Campus: UCSF
Building Name: Genentech Hall
CAAN ID: 3002
Auxiliary Building ID: NA

UNIVERSITY OF CALIFORNIA

Date: 8/19/2019

FORM 1
CERTIFICATE OF SEISMIC PERFORMANCE LEVEL
☒ **UC-Designed & Constructed Facility**
☐ **Campus-Acquired or Leased Facility**

BUILDING DATA
Building Name: Genentech Hall
Address: 600 16th St., San Francisco
Site location coordinates: Latitude 37.7672 Longitudinal -122.3922

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

ASCE 41-17 Model Building Type:

a. Longitudinal Direction: S2 and C2: Eccentrically Braced Framed and Concrete Shear Walls
b. Transverse Direction: S2 and C2: Eccentrically Braced Framed and Concrete Shear Walls

Gross Square Footage: 384,879
Number of stories *above* grade: 6
Number of basement stories *below* grade: 0

Year Original Building was Constructed: 2002
Original Building Design Code & Year: CBC-1998
Retrofit Building Design Code & Code (if applicable): NA

SITE INFORMATION
Site Class: E Basis: (Rutherford & Chekene, 5/1/2000, S0.1)
Geologic Hazards:
Fault Rupture: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Liquefaction: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Landslide: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)

ATTACHMENT
Original Structural Drawings: (UC Hall Seismic Replacement, Mission Bay, Rutherford & Chekene, 5/1/2000, S0.1) or
Seismic Evaluation: NA
Retrofit Structural Drawings: NA

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):

a) the review of structural drawings indicating that they are as-built or record drawings, or that they otherwise are the basis for the construction of the building: ☑ Yes ☐ No
b) visiting the building to verify the observable existing conditions are reasonably consistent with those shown on the structural drawings: ☑ Yes ☐ No

Based on my review, I have verified that the UCOP Seismic Performance Level (SPL) is presumptively permitted by the following UC Seismic Program Guidebook provision (choose one of the following):

☑ 1) Contract documents indicate that the original design and construction of the aforementioned building is in accordance with the benchmark design code year (or later) building code seismic design provisions for UBC or IBC listed in Table 1 below.

☐ 2) The existing SPL rating is based on an acceptable basis of seismic evaluation completed in 2006 or later.

☐ 3) Contract documents indicate that a comprehensive[1] building seismic retrofit design was fully-constructed with an engineered design based on the 1997 UBC/1998 ***or later*** CBC, and (choose one of the following):

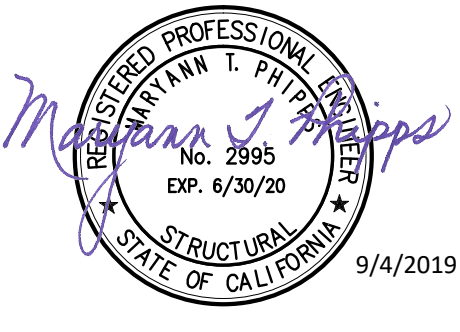
☐ the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1E (or BSE-R) and BSE-2E (or BSE-C) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 CBC ***or later*** for EXISTING buildings, and is presumptively assigned an SPL rating of IV.
☐ the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1 (or BSE-1N) and BSE-2 (or BSE-2N) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 ***or later*** 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 is presumptively assigned an SPL rating of IV.

[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.

CERTIFICATION SIGNATURE

AFFIX SEAL HERE

Maryann T. Phipps	President
Print Name	Title
S2995	6/30/2020
CA Professional Registration No.	License Expiration Date
Maryann T. Phipps	8/19/2019
Signature	Date



9/4/2019

Estructure, (510) 235-3116, 1144 65th St Suite A, Oakland
Firm Name, Phone Number, and Address

Table 1: Benchmark Building Codes and Standards

Building Type[a,b]	Building Seismic Design Provisions	
	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*.

[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

[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.

[h] Cold-formed steel shear walls with wood structural panels only.

[i] Flat slab concrete moment frames shall not be considered Benchmark Buildings.

There are no EBF links next to columns in Genentech Hall

IX. STRUCTURAL STEEL FRAMING NOTES

A. CODE: COMPLY WITH AISC "LOAD AND RESISTANCE FACTOR SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", SECOND EDITION, FOR ALL TOLERANCES, SPACINGS, MINIMUM WELD SIZES AND OTHER DETAILS NOT NOTED OR SHOWN.

B. 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. CONNECTION OF BP-2 MEMBERS TO BP-1 MEMBERS SHALL UTILIZE FIELD WELDS WHETHER OR NOT SO NOTED ON THE DRAWINGS. 2

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. FOR INTERIOR SHAFT OPENINGS, SEE SHEET S5.1.

D. OPENINGS: FOR FRAMING AT OPENINGS NOT NOTED ON PLANS, SEE TYPICAL DETAILS.

E. COMPOSITE CONSTRUCTION: ALL STEEL BEAMS AND GIRDERS AT LEVELS 2 TO 7 SHALL HAVE WELDED STUDS U.O.N. SEE PLAN SHEET NOTES & SHEET S5.1.

F. TOP OF STEEL (T.O.S.)

1. GENERAL: WHERE NO T.O.S. ELEVATIONS ARE GIVEN ON PLANS THEN T.O.S. IS AT NORMAL LEVEL FOR THAT FLOOR AS DESCRIBED BELOW. T.O.S. ELEVATIONS WHERE GIVEN ON PLANS ARE IN FEET AND INCHES BELOW TOP OF CONCRETE.

2. FLOORS: T.O.S. IS INDICATED IN PLAN SHEET NOTES UNLESS OTHERWISE NOTED ON PLANS.

   CONTRACTOR SHALL COORDINATE CAREFULLY BETWEEN T.O.S. ELEVATIONS AND T.O.C. ELEVATIONS AND SLOPES GIVEN ON ARCHITECTURAL DRAWINGS. DISCREPANCIES IF ANY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION BEFORE FABRICATION.

&	AND
@	AT
℄	CENTERLINE
Ø	DIAMETER OR ROUND
#	POUND OR NUMBER
(E)	EXISTING
(N)	NEW
A.B.	ANCHOR BOLT
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
BLDG.	BUILDING
BM.	BEAM
BOT.	BOTTOM
B.O.F.	BOTTOM OF FOOTING
CEM.	CEMENT
C.J.	CONSTRUCTION JOINT
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
C.P.	COMPLETE PENETRATION WELD
CTR.	CENTER
DBL.	DOUBLE
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
DO	DITTO
DWG.	DRAWING
EA.	EACH
EBF	ECCENTRIC BRACED FRAME
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
E.O.S.	EDGE OF BP-2 SLAB
E.P.S.	EXPANDED POLYSTYRENE
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.	EACH WAY
EXST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.B.	FLAT BAR
FDN.	FOUNDATION
F.D.P.P.	FULL DEPTH PARTIAL PENETRATION
F.F.	FAR FACE
FIN.	FINISH
FL.	FLOOR
F.O.C.	FACE OF CONCRETE
F.O.S.	FACE OF STUD
FPRF.	FIREPROOF
FT.	FOOT OR FEET
FTG.	FOOTING
FUT.	FUTURE
GA.	GAUGE
GALV.	GALVANIZED
GB	GRADE BEAM
GR.	GRADE
HK.	HOOK
HORIZ.	HORIZONTAL
HGT.	HEIGHT
H.S.	HIGH STRENGTH (BOLT)
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
INSUL.	INSULATION
INT.	INTERIOR
JT.	JOINT
LB.	POUND
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MET.	METAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
N	NORTH
N.F.	NEAR FACE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OPNG.	OPENING
OPP.	OPPOSITE
OPP. HD.	OPPOSITE HAND
PC	PILE CAP
PH.	PENTHOUSE
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PT.	POINT
PTN.	PARTITION
RAD.	RADIUS
REF.	REFERENCE
REINF.	REINFORCED
REQ.	REQUIRED
R.O.	ROUGH OPENING
S.A.D.	SEE ARCH. DRAWINGS
S.C.D.	SEE CIVIL DRAWINGS
S.C.W.	SEISMIC CRITICAL WELD
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
S.J.	SAWCUT JOINT
S.M.D.	SEE MECH. DRAWINGS
S.O.G.	SLAB ON GRADE
SPEC.	SPECIFICATION
SQ.	SQUARE
STD.	STANDARD
STL.	STEEL
STIRR.	STIRRUP
STRL.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
THK.	THICK
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VERT.	VERTICAL
W/	WITH
WK. PT.	WORK POINT
W/O	WITHOUT
WP.	WATERPROOF
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC

Plot Shed Filename:
XREF Filename(s):
Plot Setup Script:
Plot Date:
Plot View:

ABBREVIATIONS

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B. STEEL

1. SHAPES: ASTM A992 TYP., A36 AS NOTED.
   SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CHARPY V-NOTCH TOUGHNESS. WT'S SHALL BE ASTM A36.
2. PLATES: ASTM A572 GR 50 TYP., A572 GR42 & A36 AS NOTED.
3. PIPES: ASTM A53, GRADE B.
4. TUBES: ASTM A500, GRADE B.
5. HIGH STRENGTH BOLTS (H.S.B.): ASTM A325SC, U.O.N.
6. MACHINE BOLTS (M.B.): ASTM A307.
7. ANCHOR BOLTS (A.B.): ASTM A36, U.O.N.
8. HIGH STRENGTH ANCHOR BOLTS: ASTM A354 GRADE BD.
9. METAL DECKING: ASTM A446, GRADE A.
10. THREADED RODS: ASTM A36, U.O.N.
11. WELDING ELECTRODES: PER AWS D1.1, E70XX.
    SEISMIC CRITICAL WELDS: WELDS DESCRIBED AS S.C.W. SHALL HAVE CHARPY V-NOTCH TOUGHNESS OF 20 FT. LBS. AT -20'F. SEE SPECIFICATIONS.
12. DRILLED ANCHORS: KWIK BOLT II BY HILTI, OR EQUAL.

C. REINFORCED MASONRY: f'm = 1500 psi.

V. QUALITY ASSURANCE

A. THE OWNER WILL EMPLOY QUALIFIED SPECIAL INSPECTORS TO PERFORM INSPECTIONS IN ACCORDANCE WITH SECTION 1701.1 OF CBC 98 AS A MINIMUM. THE ITEMS REQUIRING SPECIAL INSPECTION ON THIS PROJECT INCLUDE THE FOLLOWING:

1. CONCRETE REINFORCEMENT (03100)
2. CAST-IN-PLACE CONCRETE (03300)
3. GROUTED DOWELS IN CONCRETE (3610)
4. UNIT MASONRY (04200)
5. STRUCTURAL STEEL (05100)
6. METAL DECKING (05300)

REFER TO THE PROJECT SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR TESTING AND INSPECTION.

B. SPECIAL INSPECTORS SHALL BE QUALIFIED BY TRAINING AND EXPERIENCE FOR THE REQUIRED INSPECTIONS. INSPECTORS SHALL PERFORM ALL DUTIES AND RESPONSIBILITIES AS REQUIRED BY CBC SECTION 1701.3 & 1701.2.

C. THE STRUCTURAL ENGINEER WILL GENERALLY REVIEW THE PROGRESS OF THE WORK, BUT HIS REVIEW SHALL NOT BE CONSTRUED AS SPECIAL INSPECTION.

VI. BID PACKAGE 2 (BP-2) ITEMS AND BID PACKGE 1 (BP-1) ITEMS ARE SHOWN IN FULL TONE LINE WORK.

VII. DETAIL NUMBERING:

THE NUMBERING SYSTEM FOR SECTIONS, ELEVATIONS AND DETAILS ON THESE DRAWINGS TYPICALLY IS AS SHOWN ON THE FOLLOWING DIAGRAM:

20	16	12	8	4
19	15	11	7	3
18	14	10	6	2
17	13	9	5	1

WHERE MORE THAN ONE BLOCK IS USED FOR A SINGLE DETAIL, THE NUMBER OF THE LOWEST NUMBERED BLOCK IS USED, THUS NUMBERS ARE ALWAYS IN THE SAME LOCATION ON THE SHEET.

VIII. DRAWINGS SYMBOLS

A. THE SYMBOLS ON PLANS TO INDICATE SECTIONS, ELEVATIONS, AND DETAILS ARE AS FOLLOWS:

1. SECTION NUMBER (SEE NOTE VI ABOVE)
   1-S3.4 SHEET ON WHICH DETAIL IS FOUND
2. 2-S3.4 (ELEVATION)
3. 3-S4.1 (DETAIL)
   OR
   WHERE THE CIRCLE IS NECESSARY TO DEFINE THE EXTENT OF THE DETAIL.

B. SEE LEGEND ON PLAN SHEETS FOR ADDITIONAL SYMBOLS.

THE DESIGN INCORPORATES A RESPONSE SPECTRUM ANALYSIS. ELASTIC RESPONSE PARAMETERS FROM THE DYNAMIC ANALYSIS ARE SCALED BY THE FULL VALUE OF THE ABOVE STATIC BASE SHEAR. THE SITE-SPECIFIC RESPONSE SPECTRUM FOR AN EARTHQUAKE WITH A 10% PROBABILITY OF EXCEEDANCE IN 50 YEARS IS DEFINED BY HARDING LAWSON ASSOCIATES IN THE GEOTECHNICAL REPORT REFERENCED BELOW. THIS SPECTRUM HAS THE FOLLOWING CHARACTERISTICS.

Period, T (sec)	Sa (g)
0	0.45
0.1	0.45
0.18	1.25
1.5	1.25
1.6	1.18
1.8	1.05
2	0.90
2.5	0.75
3	0.65
3.5	0.55
4	0.45

2. WIND: EXPOSURE C, 70 MPH_W I = 1.15 FOR GROUP H OCCUPANCY

III. FOUNDATION DESIGN CRITERIA

A. GEOTECHNICAL REPORTS: SITE SOIL INFORMATION AND RECOMMENDATIONS ARE CONTAINED IN THREE VOLUMES BY HARDING LAWSON ASSOCIATES :

1. "FINAL REPORT: GEOTECHNICAL INVESTIGATION, BUILDING 24A/B, UCSF MISSION BAY CAMPUS, SAN FRANCISCO, CALIFORNIA," DATED AUGUST 16, 1999.
2. "DATA APPENDIXES: GEOTECHNICAL INVESTIGATION, BUILDING 24A/24B, UCSF MISSION BAY CAMPUS, SAN FRANCISCO, CALIFORNIA," DATED NOVEMBER 20, 1998.
3. "SUPPLEMENTAL APPENDIXES: GEOTECHNICAL INVESTIGATION, BUILDING 24A/B, UCSF MISSION BAY CAMPUS, SAN FRANCISCO, CALIFORNIA," DATED AUGUST 16, 1999.

B. PILE LOAD CAPACITIES:

1. ALLOWABLE SOIL CAPACITIES:
   a. LONG-TERM LOADING CAPACITY: 425 KIPS IN COMPRESSION, 100 KIPS IN TENSION.
   b. SHORT-TERM LOADING CAPACITY FOR WIND AND EARTHQUAKE: 540 KIPS IN COMPRESSION, 125 KIPS IN TENSION.
   c. DOWNDRAG LOADS: 94 KIPS FOR PILES WITH BOTTOM OF BAY MUD ABOVE ELEVATION 50 FEET, 155 KIPS FOR PILES WITH BOTTOM OF BAY MUD BELOW ELEVATION 50 FEET.
2. FACTORED SOIL CAPACITIES:
   a. CAPACITY: 475 KIPS IN COMPRESSION, 150 KIPS IN TENSION.
   b. DOWNDRAG LOADS: 132 KIPS FOR PILES WITH BOTTOM OF BAY MUD ABOVE ELEVATION 50 FEET, 217 KIPS FOR PILES WITH BOTTOM OF BAY MUD BELOW ELEVATION 50 FEET.
3. ULTIMATE SOIL CAPACITIES:
   a. CAPACITY: 1000 KIPS IN COMPRESSION, 250 KIPS IN TENSION.
   b. DOWNDRAG LOADS: 132 KIPS FOR PILES WITH BOTTOM OF BAY MUD ABOVE ELEVATION 50 FEET, 217 KIPS FOR PILES WITH BOTTOM OF BAY MUD BELOW ELEVATION 50 FEET.

C. LOADING DOCK VAULT: SEE GEOTECHNICAL REPORT.

D. SITE RETAINING WALLS:

1. AT-REST EARTH PRESSURE WITH NORMAL WEIGHT BACKFILL: 60 PCF RESTRAINED, 45 PCF UNRESTRAINED.
2. AT-REST EARTH PRESSURE WITH LIGHTWEIGHT BACKFILL: 30 PCF RESTRAINED, 25 PCF UNRESTRAINED.
3. PASSIVE PRESSURE IN COMPACTED BACKFILL AND EXISTING FILL: 300 PCF ABOVE GROUNDWATER TABLE, 150 PCF BELOW GROUNDWATER TABLE.
4. PASSIVE PRESSURE IN BAY MUD: 500 PCF.

IV. MATERIALS

A. CONCRETE

1. REINFORCING STEEL
   a. ASTM A615, GRADE 60, U.O.N.
   b. ASTM A706, WHERE DESIGNATED ON DRAWINGS.
   c. ASTM A955A, TYPE 316, GRADE 420, WHERE DESIGNATED ON DRAWINGS.
   d. BARS TO BE WELDED: A706.
   e. BARS, #6 AND LARGER, TO BE MECHANICALLY COUPLED: A706.

2. CONCRETE CLASSES: SEE SPECIFICATION FOR REQUIREMENTS. ALL CONCRETE NORMAL WEIGHT (145 PCF), U.O.N.

CLASS	USE	STRENGTH	REMARKS
A 2	FOUNDATIONS, GRADE BEAMS, AND TRENCHES	4,000 PSI	1" AGG.
B	CRAWL SPACE SLAB	3,000 PSI	1" AGG.
D	WALLS, PILASTERS, COLUMNS	6,000 PSI	1" AGG.
E	SLAB-ON-GRADE, SITE WALLS, EXTERIOR PAVING	4,000	1" SHRINKAGE CONTROL AGG.
F	FIRST FLOOR SLAB AND LOADING DOCK SLAB	4,000	1" SHRINKAGE CONTROL AGG.
G	METAL DECK FILL, TYP. U.O.N.	4,000	1" SHRINKAGE CONTROL AGG.
H	METAL DECK FILL AT INTERSTITIAL FLOORS	4,000	1" LIGHTWEIGHT AGGREGATE
J	TANK VAULT	4,000	1" AGGR., CRYSTALLINE WATERPROOFING ADMIXTURE

I. GENERAL

A. FOR MORE DETAILED INFORMATION, SEE PROJECT SPECIFICATIONS. THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THESE NOTES.

B. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, 1998 EDITION (CBC 98).

C. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE UNIVERSITY'S REPRESENTATIVE.

D. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE UNIVERSITY'S REPRESENTATIVE AND RESOLVED BEFORE PROCEEDING WITH THE WORK.

E. DO NOT USE SCALED DIMENSIONS. USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT WITH THE UNIVERSITY'S REPRESENTATIVE FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

F. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.

G. REFER TO ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATION AND SIZE OF PIPES, VENTS, DUCTS, BLOCKOUTS, EMBEDDED ITEMS, OPENINGS, CURBS, AND DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.

H. THE CONTRACTOR MUST SUBMIT IN WRITING ANY REQUESTS FOR MODIFICATIONS TO THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SUBMITTED TO THE UNIVERSITY'S REPRESENTATIVE FOR HIS REVIEW DO NOT CONSTITUTE "IN WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING REQUESTED.

I. BOTH BP-1 AND BP-2 ITEMS ARE SHOWN IN THE RECORD DRAWINGS.

II. DESIGN CRITERIA

A. APPLICABLE CODE: PART 2, TITLE 24, CALIFORNIA CODE OF REGULATIONS, (CALIFORNIA BUILDING CODE), 1998 EDITION. FOR EBF DESIGN, 1997 AISC "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS", EXCEPT FOR LINK ROTATIONS, WHICH WERE CHECKED USING THE 1998 CBC.

B. LIVE LOADS:

1. LABORATORY FLOORS: 100 PSF* REDUCIBLE+ 30 PSF UNREDUCIBLE SUPERIMPOSED DEAD LOAD FOR CASEWORK AND PARTITIONS.

   * THIS IS THE MINIMUM DESIGN LOAD USED FOR STRENGTH CALCULATIONS. BECAUSE OF THE FLOOR VIBRATION CRITERION AS DESCRIBED IN SECTION C, THE ACTUAL LIVE LOAD CAPACITIES OF THE SLABS, BEAMS, GIRDERS AND CONNECTIONS ARE TYPICALLY HIGHER THAN THE MINIMUM.

2. OFFICE FLOORS: 80 PSF.
3. ROOF: AREAS WITH MECHANICAL EQUIPMENT: 100 PSF OR WEIGHT OF EQUIPMENT PLUS 20 PSF, WHICHEVER IS GREATER.
   AREAS WITHOUT MECHANICAL EQUIPMENT: 20 PSF
4. MECHANICAL SPACES (U.O.N.): 100 PSF OR WEIGHT OF EQUIPMENT PLUS 50 PSF, WHICHEVER IS GREATER
5. INTERSTITIAL FLOOR: 50 PSF OR WEIGHT OF EQUIPMENT WHICHEVER IS GREATER.
6. LEVEL 1 MECHANICAL PLANT:
   a. GRIDLINES 4.2-11.6:
      SLAB/BEAM: 1250 PSF (UNREDUCIBLE)
      GIRDER: 1250 PSF (REDUCIBLE)
      PILE CAP/FOUNDATION: 900 PSF (REDUCIBLE)
   b. GRIDLINES 11.6-14.0:
      SLAB/BEAM/GIRDER: 500 PSF (UNREDUCIBLE)
      PILE CAP/FOUNDATION: 900 PSF (REDUCIBLE)
   c. THESE SUPERIMPOSED LOADS USED A 1.4 LOAD FACTOR.
7. STAIRS & CORRIDORS: 100 PSF
8. TERRACES: 250 PSF SUPERIMPOSED LOAD OR WEIGHT OF PLANTERS PLUS 20 PSF, WHICHEVER IS GREATER

C. FLOOR VIBRATION: FOR STEEL FRAMING IN THE LABORATORY AREAS, VIBRATION VELOCITY FROM A "TYPICAL WALKER" IS LIMITED TO 2000 MICROINCHES/SECOND. CORNER OFFICES, THE CORRIDOR SPINE AND THE PLAZAS ARE DESIGNED TO A LESS STRINGENT STANDARD OF "SLIGHTLY PERCEPTIBLE" ON THE MODIFIED REIHER-MEISTER SCALE. AT THE GROUND FLOOR SLAB, VIBRATION VELOCITY IS LIMITED TO 2000 MICROINCHES/SECOND, EXCEPT IN DESIGNATED AREAS FOR THE SEM/TEM, NMR, MASS SPECTROMETRY AND X-RAY CRYSTALLOGRAPHY EQUIPMENT, WHERE ADDITIONAL PILES ARE ADDED TO REDUCE THE VIBRATION VELOCITY FROM A "TYPICAL WALKER" TO 250 MICROINCHES/SECOND.

D. LATERAL LOADS:

1. SEISMIC:

   For the braced frames:

   $V_S \leq [Cv_I/RT] \times W = [1.15 \times 1.25 / 7 \times 0.8] \times W = 0.257\ W$

   $V_S \leq [2.5Ca_I/R] \times W = [2.5 \times 0.36 \times 1.25 / 7] \times W = 0.161\ W$ (governs)

   $V_S \geq [0.11Ca_I] \times W = [0.11 \times 0.36 \times 1.25] \times W = 0.0495\ W$

   $V_S \geq [0.8ZNv_I/R] \times W = [0.8 \times 0.4 \times 1.2 \times 1.25 / 7] \times W = 0.069\ W$

   For the shear walls: Multiply by R/Rwall= 7.0/5.5

   Where:

   Z = 0.4 (Seismic Zone 4)
   I = 1.25 (Group H occupancy)
   T = $0.030 \times (80)^{3/4}$ = 0.80 seconds
   S_E = Soil Profile Type
   Nv = 1.2 (Near Source Factor)
   Na = 1.0 (Near Source Factor)
   Ca = 0.36 Na = 0.36
   Cv = 0.96Nv = 0.96 x 1.2 = 1.15
   R = 7 (Building frame system with steel eccentrically-braced frames)
   Rwall = 5.5 (Building frame system with concrete shear walls)

312152

GENERAL NOTES

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UCSF
University of California San Francisco

UC Hall Seismic Replacement, Mission Bay

Capital Asset Account Number 3002

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Seals and Signatures

REGISTERED PROFESSIONAL ENGINEER C. MARK SAUNDERS No. 1806 Exp. 6-30-01 STRUCTURAL STATE OF CALIFORNIA

RECORD SET

THIS SET CONTAINS RECORD DRAWINGS FOR BID PACKAGES 1 & 2

Key Plan

Project North

Drawing Title

GENERAL NOTES

Scale
NONE

UCSF: M7317
Project Number
01 MAY 00
Baseline Date

S0.1
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