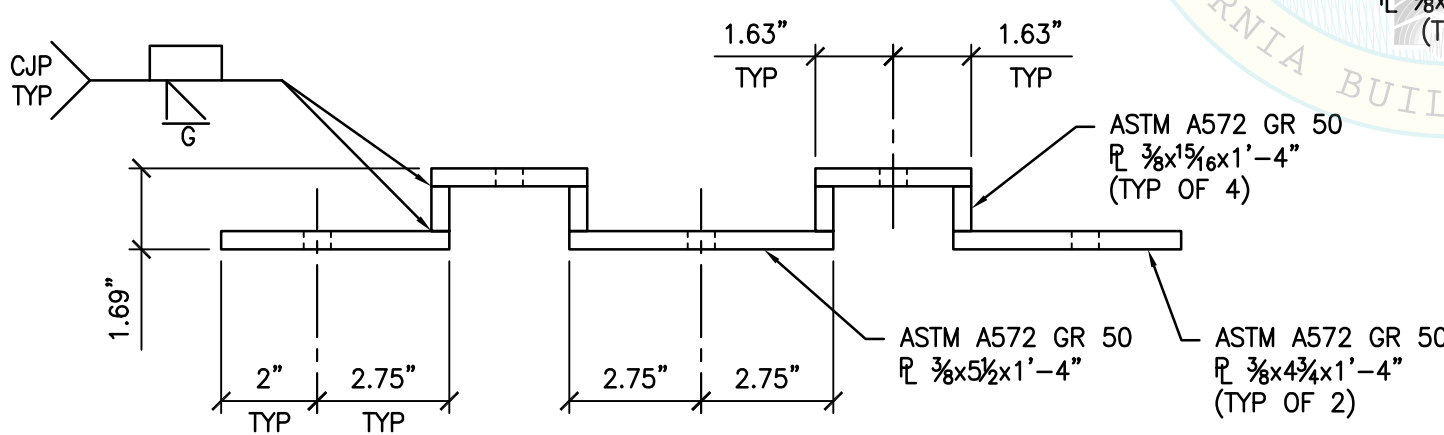
SEISMIC BRACKET DETAIL:



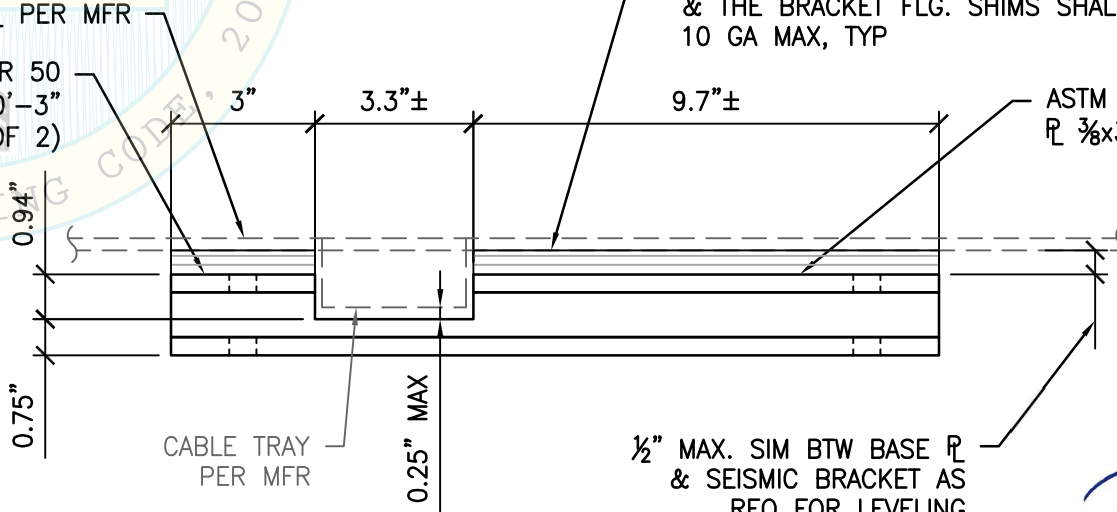
NOTE:
GENERAL CONTRACTOR TO PROVIDE
& INSTALL THE FOLLOWING:
• SEISMIC BRACKETS
• SHIMS
• ANCHORS

FRONT

PLAN VIEW



SIDE ELEV



FRONT ELEV



SHEET TITLE: VIRTUO
SEISMIC BRACKET DETAIL

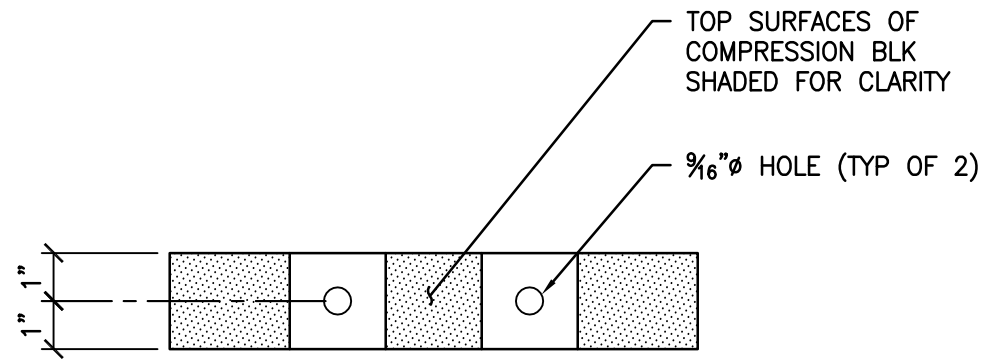


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VIRTUO
EQUIPMENT SUPPORTS & ATTACHMENTS

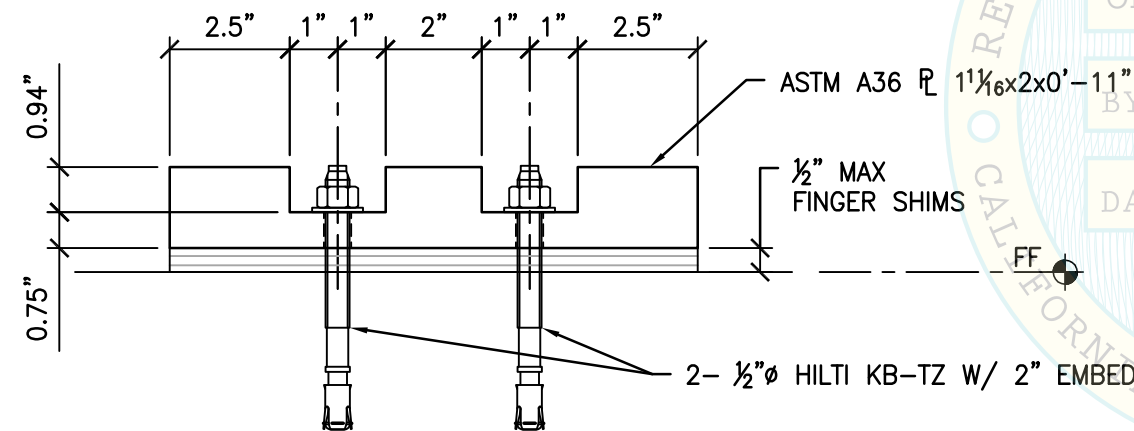


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| | | | Date: | 8/31/2018 |
| | | | By: | MTC |
| | | | Page: | 8 of 10 |

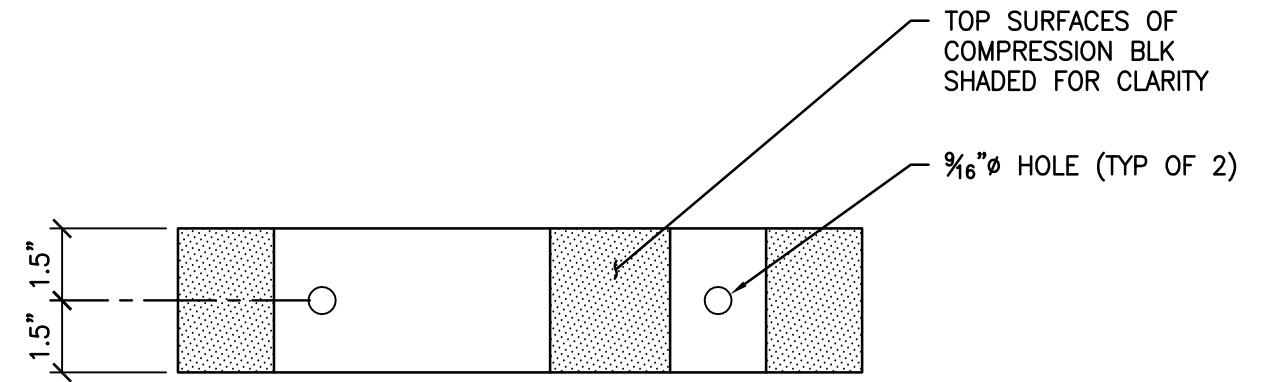


PLAN VIEW

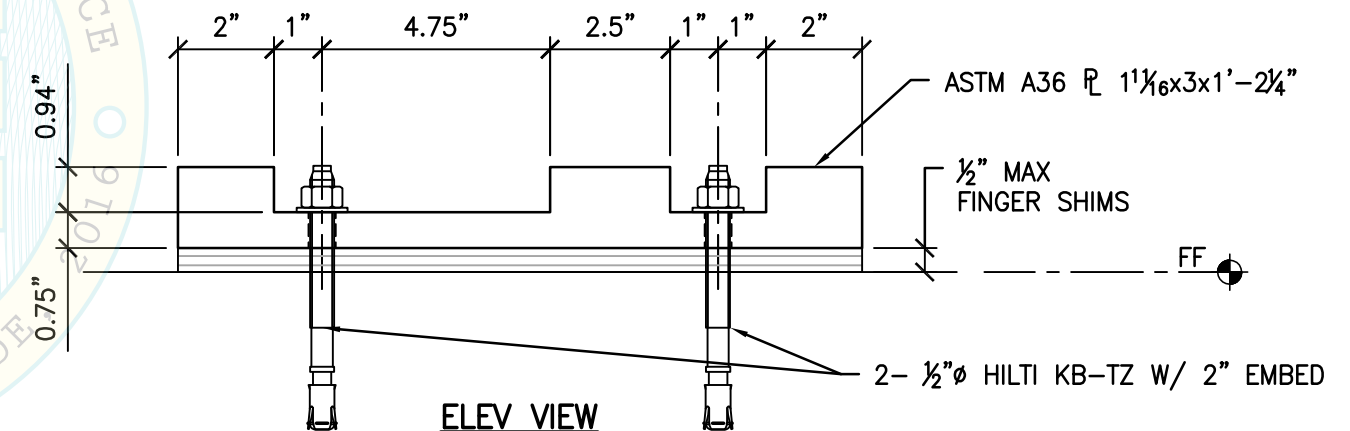


ELEV VIEW

REAR COMPRESSION BLOCK



PLAN VIEW



ELEV VIEW

FRONT COMPRESSION BLOCK

NOTE:
GENERAL CONTRACTOR TO PROVIDE
& INSTALL THE FOLLOWING:

- COMPRESSION BLKS
- SHIMS
- ANCHORS



NOT SEOR

SHEET TITLE: VIRTUO
REAR COMPRESSION BLOCK & FRONT COMPRESSION BLOCK DETAILS



bioMérieux
VIRTUO
EQUIPMENT SUPPORTS & ATTACHMENTS



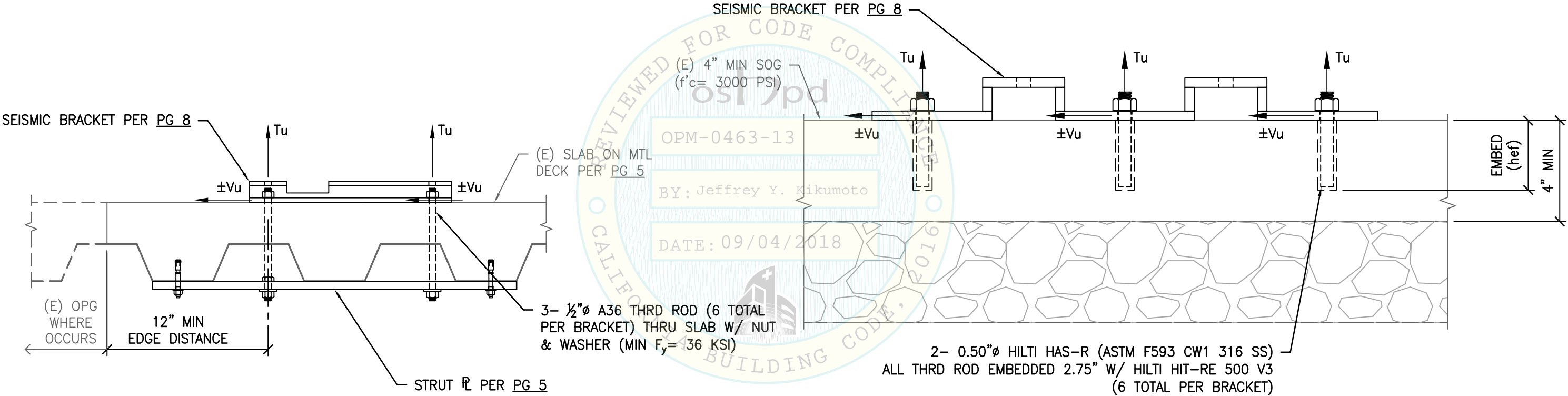
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| | | | 17136 |
| | | | Date: 8/31/2018 |
| | | | By: MTC |
| | | | Page: 9 of 10 |

| MAX ANCHOR FORCES AT LRFD AT EA ANCHOR TO CONC FLR | | |
|--|--------------------|-------------------|
| | Tu | Vu |
| CASE 1 z/h ≤ 1.0 | 5599# | 750# ¹ |
| CASE 2 z/h = 0 | 3134# ¹ | 423# ¹ |

1. INCLUDES MATERIAL OVERSTRENGTH FACTOR (ϕ) IN ACCORDANCE W/ ACI 318-14 SECTION 17.2.3.4.3(d) FOR TENSION OR SECTION 17.2.3.5.3(c) FOR SHEAR.



| | | | | | | | |
|--|--|--|--|-----|-------------|------|-----------------|
| SHEET TITLE: VITEK MASS SPECTROMETER SUPPORT & ATTACHMENT DETAILS | | | | Rev | Description | Date | Job No: 17136 |
|  bioMérieux VIRTUO EQUIPMENT SUPPORTS & ATTACHMENTS | | | | | | | Date: 8/31/2018 |
| | | | | | | | By: MTC |
| | | | | | | | Page: 10 of 10 |



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