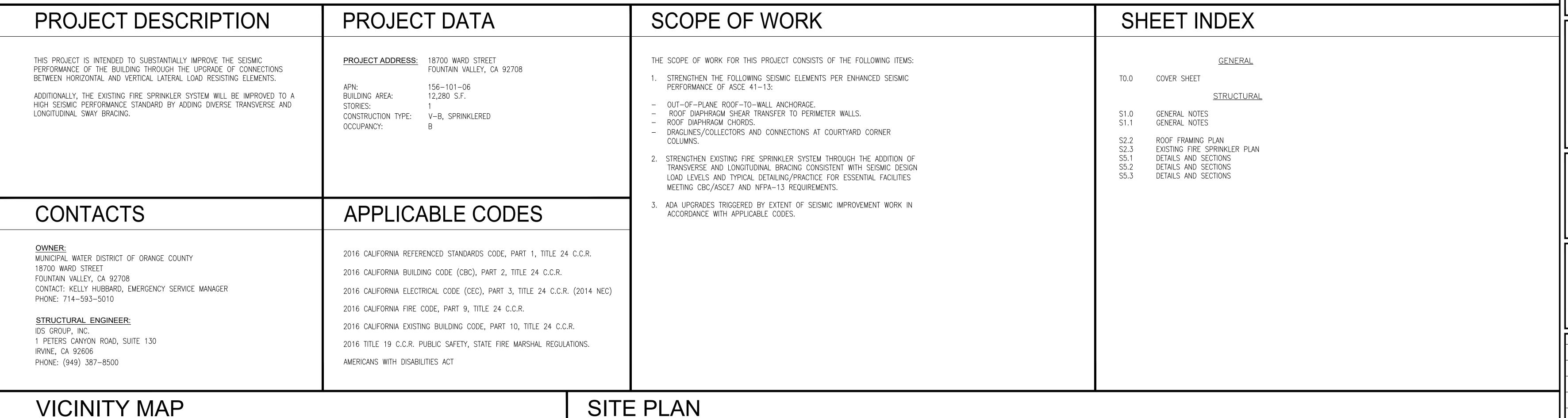
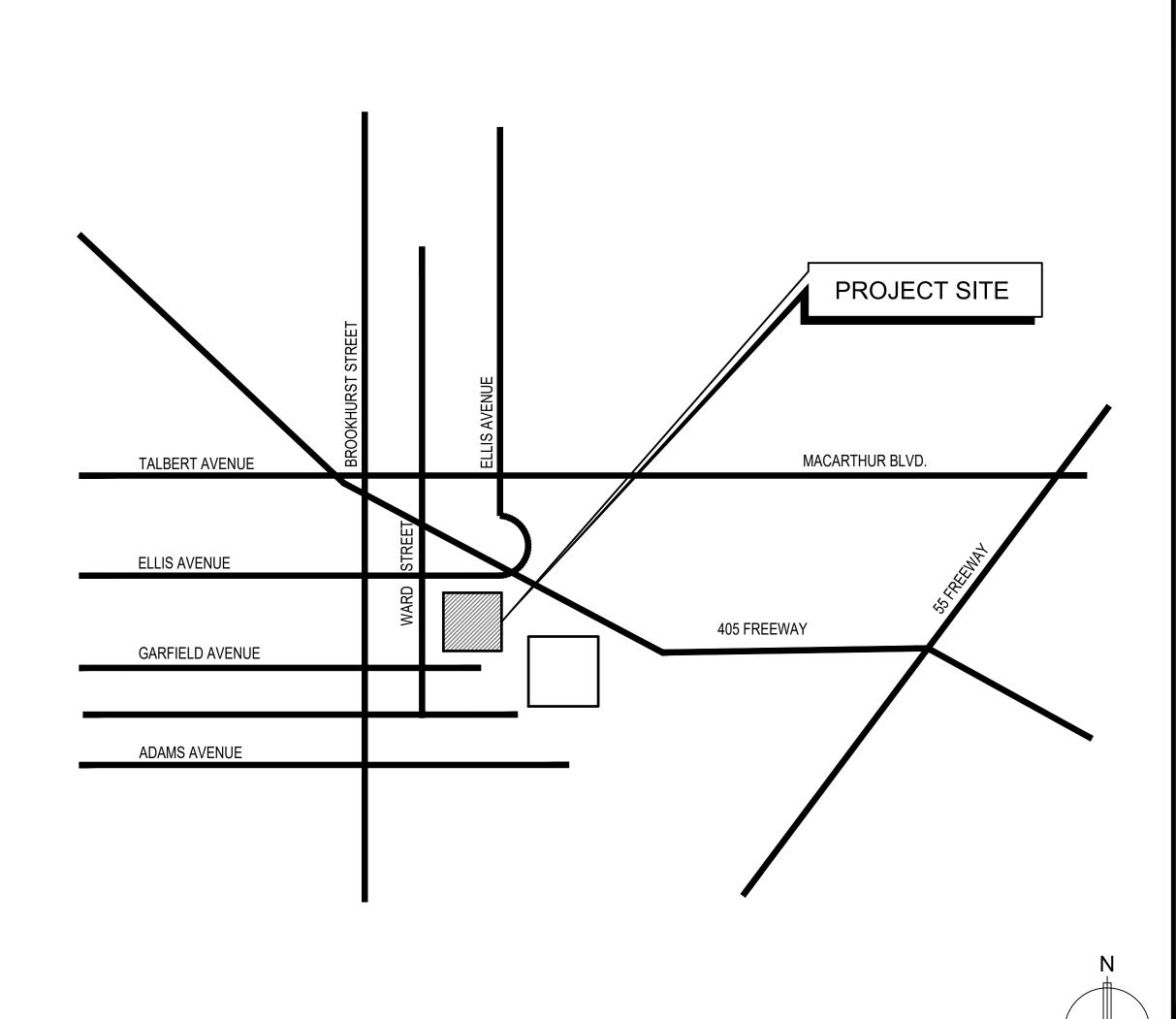
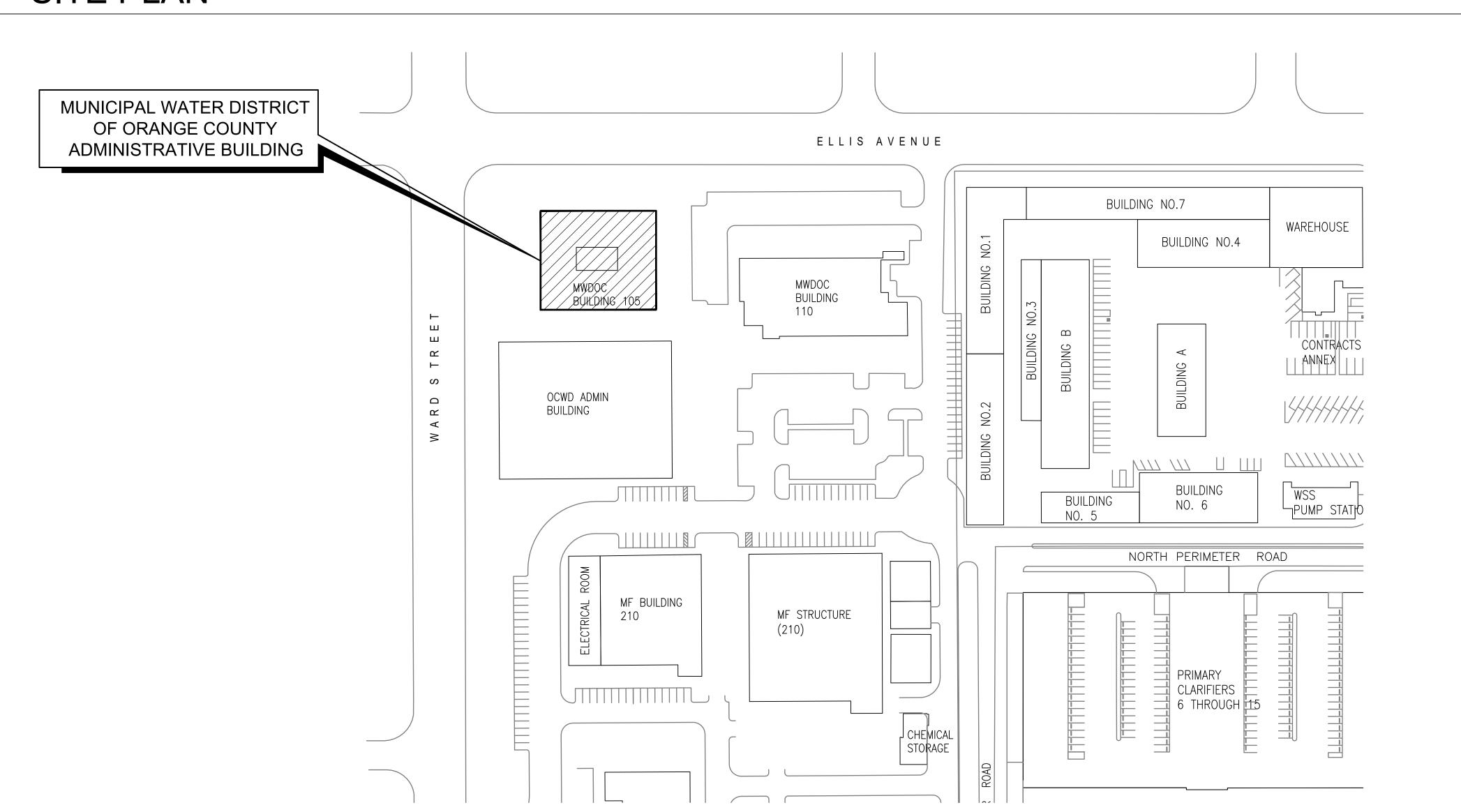
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY ADMINISTRATIVE BUILDING

18700 WARD STREET FOUNTAIN VALLEY, CA 92708

SEISMIC RETROFIT, ADA COMPLIANCE AND TENANT IMPROVEMENT









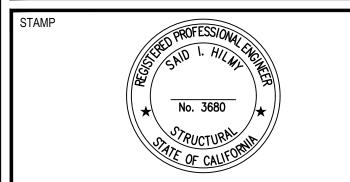
PROJECT NAME

MUNICIPAL WATER DISTRICT
OF ORANGE COUNTY ADMINISTRATIVE BUILDING

SEISMIC RETROFIT, ADA
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1 PETERS CANYON ROAD, SUITE 130 IRVINE, CA 92606 TEL: 949-387-8500, FAX: 949-387-0800



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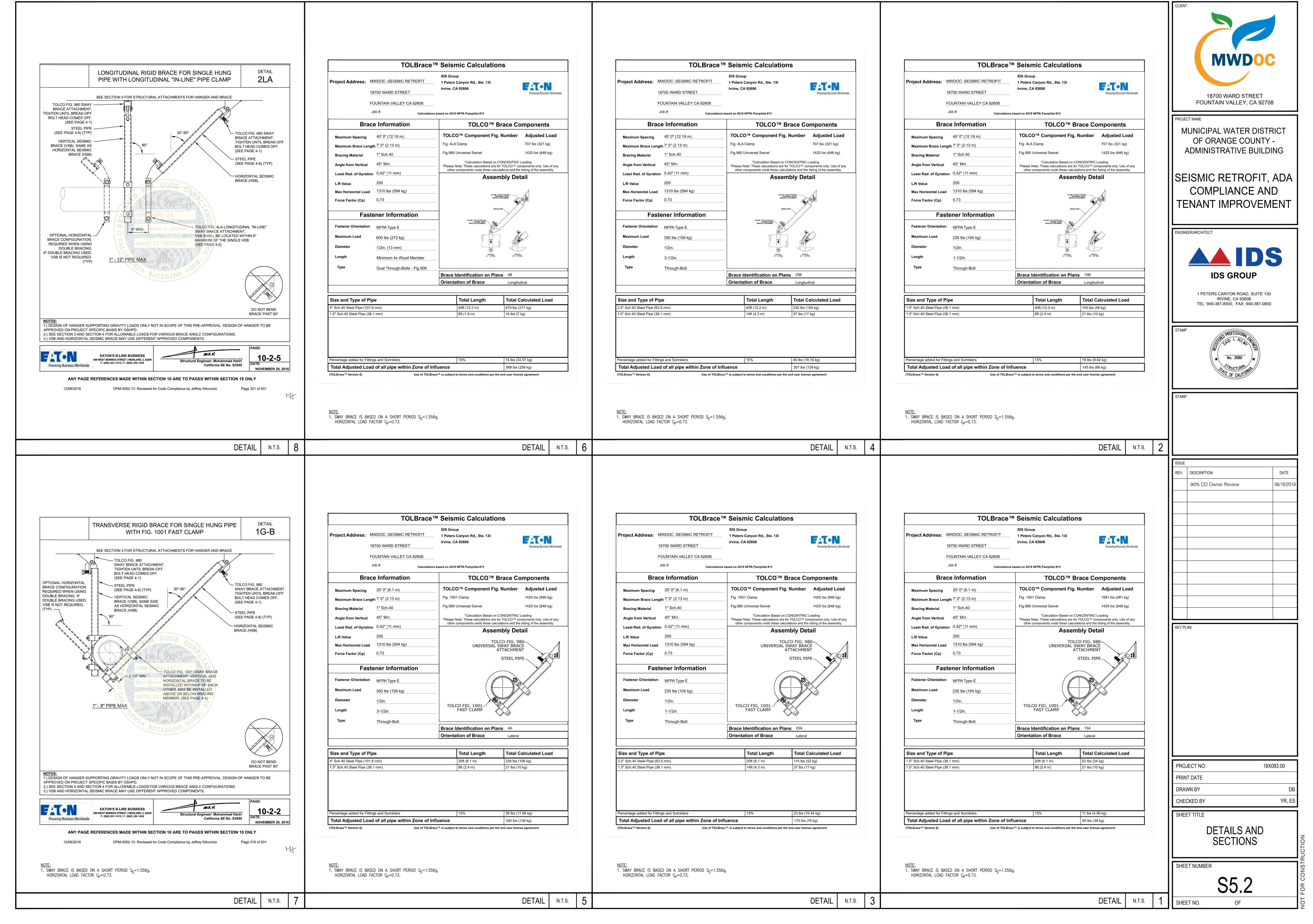
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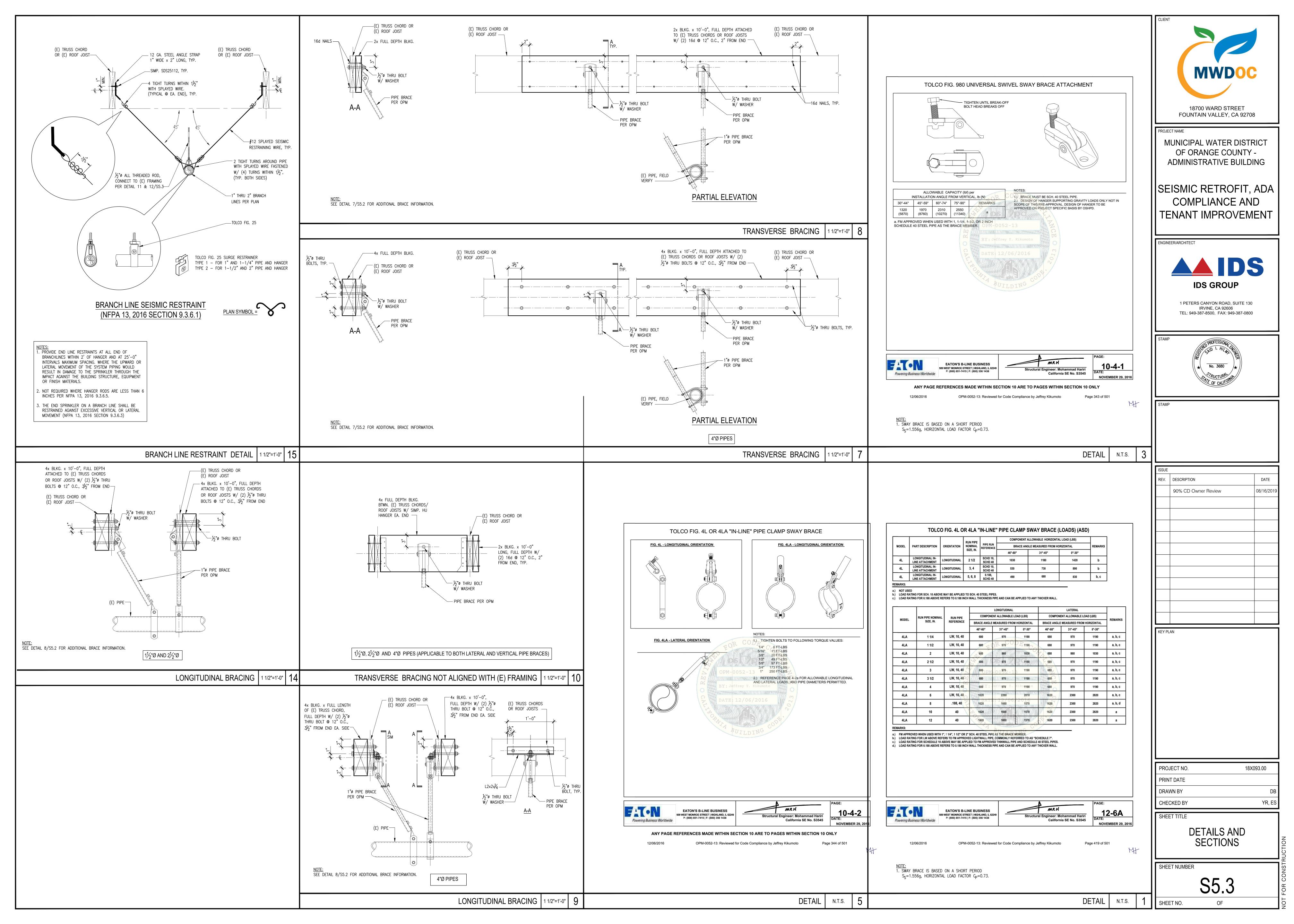
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REQUIRED VERIFICATION AND INSPECTION	OF STEEL CO)NSTRUCTION	
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WAS	SHERS:		
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	_	X	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	-	Χ	_
INSPECTION OF HIGH-STRENGTH BOLTING:			
a. SNUG—TIGHT JOINTS.	-	X	
b. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	_	X	AISC 360, SECTION M2.5
c. PRETENSIONED AND SLIP—CRITICAL JOINTS USING TURN—OF—NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	-	
MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED	STEEL DECK:		
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360.	_	X	AISC 360, SECTION A3.1
b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	_	Χ	APPLICABLE ASTM MATERIAL STANDARDS
c. MANUFACTURER'S CERTIFIED TEST REPORTS.	_	Χ	-
MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	_	X	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	-	X	-
INSPECTION OF WELDING:			
a. STRUCTURAL STEEL AND COLD—FORMED STEEL DECK:			
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.	Х	_	
2) MULTIPASS FILLET WELDS.	Х	_	
3) SINGLE-PASS FILLET WELDS > 5/16"	Х	_	AWS D1.1
4) PLUG AND SLOT WELDS.	Х	_	
5) SINGLE-PASS FILLET WELDS < 5/16"	-	X	
6) FLOOR AND ROOF DECK WELDS.	_	X	AWS D1.3
b. REINFORCING STEEL:			
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	_	X	
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	_	AWS D1.4 ACI 318: SECTION 3.5.2
3) SHEAR REINFORCEMENT.	X		0.0.2
4) OTHER REINFORCING STEEL.	-	X	
INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:			
a. DETAILS SUCH AS BRACING AND STIFFENING.	-	X	_
b. MEMBER LOCATIONS.	-	X	_
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	_	Χ	_

REFERENCE STANDARDS FOR CONCRETE REPAIR

	ACI RAP-1	STRUCTURAL CRACK REPAIR BY EPOXY INJECTION.
	ACI RAP-2	CRACK REPAIR BY GRAVITY FEED WITH RESIN
	ACI RAP-3	SPALL REPAIR BY LOW-PRESSURE SPRAYING
CONCRETE REPAIR	ACI RAP-4	SURFACE REPAIR USING FORM-AND-POUR TECHNIQUES
	ACI RAP-5	SURFACE REPAIR USING FORM-AND-PUMP TECHNIQUES
	ACI RAP-6	VERTICAL AND OVERHEAD SPALL REPAIR BY HAND APPLICATION
	ACI RAP-7	SPALL REPAIR OF HORIZONTAL CONCRETE SURFACES

POST-INSTALLED ANCHORAGE INTO MASONRY

- 1. POST-INSTALLED MECHANICAL ANCHORS INTO MASONRY SHALL BE SIMPSON WEDGE-ALL (ICC-ESR-1396), HILTI KWIK-BOLT 3 (ICC ESR-1385), OR EQUAL. INSTALL ANCHORS IN CONFORMANCE WITH THE ICC REPORT AND MANUFACTURER'S SPECIFICATIONS. COMPLY WITH 1. LIVE LOADS: ACI 530 AND CBC.
- 2. ALL HOLES SHALL BE DRILLED PER MANUFACTURER'S RECOMMENDATIONS. CORE DRILLED HOLES ARE NOT PERMITTED.
- 7. CONTRACTOR SHALL DETERMINE LOCATION OF EXISTING REINFORCING STEEL PRIOR TO DRILLING FOR ANCHORS, AND DRILL THE ANCHOR HOLES TO CLEAR THE REINFORCING STEEL PER THESE NOTES. NO REINFORCING STEEL SHALL BE NICKED, CUT OR DAMAGED IN ANY WAY. DAMAGED REINFORCING WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST. IF THE LOCATION OF ANCHORS MUST BE MOVED SLIGHTLY TO ACCOMMODATE THE LOCATION OF EXISTING REINFORCING STEEL, THE CONTRACTOR SHALL PREPARED A SLIGHTLY MODIFIED DESIGN OF THE ITEM TO BE ANCHORED AND SUBMIT TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. THE MODIFIED DESIGN SUGGESTED BY THE CONTRACTOR SHALL INVOLVE THE ABSOLUTE MINIMUM RELOCATION OF ANCHORS TO MEET THE DETAILS AND REQUIREMENTS HEREIN, AND SHALL BE BASED ON A TEMPLATE BY THE CONTRACTOR WHICH ACCURATELY PORTRAYS THE POSITION OF THE ANCHORS.
- 8. MAINTAIN A MINIMUM CLEARANCE OF 1-INCH BETWEEN THE REINFORCEMENT AND THE POST-INSTALLED ANCHOR.
- 9. ANCHORS SHALL BE INSTALLED A MINIMUM OF 1-3/8 INCH FROM ANY VERTICAL MORTAR
- 10. ANCHOR LOCATIONS ARE LIMITED TO ONE PER MASONRY CELL, WITH A MINIMUM SPACING OF 8 INCHES ON CENTER.
- 11. EMBEDMENT SHALL BE MEASURED FROM THE OUTSIDE FACE OF THE CONCRETE MASONRY
- 12. STAINLESS STEEL ANCHORS SHALL BE PROVIDED FOR EXTERIOR EXPOSURES.
- 13. CONTINUOUS SPECIAL INSPECTION IS REQUIRED.

TEST LOADS, EXPANSION BOLTS INTO MASONRY

ANCHOR DIAMETER (INCH)	MIN. EMBED "A" (INCH)	MIN. EDGE DISTANCE "B" (INCH)	TEST — MIN. TENSION LOAD (LBS)	TEST - MIN. TORQUE (FT-LBS) *
	1.105"	4"	242 LB	
1/4"	1.125"	12"	242 LB	, ET 1D
1/ +	2"	4"	864 LB	4 FT-LB
	2	12"	864 LB	
	4.005"	4"	514 LB	
3/8"	1.625"	12"	546 LB	15 [] 15
,	2.5"	4"	1252 LB	15 FT-LB
		12"	1252 LB	
	2.25" 3.5"	4"	1004 LB	20 FT-LB
1/2"		12"	1066 LB	
,		4"	1448 LB	
	ა.ა	12"	1448 LB	
	0.75"	4"	1302 LB	65 FT-LB
5/8"	2.75"	12"	1384 LB	
,	4"	4"	1998 LB	
	4	12"	2070 LB	
	7.05"	4"	1658 LB	
3/4"	3.25"	12"	1658 LB	120 FT-LB
,	4.775"	4"	2632 LB	
	4.375"	12"	2632 LB	

- * ANCHORS MUST ATTAIN SPECIFIED TORQUE WITHIN ONE-HALF TURN OF THE NUT.
- 14. PER 1704A.4 TEST POST-INSTALLAED ANCHORS IN MASONRY USING THE REQUIREMENTS FOR TEST LOADS, FREQUENCY, ACCEPTANCE CRITERIA AND PROCEDURE SET FORTH IN CBC 1913A.7. TEST LOADS SHALL BE IN ACCORDANCE WITH 1913A.7.2, METHOD 2 FOR ANCHORS OTHER THAN MECHANICAL ANCHORS WHICH ARE COVERED IN THE ABOVE TABLE.
- 15. POST-INSTALLED ADHESIVE ANCHORS SHALL USE HILTI HIT HY 70 PER ICC ESR-2682 FOR ROD DIAMETERS LESS THAN $\frac{3}{4}$ ".

DESIGN CRITERIA

- DESIGN CONFORMS TO CBC.
- A. ROOF: 21.5 PSF
- 2. DEAD LOADS:
 - A. SELF WEIGHT B. PARTITIONS: 20 PSF
- SEISMIC ANALYSIS: EQUIVALENT LATERAL FORCE PROCEDURE

SITE CLASS D SEISMIC DESIGN CATEGORY D

 $S_1 = 0.579 \text{ g}$ Fa = 1.0

Ss = 1.556 q

Fv = 1.5 $S_{DS} = 1.037$ $S_{D1} = 0.579 \text{ g}$

STRUCTURAL STEEL

- 1. THE CONTRACTOR SHALL SUBMIT ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
- MATERIAL TEST OR REPORTS FOR HOT-ROLLED STRUCTURAL SHAPES, PLATES, AND BARS SHALL BE MADE IN ACCORDANCE WITH ASTM A6. FOR SHEET MATERIAL, TEST SHALL BE MADE IN ACCORDANCE WITH ASTM A568. FOR TUBING AND PIPE, SUCH TEST SHALL BE MADE IN ACCORDANCE WITH REQUIREMENTS OF THE APPLICABLE ASTM STANDARDS.
- 3. HOT ROLLED SHAPES WITH FLANGES 11/3" THICK AND THICKER AND BASE PLATE 11/3" THICK AND THICKER SHALL HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FL-LB AT 70° F.
- 4. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:
- A. ANGLES, PLATES AND BARS: ASTM A36 (Fy=36ksi, Fu=58ksi)
- B. W AND WT: ASTM A992 (Fy=50ksi, Fu=65ksi) C. RECTANGULAR AND SQUARE HSS: ASTM A1085 (Fy=50ksi, Fu=65ksi)
- D. ROUND HSS: ASTM A1085 (Fy=50ksi, Fu=65ksi)
- E. PIPES: ASTM A53, GRADE B (Fy=35ksi, Fu=60ksi)
- F. BOLTS AT STEEL-TO-STEEL CONNECTIONS: ASTM A325 ST (SNUG-TIGHTENED), TYPE 1; $\frac{1}{8}$ " o TYP. U.O.N. G. BOLTS AT OTHER APPLICATIONS: ASTM A307
- H. ANCHOR RODS: ASTM F1554, GRADE 36, U.N.O.
- I. THREADED RODS: ASTM A36 J. NUTS: ASTM A563
- WASHERS: ASTM F436
- TWIST-OFF-TYPE TENSION-CONTROL BOLT ASSEMBLIES: ASTM F1852
- M. COMPRESSIBLE-WASHER-TYPE DIRECT-TENSION INDICATORS: ASTM F959
- N. STEEL STUD SHEAR CONNECTORS: ASTM A29/A108, AWS D1.1
- 5. ALL WELDING OF STEEL SHALL CONFORM TO AWS D1.1 AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING E-70XX LOW HYDROGEN MOISTURE RESISTING ELECTRODES UNLESS OTHERWISE NOTED.
- 6. USE THE MINIMUM SIZE OF WELDS IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION AT STEEL TO STEEL JOINTS UNLESS A LARGER WELDING SIZE IS SPECIFIED ON THE PLANS.
- 7. ALL STEEL (EXCEPT STAINLESS STEEL) SHALL BE SHOP PRIMED WITH ZINC OXIDE PRIMER UNLESS OTHERWISE NOTED.
- 8. PAINT ALL STRUCTURAL STEEL WITH WEATHER/RUST RESISTANT PAINT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ARCHITECTURAL DETAILS UNLESS OTHERWISE NOTED.
- 9. DIAMETER OF BOLT HOLE SHALL BE $\frac{1}{16}$ " LARGER THAN THE BOLT'S DIAMETER UNLESS OTHERWISE NOTED.
- 10. IF DRILLING HOLES AT STEEL MEMBERS TO ACCOMMODATE THE CONCRETE OR MASONRY ANCHORS IS REQUIRED, THE DRILLING MUST BE DONE AFTER THE ANCHORS HAVE BEEN INSTALLED. THE HOLES AT STEEL MEMBERS SHALL MATCH THE LOCATION OF INSTALLED ANCHORS.
- 11. PROVIDE BEVELED WASHERS ON SLOPING SURFACE OF CONNECTIONS FOR FULL BEARING.
- 12. WHERE LENGTH OF WELDING IS NOT SHOWN, IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS UNLESS OTHERWISE NOTED.
- 13. WHERE SO INDICATED ON THE DRAWINGS, STEEL EXPOSED TO VIEW IS DEFINED AS "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" (AESS). SEE SPECIFICATIONS.
- 14. MINIMUM BOLT SPACING FROM CENTER OF STANDARD AISC HOLE AS FOLLOWS, U.N.O.: CENTER-TO-CENTER = 3 BOLT DIAMETER CENTER-TO-ROLLED EDGE = 1.5 BOLT DIAMETER
- CENTER-TO-SHEARED EDGE = 1.75 BOLT DIAMETER 15. THE NATURAL CAMBER IN BEAMS SHALL BE ORIENTED UP, UNLESS NOTED OTHERWISE. AT CANTILEVERS, THE NATURAL CAMBER SHALL BE ORIENTED SO THAT THE FREE END IS ABOVE THE CONNECTED END. THE TOP OF ALL MEMBERS SHALL BE CLEARLY IDENTIFIED. ALL BEAM CAMBERS SHOWN ON THE PLANS SHALL
- 16. PROVIDE UPWARD CAMBER TO MEMBERS INDICATED TO HAVE CAMBER. AMOUNT MEASURED IN THE FIELD PRIOR TO ERECTION SHALL NOT DEVIATE BY MORE THAN ALLOWED BY THE AISC SPECIFICATION. DO NOT CAMBER MEMBERS OCCURRING BELOW ELEVATOR ENTRANCE DOORS.
- 17. GALVANIZE ALL STEEL EXPOSED TO WEATHER, UNLESS OTHERWISE NOTED.
- 18. UNDER NO CIRCUMSTANCES SHALL DRAWINGS BE SCALED OR REFERENCE ELECTRONIC BUILDING INFORMATION BE USED TO DETERMINE ELEVATIONS OR DIMENSIONS.
- 19. THE CONTRACTOR SHALL ESTABLISH A MASTER SET OF TOP-OF-STEEL DRAWINGS FOR ALL AREAS OF THE BUILDING OR STRUCTURE FOR APPROVAL BY THE ARCHITECT BEFORE BEGINNING FABRICATION OF STRUCTURAL STEEL. THE CONTRACTOR'S MASTER SET OF TOP-OF-STEEL DRAWINGS SHALL BE SUBMITTED AT THE BEGINNING OF THE SHOP DRAWING SUBMITTAL PROCESS. THIS SET OF DRAWINGS SHALL SHOW ALL TOP-OF-STEEL ELEVATIONS, ALL EDGE OF STEEL INFORMATION FOR FLOOR AND ROOF LEVELS, AND ALL STEEL FRAMING DIMENSIONS AT FLOOR AND WALL OPENINGS.

TOLERANCE

INCLUDE NATURAL CAMBER.

1. PERMITTED TOLERANCE SHALL BE ACCORDING TO THE CBC.

GENERAL

- SCOPE OF WORK: THIS PROJECT INVOLVES SEISMIC RETROFIT OF A 18,000 SF CMU WITH WOOD ROOF BUILDING. WORK INCLUDES OUT-OF-PLANE WALL ANCHORS, CONTINUOUS CROSS-TIES AND A NEW CHORD CONNECTIONS.
- 2. REFER TO PROJECT SPECIFICATIONS FOR PROJECT REQUIREMENTS.
- 3. ALL CONSTRUCTION AND WORKMANSHIP, INCLUDING MATERIALS, SHALL CONFORM TO THESE DRAWINGS AND THE CBC.
- 4. GOVERNING CODE AUTHORITY: FOUNTAIN VALLEY BUILDING AND SAFETY DIVISION.
- 5. COMPLY FULLY WITH ALL CODES HAVING JURISDICTION OVER THE WORK. IF ANY WORK SHOWN OR INDICATED ON THE DRAWINGS IS IN CONFLICT WITH ANY CODE HAVING JURISDICTION, BRING IT TO THE ATTENTION OF THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK WHICH WOULD BE AFFECTED BY IT.
- 6. WHERE NOT INDICATED OTHERWISE, THE LATEST EDITION OF ALL CITED DOCUMENTS SHALL GOVERN.
- 7. THE TERM CBC IN THESE DRAWINGS MEANS 2016 CALIFORNIA BUILDING CODE, CALIFORNIA CODE OF REGULATIONS, TITLE 24, ALL PARTS AND VOLUMES.
- 8. ALL INFORMATION, DIMENSIONS, AND ELEVATIONS SHOWN OR NOTED TO EXISTING STRUCTURE ARE BASED ON BEST INFORMATION CURRENTLY AVAILABLE AT THE TIME OF THE PREPARATION OF THESE DRAWINGS. NO WARRANTY IS IMPLIED AS TO THE ACCURACY OF EXISTING CONDITIONS. THE CONTRACTOR SHALL REFER TO THE ORIGINAL CONSTRUCTION DOCUMENTS FOR INFORMATION REGARDING EXISTING CONSTRUCTION AND SHALL FIELD VERIFY ALL CONDITIONS. IF CONDITIONS BECOME APPARENT WHICH DIFFER FROM THE CONDITIONS SHOWN HEREIN, THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER. HOWEVER, ANY SIGNIFICANT CONFLICTS SHALL BE RESOLVED AS NOTED.
- THE CONTRACTOR SHALL:
- A. BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS. B. CHECK ALL DIMENSIONS.
- C. BE RESPONSIBLE FOR COORDINATION OF ALL TRADES TO ASSURE PROPER CONSTRUCTION OF
- ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- 10. DIMENSIONS: DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWING. RELY ON WRITTEN DIMENSIONS GIVEN AND FIELD VERIFICATION. IF DISCREPANCIES ARE FOUND, NOTIFY THE OWNER BEFORE THE COMMENCEMENT OR RESUMPTION OF WORK. IF NO DIMENSION ARE GIVEN, NOTIFY THE OWNER FOR CLARIFICATIONS. ALL NOTIFICATIONS SHALL BE BY "RFI".
- 11. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER "GENERAL NOTES" AND TYPICAL DETAILS. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO PRIOR REVIEW BY THE ENGINEER.
- 12. CONDITIONS NOTED AS "EXISTING" OR (E) ARE TO REMAIN U.N.O. PROTECT AS REQUIRED. "EXISTING" CONSTRUCTION REMOVED BY THE CONTRACTOR FOR ANY REASON SHALL BE REPLACED TO MATCH EXISTING AT NO ADDITIONAL COST TO THE OWNER. ALL MATERIALS, FEATURES OR CONDITIONS NOT SPECIFICALLY IDENTIFIED AS "EXISTING" OR (E) ARE CONSIDERED NEW WORK AND ARE PART OF THE PROJECT SCOPE OF WORK.
- 13. ALL EXISTING CONDITIONS, WHETHER OR NOT SPECIFICALLY NOTED ON THE DRAWINGS, SHALL BE VERIFIED PRIOR TO THE COMMENCEMENT OF ANY WORK. DO NOT PROCEED WITH ANY ITEM OR WORK THAT IS REASONABLY QUESTIONABLE WITHOUT ADVISING THE OWNER. OBTAIN DIRECTION FROM THE OWNER AS TO HOW TO PROCEED. SUBMIT ALL QUESTIONS ON "RFI" FORM.
- 14. ANY DISCREPANCIES FOUND IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO COMMENCING ANY WORK.
- 15. SHOP DRAWINGS REQUIRED BY THE PROJECT SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. DRAWINGS ARE REVIEWED BY THE ENGINEER FOR GENERAL CONFORMANCE TO THE DESIGN. REGARDLESS OF THE ENGINEER'S REVIEW, THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR COMPLETE AND SATISFACTORY SUBMITTAL AND CONFORMANCE TO THE CONTRACT DOCUMENTS. SHOP DRAWINGS WILL BE REJECTED FOR INCOMPLETENESS. LACK OF CALCULATIONS (IF REQUIRED) OR CHANGES WITHOUT PRE-APPROVAL. ALL STRUCTURAL CALCULATIONS AND DRAWINGS AS PART OF THE SHOP DRAWINGS SUBMITTAL SHALL BE SIGNED AND STAMPED BY A CALIFORNIA REGISTERED STRUCTURAL ENGINEER. FOR RESUBMITTALS, ALL CHANGES FROM THE PRIOR SUBMITTAL SHALL BE TIGHTLY ENCLOSED BY A "CLOUD" SO AS TO INDICATE ONLY THOSE AREAS CHANGED. WHEN THE CLOUDED DRAWING ARE RESUBMITTED, ONLY THE CLOUDED AREAS WILL BE REVIEWED.
- 16. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. THE SUPPORTING SERVICES BY THE ENGINEER, WHETHER PERFORMED PRIOR TO, DURING, OR AFTER CONSTRUCTION, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND PROJECT SPECIFICATIONS; BUT THEY DO NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSIDERED AS SUPERVISION OF CONSTRUCTION.
- 17. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ALL SHORING REQUIRED IN ORDER TO SAFELY ACHIEVE THE FINAL CONSTRUCTION SHOWN ON THE DRAWINGS. THIS INCLUDES, BUT IS NOT LIMITED TO, ANY TYPES OF SHORING REQUIRED FOR SOILS EXCAVATION AND BACKFILL WORK; SUPPORT OF STRUCTURAL ELEMENTS UNTIL THEY HAVE ACHIEVED THE NECESSARY STRENGTH TO PERFORM IN THE FINAL POSITION AND MANNER SHOWN ON THE DRAWINGS; AND SUPPORT OF STRUCTURAL ELEMENTS THAT ARE MODIFIED AND THEREBY REDUCED IN STRENGTH IN ANY WAY DURING CONSTRUCTION AS REQUIRED TO ACHIEVE THE FINAL CONSTRUCTION AS SHOWN ON THE DRAWINGS. ALL SHORING CALCULATIONS AND DRAWINGS SHALL BE STAMPED BY A CALIFORNIA REGISTERED ENGINEER AND SUBMITTED FOR REVIEW PRIOR TO PERFORMING THE
- 18. THE CONTRACTOR SHALL COORDINATE ALL UTILITY LOCATIONS WITH OTHER DRAWINGS AND SHALL CONDUCT A DETAILED SURVEY OF EXISTING UTILITIES TO IDENTIFY INTERFERENCES WITH THE NEW CONSTRUCTION. PROMPTLY NOTIFY THE ENGINEER OF ANY INTERFERENCES PRIOR TO PERFORMING THE WORK.
- 19. IN THE EVENT THAT THERE ARE ANY UTILITIES AFFECTED, ANY MODIFICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THAT OF THE OWNER. ALL OUTLETS EITHER ELECTRICAL OR MECHANICAL, OR ANY ASSOCIATED REWORK OR MODIFICATIONS WILL BE A PART OF THE BID AND NOT TO BE CONSTRUED AS THE WORK OF THE OWNER. SUFFICIENT DUE DILIGENCE ON THE PART OF THE CONTRACTOR WILL ELIMINATE ANY POTENTIAL ISSUES AND ACCEPTANCE OF THE AGREEMENT SHALL BIND CONTRACTOR TO SAID ACCEPTANCE.
- 20. LOCATE ALL EMBEDDED ITEMS, REINFORCING STEEL AND TENDONS USING NON-DESTRUCTIVE MEANS PRIOR TO DRILLING OR CORING. DO NOT DAMAGE EMBEDDED ITEMS WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.
- 21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA DURING CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTY AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- 22. PROVIDE BARRICADING AND MAINTAIN ANY REQUIRED LIGHTS. WARNING, AND DIRECTIONAL SIGNS, AND OTHER PROTECTION NEAR AND ABOUT THE AREA OF THE WORK AS MAY BE REQUIRED BY THE OWNER. OR BY ANY OTHER GOVERNING AUTHORITY. PROVIDE NECESSARY MEANS TO PROTECT ANY SURROUNDING ADJACENT SITE STRUCTURES, PROPERTIES, SERVICING UTILITIES, PEDESTRIAN AND VEHICLE WAYS, AND MAINTAIN ALL SAFETY MEASURES UNTIL WORK IS COMPLETED.
- 23. SECURE THE CONSTRUCTION SITE. ANY PARTS OF WORK AREA WHICH ARE TO BE BARRICADED OR SEALED TO NON-CONSTRUCTION INDIVIDUALS MUST BE COORDINATED WITH AND APPROVED BY THE OWNER BEFORE PROCEEDING WITH THE WORK.
- 24. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND ADJACENT STRUCTURE(S). FINISHES AND UTILITIES DURING CONSTRUCTION.

26. THE CONTRACTOR SHALL EXERT EVERY EFFORT TO PREVENT DUST AND CONSTRUCTION DEBRIS FROM

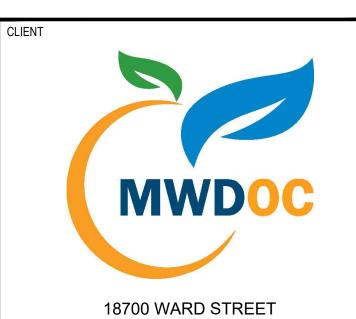
DETAILED ON STRUCTURAL DRAWINGS SHALL NOT BE DONE WITHOUT THE ENGINEER'S APPROVAL.

SURFACES UNLESS SPECIFICALLY NOTED OTHERWISE TO THE SATISFACTION OF THE OWNER.

25. PROVIDE AND ENGINEER ALL TEMPORARY STRUCTURAL AND SAFETY ELEMENTS REQUIRED TO ACCOMPLISH THE

CONTAMINATING THE WORK AREA. THESE EFFORTS SHALL INCLUDE BUT NOT BE LIMITED TO PROVIDING A

- DAILY CLEANUP OF THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 27. CUTTING, BORING, SAW-CUTTING OR DRILLING THROUGH NEW STRUCTURAL MEMBERS OTHER THAN THOSE
- 28. PERFORM ALL PATCHING AND RESTORATION AS REQUIRED BY THE WORK. THE WORK SHALL MATCH ADJACENT



PROJECT NAME

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY -ADMINISTRATIVE BUILDING

FOUNTAIN VALLEY, CA 92708

SEISMIC RETROFIT, ADA **COMPLIANCE AND** TENANT IMPROVEMENT

NGINEER/ARCHITECT



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SHEET TITLE GENERAL NOTES

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© & A.B.	AT AND ANCHOR BOLT	K K.P.	KIPS; 1000 KING POST	1. SHOI CON DOC
ABV. ADD'L. (ADDL.) ADJ.	ABOVE ADDITIONAL ADJACENT	LAT. L.B. LB (#)	LATERAL LAG BOLT POUND	CON THE THE
ALT. ALUM. APPRX. (APPROX.) ARCH.	ALTERNATE ALUMINUM APPROXIMATE(LY) ARCHITECT(URAL)	L.F. LLH LLV LT. WT.	LINEAL FEET (FOOT) LONG LEG HORIZONTAL LONG LEG VERTICAL LIGHT WEIGHT	2. SHO GEN RESI
BLDG. BLKG. BLW.	BUILDING BLOCKING BELOW	MAX. M.B. MECH.	MAXIMUM MACHINE BOLT MECHANICAL	DIME FROI REQI DIME
BM. B.N. BNDRY.	BEAM BOUNDARY NAILING BOUNDARY	M.E.P. MEZZ.	MECHANICAL, ELECTRICAL AND PLUMBING MEZZANINE	_ DEVI
B.O.C. B.O.F. BOT. (B) BRCG.	BOTTOM OF CONCRETE BOTTOM OF FOOTING BOTTOM BRACING	MFR. MIN. MISC. MTL.	MANUFACTURER MINIMUM MISCELLANEOUS METAL	
BRDG. BRG. BTWN.	BRIDGE (ING) BEARING BETWEEN	(N)	NEW	
CAMB. (C) CBC CANT.	CAMBER(ED) CALIFORNIA BUILDING CODE CANTILEVER(ED)	NO. (#) N.S. N.T.S.	NUMBER NEAR SIDE NOT TO SCALE	
C.F. C.I.P.	CUBIC FEET (FOOT) CAST-IN-PLACE	O/C (O.C.) O.D. O.H.	ON CENTER OUTSIDE DIAMETER OPPOSITE HAND	
C.I.D.H. C.J. C.L. (♠) CLG.	CAST-IN-DRILLED HOLE CONTROL JOINT; CONSTRUCTION JOINT CENTER LINE CEILING	OPNG. OPP. ORTHO. O.W.J.	OPENING OPPOSITE ORTHOGONAL OPEN WEB JOIST	
CLR. COL. CONC.	CLEAR COLUMN CONCRETE	PC PCF	PILE CAP POUNDS PER CU.FT.	
CONN. CONST. CONT.	CONNECTION CONSTRUCTION CONTINUOUS	PL. PLYWD. P.P.	PLATE PLYWOOD PARTIAL—PENETRATION	
C.P. CTSK. CTR.	COMPLETE—PENETRATION COUNTERSINK CENTER(ED)	P.S.F. P.S.I.	POUNDS PER SQUARE FOOT POUNDS PER SQUARE	
C.Y.	CUBIC YARD	PT P.T.	INCH PRETENSIONED PRESSURE TREATED	
d DBA DBL. DEPT.	d PENNY NAIL DEFORMED BAR ANCHOR DOUBLE DEPARTMENT	QTY.	QUANTITY	
D.F. DIA. (Ø) DIAG.	DOUGLAS FIR DIAMETER DIAGONAL	RAD. (R) RBS REF.	RADIUS REDUCED BEAM SECTION REFERENCE	1
DIAPH. DIM. DN.	DIAPHRAGM DIMENSION DOWN	REINF. REQ'D. (REQD.) RF.	REINFORCEMENT (ING)	
DO DWG. (DWGS.) DWL.	DITTO (REPEAT) DRAWING(S) DOWEL	R.O.	ROUGH OPENING	
EA.	EACH	S.A.D. SC	SEE ARCHITECTURAL DRAWINGS SLIP—CRITICAL	
E.F. E.J. EL.	EACH FACE EXPANSION JOINT ELEVATION	S.C.D. SCH. SEP.	SEE CIVIL DRAWINGS SCHEDULE SEPARATION	
ELEC. ELEV. EMB.	ELECTRICAL ELEVATOR EMBED(MENT)	SHT. SIM. SKW.	SHEET SIMILAR SKEW(ED)	
E.N. ENG. EQ.	EDGE NAIL ENGINEER EQUAL	S.O.G. SPEC.	SLAB-ON-GRADE SPECIFICATION SQUARE	
EQPT. EQUIV. EXP.	EQUIPMENT EQUIVALENT EXPANSION	SQ. ST STD.	SNUG-TIGHTENED STANDARD	
EXIST. (E) EXT.	EXISTING EXTERIOR	STAGG. STIFF. STIR.	STAGGER(ED) STIFFENER STIRRUP	
FDN. FIN.	FOUNDATION FINISH(ED)	STL. STRUC(T). SUSP.	SUSPENDED	
FLR. F.N. F.O.C.	FLOOR FIELD NAIL; FACE NAIL FACE OF CONCRETE	SYMM.	SYMMETRICAL	
F.O.M. F.O.S. F.O.W.	FACE OF MASONRY FACE OF STUD FACE OF WALL	T&B T&G TEMP.	TOP AND BOTTOM TONGUE AND GROOVE TEMPORARY	
F.P. FRP F.S.	FULL (COMPLETE) PENETRA FIBER REINFORCED POLYME FAR SIDE	TIOK. RI.N. T.O.	THICK(NESS) TOE NAIL TOP OF	
FT. (') FTG.	FOOT (FEET) FOOTING	T.O.C. T.O.S.	TOP OF CONCRETE TOP OF STEEL; TOP OF SHEATHING	
F.V.	GAUGE	T.O.W. TRANS. T.S.G.	TOP OF WALL TRANSVERSE TAPERED STEEL GIRDER	
GALV. GLB.	GALVANIZE(D) GLU-LAM/GLULAM GLUED LAMINATED BEAM	TYP.	TYPICAL	
GRD. GYP.	GRADE GYPSUM	UTIL.	UNLESS OTHERWISE NOT UTILITY	ED
HD. HDR. HGR.	HOLDOWN; HAND HEADER HANGER	VERT. (V) V.I.F.	VERIFY IN FIELD	
HORIZ. (H) H.S.	HORIZONTAL HEADED STUD	W/ (W) WD.	WITH WIDE; WIDTH WOOD	
H.S.B. HT.	HIGH STRENGTH BOLT HEIGHT	W.P. WT. W.W.F.	WORK POINT WEIGHT WELDED WIRE FABRI	С
I.D. IN. (") INFO.	INSIDE DIAMETER INCH(ES) INFORMATION	X-STG XX-STG	EXTRA STRONG DOUBLE EXTRA STRO	ONG
JST.	JOIST			
JT.	JOINT			

OP DRAWINGS, SUBMITTALS AND REVIEW BY THE ENGINEER NAILING

OP DRAWINGS ARE NOT CONTRACT DOCUMENTS AND MAY NOT BE USED AS A BASIS FOR INSTRUCTING THE WORK IN A MANNER DIFFERENT FROM WHAT IS SHOWN IN THE CONTRACT CUMENTS. THE PURPOSE OF THE SHOP DRAWING REVIEW BY THE ENGINEER IS TO HELP THE NTRACTOR UNDERSTAND AND IMPLEMENT THE DESIGN SHOWN ON THE DRAWINGS AND DESCRIBED IN SPECIFICATIONS. IF DEVIATIONS, DISCREPANCIES OR CONFLICTS BETWEEN THE SHOP DRAWINGS AND CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER THE SHOP DRAWINGS ARE VIEWED BY THE ENGINEER, THE CONTRACT DOCUMENTS SHALL CONTROL AND SHALL BE FOLLOWED.

OP DRAWINGS ARE REVIEWED BY THE ENGINEER SOLELY TO AID IN ASSESSING THE CONTRACTOR'S NERAL CONFORMANCE WITH THE DESIGN REQUIREMENTS AND INTENT. THE CONTRACTOR IS SOLELY SPONSIBLE FOR CONSTRUCTABILITY, COMPATIBILITY WITH THE RELATED COMPONENTS OR ASSEMBLIES, MENSIONS, QUANTITIES, WEIGHTS OR GAUGES, AND THE LIKE. THE CONTRACTOR IS NOT RELIEVED ROM COMPLIANCE WITH THE CONTRACT DOCUMENTS, OR FROM ANY CODE OR OTHER LEGAL QUIREMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING AND COORDINATING ALL MENSIONS; FOR CONSTRUCTION MEANS & METHODS AND SAFETY PRECAUTIONS; AND FOR ANY VIATIONS FROM THE PLANS AND SPECIFICATIONS NOT CLEARLY IDENTIFIED BY THE ENGINEER.

All	<u>-ING</u>		
1.	CONNECTION JOIST TO SILL OR GIRDER	FASTENING a, m $3 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	LOCATION TOENAIL
2.	BRIDGING TO JOIST	$2 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	TOENAIL EACH END
	1" x 6" SUBFLOOR OR LESS TO EACH JOIST	$2 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	FACE NAIL
4.	WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST	$3 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	FACE NAIL
5.	2" SUBFLOOR TO JOIST OR GIRDER	$2 - 16d COMMON (3\frac{1}{2}^{"} \times 0.162")$	BLIND AND FACE NAIL
6.	SOLE PLATE TO JOIST OR BLOCKING	16d (3½" x 0.135") AT 16" O.C.	TYPICAL FACE NAIL
	SOLE PLATE TO JOIST OR BLOCKING AT PANELS BRACED WALL PANEL	$3 - 16d (3\frac{1}{2}$ " x 0.135") AT 16" 0.C.	BRACED WALL
7.	TOP PLATE TO STUD	2 - 16d COMMON $(3\frac{1}{2}" \times 0.162")$	END NAIL
8.	STUD TO SOLE PLATE	4 - 8d COMMON $(2\frac{1}{2}" \times 0.131")$ 2 - 16d COMMON $(3\frac{1}{2}" \times 0.162")$	TOENAIL END NAIL
9.	DOUBLE STUDS	16d (3½" × 0.135") AT 24" O.C.	FACE NAIL
10.	DOUBLE TOP PLATES DOUBLE TOP PLATES	16d (3½" x 0.135") AT 16" O.C. 8 − 16d COMMON (3½" x 0.162")	TYPICAL FACE NAIL LAP SPLICE
11.	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	$3 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	TOENAIL
12.	RIM JOIST TO TOP PLATE	8d (2½" x 0.131") AT 6" O.C.	TOENAIL
13.	TOP PLATES, LAPS AND INTERSECTIONS	$2 - 16d$ COMMON $(3\frac{1}{2}" \times 0.162")$	FACE NAIL
14.	CONTINUOUS HEADER, TWO PIECES	16d COMMON $(3\frac{1}{2}" \times 0.162")$	16" O.C. ALONG EDGE
15.	CEILING JOISTS TO PLATE	3 − 8d COMMON (2½" x 0.131")	TOENAIL
16.	CONTINUOUS HEADER TO STUD	4 − 8d COMMON (2½" x 0.131")	TOENAIL
17.	CEILING JOISTS, LAPS OVER PARTITIONS (NOTE q.)	$3 - 16d$ COMMON ($3\frac{1}{2}$ " x 0.162") MINIMUM, TABLE 2308.10.4.1	FACE NAIL
18.	CEILING JOISTS TO PARALLEL RAFTERS (NOTE q.)	$3 - 16d$ COMMON $(3\frac{1}{2}$ " x 0.162") MINIMUM, TABLE 2308.10.4.1	FACE NAIL
19.	RAFTER TO PLATE (NOTE 4.)	$3 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	TOENAIL
20.	1" DIAGONAL BRACE TO EACH STUD AND PLATE	$2 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	FACE NAIL
21.	1" x 8" SHEATHING TO EACH BEARING	$3 - 8d COMMON (2\frac{1}{2}" \times 0.131")$	FACE NAIL
22.	WIDER THAN 1" x 8" SHEATHING TO EACH BEARING	3 − 8d COMMON (2½" x 0.131")	FACE NAIL
23.	BUILT-UP CORNER STUDS	16d COMMON (3½" x 0.162")	24" O.C.
24.	BUILT-UP GIRDER AND BEAMS	20d COMMON (4" x 0.192") AT 32" O.C.	FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
		2 - 20d COMMON (4" X 0.192")	FACE NAIL AT ENDS AND AT EACH SPLICE
25.	2" PLANKS	16d COMMON (3½" x 0.162")	AT EACH BEARING
26	. COLLAR TIE TO RAFTER	3 - 10d COMMON (3" x 0.148")	FACE NAIL
27.	JACK RAFTER TO HIP	3 - 10d COMMON (3" x 0.148") 2 - 16d COMMON (3 $\frac{1}{2}$ " x 0.162")	TOENAIL FACE NAIL
28.	ROOF RAFTER TO 2-BY RIDGE BEAM	2 - 16d COMMON $(3\frac{1}{2}$ " x 0.162") 2 - 16d COMMON $(3\frac{1}{2}$ " x 0.162")	TOENAIL FACE NAIL
29.	JOIST TO BAND JOIST	$3 - 16d$ COMMON $(3\frac{1}{2}^{\circ} \times 0.162^{\circ})$	FACE NAIL
30.	LEDGER STRIP	$3 - 16d COMMON (3\frac{1}{2}" \times 0.162")$	FACE NAIL AT EACH JOIS
31.	WOOD STRUCTURAL PANELS AND PARTICILEBOARD b SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	½" AND LESS 6d ^{c,1} 19 ₃₂ " TO ¾" 8d ^d OR 6d ^e 7 ₈ " TO 1" 10d ^d OR 8d ^e 1½" TO 1¼" 10d ^d OR 8d ^e	
	SINGLE FLOOR (COMBINATION SUBFLOOR — UNDERLAYMENT TO FRAMING)	$\frac{3}{4}$ " AND LESS $6d^{e}$ $\frac{7}{8}$ " TO 1" $8d^{e}$ $\frac{1}{8}$ " TO $\frac{1}{4}$ " 10^{d} OR $8d^{e}$	
32.	PANEL SIDING (TO FRAMING)	½" AND LESS 6d ^f 5/8" 8d ^f	
33.	FIBERBOARDING SHEATHING ⁹	$\frac{1}{2}$ " 6d COMMON NAIL (2" x 0.113") 8d COMMON NAIL (2 $\frac{1}{2}$ " x 0.131")	
34.	INTERIOR PANELING	1/4" 4d ^j 3%" 6d ^k	

a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED. b. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR

WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.

- c. COMMON OR DEFORMED SHANK (6d 2" x 0.113"; 8d $2\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148").
- d. COMMON (6d 2" x 0.113"; 8d $2\frac{1}{2}$ " x 0.131"; 10d 3 x 0.148").
- e. DEFORMED SHANK (6d 2" x 0.113"; 8d $2\frac{1}{2}$ " x 0.131"; 10d 3" x 0.148").
- f. CORROSION-RESISTANT SIDING (6d $1\frac{1}{8}$ " x 0.106"; 8d $2\frac{3}{8}$ " x 0.128") OR CASING (6d 2" x 0.099"; 8d $2\frac{1}{2}$ " x 0.113") g. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT
- INTERMEDIATE SUPPORTS FOR NON-STRUCTURAL APPLICATIONS. h. CORROSION-RESISTANT ROOFING NAILS WITH $\frac{1}{16}$ -INCH-DIAMETER HEAD AND $\frac{1}{2}$ -INCH LENGTH FOR $\frac{1}{2}$ -INCH SHEATHING AND $1\frac{3}{4}$ -INCH LENGTH FOR $2\frac{5}{3}$ 2-INCH SHEATHING.
- i. CORROSION-RESISTANT STAPLES WITH NOMINAL $\frac{1}{16}$ -INCH CROWN OR 1-INCH CROWN AND $1\frac{1}{4}$ -INCH LENGTH FOR $\frac{1}{2}$ -INCH SHEATHING AND $1\frac{1}{2}$ -INCH LENGTH FOR $2\frac{5}{32}$ -INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
- j. CASING (1½" x 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE
- k. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE
- I. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS $(2\frac{1}{2})$ " x 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
- m. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF $\frac{1}{16}$ INCH.
- n. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS. o. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS FOR SUB-FLOOR AND WALL SHEATHING
- AND 3 INCHES ON CENTER AT EDGES. 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING. p. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
- q. CEILING JOIST AND RAFTER CONSTRUCTION SHALL BE IN ACCORDANCE WITH CBC SECTION 2308.10.

WOOD

- 1. WOOD MEMBERS SHALL BE DOUGLAS FIR-LARCH PER WCLIB OR WWPA, VISUALLY GRADED DIMENSION LUMBER AND SHALL BE SURFACED DRY (19% MOISTURE CONTENT MAXIMUM). ALL LUMBER SHALL BEAR THE GRADE STAMP OF AN APPROVED TESTING AGENCY, EXCEPT EXPOSED LUMBER AT VISIBLE AREAS. STRUCTURAL FRAMING MEMBERS SHALL BE S4S AND GRADE MARKED AS No.1.
- 2. PLYWOOD SHEATHING SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF U.S. PRODUCT STANDARDS PS 1-95. STRUCTURAL USE PANELS SHALL CONFORM TO NER-108 (APA-PRP-108). EACH PANEL SHALL BE IDENTIFIED WITH THE APPROPRIATE A.P.A. GRADE STAMP.
- 3. ROOF SHEATHING SHALL BE FIVE PLY WITH THICKNESS AND PANEL INDEX AS INDICATED ON DRAWINGS.

STAGGER SHEETS PER PLAN. ROOF NAILING SHALL BE PER SCHEDULE ON DRAWINGS, OR AS INDICATED

4. ROOF AND FLOOR SHEATHING, AND SHEAR WALL PANELS NAILING AND INSTALLATION SHALL BE INSPECTED AND APPROVED PRIOR TO COVERING.

ON NOTES. INSTALL SHEETS WITH FACE GRAIN ACROSS SUPPORTS EXCEPT WHERE NOTED OTHERWISE.

5. BOLTS SHALL CONFORM TO ASTM A307. ALL BOLTS THROUGH WOOD SHALL HAVE STANDARD WASHERS. BOLT HOLES SHALL BE BORED $\frac{1}{32}$ " TO $\frac{1}{16}$ " LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE TIGHTENED PRIOR TO BEING COVERED. WHERE PLATE WASHERS ARE SHOWN ON THE DRAWINGS THEY SHALL BE AS FOLLOWS:

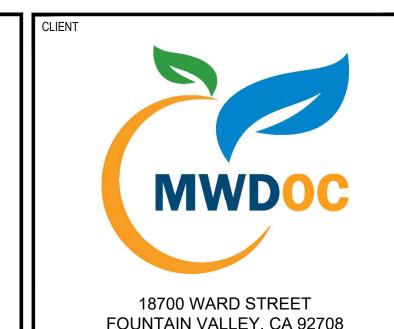
MINIMUM SIZE FOR SQUARE PLATE WASHERS

BOLT SIZE	PLATE SIZE
1/2"	³ ∕ ₁₆ " × 2" × 2"
5/8 "	1/4" × 21/2" × 21/2"
3/4"	5/ ₁₆ " × 2 ³ / ₄ " × 2 ³ / ₄ "
7/8"	5/16" x 3" x 3"
1"	3/8" × 31/2" × 31/2"

- 6. NAILS SHALL BE COMMON WIRE NAILS (0131" $0 \times 2 \frac{1}{2}$ " FOR 8d; 0148" 0×3 " FOR 10d; 0.148" $0 \times 3 \frac{1}{4}$ " FOR 12d; 0.162"øx3½" FOR 16d) OR ACCESSORIES OF HARDWARE CONNECTORS. SEE CBC FOR MINIMUM NAILING SCHEDULE AT CONNECTIONS.
- 7. HARDWARE CONNECTORS AND ACCESSORIES SHALL BE SIMPSON STRONG-TIE CONNECTORS OR APPROVED
- 8. NONBEARING PARTITIONS SHALL BE MINIMUM 2x4 STUD AT MAXIMUM 16" ON CENTER WITH TOP AND SILL PLATES AS SHOWN IN THE APPLICABLE DETAILS UNLESS OTHERWISE NOTED.
- 9. PLYWOOD NAILING SHALL HAVE A MINIMUM EDGE DISTANCE OF 3/8". NAIL HEADS SHALL BE FLUSH WITH TOP SURFACE OF PLYWOOD; SINKING NAIL HEADS IS PROHIBITED.
- 10. PROVIDE PLYWOOD EDGE NAILING AROUND THE PLYWOOD OPENINGS AND ALONG THE FULL HEIGHT OF ALL WOOD POSTS AND COLUMNS.
- 11. LAG SCREWS SHALL BE SCREWED, NOT DRIVEN, INTO WOOD MEMBERS WITH PRE-DRILLED HOLES. PRE-DRILLED HOLE DIAMETER IN SOFT STRUCTURAL WOODS SHALL EQUAL SCREW SHANK DIAMETER AT THE SCREW SHANK, AND SHALL BE UNDERSIZED BY 25% OF SCREW DIAMETER AT THE SCREW THREADS. FOR EXAMPLE, FOR A 3/8" SCREW. THE PRE-DRILLED HOLE SHALL BE 3/8" OVER THE LENGTH OF THE SCREW SHANK. AND SHALL BE 9/32" OVER THE LENGTH OF THE SCREW THREADS. FOR HARD WOODS USED IN A STRUCTURAL APPLICATION, PRE-DRILLED HOLE DIAMETER AT THE SHANK SHALL MATCH THE SCREW DIAMETER. AND THE HOLE DIAMETER OVER THE LENGTH OF THE SCREW THREADS SHALL BE UNDERSIZED BY 12.5% OF THE SCREW DIAMETER.
- 12. SILL PLATES IN DIRECT CONTACT WITH CONCRETE, MASONRY, OR EARTH, SHALL BE PRESSURE TREATED WOOD OR APPROVED EQUAL. PRESSURE TREATED WOOD SHALL BE TREATED WITH ALKALINE COPPER QUAT (ACQ-C AND ACQ-D), CARBONATE AZOLE (CBA-A), OR COPPER AZOLE (CA-B).
- 13. PROVIDE DOUBLE OR 4x FLOOR JOIST UNDER PARALLEL. NON-BEARING PARTITION WALL UNLESS OTHERWISE NOTED.
- 14. PROVIDE LAMINATED DOUBLE STUDS UNDER EACH SUPPORT OF BEAMS UNLESS OTHERWISE NOTED.
- 15. SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS AT POINTS OF SUPPORT AND POINTS WHERE SHEATHING IS DISCONTINUOUS.
- 16. APPLY ADHESIVE TO CONTACT SURFACES BETWEEN HORIZONTAL PLYWOOD SHEATHING AND SUPPORTING WOOD MEMBER.
- 17. WOOD MEMBER WITH WANE SHALL NOT BE LOCATED AT PLYWOOD JOINT.
- 18. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
- 19. HARDWARE CONNECTING WOOD MEMBERS SHALL BE RECESSED WHEN REQUIRED BY ARCHITECTURAL FINISH. VERIFY WITH ARCHITECTURAL DRAWINGS.
- 20. 0.229"x2"x2" STEEL PLATE WASHERS (OR SIMPSON BP) SHALL BE USED FOR ALL SILL PLATE ANCHOR BOLTS AND HOLDOWN CONNECTOR BOLTS UNLESS OTHERWISE NOTED. SIMPSON BP SHALL BE PROTECTED WITH ZMAX (G185) COATING.
- 21. ALL BOLTS SHALL BE RE-TIGHTENED JUST PRIOR TO BEING COVERED.
- 22. BOLT HOLES AT WOOD MEMBERS SHALL NOT BE MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER.
- 23. ALL HARDWARE AND FASTENERS IN CONTACT WITH TREATED WOOD SILL PLATES SHALL BE ZINC- COATED. ALL NAILS INTO TREATED SILL PLATES SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED OR SIMPSON ZMAX (G185) COATED NAILS.
- 24. SOLID BLOCKING OR EQUIVALENT CROSS-BRIDGING SHALL BE INSTALLED BETWEEN ALL ROOF AND FLOOR JOISTS AT THE SPACING PER CODE.
- 25. FIRE BLOCKING SHALL BE INSTALLED BETWEEN ALL WALL STUDS IF REQUIRED BY CODE.

STRUCTURAL OBSERVATION

- 1. THE OWNER SHALL EMPLOY THE ENGINEER OF RECORD REGISTERED/LICENSED IN THE STATE OF CALIFORNIA WHO IS RESPONSIBLE FOR THE STRUCTURAL DESIGN, TO DO STRUCTURAL OBSERVATION.
- 2. THE STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH CBC SECTION 1704. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE PROJECT INSPECTOR, DEPUTY INSPECTOR, SPECIAL INSPECTOR OR CITY INSPECTOR.
- 3. STRUCTURAL OBSERVER OF RECORD : SAID HILMY, S3680
- 4. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE CONSTRUCTION THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER.
- CONSTRUCTION STAGE ELEMENTS/CONNECTIONS TO BE OBSERVED; A. FOLLOWING RETROFIT/PRIOR TO COVERING WITH FINISH.
- OBSERVED DEFICIENCIES: ANY OBSERVED DEFICIENCIES SHALL BE DESCRIBED ON THE FORM; THE OBSERVER SHALL ALSO INDICATE WHETHER A RE-OBSERVATION IS REQUIRED TO VERIFY CORRECTIVE ACTIONS HAVE BEEN PROPERLY TAKEN OR THAT THE CORRECTIVE ACTIONS ARE DEEMED VERIFIABLE BY THE SPECIAL INSPECTOR OR CITY INSPECTOR PRIOR TO INSPECTION APPROVAL.



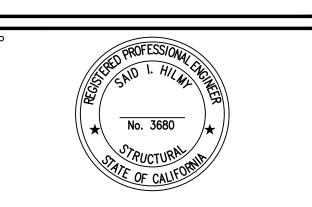
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY -ADMINISTRATIVE BUILDING

SEISMIC RETROFIT, ADA **COMPLIANCE AND** TENANT IMPROVEMENT

ENGINEER/ARCHITECT



1 PETERS CANYON ROAD, SUITE 130 IRVINE, CA 92606 TEL: 949-387-8500, FAX: 949-387-0800



ISSUE				
REV.	DESCRIPTION	DATE		
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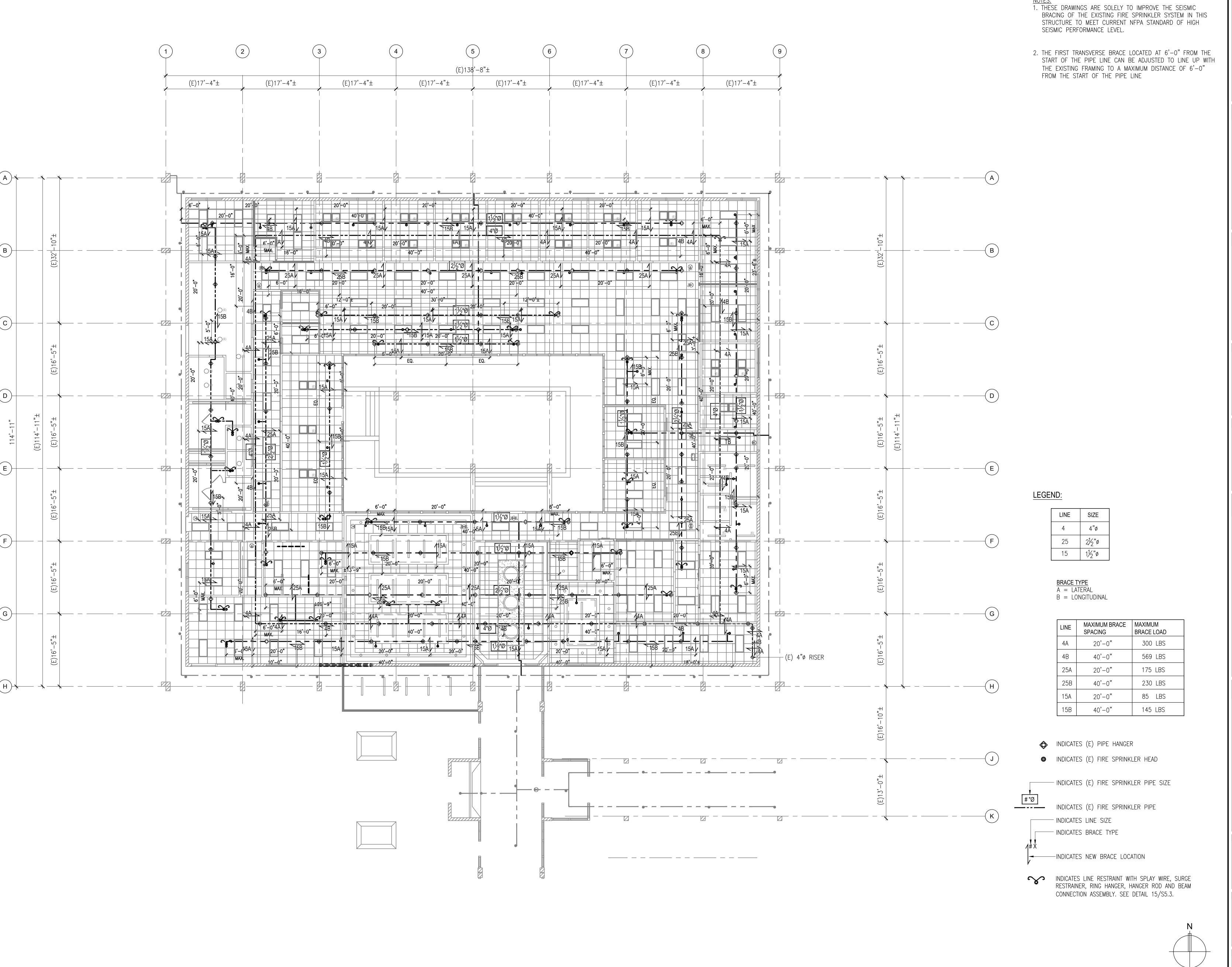
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SHEET TITLE

GENERAL NOTES

SHEET NUMBER

SHEET NO. OF



MWDOC

18700 WARD STREET
FOUNTAIN VALLEY, CA 92708

DDO IECT NAME

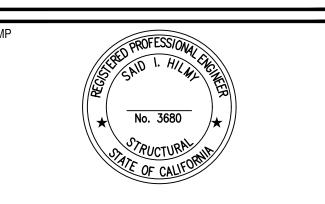
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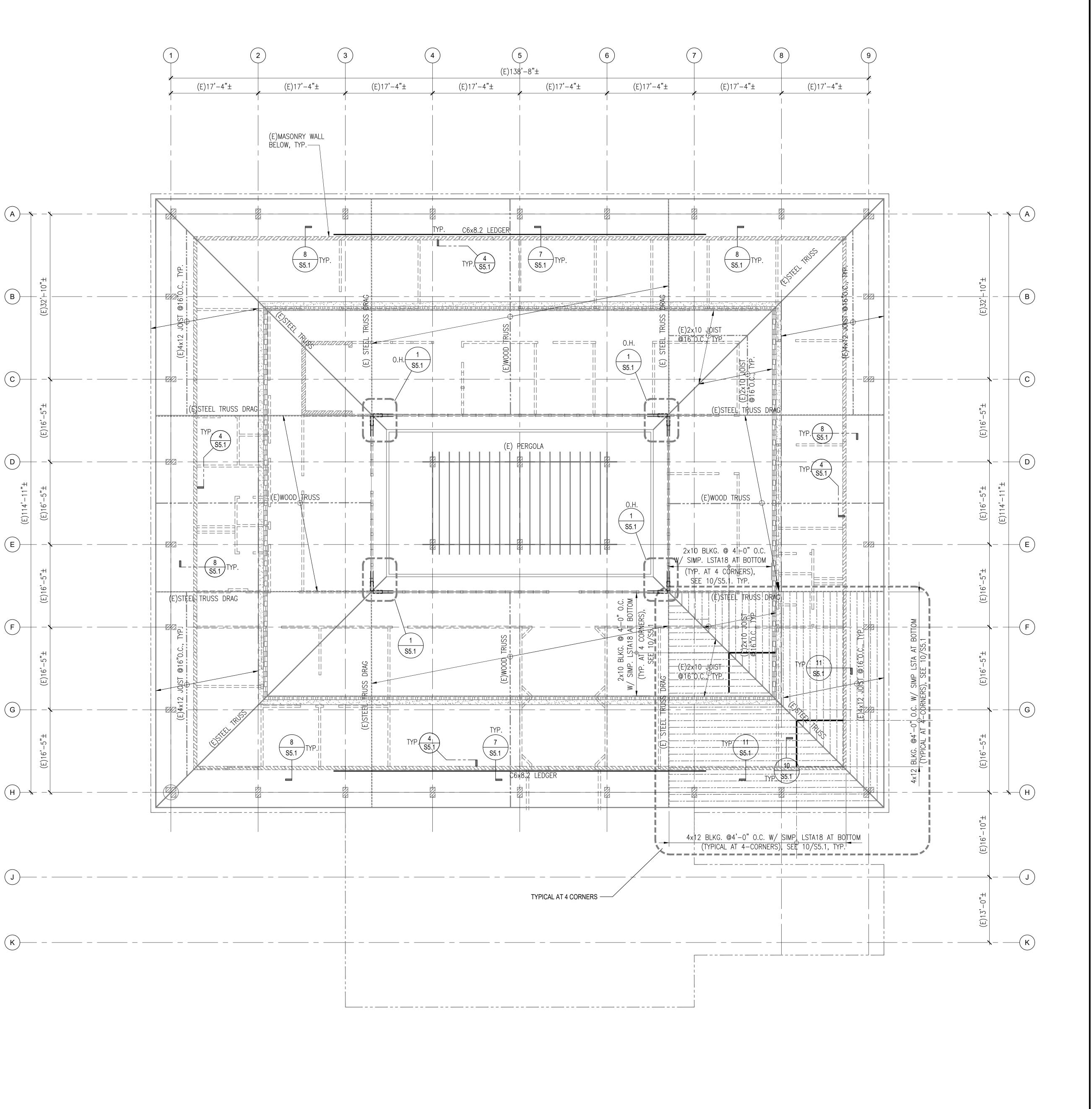
SHEET TITLE

EXISTING FIRE SPRINKLER PLAN

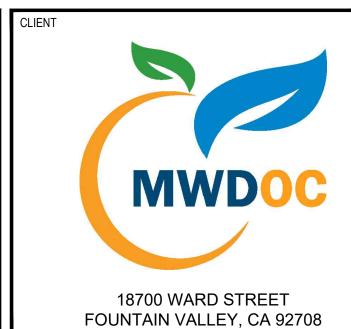
SHEET NUMBER

SHEET NO.

S2.2



- 1. GENERAL CONTRACTOR TO CONFIRM ROOF DIAPHRAGM NAILING PATTERN OF 6" AT BOUNDARIES, 6" AT PANEL EDGES AND 12" AT FIELD.
- 2. GENERAL CONTRACTOR TO CONFIRM ALL EXISTING STRUCTURAL ELEMENT AND IF SIZES OF EXISTING BOLTS AND ALL EXISTING MISCELLANEOUS STEEL IS NOT AS SHOWN ON THESE DRAWINGS, GENERAL CONTRACTOR TO CONTACT SEOR,



PROJECT NAME

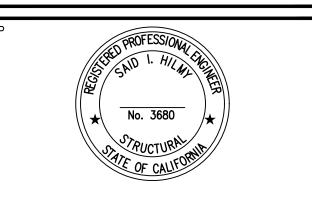
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY -ADMINISTRATIVE BUILDING

SEISMIC RETROFIT, ADA
COMPLIANCE AND
TENANT IMPROVEMENT

ENGINEER/ARCHITECT



1 PETERS CANYON ROAD, SUITE 130 IRVINE, CA 92606 TEL: 949-387-8500, FAX: 949-387-0800



STAMP

SSUE	SSUE				
REV.	DESCRIPTION	DATE			
	90% CD Owner Review	08/16/2019			

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ROOF FRAMING PLAN

SHEET NUMBER

S2.3

