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

OFFICE USE ONLY
APPLICATION #: OPM-0431-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

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

Manufacturer Information

Manufacturer: Hologic

Manufacturer's Technical Representative: Robert Percy

Mailing Address: 36 Apple Ridge Rd, Danbury CT 06810

Telephone: 203-207-4565 Email: robert.percy@hologic.com

Product Information

Product Name: 3Dimensions Gantry

Product Type: Mammography Screening System

Product Model Number: N/A

General Description: Gantry

Applicant Information

Applicant Company Name: Hologic

Contact Person: Robert Percy

Mailing Address: 36 Apple Ridge Rd, Danbury CT 06810

Telephone: 203-207-4565 Email: robert.percy@hologic.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: _____ Date: 6-1-17

Title: Mechanical Engineer Company Name: Hologic

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

Registered Design Professional Preparing Engineering Recommendations

Company Name: Don Lee Engineering

Name: Donald Lee California License Number: 2311

Mailing Address: 21008 Sylvanwood Ave., Lakewood, Ca 90715

Telephone: 562-860-7896 Email: Donleese@aol.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, 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: Date: 08-14-2017

Print Name: Jeffrey Kikumoto

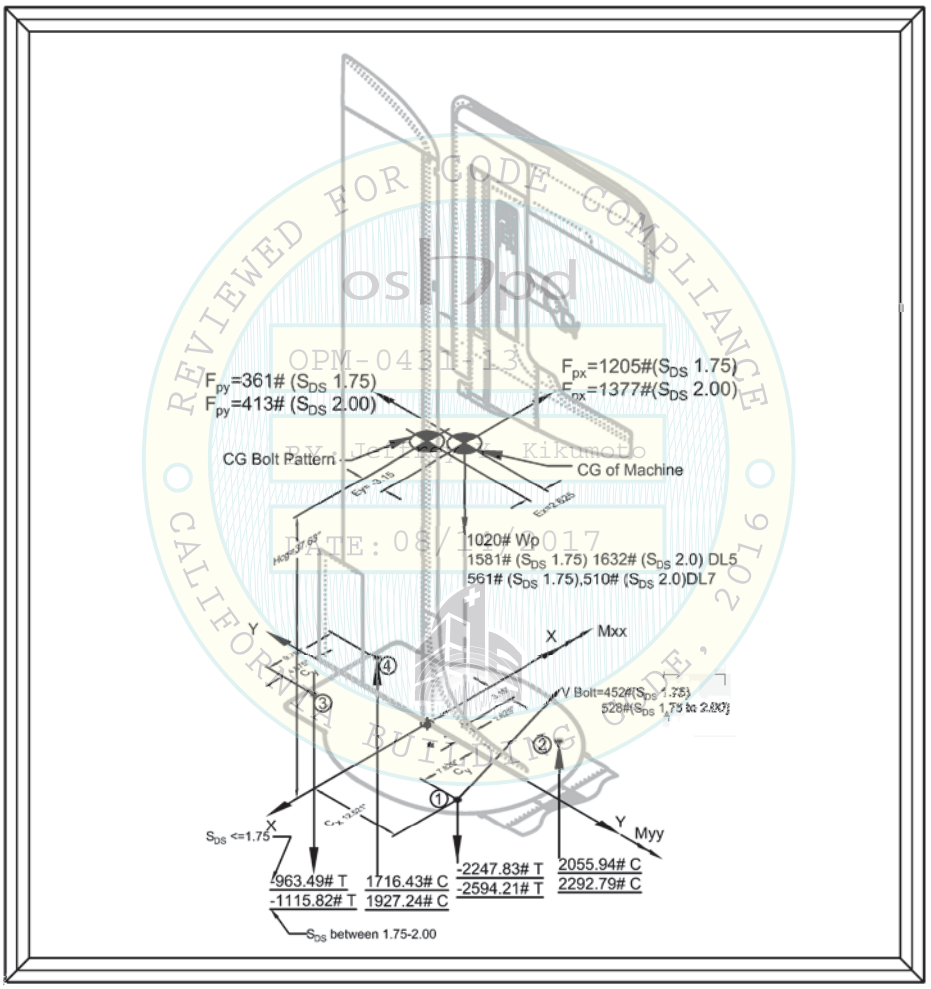
Title: SSE

Condition of Approval (if applicable):

Don Lee Engineering

21008 Sylvanwood Ave.
Lakewood, Ca 90715
562-860-7896
Donald E. Lee Structural Engineer #2311

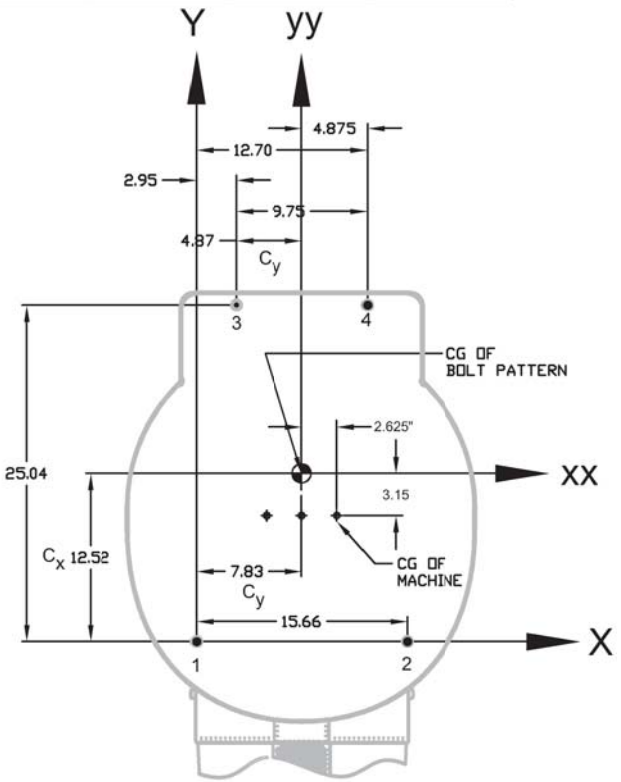
OPM-0431-13
Hologic 3Dimensions Gantry
Attachment Forces & Details



Prepared by
Don Lee S. E. #2311
Signed 7-25-2017

REGISTERED PROFESSIONAL ENGINEER
DONALD E. LEE
SE 2311
EXP 12/31/17
STRUCTURAL
STATE OF CALIFORNIA

Bolt Pattern Coordinates			Bolt Pattern Properties	
Location	X	Y	I_{xx}	627.29 In^4
①	0.00"	0.00"	I_{yy}	170.31 In^4
②	0.00"	15.658"		
③	2.954"	25.042"		
④	12.704"	25.042"	Zcg	
cg	7.829"	12.521"	37.63"	

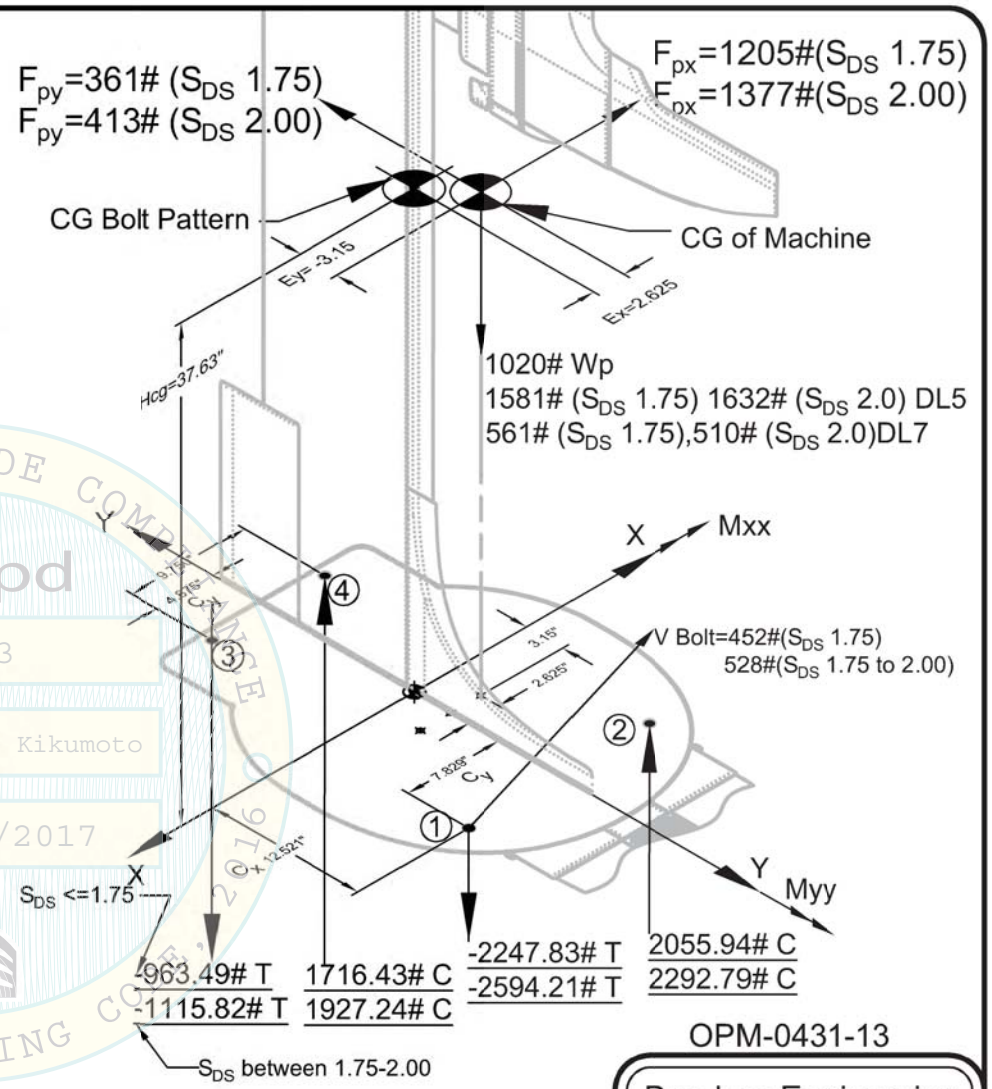


1. This pre-approval covers only the supports & attachments of the unit to the structure based on the relation of the Cg and bolt pattern shown at the right.

2. The details in this pre-approval may be used at any location in the state of California where S_{DS} is ≦ 2.00, & $\frac{z}{h}=0$

3.The forces shown using Strength Design were obtained from ASCE 7-10 Using Eqn's. 13.3-1,2,3 and Load Combinations 5 & 7 from Section 12.4.3.2 with these parameters:Wp=1020 Lbs. S_{DS} is ≦1.75 & 2.00 (See details for applicability) I_p=1.5 z=0 h=1.0 $\frac{z}{h}$=0 At Grade ASCE 7-10 Table 13.6-1: Other Mechanical or Electrical Equipment, a_p=1.0 R_p=1.5 Ω_0=1.5 (Where Req'd for Anchorage to Concrete)

4. This pre-approval encompasses all of the weights and C_g locations up to those shown. V-10-27-14)



REGISTERED PROFESSIONAL ENGINEER
DONALD E. LEE
SE 2311
EXP 12/31/17
STRUCTURAL
STATE OF CALIFORNIA

Signed 7-25-2017

OPM-0431-13

Don Lee Engineering
21008 Sylvanwood Ave.
Lakewood, Ca 90715
562-860-7896

Project	DLE-(A)-2017	S0
Date	July 25, 2017	
Scale	None	

2 of 6 7/26/2017

Hologic 3Dimensions Gantry

EXPANSION BOLTS

Version 9-22-2014

1. CONCRETE ANCHORS SHALL BE:
HILTI KB-TZ-ESR1917, Reissued May 2017.

2. INSPECTION AND TESTING OF EXPANSION BOLTS SHALL COMPLY WITH 2016 CBC Section 1910A.5 USING THE TORQUE WRENCH METHOD AND IN ACCORDANCE WITH THE PROCEDURES BELOW.

3. TORQUE WRENCHES SHALL BE FLAT OR ROUND BEAM TYPE CALIBRATED BY AN APPROVED LABORATORY IN ACCORDANCE WITH ACCEPTED PROCEDURES.

4. THE BOLTS SHALL BE INSTALLED AS DESCRIBED IN THE APPLICABLE ICC-ESR REPORT, WHICH SHALL BE ONSITE PRIOR TO THE START OF WORK.

5. Testing of the post-installed anchors shall be done in the presence of the special inspector and a report of the test results shall be submitted to the enforcement agency.

6. THE HOLES SHALL NOT BE DRILLED UNTIL THE BOLTS TO BE USED ARE ON SITE.

7. INSPECTOR SHALL MEASURE THE LENGTH OF THE BOLTS AND ENSURE THAT THEY ARE THE PROPER PART NUMBER AND LENGTH SHOWN IN DETAIL $\frac{3}{S3.}$

8. OBSERVE THE DRILLING OF THE HOLES AND MEASURE THE ACTUAL DEPTH.

9. IF THE HOLE DEPTH EXCEEDS THAT SHOWN IN DETAIL $\frac{3}{S3.}$, CARE SHALL BE TAKEN WHEN DRIVING THE BOLTS INTO THE HOLES SO THAT THE EXTENSION OF THE BOLT ABOVE THE SURFACE IS AS SHOWN IN DETAIL $\frac{3}{S3.}$.

10. **INITIAL INSTALLATION**: TIGHTEN ALL ANCHORS ON EACH UNIT TO THE SPECIFIED TORQUE AND HOLD IT FOR 2 MINUTES. THE NUT SHALL NOT CONTINUE TO TURN. THE REQUIRED TORQUE SHALL BE REACHED WITHIN THE NUMBER OF TURNS AND/OR STICK OUT SHOWN IN DETAIL $\frac{3}{S3.}$.

11. **FINAL TEST A MINIMUM 24 HOURS AFTER INITIAL INSTALLATION.** THE NUTS SHALL REACH THE REQUIRED TORQUE WITHIN $\frac{1}{2}$ TURN.

12. BOLT HOLES MAY NOT BE REUSED. MINIMUM DISTANCE BETWEEN NEW BOLT AND ABANDONED HOLE SHALL BE 1-$\frac{1}{2}$". OLD HOLE SHALL BE FILLED WITH NON-SHRINK GROUT.

GENERAL NOTES:

Version 9-22-14

THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.

ALL CONSTRUCTION SHALL COMPLY WITH THE CBC 2016 & ITS REFERENCED STANDARDS.

THE SEISMIC ATTACHMENTS SHOWN ON THESE PLANS COMPLY WITH THE PROVISIONS OF 2016 CBC 1910A.5 FOR THE QUALIFICATION, DESIGN AND USE OF POST-INSTALLED ANCHORS IN CONCRETE.

THE CONTRACTOR SHALL VERIFY THAT THE SITE CONDITIONS ARE SUITABLE FOR INSTALLATION OF THE EQUIPMENT AS SHOWN ON THESE DRAWINGS AND ANY OTHER APPLICABLE PROJECT DRAWINGS. IF ANY PROBLEMS ARE FOUND, THE PERSON RESPONSIBLE FOR THE PROJECT SHALL BE NOTIFIED IN WRITING LISTING THE PROBLEMS.

LOCATE ALL REINFORCEMENT, CONDUIT, PIPES OR OTHER ITEMS IN THE CONCRETE SLAB PRIOR TO DRILLING THE BOLT HOLES. NOTIFY PERSON IN CHARGE OF THE PROJECT BEFORE CONTINUING IF ANY INTERFERENCE IS FOUND.

THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CONSTRUCTION SAFTEY PROCEDURES.

WHEN THE TEST LAB IS CALLED TO THE SITE, A REPORT MUST BE FILED STATING THE REASON FOR THE CALL AND THE DISPOSITION OF THE CALL.

The Structural Engineer of Record Shall:

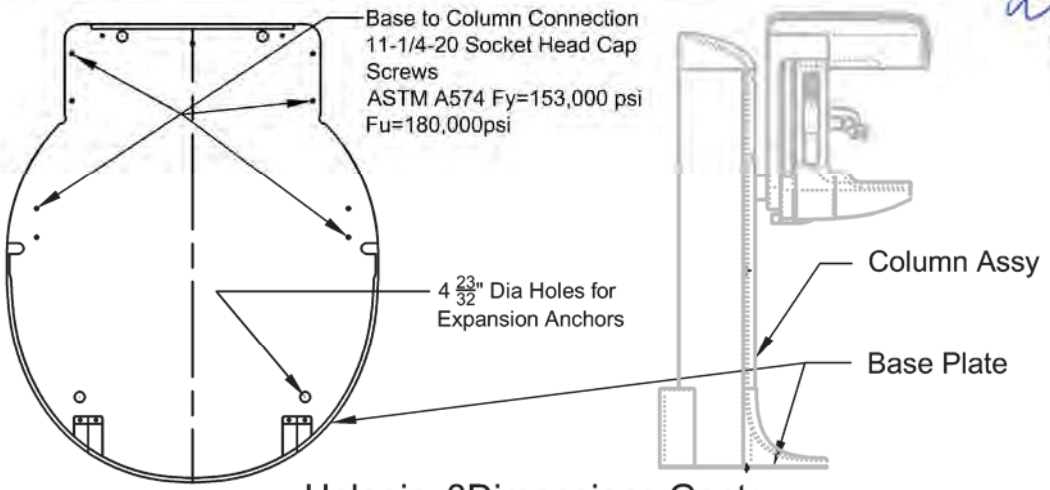
Version 9-23-14

1. Verify the equipment is anchored to a normal weight concrete slab at grade (Minimum T=5" f'c=2500 Psi), located such that adequate bolt strength and foundation size are provided. The anchors shall meet the requirements of the applicable ICC-ESR.

2. Verify that the anchors are an adequate distance from any slab edge, opening or control joint. (see Detail 1/S2).

3. Verify that all new or existing anchors are an adequate distance from the anchors shown in this pre-approval. SEOR shall verify that there is no adverse interaction where other anchors are within 18" from this unit's anchors.

4. Verify that the installation is in conformance with the 2016 CBC, that the site specific values of S_{DS} & $\frac{z}{h}$ do not exceed the values shown on Sheet S0, and with the details shown in this pre-approval. Verify that the actual equipment's weight, CG location, anchor locations, anchor details, and the material and gage of the unit where attachments are made agree with the information shown on the pre-approval documents. Provide any support structure required to support the weights and forces shown in addition to all other required loads.



Hologic 3Dimensions Gantry

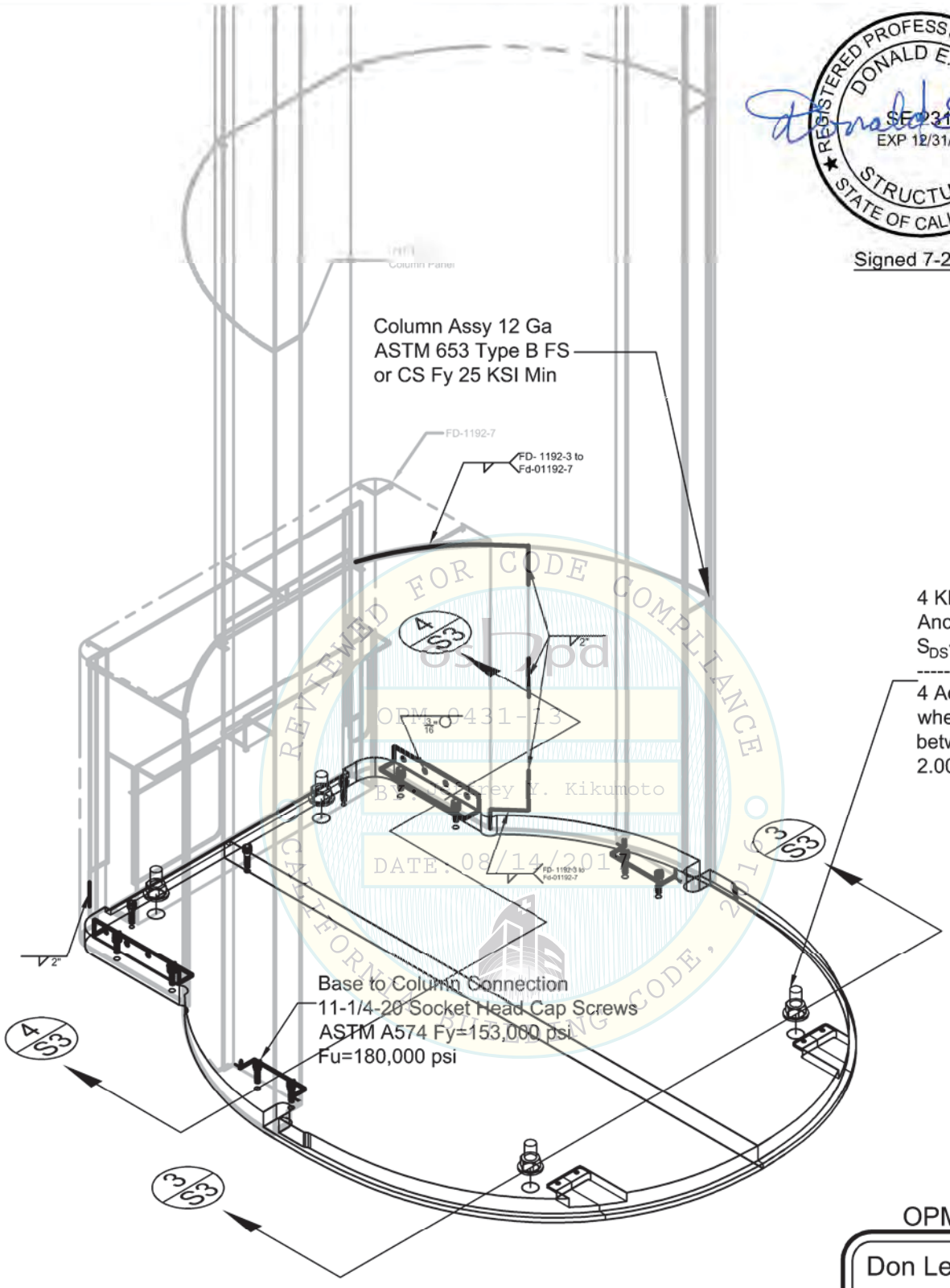
All Items shown are Integral with Gantry Except the Expansion Bolts

OPM-0431-13

Don Lee Engineering
21008 Sylvanwood Ave.
Lakewood, Ca 90715
562-860-7896

Project	DLE-(A)-2017	S1
Date	July 25, 2017	
Scale	None	

3 of 6 7/26/2017



REGISTERED PROFESSIONAL ENGINEER
DONALD E. LEE
SE 2311
EXP 12/31/17
STRUCTURAL
STATE OF CALIFORNIA

Signed 7-25-2017

Structural Schematic
Hologic 3Dimensions Gantry

OPM-0431-13

Don Lee Engineering
21008 Sylvanwood Ave.
Lakewood, Ca 90715
562-860-7896

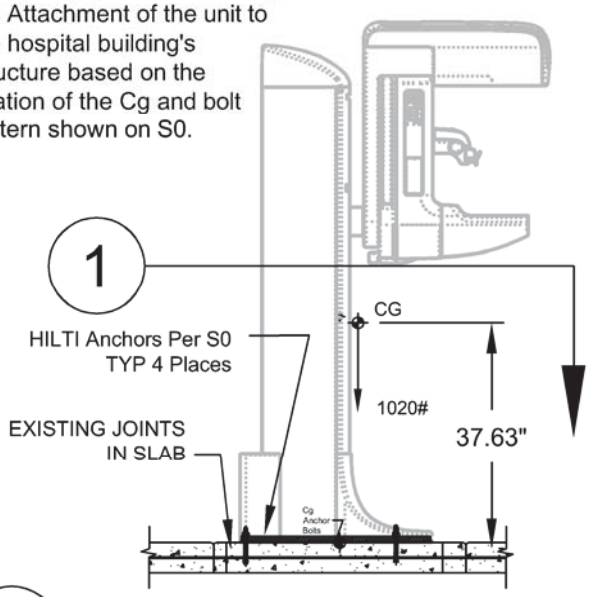
Project	DLE-(A)-2017
Date	July 25, 2017
Scale	None

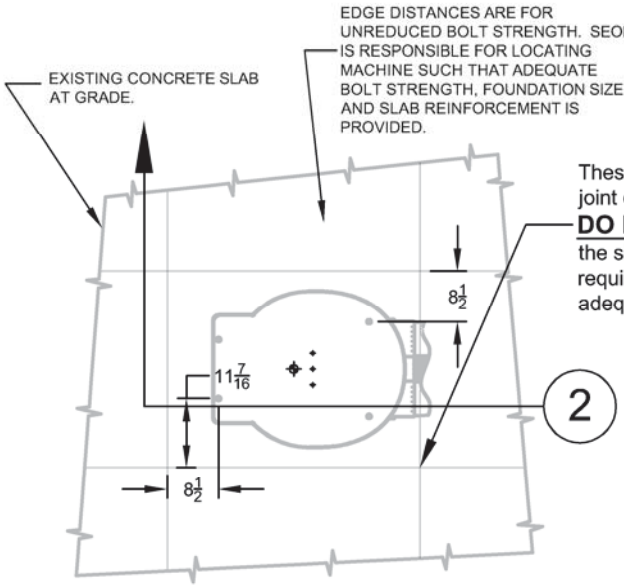
S2

4 of 6 7/26/2017

D:\MyFiles FII\3Dimensions Gantry\OPM\3Dimensions Gantry OPM-0431-13.dwg, 7/26/2017 8:53:43 AM

This pre-approval covers only the Attachment of the unit to the hospital building's structure based on the relation of the Cg and bolt pattern shown on S0.





2 3Dimensions Gantry

3/8"=1'-0"

1 3Dimensions Gantry installed on existing concrete slab. minimum: 5" thick, normal weight, fc=2500 PSI.

Scale 3/8"=1'-0"

4/S3 Machine Frame to Base Connection

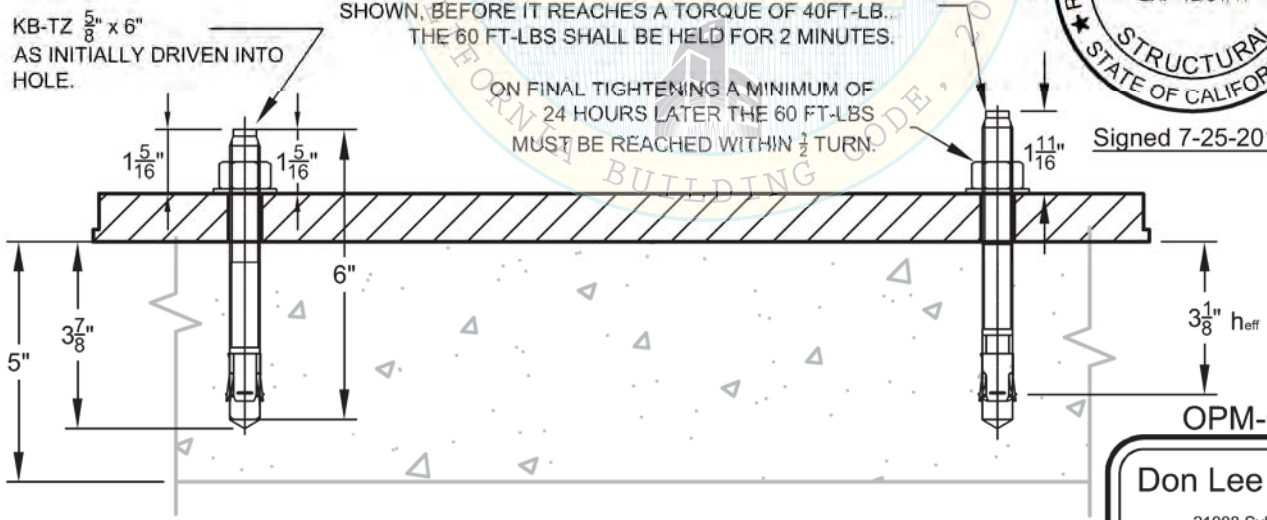
Scale 3"=1'-0"

ON INITIAL TIGHTENING THE BOLT SHALL NOT MOVE UPWARD MORE THAN 4 TURNS, OR THE EXTENSION SHOWN, BEFORE IT REACHES A TORQUE OF 40FT-LB.. THE 60 FT-LBS SHALL BE HELD FOR 2 MINUTES.

ON FINAL TIGHTENING A MINIMUM OF 24 HOURS LATER THE 60 FT-LBS MUST BE REACHED WITHIN 1/2 TURN.

REGISTERED PROFESSIONAL ENGINEER
DONALD E. LEE
SE2311
EXP 12/31/17
STRUCTURAL
STATE OF CALIFORNIA

Signed 7-25-2017



OPM-0431-13

3/S3 Expansion Bolt Installation Details

Scale 3"=1'-0"

Hologic 3Dimensions Gantry

Don Lee Engineering
21008 Sylvanwood Ave.
Lakewood, Ca 90715
562-860-7896

Project	DLE-(A)-2017
Date	July 25, 2017
Scale	None

S3

This pre-approval covers only the Attachment of the unit to the hospital building's structure based on the relation of the Cg and bolt pattern shown on S0.

REGISTERED PROFESSIONAL ENGINEER
DONALD E. LEE
SE-2311
EXP 12/31/17
STRUCTURAL
STATE OF CALIFORNIA

Signed 7-25-2017

ADHESIVE ANCHORS:

1. Inspection and testing of adhesive anchors shall comply with the 2016 CBC Sections 1901A.3, 1910A.5.2, and 1910A.5.4, and 1910A.5.5.

2. Installation shall be per the manufacturer's instructions, which shall be on site prior to the start of work.

3. Anchors shall be Hilti HIT-HY 200 with threaded rod per ESR-3187 revised November 2016.

4. Threaded rod shall be ASTM F1554 Gr. 55 or ASTM A193 Gr. B7 with UNC threads per the diameter specified on the drawings.

5. Continuous inspection is required.

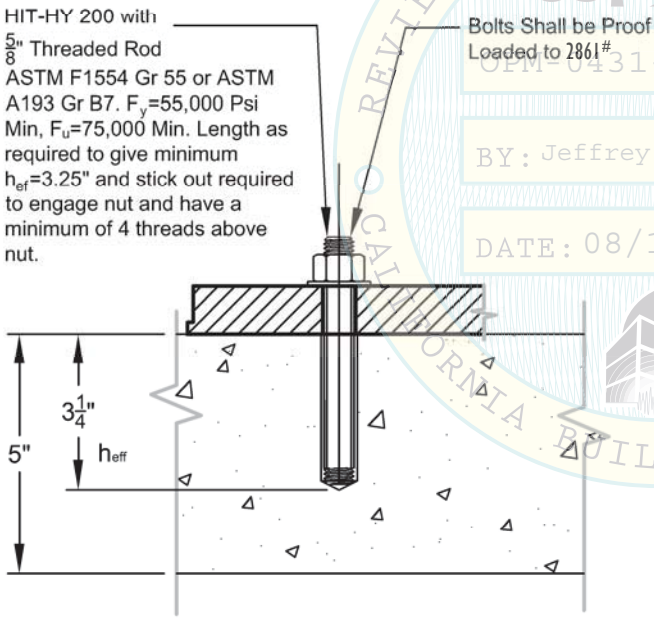
6. The inspector shall verify that the proper drill sizes and types are on hand.

7. The inspector shall verify that the anchor rods are long enough to provide the required stick using the as drilled holes.

8. The anchors shall be tested to the loads shown on the drawings by the hydraulic ram method.

9. The test load must be held for 15 seconds and the anchor shall exhibit no discernible movement during the test.

10. Bolt holes shall not be reused. Minimum distance between new hole and abandoned one shall be 1-1/2".



OPM-0431-13

Don Lee Engineering
21008 Sylvanwood Ave.
Lakewood, Ca 90715
562-860-7896

Project	DLE-(A)-2017
Date	July 25, 2017
Scale	None

S4

6 of 6 7/26/2017

Hologic 3Dimensions Gantry