Building Name: Fresno MERC

CAAN ID: 3029

Auxiliary Building ID: NA



FORM 1
CERTIFICATE OF SEISMIC PERFORMANCE LEVEL

Date: 8/16/2019

☑ UC-Designed & Constructed Facility

■ Campus-Acquired or Leased Facility

BUILDING DATA

Building Name: Fresno MERC Address: 155 N Fresno St., Fresno

Site location coordinates: Latitude 36.7436 Longitudinal -199.7821

UCOP SEISMIC PERFORMANCE LEVEL (OR "RATING"): III

ASCE 41-17 Model Building Type:

a. Longitudinal Direction: S1: Steel Moment Frameb. Transverse Direction: S1: Steel Moment Frame

Gross Square Footage: 84,175 Number of stories *above* grade: 3

Number of basement stories below grade: 0

Year Original Building was Constructed: 2005 Original Building Design Code & Year: CBC- 1998

Retrofit Building Design Code & Code (if applicable): NA

SITE INFORMATION

Site Class: D Basis: (Rutherford & Chekene, 6/25/2002, S0-1)

Geologic Hazards:

Fault Rupture: No
Liquefaction: No
Landslide: No
Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)

ATTACHMENT

Original Structural Drawings: (Medical Education and Research Center Fresno, Rutherford & Chekene,

6/25/2002, S0-1) or Seismic Evaluation: NA

Retrofit Structural Drawings: NA

Building Name: Fresno MERC

CAAN ID: 3029





CERTIFICATION & PRESUMPTIVE RATING VERIFICATION STATEMENT

I, Maryann T. Phipps, a California-licensed structural engineer, am responsible for the completion of this certificate, and I have no ownership interest in the property identified above. My scope of review to support the completion of this certificate included both of the following ("No" responses must include an explanation):

support the completion of this certificate included both of the following ("No" responses an explanation):	must include
 a) the review of structural drawings indicating that they are as-built or record drawing otherwise are the basis for the construction of the building: ✓ Yes □ No b) visiting the building to verify the observable existing conditions are reasonably con those shown on the structural drawings: ✓ Yes □ No 	
Based on my review, I have verified that the UCOP Seismic Performance Level (SPL) is prepermitted by the following UC Seismic Program Guidebook provision (choose one of the	
☑ 1) Contract documents indicate that the original design and construction of the aforen building is in accordance with the benchmark design code year (or later) building code se provisions for UBC or IBC listed in Table 1 below.	
\square 2) The existing SPL rating is based on an acceptable basis of seismic evaluation comple later.	ted in 2006 or
\square 3) Contract documents indicate that a comprehensive building seismic retrofit design constructed with an engineered design based on the 1997 UBC/1998 <i>or later</i> CBC, and (c the following):	•
 □ the retrofit project was completed by the UC campus. Further, the design was base motion parameters, at a minimum, corresponding to BSE-1E (or BSE-R) and BSE-2E (or defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1 later for EXISTING buildings, and is presumptively assigned an SPL rating of IV. □ the retrofit project was completed by the UC campus. Further, the design was base motion parameters, at a minimum, corresponding to BSE-1 (or BSE-1N) and BSE-2 (or defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1 	BSE-C) as 998 CBC <i>or</i> d on ground BSE-2N) as
CBC for NEW buildings, and is presumptively assigned an SPL rating of III. The retrofit project was not completed by the UC campus following UC policies, and presumptively assigned an SPL rating of IV.	

Date: 8/16/2019

¹ A comprehensive retrofit addresses the entire building structural system as indicated by the associated seismic evaluation, as opposed to addressing selective portions of the structural system.

Building Name: Fresno MERC

CAAN ID: 3029

Signature

Auxiliary Building ID: NA



Date: 8/16/2019

9/4/2019

CERTIFICATION SIGNATURE

Maryann T. Phipps
Print Name

Title

S2995
CA Professional Registration No.
License Expiration Date

AFFIX SEAL HERE

PROFESS / ONLY

PROFESS / ONLY

No. 2995
EXP. 6/30/20

Date

Estructure, (510) 235-3116, 1144 65th St Suite A, Oakland

Firm Name, Phone Number, and Address

Building Name: Fresno MERC

CAAN ID: 3029

Auxiliary Building ID: NA



Table 1: Benchmark Building Codes and Standards

	Building Seismic	Design Provisions
Building Type a,b	UBC	IBC
Wood frame, wood shear panels (Types W1 and W2)	1976	2000
Wood frame, wood shear panels (Type W1a)	1976	2000
Steel moment-resisting frame (Types S1 and S1a)	1997	2000
Steel concentrically braced frame (Types S2 and S2a)	1997	2000
Steel eccentrically braced frame (Types S2 and S2a)	1988 ^g	2000
Buckling-restrained braced frame (Types S2 and S2a)	f	2006
Metal building frames (Type S3)	f	2000
Steel frame with concrete shear walls (Type S4)	1994	2000
Steel frame with URM infill (Types S5 and S5a)	f	2000
Steel plate shear wall (Type S6)	f	2006
Cold-formed steel light-frame construction—shear wall system (Type CFS1)	1997 ^h	2000
Cold-formed steel light-frame construction—strap-braced wall system (Type CFS2)	f	2003
Reinforced concrete moment-resisting frame (Type C1) ⁱ	1994	2000
Reinforced concrete shear walls (Types C2 and C2a)	1994	2000
Concrete frame with URM infill (Types C3 and C3a)	f	f
Tilt-up concrete (Types PC1 and PC1a)	1997	2000
Precast concrete frame (Types PC2 and PC2a)	f	2000
Reinforced masonry (Type RM1)	1997	2000
Reinforced masonry (Type RM2)	1994	2000
Unreinforced masonry (Type URM)	f	f
Unreinforced masonry (Type URMa)	f	f
Seismic isolation or passive dissipation	1991	2000

Note: This table has been adapted from ASCE 41-17 Table 3-2. Benchmark Building Codes and Standards for Life Safety Structural Performed at BSE-1E.

Note: UBC = Uniform Building Code. IBC = International Building Code.

Date: 8/16/2019

^a Building type refers to one of the common building types defined in Table 3-1 of ASCE 41-17.

^b Buildings on hillside sites shall not be considered Benchmark Buildings.

c not used

^d not used

e not used

 $^{^{\}it f}$ No benchmark year; buildings shall be evaluated in accordance with Section III.J.

^g Steel eccentrically braced frames with links adjacent to columns shall comply with the 1994 UBC Emergency Provisions, published September/October 1994, or subsequent requirements.

 $^{^{\}it h}$ Cold-formed steel shear walls with wood structural panels only.

¹ Flat slab concrete moment frames shall not be considered Benchmark Buildings.

ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS MAY BE USED IN THESE DRAWINGS TO DENOTE THE WORDS

& @ C Ø # (E) (N)	AND AT CENTERLINE DIAMETER OR ROUND POUND OR NUMBER EXISTING NEW	MAX. M.B. MET. MFR. MIN. MISC.	MAXIMUM MACHINE BOLT METAL MANUFACTURER MINIMUM MISCELLANEOUS
A.B. ADJ. APPROX. ARCH.	ANCHOR BOLT ADJACENT APPROXIMATE ARCHITECTURAL	N N.F. N.I.C. NOM. N.T.S.	NORTH NEAR FACE NOT IN CONTRACT NOMINAL NOT TO SCALE
BLDG. BM. BOF BOT. B.S.	BUILDING BEAM BOTTOM OF FOOTING BOTTOM BOTH SIDES	O.C. O.F. O.H. OPNG. OPP.	ON CENTER OUTSIDE FACE OPPOSITE HAND OPENING OPPOSITE
CANT. C.J. CLR. COL. CONC. CONN. CONSTR. CONT. C.P. CTR.	CANTILEVER CONSTRUCTION JOINT CLEAR COLUMN CONCRETE CONNECTION CONSTRUCTION CONTINUOUS COMPLETE PENETRATION CENTER	P.P. P.S.F. P.S.I. PT. P.T. PTN. PWD.	PARTIAL PENETRATION POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POINT PRESSURE TREATED PARTITION PLYWOOD RADIUS
DBL. DET. DIA. DIM.	DOUBLE DETAIL DIAMETER DIMENSION	REF. REINF. OR R/F REQ. R.O.	REFERENCE REINFORCED(ING) REQUIRED ROUGH OPENING SEE ARCHITECTURAL DRAWINGS
DWG. E.F. E.J. E.S. EL. OR ELEV. EMBED. EPS EQ. EQPT. E.W. EXP. EXT.	EACH FACE EXPANSION JOINT EACH SIDE ELEVATION EMBEDMENT EXPANDED POLYSTYRENE EQUAL EQUIPMENT EACH WAY EXPANSION EXTERIOR	S.A.D. S.C.D. SCHED. S.C.W. SECT. S.E.D. SHT. SIM. S.M.D. S.O.G. SPEC. SQ. STD. STL.	SEE ARCHITECTURAL DRAWINGS SEE CIVIL DRAWINGS SCHEDULE SEISMIC CRITICAL WELD SECTION SEE ELECTRICAL DRAWINGS SHEET SIMILAR SEE MECHANICAL DRAWINGS SLAB ON GRADE SPECIFICATION SQUARE STANDARD STEEL
FDN. F.F. FIN. FL. F.O.C. F.O.S. FPRF. FT.	FOUNDATION FAR FACE FINISH FLOOR FACE OF CONCRETE FACE OF STUDS FIREPROOF FOOT OR FEET FOOTING	STIRR. STRL. SUSP. SYM. T&B THK. T.O.C. T.O.F. T.O.PLY.	STIRRUP STRUCTURAL SUSPENDED SYMMETRICAL TOP AND BOTTOM THICK TOP OF CONCRETE TOP OF FOOTING TOP OF PLYWOOD
FUT. GA. GALV. GR.	FUTURE GAUGE GALVANIZED GRADE	T.O.S. TYP. U.O.N. U.T.	TOP OF STEEL TYPICAL UNLESS OTHERWISE NOTED ULTRASONIC TEST
HK. HORIZ. HGT. H.S.B.	HOOK HORIZONTAL HEIGHT HIGH STRENGTH BOLT	VERT. V.I.F.	VERTICAL VERIFY IN FIELD WITH
I.F. INSUL. INT. JT.	INSIDE FACE INSULATION INTERIOR JOINT	W/ WK. PT. OR W.P. W/O WP. WT. W.W.F.	WORK POINT WITHOUT WATERPROOF(ING) WEIGHT WELDED WIRE FABRIC
LB.	POUND LONG LEG HORIZONTAL	X.S.	EXTRA STRONG

LONG LEG HORIZONTAL

LONG LEG VERTICAL

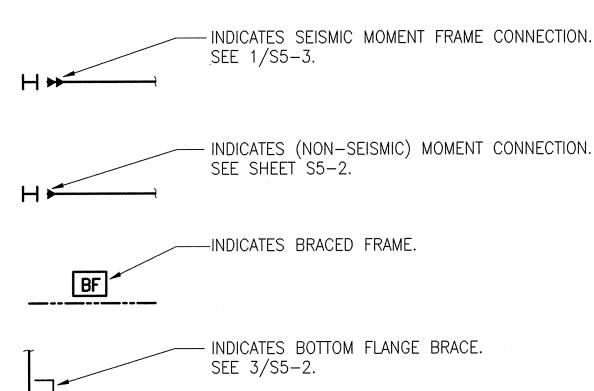
L.L.H.

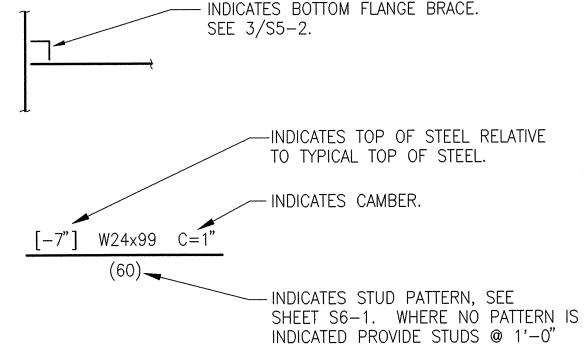
L.L.V.

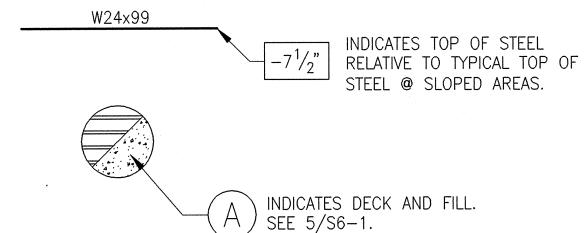
STRUCTURAL STEEL FRAMING NOTES

- A. CODE: COMPLY WITH AISC "MANUAL OF STEEL CONSTRUCTION" NINTH EDITION FOR ALL TOLERANCES, EDGE DISTANCES, SPACINGS, MINIMUM WELD SIZES AND OTHER DETAILS NOT NOTED OR SHOWN.
- CONNECTIONS: USE CONNECTIONS DESIGNATED AS "TYPICAL" WHERE SPECIFIC CONNECTION DETAILS ARE NOT CALLED. WHERE GEOMETRY OR OTHER CONDITIONS VARY FROM CONDITIONS OF THE TYPICAL CONNECTIONS. PROVIDE SIMILAR CONNECTIONS OF EQUAL STRENGTH.
- C. LOCATION OF MEMBERS: WHERE MEMBER LOCATIONS ARE NOT SPECIFICALLY DIMENSIONED ON PLANS, MEMBERS ARE LOCATED EITHER ON GRID LINES OR EQUALLY SPACED BETWEEN MEMBERS ON GRID LINES, OR MEMBERS OTHERWISE LOCATED.
- D. OPENINGS: FOR FRAMING AT OPENINGS NOT NOTED ON PLANS, SEE TYPICAL DETAILS.

LEGEND







ON CENTER TO ALL W BEAMS.

GENERAL NOTES

1. GENERAL

- A. THE PROJECT SPECIFICATION SHALL TAKE PRECEDENCE OVER THESE NOTES.
- ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, 1998 EDITION.
- OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
- DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.

II. DIMENSIONS

- THE STRUCTURAL DRAWINGS ALONE DO NOT INCLUDE ALL DIMENSIONS NECESSARY TO LOCATE STRUCTURAL MEMBERS, SLAB-EDGES, OPENINGS, EMBEDS, CURBS, DEPRESSIONS, ETC. SHOULD THERE BE DISCREPANCIES BETWEEN DIMENSIONS SPECIFICALLY NOTED, OR BETWEEN DETAILS AND DIMENSIONS NOTED OR INFERRED, CONTRACTOR SHALL BRING THEM TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION, BEFORE FABRICATION.
- DO NOT USE SCALED DIMENSIONS, USE WRITTEN DIMENSIONS.
- BASED ON THE DRAWINGS, THE CONTRACTOR SHALL PREPARE LAYOUTS AS NEEDED TO ESTABLISH ELEVATIONS, HORIZONTAL DIMENSIONS AND OTHER RELATIONSHIPS NOT SPECIFICALLY SHOWN.

III. DESIGN CRITERIA

- APPLICABLE CODE: CALIFORNIA BUILDING CODE, 1998 EDITION.
- LIVE LOADS:
 - 1. ROOF

FLAT ROOF 20 PSF

ACTUAL WEIGHT OF MECHANICAL UNITS PLUS MECHANICAL AREA 50 PSF IN SURROUNDING AREA

2. FLOOR OFFICE TERRACE, CORRIDOR & STAIR

80 PSF (+20 PSF PARTITIONS) 100 PSF (NO PARTITIONS)

COMPACT SHELVING OTHER STORAGE AREAS

200 PSF 125 PSF

WIND LOAD WIND SPEED 70 MPH, EXPOSURE C.

SEISMIC DESIGN ZONE 3, I = 1.0, R = 8.5 (SPECIAL MOMENT-RESISTING FRAME)

SOIL TYPE SD BASE SHEAR, V = 0.10W

1998 CBC SEISMIC DRIFT, \triangle m IS 3" PER STORY.

IV. FOUNDATION DESIGN CRITERIA

- THE FOUNDATION DESIGN IS BASED ON CRITERIA AND RECOMMENDATIONS PRESENTED IN THE REPORT PREPARED BY KLEINFELDER INC. ENTITLED "GEOTECHNICAL INVESTIGATION REPORT PROPOSED UCSF MEDICAL EDUCATION BUILDING, FRESNO, CALIFORNIA", DATED MARCH 2, 2001.
- B. SPREAD FOOTINGS CAN BE DESIGNED FOR THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURE.

1. DEAD LOAD + LIVE LOAD 330B+1040D 2. DEAD LOAD + LIVE LOAD + WIND OR SEISMIC 500B+1560D B IS FOOTING WIDTH IN FEET AND D IS FOOTING EMBEDMENT DEEP IN FEET.

LIMIT ALLOWABLE SOIL BEARING PRESSURE FOR DEAR LOAD + LIVE LOAD CASE TO 4000 PSF TO LIMIT THE SETTLEMENT TO $\frac{1}{2}$.

RESISTANCE TO LATERAL LOADS CAN BE OBTAINED FROM PASSIVE EARTH PRESSURE AGAINST THE FACE OF FOUNDATIONS, AND FRICTION ACROSS THE BASES OF FOOTINGS USING THE FOLLOWING CRITERIA:

PASSIVE PRESSURE

310 PSF PER FOOT OF DEPTH

BASE FRICTION

0.41 TIMES NET VERT. DEAD LOAD

C. REFER TO PROJECT SOIL REPORT FOR DETAILED RECOMMENDATIONS.

MATERIALS

- A. FOR MORE COMPLETE INFORMATION, SEE SPECIFICATIONS. SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THESE NOTES IN THE EVENT OF CONFLICT.
- REINFORCING STEEL
 - 1. BARS: ASTM A615, GRADE 60
- 2. WELDED WIRE FABRIC: ASTM A185.
- C CONCRETE CLASSES AND THEIR LISE (LLON ON DRAWINGS)

CONCRETE	CLASSES AND	IUCIK	USE	(0.0.14.	ON	DRAWINGS)	
<u>CLASS</u>	<u>USE</u>					<u>f'c</u>	
Α	FOUNDATION	1				4000psi	
В	SLAB-ON-GRADE,			3500psi			

OTHER CONCRETE LIGHT WEIGHT FILL OVER

STEEL DECK

4000psi

D. STEEL

- 1. W SHAPES: ASTM A992
- 2. ANGLES AND CHANNELS: ASTM A36.
- 3. PLATE: ASTM A572, GRADE 50. U.O.N.
- 4. TUBES: ASTM A500, GRADE B.
- 5. PIPES: ASTM A53, TYPE S, GRADE B.
- HIGH STRENGTH BOLTS: ASTM A325, FULLY TENSIONED BEARING.
- 7. MACHINE BOLTS: ASTM A307.
- 8. ANCHOR BOLTS:
- a. 1" DIAMETER AND SMALLER: ASTM A307 (HEADED) OR A36 (HOOKED) b. LARGER DIAMETER BOLTS: ASTM A354, GRADE BD.
- 9. SHEAR CONNECTOR STUDS: AWS D1.1, TYPE B, AUTOMATICALLY END WELDED.
- 10. WELDING ELECTRODES: E70XX, REFER TO SPECIFICATIONS FOR SPECIAL REQUIREMENTS FOR SEISMIC CRITICAL WELDS.
- E. STEEK DECK: REFER TO SHEET S6-1.

VI. QUALITY ASSURANCE

- THE OWNER SHALL EMPLOY QUALIFIED SPECIAL INSPECTORS TO PERFORM INSPECTIONS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. REFER TO SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR TESTING AND INSPECTION. THE ITEMS REQUIRING SPECIAL INSPECTION ON THIS PROJECT INCLUDE THE FOLLOWING:
 - 1. OBSERVATION OF SITE PREPARATION, GRADING, PLACEMENT AND COMPACTION OF FILL OPERATIONS BY GEOTECHNICAL ENGINEER.
 - REINFORCING STEEL.
- CAST-IN-PLACE CONCRETE.
- 4. HIGH STRENGTH ANCHOR BOLTS
- 5. SHOP AND FIELD WELDING OF STRUCTURAL STEEL, METAL DECK, AND SHEAR CONNECTOR STUDS.
- 6. HIGH STRENGTH BOLTING.
- 7. GROUTING BELOW COLUMN BASE PLATES.
- 8. SPRAY-ON FIREPROOFING.
- THE STRUCTURAL ENGINEERS' REVIEW FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS SHALL NOT BE CONSIDERED AS SPECIAL INSPECTION.

VII. CONTRACTOR DESIGNED SYSTEMS

- A. STEEL STAIR TREADS, LANDINGS, AND CONNECTIONS.
 - 1. REFER TO SECTION 05510 OF SPECIFICATIONS.
 - STAIR STRINGERS. POSTS AND HANGERS ARE SIZED ON STRUCTURAL DRAWINGS. CONTRACTOR SHALL NOT CHANGE THE MEMBER SIZES INDICATED.
 - CONTRACTOR SHALL EMPLOY A CIVIL ENGINEER, LICENSED IN THE STATE OF CALIFORNIA, TO DESIGN STAIR TREADS, LANDINGS, AND STRINGER CONNECTIONS WHICH ARE NOT SHOWN.
 - DESIGN CRITERIA: 100 PSF UNIFORM LOAD, 300 POUND CONCENTRATED LOAD; DESIGN CONNECTIONS TO RESIST LATERAL LOAD OF 25% OF THE VERTICAL DEAD + LIVE LOAD ON THE CONNECTION.



FONG & CHAN ARCHITECTS



MEDICAL EDUCATION AND RESEARCH CENTER

FRESNO, CALIFORNIA

UCSF PROJECT NO. M8338 UCSF FILE NO. 10449

CONSULTANTS:

STRUCTURAL ENGINEER:

TEL(510)740-3200

RUTHERFORD & CHEKENE 427 THIRTEENTH STREET OAKLAND, CA 94612



FAX(510)740-3340

UNIVERSITY OF CALIFORNIA SAN FRANCISCO FIRE MARSHAL CDF-OFFICE OF STATE FIRE MARSHAL APPROVED 06/20/02 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times. Project #: 149907 M8338 .

Authorization #: SEU

NO. DATE DESCRIPTION

REVISIONS

KEY PLAN
SHEET TITLE

GENERAL NOTES

SHEET NO. PROJECT NO. FCA 214 DRAWN BY: **SO-1** CHECKED: