



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-0751

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal/Update

Manufacturer Information

Manufacturer: Labconco Corporation

Manufacturer's Technical Representative: David Wasescha

Mailing Address: 8811 Prospect Ave, Kansas City, MO 64132

Telephone: (800) 821-5525 Email: dwasescha@labconco.com

Product Information

Product Name: Labconco Logic+ Biosafety Cabinet

Product Type: Class II Biosafety Cabinet

Product Model Number: 3023, 3024, 3025, 3026, 3034, and 3036

General Description: Fume Hoods and Stand/Wall mount

Applicant Information

Applicant Company Name: Labconco Corporation

Contact Person: David Wasescha

Mailing Address: 8811 Prospect Ave, Kansas City, MO 64132

Telephone: (800) 821-5525 Email: dwasescha@labconco.com

Title: Director of Biosafety Products

"A healthier California where all receive equitable, affordable, and quality health care"

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: CUSHING TERRELL

Name: Sushil Shenoy California License Number: CE87108

Mailing Address: 5915 S Regal St, STE 314, Spokane, WA 99223

Telephone: (509) 921-7731 Email: sushilshenoy@cushingterrell.com

Certification Method

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

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 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: 7/23/2025

Name: William Staehlin

Title: Senior Structural Engineer

Condition of Approval (if applicable):

"A healthier California where all receive equitable, affordable, and quality health care"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY





EXP: 9/30/2025



**Cushing
Terrell**

cushingterrell.com

800.757.9522

PROJECT #: 24-01-058

LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
WALL MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
COVER &
GENERAL NOTES

SHEET
S1

LABCONCO LOGIC SERIES CLASS II BIOLOGICAL SAFETY FUME HOOD; SERIES 3023, 3024, 3025, 3026, 3034, AND 3036

GENERAL NOTES – LABCONCO BIO CABINETS OPM

I. GENERAL REQUIREMENTS:

1. THIS HCAI PRE APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2022 CALIFORNIA BUILDING CODE (CBC). THE DEMAND (DESIGN FORCES) FOR USE WITH THE OPM SHALL BE BASED ON THE 2022 CBC.
2. DESIGN CRITERIA AND LIMITATIONS:
 - A. $S_{DS} \leq 1.5$ AND ≤ 2.5
 - B. $a_p = 1.0$
 - C. $R_p = 2.5$
 - D. $z/h \leq 1$
 - E. $\Omega_0 = 2.0$ (LABORATORY EQUIPMENT PER ASCE 7-16 TABLE 13.5-1)

II. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD:

1. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2022 CBC AND WITH THE DETAILS, MATERIAL, AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THESE DOCUMENTS.
2. VERIFY THAT THE PROJECT SPECIFIC VALUES OF S_{DS} AND z/h FOUND ON THESE DOCUMENTS ARE NOT EXCEEDED.
3. PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS. VERIFY THE ADEQUACY OF THE STRUCTURE THAT SUPPORTS THE EQUIPMENT FOR THE LOADS IMPOSED ON THEM BY THE EQUIPMENT IN ADDITION TO ALL OTHER LOADS.

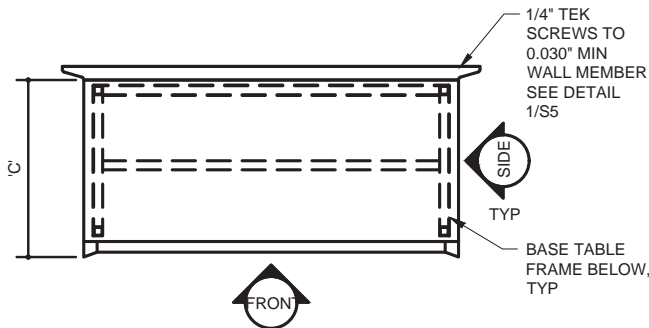
III. COMPONENT, SUPPORT, AND ATTACHMENT MATERIALS

1. BASE TABLE SUPPORT FRAME TUBING: ASTM A513, TYPE 2; $F_y = 32$ KSI
2. THREADED RODS AND STRUCTURAL STEEL ANGLES: ASTM A36; $F_y = 36$ KSI
3. BOLTS: ASTM A307
4. NUTS: ASTM A563
5. HARDENED PLAIN WASHERS: ASTM F436
6. SHEET METAL SCREWS: TEKS BY ITW BUILDEX, ICC-ES ESR-3223. SCREWS SHALL HAVE TEKS/5 DRILL POINT WITH DRILLING CAPACITY OF 0.125" OF MATERIAL, MINIMUM, AND 0.500", MAXIMUM. SCREWS ARE SPECIFIED THUS: 12-24 x 1 1/4" IS A #12 DIAMETER SCREW WITH 24 THREADS PER INCH AND 1 1/4" LONG.
7. SHEET STEEL PLATES AND BENT PLATES (12GA THICKNESS OR LESS): ASTM A568; $F_y = 33$ KSI, MIN
8. BIO CABINET WALL/FLANGE AT INTERFACE WITH BASE TABLE SUPPORT FRAME: ASTM A276; $F_y = 30$ KSI

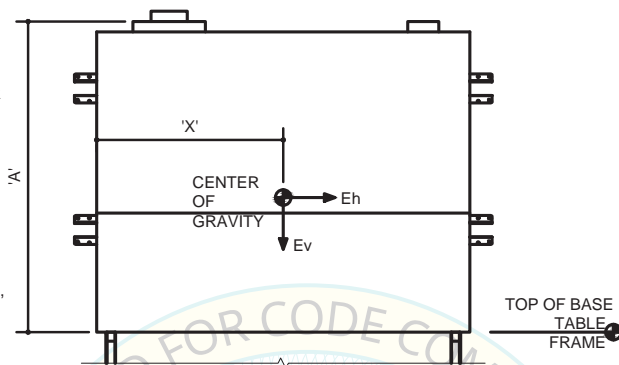
IV. LOAD COMBINATIONS

1. $1.2 DL + Ev + Eh + L + 0.2S$
2. $0.9 DL - Ev + Eh$

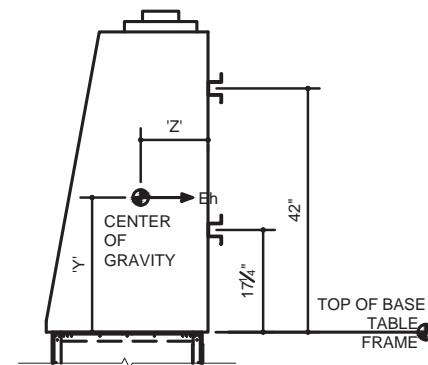




PLAN VIEW OF CABINET (COMPONENT)



ELEVATION VIEW: FRONT



ELEVATION VIEW: SIDE

1

CABINET DIMENSIONS

1/2" = 1'-0"

CABINET LOADS AT INTERFACE WITH WALL (1.0 x E, STRENGTH DESIGN)

CABINET SERIES	z/h = 0 S _{DS} ≤ 1.5		z/h = 1 S _{DS} ≤ 1.5		z/h = 0 S _{DS} ≤ 2.5		z/h = 1 S _{DS} ≤ 2.5	
	E _v (LBS)	E _h (LBS)	E _v (LBS)	E _h (LBS)	E _v (LBS)	E _h (LBS)	E _v (LBS)	E _h (LBS)
3023	126	151	126	454	210	252	210	756
3024	153	184	153	551	255	306	255	918
3025	180	216	180	648	300	360	300	1080
3026	207	248	207	745	345	414	345	1242
3034	162	194	162	583	270	324	270	972
3036	216	259	216	778	360	432	360	1296

CABINET SERIES	TYPE	CABINET DIMENSIONS AND CENTER OF GRAVITY						MAX CABINET WEIGHT (LBS)	BASE TABLE			TOTAL WEIGHT (LBS)
		A	B	C	X	Y	Z		MODEL	LENGTH	WEIGHT (LBS)	
3023	A2	61.7"	42.2"	31.2"	21.06"	34.36"	13.51"	420	3401003	38.5"	117	537
3024	A2	61.7"	54.2"	31.2"	27.03"	33.32"	13.40"	510	3401004	50.5"	125	635
3025	A2	61.7"	66.2"	31.2"	32.37"	33.70"	13.61"	600	3401005	62.5"	133	733
3026	A2	61.7"	78.2"	31.2"	38.28"	34.62"	13.53"	690	3401006	74.5"	150	839
3034	B2	61.6"	54.2"	31.2"	27.54"	34.48"	14.16"	540	3401004	50.5"	125	665
3036	B2	61.6"	78.2"	31.2"	39.10"	33.98"	13.20"	720	3401006	74.5"	150	869

SCHEDULE NOTE:

CENTER OF GRAVITY AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHTS SHOWN.



EXP: 9/30/2025



cushingterrell.com
800.757.9522
PROJECT #: 24-01-058

LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
WALL MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
CABINET
DIMENSIONS &
SCHEDULE

SHEET
S2



EXP: 9/30/2025



cushingterrell.com
800.757.9522
PROJECT #: 24-01-058

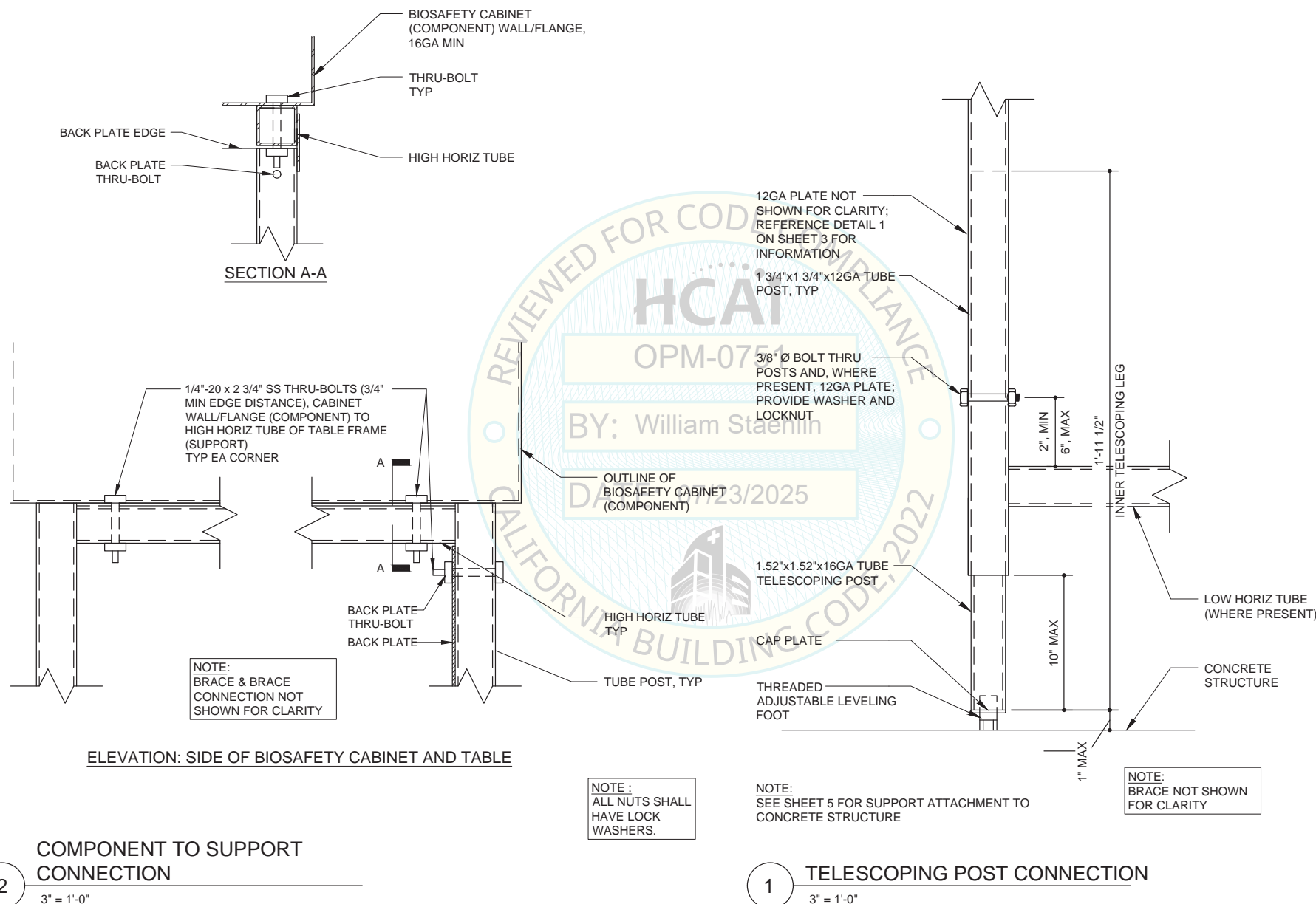
LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
WALL MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
TABLE FRAME
SUPPORT
DETAILS

SHEET
S4



COMPONENT TO SUPPORT CONNECTION

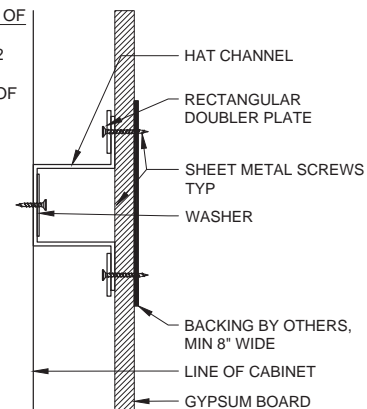
3" = 1'-0"

TELESCOPING POST CONNECTION

3" = 1'-0"

SECTION PROPERTIES OF
HAT CHANNEL
AREA = 0.63 INCHES ²

PRINCIPAL MOMENTS OF
INERTIA: (INCHES ⁴)
I_x = 0.73
I_y = 1.42



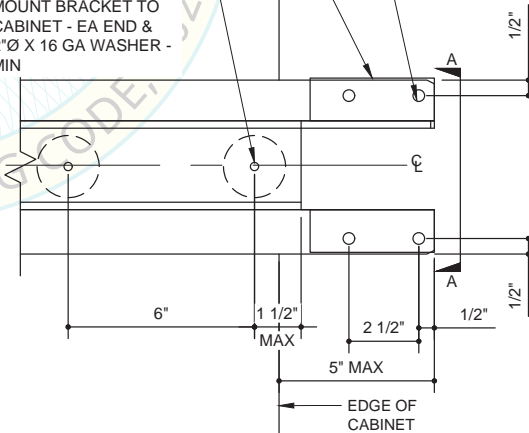
SECTION A-A

(4) 14-24x1 1/2" SHEET METAL SCREWS
INTO MIN 33 MIL (20 GA) THICK
BACKING DESIGNED BY OTHERS

4"x1.375"x 1/8" THICK PLATE
WASHER, TYP

EDGE OF CABINET,
WALL BRACKET EXTENDS UP
TO 5" PAST EDGE OF CABINET

(2) 12-24 x 3/4" SHEET
METAL SCREWS, WALL
MOUNT BRACKET TO
CABINET - EA END &
2"Ø X 16 GA WASHER -
MIN



WALL MOUNT BRACE CONNECTION TO WALL

3" = 1'-0"



EXP: 9/30/2025



**Cushing
Terrell**

cushingterrell.com

800.757.9522

PROJECT #: 24-01-058

LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
WALL MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
SUPPORT
ATTACHMENT
DETAILS

SHEET
S5

LABCONCO LOGIC SERIES CLASS II BIOLOGICAL SAFETY FUME HOOD; SERIES 3023, 3024, 3025, 3026, 3034, AND 3036

GENERAL NOTES – LABCONCO BIO CABINETS OPM

I. GENERAL REQUIREMENTS:

- THIS HCAI PRE APPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2022 CALIFORNIA BUILDING CODE (CBC). THE DEMAND (DESIGN FORCES) FOR USE WITH THE OPM SHALL BE BASED ON THE 2022 CBC.
- DESIGN CRITERIA AND LIMITATIONS:
 - $S_{DS} \leq 2.5$
 - $a_p = 1.0$
 - $R_p = 2.5$
 - z/h INSTALLED AT GROUND LEVEL W/ $S_{DS} \leq 2.5$
 - $\Omega_0 = 2.0$ (LABORATORY EQUIPMENT PER ASCE 7-16 TABLE 13.5-1)
- THE DESIGN OF THE SUPPORTS AND ATTACHMENTS DEPICTED ARE ADEQUATE FOR NORMAL WEIGHT CONCRETE SUBSTRATE WITH $f'_c \geq 3000$ PSI

II. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD:

- VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2022 CBC AND WITH THE DETAILS, MATERIAL, AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THESE DOCUMENTS.
- VERIFY THAT THE PROJECT SPECIFIC VALUES OF S_{DS} AND z/h FOUND ON THESE DOCUMENTS ARE NOT EXCEEDED.
- VERIFY THAT THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ANCHORED MEETS THE REQUIREMENTS OF THE APPLICABLE POST-INSTALLED ANCHOR ICC-ES EVALUATION REPORT.
- VERIFY THAT THE POST-INSTALLED ANCHORS COMPLY WITH THE MINIMUM SPACING AND EDGE DISTANCE REQUIREMENTS DEFINED IN THESE DOCUMENTS.
- VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE AN ADEQUATE DISTANCE FROM THE UNIT ATTACHMENTS AND CHECK FOR INTERACTION WHERE OTHER ANCHORS ARE WITHIN $18"$ OR $6 \times h_{ef}$ FROM THIS UNIT'S ANCHORS.
- PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN ADDITION TO ALL OTHER LOADS. VERIFY THE ADEQUACY OF THE STRUCTURE THAT SUPPORTS THE EQUIPMENT FOR THE LOADS IMPOSED ON THEM BY THE EQUIPMENT IN ADDITION TO ALL OTHER LOADS.

III. POST-INSTALLED ANCHORS:

- POST-INSTALLED ANCHORS FOR ATTACHING THE EQUIPMENT SUPPORT TO THE STRUCTURE SHALL BE KWIK BOLT T22 (ICC-ES ESR-4266; REISSUED DECEMBER, 2021) BY HILTI AND SHALL COMPLY WITH THE FOLLOWING. REFERENCE THE PRODUCT ICC-ES EVALUATION REPORT FOR MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ANCHOR DIAMETER	CONCRETE TYPE	CONCRETE f'_c	MIN SLAB THICKNESS	TORQUE TEST LOAD
5/8"	NWC	3000 psi	5" SLAB	40 ft-lb

- REFERENCE THE DETAILS IN THE DRAWINGS FOR ANCHOR MINIMUM EFFECTIVE EMBEDMENT (h_{ef} , NOT NOMINAL EMBEDMENT), MINIMUM SPACING, AND MINIMUM EDGE DISTANCE.
- THIS DOCUMENT ALLOWS FOR UP TO A MAXIMUM OF 2 ADJACENT CONCRETE SLAB EDGES, SEE DETAIL 2 ON SHEET 5.
- CARE AND CAUTION SHALL BE EXERCISED TO AVOID DAMAGING REINFORCING OR TENDONS IN THE EXISTING SLAB DURING DRILLING FOR ANCHORS.
- EXPANSION ANCHORS SHALL BE LONG ENOUGH TO PROVIDE FULL ENGAGEMENT OF THE NUT AND WASHER FOR THE SPECIFIED EMBEDMENT DEPTH.

IV. TESTING OF POST-INSTALLED CONCRETE ANCHORS:

- COMPLY WITH SECTION 1910A.5 OF THE 2022 CBC. AFTER A MINIMUM OF 24 HOURS HAVE ELAPSED SINCE INSTALLATION, TORQUE TESTING OF AT LEAST 50% OF THE POST-INSTALLED ANCHORS SHALL BE PERFORMED
- ACCEPTANCE CRITERIA: TORQUE WRENCH METHOD. ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN $\frac{1}{2}$ TURN OF THE NUT. IF ANY ANCHOR FAILS, ALL ANCHORS OF THE SAME TYPE SHALL BE TESTED, WHICH ARE INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.

V. COMPONENT, SUPPORT, AND ATTACHMENT MATERIALS

- BASE TABLE SUPPORT FRAME TUBING: ASTM A513, TYPE 2; $F_y = 32$ KSI
- THREADED RODS AND STRUCTURAL STEEL ANGLES: ASTM A36; $F_y = 36$ KSI
- BOLTS: ASTM A307
- NUTS: ASTM A563
- HARDENED PLAIN WASHERS: ASTM F436
- SHEET METAL SCREWS: TEKS BY ITW BUILDEX, ICC-ES ESR-3223. SCREWS SHALL HAVE TEKS/5 DRILL POINT WITH DRILLING CAPACITY OF 0.125" OF MATERIAL, MINIMUM, AND 0.500", MAXIMUM. SCREWS ARE SPECIFIED THUS: 12-24 x 1 1/4" IS A #12 DIAMETER SCREW WITH 24 THREADS PER INCH AND 1 1/4" LONG.
- SHEET STEEL PLATES AND BENT PLATES (12GA THICKNESS OR LESS): ASTM A568; $F_y = 33$ KSI, MIN
- BIO CABINET WALL/FLANGE AT INTERFACE WITH BASE TABLE SUPPORT FRAME: ASTM A276; $F_y = 30$ KSI

VI. LOAD COMBINATIONS

- $1.2 DL + Ev + Emh + L + 0.2S$
- $0.9 DL - Ev + Emh$



EXP: 9/30/2025



Cushing Terrell

cushingterrell.com

800.757.9522

PROJECT #: 24-01-058

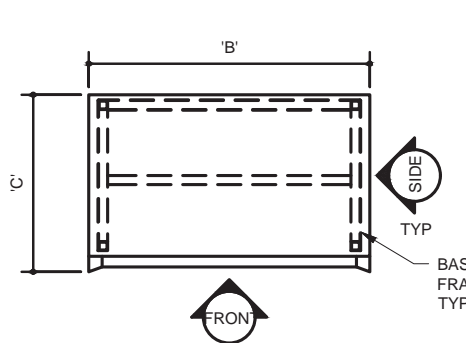
LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
FLOOR MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

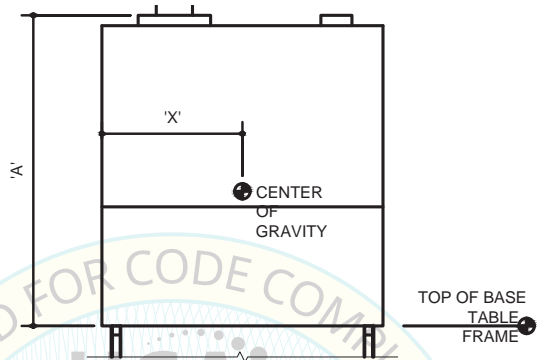
DATE:
7.23.25

SHEET TITLE
COVER &
GENERAL NOTES

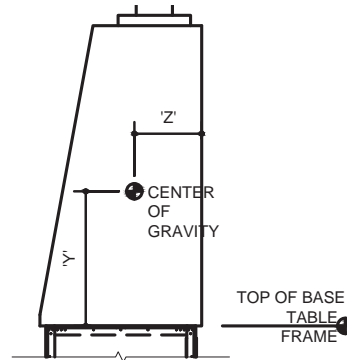
SHEET
S1



PLAN VIEW OF CABINET (COMPONENT)

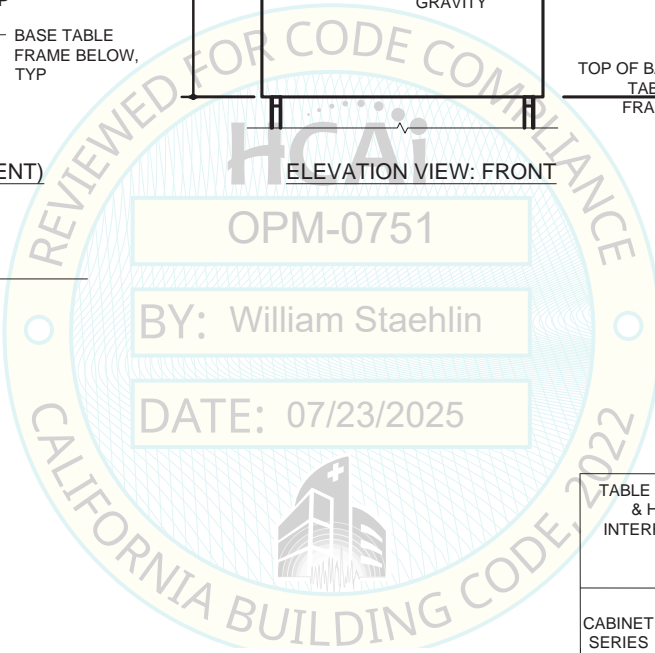


ELEVATION VIEW: FRONT



ELEVATION VIEW: SIDE

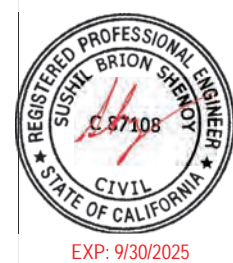
1 CABINET DIMENSIONS
1/2" = 1'-0"



CABINET SERIES	TYPE	CABINET DIMENSIONS AND CENTER OF GRAVITY						MAX CABINET WEIGHT (LBS)	BASE TABLE			TOTAL WEIGHT (LBS)
		A	B	C	X	Y	Z		MODEL	LENGTH	WEIGHT (LBS)	
3023	A2	61.7"	42.2"	31.2"	21.06"	34.36"	13.51"	420	3401003	38.5"	117	537
3024	A2	61.7"	54.2"	31.2"	27.03"	33.32"	13.40"	510	3401004	50.5"	125	635
3025	A2	61.7"	66.2"	31.2"	32.37"	33.70"	13.61"	600	3401005	62.5"	133	733
3026	A2	61.7"	78.2"	31.2"	38.28"	34.62"	13.53"	690	3401006	74.5"	150	839
3034	B2	61.6"	54.2"	31.2"	27.54"	34.48"	14.16"	540	3401004	50.5"	125	665
3036	B2	61.6"	78.2"	31.2"	39.10"	33.98"	13.20"	720	3401006	74.5"	150	869

CABINET SERIES	z/h = 0 S _{DS} ≤ 1.5		z/h = 0 S _{DS} ≤ 2.5	
	T _u /POST (LBS)	V _u /POST (LBS)	T _u /POST (LBS)	V _u /POST (LBS)
3023	283	161	539	271
3024	335	197	645	332
3025	383	230	744	387
3026	435	265	851	446
3034	356	206	688	347
3036	462	273	896	464

SCHEDULE NOTE:
CENTER OF GRAVITY AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHTS SHOWN.



LABCONCO
Cushing Terrell
cushingterrell.com
800.757.9522
PROJECT #: 24-01-058

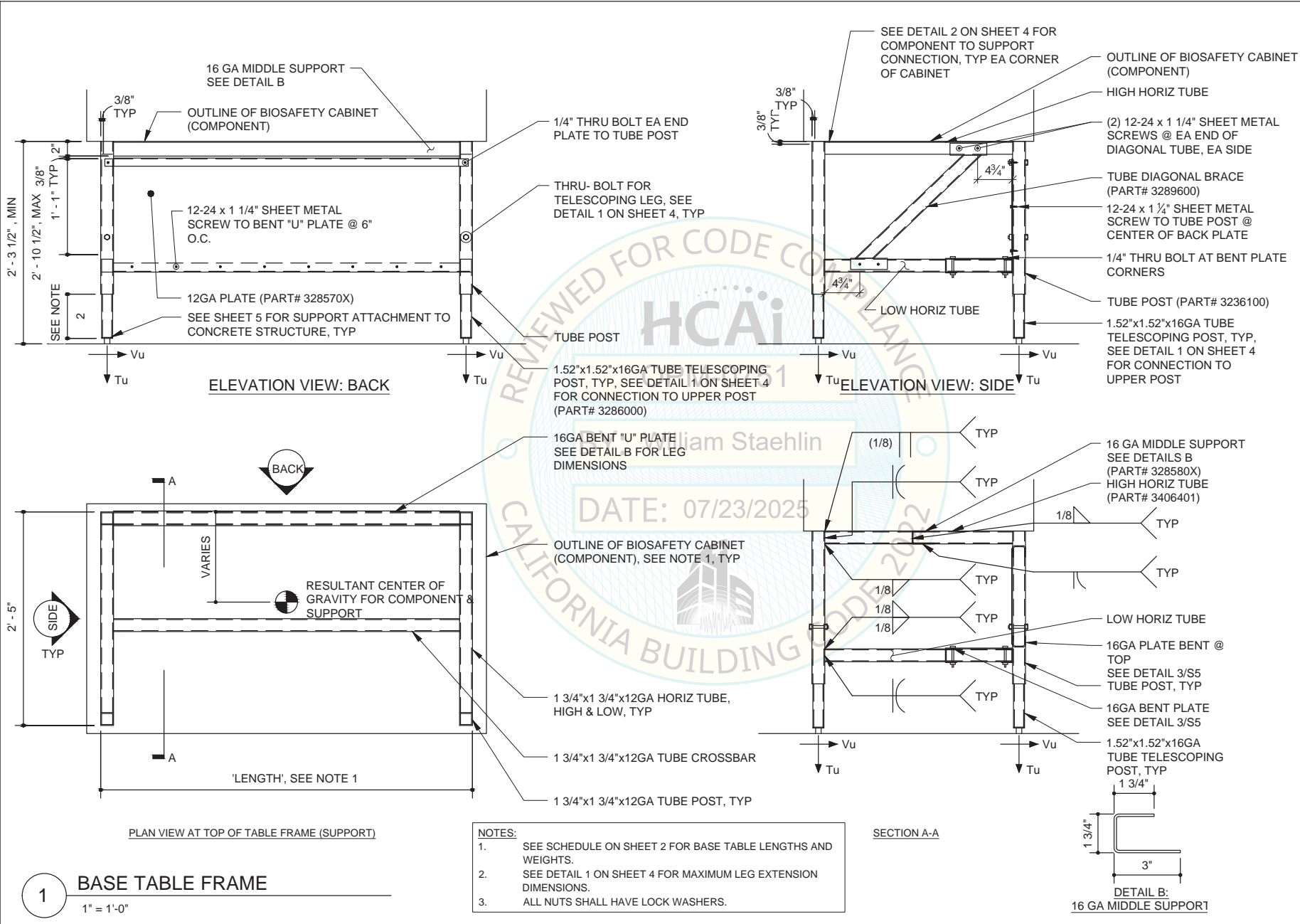
LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
FLOOR MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
CABINET
DIMENSIONS &
SCHEDULES

SHEET
S2



EXP: 9/30/2025



Cushing Terrell

cushingterrell.com

800.757.9522

PROJECT #: 24-01-058

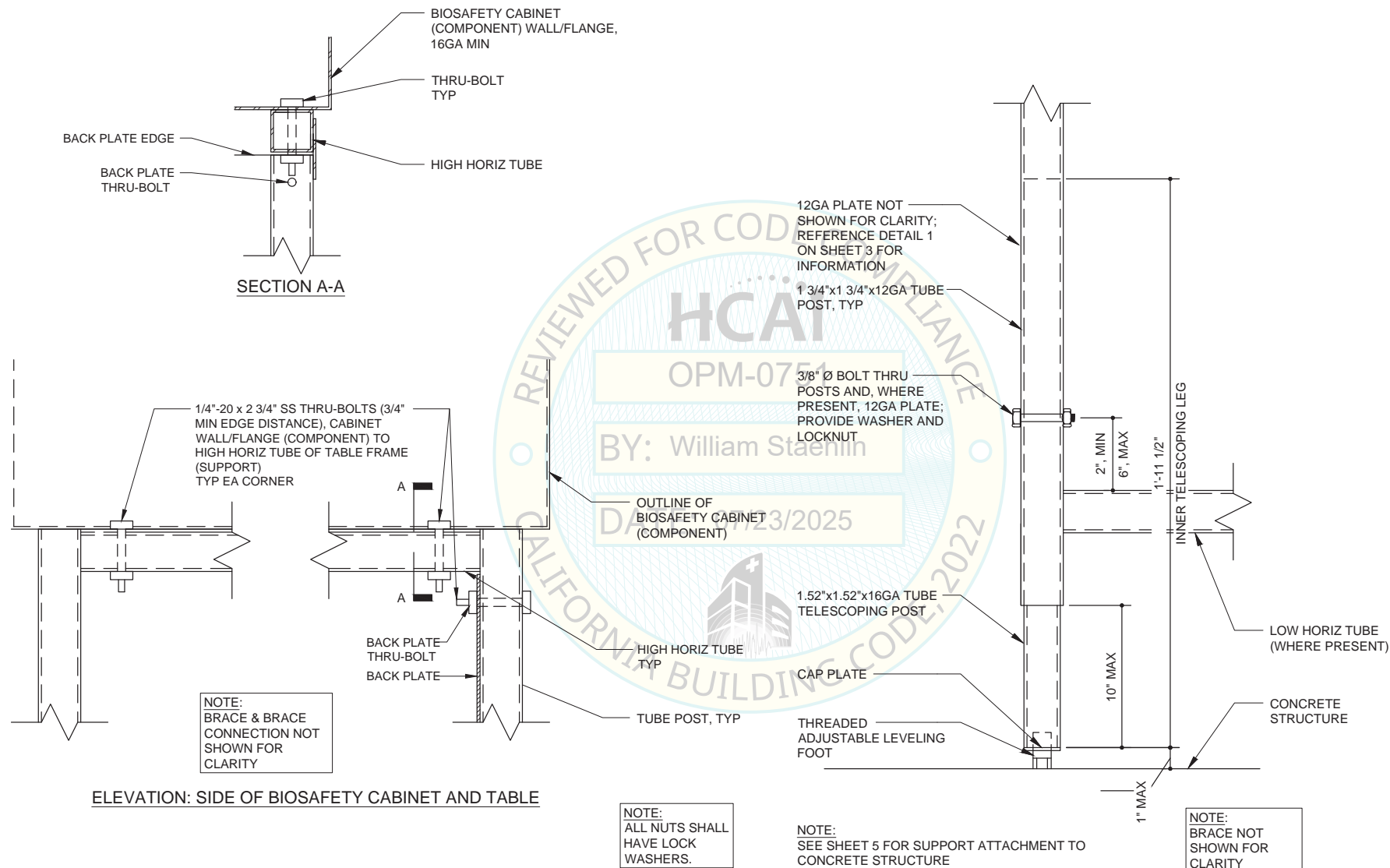
LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
FLOOR MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
TABLE FRAME
SUPPORT
DETAILS

SHEET
S3



COMPONENT TO SUPPORT CONNECTION

2

3" = 1'-0"

TELESCOPING POST CONNECTION

1

3" = 1'-0"



EXP: 9/30/2025



cushingterrell.com
800.757.9522
PROJECT #: 24-01-058

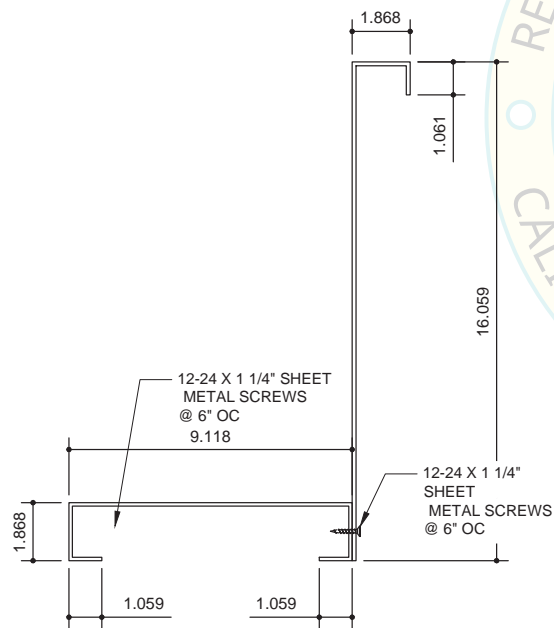
LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
FLOOR MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
TABLE FRAME
SUPPORT
DETAILS

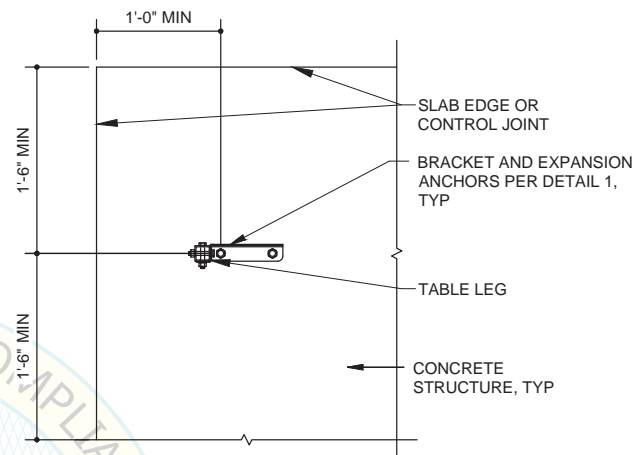
SHEET
S4



3

BENT PLATES

1" = 1'-0"

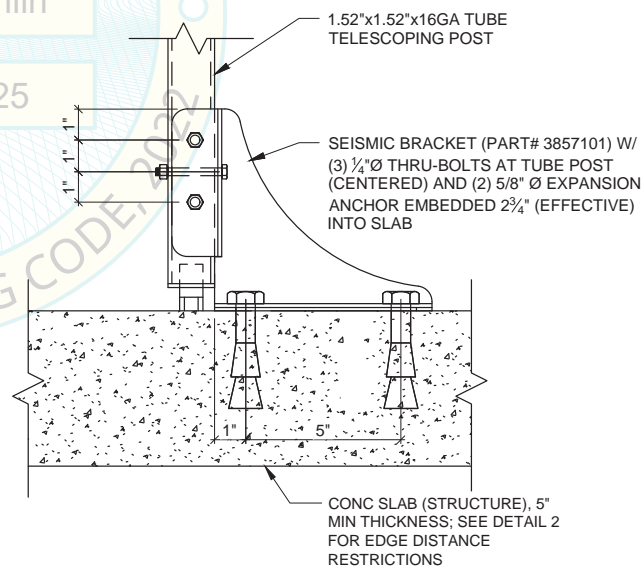


PLAN VIEW

2

ANCHOR EDGE DISTANCES

1" = 1'-0"



1

EXPANSION ANCHOR CONNECTION

3" = 1'-0"



EXP: 9/30/2025



Cushing Terrell

cushingterrell.com
800.757.9522
PROJECT #: 24-01-058

LABCONCO LOGIC
BIOLOGICAL SAFETY
FUME HOOD
FLOOR MOUNT
OPM: 0751

PROJECT LOCATION:
CALIFORNIA, USA

DATE:
7.23.25

SHEET TITLE
SUPPORT
ATTACH DETAILS

SHEET
S5