SAN ANTONIO WATER COMPANY
NEW OFFICE AND OPERATIONS YARD FACILITIES

APN: 1044091220000

ABBREVIATIONS

A	
AACCOST.	ACOUSTICAL
ADD'N	ADDITION
ADJ.	ADJACENT
AFF.	ABOVE FINISH FLOOR
ALUM.	ALUMINUM
ANOD.	ANODIZED
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
AUTO.	AUTOMATIC
B	
BET.	BETWEEN
BD.	BOARD
BLK(G)	BLOCK(ING)
BLDG.	BUILDING
BM.	BENCHMARK
BOT.	BOTTOM
BSMT.	BASEMENT
B.W.	BOTH WAYS
C	
C.	COURSE
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.G.	CORNER GUARD
CLG.	CEILING
C.L.L.	CONTRACT LIMIT LINE
CLO.	CLOSET
C.J.	CONTROL JOINT
COL.	COLUMN
COMB.	COMBINATION
COMPO.	COMPOSITION
C.M.U.	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORR.	CORRUGATED
CSK.	COUNTERSUNK
C.S.	CLINICAL SINK
D	
DET.	DETAIL
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
D.L.	DEAD LOAD
DN.	DOWN
DS.	DOWN SPOUT
DWG.	DRAWING
E	
(E)	EXISTING
E/ELEC.	ELECTRICAL
EA.	EACH
E.B.	EXPANSION BOLT
E.F.	EACH FACE
EMP.	EMPLOYEE
ENCLO.	ENCLOSURE
E.P.	ELECTRICAL PANEL
EQ.	EQUAL
EQUIP'T	EQUIPMENT
EST.	ESTIMATED
EWC.	ELECTRICAL WATER COOLER
EXP.	EXPOSED
EXT.	EXTERIOR
F	
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.F.	FINISH FLOOR
F.H.C.	FIRE HOSE CABINET
F.H.E.C.	FIRE EXTINGUISHER CABINET
FIN.	FINISH
FLASH'G	FLASHING
FLR.	FLOOR
FND.	FOUNDATION
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
G	
GA.	GAUGE
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GD	GRADE
G.SS.	GALVANIZED STEEL SHEET
GRD.	GROUND
GYP.	GYPSUM
H	
H/C	HANDICAP
H.B.	HOSE BIBB
HD.	HEAVY DUTY
HDWR.	HARDWARE
HM.	HOLLOW METAL
HR.	HOUR
HT.	HEIGHT
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HWD	HARDWOOD
I	
I.D.	INSIDE DIMENSION
IPS	IRON PIPE SIZE
INCLU.	INCLUDED
INT.	INTERIOR
INSUL.	INSULATION
J	
JAN.	JANITOR
L	
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
LT.	LIGHT
M	
MECH.	MECHANICAL
MACH.	MACHINE
MAT'L	MATERIAL
MAS.	MASONRY
MAX.	MAXIMUM
MB.	MACHINE BOLT
MET.	METAL
M.F.R.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD.	MOUNTED
N	
(N)	NEW
N.	NORTH
NAT.	NATURAL
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O	
OA	OUTSIDE AIR
O.C.	ON CENTER
O.D.	OUTSIDE DIMENSION
OPP.	OPPOSITE
OP'G	OPENING
P	
P.	PLUMBING/PAINT
PART.	PARTITION
PL.	PLATE
P.L.	PROPERTY LINE
PLAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PNL.	PANEL
PREFAB.	PREFABRICATED
PSI	POUNDS PER SQUARE INCH
PT.	POINT
PVC	POLYVINYL CHLORIDE
R	
R.	RADIUS
R.D.	ROOF DRAIN
REINF.	REINFORCED
REV.	REVISION
RM.	ROOM
R.O.	ROUGH OPENING
R.S.	ROOF SUMP
S	
STRUC.	STRUCTURAL
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
SHO.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
SL.	SLEEVE
SPEC.	SPECIFICATIONS
SQ.	SQUARE
S.S.	STAINLESS STEEL
STL.	STEEL
STD.	STANDARD
STO.	STORAGE
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
T	
T.	TILE
TEL.	TELEPHONE
TEMP.	TEMPERED
THK.	THICK
TOIL.	TOILET
TOR	TOP OF ROOF
T/C	TOP OF CONCRETE
T/P	TOP OF PLYWOOD
T/W	TOP OF WALL
TOP.	TOP OF PARAPET
TYP.	TYPICAL
V	
V.T.	VINYL TILE
VER.	VERIFY
VERT.	VERTICAL
W	
W.	WIDE/WIDTH
WC	WATER CLOSET
WCT.	WAINSCOT
WD.	WOOD
WG.	WIRE GLASS
WHB.	WHEEL BUMPER
W/	WITH
W/O	WITHOUT

PROJECT DIRECTORY

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DEFERRED SUBMITTAL

SUBMITTAL DOCUMENTS FOR DEFERRED ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING.

THE DEFERRED ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

GENERAL NOTES

1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL THE LABOR MATERIALS AND NECESSARY SERVICES TO EXECUTE THE WORK AS SHOWN, DESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL TAKE ALL POSSIBLE CARE TO PROTECT PERSONAL AND ADJACENT PROPERTY AND TO INSURE THE SAFETY OF THOSE INVOLVED DIRECTLY OR INDIRECTLY WITH THE WORK.
3. IN THE WORK OF ALL TRADES, THE CONTRACTOR SHALL PERFORM ANY AND ALL CUTTING, PATCHING, REPAIRING, RESTORING, AND THE LIKE NECESSARY TO RETURN ALL SURFACES AFFECTED BY THE WORK TO THEIR ORIGINAL CONDITION.
4. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AS TO NOT INTERFERE WITH OTHER TRADES.
5. WRITTEN DIMENSIONS IN SCHEDULES AND DRAWING SHALL TAKE PRECEDENCE OVER SCALE DRAWINGS. DO NOT SCALE THE DRAWINGS. BRING ALL DISCREPANCIES IN DIMENSIONS TO THE ATTENTION OF THE ARCHITECT AND AWAIT FURTHER INSTRUCTIONS.
6. IN THE WORK OF ALL TRADES, THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEIR SELF WITH THE EXISTING FIELD CONDITIONS AND VERIFYING CONSISTENCY WITH DESIGN DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL REPORT ANY DISCREPANCY TO THE ARCHITECT IMMEDIATELY AND AWAIT FURTHER INSTRUCTIONS.
7. WHEN A DETAIL IS IDENTIFIED AS TYPICAL OR BY THE ABBREVIATION "TYP." ON DRAWINGS, NOTES, OR SCHEDULES, THE CONTRACTOR IS TO APPLY THIS DETAIL IN ESTIMATION AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT REFERENCE IS REPEATED IN EVERY INSTANCE.
8. NO HAZARDOUS MATERIALS WILL BE RESTORED AND/OR USED WITHIN THE BUILDING WHICH EXCEED THE QUANTITIES LISTED IN CBC TABLES 307.1(1) AND 307.1(2).
9. ALL WEATHER-EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND THAT EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM WEATHERPROOF. SECTION 1402.2 CBC.
10. CONTRACTOR WILL VERIFY LOCATION AND SIZE OF ALL OPENINGS WITH ALL DRAWINGS, AND MANUFACTURED ITEMS WHERE APPLICABLE.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY LOCATE ALL INSERTS AND EMBEDDED ITEMS PRIOR TO POURING CONCRETE.
12. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IN AREA OF NEW CONSTRUCTION PRIOR TO EXCAVATION OR CONSTRUCTION.
13. PROVIDE ALL NECESSARY BACKING AND FRAMING FOR WALL MOUNTED ITEMS, HANDRAILS, LIGHT FIXTURES, AND ALL OTHER ITEMS REQUIRING THE SAME.
14. PLUMBING FIXTURES SHALL BE PROVIDED IN ACCORDANCE WITH 2022 CPC TABLE 422.1FOR NUMBER OF REQUIRED PLUMBING FIXTURES.
15. AT TIME OF PERMIT ISSUANCE, CONTRACTOR SHALL SHOW THEIR VALID WORKERS' COMPENSATION INSURANCE CERTIFICATE.
16. ALL WORK SHALL CONFORM TO ALL REQUIREMENTS OF STATE OF CALIFORNIA TITLE 24 REGARDLESS OF THE INFORMATION INDICATED ON THESE PLANS. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL SUPERVISING THE CONSTRUCTION TO ENSURE THAT THE WORK IS DONE IN ACCORDANCE WITH CODE REQUIREMENTS PRIOR TO REQUESTING INSPECTION.
17. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
18. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
19. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
20. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) SHALL BE NOTIFIED IN ACCORDANCE WITH CALIFORNIA STATE LAW PRIOR TO START OF ANY DEMOLITION, ADDITION, AND/OR REMODEL WORK. THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT OFFICE IS LOCATED AT 21865 COPLEY DRIVE IN DIAMOND BAR, PHONE NO. (909) 396-2000. BE ADVISED, SCAQMD MAY REQUIRE A 10 DAY WAIT PERIOD PRIOR TO START OF WORK.
21. DUE TO THE POSSIBLE PRESENCE OF LEAD-BASED PAINT, LEAD-SAFE WORK PRACTICES ARE REQUIRED FOR ALL REPAIRS THAT DISTURB PAINT IN PRE-1979 BUILDINGS. FAILURE TO DO SO COULD CREATE LEAD HAZARDS THAT VIOLATE CALIFORNIA HEALTH & SAFETY CODE, SECTIONS 17920.10 AND 105256 WITH POTENTIAL FINES FOR VIOLATIONS UP TO $5,000 (SECTION (D) AMENDED) OR IMPRISONMENT FOR NOT MORE THAN 6 MONTHS IN THE COUNTY JAIL OR BOTH.

PROJECT INFORMATION

OWNER:	SAN ANTONIO WATER COMPANY	
ASSESSOR'S PARCEL NUMBERS:	1044091220000	
GOVERNING AGENCY:	CITY OF UPLAND	
EXISTING ZONING:	RS10000	
PARCEL AREA:	214358.76 SQ.FT. (4.921 ACERS)	
CONSTRUCTION TYPE:	VB	
~~MAIN BUILDING~~		
OCCUPANCY GROUP:	B	
FLOOR AREA	GROUND FLOOR	3,887 SQ.FT.
~~MAINTENANCE BUILDING~~		
OCCUPANCY GROUP:	S-2/U	
FLOOR AREA	GROUND FLOOR	3,650 SQ.FT.
	STORAGE LOFT	450 SQ.FT.
		4,100 SQ.FT.
SPRINKLERS:	YES (NFPA 13)	

PARKING SPACES

GUEST PARKING	12 SPACES + 2 ADA SPACES
EMPLOYEE PARKING	12 SPACES + 2 ADA SPACES
COMPANY TRUCK PARKING	8 SPACES

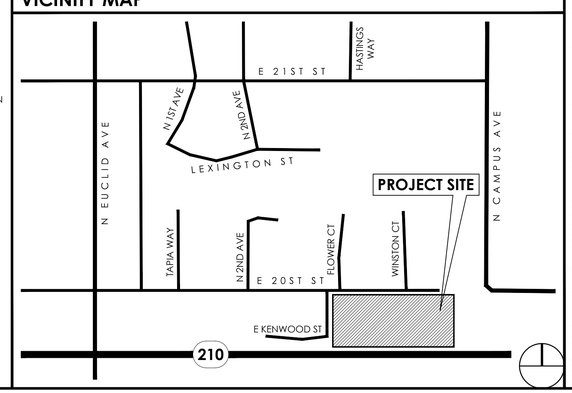
LEGAL DESCRIPTIONS

PARCEL A OF LOT LINE ADJUSTMENT NO. LA-04-03, RECORDED FEBRUARY 6, 2006 AS INSTRUMENT NO. 2006-0084615 OF OFFICIAL RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PORTION OF LOT 282 OF MAP OF ONTARIO, ALSO KNOWN AS ONTARIO COLONY LANDS, IN THE CITY OF UPLAND, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 11, PAGE 6 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY, TOGETHER WITH A PORTION OF THE WEST 21.48 FEET OF LOT 281 OF MAP OF ONTARIO, AS PER MAP RECORDED IN BOOK 11, PAGE 6 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 33.00 FEET SOUTHERLY OF THE CENTERLINE OF 20TH STREET, SHOWN AS NORTH 89º 59' 00" WEST, AND 21.48 FEET EASTERLY OF THE EAST LINE OF LOT 282;
THENCE SOUTH 00º 00' 57" WEST A DISTANCE OF 313.86 FEET TO A POINT ON THE NORTHERLY LINE OF THE LAND CONVEYED TO THE STATE OF CALIFORNIA BY FINAL ORDER OF CONDEMNATION RECORDED MAY 14, 2002 AS INSTRUMENT NO. 2002- 0247046 OF OFFICIAL RECORDS; SAID LINE WHICH IS PARALLEL AND 313.86 FEET SOUTHERLY FROM THE SOUTHERLY RIGHT-OF-WAY LINE OF 20TH STREET;
THENCE NORTH 89º 59' 00" WEST ALONG SAID LINE A DISTANCE OF 685.62 FEET TO A POINT WHICH IS PARALLEL WITH AND 32.00 FEET EASTERLY OF THE WESTERLY LINE OF SAID LOT 282;
THENCE NORTH 00º 00' 44" EAST A DISTANCE OF 22.03 FEET TO THE BEGINNING OF A NON-TANGENT CURVE, CONCAVE NORTHWESTERLY, WITH A RADIAL BEARING OF NORTH 54º 44' 11" WEST;
THENCE ALONG SAID CURVE 42.65 FEET, WITH A RADIUS OF 54.00 FEET THROUGH A ANGLE OF 45º 15' 05";
THENCE TO A TANGENT BEARING NORTH 09º 59' 16" WEST A DISTANCE OF 43.73 FEET TO THE BEGINNING OF A TANGENT CURVE, CONCAVE EASTERLY;
THENCE ALONG SAID CURVE 17.10 FEET, WITH A RADIUS OF 98.00 FEET THROUGH AN ANGLE OF 10º 00' 00";
THENCE NORTH 00º 00' 44" EAST, PARALLEL WITH AND 32.00 FEET EASTERLY OF THE WEST LINE OF SAID LOT 282, A DISTANCE OF 171.20 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE SOUTHEASTERLY;
THENCE ALONG SAID CURVE, 31.36 FEET, WITH A RADIUS OF 20.00 FEET THROUGH AN ANGLE OF 89º 50' 39" TO A POINT ON A LINE LOCATED PARALLEL AND DISTANT 33.00 FEET SOUTHERLY FROM THE CENTERLINE OF SAID 20TH STREET;
THENCE SOUTH 89º 59' 00" EAST ALONG SAID PARALLEL LINE A DISTANCE OF 665.69 FEET TO THE POINT OF BEGINNING.

VICINITY MAP



PROJECT DESCRIPTION

NEW 3,887 SQ.FT. HEADQUARTERS, 4,100 SQ.FT. MAINTENANCE BUILDING, MAINTENANCE YARD; DEMONSTRATION WATERWISE NATIVE LANDSCAPE AND CITRUS GROVE BUFFER.

MAINTAIN EXISTING WATER STORAGE TANK AND PUMP SYSTEM.

SHEET INDEX

G0.00	COVER SHEET, PROPOSED SITE PLAN AND NOTES	S-4.0	SHEAR WALL DETAILS
G1.00	GENERAL NOTES	S-4.1	TYPICAL WOOD DETAILS
G2.00	CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 1	S-4.2	TYPICAL WOOD DETAILS
		S-4.3	TJI DETAILS
G2.10	CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 2	S-5.0	STEEL DETAILS
		S-5.1	MOMENT FRAME DETAILS
G2.20	CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 3	S-6.0	TRASH ENCLOSURE DETAILS
G3.00	ACCESSIBILITY NOTES AND DETAILS		
G4.10	DOOR PLAN WINDOW SCHEDULES		

CIVIL

SHEET 1 OF 7	PRECISE GRADING PLAN TITLE SHEET	E0.1	ELECTRICAL GENERAL NOTES
SHEET 2 OF 7	PRECISE GRADING PLAN DETAILS	E1.1	ELECTRICAL SITE PLAN
SHEET 3 OF 7	PRECISE GRADING PLAN	E2.1	ELECTRICAL LIGHTING FLOOR PLAN
SHEET 4 OF 7	PRECISE GRADING PLAN	E2.2	ELECTRICAL LIGHTING PLAN
SHEET 5 OF 7	EROSION CONTROL PLAN	E3.1	ELECTRICAL POWER FLOOR PLAN
SHEET 6 OF 7	HORIZONTAL CONTROL PLAN	E3.2	ELECTRICAL POWER FLOOR PLAN
SHEET 7 OF 7	UTILITY PLAN	E4.1	ELECTRICAL PANEL SCHEDULE

ARCHITECTURAL

A0.00	SITE PLAN AND NOTES	M-1.0	MECHANICAL SCHEDULE & GENERAL NOTES
A1.10	MAIN BUILDING FLOOR PLAN AND NOTES	M-1.1	T-24 DOCUMENTS
A1.20	MAIN BUILDING REFLECTED CEILING PLAN AND NOTES	M-1.2	T-24 DOCUMENTS
		M-1.3	T-24 DOCUMENTS
		M-1.4	T-24 DOCUMENTS
A1.20	MAIN BUILDING ROOF PLAN AND NOTES	M-1.5	T-24 DOCUMENTS
		M-1.6	T-24 DOCUMENTS
A2.10	EXTERIOR ELEVATIONS AND NOTES	M-1.7	T-24 DOCUMENTS
		M-1.9	T-24 DOCUMENTS
		M-1.10	T-24 DOCUMENTS
A4.10	STORAGE BUILDING FLOOR PLANS AND NOTES	M-1.11	T-24 DOCUMENTS
A4.20	STORAGE BUILDING REFLECTED CEILING PLANS AND NOTES	M-1.12	T-24 DOCUMENTS
A4.30	STORAGE BUILDING ROOF PLAN, EXTERIOR ELEVATIONS AND NOTES	M-2	MECHANICAL FLOOR PLAN BUILDING A
		M-3	MECHANICAL FLOOR PLAN BUILDING B
A7.10	MAIN BUILDING INTERIOR ELEVATIONS AND NOTES		
A7.20	MAIN BUILDING INTERIOR ELEVATIONS AND NOTES		
A7.30	MAIN BUILDING INTERIOR ELEVATIONS AND NOTES		
A7.40	STORAGE BUILDING INTERIOR ELEVATIONS AND NOTES	P-1	PLUMBING GENERAL NOTE, LEGEND & PIPE SCHEDULE
A7.50	STORAGE BUILDING INTERIOR ELEVATIONS AND NOTES	P-2	PLUMBING SCHEDULE, WATER PIPE CALCAULATION & PIPE SIZES
		P-3	PLUMBING SITE UTILITY PLAN
A8.00	ARCHITECTURAL DETAILS	P-4	PLUMBING HOT AND COLD WATER PIPING MAIN BUILDING FLOOR PLAN
A8.10	ARCHITECTURAL DETAILS	P-5	PLUMBING HOT AND COLD WATER LAYOUT MAINTENANCE BUILDING FLOOR PLAN
A8.20	ARCHITECTURAL DETAILS	P-6	PLUMBING SEWER AND VENT FLOOR PLAN BUILDING A
A8.30	ARCHITECTURAL DETAILS	P-7	PLUMBING SEWER AND VENT FLOOR PLAN
A8.40	ARCHITECTURAL DETAILS	P-8	PLUMBING DETAILS
A8.50	ARCHITECTURAL DETAILS	P-9	PLUMBING SPECIFICATIONS

STRUCTURAL

S-0.0	STRUCTURAL GENERAL NOTES	**LANDSCAPE**	
S-0.1	STRUCTURAL GENERAL NOTES		
S-0.2	STRUCTURAL GENERAL NOTES	L1.00	LANDSCAPE PLANTING PLAN AND NOTES
		L2.00	LANDSCAPE IRRIGATION PLAN AND NOTES
S-1.0	MAIN BUILDING FOUNDATION PLAN	L3.00	LANDSCAPE DETAILS
S-1.1	MAIN BUILDING ROOF FRAMING PLAN		
S-1.2	STORAGE FOUNDATION PLAN - PART 1		
S-1.3	STORAGE FOUNDATION PLAN - PART 2		
S-1.4	STORAGE ROOF & MEZZANINE FRAMING PLAN - PART 1		
S-1.5	STORAGE ROOF & MEZZANINE FRAMING PLAN - PART 2		
S-1.6	TRASH ENCLOSURE ROOF FRAMING AND FOUNDATION PLANS		
S-2.0	FOUNDATION DETAILS		
S-2.1	FOUNDATION DETAILS		
S-3.0	ROOF FRAMING SECTIONS		
S-3.1	ROOF & FLOOR FRAMING SECTIONS & DETAILS		

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
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STAMP

LICENSED ARCHITECT
ERIK G. PETERSON
No. C-25289
REN. 10-31-2027
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

COVER SHEET

REVISIONS

1	-
2	-
3	-
4	-
5	-

DATE:	**12/17/2025**
SCALE:	**AS NOTED**
JOB NO:	**23100**
DWN BY:	**CCW**
CHK BY:	**EGP**

SHEET NO.

G0.00

GENERAL NOTES

DIVISION 1

GENERAL REQUIREMENTS

1.1 WORK PERFORMED SHALL COMPLY WITH THE FOLLOWING:

A. THESE GENERAL NOTES UNLESS OTHERWISE NOTED ON PLANS OR SPECIFICATIONS.
B. COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.

1.2 ON SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL AND SUB-CONTRACTORS. NOTED DIMENSIONS TAKE PRECEDENT OVER SCALE. ARCHITECT TO BE NOTIFIED IMMEDIATELY BY CONTRACTOR SHOULD ANY DISCREPANCY OR OTHER QUESTION ARISE PERTAINING TO THE WORKING DRAWINGS BEFORE PRECEDING WITH THE WORK.

1.3 THE GENERAL CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR:

A. ALL CONTRACT DOCUMENTS, GENERAL NOTES, AND ALL ATTACHED OR REFERENCED REPORTS
B. OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS.
C. ALL DIMENSIONS AND CONDITIONS AT THE SITE. (DIMENSIONS TAKE PRECEDENT OVER SCALE)
D. ANY CONDITION WHICH IN HIS OPINION MIGHT THE STABILITY OF THE STRUCTURE, PROVIDE STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
E. ENSURING PROPER ALIGNMENT AND TEMPORARY BRACING AND SHORING TO THE STRUCTURE.
F. SECURING FINAL CERTIFICATE OF OCCUPANCY.
G. SECURE MISCELLANEOUS SUBCONTRACTS AS REQUIRED FOR COMPLETION OF THE JOB.

1.4 ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK, i.e., STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY AND CAL/OSHA, ETC. AND CONFORM TO THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES COMPRISING THE WORK. ASTM DESIGNATIONS SHALL BE AMENDED TO DATE.

DIVISION 2

SITE WORK

2.1 ALL FOOTINGS SHALL REST ON FIRM NATURAL SOIL OR APPROVED COMPACTED FILL (PER THE SOILS REPORT)

2.2 SOIL BEARING VALUE USED- (SEE STRUCTURAL DWGS.)

2.3 NO TRENCHES OR EXCAVATIONS OVER 3'-0" IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND SHALL BE CONSTRUCTED WITHOUT A PERMIT FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY.

2.4 TEMPORARY SHORING IS REQUIRED FOR EXCAVATIONS THAT REMOVE THE LATERAL SUPPORT FROM A PUBLIC WAY OR AN EXISTING BUILDING. EXCAVATIONS ADJACENT TO A PUBLIC WAY REQUIRE PUBLIC APPROVAL PRIOR TO ISSUANCE OF A BUILDING PERMIT.

2.5 CONTRACTOR SHALL GIVE DUE LEGAL NOTICE TO ADJACENT PROPERTY OWNERS REGARDING THE PROTECTION OF STRUCTURES NECESSITATED BY EXCAVATION AND CONSTRUCTION INDICATED ON THESE DRAWINGS, IN DUE TIME, PRIOR TO START OF EXCAVATION. SHORING SHALL PROVIDE NECESSARY SUPPORT FOR ANY ADJOINING STRUCTURES OR PROPERTY.

2.6 FOUNDATION TRENCHES SHALL NOT BE EXCAVATED UNTIL GRADING CERTIFICATE IS APPROVED

2.7 THE EXISTING FILL, PEATY SOILS, AND ANY OTHER DELETERIOUS SUBSTANCES SHALL BE TOTALLY REMOVED FROM BUILDING AREA (SEE SOILS REPORT). THE FILL REMOVED AND RECOMPACTION SHALL EXTEND BEYOND THE BUILDING LINES A DISTANCE EQUALING THE DEPTH OF THE COMPACTED FILL BELOW THE EXTERIOR FOOTINGS. THE EXISTING FILL ON SITE SHALL BE INSPECTED AND APPROVED BY THE PROJECT SOILS ENGINEER BEFORE USE.

2.8 AN IMAGINARY LINE 45 DEGREES TO THE HORIZONTAL EXTENDED DOWNWARD FROM THE BOTTOM CORNER OF ANY BUILDING FOOTING SHALL NOT INTERSECT ANY PART OF AN EXCAVATION FOR GAS, SEWER, OR DRAINAGE PURPOSES.

2.9 THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING AS REQUIRED FOR STRUCTURAL STABILITY OF THE STRUCTURE DURING THIS PHASE OF CONSTRUCTION.

DIVISION 4

MASONRY

4.1 MASONRY TO CONFORM TO DIVISION 24, CBC OR APPLICABLE LOCAL BUILDING CODE FOR REINFORCED GROUTED MASONRY.

4.2 CONCRETE BLOCK: SHALL BE HOLLOW LOAD BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C-90 GRADE NI 1500 PSI-UNLESS NOTED OTHERWISE. CONTINUOUS INSPECTION REQUIRED. (CONTRACTOR TO USE STANDARD 8"X8"X16" (NOMINAL) BLOCK (GREY PRECISION) WITH CONCAVE JOINTS UNLESS NOTED OTHERWISE ON PLANS.)

4.3 MORTAR OR GROUT: TO BE TYPE "5" MORTAR, 1 PART CEMENT, 1/4 PART MAXIMUM HYDRATED LINE OR PLASTIC CEMENT: 4 PARTS SAND: 1500 PSI.

4.4 GROUT: 1:3 WITH 2 PARTS PER GRAVEL.

4.5 MORTAR AND GROUT SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH EQUAL TO 2000 PSI, MINIMUM.

4.6 DRY PACK: SHALL BE A 1:2 MIX PLUS ENOUGH WATER FOR A STIFF MIX.

4.7 CONSTRUCTION:
1. BED JOINTS TO BE FULL BEDDED IN MORTAR. HEAD JOINTS TO BE SOLIDLY FILLED AT LEAST 1 1/2" FROM EACH FACE.
2. GROUT POUR SHALL BE LIMITED TO 4'-0". AT WORKS STOPPAGES, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING GROUT 1-1/2" BELOW TOP OF MASONRY.
3. GROUT SHALL BE TAMPED TO ASSURE FILLING OF ALL VOIDS.
4. PROVIDE TWO #5 FOR CONCRETE BLOCK, TWO #4 FOR BRICK, REINFORCING AT ENDS OF ALL WALLS AND AROUND ALL OPENINGS WITH 24" LAP.

4.8 SOLID GROUT ALL CELLS.

4.9 BLOCK UNITS SHALL BE SUFFICIENTLY MOIST AT TIME OF LAYING TO PREVENT DEHYDRATION OF MORTAR AND GROUT.

4.10 BLOCK UNITS SHALL BE FREE OF ALL SUBSTANCES WHICH MIGHT IMPAIR THE BOND OF THE BLOCK TO MORTAR AND GROUT.

4.11 CONCRETE BLOCK WALLS TO RECEIVE STUCCO FINISH AS PER SITE PLAN AND DIVISION 9.

4.12 REINFORCING STEEL REQUIREMENTS-PER STRUCTURAL, ARCHITECTURAL AND LANDSCAPE ARCHITECTURAL DRAWINGS.

DIVISION 5

METALS

5.1 ALL REINFORCING STEEL SHALL BE NEW STOCK AS FOLLOWS: (SEE STRUCTURAL DRAWINGS)

5.2 ALL BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIALS LIKELY TO IMPAIR BOND.

5.3 ALL BENDS SHALL BE MADE COLD.

5.4 SPLICING OF BARS SHALL HAVE LAPPING OF 36 DIA. OR 2'-0" MINIMUM IN IN ALL CONTINUOUS REINFORCEMENT OF FOOTINGS AND CONCRETE WALLS, AND 40 BAR DIA. OR 2'-0" MINIMUM, IN MASONRY WALLS. (BEND BARS AROUND CORNERS & INTERSECTIONS, BAR LAPS SHALL BE MADE EASY FROM POINTS OF MAXIMUM STRESS.)

5.5 ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED BEFORE POURING CONCRETE OR APPLYING MORTAR OR GROUT.

5.6 WELDING OF REINFORCING STEEL SHALL BE PERFORMED BY THE ELECTRIC ARC PROCESS AND PERFORMED BY WELDERS CERTIFIED BY THE APPROPRIATE AGENCY. ALL WELDING SHALL BE DONE UTILIZING E-70 ELECTRODES.

5.7 ALL FIELD WELDING TO BE DONE UNDER THE CONTINUOUS INSPECTION OF DEPUTY INSPECTOR REGISTERED BY THE CITY OR OTHERWISE AS REQUIRED BY THE ENGINEER.

5.8 ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS.

5.9 ALL PIPE COLUMNS SHALL CONFORM TO ASTM A-53, GRADE "B"

5.10 ALL TUBE COLUMNS SHALL CONFORM TO ASTM 501.

5.11 ALL FABRICATION SHALL BE DONE BY CERTIFIED WELDERS USING THE ELECTRIC ARC PROCESS AND E-70 ELECTRODES.

5.12 CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND NECESSARY TEMPORARY BRACING.

5.13 BOLTS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE NOTED ON PLANS.

5.14 SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION. ANY FABRICATION DONE PRIOR TO RECEIPT OF APPROVED SHOP DRAWINGS SHALL BE DONE AT THE CONTRACTOR'S OWN RISK.

5.15 ALL FABRICATION SHALL BE DONE IN THE SHOP OF A FABRICATOR LICENSED BY THE LOCAL BUILDING OFFICIAL OR UNDER THE CONTINUOUS INSPECTION OF A REGISTERED DEPUTY INSPECTOR LICENSED BY THE SAME BODY.

5.16 STRUCTURAL STEEL ROLLED SECTIONS AND PLATES USED IN THE WORK SHALL CONFORM TO ASTM A36. PIPE COLUMNS SHALL BE WELDED SEAMLESS PIPE CONFORMING TO ASTM A 53 FOR GRADE "B" PIPE. SQUARE OR RECTANGULAR TUBES SHALL BE WELDED SEAMLESS SECTIONS MADE OF STEEL CONFORMING TO ASTM A36.

5.17 ALL STRUCTURAL STEEL EXCEPT THAT PORTION TO BE EMBEDDED IN CONCRETE OR TO RECEIVE SPRAYED-ON FIREPROOFING, SHALL RECEIVE ONE SHOP COAT OF PAINT AS DESCRIBED BY MANUFACTURER'S SPECIFICATIONS.

5.18 CONTRACTOR SHALL PROVIDE BRACING AS REQUIRED TO MAINTAIN THE ALIGNMENT OF THE BUILDING FRAME UNTIL ALL WELDING IS COMPLETED AND/OR SLABS AND WALLS ARE POURED.

DIVISION 6

CARPENTRY

6.1 SEE STRUCTURAL DRAWINGS FOR ROUGH FRAMING.

6.2 SEE ARCHITECTURAL DRAWINGS FOR FINISH CARPENTRY INCLUDING PORCHES AND EAVES.

6.3 SEE ARCHITECTURAL SECTIONS AND DETAILS FOR INTERIOR EXPOSED BEAMS.

6.4 SEE ARCHITECTURAL DETAILS FOR WINDOW AND DOOR CASINGS. ALTERNATE MATERIALS FOR INTERIOR DOOR AND WINDOW CASINGS:

1 X 3½" MODEL H19A PRE-PRIMED MDF, ARCHITECTURAL MILLWORK MANUFACTURING COMPANY.

6.5 ALL BASEBOARD THROUGHOUT EA UNIT: 1" X 5"MODEL H20C PRE-PRIMED MDF, ARCHITECTURAL MILLWORK MANUFACTURING COMPANY.

6.6 PROVIDE CROWN MOLDING IN ALL ROOMS WITH FLAT CEILINGS AND AT THE TOP OF ALL PAINTED CABINETRY:
4⅝" MODEL C23A, PRE-PRIMED MDF, ARCHITECTURAL MILLWORK MANUFACTURING COMPANY.
CROWN MOLDING FOR STAINED CABINETRY: 4⅝" MODEL C23A, STAIN GRADE TO MATCH, ARCHITECTURAL MILLWORK MANUFACTURING COMPANY.

DIVISION 7

THERMAL AND MOISTURE PROTECTION

7.1 ALL SHEET METAL TO BE 26 GA. GALVANIZED IRON UNLESS OTHERWISE NOTED.

7.2 FLASH AND COUNTER FLASH AT ALL ROOF TO WALL CONDITIONS.

7.3 G.I. FLASH AND CAULK WOOD BEAMS, OUTLINERS PROJECTING FROM EXTERIOR WALLS OR ROOF SURFACES.

7.4 FLASH ALL EXTERIOR OPENING WITH APPROVED WATERPROOF BUILDING PAPER TO EXTEND AT LEAST 3" UNDER THE BUILDING PAPER BEHIND THE WALL COVERING.

7.5 SHOWER WALLS SHALL BE APPROVED NONABSORBENT WATERPROOF MATERIAL TO A HEIGHT OF 6'-0" ABOVE THE FLOOR.

7.6 ALL RANGE VENTS TO BE INSTALLED PER 2019 CBC AND MANUFACTURER'S INSTRUCTIONS.

7.7 ALL VENTS AND DUCTS PENETRATING THE ROOF SHALL EXTEND A MINIMUM OF 12" ABOVE THE ROOF SURFACE OR PER 2019 CBC, WHICHEVER IS MORE CONSERVATIVE.

7.8 PROVIDE FLASHING AT THE TOP OF ALL EXPOSED TRELLIS BEAMS AND RAFTERS.

7.9 PROVIDE GUTTERS AT ALL DRIP EDGES OF THE ROOF, WITH DOWNSPOUTS EVERY 30'-0" OF GUTTER OR AS NEEDED IF RUN IS SHORTER. ALL GUTTERS TO BE 6" HALF ROUND SEAMLESS ALUMINUM W/ 3" DIAMETER ROUND DOWNSPOUTS TO CONC. SPLASH BLOCKS. ALL GUTTERS TO BE PREFINISHED DARK BRONZE.

7.10 PROVIDE EXHAUST DUCTS AS REQUIRED FOR WATER HEATER(S), RANGE HOOD AND VENTILATION FANS.

7.11 ENERGY INSULATION REQUIREMENTS:

A. ALL EXTERIOR WALLS SHALL BE INSULATED WITH BLANKET TYPE MINERAL FIBER OR GLASS FIBER INSULATION CONFORMING TO FEDERAL SPECIFICATION HH-I-52IE WITH A THERMAL RESISTANCE (R) OF NOT LESS THAN 11.
B. ALL ROOF-CEILING ASSEMBLIES SHALL BE INSULATED WITH EITHER:

1. BLANKET TYPE MINERAL OR GLASS FIBER INSULATION CONFORMING TO FEDERAL SPECIFICATION HH-I-521E, TITLE 24 ENERGY MANDATES.

C. ALL FLOOR ASSEMBLIES OVER NON INSULATED SPACE SHALL BE INSULATED WITH BLANKET TYPE MINERAL FIBER OR GLASS FIBER INSULATION CONFORMING TO FEDERAL SPECIFICATION HH-I-52IE WITH A THERMAL RESISTANCE (R) OF NOT LESS THAN 19.
D. ALL HEATING OR COOLING DUCTS LOCATED OUTSIDE THE BUILDING ENERGY ENVELOPE SHALL HAVE ALL JOINTS AND SEAMS SEALED AND SHALL BE INSULATED TO MEET THE CURRENT TITLE 24 REQUIREMENTS.
E. SEE DIVISION 8, DIV. 15 FOR ADDITIONAL ENERGY REQUIREMENTS.
F. MINERAL FIBER INSULATION SHALL BE INSTALLED IN JOIST SPACES WHENEVER A PLUMBING PIPE OR DUCT PENETRATES A FLOOR-CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE INSTALLED TO A POINT 12" BEYOND THE PIPE OR DUCT.
G. UPON COMPLETION OF INSULATION INSTALLATION BOTH THE BUILDER AND THE INSULATION APPLICATOR SHALL EXECUTE A CARD CERTIFYING THAT THE INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH CHAPTERS 2-53 OF TITLE 24 OF CALIFORNIA ADMINISTRATIVE CODE, AND THAT THE MATERIALS INSTALLED CONFORM WITH THE REQUIREMENTS OF TITLE 20, CHAPTER 2, SUBCHAPTER 4, ARTICLE 3. THE CARD MUST BE POSTED IN A CONSPICUOUS LOCATION WITHIN THE BUILDING.
H. ALL INSULATION MATERIALS SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL.
I. A R-12 EXTERIOR BLANKET SHALL BE PROVIDED FOR HOT WATER HEATER.
J. INSULATE HOT WATER PIPING PER TITLE 24 REQUIREMENTS.
K. INSULATE GARAGE ROOF AND WALLS WITH EQUAL BATT INSULATION TO BUILDING ENVELOPE WALLS FOR CONDITIONED SPACE PER TITLE 24.

7.12 ENERGY REQUIREMENTS (GENERAL)

A. DUAL GLAZING AT ALL WINDOWS, GLASS DOORS, AND SKYLIGHTS (AS SHOWN ON WINDOW SCHEDULE). SHADING DEVICES AS REQUIRED BY ENERGY CALCULATIONS.
B. CAULK PLUMBING AND ELECTRICAL PENETRATION, ALL WINDOW AND DOOR FRAMES, BETWEEN WALL SOLEPLATES AND FLOORS, AND ALL OTHER OPENINGS IN THE ENVELOPE.
C. LED LIGHTING SHALL BE INSTALLED THROUGHOUT.
D. ALL WATER HEATING AND SPACE CONDITIONING EQUIPMENT, SHOWER HEADS AND FAUCETS SHALL BE C.E.C. CERTIFIED.

7.13 WALL/CEILING FINISHES

A. ALL INTERIOR WALLS SHALL BE 5/8" GYPSUM BOARD EACH SIDE, NAILED WITH 6d COOLER NAILS AT 7"O.C. UNLESS NOTED ON PLANS. (UNBLOCKED).
B. PROVIDE ONE HOUR FIRE SEPARATION BETWEEN GARAGE AND RESIDENCE AND UNDER ENCLOSED STAIRWAYS WITH 5/8" GYPSUM BOARD EACH SIDE OF WALLS AND ON CEILINGS. PROVIDE 5/8" GYPSUM BOARD THROUGHOUT GARAGE AND FINISH PER INTERIOR FINISH (LEVEL V, SMOOTH FINISH). USE TYPE "X" GYPSUM BOARD.
C. INSPECTION IS REQUIRED PRIOR TO TAPING AND FINISHING (ALL JOINTS) WALLBOARDS.
D. INSPECTION IS REQUIRED FOR ALL INTERIOR AND EXTERIOR IN-PLACE LATH AND WALLBOARD BEFORE ANY PLASTERING IS APPLIED.
E. PROVIDE 26 GAUGE GALVANIZED IRON FOUNDATION WEEP SCREED MANUFACTURED STONE AT THE INTERSECTION OF THE MUD SILL AND THE CONCRETE SLAB. WEEP SCREED SHALL BE A MINIMUM OF 6" ABOVE GRADE.
F. INTERIOR FINISH IN GROUP R-3 OCCUPANCIES SHALL BE A MINIMUM FLAME SPREAD CLASSIFICATION OF III EXCEPT IN KITCHENS, BATHROOMS, AND GARAGES.

7.14 FLOORING SHALL BE VINYL PLANK THROUGHOUT AS SELECTED BY OWNER'S REPRESENTATIVE.

7.15 ROOFING -
A. ASPHALT SHINGLES FOR 3/ 12 ROOF SLOPE: INSTALL OWNER SELECTED SHINGLES (50 YR) PER MANUFACTURER'S INSTRUCTIONS OVER TWO LAYERS OF 30 LB FELT WITH 50% LAPS.
B. TORCH DOWN ROOFING FOR 1/ 12 ROOF SLOPE: INSTALL OWNER SELECTED COLOR ROOFING PER MANUFACTURER'S INSTRUCTIONS.
C. INSTALL ALL ROOFING SYSTEMS OVER LP ½" TECHSHIELD RADIANT BARRIER SHEATHING.

7.16 ALL METAL TRIM PIECES SHALL BE AS SPECIFIED IN THE CONSTRUCTION DETAILS.

7.19 FIRE BLOCKING SHALL BE INSTALLED AT:

A. CONCEALED SPACES OF STUD WALLS AND PARTITIONS, FLOOR AND CEILING AT 10'-0" MAXIMUM INTERVALS BOTH VERTICALLY AND HORIZONTALLY.
B. INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES.
C. CONCEALED SPACE BETWEEN STAIR STRINGERS AT TOP AND BOTTOM RUN.
D. AT OPENINGS AROUND VENTS, PIPES, DUCTS, AND CHIMNEYS NON-COMBUSTIBLE MATERIALS).
E. AT OPENINGS BETWEEN ATTIC AND CHIMNEY CHASE FOR FACTORY-BUIL CHIMNEYS.

DIVISION 8

DOORS, WINDOWS, AND GLASS

8.1 ALL GLASS AND GLAZING SHALL COMPLY WITH APPLICABLE CODES AND MUST BE LABELED SAFETY GLAZING FOR IMPACT WHERE APPLICABLE.

8.2 ALL GLASS LESS THAN 18" ABOVE ADJACENT WALKING SURFACE SHALL BE TEMPERED.

8.3 TITLE 24 REQUIREMENTS: (SEE TITLE 24 ENERGY COMPLIANCE SHEETS).

8.4 GLAZING IN DOORS AND FIXED GLAZED PANELS OF MORE THAN 9 SQ. FT. SHALL HAVE CATEGORY II CLASSIFICATION PER C.B.C. STD.

8.6 GLAZING IN DOORS AND ENCLOSURES FOR BATHTUBS AND SHOWERS SHALL HAVE CATEGORY II CLASSIFICATION PER 2019 C.B.C.

8.7 THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING. GLAZING IN THESE LOCATIONS MUST BE TEMPERED:

A. GLAZING IN INGRESS AND EGRESS DOORS EXCEPT JALOUSIES.
B. GLAZING IN FIXED AND SLIDING PANELS OF SLIDING DOOR ASSEMBLIES AND PANELS IN SWINGING DOORS OTHER THAN WARDROBE DOORS.
C. GLAZING IN STORM DOORS.
D. GLAZING IN ALL UNFRAMED SWINGING DOORS.
E. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE A STANDING SURFACE AND DRAIN INLET.
F. GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60-INCHES ABOVE THE WALKING SURFACE.
G. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL, OTHER THAN LOCATIONS DESCRIBED IN ITEMS 'E' AND 'F', THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATHER THAN 9 SQ. FT.
2. EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
3. EXPOSED TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR.
4. ONE OR MORE WALKING SURFACES WITHIN 36 INCHES HORIZONTALLY OF THE PLANE OF THE GLAZING.
H. GLAZING IN RAILING REGARDLESS OF HEIGHT ABOVE A WALKING SURFACE. INCLUDED ARE STRUCTURAL BALUSTER PANELS AND NON-STRUCTURAL IN-FILL PANELS.
I. GLAZING IN WALLS AND FENCES USED AS THE BARRIER FOR INDOOR AND OUTDOOR SWIMMING POOLS AND SPAS WHEN ALL OF THE FOLLOWING CONDITIONS ARE PRESENT:
1. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE POOL SIDE OF THE GLAZING.
2. THE GLAZING IS WITHIN 5 FEET OF A SWIMMING POOL OR SPA WATER'S EDGE.
J. GLAZING IN WALLS ENCLOSING STAIRWAY LANDINGS OR WITHIN 5 FEET OF THE BOTTOM AND TOP OF THE STAIRWAYS WHERE THE BOTTOM EDGE OF THE GLASS IS LESS THAN 60 INCHES ABOVE A WALKING SURFACE.

8.8 ENERGY INSULATION STANDARD

A. SWINGING DOORS OR WINDOWS TO THE EXTERIOR OR TO UNCONDITIONED SPACES SUCH AS GARAGES SHALL BE FULLY WEATHER-STRIPPED, GASKETED OR OTHERWISE TREATED TO LIMIT AIR INFILTRATION.

8.9 SECURITY NOTES

EXTERIOR DOORS, DOORS BETWEEN HOUSE AND GARAGE, WINDOWS AND THEIR HARDWARE SHALL CONFORM TO THE FOLLOWING PROVISIONS:

A. SWINGING DOORS:

1. DOOR STOPS OF IN-SWINGING DOORS SHALL BE OF ONE PIECE CONSTRUCTION WITH THE JAMB OR JOINED BY RABBET TO THE JAMB.
2. ALL PIN TYPE HINGES WHICH ARE ACCESSIBLE FROM OUTSIDE THE SECURED AREA WHEN THE DOOR IS CLOSED SHALL HAVE NON-REMOVABLE HINGE PINS. IN ADDITION, THEY SHALL HAVE MINIMUM 1/2" DIAMETER STEEL JAMB STUD WITH 1/2" MINIMUM PROJECTION UNLESS THE HINGES ARE SHAPED TO PREVENT REMOVAL OF THE DOOR IF THE HINGE PINS ARE REMOVED.
3. THE STRIKE PLATE FOR LATCHES AND HOLDING DEVICE FOR PROJECTING DEADBOLTS IN WOOD CONSTRUCTION SHALL BE SECURED TO THE JAMB AND THE WALL FRAMING WITH SCREWS NOT LESS THAN 2-1/2" IN LENGTH.
4. DEADBOLTS SHALL CONTAIN HARDENED INSERTS.
5. STRAIGHT DEAD BOLTS SHALL HAVE A MINIMUM THROW OF 1" AND AN EMBEDMENT OF NOT LESS THAN 5/8".
6. A HOOK-SHAPED OR AN EXPANDING LUG DEAD BOLT SHALL HAVE A MINIMUM THROW OF 3/4"
7. WOOD FLUSH TYPE DOORS SHALL BE 1-3/8" THICK MINIMUM WITH SOLID CORE CONSTRUCTION.
8. HOLLOW CORE DOORS OR DOORS LESS THAN 1-3/8" IN THICKNESS SHALL BE COVERED ON THE INSIDE FACE WITH 26 GAUGE SHEET METAL ATTACHED WITH SCREWS AT 6" O.C. AROUND THE PERIMETER OR EQUIVALENT.
9. GLASS DOORS SHALL HAVE FULLY TEMPERED GLASS COMPLYING WITH THE APPLICABLE BUILDING CODE.
10. PROVIDE DOOR VIEWERS, VIEW PORTS OR VIEWING WINDOWS AT ALL DWELLING OR QUEST ROOM ENTRANCES. SUCH WINDOWS OR PORTS SHALL BE CONSTRUCTED IN COMPLIANCE WITH PROVISION OF 91.6720.
11. SINGLE SWINGING DOORS, ACTIVE LEAF OF A PAIR OF DOORS, AND THE BOTTOM LEAF OF DUTCH DOORS SHALL BE EQUIPPED WITH A LATCH AND A DEADBOLT KEY OPERATED FROM THE OUTSIDE.
12. THE INACTIVE LEAF OF A PAIR OF DOORS OR THE UPPER LEAF OF DUTCH DOORS SHALL HAVE A NON-KEY OPERATED DEADBOLT, HARDENED DEADBOLT TOP AND BOTTOM WITH 1/2" EMBEDMENT.
13. PANELS OF WOOD DOORS SHALL BE 9/16" THICK AND NOT MORE THAN 300 SQ. INCHES. STILES AND RAILS TO BE 1 3/8" THICK AND 3" MINIMUM WIDTH.

B. CYLINDER GUARDS SHALL BE INSTALLED ON ALL CYLINDER LOCKS WHENEVER THE CYLINDER PROJECTS BEYOND THE FACE OF THE DOOR OR IS OTHERWISE ACCESSIBLE TO GRIPPING TOOLS.
C. SLIDING GLASS DOORS AND WINDOWS SHALL BE EQUIPPED WITH LOCKING DEVICES AND SHALL BE CONSTRUCTED AND INSTALLED SO THAT THEY REMAIN INTACT AND ENGAGED WHEN SUBJECTED TO THE TESTS SPECIFIED IN 91.6731 AND 91.6732, AND SHALL BEAR FORCED-ENTRY RESISTANT LABELS.
D. SLIDING DOORS AND WINDOWS SHALL BE PROVIDED WITH A LOCKING DEVICE IN THE UPPER CHANNEL OF THE MOVING PANEL IN THE CLOSED OR PARTIALLY OPEN POSITION.
E. LOUVERED WINDOWS SHALL BE PROTECTED BY METAL BARS OR GRILLS WITH OPENINGS THAT HAVE AT LEAST ONE DIMENSION OF 6" OR LESS, WHICH ARE CONSTRUCTED TO PRECLUDE HUMAN ENTRY.
F. OTHER OPERABLE WINDOWS SHALL BE PROVIDED WITH SUBSTANTIAL LOCKING DEVICES
G. SCREENS, BARRICADES, OR FENCES MADE OF MATERIAL WHICH PRECLUDE HUMAN CLIMBING SHALL BE PROVIDED AT EVERY PORTION OF EVERY ROOF, BALCONY, OR SIMILAR SURFACE WHICH IS WITHIN 8" OF A UTILITY POLE OR SIMILAR STRUCTURE.
H. GLAZED OPENING WITHIN 40" OF THE DOOR LOCK WHEN THE DOOR IS IN THE CLOSED POSITION, SHALL BE FULLY TAMPERED GLASS OR APPROVED BURGLARY RESISTANT MATERIAL, OR SHALL BE PROTECTED BY METAL BARS, SCREENS OR GRILLS HAVING A MAXIMUM OPENING OF 2". THIS SHALL NOT APPLY TO VIEW PORTS OR WINDOWS WHICH DO NOT EXCEED 2" IN THEIR GREATEST DIMENSIONS.
I. LOCKS SHALL OPEN FROM INTERIOR WITHOUT KEYS, SPECIAL KNOWLEDGE OR SPECIAL EFFORT.
J. OVERHEAD AND SLIDING GARAGE DOORS SHALL BE SECURED WITH A CYLINDER LOCK, GLIDE BAR, BOLTS CROSS BARS, AND/OR PADLOCKS WITH MINIMUM 9/32" HARDENED STEEL SHACKLES OR EQUIVALENT WHEN NOT OTHERWISE LOCKED BY ELECTRIC POWER OPERATION. JAMB LOCKS SHALL BE ON BOTH JAMBS FOR DOORS EXCEEDING 9 FEET IN WIDTH.
K. PROVIDE APPROVED GARAGE DOOR SPRINGS AND ANCHORAGE (HSC 17927;T25-B1318; B1418). GARAGE DOOR SPRINGS AND CONTAINMENT DEVICES SHALL BE LABELED.

DIVISION 9

FINISHES

9.1 DRYWALL NAILING SHALL BE ACCORDING TO APPLICABLE BUILDING CODE REQUIREMENTS FOR THE TYPES AND THICKNESS BEING USED (SEE DIVISION 7).

9.2 ALL DRYWALL APPLICATIONS TO BE INSPECTED AND APPROVED PRIOR TO TAPING.

9.3 ALL ROUGHSAWN AND RESAWN SURFACES TO RECEIVE STAIN, DO NOT PRIME.

9.4 DRYWALL TO BE "U.S. GYPSUM" SHEET ROCK OR EQUAL.

9.5 ALL DRYWALL TO BE INSTALLED IN A ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

9.6a ALL INTERIOR WALLS TO HAVE 5/8" SHEET ROCK TYPE X (SEE DIVISION7).

9.6b THE WALL BETWEEN UNITS IN BUILDING "D" SHALL BE BE CONSTRUCTED WITH ONE LAYER OF ⅝" QUIET ROCK OVER ONE LAYER OF STANDARD TYPE "X" DRYWALL ON EACH SIDE OF THE DEMISING WALL.

9.7 ALL TILE MUST BE SET BY A FIRST-CLASS TILE SETTER.

9.8 ALL TILE SHALL BE FIRMLY SECURED IN PLACE WITH FILLED JOINTS AT LEAST 1/16" WIDE.

9.9 LINES SHALL BE KEPT STRAIGHT AND TRUE AND ALL FINISH SURFACES BROUGHT TO LEVEL PLANES.

9.10 TILE WORK SHALL BE "CERAMIC TILE" (AS SELECTED BY ARCHITECT) AND CEMENT MORTAR PER SPECIFICATIONS OF "CERAMIC TILE INSTITUTE."

9.11 SEE ARCHITECTURAL PLANS FOR TUBS AND SHOWERS.

9.12 ALL PAINT SHALL BE DUNN EDWARDS OR EQUAL, READY MIXED PAINT. ALL PAINTED SURFACES SHALL BE PRIMED AND FINISHED WITH TWO COLOR COATS. OWNER TO SELECT COLORS AND SHEEN FOR EACH ROOM OR PORTION OF ROOM.

9.13 PAINTING CONTRACTOR SHALL APPROVE CONDITION OF PLASTER AND ANY SURFACES PAINTED AND TO SEAL ALL SURFACES.

9.14 ALL COLORS SHALL BE SELECTED BY OWNER.

9.15 PROTECT ALL ADJACENT SURFACES AGAINST PAINT SPATTERING.

9.16 PAINT-GRADE DOORS SHALL RECEIVE 2-COATS ENAMEL (SEMI-GLOSS) OVER PRIMER.

9.17 INTERIOR WOODWORK TO RECEIVE 2-COATS ENAMEL (SEMI-GLOSS) OVER PRIMER, IF NOT STAINED.

9.18 ALL BUILT-IN CABINETS SHALL RECEIVE 2-COATS ENAMEL (SEMI-GLOSS), IF NOT STAINED.

9.19 EXTERIOR WOODWORK SHALL RECEIVE PRIME PLUS 2-COATS EXTERIOR PAINT EXCEPT FOR NATURAL FINISH.

9.20 PUTTY ALL NAIL HOLES AFTER FIRST COAT.

9.21 REMOVE ALL PAINT SPOTS AND LEAVE IN A CLEAN AND ACCEPTABLE MANNER, READY FOR OCCUPANCY.

9.22 PAINTER TO SUBMIT A COLOR SAMPLE OF AREA TO BE PAINTED FOR OWNER'S APPROVAL PRIOR TO COMMENCEMENT OF WORK.

9.23 PAINTER TO RETURN AFTER ALL TRADES HAVE COMPLETED WORK AND TOUCH UP ALL PAINTED AREAS AS REQUIRED.

DIVISION 15

MECHANICAL

15.1 EQUIPMENT SHALL BEAR A PERMANENT AND LEGIBLE NAMEPLATE ON WHICH SHALL APPEAR: THE MANUFACTURER'S NAME AND RATING OF THE APPLIANCE; A MODEL DESIGNATION: INSTRUCTIONS FOR THE OPERATION OF THE APPLIANCE; A SEAL OF APPROVAL OF THE APPLIANCE BY AN APPROVED TESTING LABORATORY.

15.2 EACH UNIT SHALL BEAR A METAL NAME PLATE SECURELY FIXED TO THE APPLIANCE AND READILY ACCESSIBLE FOR INSPECTION, IDENTIFYING THE NAME AND ADDRESS OF THE INSTALLER, IF OTHER THAN THE OWNER.

15.3 CHECK FRAMING FOR ALL DUCTS, ETC., INTERFERING WITH STRUCTURAL MEMBERS.

15.4 INSTALL, CONNECT, AND INSPECT FORCED AIR UNIT WITH DUCTS AND VENTS (AND CONDENSER UNIT ON A PLATFORM OPTION) PER MANUFACTURER'S SPECIFICATIONS.

15.5 THE AIR CIRCULATION SYSTEM SHALL INCORPORATE AN AIR FILTRATION SYSTEM.

15.6 ALL HEATING AND COOLING DUCTS LOCATED OUTSIDE THE BUILDING ENERGY ENVELOPE SHALL HAVE ALL JOINTS AND SEEMS SEALED, BE INSULATED PER TITLE 24.

15.7 HEATING AND AIR CONDITIONING CONTRACTOR TO INSTALL THERMOSTAT FOR HVAC SYSTEM USING THERMOSTAT WIRE PRE-INSTALLED BY ELECTRICIAN. THERMOSTAT SHALL BE SELECTED BY OWNER.

15.8 NO PIPES, CONDUIT OR DUCTS SHALL BE EMBEDDED INTO STRUCTURAL MEMBERS OR FOOTINGS UNLESS SO SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.

15.9 ALL PLUMBING VENTS SHALL GO THROUGH ROOF A MINIMUM OF 10'-0" FROM ANY PROPERTY LINE.

15.10 MINERAL FIBER INSULATION WILL BE INSTALLED IN JOIST SPACES WHENEVER A PLUMBING PIPE OR DUCT PENETRATES A FLOOR-CEILING ASSEMBLY OR WHERE SUCH A UNIT PASSES THROUGH THE PLANE OF THE FLOOR-CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE TO A POINT 12" BEYOND THE PIPE OR DUCTS.

15.11 WATER HEATERS SHALL BE STRAPPED FOR LATERAL SUPPORT. FRAME SHALL BE A MINIMUM OF 2'-0" FROM FINISH FLOOR.

15.12 PROVIDE AN OUTSIDE GAS SHUTOFF, CONSPICUOUSLY MARKED.

15.13 ALL GAS APPLIANCES SHALL BE EQUIPPED WITH INTERMITTENT IGNITION DEVICES.

15.14 PROVIDE BACK DRAFT DAMPERS ON ALL EXHAUST FAN SYSTEMS.

15.15 ALL SPECIFICATIONS TO BE CHECKED AND VERIFIED WITH GENERAL CONTRACTOR.

15.16 SEE PLANS FOR LOCATION OF GAS, HOSE BIBS, AND WATER SERVICE.

15.17 STUB OUT 4'-0" FOR SEWER HOOKUP.

15.18 ALL OVERHEAD PLUMBING TO BE COPPER OR AS OTHERWISE NOTED.

15.19 ALL FIXTURE TO BE ACID RESISTING.

15.20 CONTRACTOR SHALL INSTALL CONDENSATION LINE FOR AIR CONDITIONER.

15.21 CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY CO. APPROVAL OF WATER SERVICE AND GAS METER LOCATION.

15.22 CONTRACTOR SHALL HOOKUP AND INSTALL DISHWASHER AND WATER LINE TO REFRIGERATOR.

15.23 SET HOSE BIBS AND T PRIOR TO PRESSURE REGULATOR FOR HOSE BIBS AND SPRINKLERS.

15.24 PROVIDE AIR CHAMBERS AND/OR RUBBER GASKETS ON WATER LINES TO REDUCE PIPE NOISE WHERE POSSIBLE.

15.25 PRIOR TO NOTCHING OF EXTERIOR AND INTERIOR BEARING WALLS, CONTRACTOR SHALL VERIFY WITH STRUCTURAL ENGINEER THE SIZE AND LOCATION MEET STRUCTURAL REQUIREMENTS PRIOR TO NOTCHING OR BORING.

15.26 THE FOLLOWING ARE REQUIRED FOR FURNACE OR COMFORT COOLING EQUIPMENT IN AN ATTIC:

A. SCUTTLE 30"X30" OR THE SIZE OF THE LARGEST PIECE OF EQUIPMENT AND LOCATED NOT OVER 20 FEET FROM EQUIPMENT IS REQUIRED.
B. UNOBSTRUCTED PASSAGEWAY 24" INCHES WIDE OF SOLID CONTINUOUS FLOORING FROM SCUTTLE TO EQUIPMENT AND ITS CONTROLS.
C. UNOBSTRUCTED WORK SPACE OF 30" MIN. DEPTH IN FRONT OF EQUIPMENT.
D. LIGHT OVER EQUIPMENT WITH A SWITCH AT THE SCUTTLE.
E. VENT THROUGH THE ROOF A MIN. OF 5 FEET ABOVE THE HIGHEST VENT COLLAR WHICH IT SERVES.
F. FURNACE INSTALLATION SHALL MEET ALL LISTED CLEARANCE. FAU IS NOT ALLOWED IN ATTICS OF TRUSSED ROOFS UNLESS REQUIRED CLEARANCES ARE PROVIDED. NO LINE CONTACT IS PERMITTED.

15.27 CLOTHES DRYER LOCATED IN AN AREA THAT IS HABITABLE OR CONTAINING OTHER FUEL BURNING APPLIANCES SHALL BE EXHAUSTED TO THE OUTSIDE.
15.28 CLOTHES DRYER MOISTURE EXHAUST DUCT SHALL BE 4 INCHES IN DIAMETER AND LENGTH IS LIMITED TO 14 FEET WITH TWO ELBOWS FROM THE CLOTHES DRYER TO POINT OF TERMINATION. DUCT LENGTH SHALL BE REDUCED BY 2 FEET FOR EVERY ELBOW IN EXCESS OF TWO. VERTICAL VENTS THROUGH THE ROOF SHALL BE POWER ASSISTED WITH AN APPROVED APPLIANCE FOR THAT PURPOSE.

15.29 DUCTS SHALL BE SIZED PER CHAPTER 6 OF THE MECHANICAL CODE.

15.30 PAD SUPPORTING COMPRESSOR/CONDENSER SHALL BE A MINIMUM OF 3" ABOVE GRADE.

PLUMBING FIXTURE REQUIREMENTS (2022 CPC, TABLE 422.1)

OCCUPANT LOAD FACTOR (TABLE A):

CLASSROOMS:	20 SF/ OCCUPANT	2,602/20	130 OCCUPANTS
OFFICE:	200 SF/ OCCUPANT	91/200	3 OCCUPANTS
BREAK ROOM:	30 SF/ OCCUPANT	235/30	8 OCCUPANTS
KITCHEN	200 SF/ OCCUPANT	194/200	1 OCCUPANTS
RECEPTION	200 SF/ OCCUPANT	148/200	1 OCCUPANTS
TOTAL OCCUPANT LOAD		143 OCCUPANTS/2 = 72 WOMEN & 72 MEN	

PER TABLE 422.1

WATER CLOSETS:	REQUIRED: MEN: 2 (1/50) WOMEN: 5 (1/30)	PROVIDED: MEN: 2, WOMEN: 6
URINALS:	REQUIRED: MEN: 2 (1/100)	PROVIDED: MEN: 2
LAVATORIES:	REQUIRED: MEN: 2 (1/40) WOMEN: 2 (1/40)	PROVIDED: MEN: 4 WOMEN: 4
DRINKING FOUNTAINS	REQUIRED: 1 (1/150)	PROVIDED: 3

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CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

GENERAL NOTES

REVISIONS

-	-
-	-
-	-
-	-
-	-

DATE:	12/17/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

G1.00

2022 CALGREEN NONRESIDENTIAL MANDATORY MEASURES CHECKLIST (EFFECTIVE JAN 1, 2023)

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
GREEN BUILDING			
301.3	Application	- Applies to nonresidential projects that meet one of the following: new construction, building additions of 1,000 square feet or greater, or building alterations with a permit valuation of $200,000 or more. - Requirements for additions and alterations only apply to the portion of the building being added or altered.	G-0.0
PLANNING AND DESIGN (SITE DEVELOPMENT)			
5.106.1	Storm Water Pollution Prevention Plan	Newly constructed projects and additions which disturb less than one acre of land and are not part of larger common plan of development or sale shall prevent the pollution of stormwater runoff from the construction activities through local ordinance in Section 5.106.1.1 or Best management practices (BMP) in Section 5.106.1.2.	N/A
5.106.2		For projects that disturb one or more acres of land or disturb less than or more land but are part of a larger common plan of development or sale comply with the postconstruction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General Permit.	N/A
5.106.4	Bicycle Parking	Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet local ordinance, whichever is stricter. 5.106.4.1.1 Short-Term bicycle parking. If the new project or addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 ft of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. Exception: Additions or alterations which add 9 or fewer visitor vehicular parking spaces. 5.106.4.1.2 Long-Term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupants vehicular parking spaces with a minimum of one space. 5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5% of the tenant-occupants vehicular parking spaces being added, with a minimum of one bicycle parking facility. 5.106.4.1.4 For new shell buildings in phased projects, provide secure bicycle parking for 5% of the anticipated tenant-occupants vehicular parking spaces with a minimum of one bicycle parking facility. 5.106.4.1.4 Acceptable parking facilities shall be convenient from the street and shall meet one of the following: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; or 3. Lockable, permanently anchored bicycle lockers.	A-1.0
5.106.5.2	Designated Parking	5.106.5.2 Designated parking for clean air vehicles. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel efficient, and carpool/van pool vehicles per Table 5.106.5.2. 5.106.5.2.1 Parking stall marking. Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR/ VANPOOL/EV Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.	A-1.0
5.106.5.3	Electric Vehicle (EV) Charging	New Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). 5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following: 1. The type and location of the EVSE. 2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. 3. The raceway shall not be less than trade size 1". 4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent. 5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE. 5.106.5.3.2 Multiple charging spaces requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following: 1. The type and location of the EVSE. 2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent. 3. Plan design shall be based upon 40-ampere minimum branch circuits. 4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage. 5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE. 5.106.5.3.3 EV charging space calculation. [N] Use Table 5.106.5.3.3 to determine if single or multiple charging space requirements apply for the future installation of EVSE. 5.106.5.3.4 Identification [N]. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE." 5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.	A-1.0
5.106.8	Light Pollution Reduction	New outdoor lighting systems shall be designed and installed to comply with the following: 1. The minimum requirements in the California Energy Code for Lighting Zones 0–4 as defined in Chapter 10, section 10-14 of the California Administrative Code; and 2. Backlight (B) rating as defined in IES TM-15-11 (shown in table A-1 in Chapter 8); 3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and 4. Allowable BUG ratings not exceeding those shown in Table 5.106.8[N], or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent. Exceptions: 1. Luminaires that qualify as exceptions in Section 140.7 of California Energy Code 2. Emergency lighting 3. Building façade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6. 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.	E-0.3
5.106.10	Grading and Paving	Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales. 2. Water collection and disposal systems. 3. French drains. 4. Water retention gardens. 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. Exceptions: Additions and alterations not altering the drainage path.	CIVIL SHEET 3 OF 7
ENERGY EFFICIENCY			
5.201.1	Scope	Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.	M-1.1 - M-1.2

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
WATER EFFICIENCY AND CONSERVATION (INDOOR WATER USE)			
5.303.1	Meters	Separate meters shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2. 5.303.1.1 New buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows: 1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems: a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s) b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s) c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 kW) 5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or an addition that is projected to consume more than 1,000 gal/day (3800 L/day).	N/A
5.303.3	Water Conserving Plumbing Fixtures and Fittings	Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following: **PLUMBING FIXTURES & FITTINGS** / **MAXIMUM** WATER CLOSETS: 1.28 GALLONS/FLUSH SHOWERHEADS: 1.8 GPM @ 80 PSI KITCHEN FAUCETS: 1.8 GPM @ 60 PSI NONRESIDENTIAL LAVATORY FAUCETS: 0.5 GPM @ 60 PSI WASH FOUNTAINS: 1.8 GPM/20" RIM SPACE @ 60 PSI METERING FAUCETS: 0.20 GALLONS/CYCLE METERING FAUCETS FOR WASH FOUNTAIN: 0.20 GALLONS/CYCLE PRE-RINSE SPRAY VALVE (WITH AN INTEGRAL AUTOMATIC SHUT OFF): 1.6 GPM @ 60 PSI URINALS: 0.125 GALLONS/FLUSH FOR WALL-MOUNTED TYPE AND 0.5 GALLONS/FLUSH FOR FLOOR-MOUNTED OR OTHER TYPE COMMERCIAL FOOD WASTE DISPOSER: 1 GPM NO LOAD OR 10 MINUTES AUTO OFF, 8 GPM MAX.	A-1.2 - A-1.3
WATER EFFICIENCY AND CONSERVATION (INDOOR WATER USE)			
5.303.4	Commercial Kitchen Equipment	5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.	A-1.2 - A-1.3
5.303.5	Areas of Additions or Alteration	For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alterations to the building.	A-1.2 - A-1.3
5.303.6	Standards for Plumbing Fixtures and Fittings	Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code and in Chapter 6 of this code.	A-1.2 - A-1.3
WATER EFFICIENCY AND CONSERVATION (Outdoor Water Use)			
5.304.1	Outdoor Potable Water Use in Landscape Areas	Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO).	A-1.2 - A-1.3
MATERIAL CONSERVATION & RESOURCE EFFICIENCY (WEATHER RESISTANCE AND MOISTURE MANAGEMENT)			
5.407.1	Weather Protection	Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code, Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.	A-3.1
5.407.2	Moisture Control	Employ moisture control measures by the following methods: 5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent irrigation spray on structures. 5.407.2.2 Entries and openings. Design exterior entries and openings to prevent water intrusion into buildings as follows: 5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least 4 feet in depth. 3. The door is recessed at least 4 feet. 4. Other methods which provide equivalent protection. 5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.	A-3.1
MATERIAL CONSERVATION & RESOURCE EFFICIENCY (CONSTRUCTION WASTE REDUCTION, DISPOSAL & RECYCLING)			
5.408.1	Construction Waste Management	Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.	G0.01
5.408.1.1	Construction Waste Management Plan	Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that complies with Items 1 through 4 of this section.	G0.01
5.408.1.2	Waste Management Company	Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section. Exceptions to Sections 5.408.1.1 and 5.408.1.2: 1. Excavated soil and land-clearing debris 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. 3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets	G0.01
5.408.1.3	Waste Stream Reduction Alternative	The combined weight of new construction disposal that does not exceed 2 lbs/sqft of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.	G0.01
5.408.1.4	Documentation	Provide documentation of the waste management plan that meets the requirements listed in Sections 5.408.1.1 through 5.408.1.3, and the plan is accessible to the enforcement authority.	G0.01
5.408.2	Universal Waste	Additions and alterations to a building or tenant space shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents. Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/OEARA_REGS_UWR_FinalText.pdf	N/A
5.408.3	Excavated Soil and Land Clearing Debris	100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. Exception: Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.	G0.01

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LICENSED ARCHITECT
ERIK G. PETERSEN
No. C-25289
REN. 10-31-2027
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 1

REVISIONS
1 -
2 -
3 -
4 -
5 -

DATE: 12/17/2025
SCALE: AS NOTED
JOB NO: 23100
DWN BY: CCW
CHK BY: EGP

SHEET NO.
G2.00

2022 CALGREEN NONRESIDENTIAL MANDATORY MEASURES CHECKLIST (EFFECTIVE JAN 1, 2023)

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
MATERIAL CONSERVATION & RESOURCE EFFICIENCY (BUILDING MAINTENANCE AND OPERATION)			
5.410.1	Recycling by Occupants	Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling. 5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site. Exception: addition within a tenant space resulting in less than a 30% increase in the tenant space floor area.	G0.01
5.410.2	Commissioning	New buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include items listed in Section 5.410.2. Exceptions: 1. Unconditioned warehouses of any size 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses 3. Tenant improvements less than 10,000 sqft as described in Section 303.1.1. 4. Open parking garages of any size, or open parking garage areas of any size, within a structure. 5.410.2.1 Owner's Project Requirements (OPR). [N] Documented before the design phase of the project begins the OPR shall include items listed in Section 5.410.2.1. 5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project to cover the systems listed in Section 5.410.2.2. 5.410.2.3 Commissioning Plan. [N] A commissioning plan describing how the project will be commissioned shall include items listed in Section 5.410.2.3. 5.410.2.4 Functional Performance Testing. [N] Functional performance testing shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. 5.410.2.5 Documentation and Training. [N] A Systems manual and systems operations training are required. 5.410.2.5.1 Systems manual. [N] The systems manual shall be delivered to the building owner or representative and facilities operator and shall include the items listed in Section 5.410.2.5.1. 5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and shall include items listed in Section 5.410.2.5.2. 5.410.2.6 Commissioning Report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.	N/A
5.410.4	Testing and Adjusting	Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1. 5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project, the systems listed in Section 5.410.4.2. 5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by the enforcing agency. 5.410.4.3.1 HVAC balancing. Before a new space-conditioning system serving a building or space is operated for normal use, balance in accordance with the procedures defined by national standards listed in Section 5.410.4.3.1 or as approved by the enforcing agency. 5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services. 5.410.4.5 Operation and maintenance manual. Provide the building owner with detailed operating and maintenance instructions and copies of guaranties/warranties for each system prior to final inspection. 5.410.4.5.1 Inspection and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.	N/A
ENVIRONMENTAL QUALITY (FIREPLACES)			
5.503.1	General	Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150.	N/A
5.503.1.1	Woodstoves	Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable.	N/A

SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
ENVIRONMENTAL QUALITY (POLLUTANT CONTROL)			
5.504.1.3	Temporary Ventilation	If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if building is occupied during alteration, at the conclusion of construction. Applies to additions or alterations.	N/A
5.504.3	Covering of Duct Openings and Protection of Mechanical Equipment During Construction	At the time of rough installation and during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system	G0.01
5.504.4	Finish Material Pollutant Control	Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.	G0.01
5.504.4.1	Adhesives, Sealants and Caulks	Adhesives and sealants used on the project shall meet the requirements of the following standards. 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. 2. Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.	G0.01
5.504.4.3	Paints and Coatings	Architectural paints and coatings shall comply with Table 5.504.4.3 unless more stringent local limits apply. 5.504.4.3.1 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances (CCR, Title 17, Section 94520 et seq). 5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency.	G0.01
5.504.4.4	Carpet Systems	All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in Section 5.504.4.4. 5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program. 5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.	G0.01
5.504.4.5	Composite Wood Products	Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Table 5.504.4.5. 5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following. 1. Product certifications and specifications 2. Chain of custody certifications 3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.) 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards. 5. Other methods acceptable to the enforcing agency.	G0.01
5.504.4.6	Resilient Flooring Systems	For 80% of floor area receiving resilient flooring, install resilient flooring which meets one of the following: 1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; 2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for Testing and Evaluation Chambers, Version 1.1, February 2010; 3. Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 7.0 and 7.1 (formerly Eq 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or 4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & School Program). 5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.	G0.01
5.504.5.3	Filters	In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a MERV of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. Exceptions: Existing mechanical equipment. 5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.	G0.01
5.504.7	Environmental Tobacco Smoke (ETS) Control	Prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows where outdoor areas are provided for smoking and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University or campus of the University of California, whichever are more stringent.	G0.01
ENVIRONMENTAL QUALITY (INDOOR MOISTURE CONTROL)			
5.505.1	Indoor Moisture Control	Buildings shall meet or exceed the provisions of 2019 California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls).	G0.01
ENVIRONMENTAL QUALITY (INDOOR AIR QUALITY)			
5.506.1	Outside Air Delivery	For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 of the California Energy Code and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent.	G0.01
5.506.2	Carbon Dioxide	For buildings or additions equipped with demand control ventilation, CO2 sensors and ventilation controls shall be specified (CO2) Monitoring and installed in accordance with the requirements of the California Energy Code, Section 120.1(c)(4).	G0.01
ENVIRONMENTAL QUALITY (ENVIRONMENTAL COMFORT)			
5.507.4	Acoustical Control 5.507.4.2.	Employ building assemblies and components with STC values determined in accordance with ASTM E90 and ASTM E413 or OITC determined in accordance with ASTM E1332, using either the prescriptive or performance method in Section 5.507.4.1 or	G0.01
5.507.4.1	Prescriptive Method	Wall and floor-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations: 1. Within the 65 CNEL noise contour of an airport. 2. Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan. Also applies to addition envelope or altered envelope. 5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB Leq-1Hr during any hour of operation shall have building, addition, or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30). Also applies to addition or alteration exterior wall.	G0.01
5.507.4.2	Performance Method	For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation. Also applies to addition envelope or altered envelope. 5.507.4.2.1 Site features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior. Also applies to addition envelope or altered envelope. 5.507.4.2.2 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record. 5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.	G0.01

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LICENSED ARCHITECT
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No. C-25289
REN. 10-31-2027
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 2

REVISIONS

1	-
2	-
3	-
4	-
5	-

DATE:	12/17/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

G2.10

2022 CALGREEN NONRESIDENTIAL MANDATORY MEASURES CHECKLIST (EFFECTIVE JAN 1, 2023)

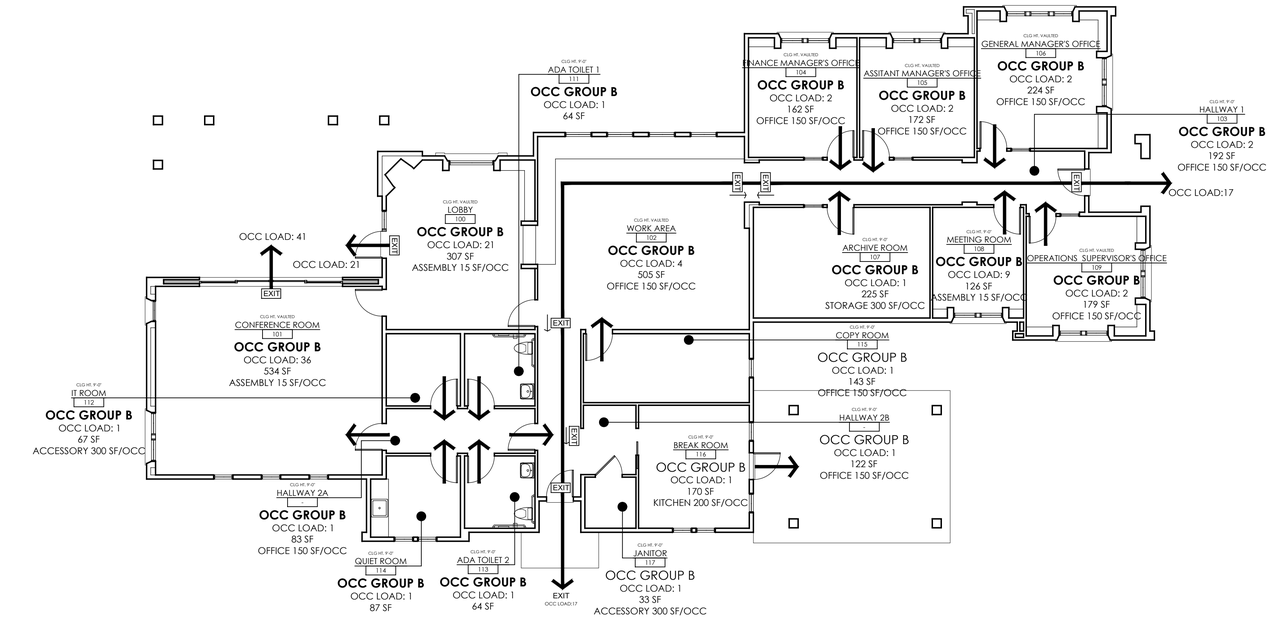
SECTION	MEASURE	REQUIREMENT	MEASURES PROVIDED ON PLAN SHEET
ENVIRONMENTAL QUALITY (OUTDOOR AIR QUALITY)			
5.508.1	Ozone Depletion and Greenhouse Gas Reductions	Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2. 5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration & fire suppression equipment that do not contain CFCs. 5.508.1.2 Halons. Install HVAC, refrigeration & fire suppression equipment that do not contain Halons.	G0.01
5.508.2	Supermarket Refrigerant Leak Reduction	New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 sqft or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facility and the replacement of existing refrigeration systems in existing facilities. Exception: refrigeration systems containing low-global-warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO2), and potentially other refrigerants.	N/A
5.508.2.1	Refrigerant Piping	Piping compliant with the California Mechanical code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than ¼", flared tubing connection and short radius elbows shall not be used in refrigerant systems except as noted below. 5.508.2.1.1 Treaded pipe. Threaded connections are permitted at the compressor rack. 5.508.2.1.2 Copper pipe. Copper tubing with an OD less than ¼" may be used in systems with a refrigerant charge of 5 pounds or less. 5.508.2.1.2.1 Anchorage. ¼" OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils. 5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil. Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations. 5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.	G0.01
5.508.2.2	Valves	Valves and fittings shall comply with the California Mechanical Code and as follows: 5.508.2.2.1 Pressure relief valves. For vessel containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet the pressure relief valve. 5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve. 5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use. 5.508.2.2.2.1 Valves caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic. 5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place. 5.508.2.2.2.2.1 Chain tethers. Chain tethers to fit over the stem are required for valves designed to have seal caps. Exceptions: Valves with seal caps that are not removed from the valve during stem operation.	G0.01
5.508.2.3	Refrigerated Service Cases	Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances. 5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.	G0.01
5.508.2.4	Refrigerant	Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of Receivers refrigerant in the receiver.	G0.01
5.508.2.5	Pressure Testing	The systems shall be pressure tested during installation prior to evacuation & charging. 5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum. 5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge. 5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.	G0.01
5.508.2.6	Evacuation	The system shall be evacuated after pressure testing prior to charging. 5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold down for 30 minutes. 5.508.2.6.2 Second vacuum. Pull a system vacuum to a minimum of 500 microns and hold for 30 minutes. 5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.	G0.01

NOTES:

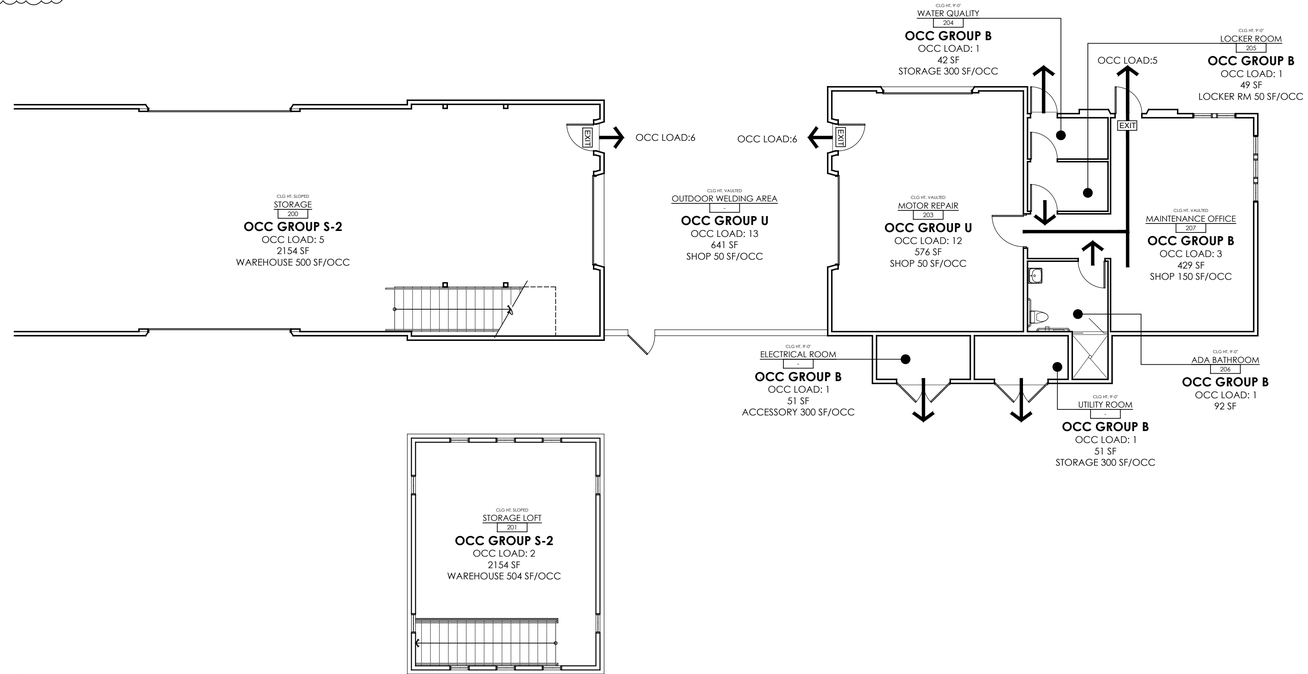
- [N]: INDICATES CODE SECTION APPLIES ONLY TO NEWLY CONSTRUCTED BUILDINGS.
- THIS CHECK LIST IS INTENDED ONLY AS AN AID TO THE USER AND MAY NOT CONTAIN COMPLETE CODE LANGUAGE. REFER TO 2019 CALGREEN CHAPTER 5 FOR COMPLETE CODE LANGUAGE.

FOOTNOTES:

1. INDICATE N/A IF NOT APPLICABLE.



1 MAIN BUILDING EGRESS PLAN AND OCCUPANCY CALCULATIONS
1/8"=1'-0"



2 STORAGE BUILDING EGRESS PLAN AND OCCUPANCY CALCULATIONS
1/8"=1'-0"

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LICENSED ARCHITECT
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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES CHECKLIST, SHEET 3

REVISIONS

1	-
2	-
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4	-
5	-

DATE:	12/17/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

G2.20

DOOR SCHEDULE

DOOR#	DOOR TYPE	OPENING		DOOR PANEL				DOOR FRAME		DETAILS			FIRE RATING	U-FACTOR	SHGC	VT	REMARKS
		WIDTH	HEIGHT	THCKNSS	CORE	MATERIAL	FINISH	MATERIAL	FINISH	HEAD	JAMB	THRESHOLD					
MAIN BUILDING																	
100	MULTI-SLIDE DOOR	16'-0"	8'-0"	1-3/4	-	AL/GL	BLACK	AL	BLACK	STUCCO	STUCCO	ADA COMP.	--	0.30	0.20	0.45	MFR: LA CANTINA, BLACK ALUMINUM FRAME
101	A5	3'-0"	7'-0"	1-3/4"	-	STL	PT	STL TUBE	PT	1/A8.11	2/A8.11	3/A8.11	--	0.30	0.20	0.45	MFR: PINKY'S
102	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	PT	9/A8.10		--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
103	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	PT	9/A8.10		--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
104	A2	3'-0"	7'-0"	1-3/4"	INS	STL/GL	PT	STL TUBE	PT	1/A8.11	2/A8.11	3/A8.11	--	0.30	0.20	0.45	
105	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
106	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
107	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
108	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
109	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
110	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
111	A1-POCKET	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	PT	9/A8.10	10/A8.10	--	--	--	--	--	JOHNSON POCKET DOOR HARDWARE - SC2000
112	A2	3'-0"	7'-0"	1-3/4"	INS	STL/GL	PT	STL TUBE	PT			16/A8.10	--	0.30	0.20	0.45	--
113	A7	3'-0"	7'-0"	1-3/4"	SC	STL/GL	PT	STL TUBE	PT	5/A8.11	6/A8.11	--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
114	A7	3'-0"	7'-0"	1-3/4"	SC	STL/GL	PT	STL TUBE	PT	5/A8.11	6/A8.11	--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
115	A7	3'-0"	7'-0"	1-3/4"	SC	STL/GL	PT	STL TUBE	PT	5/A8.11	6/A8.11	--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
116	A7	3'-0"	7'-0"	1-3/4"	SC	STL/GL	PT	STL TUBE	PT	5/A8.11	6/A8.11	--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
117	A6	3'-0"	7'-0"	1-3/4"	SC	STL/GL	PT	STL TUBE	PT	5/A8.11	6/A8.11	--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
118	A7	3'-0"	7'-0"	1-3/4"	SC	STL/GL	PT	STL TUBE	PT	5/A8.11	6/A8.11	--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
119	A2	3'-0"	7'-0"	1-3/4"	INS	STL/GL	PT	STL TUBE	PT	1/A8.11	2/A8.11	3/A8.11	--	0.30	0.20	0.45	--
120	A1	3'-0"	7'-0"	1-3/4"	SC	WD	ST	WD	PT			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
STORAGE BUILDING																	
200	C1	10'-0"	10'-0"	-	INS	STL	PT	-	PT			--	--	--	--	--	BULLNOSE STUCCO INTO JAMBS & HEAD
201	C1	16'-0"	10'-0"	-	INS	STL	PT	-	PT			--	--	--	--	--	BULLNOSE STUCCO INTO JAMBS & HEAD
202	C1	16'-0"	10'-0"	-	INS	STL	PT	-	PT			--	--	--	--	--	BULLNOSE STUCCO INTO JAMBS & HEAD
203	C1	10'-0"	10'-0"	-	INS	STL	PT	-	PT			--	--	--	--	--	BULLNOSE STUCCO INTO JAMBS & HEAD
204	A3	3'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	0.30	0.20	0.45	--
205	A3	3'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	0.30	0.20	0.45	--
206	C1	10'-0"	10'-0"	-	INS	STL	PT	-	PT			--	--	--	--	--	BULLNOSE STUCCO INTO JAMBS & HEAD
207	C1	10'-0"	10'-0"	-	INS	STL	PT	-	PT			--	--	--	--	--	BULLNOSE STUCCO INTO JAMBS & HEAD
208		3'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	0.30	0.20	0.45	--
209		3'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	0.30	0.20	0.45	--
210		3'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	9/A8.10	10/A8.10	--	--	--	--	--	--
211	A1	3'-0"	7'-0"	1-3/4"	INS	WD	PT	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
212	A1	3'-0"	7'-0"	1-3/4"	INS	WD	PT	WD	ST			--	--	--	--	--	BULLNOSE DRWALL INTO JAMBS & HEAD
213		3'-0"	7'-0"	1-3/4"	INS	HM/GL	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	0.30	0.20	0.45	--
214	B1	6'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	--	--	--	--
215	B1	6'-0"	7'-0"	1-3/4"	INS	HM	PT	HM	PT	5/A8.10	6/A8.10	16/A8.10	--	--	--	--	--

ABBREVIATIONS

CORE
SC = SOLID CORE
HM = HOLLOW METAL
STL= STEEL
GL = GLASS (T = TEMPERED)
INS = INSULATED CORE

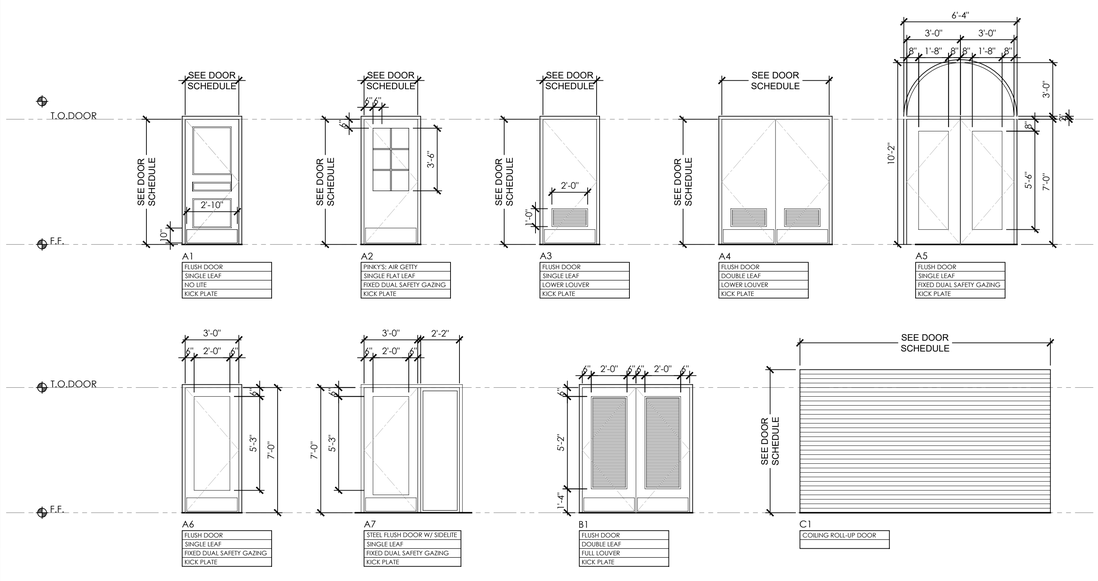
DOOR PANEL/ FRAME MATERIAL
GL = TEMP. GLASS
AL = ALUMINUM
WD = WOOD
HM = HOLLOW METAL
STL= STEEL

DOOR PANEL/ FRAME FINISH
PT = PAINT
WV = WOOD VENEER PER SPECS
ST =STAIN

REMARKS
PH = PANIC HARDWARE
HO = HOLD OPEN
CR = CARD READER

DOOR SCHEDULE NOTES

A. ALL REQUIRED EXIT DOORS SHALL BE OPERABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
B. ALL REQUIRED EXIT DOORS SHALL BE SIZED NOT LESS THAN 3'-0" WIDE AND NOT LESS THAN 6'-8" HIGH, CAPABLE OF OPENING 90 DEGREES AND MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT WAY IS A MINIMUM 32 INCHES, U.N.O.
C. CLOSER EFFORT TO BE 5 LBS AT INTERIOR & EXTERIOR DOORS, GATES, AND INTERIOR DOORS PER 11B-404.2.9 AND SHALL HAVE HINGES ADJUSTED SO THAT FROM THE OPEN POSITION OF 90°, THE DOOR OR GATE SHALL MOVE TO WITHIN 12° OF THE LATCH IN 5 SECONDS MINIMUM PER 11B-404.2.8.2. WHERE FIRE DOORS ARE REQUIRED, THE AUTHORITY HAVING JURISDICTION, MAY INCREASE THE MAXIMUM EFFORT TO OPERATE FIRE DOORS TO ACHIEVE POSITIVE LATCHING, BUT NOT TO EXCEED 15 LBS MAX.
D. LATCHING AND LOCKING DOORS THAT ARE HAND-ACTIVATED AND WHICH ARE IN PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVERTYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATED BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.
E. PROVIDE WALL MOUNTED OR FLOOR MOUNTED DOOR STOPS FOR ALL DOORS.
F. INTERIOR AND EXTERIOR THRESHOLDS SHALL BE 1/2" MAXIMUM ABOVE THE FLOOR LEVEL. EXPOSED EDGE SHALL BE SLOPED OR BEVELED TO MAXIMUM 1:2 SLOPE WITH MAXIMUM 1/4" CHANGE IN VERTICAL ELEVATION.
G. THE BOTTOM 10" OF ALL DOORS AND GATES, EXCEPT AUTOMATIC AND SLIDING, SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST.
H. DOORS IN CORRIDORS SHALL COMPLY WITH C.B.C. SECTION 716.5.3.
I. SAFETY GLAZING SHALL COMPLY WITH CBC SECTION 2406.
J. DOOR SIGNAGE FOR ACCESSIBLE RESTROOMS: PROVIDE REQUIRED SIGNS AND SYMBOLS AT APPROPRIATE TOILET DOORS INDICATING ACCESSIBLE TOILET FACILITY. RE: 08/A-1111 FOR ADDITIONAL INFORMATION.
K. PROVIDE SECURITY GLAZING AT ALL DOOR VISION PANEL LITES.



WINDOW SCHEDULE

WINDOW#	WINDOW TYPE	SIZE		SILL HT.	Q'TY	U-FACTOR	SHGC	VT	REMARKS
		WIDTH	HEIGHT						
A	FIXED	SEE TYPE 1A BELOW		2'-0"	1	0.30	0.20	0.45	PINKY'S STEEL FRAME
B	CASEMENT	3'-0"	4'-0"	3'-0"	4	0.30	0.20	0.45	PINKY'S AIR
C	CASEMENT	2'-6"	4'-0"	3'-0"	14	0.30	0.20	0.45	PINKY'S AIR
D	CASEMENT	2'-2"	4'-0"	3'-0"	14	0.30	0.20	0.45	PINKY'S AIR
E	FIXED	2'-2"	2'-6"	4'-6"	3	0.30	0.20	0.45	PINKY'S AIR
F	FIXED	2'-2"	2'-6"	13'-0"	6	0.30	0.20	0.45	PINKY'S AIR
G	FIXED	2'-2"	2'-6"	15'-2"	10	0.30	0.20	0.45	PINKY'S AIR



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CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

DOOR AND WINDOWS SCHEDULES

REVISIONS
1 -
2 -
3 -
4 -
5 -

DATE: 12/17/2025
SCALE: AS NOTED
JOB NO: 23100
DWN BY: CCW
CHK BY: EGP

SHEET NO.

G4.00

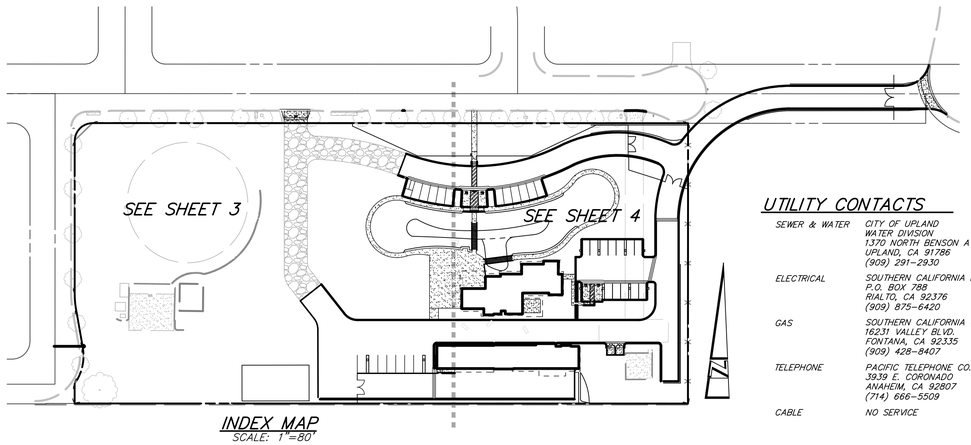
PRECISE GRADING PLAN
FOR
400 E. 20TH STREET

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH CHAPTER 15.52 OF THE UPLAND MUNICIPAL CODE AND ANY SPECIAL REQUIREMENTS OF THE PERMIT. A COPY OF THE APPROVED GRADING PLAN SHALL BE RETAINED ON THE JOB SITE WHILE WORK IS IN PROGRESS. WHEN REFERENCED ON THE PLANS, A COPY OF CITY OF UPLAND STANDARD PLANS SHALL ALSO BE RETAINED ON THE SITE.
2. GRADING SHALL NOT BE STARTED WITHOUT FIRST NOTIFYING THE CITY OF UPLAND PUBLIC WORKS INSPECTOR AT (909) 291-2963. A PRE-GRADING MEETING ON THE SITE IS REQUIRED BEFORE START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, ENGINEERING GEOLOGIST, AND CITY INSPECTOR. THE REQUIRED INSPECTIONS FOR GRADING WILL BE EXPLAINED AT THIS MEETING.
3. ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED ON THIS PLAN.
4. THE GRADING PERMIT AND AN APPROVED COPY OF THE GRADING PLAN SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
5. PRELIMINARY SOIL AND GEOLOGY REPORTS AND ALL SUBSEQUENT REPORTS ARE CONSIDERED A PART OF THE APPROVED GRADING PLAN.
6. THE SOILS ENGINEER AND ENGINEERING GEOLOGIST SHALL PERFORM SUFFICIENT INSPECTIONS AND BE AVAILABLE DURING GRADING AND CONSTRUCTION TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND THE CODE WITHIN THEIR PURVIEW.
7. THE CIVIL ENGINEER SHALL BE AVAILABLE DURING GRADING TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS, CODE AND ANY SPECIAL CONDITIONS OF THE PERMIT WITHIN THEIR PURVIEW.
8. AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED IN WRITING BY THE SOIL ENGINEER BEFORE PLACING FILL.
9. FILLS SHALL BE BENCHED INTO COMPETENT MATERIAL AS REQUIRED BY THE SOILS ENGINEER.
10. ALL EXISTING FILLS SHALL BE APPROVED BY THE SOILS ENGINEER OR REMOVED BEFORE PLACING ADDITIONAL FILLS.
11. FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90% RELATIVE COMPACTION. AGGREGATE BASE FOR ASPHALTIC AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. MAXIMUM DENSITY SHALL BE IN ACCORDANCE WITH CALIFORNIA BUILDING CODE (LATEST EDITION).
12. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2-FOOT HORIZONTAL TO 1-FOOT VERTICAL (2:1) EXCEPT WHERE SPECIFICALLY APPROVED OTHERWISE.
13. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL SUBMIT RECOMMENDED TREATMENT TO THE CITY INSPECTOR FOR APPROVAL.
14. ALL TRENCH BACKFILLS SHALL BE TESTED AND APPROVED BY THE SOILS ENGINEER PER THE GRADING CODE.
15. ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED AND/OR CRUSHED IN PLACE AND APPROVED BY THE CITY INSPECTOR AND SOILS ENGINEER.
16. ANY EXISTING WATER WELLS SHALL BE ABANDONED IN COMPLIANCE WITH THE SPECIFICATIONS APPROVED BY SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC HEALTH.
17. ANY EXISTING CESSPOOLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE CALIFORNIA PLUMBING CODE TO THE APPROVAL OF THE BUILDING OFFICIAL. A SEPARATE PERMIT MUST BE OBTAINED FROM THE CITY BUILDING DEPARTMENT.
18. THE CITY INSPECTOR, BEFORE EXCAVATION, SHALL APPROVE STOCK PILING OF EXCESS MATERIAL.
19. EXPORT SOIL MUST BE TRANSPORTED TO A LEGAL DUMP OR TO A PERMITTED SITE APPROVED BY THE CITY INSPECTOR.
20. THE PERMITTEE SHALL SUBMIT A HAUL ROUTE PLAN TO THE CITY ENGINEER WHEN EARTH AND/OR DEBRIS IS TRANSPORTED TO OR FROM A PERMITTED SITE ON PUBLIC ROADWAYS.
21. THE PERMITTEE IS RESPONSIBLE FOR DUST CONTROL MEASURES.
22. THE PERMITTEE SHALL GIVE REASONABLE NOTICE TO THE OWNER OF THE ADJOINING LANDS AND BUILDINGS BEFORE BEGINNING EXCAVATIONS, WHICH MAY AFFECT THE LATERAL, AND SUBADJACENT SUPPORT OF THE ADJOINING PROPERTY. THE NOTICE SHALL STATE THE INTENDED DEPTH OF EXCAVATION AND WHEN THE EXCAVATION WILL COMMENCE. THE PERMITTEE OR HIS AGENT SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIS/HER GRADING ACTIVITIES.
23. SLOPES EXCEEDING 5 FEET IN HEIGHT SHALL BE PLANTED WITH AN APPROVED PLANT MATERIAL. IN ADDITIONAL, SLOPES EXCEEDING 15 FEET IN HEIGHT SHALL BE PROVIDED WITH AN APPROVED IRRIGATION SYSTEM UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
24. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
25. THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
26. ALL WATER VALVES AND SEWER MANHOLES SHALL REMAIN ACCESSIBLE AND FREE OF DEBRIS THROUGHOUT ALL PHASES OF THE PROJECT.
27. INSTALL 3/4" PLYWOOD FALSE BOTTOMS IN ALL SEWER MANHOLES WITHIN THE CONSTRUCTION AREA. (CHECKED DAILY BY INSPECTOR.)
28. PROVIDE TRAP AT FIRST MANHOLE DOWNSTREAM OF PROPOSED IMPROVEMENTS. (CHECKED DAILY BY INSPECTOR.)
29. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING.
30. GRADING OPERATIONS, INCLUDING MAINTENANCE OF EQUIPMENT, SHALL BE CONDUCTED BETWEEN THE HOURS OF 7 A.M. AND 3:30 P.M. MONDAY TROUGH FRIDAY. NO WORK SHALL BE ALLOWED ON WEEKENDS.
    A) ALL CONSTRUCTION VEHICLES OR EQUIPMENT, FIXED OR MOBILE, OPERATED WITHIN 1,000 FEET OF A DWELLING SHALL BE EQUIPPED WITH PROPERLY OPERATION AND MAINTAINED MUFFLERS.
    B) ALL OPERATIONS SHALL COMPLY WITH CITY OF UPLAND NOISE ORDINANCE (CHAPTER 4.5, UNNECESSARY NOISE.)
    C) STOCKPILING AND/OR VEHICLE STAGING AREAS SHALL BE LOCATED AS FAR AS PRACTICABLE FROM DWELLINGS AND WITHIN THE LIMITS OF GRADING PERMIT.
31. GRADING AND EXCAVATION SHALL BE HALTED DURING PERIODS OF HIGH WINDS. ACCORDING TO AQMD MEASURE F-4, HIGH WINDS ARE DEFINED AS 30 MPH OR GREATER. THIS LEVEL OCCURS ONLY UNDER EXTREME CONDITIONS, SUCH AS SANTA ANA WIND CONDITIONS. USE A WATER TRUCK FOR DUST CONTROL.
32. THE CIVIL ENGINEER, AS A CONDITION OF ROUGH GRADE APPROVAL, SHALL PROVIDE A BLUE TOP WITH ACCOMPANYING WITNESS STAKE, SET AT THE CENTER OF EACH PAD REFLECTING THE PAD ELEVATION FOR PRECISE PERMITS AND A BLUE TOP WITH WITNESS STAKE SET AT THE DRAINAGE SWALE HIGH POINT REFLECTING THE HIGH POINT ELEVATION FOR ROUGH GRADING PERMITS.
33. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS AND SUBMIT A COMPLETE REPORT AND MAP UPON COMPLETION OF THE ROUGH GRADING.
34. THE GRADING CONTRACTOR SHALL SUBMIT A STATEMENT OF COMPLIANCE TO THE APPROVED GRADING PLAN BEFORE FINAL APPROVAL.
35. IN THE EVENT THAT SOIL CONTAMINATION IS DISCOVERED DURING EXCAVATION OR REMOVAL OF AN EXISTING TANK IS NECESSARY, WORK SHALL BE STOPPED UNTIL A SITE ASSESSMENT AND MITIGATION PLAN HAS BEEN PREPARED, SUBMITTED AND APPROVED BY COUNTY OF SAN BERNARDINO DEPARTMENT OF ENVIRONMENTAL HEALTH.
36. THE DEVELOPER SHALL BE RESPONSIBLE FOR SUBMITTING TO THE CITY PROOF THAT A NOTICE OF INTENT (NOI) FOR THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAS BEEN FILED WITH AND APPROVED BY THE STATE WATER RESOURCES CONTROL BOARD. CONSTRUCTION SHALL NOT COMMENCE WITHOUT THIS APPROVAL. THE DEVELOPER SHALL BE RESPONSIBLE TO COMPLY WITH THE GENERAL CONSTRUCTION ACTIVITY STORM WATER PERMIT BY IMPLEMENTING THEIR STORM WATER POLLUTION PREVENTION PLAN FOR THE DURATION OF THE PROJECT. INDICATE WDID NUMBER ON PLANS.

LEGAL DESCRIPTION

PORTION LOT 282 ONTARIO COLONY LANDS TOGETHER WITH PORTION OF THE WEST 21.48 FEET OF LOT 281
BEGINNING AT A POINT 33.00 FEET SOUTHERLY OF CENTERLINE OF 20TH STREET SHOWN AS NORTH 89°50'00" WEST AND 21.48 FEET EASTERLY OF EAST LINE OF LOT 282;
THENCE SOUTH 313.86 FEET;
THENCE WEST 685.2 FEET TO A POINT PARALLEL WITH AND 32 FEET EASTERLY OF WESTERLY LINE OF SAID LOT 282;
THENCE NORTH 00°00'44" EAST 22.03 FEET TO BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHWESTERLY WITH RADIAL BEARING OF NORTH 54°44'11" WEST;
THENCE ALONG SAID CURVE 42.65 FEET WITH RADIUS OF 54 FEET THRU ANGLE OF 45°15'05";
THENCE TO A TANGENT BEARING NORTH 09°59'26" WEST 43.73 FEET TO BEGINNING OF TANGENT CURVE CONCAVE EASTERLY;
THENCE ALONG SAID CURVE 17.10 FEET WITH RADIAL OF 98 FEET THROUGH AN ANGLE OF 10°00'00";
THENCE NORTH 00°00'44" EAST PARALLEL WITH AND 32 FEET EASTERLY OF WEST LINE OF SAID LOT 282 171.20 FEET TO BEGINNING OF TANGENT CURVE CONCAVE SOUTHEASTERLY;
THENCE ALONG SAID CURVE 31.36 FEET WITH RADIUS OF 20 FT THRU AN ANGLE OF 89°50'39" TO A POINT ON A LINE PARALLEL AND DISTANT 33 FEET SOUTHERLY FROM CENTERLINE OF SAID 20TH STREET;
THENCE SOUTH 89°59'00" EAST ALONG SAID PARALLEL LINE A DISTANCE OF 665.69 FEET TO POINT OF BEGINNING.



INDEX MAP
SCALE: 1"=80'

ENGINEER'S NOTICE TO CONTRACTOR

THE EXISTENCE AND APPROXIMATE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES OR STRUCTURES EXCEPT AS SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITIES OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK ON EXCAVATION TO DETERMINE EXACT LOCATION OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HEREON, AND FOR ANY DAMAGE OR PROTECTION OF THESE LINES. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) PHONE 1-800-277-2600 TWO WORKING DAYS PRIOR TO DIGGING. NO CONSTRUCTION PERMIT ISSUED BY THE PUBLIC WORKS DEPARTMENT, SHALL BE VALID INVOLVING UNDERGROUND FACILITIES, UNLESS THE APPLICANT HAS AN INQUIRY IDENTIFICATION NUMBER ISSUED BY USA.

CONTRACTOR'S RESPONSIBILITY FOR SAFETY

IN SUBMITTING A BID FOR THIS WORK THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSED OF CONSTRUCTION OF THIS PROJECT; INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, THE ENGINEER AND THE CITY OF UPLAND AND ITS AGENTS OR REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE ENGINEER, AND THE CITY OF UPLAND AND ITS AGENTS OR REPRESENTATIVES.

THE CONTRACTORS AND SUB-CONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND WITH "CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTOR OR SUB-CONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

SURVEY MONUMENT NOTE

SURVEY MONUMENTS THAT EXIST AS SHOWN ON RECORDED MAPS, HIGHWAY MAPS OR POINTS THAT PROVIDE SURVEY CONTROL WITHIN THE CONSTRUCTION AREA, SHALL BE LOCATED AND REFERENCED OUT BY A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER (AUTHORIZED TO PRACTICE LAND SURVEYING), AND CORNER RECORDS SHALL BE FILED WITH THE COUNTY SURVEYOR PRIOR TO THE START OF CONSTRUCTION. THESE CORNER RECORDS SHALL DESCRIBE THE MONUMENTS FOUND WITH TIE DISTANCES TO REFERENCE POINTS FOR RESETTING OF THE SURVEY MONUMENT. WHEN CONSTRUCTION IS COMPLETED, MONUMENTS SHALL BE SET AND CORNER RECORDS SHALL BE FILED WITH THE COUNTY SURVEYOR SHOWING THE NEW MONUMENTS.

STATEMENT OF CITY ENGINEER FOR TEMPORARY DRAINAGE AND EROSION CONTROL

BY MY APPROVAL I HEREBY ACCEPT THIS GRADING PLAN AND TEMPORARY EROSION CONTROL PLAN AS MEETING THE PREREQUISITE FOR ISSUANCE OF A GRADING PERMIT AND FOR RECORD PURPOSES.

THIS GRADING PLAN AND THE TEMPORARY EROSION CONTROL PLAN WAS PREPARED UNDER THE DIRECTION OF A FULLY QUALIFIED PROFESSIONAL WHO HAS STATED THAT THE PLAN CONFORMS WITH ALL THE APPLICABLE REQUIREMENTS OF THE CITY. THE DESIGN, ELEVATIONS, DETAILS AND FEATURES OF THE ONSITE GRADING HAVE NOT BEEN REVIEWED BY THE CITY, EXCEPT AS THEY RELATE TO PUBLIC IMPROVEMENTS WITHIN THE ADJACENT RIGHT OF WAYS AND EASEMENTS.

STATEMENT OF CITY ENGINEER

BY MY APPROVAL I HEREBY ACCEPT THIS GRADING PLAN AND TEMPORARY EROSION CONTROL PLAN AS MEETING THE PREREQUISITE FOR ISSUANCE OF A GRADING PERMIT AND FOR RECORD PURPOSES. THIS GRADING PLAN AND THE TEMPORARY EROSION CONTROL PLAN WAS PREPARED UNDER THE DIRECTION OF A FULLY QUALIFIED PROFESSIONAL WHO HAS STATED THAT THE PLAN CONFORMS WITH ALL APPLICABLE REQUIREMENTS OF THE CITY. THE DESIGN, ELEVATIONS, DETAILS AND FEATURES OF THE ONSITE GRADING HAVE NOT BEEN REVIEWED BY THE CITY, EXCEPT AS THEY RELATE TO PUBLIC IMPROVEMENTS WITHIN ADJACENT RIGHT OF WAYS AND EASEMENTS.

DIGALERT
DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BASIS OF BEARING

THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF TWENTIETH STREET AS SHOWN ON TRACT NO. 11355 M.B. 158 PAGES 65-66 AS RECORDED IN THE COUNTY OF SAN BERNARDINO'S RECORDER'S OFFICE.

SAID BEARING: NORTH 89°58'58" WEST

CONSTRUCTION NOTES

		QUANTITY
1	CONSTRUCT 3" AC OVER 3" CLASS II A.B. AC PAVEMENT PER GREENBOOK (B-AR-4000). SOILS ENGINEER TO VERIFY R-VALUE AND PAVEMENT SECTION AFTER GRADING.	11,512 S.F.
2	CONSTRUCT 6" CONCRETE CURB PER CITY UPLAND STD. NO. CU-R-2 TYPE "D."	1,585 L.F.
3	CONSTRUCT 6" CURB & GUTTER PER CITY OF UPLAND STD. NO. CU-R-2 TYPE "A."	1272 L.F.
4	CONSTRUCT 4' WIDE CONCRETE GUTTER PER DETAIL ON SHEET 2.	-----
5	CONSTRUCT 6" THICK CONCRETE PAVEMENT.	1222 S.F.
6	CONSTRUCT 4" THICK CONCRETE SIDEWALK PER CITY OF UPLAND STD. NO. CU-P-3. (PRIVATE)	6,953 S.F.
7	CONSTRUCT 3' WIDE CONCRETE GUTTER PER DETAIL ON SHEET 2.	190 L.F.
8	CONSTRUCT 24" CONCRETE CHANNEL PER DETAIL ON SHEET 2.	36 L.F.
9	OMIT 3' CURB PER DETAIL ON SHEET 2.	6 L.F.
10	CONSTRUCT TRASH ENCLOSURE PER ARCHITECTURAL PLAN PER SEPARATE PERMIT.	1 EA.
11	PAINT PARKING STRIPING PER ARCHITECTURAL PLANS PER SEPARATE PERMIT.	----
12	CONSTRUCT ADA RAMP PER DETAIL ON SHEET 2.	1 EA.
13	CONSTRUCT ADA PARKING PER DETAIL 1 ON SHEET 2.	2 EA.
14	CONSTRUCT ADA PARKING PER DETAIL 2 ON SHEET 2.	2 EA.
15	CONSTRUCT TRUNCATED DOME PER DETAIL ON SHEET 2.	75 S.F.
16	CONSTRUCT RIP-RAP PAD PER DETAIL ON SHEET 2.	30 S.F.
17	CONSTRUCT UNDERWALK DRAIN PER DETAIL ON SHEET 2.	2 EA.
18	CONSTRUCT UNDERGROUND INFILTRATION SYSTEM PER DETAIL ON SHEET 2.	1 EA.
19	INSTALL 12"ø HDPE (PRIVATE STORM DRAIN).	226 L.F.
20	INSTALL 18"ø HDPE (PRIVATE STORM DRAIN).	381 L.F.
21	INSTALL 18"X18"X12" TEE. (PRIVATE STORM DRAIN)	5 EA.
22	INSTALL 18"ø-90° ELBOW. (PRIVATE STORM DRAIN)	1 EA.
23	CONSTRUCT CANOPY PER ARCHITECTURAL PLAN AND SEPARATE PERMIT.	3 EA.
24	INSTALL 18"ø-11.25° ELBOW. (PRIVATE STORM DRAIN)	3 EA.
25	INSTALL 12"ø-45° ELBOW. (PRIVATE STORM DRAIN)	1 EA.
26	CONSTRUCT 24"X24" BROOKS BOX. INSTALL FLEXSTORM INLET FILTER MODEL NO. 62HD24PCP AND STENCIL PER DETAILS ON SHEET 2.	6 EA.
27	CONSTRUCT 18" CONCRETE PARKING ISALAND LANDING PER CITY OF UPLAND STD. NO. CU-L-5.	206 L.F.
28	CONSTRUCT INFILTRATION BASIN PER ARCHITECTURAL PLAN AND PERMIT.	1 EA.
29	CONSTRUCT WROUGHT IRON FENCE PER ARCHITECTURAL PLAN.	338 L.F.
30	CONSTRUCT 6'-0" BLOCK WALL PER ARCHITECTURAL PLAN PER SEPARATE PERMIT.	248 L.F.
31	CONSTRUCT 6'-0" MAX RETAINING WALL PER ARCHITECTURAL PLAN AND SEPARATE PLAN AND PERMIT.	510 L.F.
32	CONSTRUCT BRIDGE PER SEPARATE PLAN AND PERMIT.	2 EA.
33	CONSTRUCT FULL DEPTH AC PER DETAIL ON SHEET 2.	118 L.F.
34	CONSTRUCT 8" CURB & GUTTER PER CITY OF UPLAND STD. NO. CU-R-2 TYPE "A."	31 L.F.
35	CONSTRUCT DRIVEWAY PER CITY OF UPLAND STD. NO. CU-P-4 TYPE "A". (W=26'; X=3')	1 EA.
36	CONSTRUCT DRIVEWAY PER CITY OF UPLAND STD. NO. CU-P-4 TYPE "B". (W=26'; R=30')	1 EA.
37	CONSTRUCT GRAVEL ROAD PER ARCHITECTURAL PLAN.	827 S.F.
38	CONSTRUCT 0" TO 6" TRANSITION CONCRETE CURB PER DETAIL ON SHEET 2.	2 EA.

REMOVAL NOTES

		QUANTITY
1	REMOVE EXISTING PAVEMENT.	6,428 S.F.
2	REMOVE EXISTING WALL.	355 L.F.
3	REMOVE EXISTING C.L. FENCE.	332 L.F.
4	REMOVE EXISTING METAL TOOL BOX.	1 EA.
5	REMOVE PILE OF ROCKS.	320 S.F.
6	REMOVE EXISTING DRIVEWAY APPROACH	1 EA.
7	REMOVE EXISTING CURB & GUTTER.	91 L.F.
8	REMOVE EXISTING TREE.	2 EA.
9	REMOVE EXISTING UTILITY POLE BY OTHERS.	1 EA.

UTILITY CONTACTS

SEWER & WATER	CITY OF UPLAND WATER DIVISION 1370 NORTH BENSON AVENUE UPLAND, CA 91786 (909) 291-2930
ELECTRICAL	SOUTHERN CALIFORNIA EDISON P.O. BOX 788 RIALTO, CA 92376 (909) 875-6420
GAS	SOUTHERN CALIFORNIA GAS CO. 16231 VALLEY BLVD. FONTANA, CA 92335 (909) 428-8407
TELEPHONE	PACIFIC TELEPHONE CO. 3939 E. CORONADO ANAHEIM, CA 92807 (714) 666-5509
CABLE	NO SERVICE

OWNER

SAN ANTONIO WATER
400 E. 20TH STREET
POMONA, CA 91784

CONTRACTOR

CEDC INC.
ERIK PETERSON
401 E. COLUMBIA AVE.
POMONA, CA 91767
(909) 625-3916

24 HOUR CONTACT

ERIK PETERSON
401 E. COLUMBIA AVE.
POMONA, CA 91767
(909) 625-3916

SOIL ENGINEER

THIS GRADING PLAN HAS BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS AS OUTLINED IN THE FOLLOWING SOILS REPORT FOR THIS PROJECT.

PROJECT NO: 24036-F/BMP
DATE: AUGUST 28, 2024
FIRM NAME: SOILS SOUTHWEST, INC
MALAY K. GUPTA
897 VIA LATA, SUITE N
COLTON, CA 92324
(909) 370-0474

MALAY K. GUPTA
RCE 3178 EXP. 12/31/26

DATE:

REGISTERED PROFESSIONAL ENGINEER
MALAY K. GUPTA
No.31708
Exp. 12/31/2026
CIVIL
STATE OF CALIFORNIA

DECLARATION OF ENGINEER OF RECORDS

I HEREBY DECLARE THAT IN MY PROFESSIONAL OPINION, THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH THE CURRENT PROFESSIONAL ENGINEER STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ACCEPTED FULL RESPONSIBILITY FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS COMPLY WITH THE CITY OF UPLAND IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THESE PLANS COMPLY WITH THE CITY STANDARDS AND OTHER APPLICABLE CODES AND ORDINANCES. THE PLAN REVIEW PROCESS IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT THEREFORE RELIEVE ME OF MY DESIGN RESPONSIBILITY.

AS THE ENGINEER OF RECORD, I AGREE TO DEFEND AND INDEMNITY THE CITY OF UPLAND, ITS OFFICERS, ITS AGENT, AND ITS EMPLOYEES FROM ANY AND LIABILITY, CLAIMS, DAMAGES, OR INJURIES TO ANY PERSON OR PROPERTY ARISING FROM NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD, HIS EMPLOYEES, HIS AGENT OR HIS CONSULTANTS.

SIGNATURE: KEVIN J. RICHER
RCE 43714 EXP. 3/31/27
DATE: 7/30/26

DESIGN PROFESSIONAL'S STATEMENT

THIS GRADING PLAN WAS PREPARED UNDER MY DIRECTION AND IS IN ACCORDANCE CALIFORNIA BUILDING CODE (LATEST EDITION) AND CHAPTER 15.52 OF THE UPLAND AND MUNICIPAL CODE. THE SITE GRADING AND ALL APPLICABLE DETAILS CONFORM TO THE PROVISIONS OF SERIES CU-E OF THE STANDARD DRAWINGS OF THE CITY OF UPLAND, WITH SERIES ED-E OF THE ENGINEERING DIRECTIVES, AND WITH ANY CITY OF UPLAND CONDITIONS OF APPROVAL CONCERNING GRADING. IN MY OPINION, ADEQUATE PROVISIONS HAVE BEEN MADE FOR THE DRAINAGE OF SURFACE WATERS FROM EACH BUILDING SITE.

LAND DEVELOPMENT DESIGN COMPANY, LLC
FIRM NAME

KEVIN J. RICHER — 43714 — 03/31/27
SIGNATURE — RCE # — EXP.

PROJECT MANAGER
TITLE
7/30/26
DATE

GRADING QUANTITIES

ITEM	CUT (C.Y.) A	FILL (C.Y.) B
1. RAW VOLUME	4,381	3,252
2. OVEREXCAVATION (3.0' AVG. UNDER PADS)	1,326	1,326
3. TOTAL (1A+2A)	5,707	4,578
4. SHRINKAGE (10% 3A) (SUBTOTAL)	574	-----
5. SPOILS	697	-----
6. CUT AVAILABLE (3A-4A+5A)	5,830	-----
7. FILL REQUIRED (1B+2B)	---	4,578

TOTAL EXPORT: 1,252 CY

ACREAGE

GROSS AREA: 222,084S.F. (5.10 ACRES)

DISTURBED AREA

164,800S.F. (3.78 ACRES)

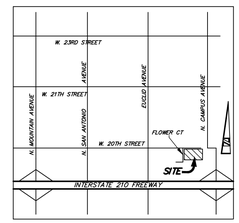
ASSESSOR'S PARCEL NUMBER

1044-091-22-0000

ESTIMATED START DATE:
ESTIMATED COMPLETION DATE:

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VICINITY MAP
N.T.S.

LEGEND

BW	BACK OF WALK		
EG	EXISTING GRADE	Ⓓ	EXISTING STORM DRAIN
FG	FINISH GRADE	Ⓢ	EXISTING SEWER DRAIN
FS	FINISH SURFACE	Ⓣ	EXISTING TELECOMM MANHOLE
TC	TOP OF CURB		
FL	FLOW LINE		
EP	EDGE OF PAVEMENT	●	FOUND MONUMENT AS NOTED
FF	FINISH FLOOR	♿	EXISTING HANDICAP SIGN
PAD	PAD GRADE		
TW	TOP OF WALL		
TF	TOP OF FOOTING		EXISTING 3'ø PALM TREE
HP	HIGH POINT		
L.S.	LANDSCAPE		EXISTING TREE
LP	LOW POINT		
CF	CURB FACE		EXISTING LIGHT
TG	TOP OF GRATE		EXISTING STREET LIGHT
WI	WROUGHT IRON		
TRW	TOP OF RETAINING WALL		EXISTING TRAFFIC SIGNAL
EDF	EXTRA DEPTH FOOTING		EXISTING GUY-WIRE
SCO	SEWER CLEANOUT		
INV	INVERT OF PIPE		EXISTING CONTOUR
GB	GRADE BREAK		
	TOP OF SLOPE		FINISH CONTOURS
2%	RATE OF SLOPE		
	TOE OF SLOPE		DAYLIGHT LINE
— S —	EXISTING SEWER		
— W —	EXISTING WATER		EXIST. CONCRETE
— E —	EXISTING ELEC.		
— G —	EXISTING GAS		REMOVAL
— T —	EXISTING COMM.		
— x —	EXISTING CHAIN-LINK FENCE		CONCRETE
— □ —	EXISTING WROUGHT IRON FENCE		
	EXISTING FIRE HYDRANT		ASPHALT PAVING
	EXISTING FDC		
	EXISTING POWER POLE		
WV	EXISTING WATER VALVE		
GM	EXISTING GAS METER		
WM	EXISTING WATER METER		
PB	EXISTING PULL BOX		
ICV	EXISTING ICV		

BENCHMARK NO.
LOCATION:

REVISIONS

MARK	DATE	INITIAL	DESCRIPTION	DATE	APP'VD

PREPARED BY:
LAND DEVELOPMENT DESIGN COMPANY, LLC
425 E. Arrow Highway, #364
Glendora, CA 91740
(909) 930-1466
PLANNING • CIVIL • SURVEYING
KEVIN J. RICHER — 7/30/26
RCE: 43714 LIC. EXP. 03/31/27 — DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN J. RICHER
No. 43714
CIVIL
STATE OF CALIFORNIA

DRAWN BY: RAS
DESIGNED BY: KJR
CHECKED BY: KJR
RECOMMENDED BY:

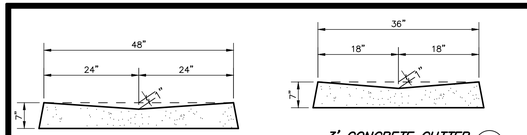
APPROVED BY:
R.C.E. EXP. DATE DATE
RECOMMENDED BY: ENGINEERING STAFF
RECOMMENDED BY: LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND GPA-24-0004 DPR-24-0008

PRECISE GRADING PLAN
TITLE SHEET
400 E. 20TH STREET
UPLAND, CA 91784

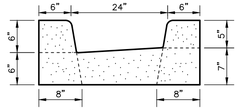
PROJECT NO. SP
SHEET 1 OF 7 SHEETS
DRAWING NO. GP 26-02

PLAN NO.
PROJECT NO.

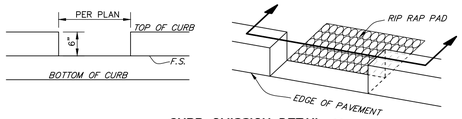


4' CONCRETE GUTTER (4)
NTS

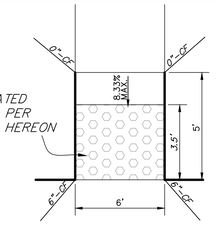
3' CONCRETE GUTTER (7)
NTS



18" CONC. CHANNEL (8)
NTS

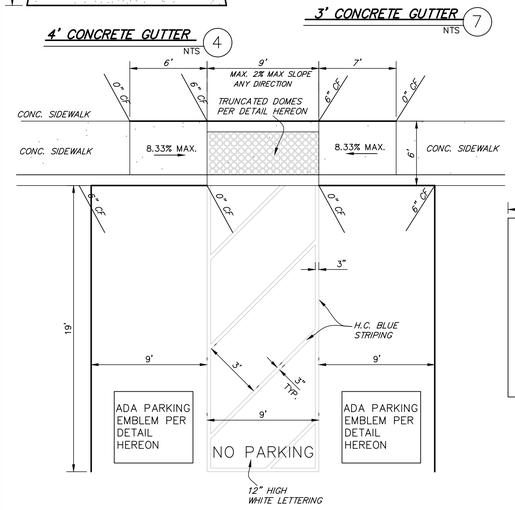


CURB OMISSION DETAIL (9)
NTS

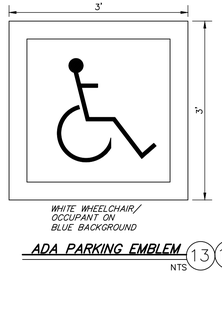


TRUNCATED DOMES PER DETAIL HEREON

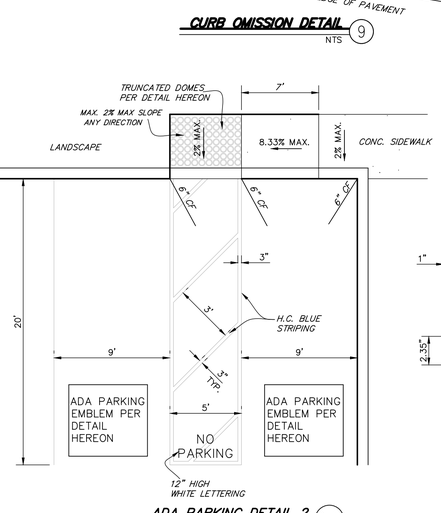
H.C. RAMP DETAIL (12)
NTS



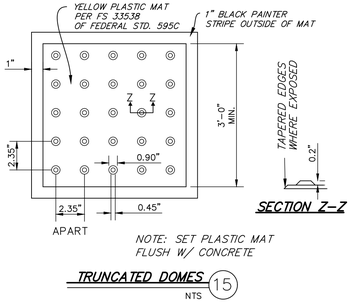
ADA PARKING DETAIL 1 (13)
NTS



ADA PARKING EMBLEM (13)(14)
NTS



ADA PARKING DETAIL 2 (14)
NTS



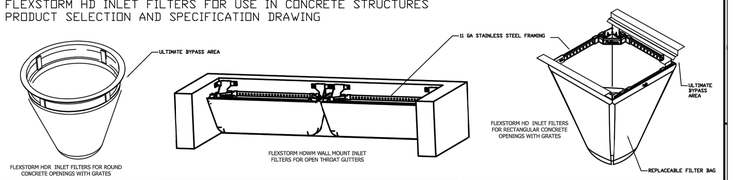
NOTE: SET PLASTIC MAT FLUSH W/ CONCRETE

TRUNCATED DOMES (15)
NTS



STENCIL (26)(27)
NTS

FLEXSTORM HD INLET FILTERS FOR USE IN CONCRETE STRUCTURES
PRODUCT SELECTION AND SPECIFICATION DRAWING



FLEXSTORM HDR Round Concrete Openings with Grates	
Drop Thru Opening Size Dia	Flexstorm Frame P/N
Small: 10.0" - 18.0"	62SHDR
Medium: 18.1" - 24.0"	62MHDR
Large: 24.1" - 36.0"	62LHDR

FLEXSTORM HDWM (Wall Mount) For Open Throat Curb Inlets - Mounted to Wall Beneath Curb Opening	
Curb Opening Size	Flexstorm Frame P/N
Up to 4' curb openings (1 Filter and Mounting Hardware)	62HDWM1
Between 4' and 8' curb openings (2 Filters and Mounting Hardware)	62HDWM2
Between 8' and 12' curb openings (3 Filters and Mounting Hardware)	62HDWM3
Between 12' and 16' curb openings (4 Filters and Mounting Hardware)	62HDWM4

FLEXSTORM HD For Rectangular/Square Concrete Openings with Grates	
Clear Drop Thru Opening Size *(not grate or seat size)*	Flexstorm Frame P/N
Small: 12" x 12" up to 16" x 16" (or 64" max perimeter)	62SHD
Medium: 18" x 18" up to 24" x 24" (or 96" max perimeter)	62MHD
Large: 26" x 26" up to 30" x 30" (or 120" max perimeter)	62LHD
XL: 32" x 32" up to 48" x 48" (or 192" max perimeter) typ 2 pc set	62XLHD

CREATE YOUR ADS FLEXSTORM PART NUMBER BY COMBINING FRAME P/N AND BAG P/N
1. IDENTIFY YOUR FLEXSTORM FRAME PART NUMBER FROM TABLES ABOVE
2. SELECT YOUR BAG PART NUMBER BASED ON APPLICATION NEEDS

FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70

3. CREATE YOUR FINAL PART NUMBER TO INCLUDE ON YOUR SPECIFICATION PLANS

Frame P/N from Step 1. | Filter Bag P/N from Step 2.

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL BAG / FRAME SIZE

Nominal Bag Size *Matched to Frame Size*	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max (CFS) FX (Woven)	PC (Post Constr)	IL (NonWoven)	*PC+ Oil Retention (Oz.)	**FX+ Oil Retention (Oz)
Small	1.6	1.2	0.8	0.9	79	168
Medium	2.1	1.7	1.2	1.3	115	204
Large	3.8	2.7	1.8	1.9	173	262
XL	4.2	3.6	2.4	2.6	230	319
Filtration Efficiency		82%	NA	Large scale 3rd party testing per ASTM D 7351 using 7% concentration USDA Sandy Loam		89
TSS (total suspended solids rem)		NA	99%	Large Scale testing at 90 GPM using US Silica OK-110 sand at 1750 mg/L measuring TSS per SM 2540D.		178
TPH (tot petroleum hydrocarbons)		NA	96%	Large Scale testing at 90 GPM with used motor oil at 243 mg/L measuring per EPA Method 1664A.		

* PC filter bag at 50% max adsorption capacity
** FX filter bag at 50% capacity and MyCelx skimmer at 100% capacity

NOTES:
1. ALL HD FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL FOR 25 YEAR LIFE RATING
2. TOTAL BYPASS CAPACITY: BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE
3. UPON ORDERING CONFIRMATION IF THE DOT CALLOUT, PRECAST MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER; PART NUMBER ALONE IS NOT SUFFICIENT

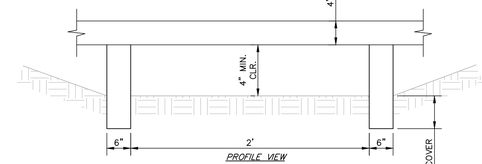
GENERAL INSTALLATION INSTRUCTIONS:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF INLET STRUCTURE
3. REPLACE GRATE



ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC
DISTRIBUTED BY ADS
WWW.INLETFILTERS.COM
(866) 287-8655 PH
(630) 355-3477 FX
INFO@INLETFILTERS.COM

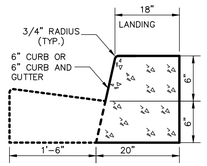
DRAWN	DWG NO	REV
C	FLEXSTORM_HD	
SCALE	SHEET 1 OF 1	

FLEXSTORM INLET FILTER (26)(27)
NTS

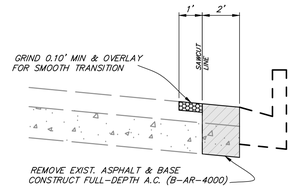


RIP RAP PAD (16)
NTS

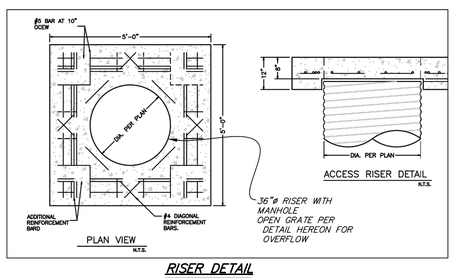
UNDERWALK DRAIN (17)
NTS



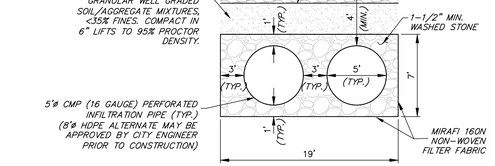
18" CONC. PARKING ISLAND LANDING (27)
NTS



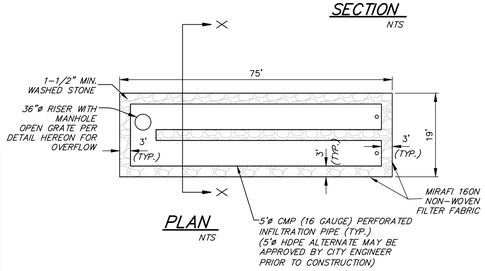
A.C. REMOVAL & REPLACEMENT (33)
NTS



RISER DETAIL
NTS



SECTION
NTS



PLAN
NTS

UNDERGROUND INFILTRATION SYSTEM (18)
NTS

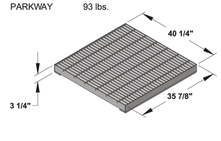


Type M Flat Grate
Approx. 140 sq. in. open area

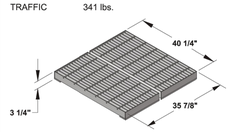
BY TRENCH DRAIN SUPPLY MODEL NO 1588 OR EQUAL

MANHOLE COVER OPEN GRATE
NTS

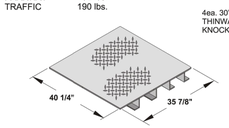
3636 STEEL GRATES - 1 Pc.
PARKWAY 93 lbs.



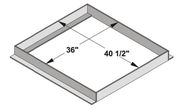
3636 STEEL GRATES - 2 Pc.
TRAFFIC 341 lbs.



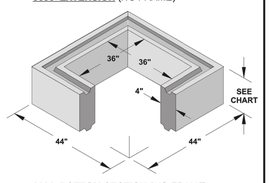
3636 STEEL COVER - 1 Pc.
PARKWAY 152 lbs.
TRAFFIC 190 lbs.



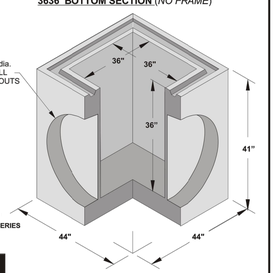
3636 FRAME ONLY



3636 EXTENSION (*NO FRAME*)



3636 BOTTOM SECTION (*NO FRAME*)



NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" OR "HEEL-PROOF" GRATES ARE NOT AVAILABLE FOR THIS SERIES
3. BOLT DOWN GRATES AND COVERS ARE AVAILABLE

EXTENSION SECTION	HT.	LBS	KNOCK-OUTS
3636 E6	6"	525	NONE
3636 E12	12"	1050	NONE

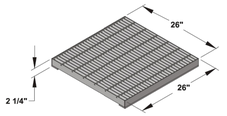
BOTTOM SECTION	HT.	LBS	KNOCK-OUTS
3636 B36	36"	2,230	(4) 30" DIA.

36" x 36" CATCH BASIN
ORIG DWG DATE 11-23-99 | REV DWG DATE 02-18-00
BROOKS PRODUCTS 3636 CB

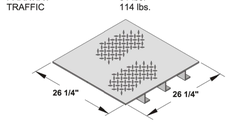
36"X36" BOX DETAIL (27)

2424 CAST IRON GRATE
PARKWAY 112 lbs.

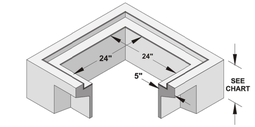
2424 STEEL GRATES
PARKWAY 48 lbs.
TRAFFIC 103 lbs.



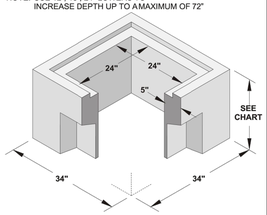
2424 STEEL COVER
PARKWAY 81 lbs.
TRAFFIC 114 lbs.



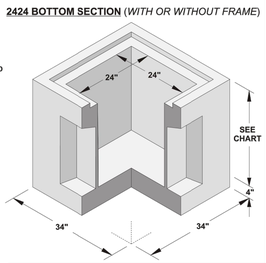
2424 TOP SECTION (*WITH GALVANIZED FRAME*)



2424 LOWER SECTION (*NO FRAME*)
NOTE: USE 12", 18", 24" LOWERS TO INCREASE DEPTH UP TO A MAXIMUM OF 72"



2424 BOTTOM SECTION (*WITH OR WITHOUT FRAME*)



NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC .
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY ONLY
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

TOP SECTION	HT.	LBS	KNOCK-OUTS
2424 T6	6"	270	NONE
2424 T12	12"	495	(4) 6" x 11"
2424 T18	18"	745	(4) 9" x 12"
2424 T24	24"	870	(4) 14" x 14"

EXTENSION SECTION	HT.	LBS	KNOCK-OUTS
2424 E6	6"	270	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUTS
2424 L12	12"	495	(4) 6" x 11"
2424 L18	18"	745	(4) 9" x 12"
2424 L24	24"	870	(4) 14" x 14"

BOTTOM SECTION	HT.	LBS	KNOCK-OUTS
2424 B30	30"	1595	(4) 18" x 18"
2424 B36	36"	1905	(4) 18" x 18"

24" x 24" CATCH BASIN
ORIG DWG DATE 11-23-99 | REV DWG DATE 02-28-00
BROOKS PRODUCTS 2424 CB

24"x24" CATCH BASIN (26)
NTS

7-05

DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK NO.
LOCATION:

REVISIONS

MARK	DATE	INITIAL	DESCRIPTION	DATE	APP'VD

PREPARED BY:
LAND DEVELOPMENT DESIGN COMPANY, LLC
425 E. Arrow Highway, #364
Glendora, CA 91740
(909) 930-1466
PLANNING • CIVIL • SURVEYING
KEVIN J. RICHER RCE: 43714 LIC. EXP. 03/31/27
7/30/26 DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN J. RICHER No. 43714 CIVIL STATE OF CALIFORNIA

DRAWN BY: RAS
DESIGNED BY: KJR
CHECKED BY: KJR
RECOMMENDED BY:

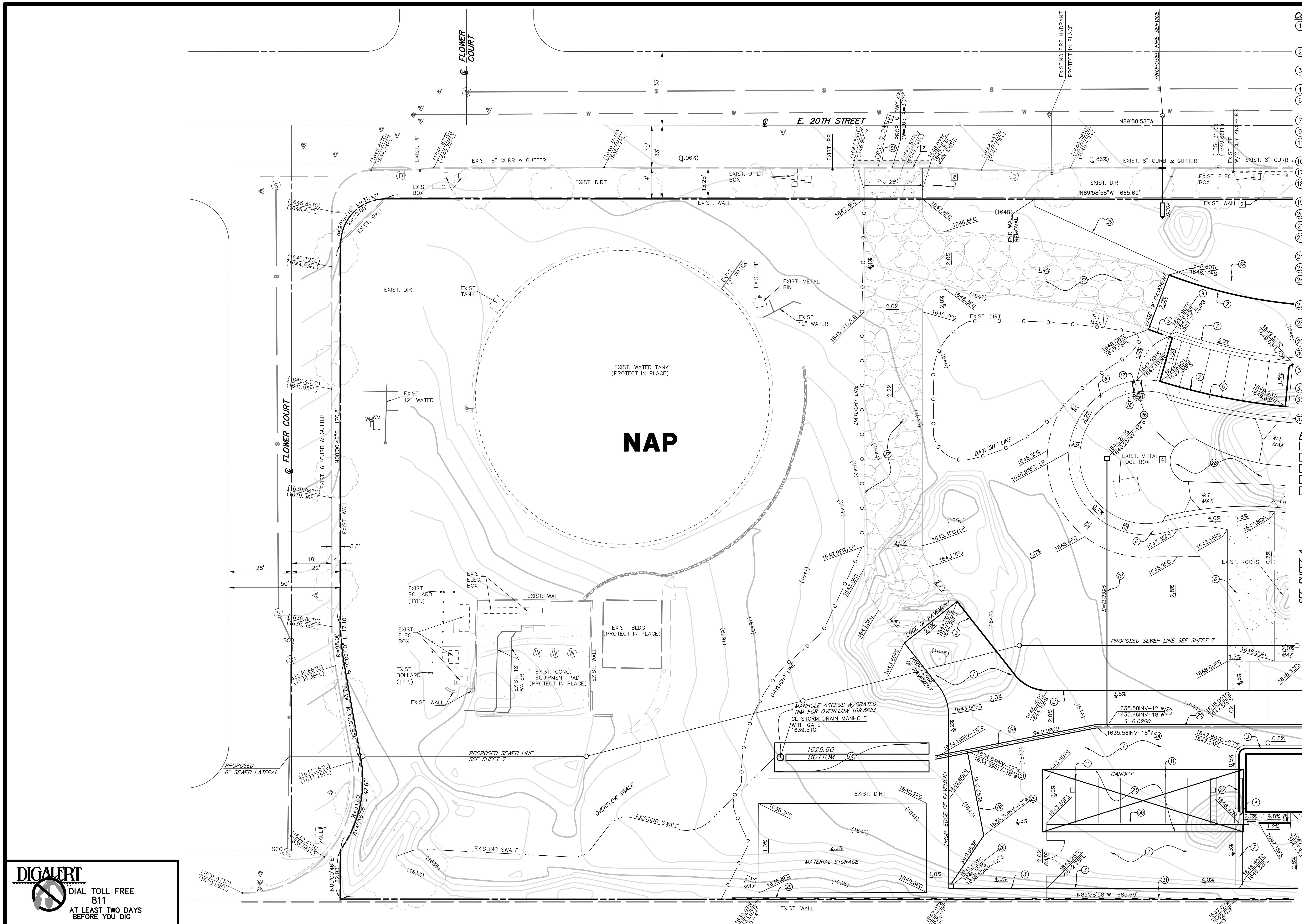
APPROVED BY: DATE
R.C.E. EXP. DATE
RECOMMENDED BY: ENGINEERING STAFF
RECOMMENDED BY: LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND
PRECISE GRADING PLAN DETAILS
400 E. 20TH STREET
UPLAND, CA 91784

PROJECT NO. SP
SHEET 2 OF 7 SHEETS
DRAWING NO. GP 26-02

6773

PLAN NO.
PROJECT NO.



DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

CONSTRUCTION NOTES

1. CONSTRUCT 3" AC OVER 3" CLASS II A.B. AC PAVEMENT PER GREENBOOK (B-AR-4000). SOILS ENGINEER TO VERIFY R-VALUE AND PAVEMENT SECTION AFTER GRADING.
2. CONSTRUCT 6" CONCRETE CURB PER CITY UPLAND STD. NO. CU-R-2 TYPE "D."
3. CONSTRUCT 6" CURB & GUTTER PER CITY OF UPLAND STD. NO. CU-R-2 TYPE "A."
4. CONSTRUCT 4' WIDE CONCRETE GUTTER PER DETAIL ON SHEET 2.
6. CONSTRUCT 4" THICK CONCRETE SIDEWALK PER CITY OF UPLAND STD. NO. CU-P-3. (PRIVATE)
7. CONSTRUCT 3' WIDE CONCRETE GUTTER PER DETAIL ON SHEET 2.
9. OMIT 3' CURB PER DETAIL ON SHEET 2.
11. PAINT PARKING STRIPING PER ARCHITECTURAL PLANS PER SEPARATE PERMIT.
16. CONSTRUCT RIP-RAP PAD PER DETAIL ON SHEET 2.
17. CONSTRUCT UNDERWALK DRAIN PER DETAIL ON SHEET 2.
18. CONSTRUCT UNDERGROUND INFILTRATION SYSTEM PER DETAIL ON SHEET 2.
19. INSTALL 12"ø HDPE (PRIVATE STORM DRAIN).
20. INSTALL 18"ø HDPE (PRIVATE STORM DRAIN).
21. INSTALL 18"X18"X12" TEE. (PRIVATE STORM DRAIN)
23. CONSTRUCT CANOPY PER ARCHITECTURAL PLAN AND SEPARATE PERMIT.
24. INSTALL 18"ø-11.25° ELBOW. (PRIVATE STORM DRAIN)
25. INSTALL 12"ø-45° ELBOW. (PRIVATE STORM DRAIN)
26. CONSTRUCT 24"X24" BROOKS BOX. INSTALL FLEXSTORM INLET FILTER MODEL NO. 62HD24PCP AND STENCIL PER DETAILS ON SHEET 2.
27. CONSTRUCT 18" CONCRETE PARKING ISALAND LANDING PER CITY OF UPLAND STD. NO. CU-L-5.
28. CONSTRUCT INFILTRATION BASIN PER ARCHITECTURAL PLAN AND PERMIT.
29. CONSTRUCT WROUGHT IRON FENCE PER ARCHITECTURAL PLAN.
30. CONSTRUCT 6'-0" BLOCK WALL PER ARCHITECTURAL PLAN PER SEPARATE PERMIT.
31. CONSTRUCT 6'-0" MAX RETAINING WALL PER ARCHITECTURAL PLAN AND SEPARATE PLAN AND PERMIT.
33. CONSTRUCT FULL DEPTH AC PER DETAIL ON SHEET 2.
35. CONSTRUCT DRIVEWAY PER CITY OF UPLAND STD. NO. CU-P-4 TYPE "A". (W=26'; X=3")
37. CONSTRUCT GRAVEL ROAD PER ARCHITECTURAL PLAN.

REMOVAL NOTES

[2] REMOVE EXISTING WALL.
[4] REMOVE EXISTING METAL TOOL BOX.
[6] REMOVE EXISTING DRIVEWAY APPROACH
[7] REMOVE EXISTING CURB & GUTTER.
[8] REMOVE EXISTING TREE.

SCALE: 1"=20'

6773

PLAN NO.
PROJECT NO.

BENCHMARK NO.
LOCATION:

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	DATE	APP'VD

PREPARED BY:
LAND DEVELOPMENT DESIGN COMPANY, LLC
425 E. Arrow Highway, #364
Glendora, CA 91740
(909) 930-1466
PLANNING • CIVIL • SURVEYING
KEVIN J. RICHER RCE: 43714 LIC. EXP. 03/31/27
7/30/26 DATE

REGISTERED PROFESSIONAL ENGINEER KEVIN J. RICHER No. 43714 CIVIL STATE OF CALIFORNIA

DRAWN BY: RAS
DESIGNED BY: KJR
CHECKED BY: KJR
RECOMMENDED BY:

APPROVED BY:
R.C.E. EXP. DATE DATE
RECOMMENDED BY: RECOMMENDED BY:
ENGINEERING STAFF LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND
PRECISE GRADING PLAN
400 E. 20TH STREET
UPLAND, CA 91784

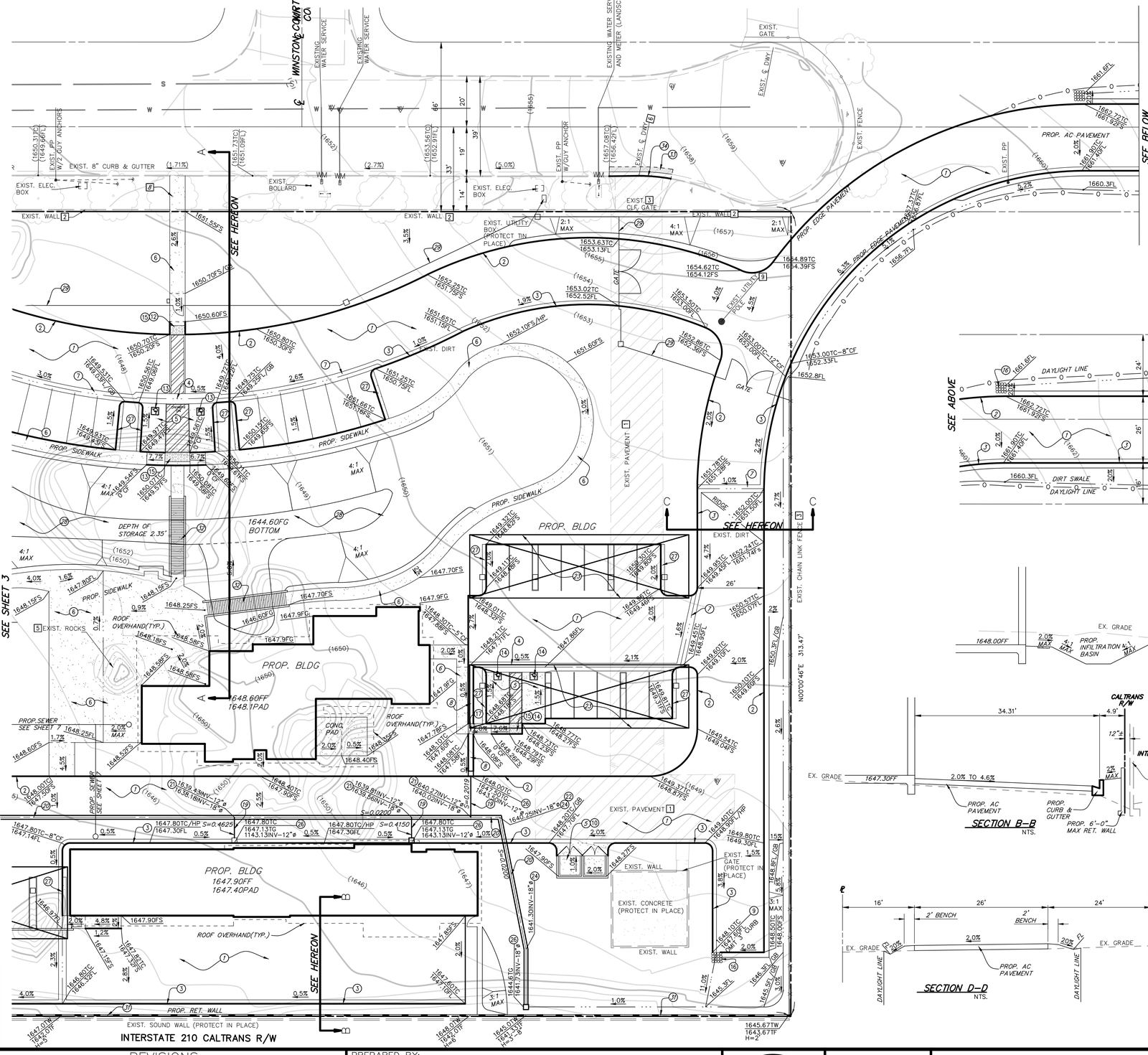
PROJECT NO. SP
SHEET 3 OF 7 SHEETS
DRAWING NO. GP 26-02

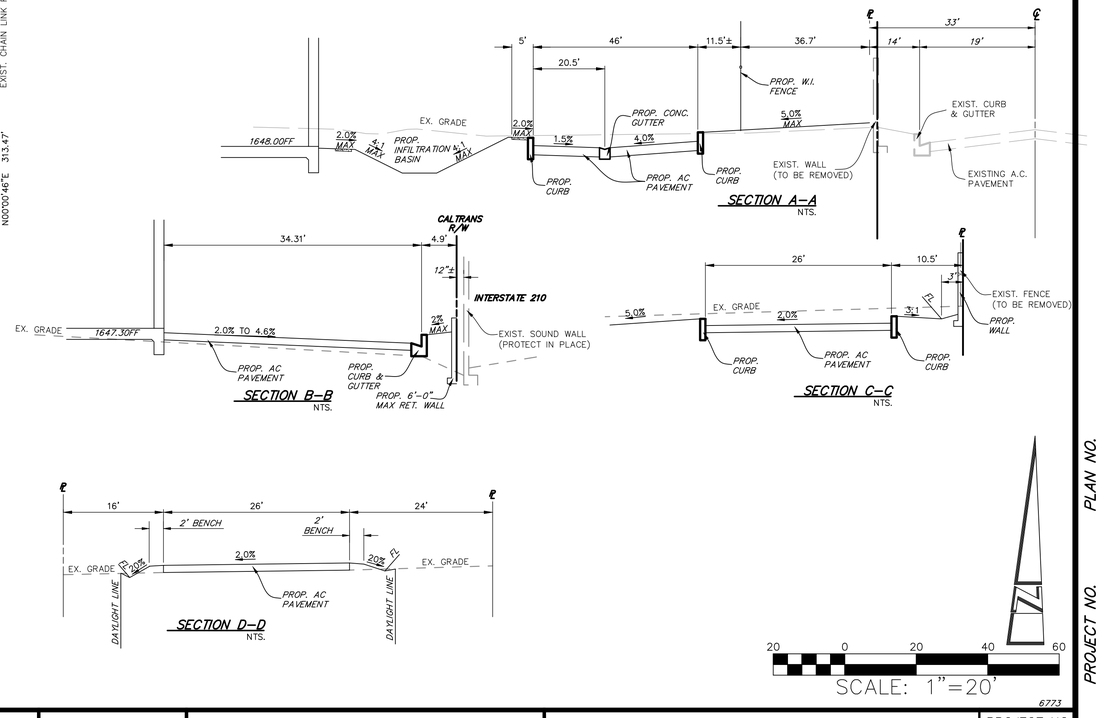
CONSTRUCTION NOTES

1. CONSTRUCT 3" AC OVER 3" CLASS II A.B. AC PAVEMENT PER GREENBOOK (B-AR-4000). SOILS ENGINEER TO VERIFY R-VALUE AND PAVEMENT SECTION AFTER GRADING.
2. CONSTRUCT 6" CONCRETE CURB PER CITY UPLAND STD. NO. CU-R-2 TYPE "D."
3. CONSTRUCT 6" CURB & GUTTER PER CITY OF UPLAND STD. NO. CU-R-2 TYPE "A."
4. CONSTRUCT 4' WIDE CONCRETE GUTTER PER DETAIL ON SHEET 2.
5. CONSTRUCT 6" THICK CONCRETE PAVEMENT.
6. CONSTRUCT 4" THICK CONCRETE SIDEWALK PER CITY OF UPLAND STD. NO. CU-P-3. (PRIVATE)
7. CONSTRUCT 3' WIDE CONCRETE GUTTER PER DETAIL ON SHEET 2.
8. CONSTRUCT 24" CONCRETE CHANNEL PER DETAIL ON SHEET 2.
9. OMIT 3' CURB PER DETAIL ON SHEET 2.
10. CONSTRUCT TRASH ENCLOSURE PER ARCHITECTURAL PLAN PER SEPARATE PERMIT.
11. PAINT PARKING STRIPING PER ARCHITECTURAL PLANS PER SEPARATE PERMIT.
12. CONSTRUCT ADA RAMP PER DETAIL ON SHEET 2.
13. CONSTRUCT ADA PARKING PER DETAIL ON SHEET 2.
14. CONSTRUCT ADA PARKING PER DETAIL 1 ON SHEET 2.
15. CONSTRUCT TRUNCATED DOME PER DETAIL 2 ON SHEET 2.
16. CONSTRUCT RIP-RAP PAD PER DETAIL ON SHEET 2.
17. CONSTRUCT UNDERWALK DRAIN PER DETAIL ON SHEET 2.
18. CONSTRUCT UNDERGROUND INFILTRATION SYSTEM PER DETAIL ON SHEET 2.
19. INSTALL 12"ø HDPE (PRIVATE STORM DRAIN).
20. INSTALL 18"ø HDPE (PRIVATE STORM DRAIN).
21. INSTALL 18"X18"X12" TEE. (PRIVATE STORM DRAIN)
22. INSTALL 18"ø-90° ELBOW. (PRIVATE STORM DRAIN)
23. CONSTRUCT CANOPY PER ARCHITECTURAL PLAN AND SEPARATE PERMIT.
24. INSTALL 18"ø-11.25° ELBOW. (PRIVATE STORM DRAIN)
25. INSTALL 12"ø-45° ELBOW. (PRIVATE STORM DRAIN)
26. CONSTRUCT 24"X24" BROOKS BOX. INSTALL FLEXSTORM INLET FILTER MODEL NO. 62HD24PCP AND STENCIL PER DETAILS ON SHEET 2.
27. CONSTRUCT 18" CONCRETE PARKING ISALAND LANDING PER CITY OF UPLAND STD. NO. CU-L-5.
28. CONSTRUCT INFILTRATION BASIN PER ARCHITECTURAL PLAN AND PERMIT.
29. CONSTRUCT WROUGHT IRON FENCE PER ARCHITECTURAL PLAN.
30. CONSTRUCT 6'-0" BLOCK WALL PER ARCHITECTURAL PLAN PER SEPARATE PERMIT.
31. CONSTRUCT 6'-0" MAX RETAINING WALL PER ARCHITECTURAL PLAN AND SEPARATE PLAN AND PERMIT.
32. CONSTRUCT BRIDGE PER SEPARATE PLAN AND PERMIT.
33. CONSTRUCT FULL DEPTH AC PER DETAIL ON SHEET 2.
34. CONSTRUCT 8" CURB & GUTTER PER CITY OF UPLAND STD. NO. CU-R-2 TYPE "A."
36. CONSTRUCT DRIVEWAY PER CITY OF UPLAND STD. NO. CU-P-4 TYPE "B". (W=26'; R=30')
37. CONSTRUCT GRAVEL ROAD PER ARCHITECTURAL PLAN.
38. CONSTRUCT 0" TO 6" TRANSITION CONCRETE CURB PER DETAIL ON SHEET 2.

REMOVAL NOTES

1. REMOVE EXISTING PAVEMENT.
2. REMOVE EXISTING WALL.
3. REMOVE EXISTING C.L. FENCE.
4. REMOVE EXISTING METAL TOOL BOX.
5. REMOVE PILE OF ROCKS.
6. REMOVE EXISTING DRIVEWAY APPROACH
8. REMOVE EXISTING TREE.
9. REMOVE EXISTING UTILITY POLE BY OTHERS.





DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK NO.
LOCATION:

REVISIONS

MARK	DATE	INITIAL	DESCRIPTION	DATE	APP'VD

PREPARED BY:
LAND DEVELOPMENT DESIGN COMPANY, LLC
425 E. Arrow Highway, #364
Glendora, CA 91740
(909) 930-1466
PLANNING • CIVIL • SURVEYING
KEVIN J. RICHER
RCE: 43714
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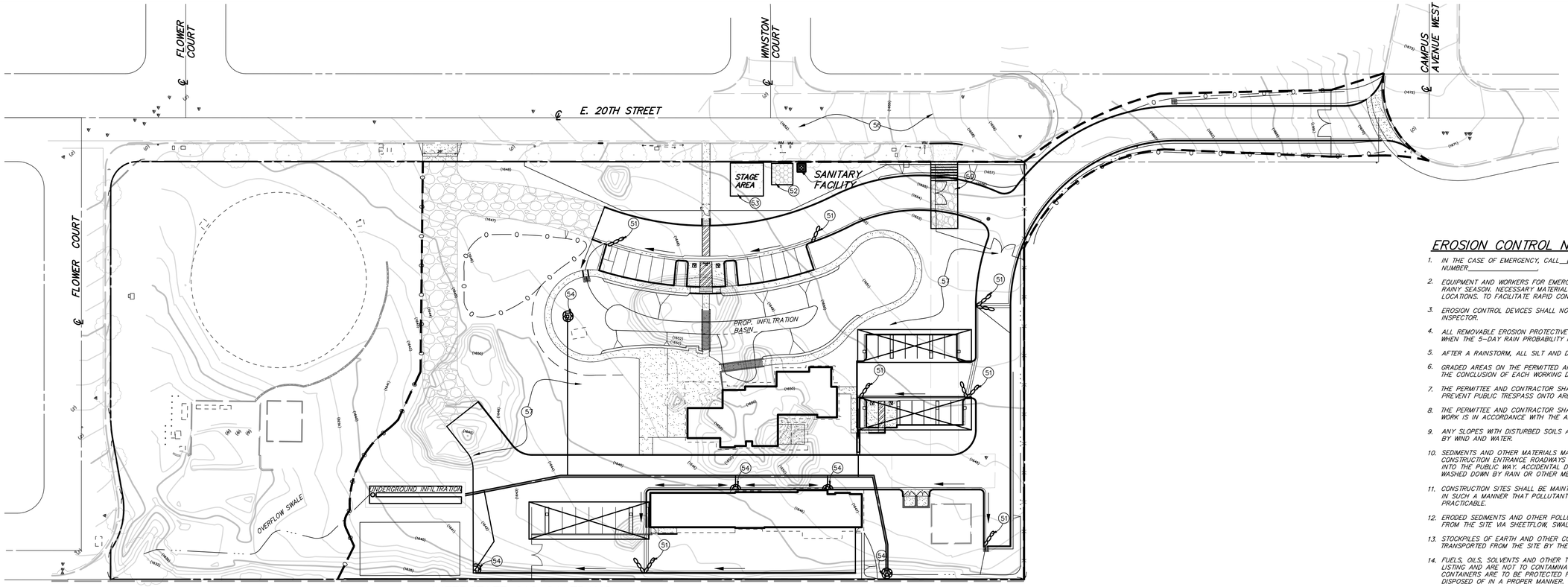
REGISTERED PROFESSIONAL ENGINEER
KEVIN J. RICHER
No. 43714
CIVIL
STATE OF CALIFORNIA

DRAWN BY: RAS
DESIGNED BY: KJR
CHECKED BY: KJR
RECOMMENDED BY:

APPROVED BY:
R.C.E. EXP. DATE DATE
RECOMMENDED BY: ENGINEERING STAFF
RECOMMENDED BY: LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND
PRECISE GRADING PLAN
400 E. 20TH STREET
UPLAND, CA 91784

PROJECT NO. SP
SHEET 4 OF 7 SHEETS
DRAWING NO. GP 26-02



SPECIAL NOTE FROM PRIVATE ENGINEER TO CONTRACTOR:

QUALIFIED SWPPP PRACTITIONER (QSP) AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, QSP WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JON SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS AND QSP FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

EROSION CONTROL NOTES

1. IN THE CASE OF EMERGENCY, CALL ERIK PETERSON AT WORK NUMBER (909) 625-3916 OR HOME NUMBER_____.
2. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS. TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
3. EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY INSPECTOR.
4. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
5. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS AND BASINS.
6. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE IS TO BE DIRECTED TOWARD DESILTING FACILITIES.
7. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
8. THE PERMITTEE AND CONTRACTOR SHALL INSPECT THE EROSION CONTROL WORK AND ENSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.
9. ANY SLOPES WITH DISTURBED SOILS ARE DENUDED VEGETATION MUST BE STABILIZED TO INHIBIT EROSION BY WIND AND WATER.
10. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
11. CONSTRUCTION SITES SHALL BE MAINTAINED BY IMPLEMENTATION OF BEST MANAGEMENT PRACTICES (BMP) IN SUCH A MANNER THAT POLLUTANTS ARE NOT DISCHARGED FROM THE SITE TO THE MAXIMUM EXTENT PRACTICABLE.
12. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE OR WIND.
13. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND AND WATER.
14. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
15. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS A SOLID WASTE.
16. ALL NON-STORMWATER DISCHARGES, UNLESS EXPECTED OR AUTHORIZED BY AN NPDES PERMIT, REQUIRE PRIOR APPROVAL BY THE STATE WATER RESOURCES CONTROL BOARD.
17. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.

EROSION CONTROL NOTES

		QUANTITY
50	CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE PER DETAIL HEREON AND PER TC-1 OF THE CALIFORNIA STORMWATER BMP HANDBOOK.	1 EA.
51	CONSTRUCT GRAVEL BAG VELOCITY REDUCER PER DETAIL HEREON.	10 EA.
52	CONSTRUCT CONCRETE TRUCK WASHOUT PER DETAIL HEREON.	1 EA.
53	CONSTRUCT STAGING AREA PER DETAIL HEREON.	1 EA.
54	CONSTRUCT CATCH BASIN CHECK DAM PER DETAIL HEREON AND PER SE-10 OF THE CALIFORNIA STORMWATER BMP HANDBOOK.	5 EA.
55	CONSTRUCT SILT FENCE PER DETAIL HEREON AND PER SE-1 OF THE CALIFORNIA STORMWATER BMP HANDBOOK.	1,460 L.F.
56	CONDUCT STREET SWEEPING AS NEEDED PER SE-7 OF THE CALIFORNIA STORMWATER BMP HANDBOOK.	----
57	APPLY WIND EROSION CONTROL AS NEEDED PER WE-1 OF THE CALIFORNIA STORMWATER BMP HANDBOOK.	----

LEGEND:

- STABILIZED CONSTRUCTION ENTRANCE PER DETAIL HEREON
- CEMENT TRUCK WASH AREA PER DETAIL HEREON.
- CONSTRUCTION STAGING AREA PER DETAIL HEREON.
- PROPOSED SILT FENCE
- PROPOSED GRAVEL BAGS
- DRAINAGE FLOW

DESIGN PROFESSIONAL'S STATEMENT TEMPORARY DRAINAGE AND EROSION CONTROL

THIS DRAINAGE AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION. BERMS, SWALES, SANDBAGS AND OTHER TEMPORARY DRAINAGE FACILITIES SHOWN HERE ARE TO BE INSTALLED AND MAINTAINED DURING THE CONSTRUCTION PHASE OF THE PROJECT.

IN MY OPINION, ADEQUATE PROVISIONS HAVE BEEN MADE TO PROVIDE DRAINAGE OF SURFACE WATER FROM THE SITE WITHOUT CAUSING FLOODING OR SEDIMENTATION PROBLEMS ON PUBLIC RIGHTS-OF-WAY OR SURROUNDING PRIVATE PROPERTY.

LAND DEVELOPMENT DESIGN COMPANY, LLC
FIRM NAME

KEVIN J. RICHER RCE 43714 EXP. 03/31/27

PROJECT MANAGER
TITLE

7/30/26
DATE

40 0 40 80 120
SCALE: 1"=40'

24 HOURS CONTACT

WDID# 8

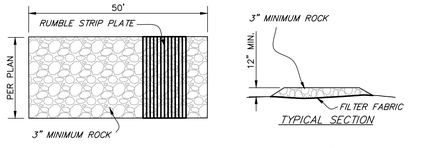
6773

PLAN NO.

PROJECT NO.

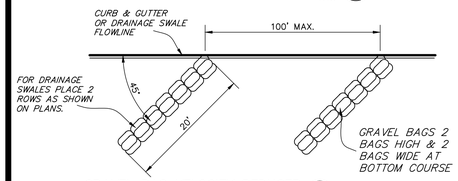
STABILIZED CONSTRUCTION ENTRANCE DETAIL (50)

NTS



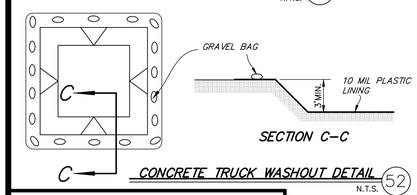
GRAVEL BAG VELOCITY REDUCER (51)

N.T.S.



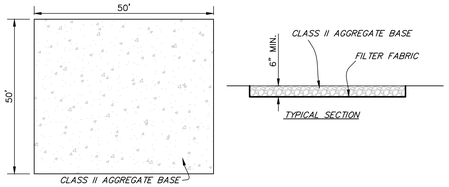
CONCRETE TRUCK WASHOUT DETAIL (52)

N.T.S.



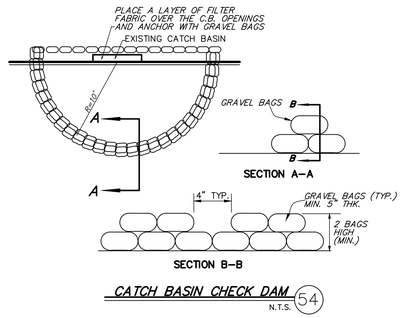
CONSTRUCTION STAGING AREA DETAIL (53)

N.T.S.



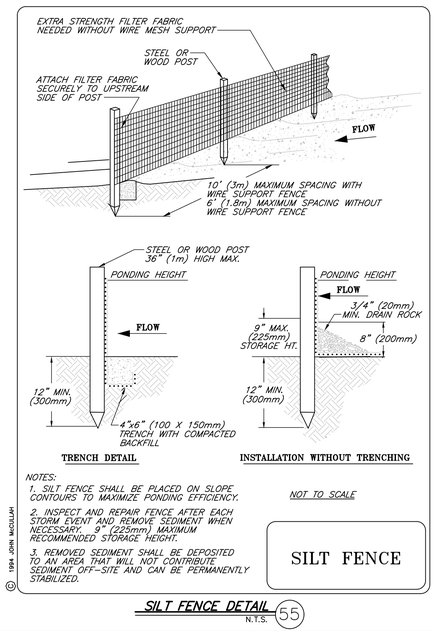
CATCH BASIN CHECK DAM (54)

N.T.S.



SILT FENCE DETAIL (55)

N.T.S.



DIGALERT
DIAL TOLL FREE 811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK NO.
LOCATION:

REVISIONS

MARK	DATE	INITIAL	DESCRIPTION	DATE	APP'VD

PREPARED BY:
LAND DEVELOPMENT DESIGN COMPANY, LLC
425 E. Arrow Highway, #364
Glendora, CA 91740
(909) 930-1466
PLANNING • CIVIL • SURVEYING
KEVIN J. RICHER
RCE: 43714 LIC. EXP. 03/31/27
7/30/26
DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN J. RICHER
No. 43714
CIVIL
STATE OF CALIFORNIA

DRAWN BY: RAS
DESIGNED BY: KJR
CHECKED BY: KJR
RECOMMENDED BY:

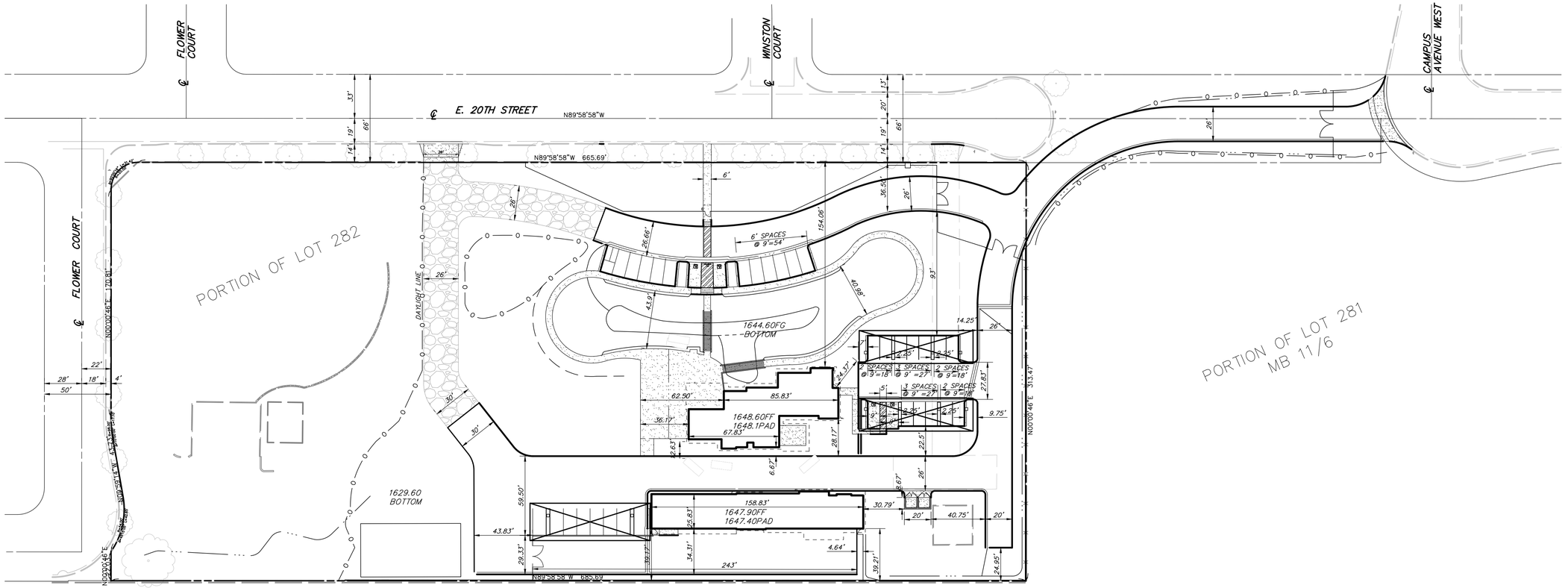
APPROVED BY:
R.C.E. EXP. DATE DATE
RECOMMENDED BY: ENGINEERING STAFF
RECOMMENDED BY: LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND

EROSION CONTROL PLAN

400 E. 20TH STREET
UPLAND, CA 91784

PROJECT NO. SP
SHEET 5 OF 7 SHEETS
DRAWING NO. GP 26-02



40 0 40 80 120

SCALE: 1"=40'

6773

PLAN NO.

PROJECT NO.

DIGALERT

DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK NO.

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LAND DEVELOPMENT DESIGN COMPANY, LLC

425 E. Arrow Highway, #364
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PLANNING • CIVIL • SURVEYING

KEVIN J. RICHER
RCE: 43714 LIC. EXP. 03/31/27

7/30/26
DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN J. RICHER
No. 43714
CIVIL
STATE OF CALIFORNIA

DRAWN BY: RAS

DESIGNED BY: KJR

CHECKED BY: KJR

RECOMMENDED BY:

APPROVED BY:

R.C.E. EXP. DATE DATE

RECOMMENDED BY: ENGINEERING STAFF

RECOMMENDED BY: LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND

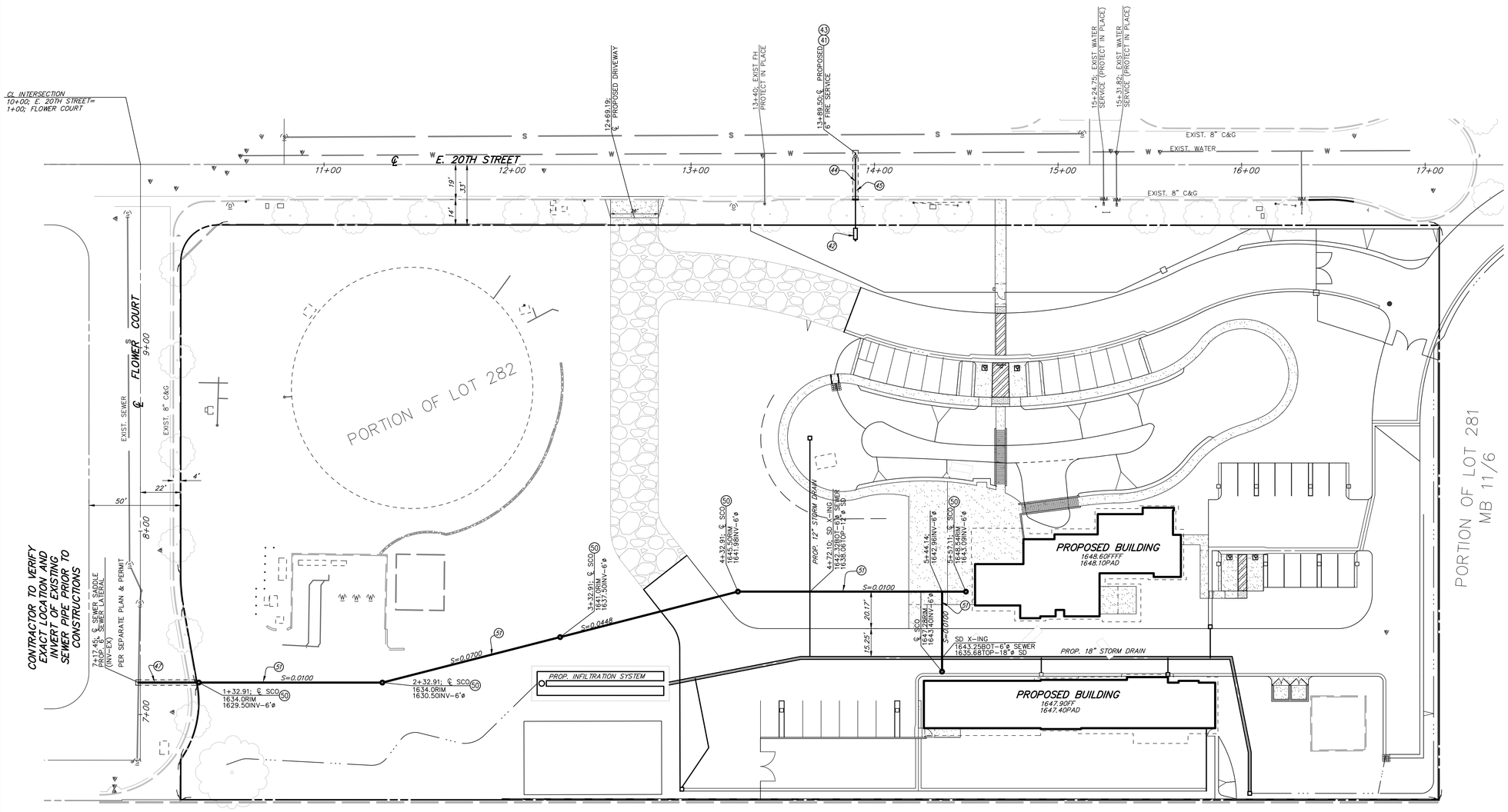
HORIZONTAL CONTROL PLAN

400 E. 20TH STREET
UPLAND, CA 91784

PROJECT NO. SP

SHEET 6 OF 7 SHEETS

DRAWING NO. GP 26-02



CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY REQUIRES A SEPARATE ENCROACHMENT PERMIT

CONTRACTOR TO NOTIFY AFFECTED WATER USERS A MINIMUM OF 72 HOURS PRIOR TO SHUT DOWN OF WATER SERVICE IF APPLICABLE

CONSTRUCTION NOTES

		QUANTITIES
(41)	CONSTRUCT 12"x8"TAPPING SLEEVE WITH 8" GATE VALVE PER CITY OF UPLAND STANDARD DRAWING W-6.	1 EA.
(42)	CONSTRUCT 8" ABOVE GROUND FIRE SERVICE WITH 8" DOUBLE CHECK DETECTOR CHECK VALVE ASSEMBLY WITH 4 WAY FIRE DEPARTMENT CONNECTION PER CITY UPLAND STANDARD W-17.	1 EA.
(43)	INSTALL 8" GATE VALVE AND VALVE BOX PER CITY OF UPLAND STANDARDS W-07 & W-09.	1 EA.
(44)	CONSTRUCT 8" CLM&C WATER PIPE.	41 L.F.
(45)	SAWCUT, REMOVE, AND REPLACE AC/BASE PER CITY OF UPLAND STANDARD CU-Z-3. TRENCH, BACKFILL AND PAVEMENT REPLACEMENT PER CITY OF UPLAND STANDARD W-23.	76 S.F.

CONSTRUCTION NOTES: PRIVATE SEWER

		QUANTITIES
(50)	CONSTRUCT SEWER CLEANOUT PER CITY OF UPLAND STANDARD CU-Z-4.	5 EA.
(51)	CONSTRUCT 6" PVC SDR35 SEWER PIPE.	1,858 L.F.

WATER & SEWER GENERAL NOTES

1. ALL WORK AND MATERIAL SHALL CONFORM TO THE HIGHER STANDARD IN EITHER "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF WATER MAINS AND APPURTENANCES, APRIL 2011" ON FILE AT THE PUBLIC WORKS DEPARTMENT, CITY OF UPLAND, OR "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," LATEST ISSUE AND AMENDMENTS, KNOWN AS THE "GREEN BOOK."
2. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL EXISTING FACILITIES AND IMPROVEMENTS WHETHER OR NOT SHOWN ON THESE PLANS. THE FACILITIES AND IMPROVEMENTS ARE BELIEVED TO BE CORRECTLY SHOWN BUT THE CONTRACTOR IS REQUIRED TO SATISFY HIMSELF AS TO THE COMPLETENESS AND ACCURACY OF THE LOCATIONS.
3. SAN ANTONIO WATER COMPANY, 139 N. EUCLID AVENUE, UPLAND, (909) 982-4107, MAY HAVE WATER LINES IN THIS AREA. CONTACT THEM FOR LOCATION, SIZE, AND DEPTH OF LINES, AND OTHER PERTINENT INFORMATION.
4. QUANTITIES SHOWN ON THE PLANS ARE ESTIMATED. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF QUANTITIES BEFORE BIDDING ON ANY ITEM.
5. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF INDUSTRIAL SAFETY, BEFORE STARTING THE EXCAVATION OF ANY TRENCH FIVE FEET OR MORE IN DEPTH. SHORING, BRACING, SLOPING AND ALL OTHER PROVISIONS FOR WORKER PROTECTION SHALL CONFORM TO THE PROVISIONS CONTAINED IN ARTICLE 6 OF THE STATE OF CALIFORNIA, DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS, EFFECTIVE AUGUST 8, 1965, AND AS AMENDED JULY 27, 1973. IF VARIATION FROM THESE STANDARDS IS DESIRED, A DETAILED PLAN SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER AND SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL.
6. ALL WATER AND SEWER MAINS SHALL MEET THE STATE OF CALIFORNIA, DEPARTMENT OF HEALTH REQUIREMENTS FOR THE SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER.
7. THE CONTRACTOR IS REQUIRED TO REPAIR THE EXISTING PAVEMENT WHICH IS REMOVED OR DAMAGED BY HIS OPERATIONS IN ACCORDANCE WITH STANDARD DRAWING ORDINANCE NO. 1841 AND CU-Z-3 UNLESS ARRANGEMENTS ARE MADE WHICH COORDINATE STREET PAVING IN A MANNER ACCEPTABLE TO AND APPROVED BY THE PUBLIC WORKS DIRECTOR.
8. BEFORE CONNECTING TO THE CITY WATER SYSTEM, THE DEVELOPER MUST MEET THE REQUIREMENTS OF SECTION 13.12.130 OF THE UPLAND MUNICIPAL CODE RELATING TO THE TRANSFER OF WATER STOCK TO THE CITY OF UPLAND.
9. SERVICE LATERALS ARE TO BE PLACED AT THE CENTER THIRD OF THE LOT UNLESS OTHERWISE APPROVED BY THE CITY OF UPLAND.
10. SERVICE LATERALS ARE TO BE INSTALLED PER STANDARD DRAWING W.01 OR W.03, ON FILE AT THE CITY OF UPLAND WATER DEPARTMENT.
11. FIRE HYDRANTS SHALL BE INSTALLED PER STANDARD DRAWING W.05 ON FILE AT THE CITY OF UPLAND WATER DEPARTMENT.
12. CONNECTIONS TO EXISTING WATER MAINS SHALL BE BY "HOT TAP."
13. MINIMUM COVER OF WATER LINES SHALL BE AS FOLLOWS:

DIAMETER OF PIPE	MINIMUM COVER
2"	24"
4"	30"
6"	36"
8"	42"
10"	48"
12"	48"
14"	52"

14. SADDLE CONNECTIONS ARE NOT PERMITTED TO THE SEWER MAIN. NEW CONNECTIONS REQUIRE A "TEE" OR "WYE" SECTION TO BE PLACED.
15. ACCESS TO WATER VALVES SHALL BE MAINTAINED DURING ALL PHASES OF THE PROJECT. VALVE BOXES TO REMAIN FREE AND CLEAR OF DEBRIS.
16. SEPARATION BETWEEN WATER INSTALLATIONS AND OTHER UTILITIES SHALL BE MAINTAINED (PER WATER DIVISION STD. W.25).
17. PROVIDE TRAP AT FIRST MANHOLE DOWNSTREAM OF PROPOSED IMPROVEMENTS. (CHECKED DAILY BY INSPECTOR)
18. PROVIDE 3/4" PLYWOOD FALSE BOTTOMS FOR MANHOLES, BOTH NEW AND OLD, DURING CONSTRUCTION. (CHECKED DAILY BY INSPECTOR)
19. PROVIDE CLEANOUTS FOR EACH SEWER LATERAL 6 INCHES BACK OF SIDEWALK, ADJUST TO FINISH GRADE IN BOX MARKED SEWER.
20. REFERENCE PLANS USED: SS 9813C, WATER ATLAS-P3

30 0 30 60 90
SCALE: 1"=30'

6773

PLAN NO. 7

PROJECT NO.

DIGALERT
DIAL TOLL FREE
811
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

BENCHMARK NO.
LOCATION:

REVISIONS

MARK	DATE	INITIAL	DESCRIPTION	DATE	APP'VD

PREPARED BY:
LAND DEVELOPMENT DESIGN COMPANY, LLC
425 E. Arrow Highway, #364
Glendora, CA 91740
(909) 930-1466
PLANNING • CIVIL • SURVEYING
KEVIN J. RICHER
RCE:43714 LIC. EXP. 03/31/27
7/30/26
DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN J. RICHER
No. 43714
CIVIL
STATE OF CALIFORNIA

DRAWN BY: RAS
DESIGNED BY: KJR
CHECKED BY: KJR
RECOMMENDED BY:

APPROVED BY:
R.C.E. EXP. DATE DATE

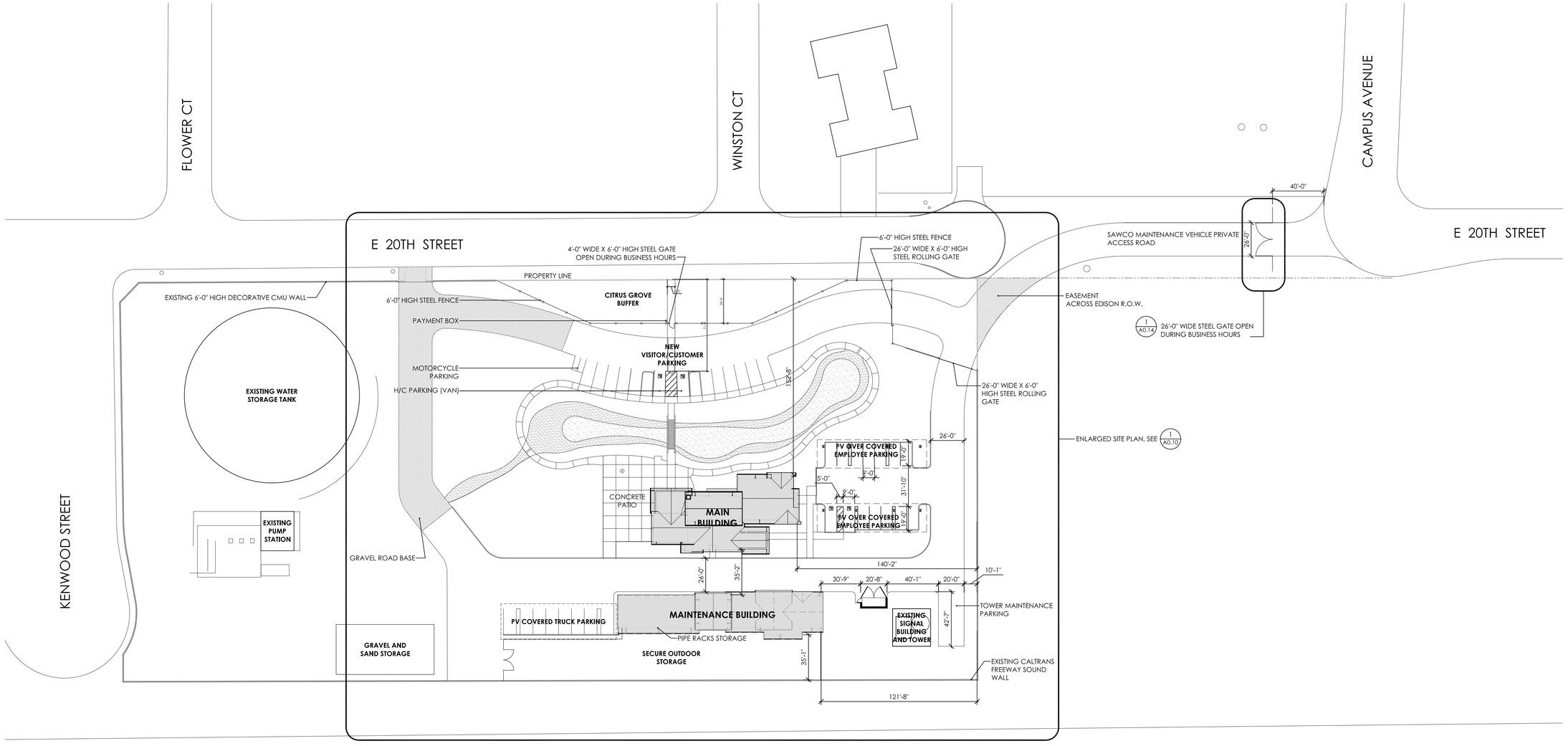
RECOMMENDED BY: ENGINEERING STAFF
RECOMMENDED BY: LAND DEVELOPMENT TRANSPORTATION

CITY OF UPLAND

UTILITY PLAN

400 E. 20TH STREET
UPLAND, CA 91784

PROJECT NO. SP
SHEET 7 OF 7 SHEETS
DRAWING NO. GP 26-02



1 SITE PLAN
1"=40'-0"

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ARCHITECTURE //
BUILD //
LANDSCAPE //

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pomona, ca 91767

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LICENSED ARCHITECT
ERIK G. PETERSON
No. C25269
REN. 10-31-2027
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

SITE PLAN

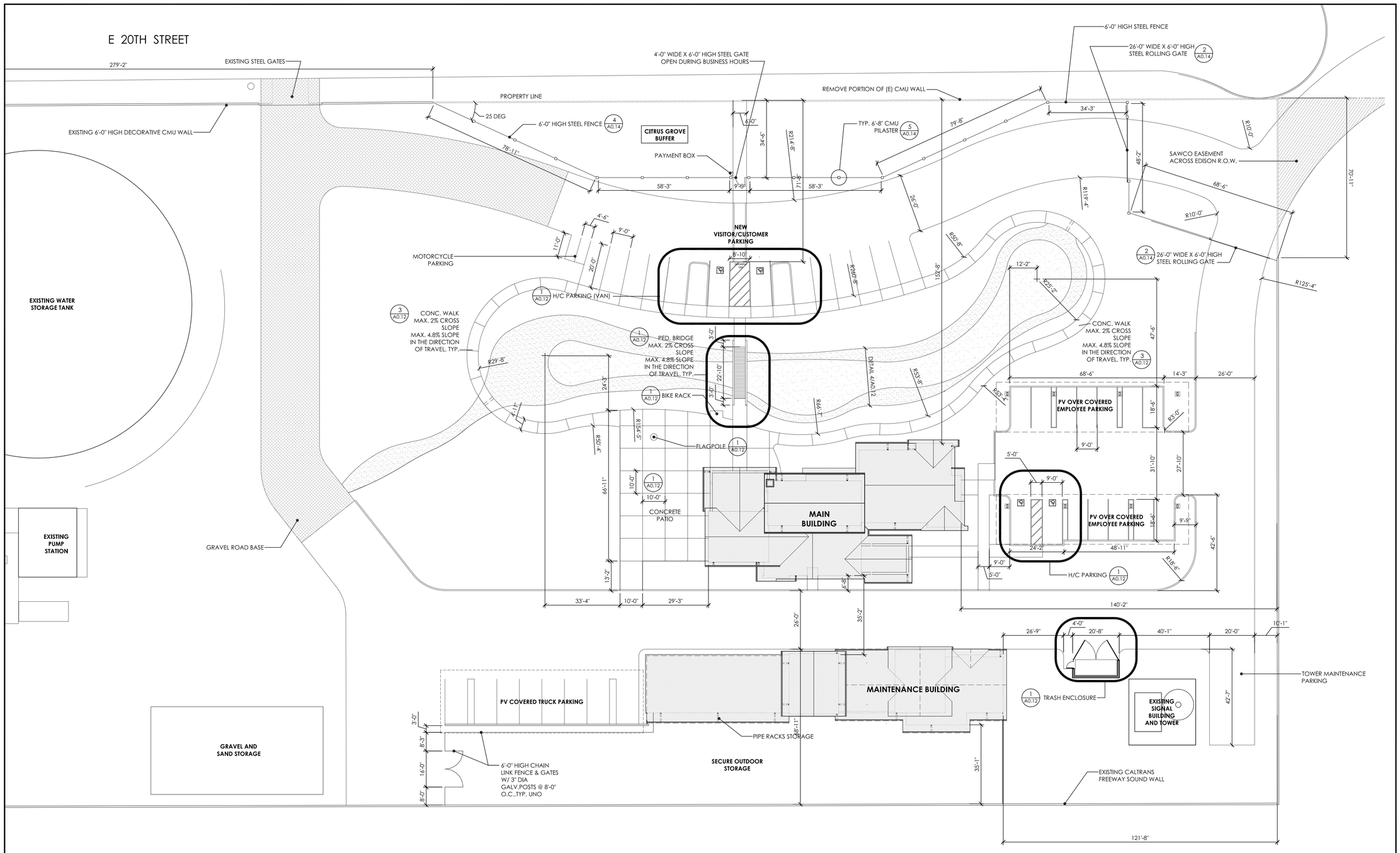
REVISIONS

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DATE:	12/17/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

A0.00



1 SITE PLAN
1"=40'-0"

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No. C25269
REN. 10-31-2027
STATE OF CALIFORNIA

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

ENLARGED SITE PLAN

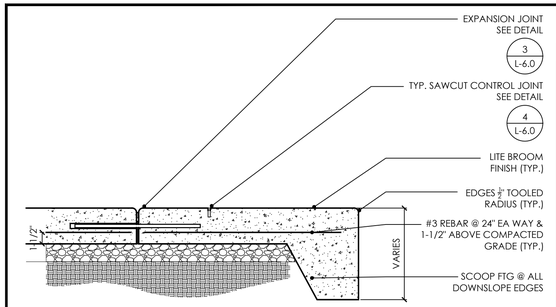
REVISIONS

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DATE:	12/17/2025
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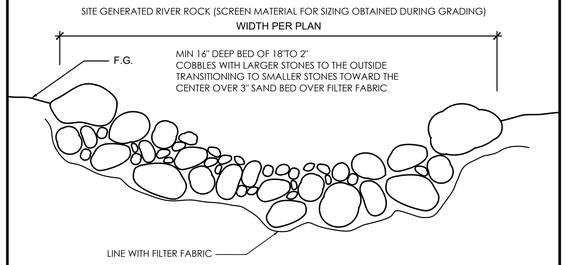
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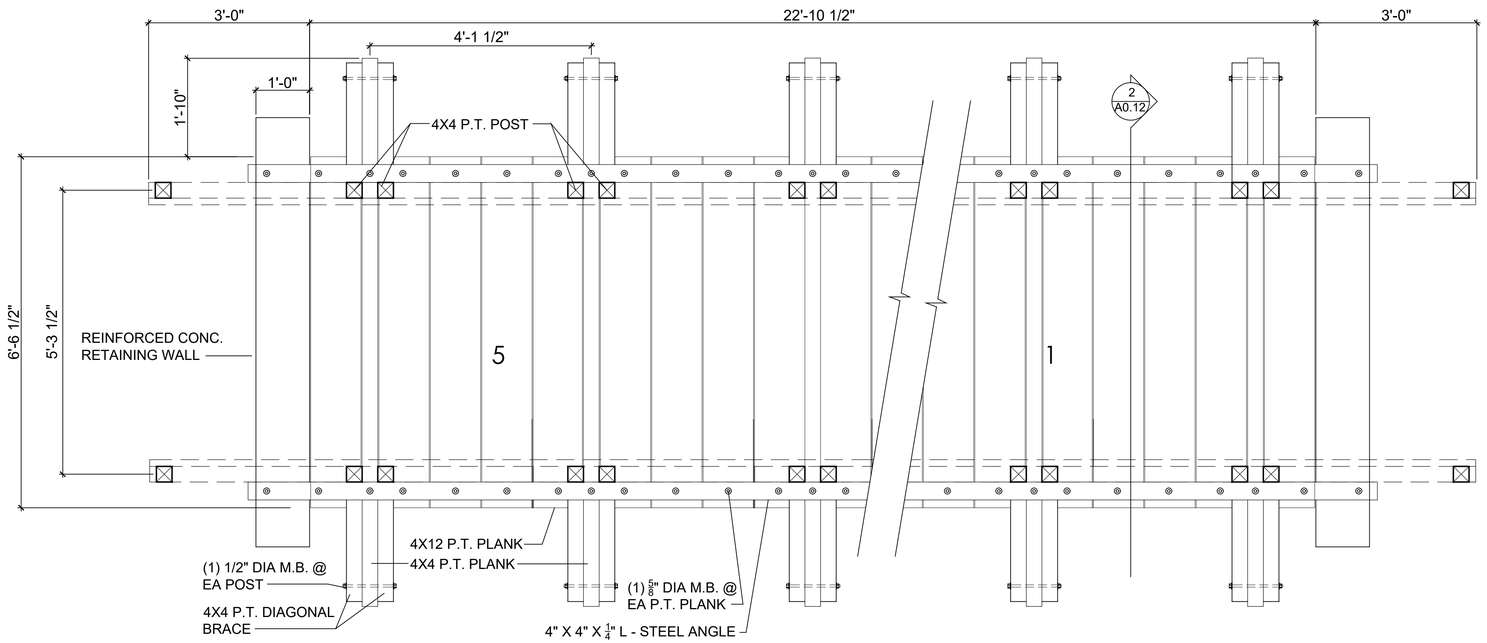
3 TRASH ENCLOSURE PLAN & ELEVATION

3"=1'-0"



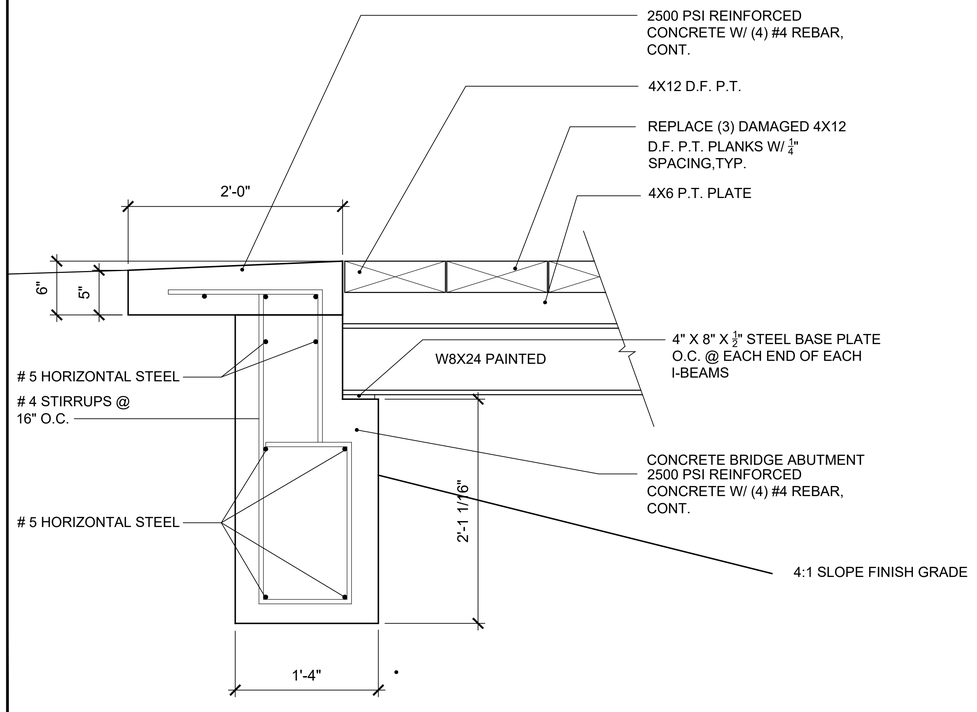
4 RIVER ROCK BASIN

1"=40'-0"



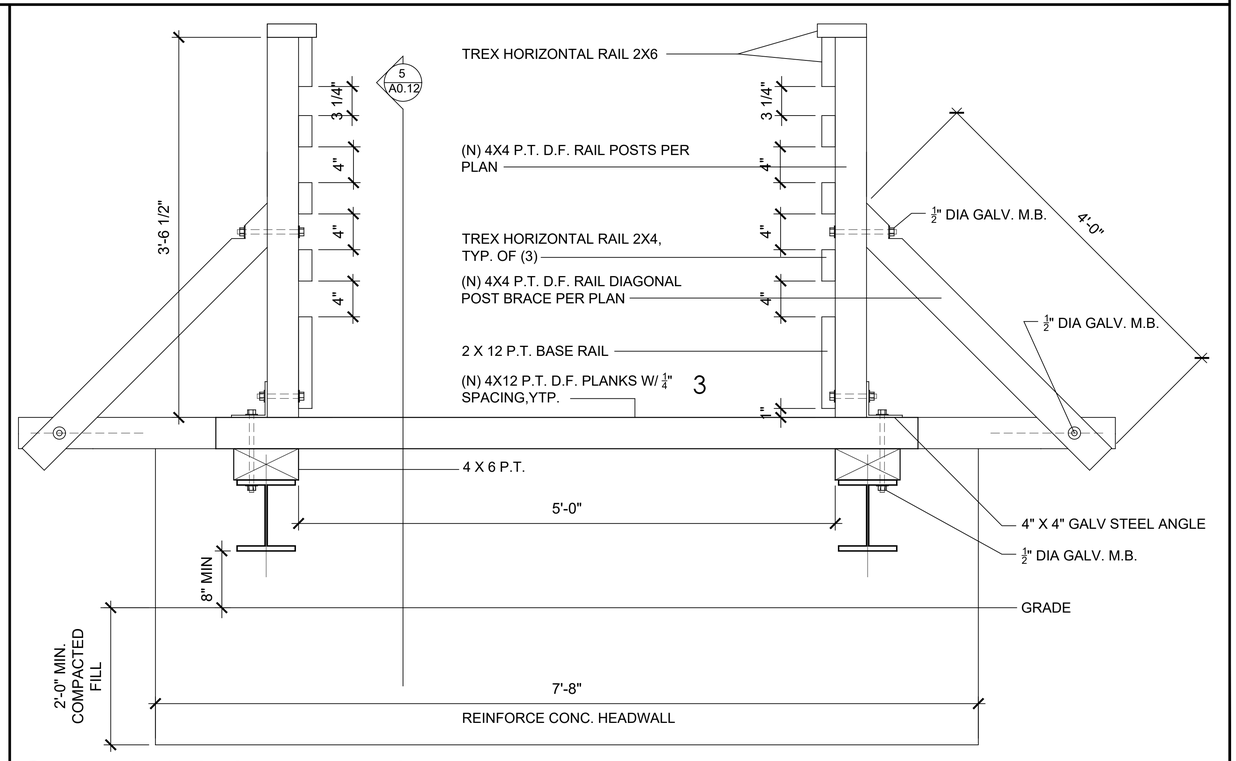
1 BRIDGE PLAN

3/4"=1'-0"



5 BRIDGE ABUTMENT AND FOUNDATION

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



2 BRIDGE SECTION & ELEVATION

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

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REN. 10-31-2027
STATE OF CALIFORNIA

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

ARCHITECTURAL DETAILS

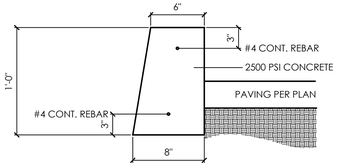
REVISIONS

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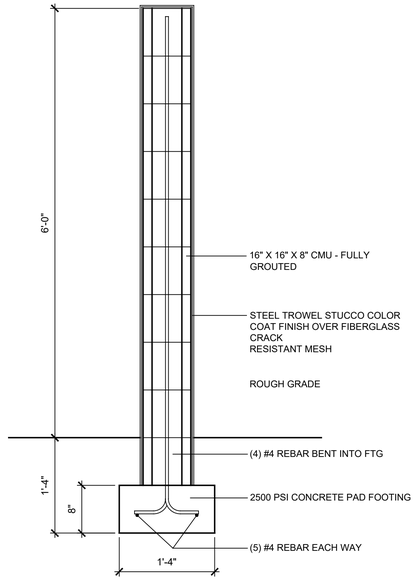
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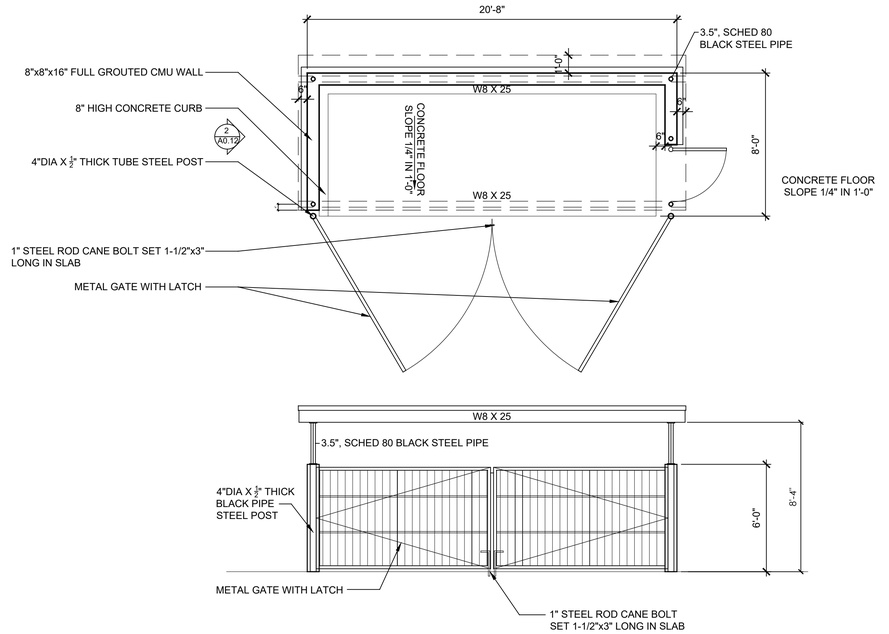
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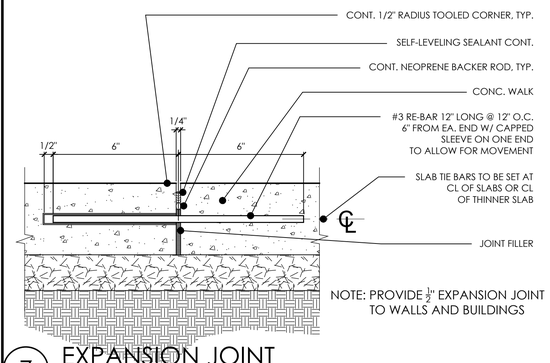
5 CURB DETAIL
1-1/2"=1'-0"



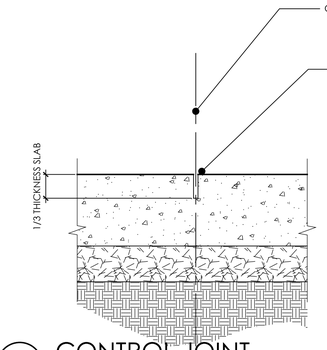
3 TRASH ENCLOSURE END ELEVATION
1"=1'-0"



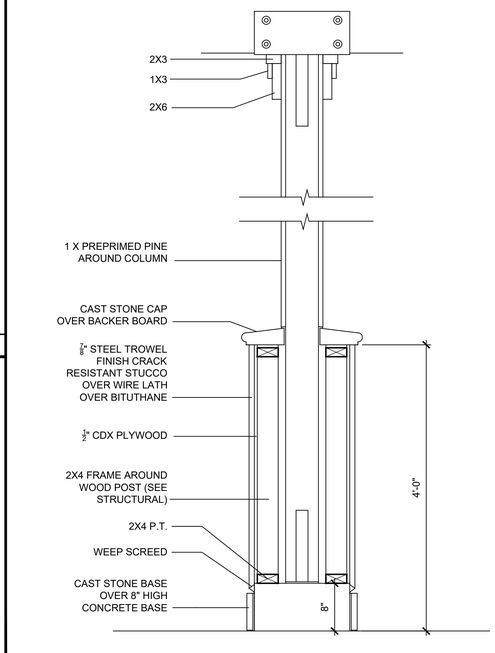
1 TRASH ENCLOSURE PLAN & ELEVATION
1/4"=1'-0"



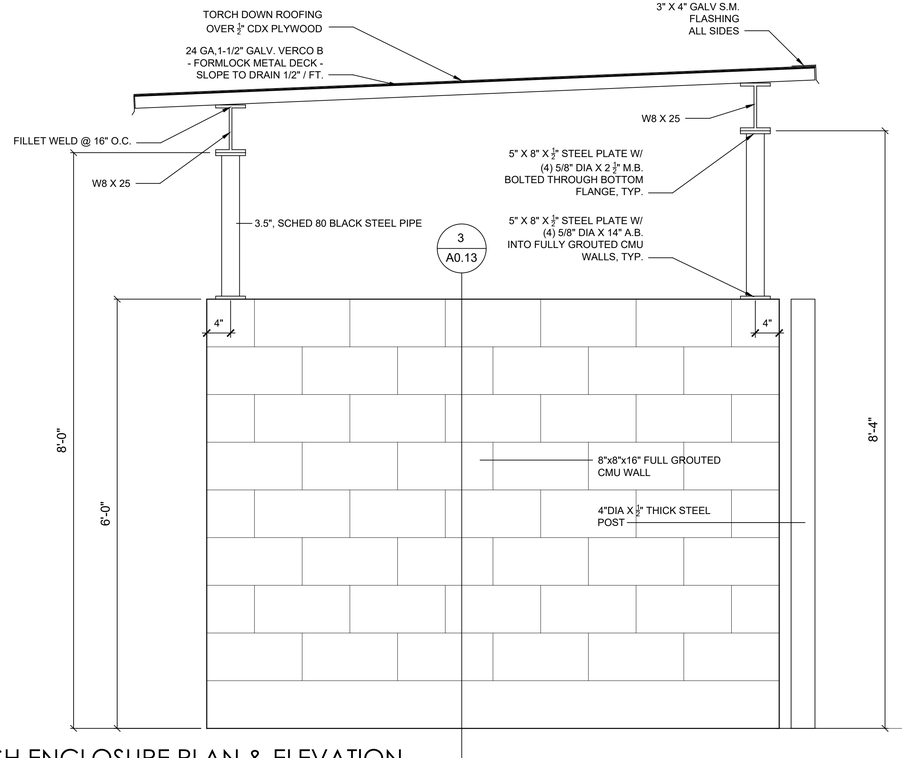
7 EXPANSION JOINT
3"=1'-0"



8 CONTROL JOINT
3"=1'-0"



4 TRASH ENCLOSURE END ELEVATION
1"=1'-0"



2 TRASH ENCLOSURE PLAN & ELEVATION
1"=1'-0"

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

ARCHITECTURAL DETAILS

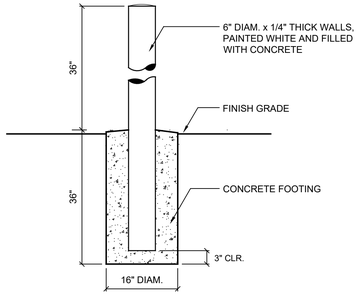
REVISIONS

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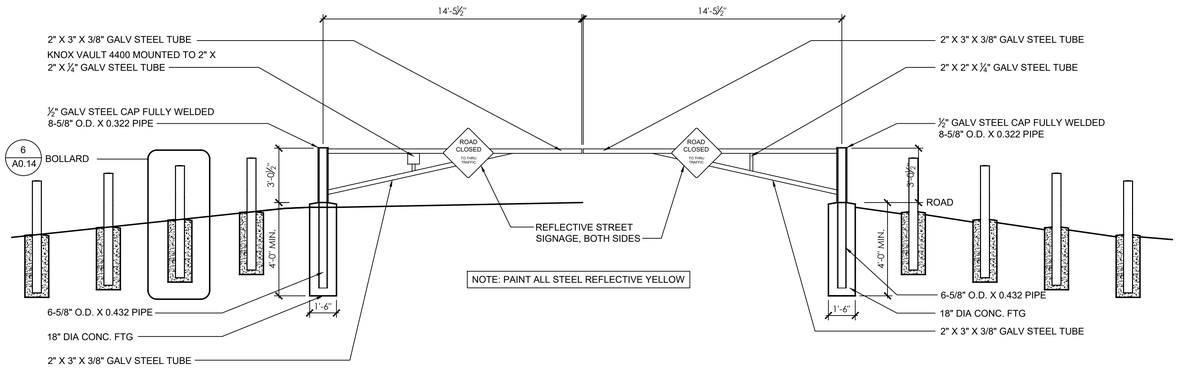
DATE:	12/17/2025
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CHK BY:	EGP

SHEET NO.

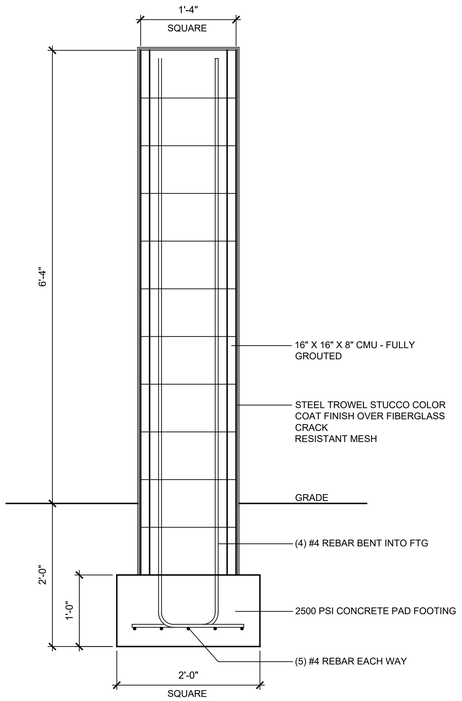
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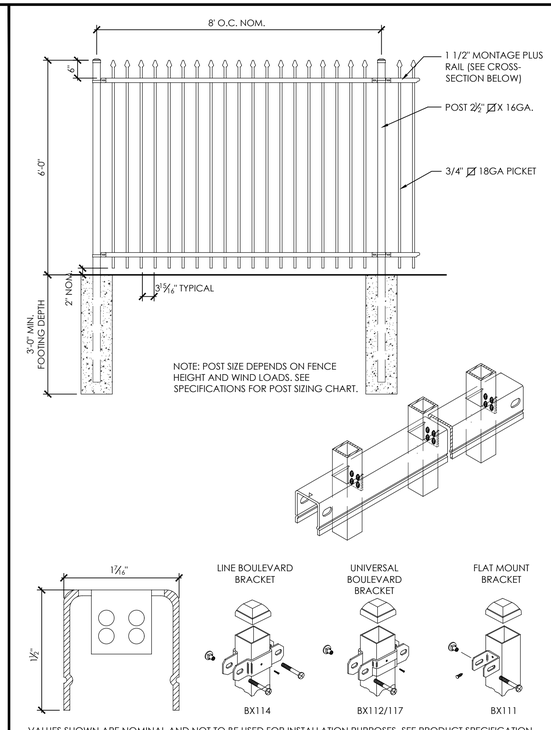
6 TYP. BOLLARD
1/2"=1'-0"



1 ROAD GATE AT CAMPUS ENTRANCE
1/4"=1'-0"

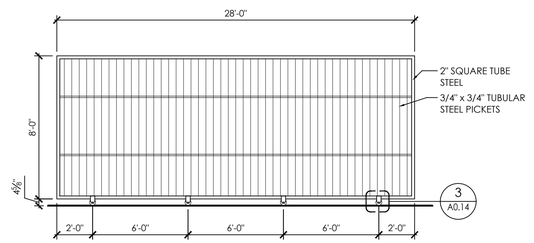


5 FENCE PILASTER
1/4"=1'-0"

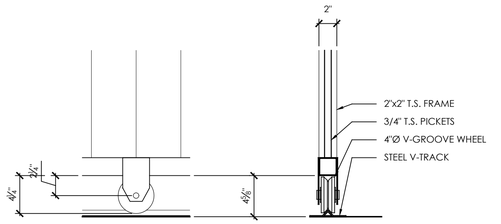


VALUES SHOWN ARE NOMINAL AND NOT TO BE USED FOR INSTALLATION PURPOSES. SEE PRODUCT SPECIFICATION FOR INSTALLATION REQUIREMENTS.

4 STEEL FENCING DETAIL
1/2"=1'-0"



2 VEHICLE GATES
1/4"=1'-0"



3 GATE DETAIL
1-1/2"=1'-0"

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

ARCHITECTURAL DETAILS

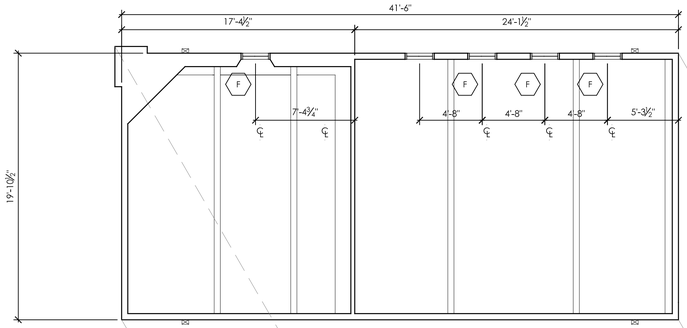
REVISIONS

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- MAIN BUILDING HIGH WALL PLAN
3/16" = 1'-0"

MAIN BUILDING ROOM FINISH SCHEDULE

ROOM#	ROOM NAME	FLR FIN	BASE	NORTH		EAST		SOUTH		WEST		CEILING		CLG HT	REMARKS
				MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN		
100	LOBBY	A	F	H	K,M	H	K,M	H	K,M	H	K,M	K	K	VARIES	
101	CONFERENCE ROOM	C	G1	H	K	H	K	H	K	H	K	K	K	VARIES	
102	WORK AREA	C	G1	H	K	H	K	H	K	H	K	K	K	9'-0"	
103	HALLWAY 1	C	G1	H	K	H	K	H	K	H	K	K	K	9'-0"	
104	FINANCE MANAGER'S OFFICE	C	G1	H	K	H	K	H	K	H	K	K	K	VARIES	
105	ASSISTANT MANAGER'S OFFICE	C	G1	H	K	H	K	H	K	H	K	K	K	VARIES	
106	GENERAL MANAGER'S OFFICE	C	G1	H	K	H	K	H	K	H	K	K	K	VARIES	
107	ARCHIVE ROOM	C	G	H	K	H	K	H	K	H	K	K	J	9'-0"	
108	MEETING ROOM	C	G1	H	K	H	K	H	K	H	K	K	K	9'-0"	
109	OPERATIONS SUPERVISOR'S OFFICE	C	G1	H	K	H	K	H	K	H	K	K	K	VARIES	
110	HALLWAY 2	C	G	H	K	H	K	H	K	H	K	K	J	9'-0"	
111	ADA TOILET 1	A	F	H	K,L	H	K,L	H	K,L	H	K,L	K	K	9'-0"	
112	IT ROOM	C	G	H	K	H	K	H	K	H	K	K	K	9'-0"	
113	ADA TOILET 2	A	F	H	K,L	H	K,L	H	K,L	H	K,L	K	K	9'-0"	
114	QUIET ROOM	C	G	H	K	H	K	H	K	H	K	K	J	9'-0"	
115	COPY ROOM	C	G	H	K	H	K	H	K	H	K	K	J	9'-0"	
116	BREAK ROOM	A	F	H	K	H	K	H	K	H	K	K	K	9'-0"	
117	JANITOR	C	F	H	K,L	H	K,L	H	K,L	H	K,L	K	K	9'-0"	

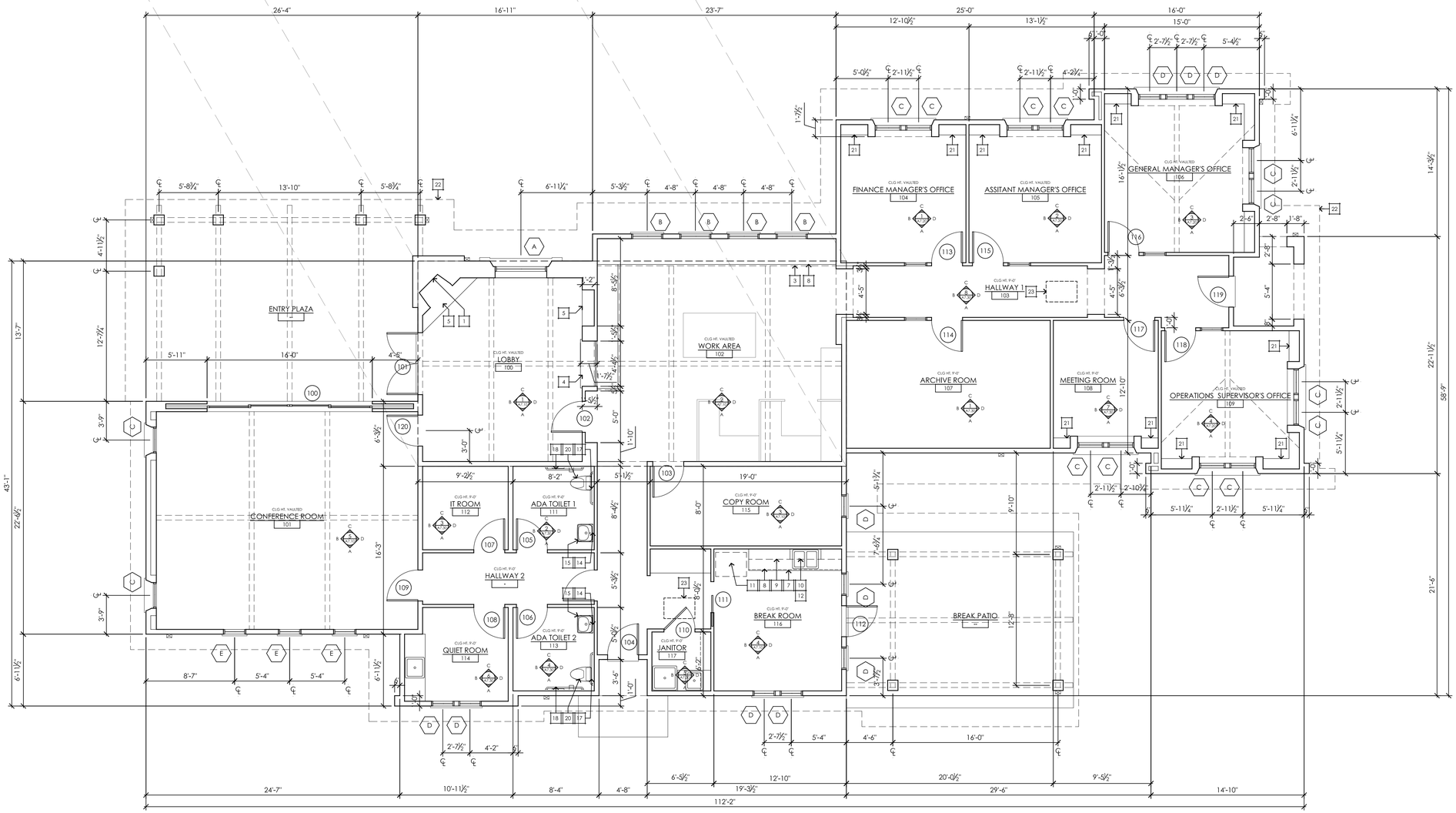
FLOORING
A. CERAMIC TILE
B. CONCRETE W/ LIGHT BROOM FINISH
C. LVT PLANK
D. MATTE FINISH CERAMIC MOSAIC TILE
E. RESILIENT RUBBER FLOORING

BASE
F. GLAZED CERAMIC TILE BASE
G. VINYL BASE
G1. 1X8 STAIN GRADE WOOD (SPECIES & FINISH TO MATCH 3-PANEL DOORS)

WALL/ CEILING MATERIAL
H. 5/8" TYPE "X" GYPSUM BOARD (09250)
J. ACOUSTICAL CEILING TILES
K. PRIME + 2 COATS LATEX PAINT (LOW V.O.C.)
L. CERAMIC TILE WAINSCOAT TO 48" A.F.F.
M. DECORATIVE CERAMIC TILE

REMARKS
1. ABUSE RESISTANT GYP. BOARD TO 8'-0".
2. PLYWOOD BACKING AS REQUIRED FOR EQUIPMENT MOUNTING.

ROOM FINISH SCHEDULE NOTES
a. PAINT FOR GYPSUM BOARD PARTITIONS SHALL BE SATIN LATEX ENAMEL UNLESS NOTED OTHERWISE. PAINT FOR ALL ABUSE-RESISTANT GYPSUM BOARD PARTITIONS SHALL BE SATIN FINISH ALKYD, UNLESS NOTED OTHERWISE.
b. PAINTED METAL / WOOD DOORS AND DOOR FRAMES SHALL BE SEMI-GLOSS OIL BASE ENAMEL UNLESS NOTED OTHERWISE.
c. PAINTED SURFACES SHALL RECEIVE ONE PRIME COAT AND TWO FINISH COATS (MINIMUM) OR AS REQUIRED FOR UNIFORM COVERAGE.
d. ALL FLOOR FINISH CHANGES SHALL OCCUR UNDER CENTERLINE OF DOOR IN CLOSED POSITION OR AT THE CENTERLINE OF AN OPENING WHERE NO DOOR OCCURS, UNLESS NOTED OTHERWISE.
e. CONTRACTOR SHALL FILL VOIDS AT ANY EXPOSED COLUMNS IN PREPARATION FOR FINISH MATERIALS UNLESS NOTED OTHERWISE.
f. RESILIENT BASE MATERIAL SHALL BE INSTALLED FLUSH ON FINISHED FLOOR SURFACE UNLESS NOTED OTHERWISE.
g. ALL PORCELAIN TILE GROUT JOINTS SHALL BE 1/8" U.N.O.; AND ALL PORCELAIN TILE SHALL BE CENTERED WITHIN A SPACE UNLESS NOTED OTHERWISE.
h. GROUT LINES OF SAME SIZE FLOOR AND WALL TILES ARE TO ALIGN.
i. -



1 MAIN BUILDING FLOOR PLAN
3/16" = 1'-0"

FLOOR PLAN KEYNOTES

1. FIRE PLACE. VERIFY WITH OWNER.
2. BASE CABINETS W/ DRAWERS.
3. GRANITE COUNTERTOP WORK SURFACE.
4. SERVICE WINDOW. VERIFY WITH OWNER.
5. BUILT-IN BENCH. VERIFY WITH OWNER.
6. 4" TOE SPACE. U.N.O. TYP.
7. PREFABRICATED QUARTZ COUNTERTOP W/ 6" BACK SPLASH. U.N.O.
8. BASE CABINET, 24" DEEP U.N.O.
9. UPPER CABINET. PROVIDE SOLID WALL BLOCKING. 12" DEEP U.N.O.
10. KITCHEN SINK.
11. 40" MIN. CLEAR REFRIGERATOR SPACE. PROVIDE RECESSED COLD WATER CONNECTION.
12. GARBAGE DISPOSAL.
13. BUILT-IN DESK.
14. WALL MOUNTED MIRROR.
15. ACCESSIBLE LAVATORY W/ SINK & FAUCET.
16. -.
17. 36" STAINLESS STEEL GRAB BAR.
18. 42" STAINLESS STEEL GRAB BAR.
19. CERAMIC TILE.
20. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET AS REQUIRED PER CODE. PROVIDE 30" MIN. CLR. WIDTH AND 24" MIN. CLR. IN FRONT.
21. BUILT-IN SHELF. VERIFY WITH OWNER.
22. LINE OF ROOF OVERHANG ABOVE.
23. ATTIC ACCESS. 22" X 34" MIN. PROVIDE SWITCHED LIGHT. 120 VOLT SERVICE OUTLET & CONTINUOUS ACCESS PLATFORM TO ALL ATTIC MOUNTED EQUIPMENT.

FLOOR PLAN NOTES

A. ALL DIMENSIONS ARE TO FACE OF STRUCTURE (F.O.S.) UNLESS NOTED OTHERWISE.
B. DO NOT SCALE FROM DRAWINGS.
C. ANY INCONSISTENCIES OR UNFORESEEN CONDITIONS TO BE REVIEWED BY THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.
D. ALL DOORS AND WINDOWS DIMENSIONED TO CENTERLINE OF CLEAR OPENING UNLESS NOTED OTHERWISE.
E. ALL NON-DIMENSIONED DOORS SHALL BE OFFSET FROM THE HINGE-SIDE WALL TO ALLOW FOR (2) 2X4 STUDS AT THE JAMB UNLESS NOTED OTHERWISE.

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LICENSED ARCHITECT
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REN. 10-31-2027
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

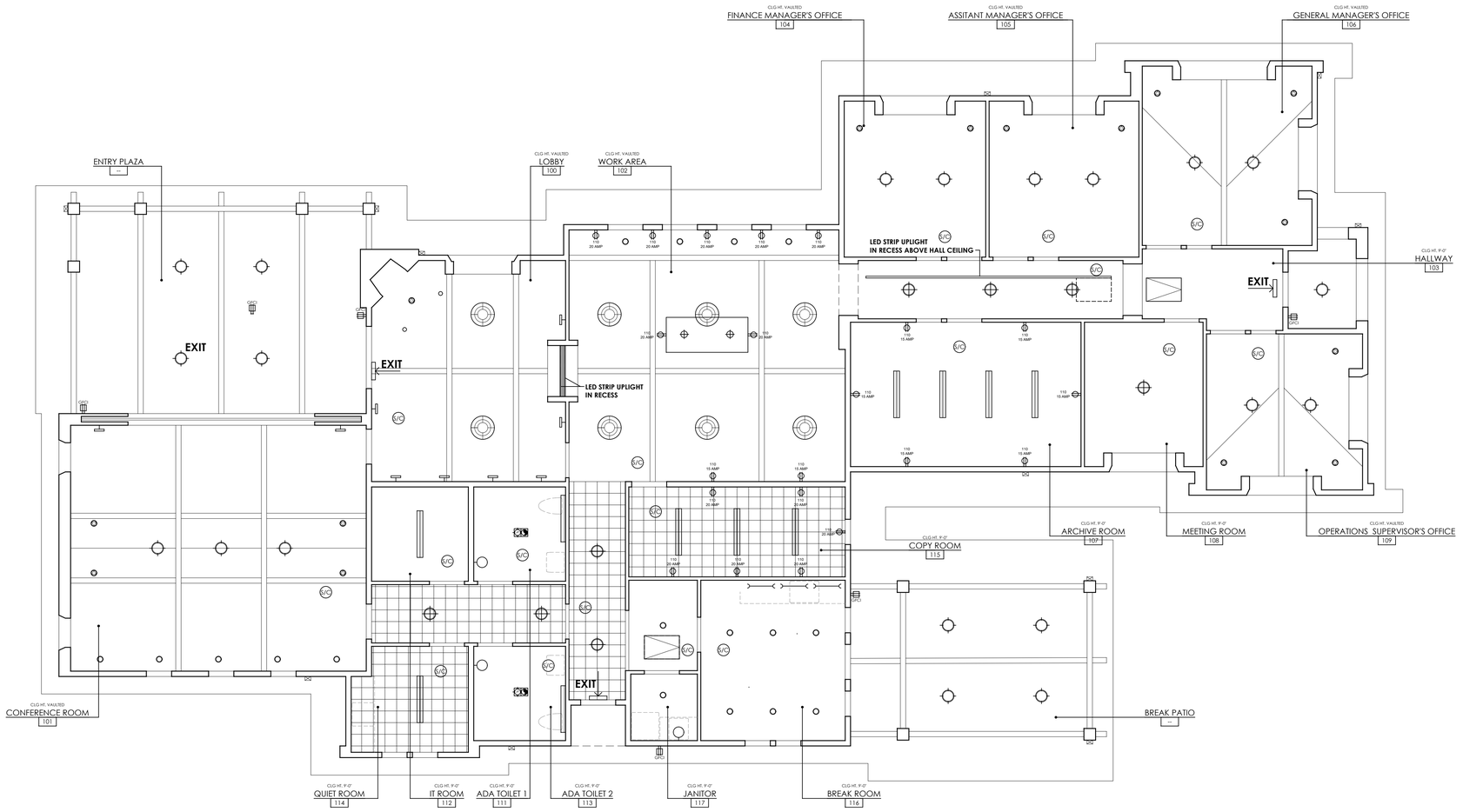
SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING FLOOR PLAN AND NOTES

REVISIONS
1 -
2 -
3 -
4 -
5 -

DATE:	12/17/2025
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CHK BY:	EGP

SHEET NO.
A1.10



1 MAIN BUILDING REFLECTED CEILING PLAN
3/16" = 1'-0"

RCP LEGEND

- SUSPENDED LED LINEAR LIGHT
- 6" RECESSED LED DOWNLIGHT
- 6" RECESSED ADJUSTABLE LED DOWNLIGHT
- CEILING MOUNTED INDUSTRIAL LUMINAIRE
- WALL MOUNT DIRECT/INDIRECT
- DIRECT / INDIRECT LINEAR LIGHT
- WALL MOUNTED ART LIGHT
- UNDER CABINET LIGHT (LED)
- ATTIC ACCESS
- 24" PENDANT LIGHT FIXTURE
- SUSPENDED INDUSTRIAL LUMINAIRE
- S/C HARDWIRED LISTED SMOKE ALARMS AND CARBON MONOXIDE DETECTORS COMPLYING WITH UL 217
- EXTERIOR WALL MOUNTED AREA LIGHT

RCP/ UTILITY PLAN NOTES

A. ALL 120-VOLT SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUN ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, KITCHEN, LAUNDRY OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED OF A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.

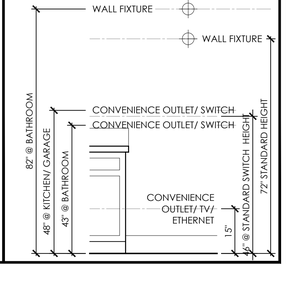
B. ACCESS TO ATTIC FURNACE MUST BE WITHIN 20 FEET OF UNIT AND SHALL HAVE A CONTINUOUS SOLID WALKWAY AT LEAST 24 INCHES WIDE. A SWITCH-CONTROLLED LIGHT IS ALSO REQUIRED.

C. LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS. ALL LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A VACANCY SENSOR.

D. OTHER ROOMS. ALL LUMINARIES SHALL BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A VACANCY SENSOR OR DIMMER. CLOSETS THAT ARE LESS THAN 70 SQUARE FOOT ARE EXEMPT FROM THIS REQUIREMENT.

E. OUTDOOR LIGHTING. ALL LUMINARIES MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRES OR SHALL BE CONTROLLED BY A PHOTOCONTROL/MOTION SENSOR COMBINATION (WITH OVERRIDE). SEE 150(K)3 FOR REQUIREMENTS.

TYP. INSTALLATION HEIGHTS



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CONSULTANTS

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING REFLECTED CEILING PLAN AND NOTES

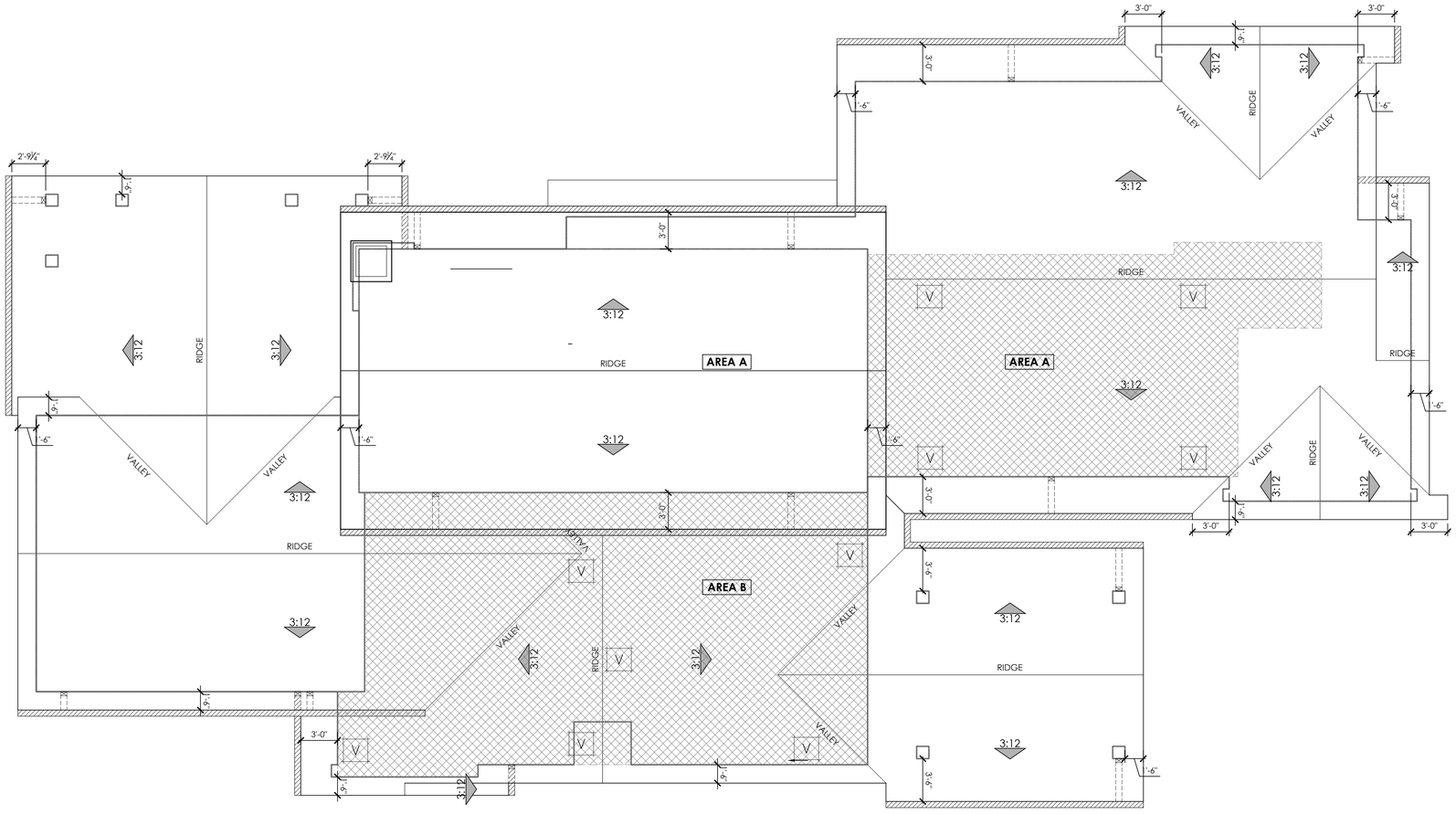
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A1.20



1 MAIN BUILDING ROOF PLAN
3/16" = 1'-0"

ROOF PLAN KEYNOTES

XX

1. COUNTER TOP, VERIFY TYPE AND COLOR OF STONE WITH OWNER.
2. KITCHEN BASE CABINET, 24"D X 36"H, STAIN GRADE, VERIFY WITH OWNER,
3. KITCHEN UPPER CABINET, 12"D X 42"H, STAIN GRADE. PROVIDE SOLID WALL BLOCKING. VERIFY WITH OWNER,
4. KITCHEN SINK W/ GARBAGE DISPOSAL.
5. SPACE FOR GAS RANGE W/ OVERHEAD EXHAUST HOOD, VENTED DIRECTLY TO OUTSIDE.
6. 36" MIN. CLEAR REFRIGERATOR SPACE. PROVIDE RECESSED COLD WATER CONNECTION.
7. 33" MIN. CLEAR WASHER SPACE. PROVIDE RECESSED WATER SUPPLY/ WASTE CONNECTION.
8. 33" MIN. CLEAR DRYER SPACE. PROVIDE 4" DIA. MIN. SMOOTH METAL EXHAUST VENT TO OUTSIDE W/BACK DRAFT DAMPER. DUCT IS LIMITED TO 14' IN LENGTH INCLUDING (2) 90 DEGREE ELBOWS.
9. VANITY CABINET W/ SINK & FAUCET, VERIFY WITH OWNER.

ROOF VENT CALCULATIONS

ROOF VENT CALCS BELOW REPRESENTS A SAMPLE METHOD OF MEETING REQ. ROOF VENTING. OTHER APPROVED METHODS MAY BE ACCEPTABLE. CONTRACTOR TO VERIFY VENTING MATERIALS + METHODS.

AREA A ATTIC AREA: 600 SQ.FT.
REQ'D VENT AREA:

600 / 300 = 2.00 SQ.FT. = 288 SQ.IN.
288 / 2 = 144 SQ.IN. (UPPER & LOWER VENT)

O'HAGIN HIGH PROFILE (S) ¼" STANDARD ROOF VENT PROVIDES 97.5 SQ.IN./ EACH

REQ. UPPER VENT = 144 @ 97.5/ EA. = 2
REQ. LOWER VENT = 144 @ 97.5/ EA. = 2

AREA B ATTIC AREA: 936 SQ.FT.
REQ'D VENT AREA:

936 / 300 = 3.12 SQ.FT. = 452 SQ.IN.
452 / 2 = 226 SQ.IN. (UPPER & LOWER VENT)

O'HAGIN HIGH PROFILE (S) ¼" STANDARD ROOF VENT PROVIDES 97.5 SQ.IN./ EACH

REQ. UPPER VENT = 226 @ 97.5/ EA. = 3
REQ. LOWER VENT = 226 @ 97.5/ EA. = 3

ROOF PLAN NOTES

A. PROVIDE BUILT-UP CRICKETS AS NEEDED TO PREVENT STANDING WATER. ALL VALLEYS OF SUCH CRICKETS SHALL MAINTAIN A MINIMUM SLOPE OF 1/4":12".
B. PROVIDE BIRD STOP DEVISES AT ALL POTENTIAL BIRD NESTING LOCATIONS.
K. ALL FLASHING SHALL BE MIN. 26 GAUGE, GALVANIZED SHEET METAL AND PAINTED OR FACTORY FINISH TO MATCH ADJACENT ROOF &/OR WALL MATERIALS
L. PROVIDE GUTTERS, DOWN-SPOUTS, AND EROSION CONTROL DEVICES AS NEEDED.
M. A MIN. OF 1" AIRSPACE SHALL BE PROVIDED BETWEEN INSULATION AND THE ROOF SHEATHING. CBC 1203.2
N. FASTENERS FOR ROOF COVERING SHALL BE CORROSION RESISTANT SUCH AS COPPER, BRASS, STAINLESS STEEL OR GALVANIZED. CBC 1507
O. ROOFS WITH A SLOPE LESS THAN 14" PER FOOT SHALL BE DESIGNED FOR PONDING EFFECT. CBC 1611.2
P. A MINIMUM OF 1/4" PER FOOT MIN. ROOF SLOPE AT THE FLAT ROOF AREAS.

ROOF PLAN LEGEND

- ROOF SLOPE INDICATOR
- DOWN SPOUT
- V — O'HAGIN HIGH PROFILE (S) ¼" STANDARD ROOF VENT OR APPROVED EQUAL

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING ROOF PLAN AND NOTES

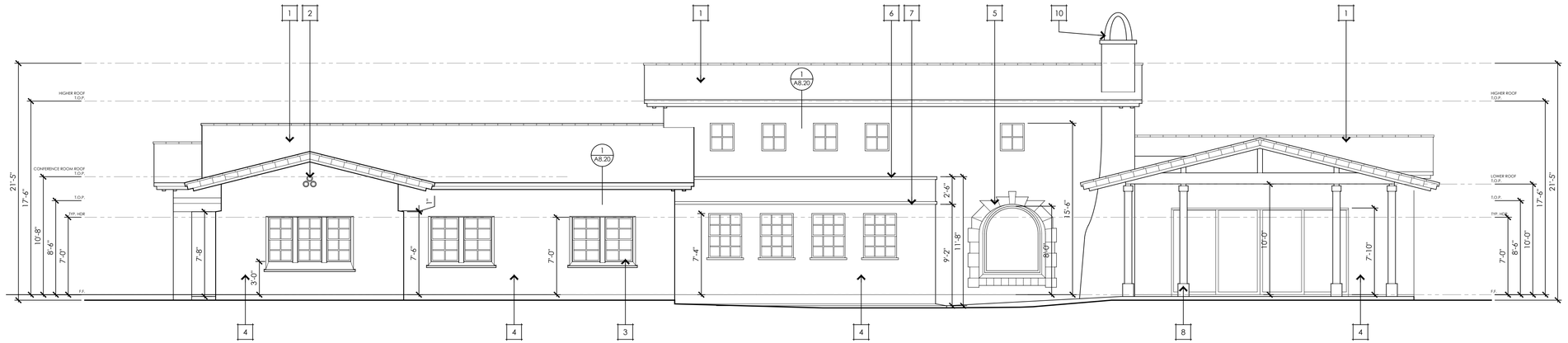
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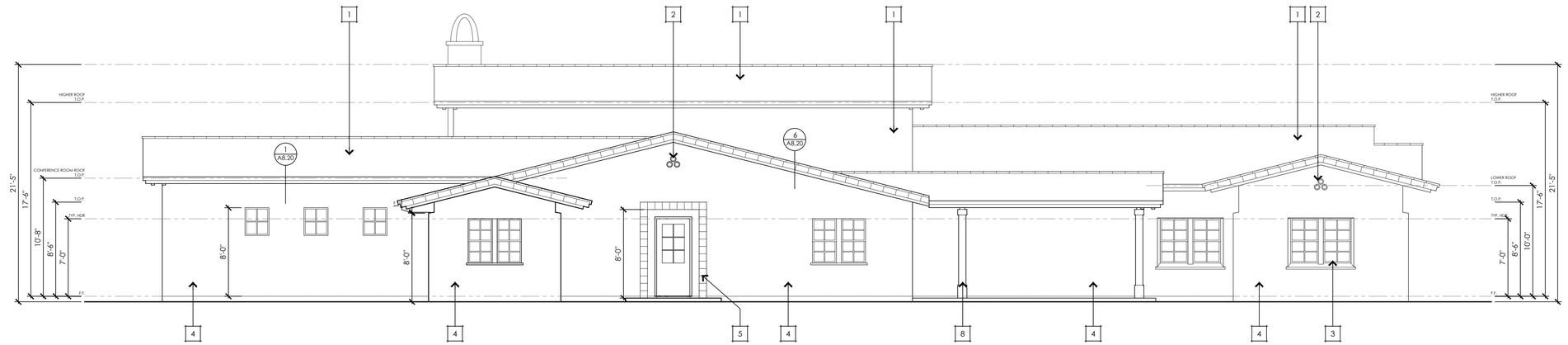
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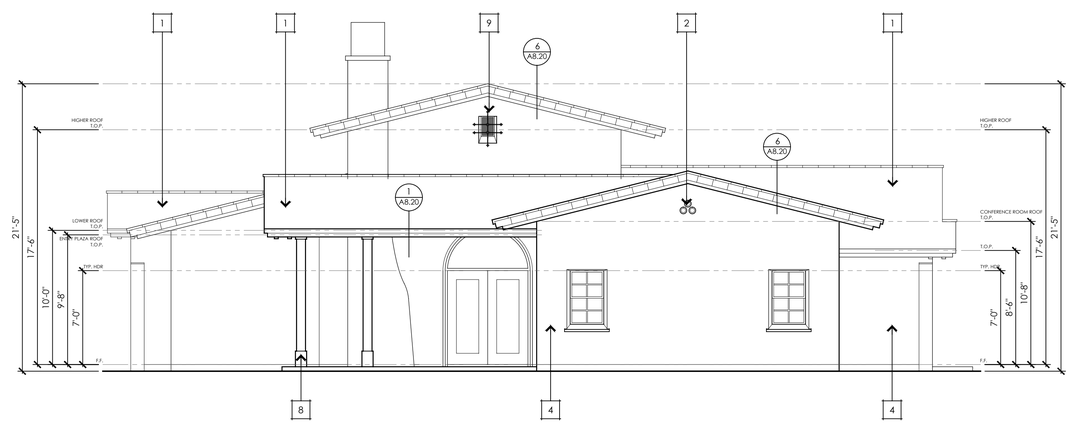
1 MAIN BUILDING NORTH ELEVATION

3/16" = 1'-0"



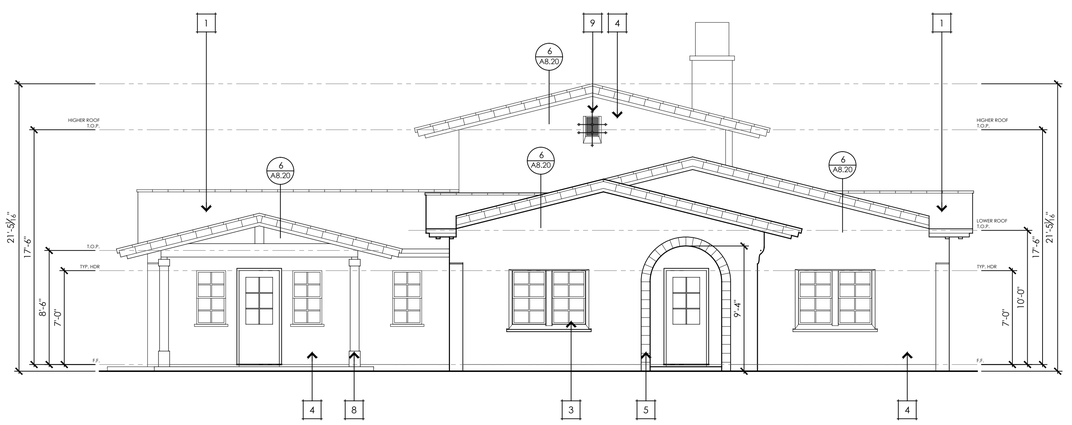
2 MAIN BUILDING SOUTH ELEVATION

3/16" = 1'-0"



4 MAIN BUILDING WEST ELEVATION

3/16" = 1'-0"



3 MAIN BUILDING EAST ELEVATION

3/16" = 1'-0"

XX ELEVATION KEYNOTES

1. CLASS 'A' ROOF ASSEMBLY: EAGLE ROOFING CAPISTRANO VALLEJO BLEND CONCRETE ROOF TILE, OVER 30LB FELT OVER ½" RADIANT BARRIER SHEATHING, TYP.
2. TERRACOTTA CLAY ATTIC GABLE VENTS.
3. RECESSED WINDOW, SMOOTH STUCCO FINISH, TYP.
4. 3-COAT STUCCO SMOOTH FINISH O/ METAL LATH O/ 2 LAYERS GRADE 'D' BUILDING PAPER OR EQUIVALENT. WHITE.
5. DECORATIVE TILE AROUND DOOR FRAME.
6. STUCCO FOAM WALL CAP, SMOOTH STUCCO FINISH, GRAY, TYP.
7. STUCCO FOAM BAND, SMOOTH STUCCO FINISH, GRAY, TYP.
8. STAINED WOOD TRELLIS & POSTS, WALNUT.
9. WROUGHT IRON DECORATIVE GABLE VENT, BRONZE.
10. STEEL CHIMNEY CAP, SMOOTH STUCCO FINISH, LIGHT BEIGE.
11. 3-COAT STUCCO SMOOTH FINISH O/ METAL LATH O/ 2 LAYERS GRADE 'D' BUILDING PAPER OR EQUIVALENT. GRAY.

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING EXTERIOR ELEVATIONS AND NOTES

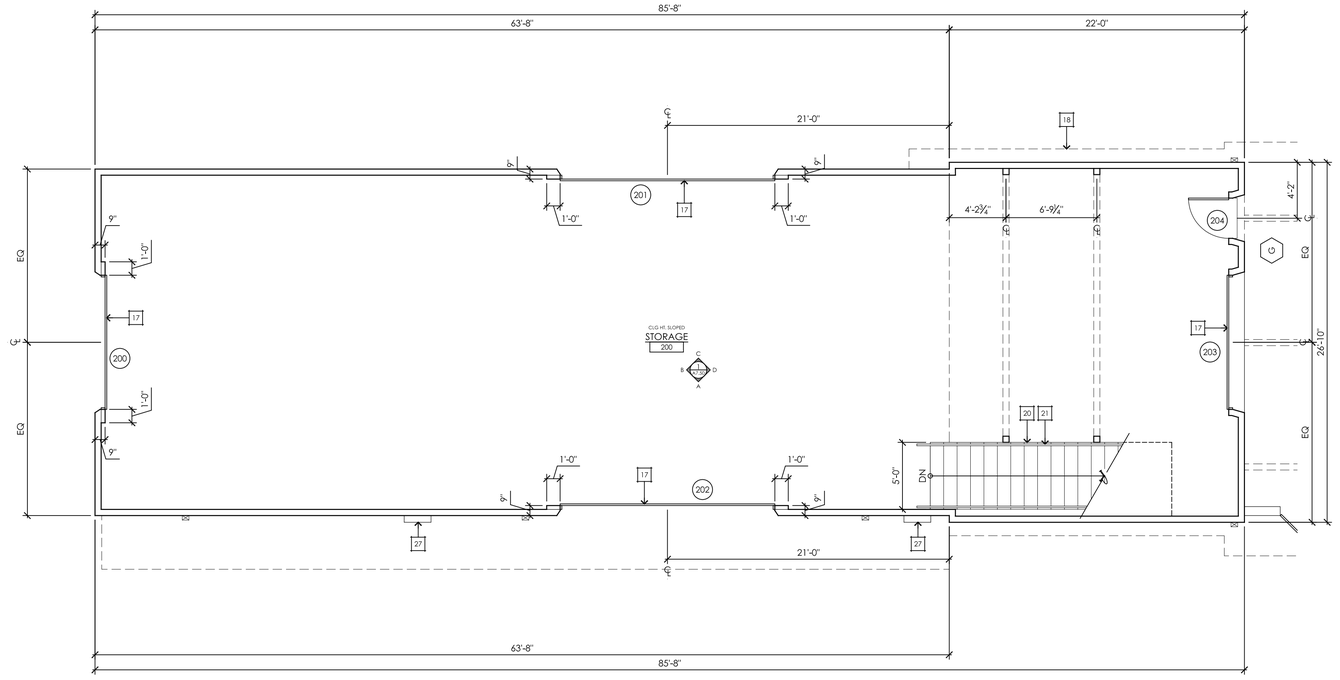
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1 STORAGE BUILDING PARTIAL FIRST FLOOR PLAN
3/16" = 1'-0"

FLOOR PLAN KEYNOTES

1. PREFABRICATED QUARTZ COUNTERTOP W/ 6" BACK SPLASH, U.N.O.
2. BASE CABINETS W/ DRAWERS, 24" DEEP U.N.O.
3. BASE CABINET, 24" DEEP U.N.O.
4. UPPER CABINET, PROVIDE SOLID WALL BLOCKING, 12" DEEP U.N.O.
7. KITCHEN SINK W/GARBAGE DISPOSAL.
8. 40" MIN. CLEAR REFRIGERATOR SPACE. PROVIDE RECESSED COLD WATER CONNECTION.
9. -.
10. BUILT-IN DESK.
11. WALL MOUNTED MIRROR.
12. ACCESSIBLE LAVATORY W/ SINK & FAUCET.
13. 36" STAINLESS STEEL GRAB BAR.
14. 42" STAINLESS STEEL GRAB BAR.
15. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET AS REQUIRED PER CODE. PROVIDE 30" MIN. CLR. WIDTH AND 24" MIN. CLR. IN FRONT.
16. BUILT-IN SHELF. VERIFY WITH OWNER.
17. ROLL-UP DOOR.
18. LINE OF ROOF OVERHANG ABOVE.
19. ATTIC ACCESS. 22" X 34" MIN. PROVIDE SWITCHED LIGHT. 120 VOLT SERVICE OUTLET & CONTINUOUS ACCESS PLATFORM TO ALL ATTIC MOUNTED EQUIPMENT.
20. STAIR. MAX. RISE = 7-3/4" MIN. THREAD = 10". ALL RISERS TO BE OF EQUAL HEIGHT.
21. CONTINUOUS HAND RAIL @ 34"-38" ABV. NOSING OF STAIR THREAD.
22. SHOWER. PROVIDE 'HOT MOP' WATERPROOF ASSEMBLY.
23. TEMPERED GLASS SHOWER DOOR & ENCLOSURE
24. LANDINGS AT DOORS SHALL HAVE A LENGTH MEASURED IN DIRECTION OF TRAVEL OF NOT LESS THAN 36 INCHES, TYP.
25. CONCRETE DECK, WALKWAY OR LANDING, SLOPE 1% MIN. AWAY FROM BUILDING.
26. HAZARDOUS STORAGE/ SPILL CONTAINMENT.
27. PIPE STORAGE.

FLOOR PLAN NOTES

A. ALL DIMENSIONS ARE TO FACE OF STRUCTURE (F.O.S.) UNLESS NOTED OTHERWISE.
B. DO NOT SCALE FROM DRAWINGS.
C. ANY INCONSISTENCIES OR UNFORESEEN CONDITIONS TO BE REVIEWED BY THE ARCHITECT PRIOR TO PROCEEDING WITH CONSTRUCTION.
D. ALL DOORS AND WINDOWS DIMENSIONED TO CENTERLINE OF CLEAR OPENING UNLESS NOTED OTHERWISE.
E. ALL NON-DIMENSIONED DOORS SHALL BE OFFSET FROM THE HINGE-SIDE WALL TO ALLOW FOR (2) 2X4 STUDS AT THE JAMB UNLESS NOTED OTHERWISE.

STORAGE BUILDING ROOM FINISH SCHEDULE

ROOM#	ROOM NAME	FLR FIN	BASE	NORTH		EAST		SOUTH		WEST		CEILING		CLG HT	REMARKS
				MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN	MATL	FIN		
200	STORAGE	A	G	H1	K	H1	K	H1	K	H1	K	H	K	VARIES	
201	STORAGE LOFT	C	G	H	K	H	K	H	K	H	K	H	K	VARIES	
202	HALLWAY	C	G	H	K	H	K	H	K	H	K	H	J	9'-0"	
203	MOTOR REPAIR	A	G	H1	K	H1	K	H1	K	H1	K	H	K	9'-0"	
204	WATER QUALITY	C	G	H	K	H	K	H	K	H	K	H	K	9'-0"	
205	LOCKER ROOM	C	G	H	K	H	K	H	K	H	K	H	K	9'-0"	
206	ADA BATHROOM	B	F	H,H2	K	H,H2	K	H,H2	K	H,H2	K	H	K	9'-0"	
207	MAINTENANCE OFFICE	C	G	H	K	H	K	H	K	H	K	H	K	VARIES	
	STAIR TREADS & RISERS														L

FLOORING
A. CONCRETE WITH LIGHT BROOM FINISH
B. MATTE FINISH CERAMIC MOSAIC TILE
C. LVT PLANK FLOORING

BASE
F. GLAZED CERAMIC TILE BASE
G. VINYL BASE

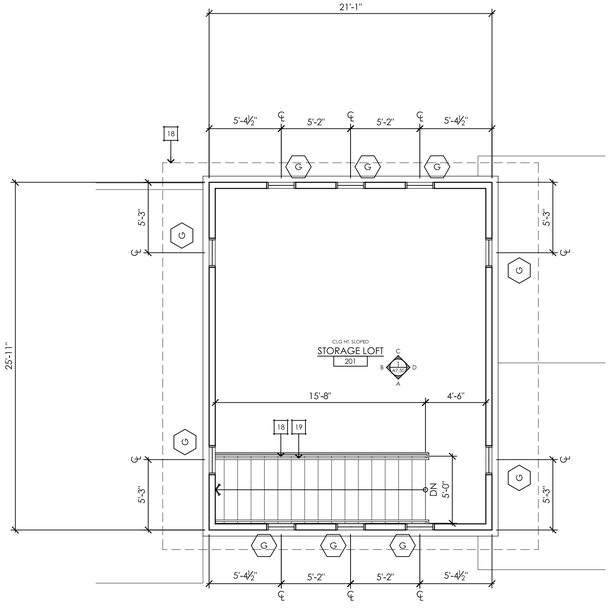
WALL/ CEILING MATERIAL
H. 5/8" TYPE "X" GYPSUM BOARD W/ LEVEL 4 SMOOTH FINISH
H1. ½" CDX T&G PLYWOOD TO 12'-0" A.F.F. OVER ⅝" TYPE "X" GYPSUM FIRE TAPE TO 12'-0" AFF, AND LEVEL 4 SMOOTH FINISH ABOVE 12'-0" A.F.F
H2. CERAMIC TILE WAINSCOAT TO 48" A.F.F.

WALL/ CEILING FINISH
J. ACOUSTICAL CEILING TILES
K. PRIME + (2) COATS LATEX PAINT (LOW V.O.C.)

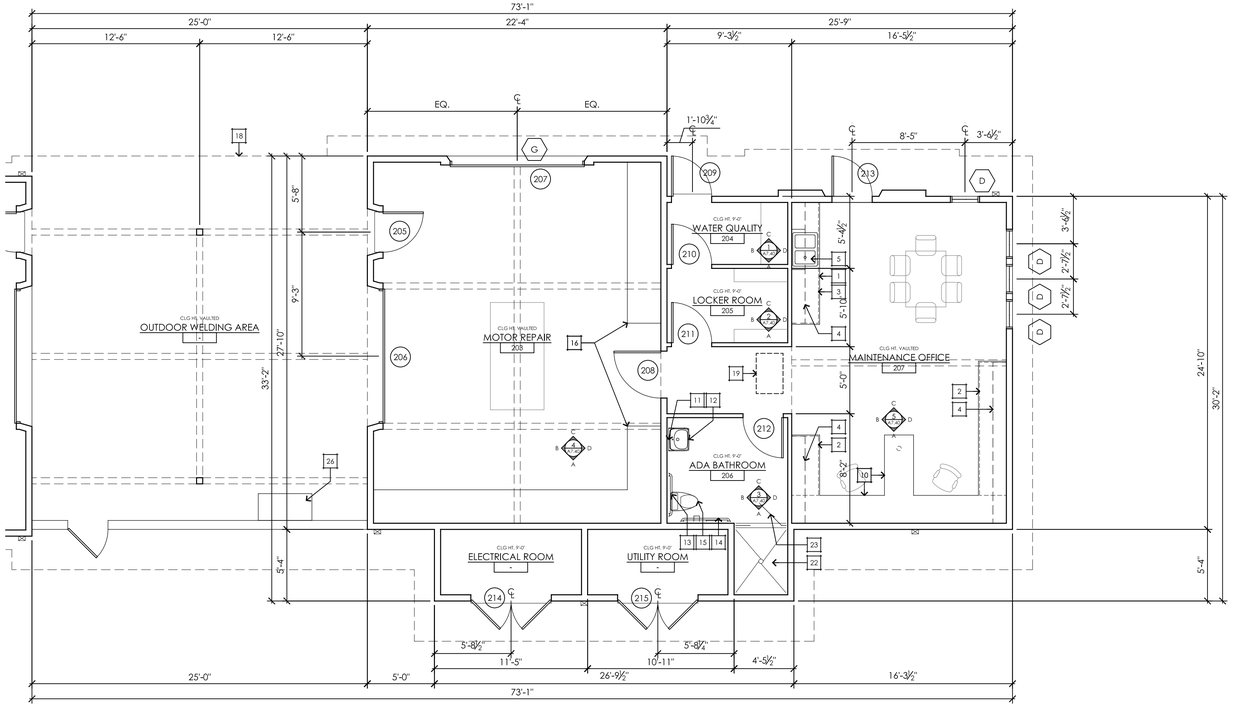
STAIR TREADS & RISERS
L. SLIP RESISTANT VINYL MFR: AMERICAN STAIR TREADS (MATCH VINYL BASE)

REMARKS
1.

ROOM FINISH SCHEDULE NOTES
a. PAINT FOR GYPSUM BOARD PARTITIONS SHALL BE SATIN LATEX ENAMEL UNLESS NOTED OTHERWISE. PAINT FOR ALL ABUSE-RESISTANT GYPSUM BOARD PARTITIONS SHALL BE SATIN FINISH ALKYD, UNLESS NOTED OTHERWISE.
b. PAINTED METAL / WOOD DOORS AND DOOR FRAMES SHALL BE SEMI-GLOSS OIL BASE ENAMEL UNLESS NOTED OTHERWISE.
c. PAINTED SURFACES SHALL RECEIVE ONE PRIME COAT AND TWO FINISH COATS (MINIMUM) OR AS REQUIRED FOR UNIFORM COVERAGE.
d. ALL FLOOR FINISH CHANGES SHALL OCCUR UNDER CENTERLINE OF DOOR IN CLOSED POSITION OR AT THE CENTERLINE OF AN OPENING WHERE NO DOOR OCCURS, UNLESS NOTED OTHERWISE.
e. CONTRACTOR SHALL FILL VOIDS AT ANY EXPOSED COLUMNS IN PREPARATION FOR FINISH MATERIALS UNLESS NOTED OTHERWISE.
f. RESILIENT BASE MATERIAL SHALL BE INSTALLED FLUSH ON FINISHED FLOOR SURFACE UNLESS NOTED OTHERWISE.
g. ALL PORCELAIN TILE GROUT JOINTS SHALL BE 1/8"; AND ALL PORCELAIN TILE SHALL BE CENTERED WITHIN A SPACE UNLESS NOTED OTHERWISE.
h. GROUT LINES OF SAME SIZE FLOOR AND WALL TILES ARE TO ALIGN.
i. WALLS SPECIFIED TO BE PAINTED WITHIN CATERING, RESTROOMS, JANITORS, OR ANY OTHER WET AREAS TO HAVE EPOXY/ HIGH PERFORMANCE COATING FINISH.



3 STORAGE BUILDING LOFT FLOOR PLAN
3/16" = 1'-0"



2 STORAGE BUILDING PARTIAL FIRST FLOOR PLAN
3/16" = 1'-0"

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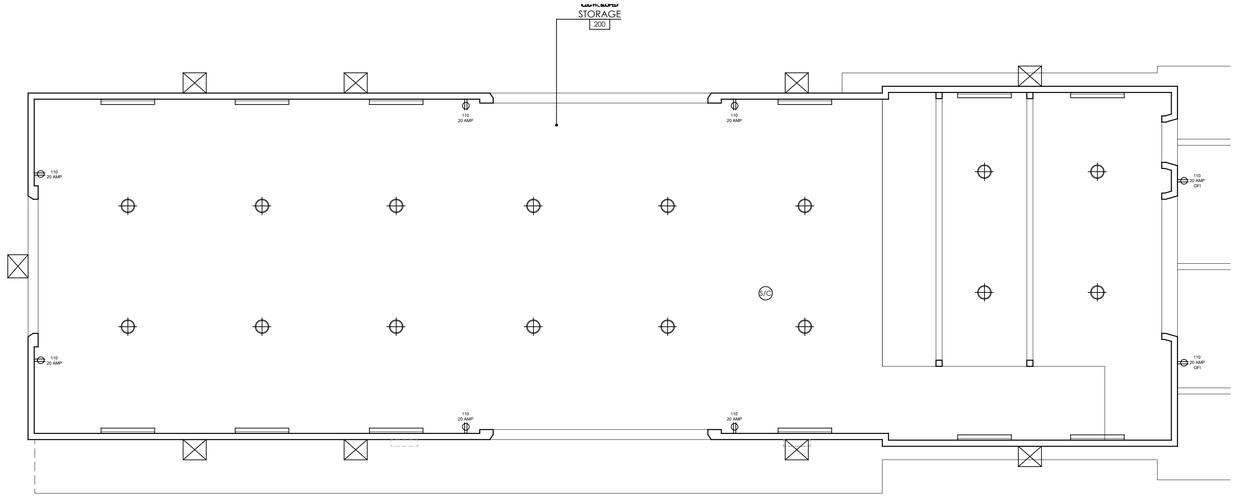
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STORAGE BUILDING FLOOR PLANS AND NOTES

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1 STORAGE BUILDING PARTIAL RFLECTED CEILING PLAN
3/16" = 1'-0"

RCP LEGEND

- CHAIN MOUNTED OPEN INDUSTRIAL LUMINAIRE
- WALL MOUNT DIRECT/INDIRECT
- CEILING MOUNTED INDUSTRIAL LUMINAIRE
- DIRECT / INDIRECT LINEAR LIGHT
- CABLE MOUNTED OPEN INDUSTRIAL LUMINAIRE
- UNDER CABINET LIGHT (LED)
- ATTIC ACCESS
- 24" PENDANT LIGHT FIXTURE
- 12" PENDANT LIGHT FIXTURE
- 6.5" PENDANT LIGHT FIXTURE
- RECESSED HORIZONTAL LED LENSED DOWNLIGHT
- HARDWIRED LISTED SMOKE ALARMS AND CARBON MONOXIDE DETECTORS COMPLYING WITH UL 217
- EXTERIOR WALL MOUNTED AREA LIGHT
- EXTERIOR WALL MOUNTED FLOOD LIGHT

RCP/ UTILITY PLAN NOTES

A. ALL 120-VOLT SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUN ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, KITCHEN, LAUNDRY OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED OF A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.

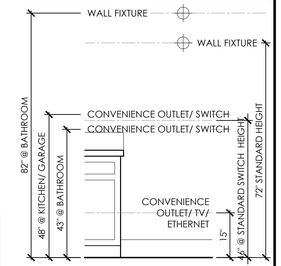
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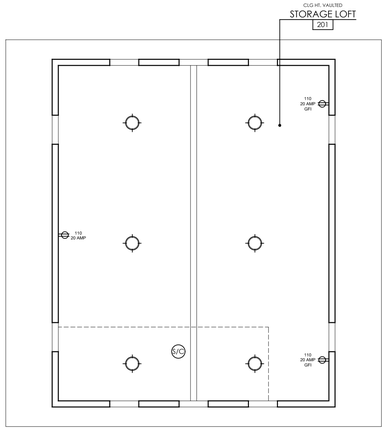
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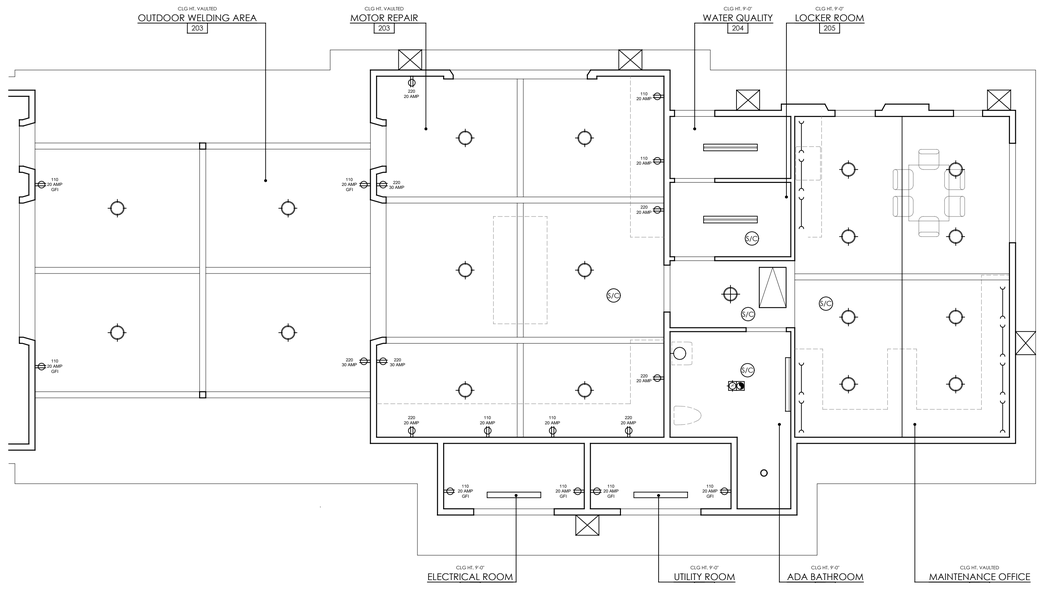
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TYP. INSTALLATION HEIGHTS





3 STORAGE BUILDING LOFT REFLECTED CEILING PLAN
3/16" = 1'-0"



2 STORAGE BUILDING PARTIAL RFLECTED CEILING PLAN
3/16" = 1'-0"

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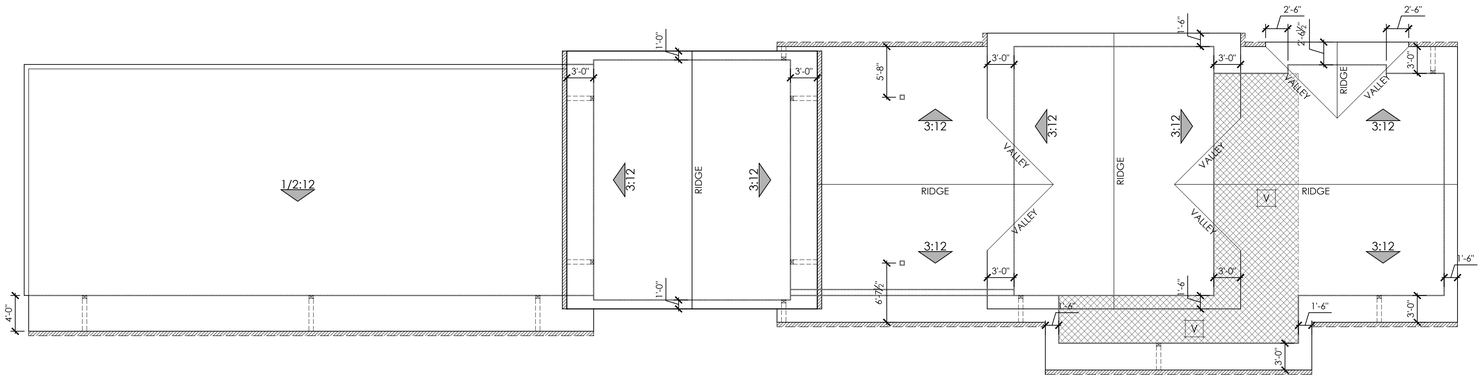
STORAGE BUILDING REFLECTED CEILING PLANS AND NOTES

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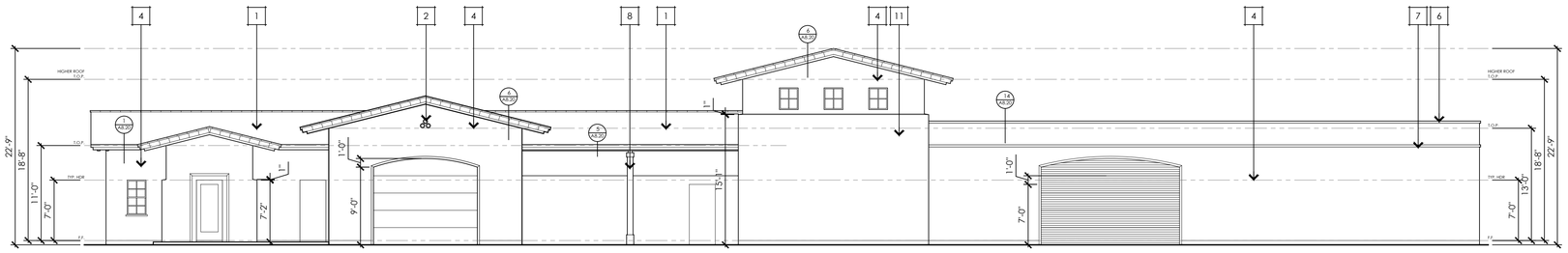
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SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

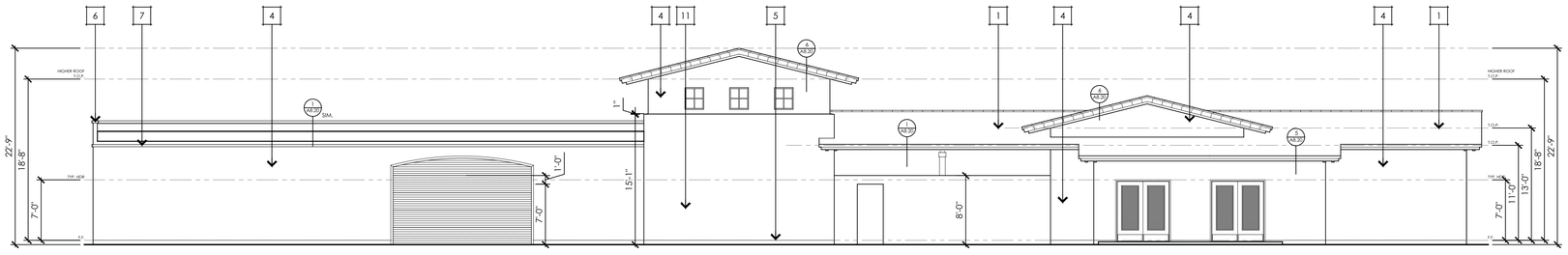
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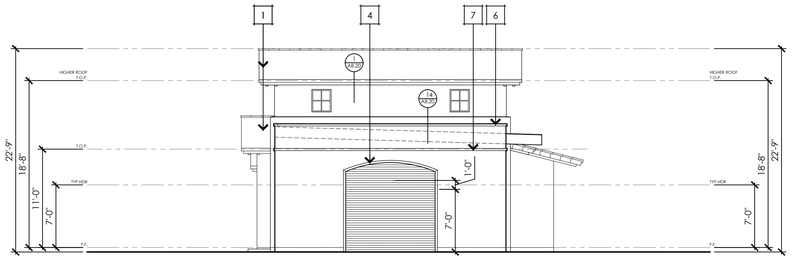
1 STORAGE BUILDING ROOF PLAN
1/8" = 1'-0"



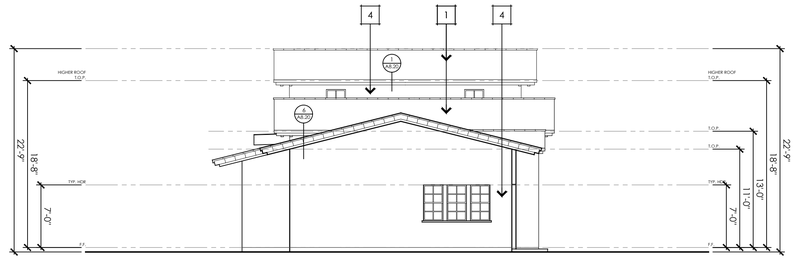
2 STORAGE BUILDING NORTH ELEVATION
1/8" = 1'-0"



3 STORAGE BUILDING SOUTH ELEVATION
1/8" = 1'-0"



5 STORAGE BUILDING WEST ELEVATION
1/8" = 1'-0"



4 STORAGE BUILDING EAST ELEVATION
1/8" = 1'-0"

XX ROOF PLAN KEYNOTES

1. COUNTER TOP, VERIFY TYPE AND COLOR OF STONE WITH OWNER.
2. KITCHEN BASE CABINET, 24"D X 36"H, STAIN GRADE, VERIFY WITH OWNER.
3. KITCHEN UPPER CABINET, 12"D X 42"H, STAIN GRADE. PROVIDE SOLID WALL BLOCKING. VERIFY WITH OWNER.
4. KITCHEN SINK W/ GARBAGE DISPOSAL.
5. SPACE FOR GAS RANGE W/ OVERHEAD EXHAUST HOOD, VENTED DIRECTLY TO OUTSIDE.
6. 36" MIN. CLEAR REFRIGERATOR SPACE, PROVIDE RECESSED COLD WATER CONNECTION.

ROOF VENT CALCULATIONS

ROOF VENT CALCS BELOW REPRESENTS A SAMPLE METHOD OF MEETING REQ. ROOF VENTING. OTHER APPROVED METHODS MAY BE ACCEPTABLE. CONTRACTOR TO VERIFY VENTING MATERIALS + METHODS.

ATTIC AREA: 378 SQ.FT.
REQ'D VENT AREA:

378 / 300 = 1.26 SQ.FT. = 182 SQ.IN.
182 / 2 = 91 SQ.IN. (UPPER & LOWER VENT)

O'HAGIN HIGH PROFILE (S) ¼" STANDARD ROOF VENT PROVIDES 97.5 SQ.IN./ EACH

REQUIRED UPPER VENT = 91 @ 97.5/ EA. = 1
REQUIRED LOWER VENT = 91 @ 97.5/ EA. = 1

ROOF PLAN NOTES

A. PROVIDE BUILT-UP CRICKETS AS NEEDED TO PREVENT STANDING WATER. ALL VALLEYS OF SUCH CRICKETS SHALL MAINTAIN A MINIMUM SLOPE OF 1/4":12".

B. ALL FLASHING SHALL BE MIN. 26 GAUGE, GALVANIZED SHEET METAL AND PAINTED OR FACTORY FINISH TO MATCH ADJACENT ROOF &/OR WALL MATERIALS

C. A MIN. OF 1" AIRSPACE SHALL BE PROVIDED BETWEEN INSULATION AND THE ROOF SHEATHING. CBC 1203.2

D. ROOFS WITH A SLOPE LESS THAN 1⁄4" PER FOOT SHALL BE DESIGNED FOR PONDING EFFECT. CBC 1611.2

E. A MINIMUM OF 1/4" PER FOOT MIN. ROOF SLOPE AT THE FLAT ROOF AREAS.

ROOF PLAN LEGEND

- X — ROOF SLOPE INDICATOR
- DOWN SPOUT
- V — O'HAGIN HIGH PROFILE (S) ¼" STANDARD ROOF VENT OR APPROVED EQUAL

XX ELEVATION KEYNOTES

1. CLASS 'A' ROOF ASSEMBLY: EAGLE ROOFING CAPISTRANO VALLEJO BLEND CONCRETE ROOF TILE, OVER 30LB FELT OVER ½" RADIANT BARRIER SHEATHING, TYP.
2. TERRACOTTA CLAY ATTIC GABLE VENTS.
3. RECESSED WINDOW, SMOOTH STUCCO FINISH, TYP.
4. 3-COAT STUCCO SMOOTH FINISH O/ METAL LATH O/ 2 LAYERS GRADE 'D' BUILDING PAPER OR EQUIVALENT. WHITE.
5. DECORATIVE TILE AROUND DOOR FRAME.
6. STUCCO FOAM WALL CAP, SMOOTH STUCCO FINISH, GRAY, TYP.
7. STUCCO FOAM BAND, SMOOTH STUCCO FINISH, GRAY, TYP.
8. STAINED WOOD TRELLIS & POSTS, WALNUT.
9. WROUGHT IRON DECORATIVE GABLE VENT, BRONZE.
10. STEEL CHIMNEY CAP, SMOOTH STUCCO FINISH, LIGHT BEIGE.
11. 3-COAT STUCCO SMOOTH FINISH O/ METAL LATH O/ 2 LAYERS GRADE 'D' BUILDING PAPER OR EQUIVALENT. GRAY.

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LICENSED ARCHITECT — ERIK G. PETERSEN — No. C-25289 — REN. 10-31-2027 — STATE OF CALIFORNIA

CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

STORAGE BUILDING ROOF PLAN, EXTERIOR ELEVATIONS AND NOTES

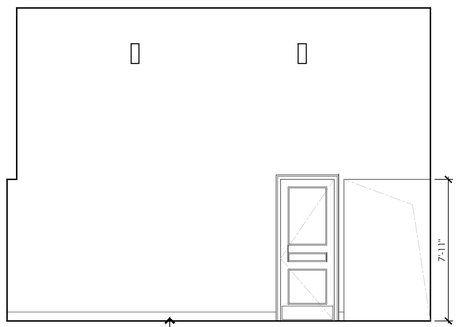
REVISIONS

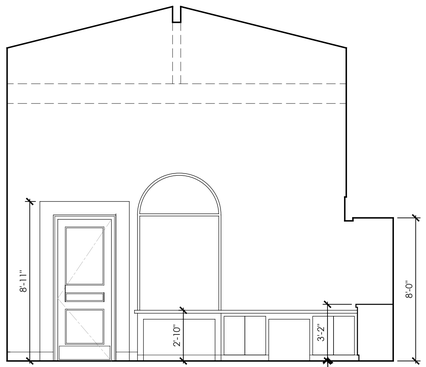
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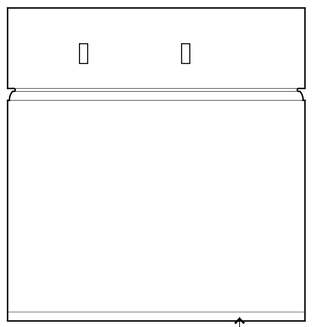
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CHK BY:	EGP

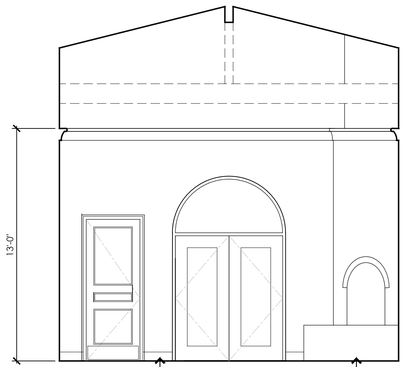
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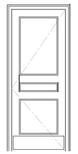
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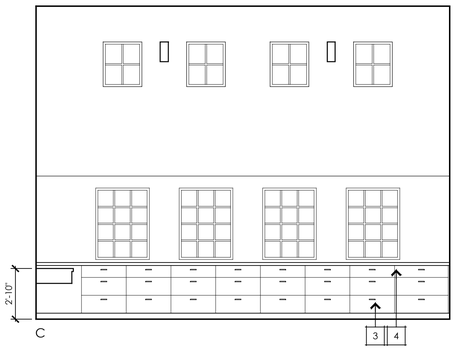


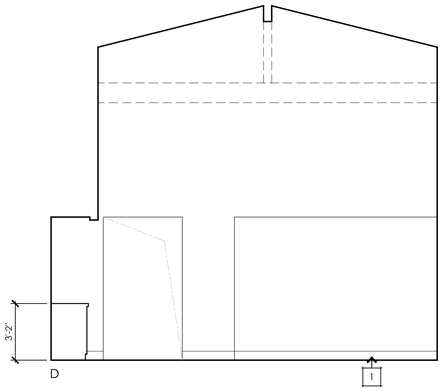


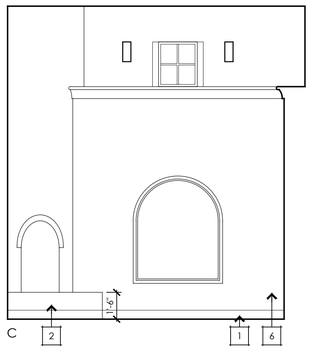


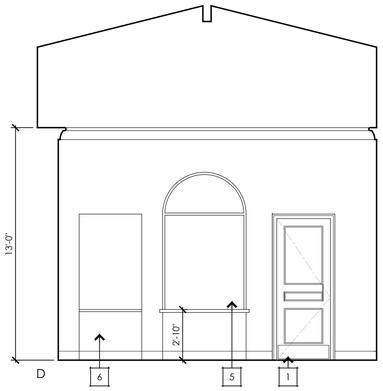












2 INTERIOR ELEVATIONS - 102 - WORK AREA

1/4" = 1'-0"

0 2 4 8 (FT)

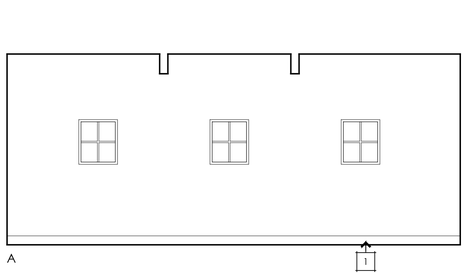
1 INTERIOR ELEVATIONS - 100 - LOBBY

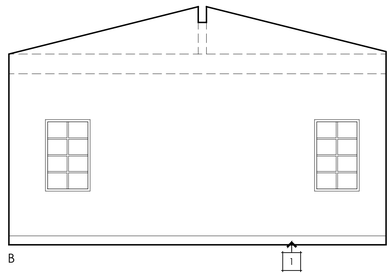
1/4" = 1'-0"

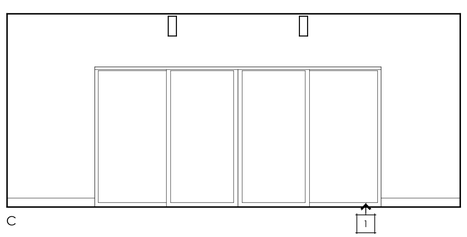
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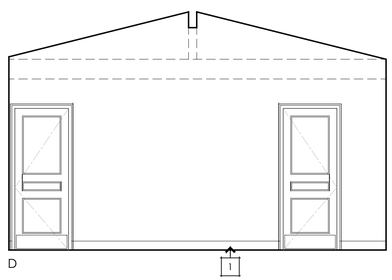
INT. ELEVATION KEYNOTES

1. 6" VINYL BASE, TYP.
2. FIRE PLACE, VERIFY WITH OWNER.
3. BASE CABINETS W/ DRAWERS.
4. GRANITE COUNTERTOP WORK SURFACE.
5. 1" THICK LAMINATED GLASS.
6. BUILT-IN BENCH, VERIFY WITH OWNER.
7. 4" TOE SPACE, U.N.O. TYP.
8. PREFABRICATED QUARTZ COUNTERTOP W/ 6" BACK SPLASH, U.N.O.
9. BASE CABINET, 24" DEEP U.N.O.
10. UPPER CABINET, PROVIDE SOLID WALL BLOCKING, 12" DEEP U.N.O.
11. KITCHEN SINK.
12. 40" MIN. CLEAR REFRIGERATOR SPACE, PROVIDE RECESSED COLD WATER CONNECTION.
13. GARBAGE DISPOSAL.
14. BUILT-IN DESK.
15. WALL MOUNTED MIRROR.
16. VANITY W/ SINK & FAUCET.
17. ACCESSIBLE LAVATORY, SEE 4/AD-1.40
18. 36" STAINLESS STEEL GRAB BAR.
19. 42" STAINLESS STEEL GRAB BAR.
20. WALL MOUNTED TOWEL DISPENSER/ WASTE RECEPTACLE.
21. WALL MOUNTED TOILET PAPER DISPENSER.
22. WALL MOUNTED TOILET SEAT COVER DISPENSER.
23. WALL MOUNTED SOAP DISPENSER.
24. UNDERSINK WHEELCHAIR PROTECTION.
25. CERAMIC TILE.
26. CERAMIC TILE BASE.
27. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET AS REQUIRED PER CODE. PROVIDE 30" MIN. CLR. WIDTH AND 24" MIN. CLR. IN FRONT.
28. BUILT-IN SHELF, VERIFY WITH OWNER.
29. ROLL-UP DOOR.





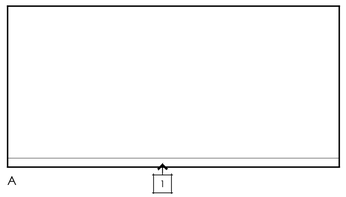


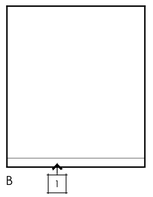


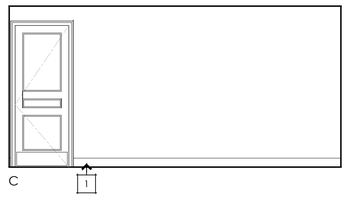
5 INTERIOR ELEVATIONS - 101 - CONFERENCE ROOM

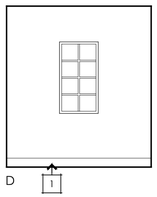
1/4" = 1'-0"

0 2 4 8 (FT)





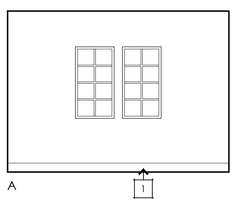


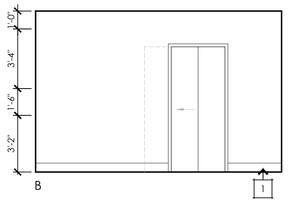


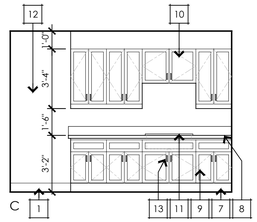
3 INTERIOR ELEVATIONS - 115 - COPY ROOM

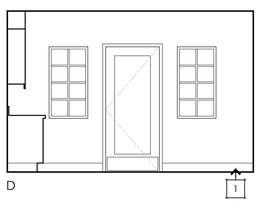
1/4" = 1'-0"

0 2 4 8 (FT)









4 INTERIOR ELEVATIONS - 116 - BREAK ROOM

1/4" = 1'-0"

0 2 4 8 (FT)

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REN. 10-31-2027
STATE OF CALIFORNIA

CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING INTERIOR ELEVATIONS AND NOTES

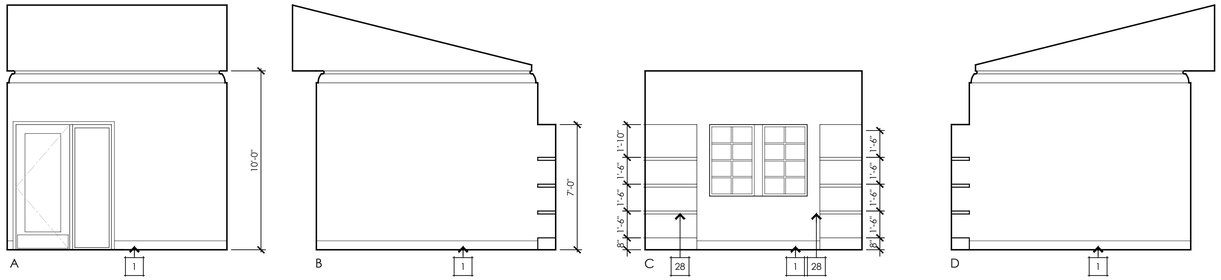
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DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

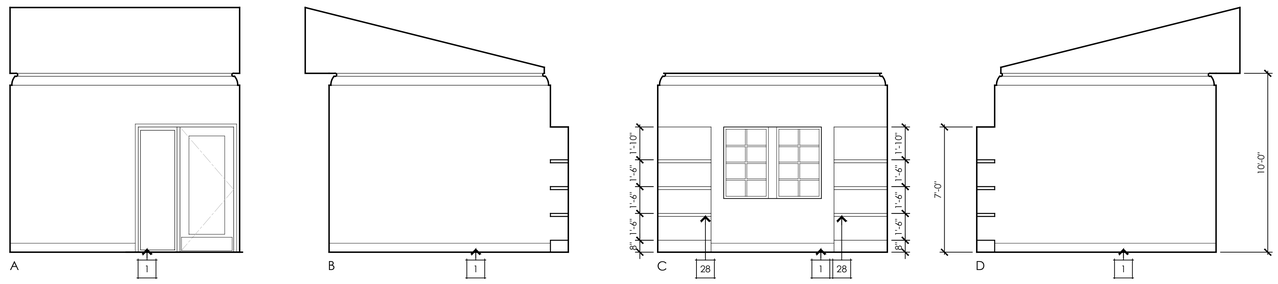
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1 INTERIOR ELEVATIONS - 104 - FINANCE MANAGER'S OFFICE

1/4" = 1'-0"

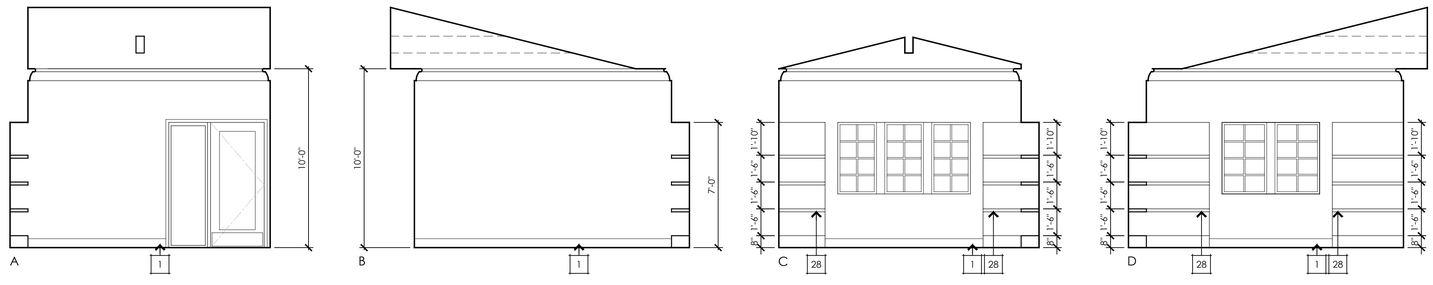
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2 INTERIOR ELEVATIONS - 105 - ASSITANT MANAGER'S OFFICE

1/4" = 1'-0"

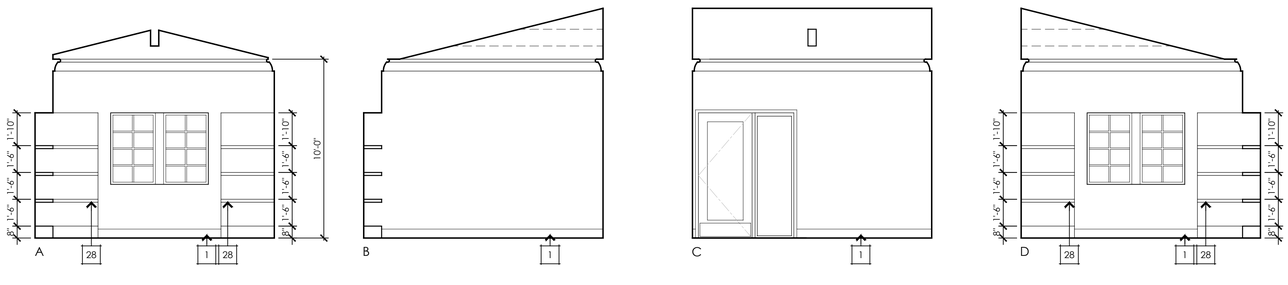
0 2 4 8 (FT)



3 INTERIOR ELEVATIONS - 106 - GENERAL MANAGER'S OFFICE

1/4" = 1'-0"

0 2 4 8 (FT)



4 INTERIOR ELEVATIONS - 109 - OPERATIONS SUPERVISOR'S OFFICE

1/4" = 1'-0"

0 2 4 8 (FT)

INT. ELEVATION KEYNOTES

1. 6" VINYL BASE, TYP.
2. FIRE PLACE, VERIFY WITH OWNER.
3. BASE CABINETS W/ DRAWERS.
4. GRANITE COUNTERTOP WORK SURFACE.
5. 1" THICK LAMINATED GLASS.
6. BUILT-IN BENCH, VERIFY WITH OWNER.
7. 4" TOE SPACE, U.N.O. TYP.
8. PREFABRICATED QUARTZ COUNTERTOP W/ 6" BACK SPLASH, U.N.O.
9. BASE CABINET, 24" DEEP U.N.O.
10. UPPER CABINET, PROVIDE SOLID WALL BLOCKING, 12" DEEP U.N.O.
11. KITCHEN SINK.
12. 40" MIN. CLEAR REFRIGERATOR SPACE, PROVIDE RECESSED COLD WATER CONNECTION.
13. GARBAGE DISPOSAL.
14. BUILT-IN DESK.
15. WALL MOUNTED MIRROR.
16. VANITY W/ SINK & FAUCET.
17. ACCESSIBLE LAVATORY. SEE 4/AD-1.40
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19. 42" STAINLESS STEEL GRAB BAR.
20. WALL MOUNTED TOWEL DISPENSER/ WASTE RECEPTACLE.
21. WALL MOUNTED TOILET PAPER DISPENSER.
22. WALL MOUNTED TOILET SEAT COVER DISPENSER.
23. WALL MOUNTED SOAP DISPENSER.
24. UNDERSINK WHEELCHAIR PROTECTION.
25. CERAMIC TILE.
26. CERAMIC TILE BASE.
27. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET AS REQUIRED PER CODE. PROVIDE 30" MIN. CLR. WIDTH AND 24" MIN. CLR. IN FRONT.
28. BUILT-IN SHELF, VERIFY WITH OWNER.
29. ROLL-UP DOOR.

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CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING INTERIOR ELEVATIONS AND NOTES

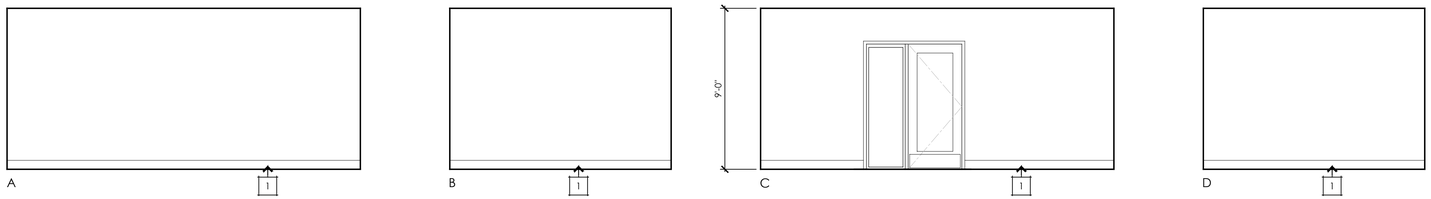
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CHK BY:	EGP

SHEET NO.

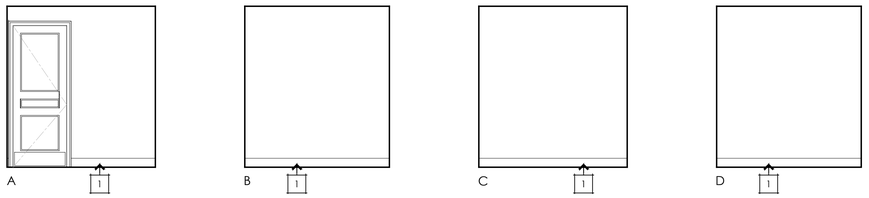
A7.20



1 INTERIOR ELEVATIONS - 107 - ARCHIVE ROOM

1/4" = 1'-0"

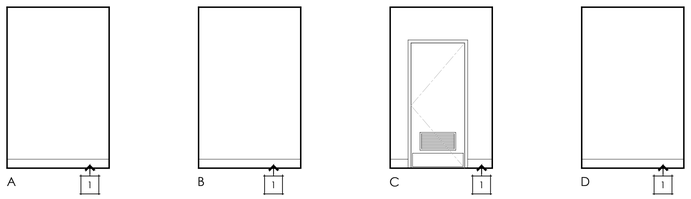
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3 INTERIOR ELEVATIONS - 112 - IT ROOM

1/4" = 1'-0"

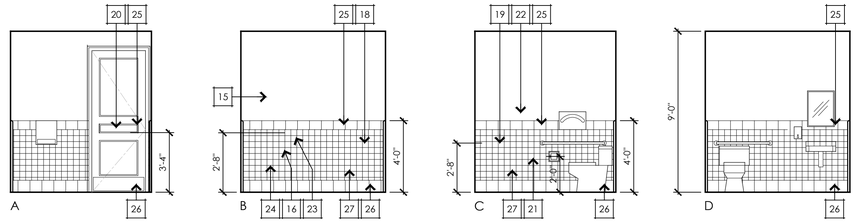
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5 INTERIOR ELEVATIONS - 117 - JANITOR

1/4" = 1'-0"

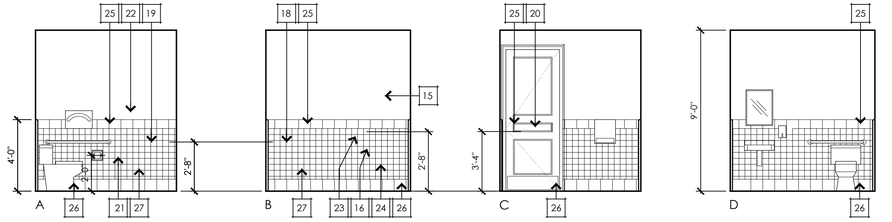
0 2 4 8 (FT)



2 INTERIOR ELEVATIONS - 111 - ADA TOILET 1

1/4" = 1'-0"

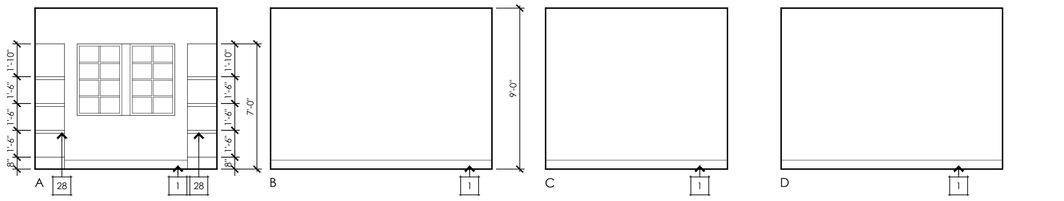
0 2 4 8 (FT)



4 INTERIOR ELEVATIONS - 113 - ADA TOILET 2

1/4" = 1'-0"

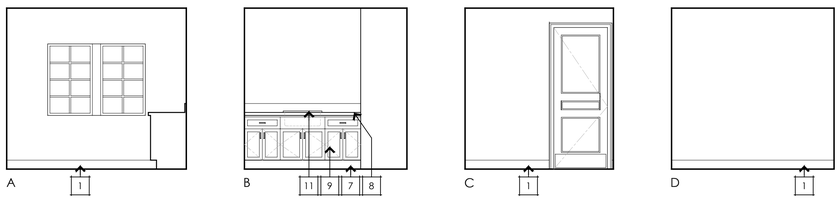
0 2 4 8 (FT)



7 INTERIOR ELEVATIONS - 108 - MEETING ROOM

1/4" = 1'-0"

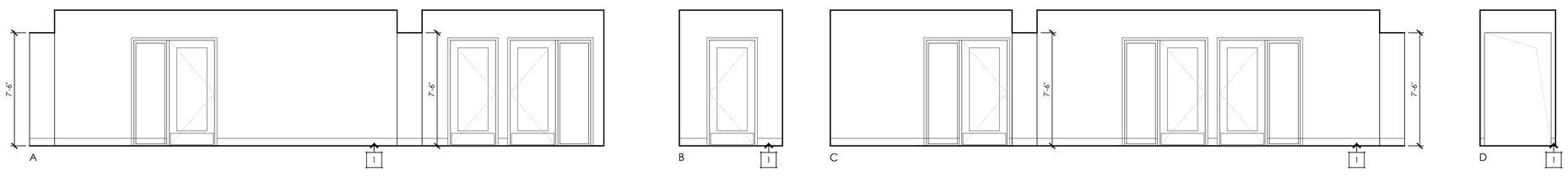
0 2 4 8 (FT)



6 INTERIOR ELEVATIONS - 114 - QUIET ROOM

1/4" = 1'-0"

0 2 4 8 (FT)



8 INTERIOR ELEVATIONS - 103 - HALLWAY

1/4" = 1'-0"

0 2 4 8 (FT)

INT. ELEVATION KEYNOTES

1. 6" VINYL BASE, TYP.
2. FIRE PLACE, VERIFY WITH OWNER.
3. BASE CABINETS W/ DRAWERS.
4. GRANITE COUNTERTOP WORK SURFACE.
5. 1" THICK LAMINATED GLASS.
6. BUILT-IN BENCH, VERIFY WITH OWNER.
7. 4" TOE SPACE, U.N.O. TYP.
8. PREFABRICATED QUARTZ COUNTERTOP W/ 6" BACK SPLASH, U.N.O.
9. BASE CABINET, 24" DEEP U.N.O.
10. UPPER CABINET, PROVIDE SOLID WALL BLOCKING, 12" DEEP U.N.O.
11. KITCHEN SINK.
12. 40" MIN. CLEAR REFRIGERATOR SPACE, PROVIDE RECESSED COLD WATER CONNECTION.
13. GARBAGE DISPOSAL.
14. BUILT-IN DESK.
15. WALL MOUNTED MIRROR.
16. VANITY W/ SINK & FAUCET.
17. ACCESSIBLE LAVATORY. SEE 4/AD-1.40
18. 36" STAINLESS STEEL GRAB BAR.
19. 42" STAINLESS STEEL GRAB BAR.
20. WALL MOUNTED TOWEL DISPENSER/ WASTE RECEPTACLE.
21. WALL MOUNTED TOILET PAPER DISPENSER.
22. WALL MOUNTED TOILET SEAT COVER DISPENSER.
23. WALL MOUNTED SOAP DISPENSER.
24. UNDERSINK WHEELCHAIR PROTECTION.
25. CERAMIC TILE.
26. CERAMIC TILE BASE.
27. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET AS REQUIRED PER CODE. PROVIDE 30" MIN. CLR. WIDTH AND 24" MIN. CLR. IN FRONT.
28. BUILT-IN SHELF, VERIFY WITH OWNER.
29. ROLL-UP DOOR.

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STAMP

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No. C-25289
REN. 10-31-2027
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CONSULTANTS

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

MAIN BUILDING INTERIOR ELEVATIONS AND NOTES

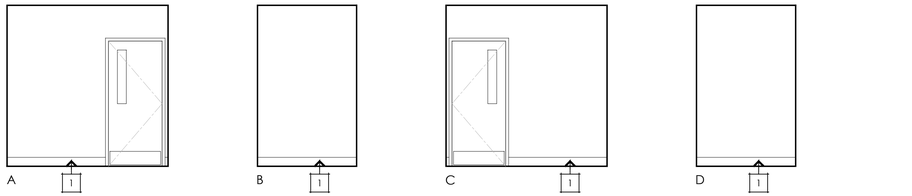
REVISIONS

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5	-

DATE:	12/17/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

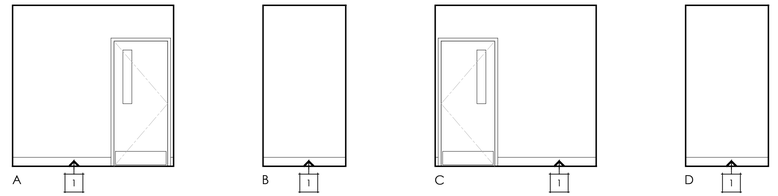
A7.30



2 INTERIOR ELEVATIONS - 205 - LOCKER ROOM

1/4" = 1'-0"

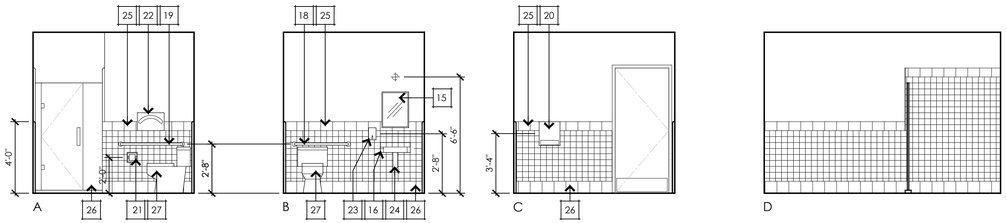
0 2 4 8 (FT)



1 INTERIOR ELEVATIONS - 204 - WATER QUALITY

1/4" = 1'-0"

0 2 4 8 (FT)



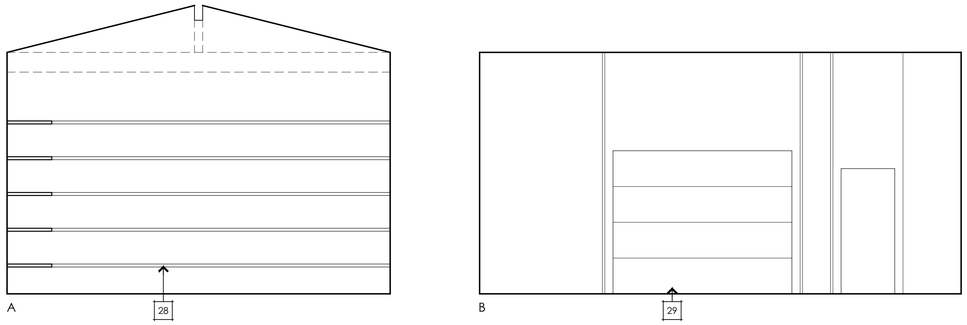
3 INTERIOR ELEVATIONS - 206 - ADABATHROOM

1/4" = 1'-0"

0 2 4 8 (FT)

INT. ELEVATION KEYNOTES

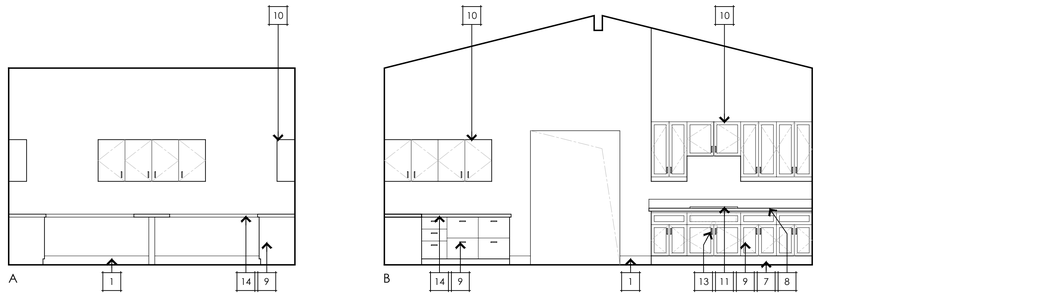
1. 6" VINYL BASE, TYP.
2. FIRE PLACE, VERIFY WITH OWNER.
3. BASE CABINETS W/ DRAWERS.
4. GRANITE COUNTERTOP WORK SURFACE.
5. 1" THICK LAMINATED GLASS.
6. BUILT-IN BENCH, VERIFY WITH OWNER.
7. 4" TOE SPACE, U.N.O. TYP.
8. PREFABRICATED QUARTZ COUNTERTOP W/ 6" BACK SPLASH, U.N.O.
9. BASE CABINET, 24" DEEP U.N.O.
10. UPPER CABINET, PROVIDE SOLID WALL BLOCKING, 12" DEEP U.N.O.
11. KITCHEN SINK.
12. 40" MIN. CLEAR REFRIGERATOR SPACE, PROVIDE RECESSED COLD WATER CONNECTION.
13. GARBAGE DISPOSAL.
14. BUILT-IN DESK.
15. WALL MOUNTED MIRROR.
16. VANITY W/ SINK & FAUCET.
17. ACCESSIBLE LAVATORY. SEE 4/AD-1.40
18. 36" STAINLESS STEEL GRAB BAR.
19. 42" STAINLESS STEEL GRAB BAR.
20. WALL MOUNTED TOWEL DISPENSER/ WASTE RECEPTACLE.
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22. WALL MOUNTED TOILET SEAT COVER DISPENSER.
23. WALL MOUNTED SOAP DISPENSER.
24. UNDERSINK WHEELCHAIR PROTECTION.
25. CERAMIC TILE.
26. CERAMIC TILE BASE.
27. ACCESSIBLE FLOOR MOUNTED FLUSH VALVE TOILET AS REQUIRED PER CODE. PROVIDE 30" MIN. CLR. WIDTH AND 24" MIN. CLR. IN FRONT.
28. BUILT-IN SHELF, VERIFY WITH OWNER.
29. ROLL-UP DOOR.



5 INTERIOR ELEVATIONS - 203 - MOTOR REPAIR

1/4" = 1'-0"

0 2 4 8 (FT)



4 INTERIOR ELEVATIONS - 207 - MAINTENANCE OFFICE

1/4" = 1'-0"

0 2 4 8 (FT)

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

STORAGE BUILDING INTERIOR ELEVATIONS AND NOTES

REVISIONS

1	-
2	-
3	-
4	-
5	-

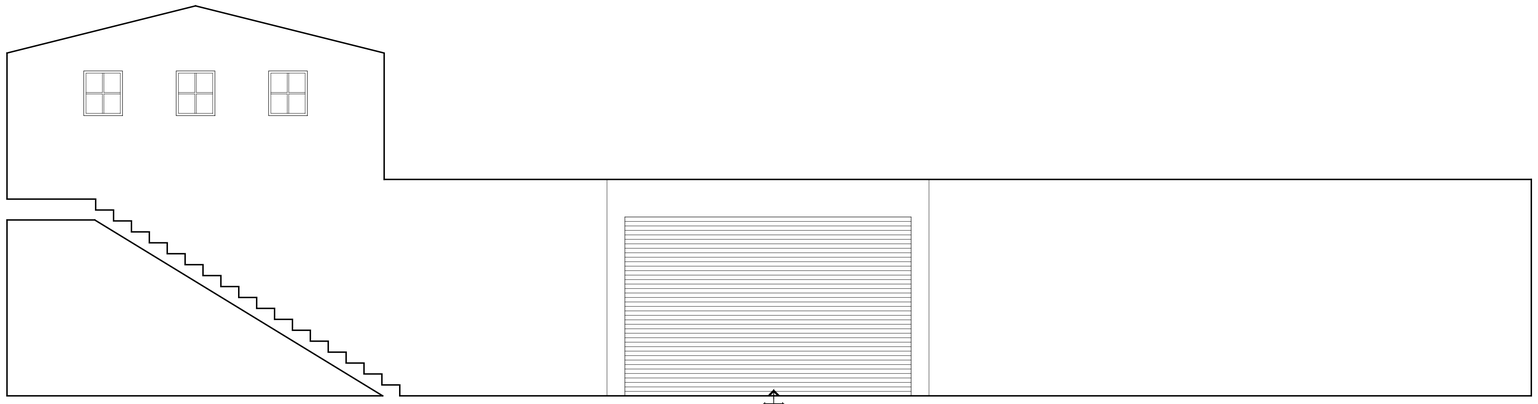
DATE:	12/17/2025
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JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

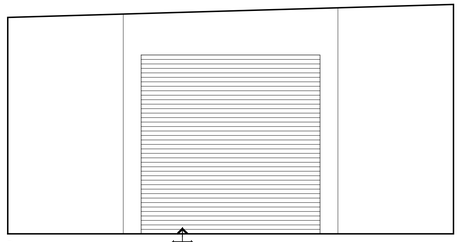
A7.40

INT. ELEVATION KEYNOTES

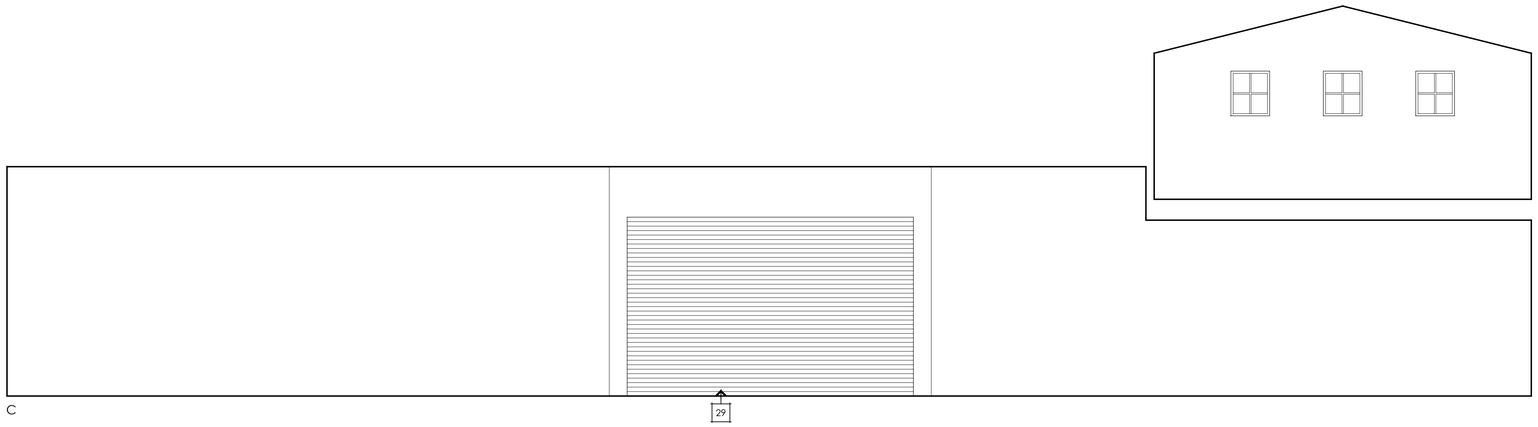
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28. BUILT-IN SHELF, VERIFY WITH OWNER.
29. ROLL-UP DOOR.



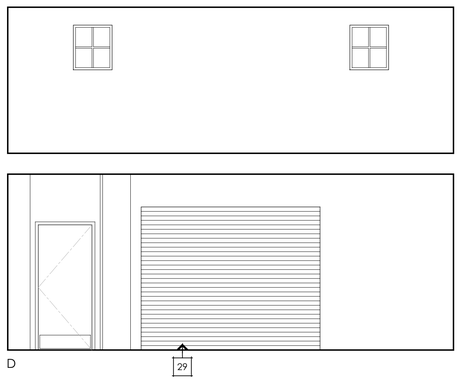
A



B



C



D

1 INTERIOR ELEVATIONS - 200/201 - STORAGE/ STORAGE LOFT

1/4" = 1'-0"

0 2 4 8 (FT)

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

STORAGE BUILDING INTERIOR ELEVATIONS AND NOTES

REVISIONS

1	-
2	-
3	-
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5	-

DATE:	12/17/2025
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CHK BY:	EGP

SHEET NO.

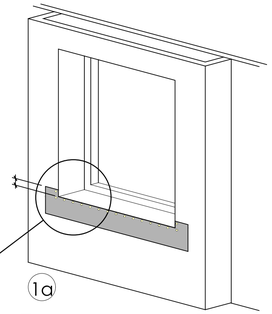
A7.50

PROVIDE 3" MIN. FROM WINDOW ROUGH OPENING TO RECESS (FURRING) FRAMING ON ALL SIDES.

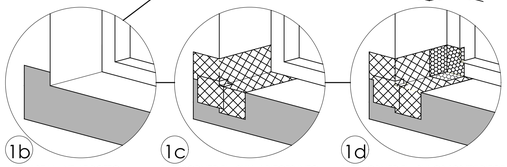
SLOPE SHELF AT RECESS 1":12" MIN. AWAY FROM WINDOW WALL.

PROVIDE SOLID BACKING FOR BITUMINOUS MEMBRANE AT SHELF AND 6" MIN. UP SIDE

ATTACH LOWER BIB OF 12" WIDE STRIP OF FLASHING MATERIAL. TOP OF BIB SHOULD BE 3" ABOVE THE OUTSIDE EDGE OF THE SLOPED SILL. ATTACH FLASHING WITH GALVANIZED ROOFING NAILS OR RUST-RESISTANT STAPLES.



1a



1b

APPLY SEALANT AT BOTTOM CORNERS OF RECESS.

1c

SET 'CORNER FLASH' 'A' PIECES INTO SEALANT AT BOTTOM CORNERS ('CORNER FLASH' BY TLS LABS. USE 'GS' 100A, 102A, 106A OR 112A DEPENDING ON THE DEPTH OF RECESS.

STAPLE IN PLACE ALONG TOP EDGE USING RUST-RESISTANT STAPLES.

1d

SET 'CORNER FLASH'-GS 100 "B" PIECE DIRECTLY ON TOP OF THE "A" PIECE. BUT 'B' PIECES AS NEEDED TO ALLOW IT TO WRAP AROUND JAMB. STAPLE IN PLACE AT TOP EDGE.

('CORNER FLASH' BY TLS LABS.)

REPEAT AT OTHER SILL CORNER.

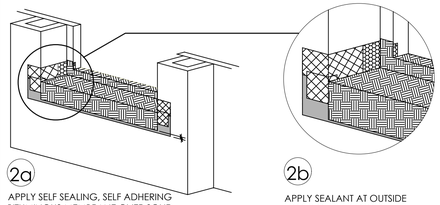
1

WATER-RESISTANT PAPER TO BE 60 MINUTE GRADE 'D' PAPER MINIMUM

C.R.C. 612.1 & 703.8 CALLS CALLS FOR FLASHING OF ALL EXTERIOR OPENINGS EXPOSED TO THE WEATHER TO MAKE THEM WEATHER PROOF. SINCE C.R.C. DOES NOT OUTLINE PROCEDURES FOR WINDOW FLASHING, TECHNIQUES SHOWN HERE ARE RECOMMENDED. USE APPROVED 12" WIDE SELF-SEALING FLASHING. CAULK BACK OF WINDOW FRAMES BEFORE SETTING. USE WINDOWS THAT ARE WATER TIGHT.

26 GA. G.I. FLASHING REQUIRED AS SHOWN IN OTHER WINDOW DETAILS TO BE INSTALLED BY SHEET METAL CONTRACTOR.

LINE WIRE, WHEN USED AS BACKING TO SUPPORT WATER-RESISTANT BUILDING PAPER OR FELT BENEATH LATH FOR STUCCO SHOULD BE INSTALLED ACCORDING TO INDUSTRY STANDARDS AND PRACTICE NO ATTACHMENT DEVICE NOR THE WIRE BACKING SHOULD COVER OR PENETRATE FLASHING MATERIAL. PERIPHERAL FLASHING AT ALL EDGES OF WALL OPENINGS MUST COVER WIRE BACKING.



2a

APPLY SELF SEALING, SELF ADHERING BITUMINOUS MEMBRANE OVER SOLID BACKING STARTING ON THE ROUGH SILL. RUN ALONG SHELF AND DOWN FACE OF FURRING TO 1" FROM BOTTOM EDGE OF BIB STRIP.

2b

APPLY SEALANT AT OUTSIDE EDGES OF BITUMINOUS MEMBRANE AND TOOL FLAT

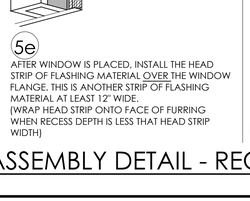
2



3a

ATTACH UPPER BIB OF WATER-RESISTANT PAPER STARTING AT SILL ROUGH OPENING AND EXTEND DOWN SILL WALL, ALONG RECESS SHELF AND DOWN FRONT OF FURRING TO 2" BELOW BITUMINOUS MEMBRANE (1" BELOW STARTER BIB)

ATTACH UPPER BIB WITH GALVANIZED ROOFING NAILS OR RUST-RESISTANT STAPLES ALONG UPPER EDGE.



3b

ATTACH SILL STRIP OF MIN. 12" WIDE FLASHING MATERIAL. TOP OF STRIP SHOULD BE FLUSH WITH BOTTOM SILL OF ROUGH OPENING.

ATTACH FLASHING WITH GALVANIZED ROOFING NAILS OR RUST-RESISTANT STAPLES.

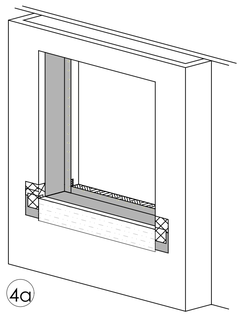
(WRAP SILL STRIP DOWN FACE OF FURRING WHEN RECESS DEPTH IS LESS THAN SILL STRIP WITH)

3

AFTER SILL STRIP IS IN PLACE ATTACH JAMB STRIPS OF FLASHING MATERIAL (SIDE OF OPENING) AT LEAST 12" WIDE WITH INSIDE EDGE OF FLASHING FLUSH WITH EDGE OF WINDOW OPENING.
TOP EDGE TO BE FLUSH WITH TOP OF RECESS OPENING. BOTTOM EDGE TO BE FLUSH WITH SLOPED SHELF OF RECESS OPENING.
.
REPEAT FOR BOTH JAMBS.

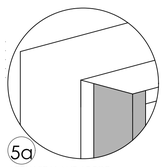
ATTACH FLASHING WITH GALVANIZED ROOFING NAILS OR RUST-RESISTANT STAPLES.

(WRAP SILL STRIP DOWN FACE OF FURRING WHEN RECESS DEPTH IS LESS THAN SILL STRIP WITH)



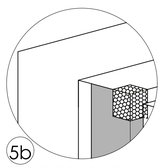
4a

4



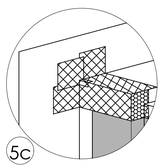
5a

APPLY SEALANT AT TOP CORNERS OF RECESS.



5b

SET 'CORNER FLASH GS 100 'B' PIECES INTO SEALANT AT TOP RECESS CORNERS. CUT 'B' PIECES AS NEEDED TO ALLOW IT TO WRAP AROUND JAMB AND HEAD. THEN STAPLE IN PLACE AT TOP EDGE OF 'B' PIECE. ('CORNER' FLASH BY TLS LABS)

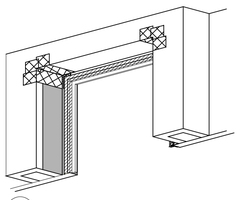


5c

SET 'CORNER FLASH' 'A' PIECES DIRECTLY ON TOP OF 'B' PIECES ('CORNER FLASH' BY TLS LABS. USE 'GS' 100A, 102A, 106A OR 112A DEPENDING ON DEPTH OF RECESS)

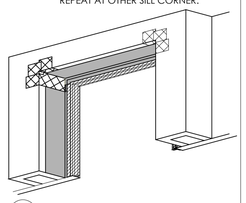
STAPLE IN PLACE ALONG TOP EDGE USING RUST-RESISTANT STAPLES.

REPEAT AT OTHER SILL CORNER.



5d

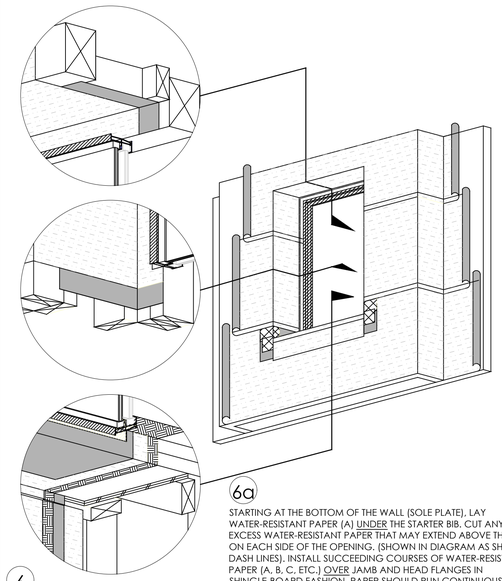
APPLY A CONTINUOUS BEAD OF SEALANT TO THE BACK SURFACES OF THE WINDOW FLANGE, THEN PLACE THE WINDOW INTO THE ROUGH OPENING WITH FLANGES OVER THE INSTALLED FLASHING STRIPS.



5e

AFTER WINDOW IS PLACED, INSTALL THE HEAD STRIP OF FLASHING MATERIAL OVER THE WINDOW FLANGE. THIS IS ANOTHER STRIP OF FLASHING MATERIAL AT LEAST 12" WIDE.
(WRAP HEAD STRIP ONTO FACE OF FURRING WHEN RECESS DEPTH IS LESS THAT HEAD STRIP WIDTH)

5



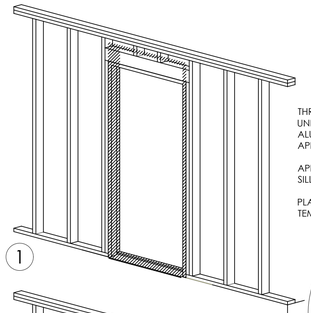
6a

STARTING AT THE BOTTOM OF THE WALL (SOLE PLATE), LAY WATER-RESISTANT PAPER (A) UNDER THE STARTER BIB, CUT ANY EXCESS WATER-RESISTANT PAPER THAT MAY EXTEND ABOVE THE SILL ON EACH SIDE OF THE OPENING. (SHOWN IN DIAGRAM AS SHORT DASH LINES). INSTALL SUCCEEDING COURSES OF WATER-RESISTANT PAPER (A, B, C, ETC.) OVER JAMB AND HEAD FLANGES IN SHINGLE-BOARD FASHION. PAPER SHOULD RUN CONTINUOUSLY OVER HEAD WITH NO SPLICES ABOVE WINDOW.

6

16 WINDOW FLASHING ASSEMBLY DETAIL - RECESSED WINDOWS

3/8"=1'-0"

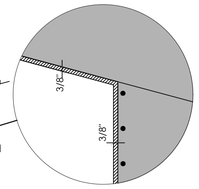


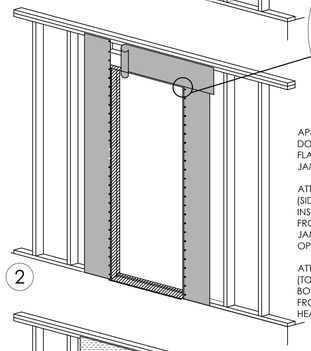
1

THRESHOLD-PROVIDE BITUMINOUS COATING UNDER THRESHOLD FOR SEPARATION OF ALUMINUM AND CONCRETE, OR OTHER APPROVED MEASURE TO ISOLATE/PROTECT

APPLY SEALANT TO FLOOR AND/OR BOTTOM OF SILL PER MANUFACTURER

PLACE DOOR UNIT INTO ROUGH OPENING AND TEMPORARILY FASTEN PER MANUFACTURER



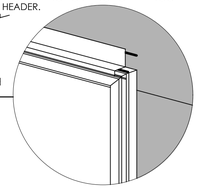


2

APPLY SEALANT TO EXTERIOR EDGE OF THE DOOR FRAME JAMBS AND HEAD TO RECEIVE FLASHING SET 3/8" IN FROM THE INSIDE EDGES OF JAMBS AND HEAD

ATTACH JAMB STRIPS OF FLASHING MATERIAL (SIDES OF OPENING) AT LEAST 12" WIDE WITH THE INSIDE EDGE OF FLASHING POSITIONED 3/8" IN FROM THE INSIDE EDGE OF THE DOOR FRAME. JAMB STRIPS SHOULD EXTEND 12" MIN. ABOVE OPENING

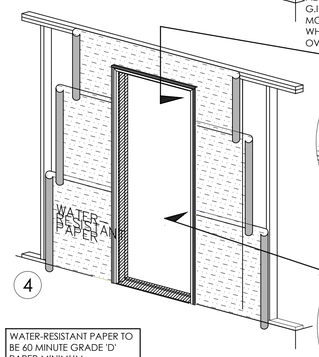
ATTACH HEAD STRIP OF FLASHING MATERIAL (TOP OF OPENING) AT LEAST 12" WIDE WITH THE BOTTOM EDGE OF FLASHING POSITIONED 3/8" UP FROM THE BOTTOM EDGE OF THE DOOR HEADER.



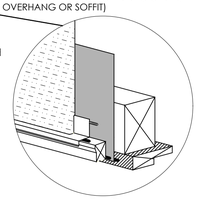
APPLY A CONTINUOUS BEAD OF SEALANT ON THE EXTERIOR SURFACE OF JAMB AND HEAD FLASHING ON THE DOOR SIDE EDGE OF THE FLASHING.

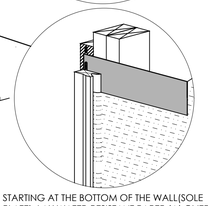
ATTACH BRICK MOULD OVER SEALANT AND ALIGNED WITH JAMB AND HEAD STRIPS OF FLASHING SET 3/8" IN FROM EDGES OF DOOR FRAME.
AT BRICK MOULD AT DOOR HEAD, APPLY SEALANT TO TOP OF BRICK MOULD AND AT ADJACENT WALL TO RECEIVE 26 GA. FLASHING. G.I. FLASHING TO EXTEND PAST THE BRICK MOULD. (26 GA. G.I. FLASHING NOT REQUIRED WHEN DOOR IS PROTECTED BY 3'-0" MIN. OVERHANG OR SOFFIT)

3



4





STARTING AT THE BOTTOM OF THE WALL(SOLE PLATE), LAY WATER-RESISTANT PAPER (A) OVER THE JAMB FLASHING STRIP AND LAP INTO THE JAMB BRICK MOULD.

INSTALL SUCCEEDING COURSES OF WATER-RESISTANT PAPER (B, C, ETC.) OVER JAMB FLASHING, SHINGLE-BOARD FASHION, AND LAP INTO THE JAMB BRICK MOULD.

AT DOOR HEAD PAPER SHOULD RUN CONTINUOUSLY ABOVE THE DOOR WITH NO SPLICES AND ALP OVER 26 GA. G.I. FLASHING. (RUN PAPER ONTO TOP OF BRICK MOULD WHEN G.I. FLASHING IS NOT REQUIRED.

WATER-RESISTANT PAPER TO BE 60 MINUTE GRADE 'D' PAPER MINIMUM

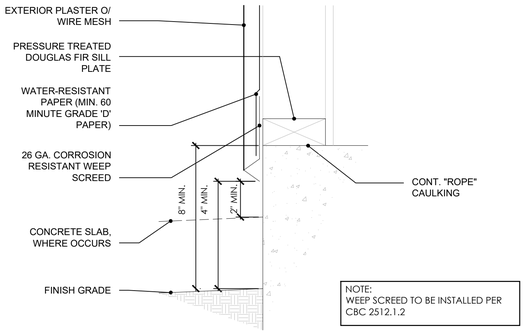
NOTE:
C.R.C. 612.1 & 703.8 CALLS CALLS FOR FLASHING OF ALL EXTERIOR OPENINGS EXPOSED TO THE WEATHER TO MAKE THEM WEATHER PROOF. SINCE C.R.C. DOES NOT OUTLINE PROCEDURES FOR DOOR FLASHING, TECHNIQUES SHOWN HERE ARE RECOMMENDED. USE APPROVED 12" WIDE SELF-SEALING FLASHING. CAULK BACK OF DOOR FRAMES BEFORE SETTING. USE DOORS THAT ARE WATER TIGHT.

26 GA. G.I. FLASHING REQUIRED AS SHOWN IN OTHER DOOR DETAILS TO BE INSTALLED BY SHEET METAL CONTRACTOR.

LINE WIRE, WHEN USED AS BACKING TO SUPPORT WATER-RESISTANT BUILDING PAPER OR FELT BENEATH LATH FOR STUCCO SHOULD BE INSTALLED ACCORDING TO INDUSTRY STANDARDS AND PRACTICE NO ATTACHMENT DEVICE NOR THE WIRE BACKING SHOULD COVER OR PENETRATE FLASHING MATERIAL. PERIPHERAL FLASHING AT ALL EDGES OF WALL OPENINGS MUST COVER WIRE BACKING.

8 DOOR FLASHING DETAIL

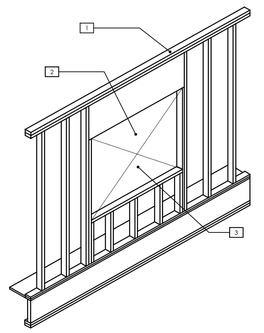
3"=1'-0"



NOTE:
WEEP SCREED TO BE INSTALLED PER CBC 2512.1.2

1 WEEP SCREED AT CONCRETE SLAB

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

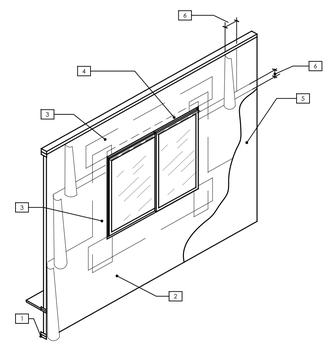


LEGEND

1. SQUARE & LEVEL FRAMING
2. ROUGH FRAMED OPENING SUFFICIENTLY LARGER IN WIDTH & HEIGHT THAN THE ACTUAL FRAME DIMENSIONS OF THE WINDOW. TO ASSURE ADEQUATE CLEARANCE. CONSULT THE WINDOW MANUFACTURER'S LITERATURE FOR THE RECOMMENDED ROUGH OPENING DIMENSIONS.
3. FURRING STRIP AROUND WINDOW FOR HARDWARE CLEARANCE AS NEEDED. TRIAL FIT WINDOW TO ENSURE PROPER FIT AND OPERATION. REFER TO WINDOW HEAD, JAMB, AND SILL DETAILS.

2 TYPICAL WINDOW FLASHING

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



LEGEND

1. WEEP SCREED @ STUCCO
2. INSTALL WATER-RESISTIVE BARRIER (WRB) SUCH AS TYVEK' OR APPROVED EQ. OVER ALL. INSTALL PER MANUFACTURER'S RECOMMEDN.
3. INSTALL WINDOW SELF-ADHERED HEAD FLASHING (SAF) @ HEAD, JAMB, SILLS. WRB PROTECTION LAYER LAPS OVER FLASHING FLANGE + WRB.
4. IF Z-BAR FLASHING USED, APPLY BELOW WRB + SAF
5. EXTERIOR WALL FINISH: INSTALL PER WALL FINISH MANUFACTURER'S RECOMMEND.
6. 6" VERTICAL/ HORIZONTAL LAPS, OR PER MANUFACTURER'S RECOMMENDATION.

3 TYP. WINDOW FLASHING

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

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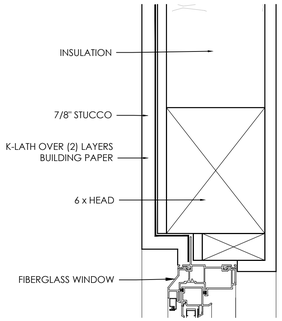
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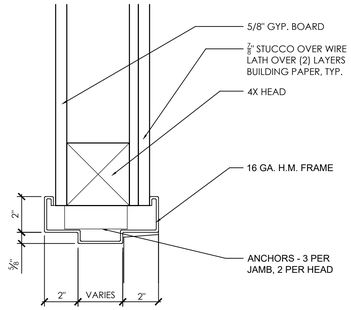
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CHK BY:	EGP

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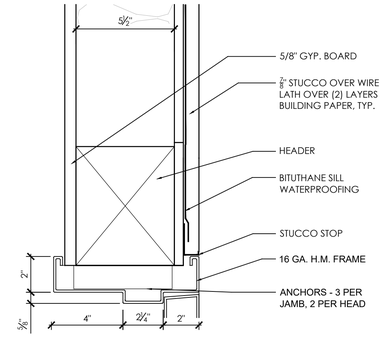
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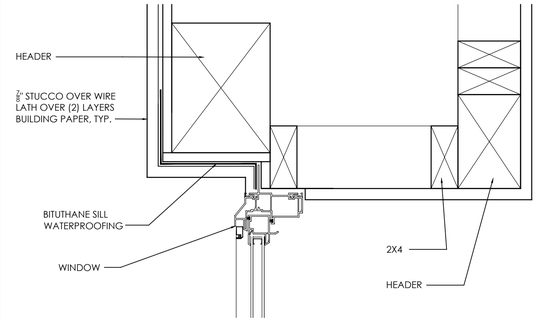
13 NOT USED
8" = 1'-0"



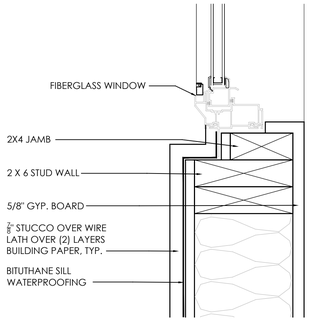
9 TYPICAL INTERIOR DOOR HEAD
3"=1'-0"



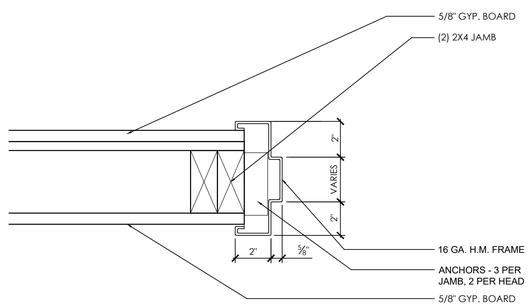
5 TYPICAL EXTERIOR DOOR HEAD
3"=1'-0"



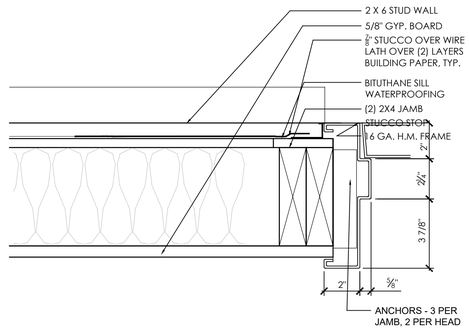
1 TYPICAL WINDOW HEAD
3"=1'-0"



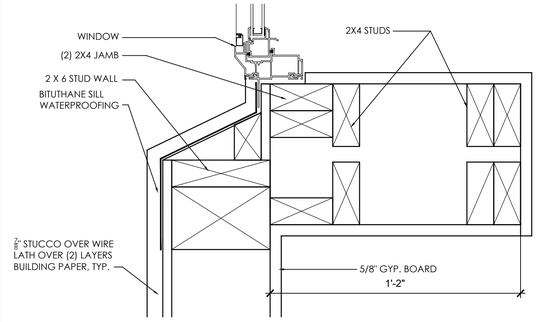
14 NOT USED
8" = 1'-0"



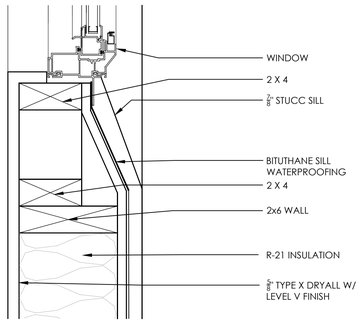
10 TYPICAL INTERIOR DOOR JAMB
3"=1'-0"



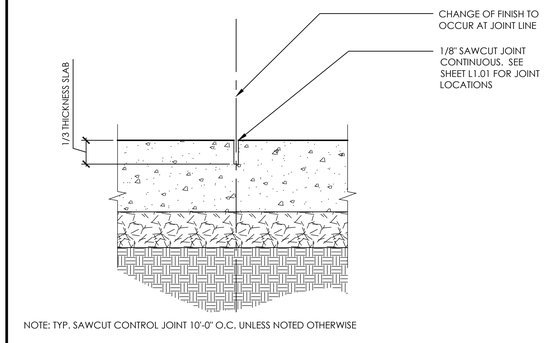
6 TYPICAL EXTERIOR DOOR JAMB
3"=1'-0"



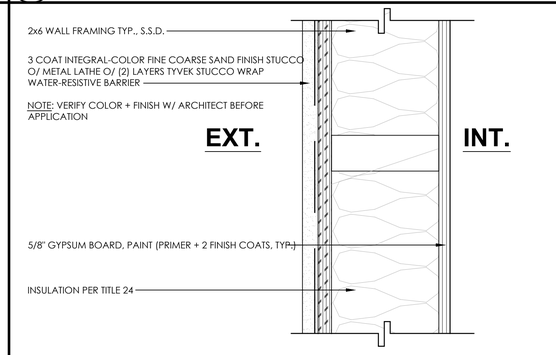
2 TYPICAL WINDOW JAMB
3"=1'-0"



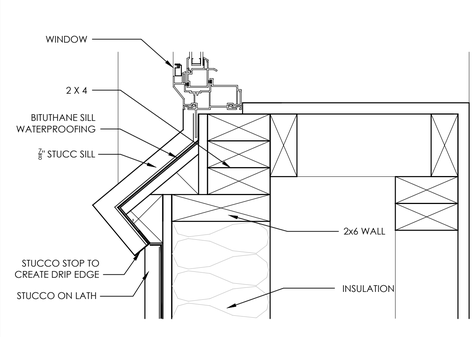
15 HIGH WINDOW SILL
3"=1'-0"



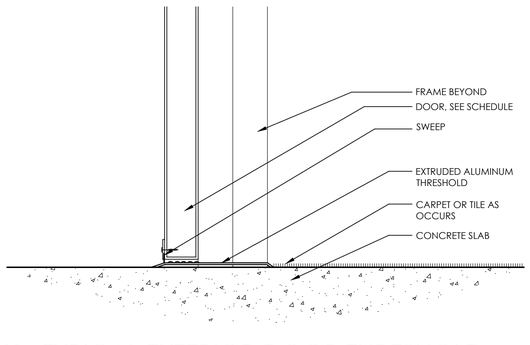
11 TYPICAL CONTROL JOINT DETAIL
3"=1'-0"



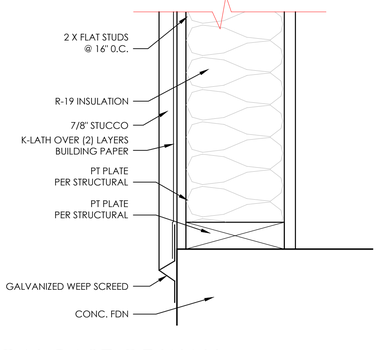
7 TYP. STUCCO SIDING APPLICATION
3"=1'-0"



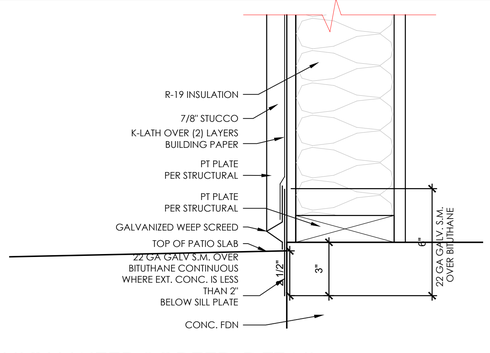
3 TYPICAL WINDOW SILL
3"=1'-0"



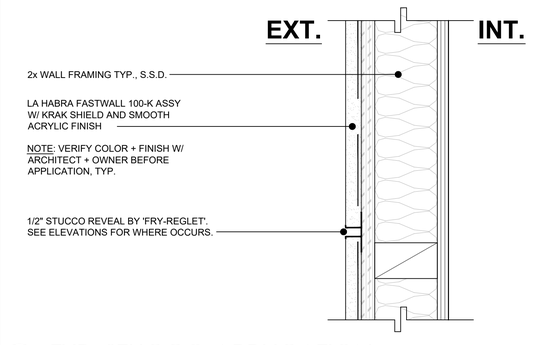
16 TYPICAL EXTERIOR DOOR THRESHOLD
3"=1'-0"



12 TYPICAL BASE OF WALL
3"=1'-0"



8 HIGH WEEP SCREED DETAIL
3"=1'-0"



4 TYP. STUCCO APPLICATION
3"=1'-0"

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REVISIONS

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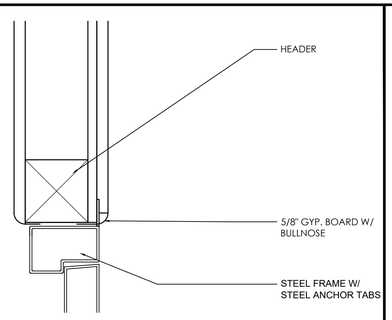
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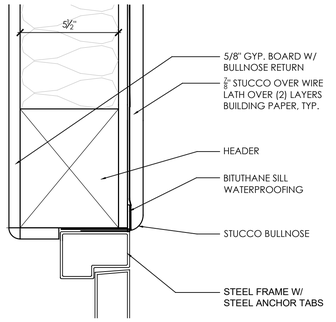
A8.10

13 NOT USED
N.T.S.

9 NOT USED
N.T.S.



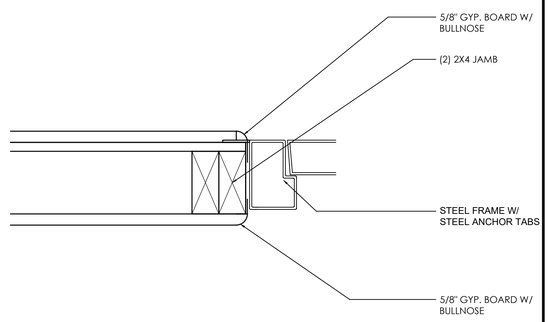
5 TYPICAL INTERIOR STEEL DOOR HEAD
3"=1'-0"



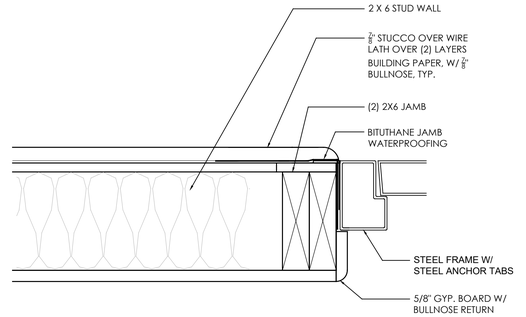
1 TYPICAL EXTERIOR STEEL DOOR HEAD
3"=1'-0"

14 NOT USED
N.T.S.

10 NOT USED
N.T.S.



6 TYPICAL INTERIOR STEEL DOOR JAMB
3"=1'-0"

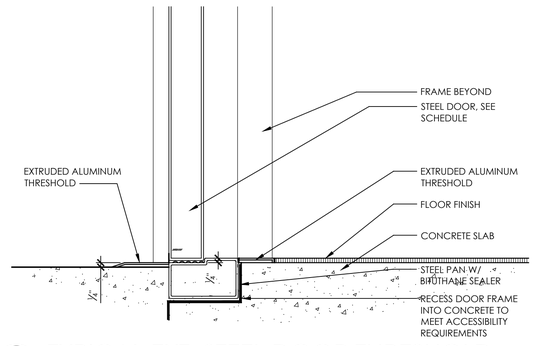


2 TYPICAL EXTERIOR STEEL DOOR JAMB
3"=1'-0"

15 NOT USED
N.T.S.

11 NOT USED
N.T.S.

7 NOT USED
N.T.S.



3 TYPICAL EXT. STEEL DOOR THRESHOLD
3"=1'-0"

16 NOT USED
N.T.S.

12 NOT USED
N.T.S.

8 NOT USED
N.T.S.

4 NOT USED
N.T.S.

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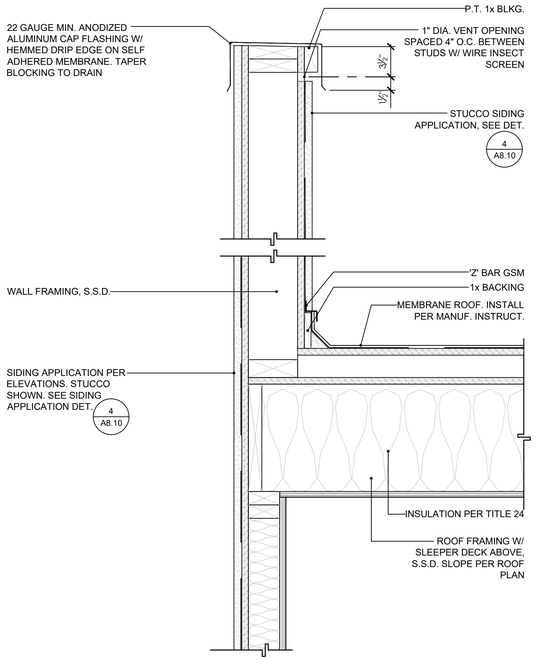
REVISIONS

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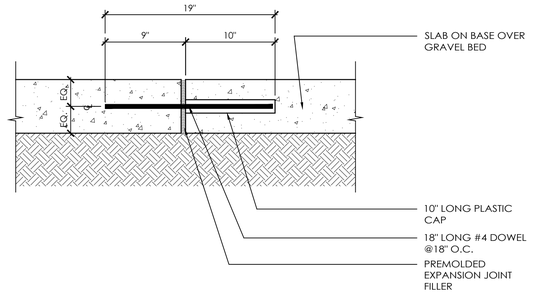
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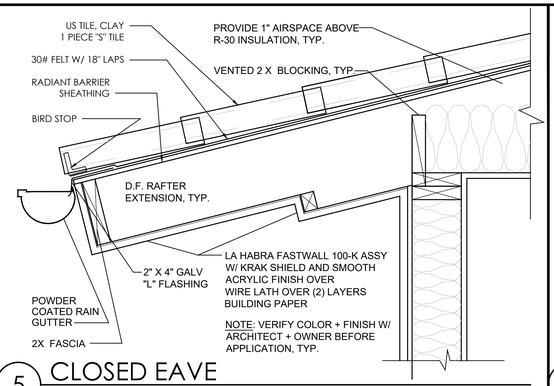
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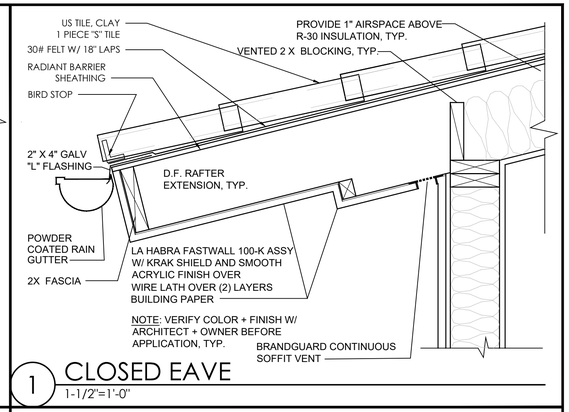
14 TYP. PARAPET WALL
1-1/2"=1'-0"



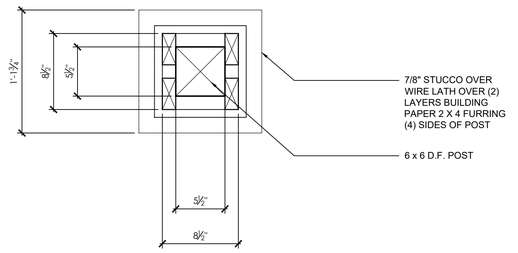
9 CONCRETE EXPANSION JOINT
1-1/2"=1'-0"



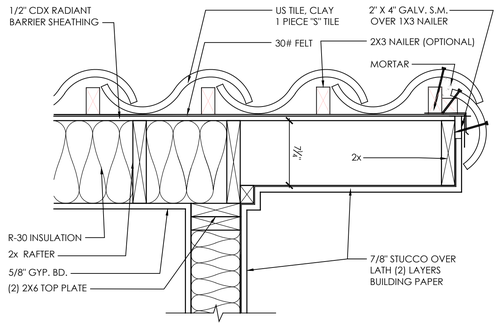
5 CLOSED EAVE
1-1/2"=1'-0"



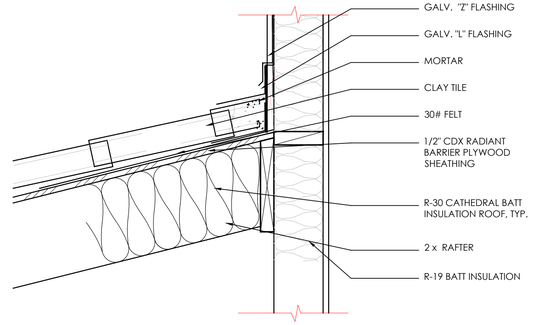
1 CLOSED EAVE
1-1/2"=1'-0"



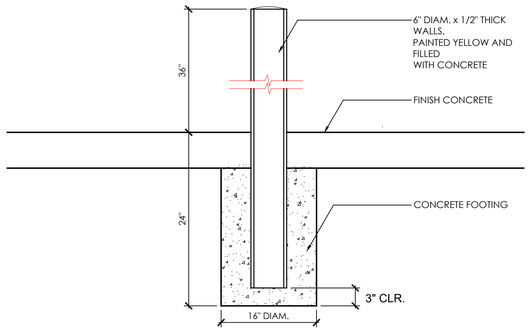
10 POST DETAIL @ COURTYARD
1-1/2"=1'-0"



6 TYPICAL RAKE
1-1/2"=1'-0"

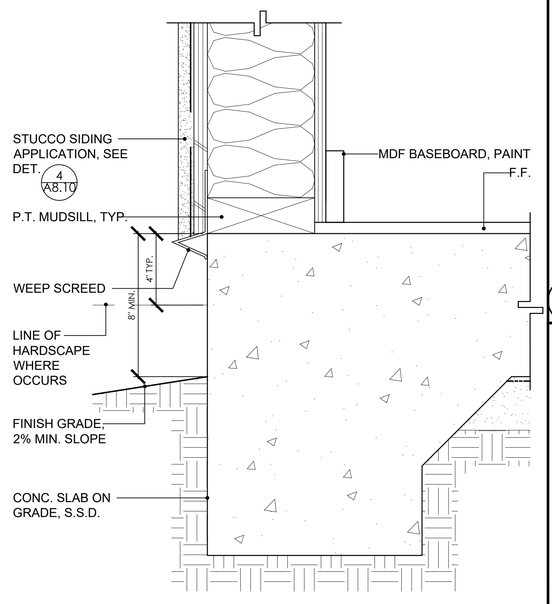


2 FRAMING DETAIL
1-1/2"=1'-0"



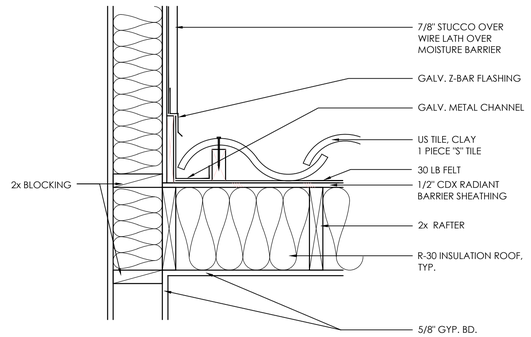
15 ROUND PIPE BOLLARD
1"=1'-0"

16 NOT USED
N.T.S.

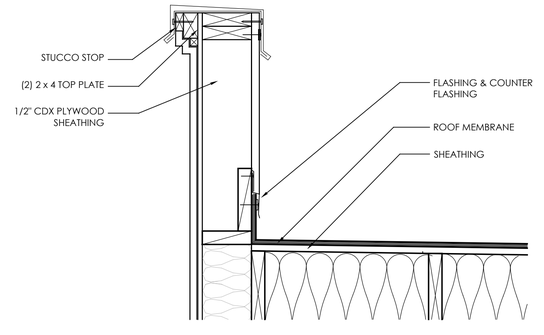


12 TYP. SLAB TO WALL CONNECTION
3"=1'-0"

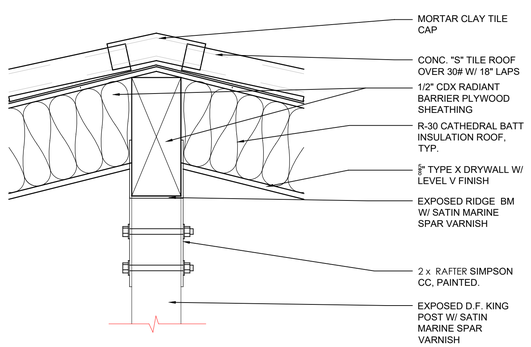
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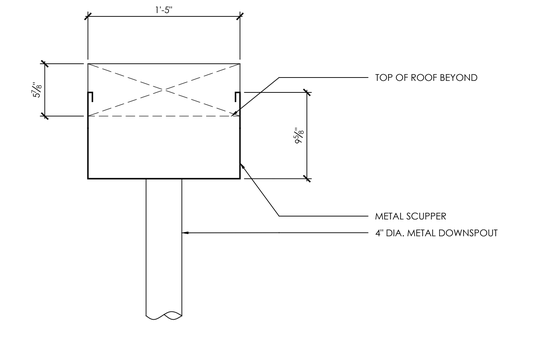
7 FRAMING DETAIL
1-1/2"=1'-0"



3 PARAPET DETAIL @ LOBBY
1-1/2"=1'-0"



8 RIDGE DETAIL
1-1/2"=1'-0"



4 SCUPPER DETAIL
1-1/2"=1'-0"

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

ARCHITECTURAL DETAILS

REVISIONS

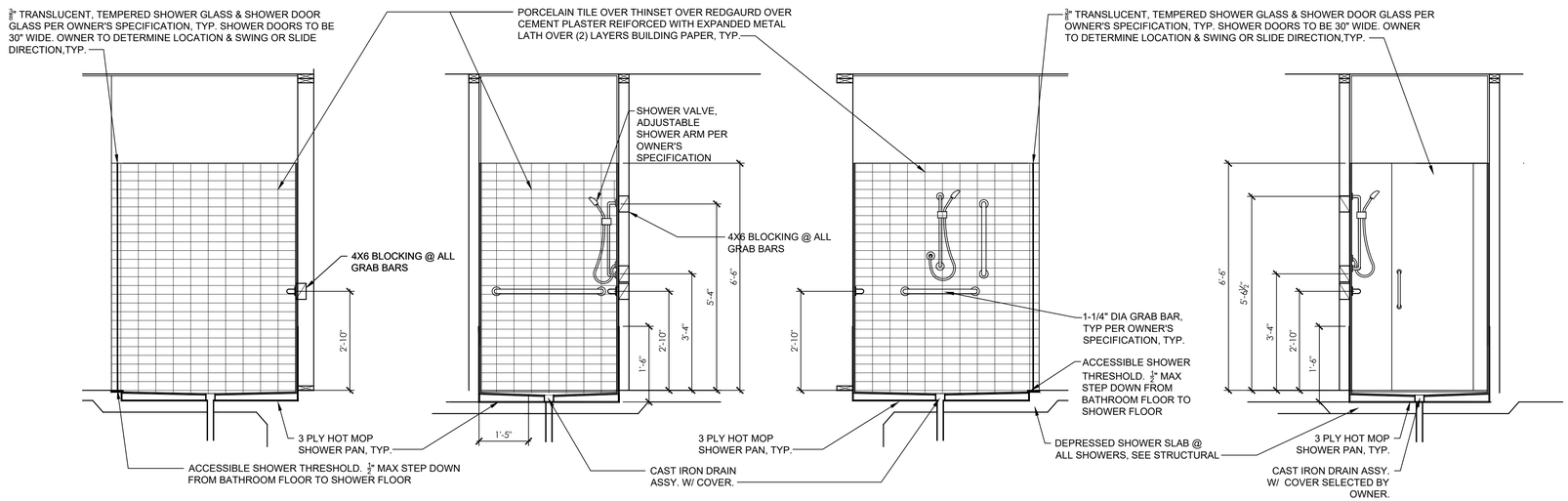
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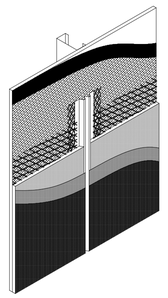
SHEET NO.

A8.20

NOTE:
1. ALL METAL FINISHES INCLUDING DDRAIN COVER, SHOWER HEAD, SHOWER VALVES, GRAB BARS AND SHOWER DOOR HARDWARE TO MATCH. OWNER TO SELECT FINISH.
2. ALL WALL TILE TO BE 3" X 6" WHITE SUBWAY TILE.
3. ALL FLOOR & SEAT TILE TO BE 1" X 1" SELECTED FROM MANUFACTURER'S STANDARD COLORS.



14 TYP. SHOWER DETAIL
1/2"=1'-0"



SHEATHING (BY OTHERS)

PAREX USA WATER-RESISTIVE & AIR BARRIER COATING

WATER-RESISTIVE BARRIER SHEET

LATH PER ASTM C1063

CONTROL JOINT

PAREX USA STUCCO BASECOAT

PAREX USA PRIMER (OPTIONAL - FOR USE WITH ACRYLIC OR ELASTOMERIC FINISH ONLY. NOT CEMENTITIOUS FINISHES)

PAREX USA FINISH

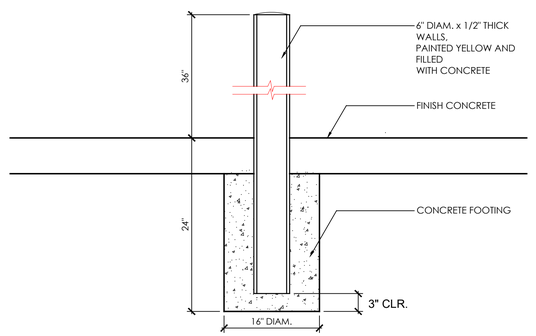
E1.02 CONTROL JOINT

PAREX ARMOURWALL 100 & 300, LAHABRA FASTWALL 100 & 300, EL REY FASTWALL & FIBER-47, TEIFS ONE COAT & SCRATCH & BROWN

HE ☐ KRAK-SHIELD ■ WATERMASTER

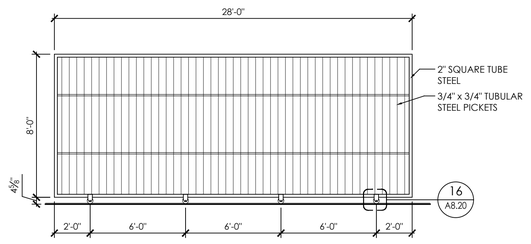
NOTE:
1. TO ENSURE A CONTINUOUS AIR BARRIER ACROSS THE BUILDING ENVELOPE, A CONTINUOUS AIR SEAL SHOULD BE MADE AT EACH SUBSTRATE CHANGE, JOINTS/GAPS, PENETRATIONS AND DISSIMILAR MATERIAL TERMINATIONS. THERE MUST BE CONSIDERATION OF THE DESIGNER IN THE OVERALL WALL ASSEMBLY DESIGN.
2. STUCCO CLADDINGS AND ANY CLADDING USING A MORTAR BED REQUIRE THE USE OF A SLIPSHEET INSTALLED OVER THE WATER-RESISTIVE & AIR BARRIER COATING TO PREVENT ADHESION TO THE STUCCO.
3. KRAK-SHIELD (NOT SHOWN) WHEN SPECIFIED SEE RELATED DETAILS.
4. REFER TO PAREX USA SPECIFICATIONS SPECIFIED BASECOAT PRODUCT & THICKNESS

1 STUCCO CONTROL JOINT
1-1/2"=1'-0"

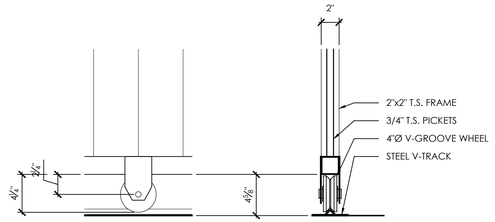


2 ROUND PIPE BOLLARD
1"=1'-0"

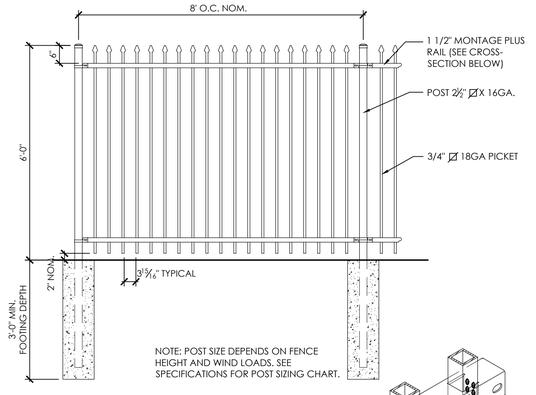
15 NOT USED
N.T.S.

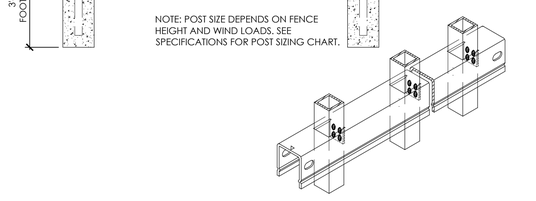


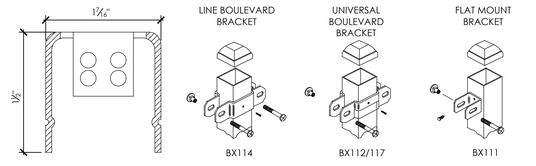
11 VEHICLE GATES
1/4"=1'-0"



7 GATE DETAIL
1-1/2"=1'-0"





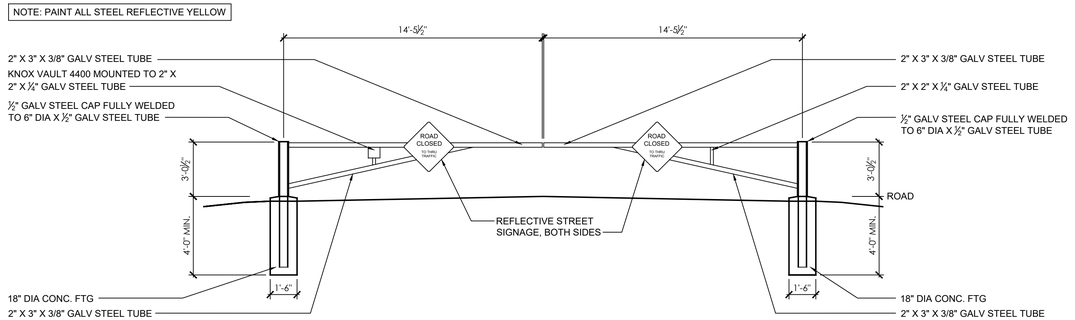


VALUES SHOWN ARE NOMINAL AND NOT TO BE USED FOR INSTALLATION PURPOSES. SEE PRODUCT SPECIFICATION FOR INSTALLATION REQUIREMENTS.

4 STEEL FENCING DETAIL
1/2"=1'-0"

16 NOT USED
N.T.S.

NOTE: PAINT ALL STEEL REFLECTIVE YELLOW



12 ROAD GATE DETAIL
1/4"=1'-0"

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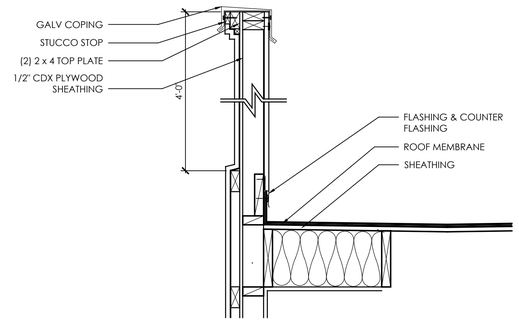
REVISIONS

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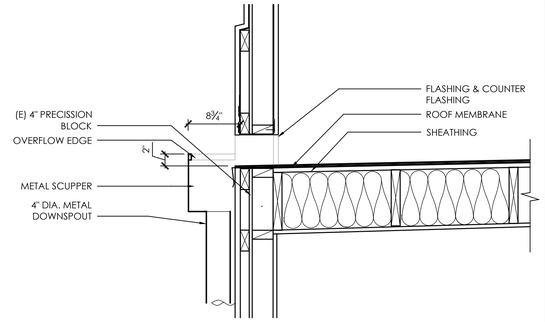
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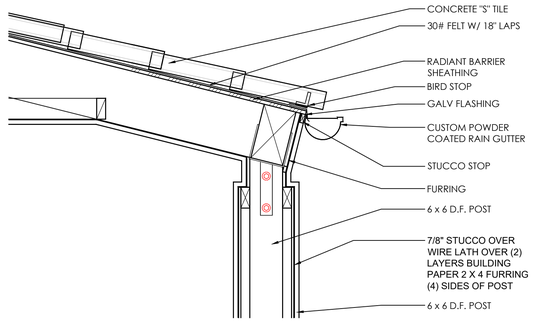
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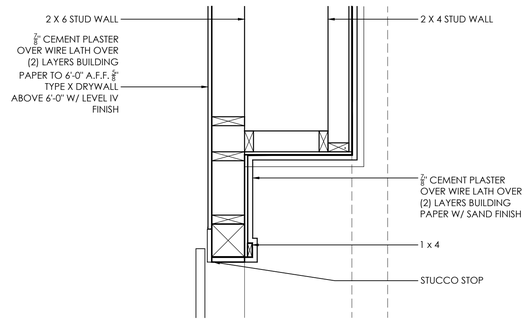
13 TYPICAL PARAPET DETAIL
1"=1'-0"



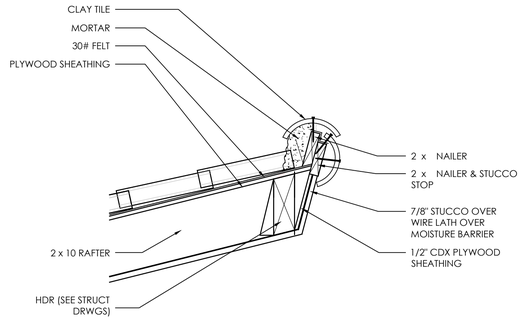
9 SCUPPER DETAIL
1"=1'-0"



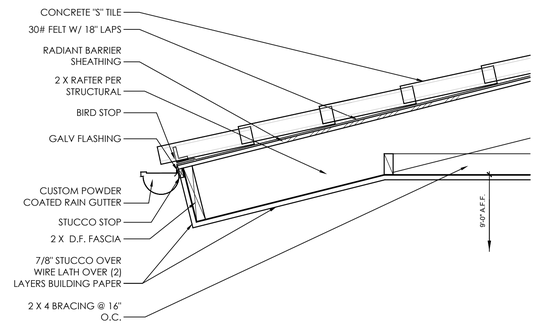
5 POST @ COURTYARD
1"=1'-0"



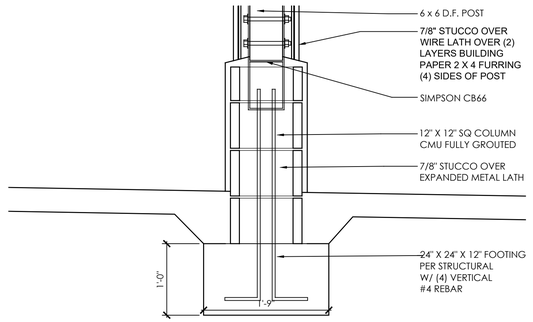
1 JAMB @ SECTIONAL OVERHEAD DOOR
1"=1'-0"



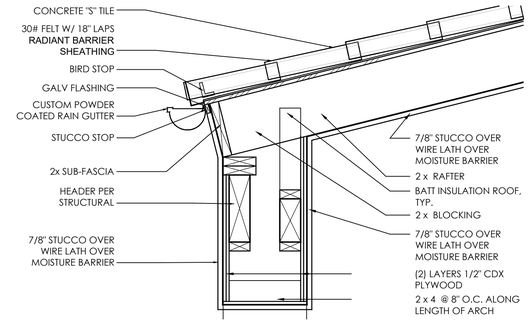
14 EAVE DETAIL
1"=1'-0"



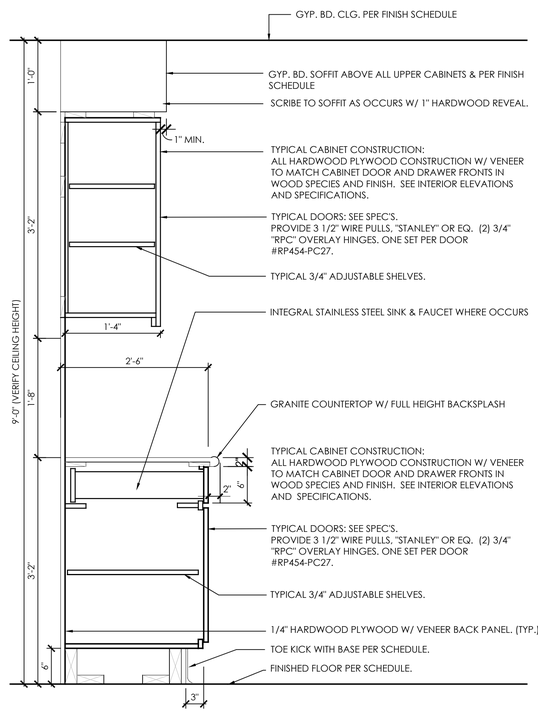
10 TYPICAL EAVE DETAIL @ COURTYARD
1"=1'-0"



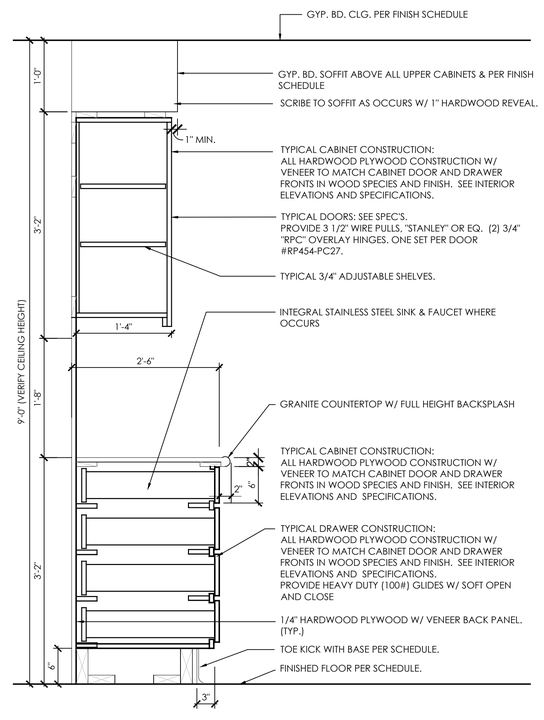
6 POST BASE @ COURTYARD
1"=1'-0"



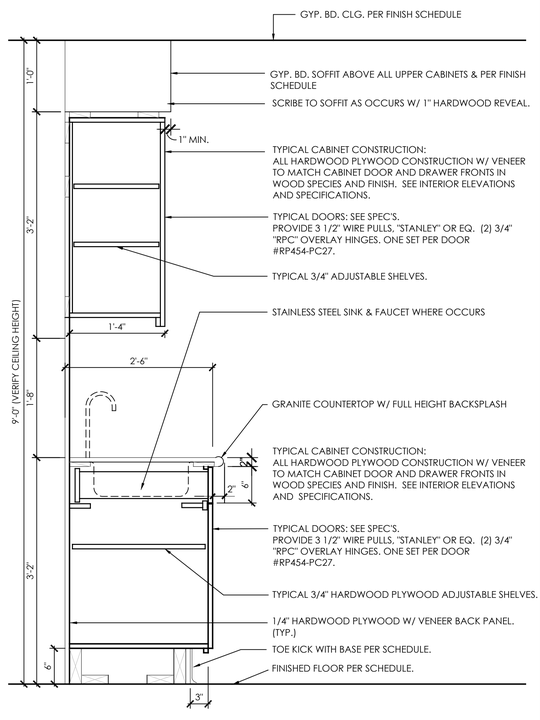
2 ARCH OPENING
1"=1'-0"



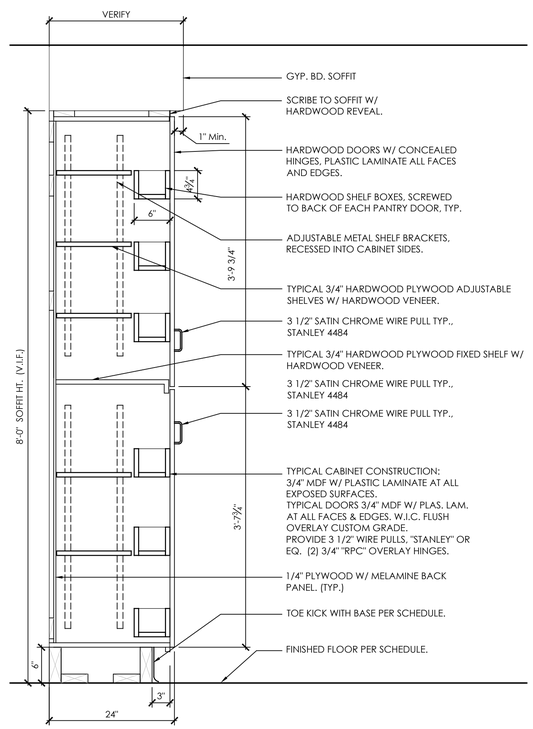
16 KITCHEN DOOR/DRAWER CABINET/ COUNTERTOP
1"=1'-0"



12 KITCHEN DRAWER CABINET/ COUNTERTOP
1"=1'-0"



8 KITCHEN ACCESSIBLE SINK/ COUNTERTOP
1"=1'-0"



4 TYPICAL PANTRY CABINET SECTION
1"=1'-0"

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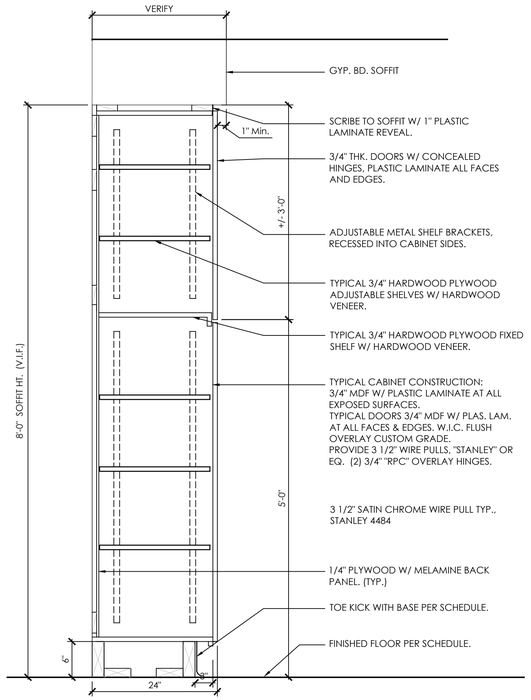
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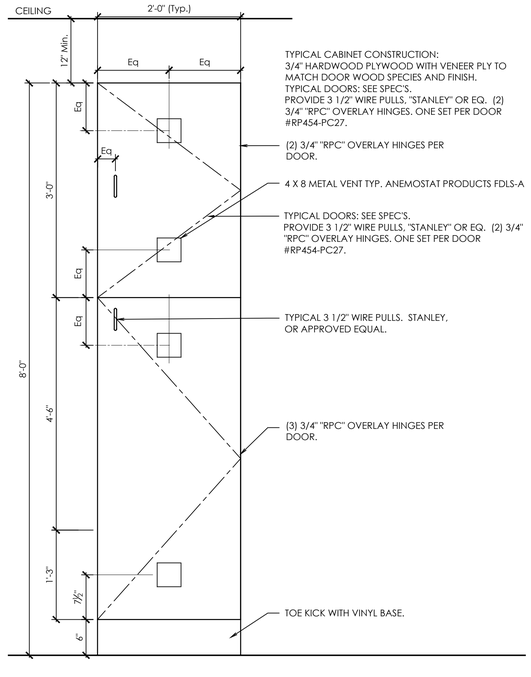
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CHK BY:	EGP

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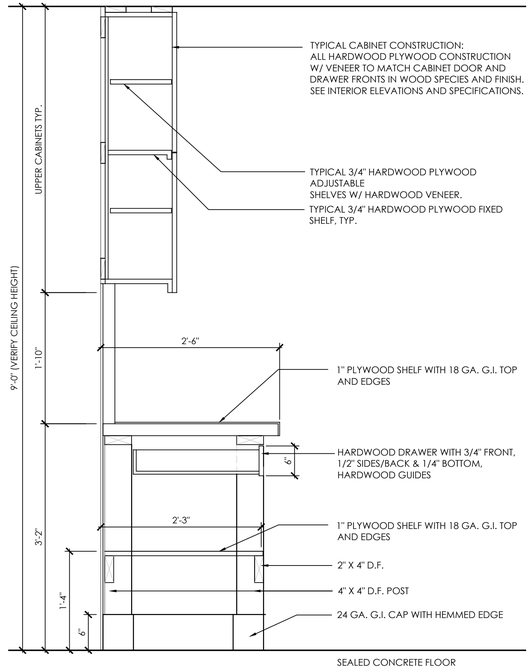
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14 TYPICAL WATER RM STORAGE CABINET SECTION
1"=1'-0"



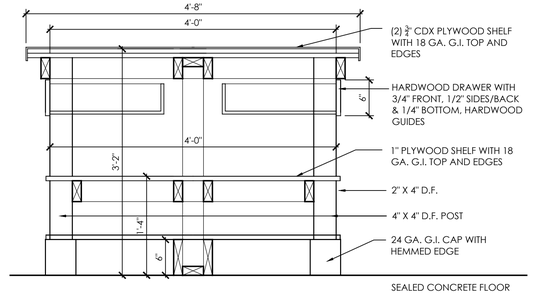
10 TYPICAL WATER RM STORAGE CABINET ELEVATION
1"=1'-0"



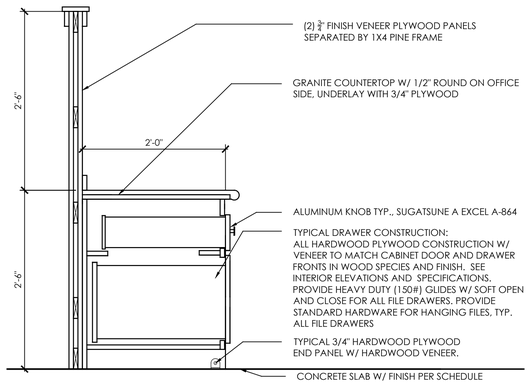
6 TYPICAL WORK BENCH SECTION
1"=1'-0"

TYPICAL CABINET NOTES

1. TYPICAL CABINET CONSTRUCTION: ALL HARDWOOD PLYWOOD CONSTRUCTION W/ VENEER TO MATCH CABINET DOOR AND DRAWER FRONTS IN WOOD SPECIES AND FINISH. SEE INTERIOR ELEVATIONS AND SPECIFICATIONS.
2. ALL CABINET DOOR AND DRAWER PULLS TO BE 3 1/2" SATIN CHROME WIRE PULL, TYP.
3. PROVIDE 2 X D.F. BLOCKING IN THE STUD WALLS AS NEEDED TO SUPPORT CABINETRY.
4. ALL EXPOSED HARDWOOD VENEER PLYWOOD TO MATCH HARDWOOD DOOR AND DRAWERS IN BOTH SPECIES AND FINISH, TYP. ALL CABINETRY.

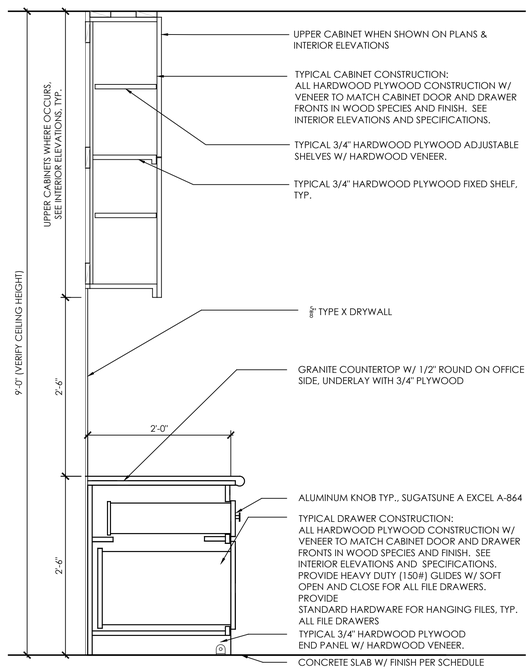


2 TYPICAL WORK BENCH SECTION
1"=1'-0"



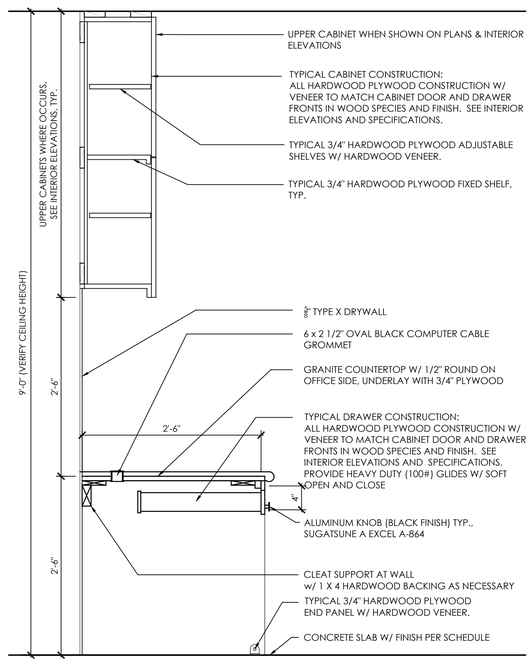
NOTE: OWNER TO SELECT WHICH SIDE OF DESK THE DRAWERS OPEN UPON

16 24" DEEP OFFICE DESK @ PRIVACY WALL
1"=1'-0"

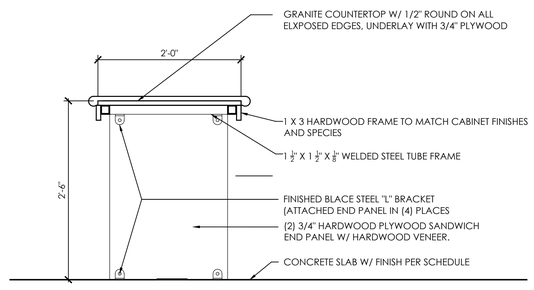


NOTE: OWNER TO SELECT WHICH SIDE OF DESK THE DRAWERS OPEN UPON

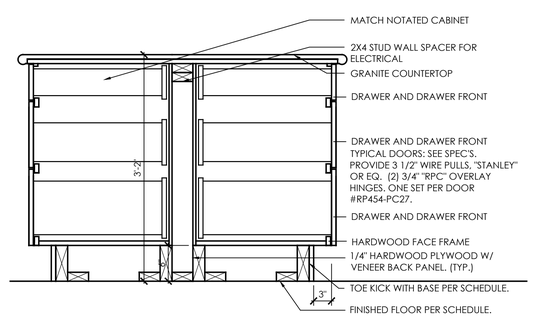
12 TYPICAL 24" OFFICE DESK & WALL
1"=1'-0"



8 TYPICAL OFFICE DESK & WALL
1"=1'-0"



3 TYPICAL OFFICE DESK @ PENINSULA
1"=1'-0"



4 WORK ROOM ISLAND SECTION
1"=1'-0"

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ARCHITECTURAL DETAILS

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DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

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ALL DRAWINGS, SPECIFICATIONS AND OTHER WORK PRODUCT OF THE ENGINEER FOR THIS PROJECT ARE INSTRUMENTS OF SERVICE FOR THIS PROJECT ONLY AND SHALL REMAIN THE PROPERTY OF THE ENGINEER WHETHER THE PROJECT IS COMPLETED OR NOT. REUSE OF ANY OF THE INSTRUMENTS OF SERVICE OF THE ENGINEER BY THE OWNER ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER SHALL BE AT THE OWNER'S RISK AND THE OWNER AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, AND EXPENSES INCLUDING ATTORNEYS' FEES ARISING OUT OF SUCH UNAUTHORIZED REUSE OF THE ENGINEER'S INSTRUMENTS OF SERVICE BY THE OWNER OR BY OTHERS ACTING THROUGH THE OWNER.

GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO 2022 CALIFORNIA BUILDING CODE.
2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON JOBSITE WITH COMPLETE SET OF LATEST DRAWINGS. NOTES AND DIMENSIONS SHALL BE CHECKED AND VERIFIED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. ANY DISCREPANCIES IN NOTES OR DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE COMMENCING WORK SO THAT PROPER REMEDIAL WORK CAN BE EXECUTED.
3. UNLESS SPECIFICALLY DETAILED ON THESE DRAWINGS, CONTRACTOR SHALL FURNISH AND INSTALL ADEQUATE SHORING, BRACING, ETC. REQUIRED TO SAFELY EXECUTE ALL WORK AND SHALL BE FULLY RESPONSIBLE FOR THE SAME.
4. DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIAL
5. THE STRUCTURAL DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO WORK.
6. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
7. THE ENGINEER HAS NOT CONSIDERED VIBRATION EFFECTS OF MECHANICAL EQUIPMENT.
8. THE ENGINEER HAS NOT DESIGNED CONCRETE SLAB ON GRADE.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE PROSECUTION OF THIS WORK.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS DURING CONSTRUCTION. SAFETY AND BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
11. IN ALL CASES WHERE A CONFLICT MAY OCCUR, SUCH AS BETWEEN ITEMS COVERED IN SPECIFICATIONS AND NOTES ON THE DRAWINGS OR BETWEEN GENERAL NOTES AND SPECIFIC DETAILS, THE ARCHITECT SHALL BE NOTIFIED AND HE WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.
12. WHERE CONSTRUCTION MATERIALS ARE TEMPORARILY STORED ON ROOF OR FLOOR FRAMING, THEY SHALL BE DISTRIBUTED SO THAT THE LOADS DO NOT EXCEED THE DESIGN LOAD.
13. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES REQUIRED FOR IT. ANY SUPPORT SERVICES PERFORMED BY THE ENGINEER DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES, WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ENGINEER, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING, OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, BUT THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
14. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
    SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED.
    SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
    SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS SLOPES, DEPRESSED AREAS, CHANGES
    IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
    SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN.
    FLOOR AND ROOF FINISHES.
    STAIR FRAMING AND DETAILS (EXCEPT AS SHOWN).
    DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
15. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING: PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC. (EXCEPT AS SHOWN OR NOTED), ELECTRIC CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES. SIZE AND, LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
16. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
17. OPENINGS, POCKETS, ETC. LARGER THAN 6 INCHES SHALL NOT BE PLACED IN CONCRETE SLABS, DECK BEAMS, JOISTS, COLUMNS, WALLS ETC., UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
    NOTIFY THE ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC. LARGER THAN 6 INCHES NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
18. DESIGN, MATERIALS, EQUIPMENT, AND PRODUCTS OTHER THAN THOSE INDICATED ON THE DRAWINGS MAY BE CONSIDERED FOR USE, PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE OWNER, ENGINEER, AND THE APPLICABLE GOVERNING CODE AUTHORITY.
19. ALL RETAINING WALLS SHALL BE ADEQUATELY SHORED DURING BACK FILLING.
20. STRUCTURAL OBSERVATIONS PERFORMED BY ARCHITECT/ENGINEER DURING CONSTRUCTION ARE NOT THE CONTINUOUS AND SPECIAL INSPECTION SERVICES AND DO NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR. OBSERVATIONS ALSO DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSIDERED AS SUPERVISION OF CONSTRUCTION.
21. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS. ANY DETAIL WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ENGINEER FOR INTERPRETATION OR CLARIFICATION.
22. SEWER AND UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS FOR THEIR LOCATION, PROFILE AND DETAILS. THE CONTRACTOR MUST COORDINATE SEWER AND UTILITY LINES WITH FOUNDATIONS SHOWN ON STRUCTURAL DRAWINGS. ANY INTERFERENCE BETWEEN SEWER AND UTILITY LINES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.

FOUNDATIONS

1. FOUNDATIONS SHALL BE OF THE SIZE AND TYPE AS INDICATED ON THE DRAWINGS.
2. FOOTINGS ARE TO BE CARRIED A MINIMUM OF 24" INTO FIRM UNDISTURBED, NATURAL SOIL OR APPROVED COMPACTED-FILL.
3. DESIGN BEARING PRESSURE IS 1500 PSF IN UNDISTURBED NATURAL SOIL PER TABLE 1806.2.
4. DESIGN LATERAL BEARING PRESSURE IS 200 PSF./FT WITH A 33% FOR WINDS, THE FOOTINGS OF THE PROPOSED STRUCTURES SHALL BE SUPPORTED COMPLETELY BY A UNIFORM THICKNESS OF NON-EXPANSIVE COMPACTED SOIL. THE STRUCTURES SHALL NOT BE SUPPORTED OVER A CUT/FILL TRANSITION.
5. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.
6. ALL EXCAVATIONS SHALL BE PROPERLY BACK FILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL INSTALLATION OF SUCH BRACING.
7. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.
8. FOUNDATION PLATES OR SILLS SHALL BE BOLTED TO THE FOUNDATION OR FOUNDATION WALL WITH NOT LESS THAN 5/8" NOMINAL DIAMETER STEEL BOLTS EMBEDDED AT LEAST 7" INTO THE CONCRETE OR MASONRY AND SPACED NOT MORE THAN 4'-0" APART. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED WITHIN 12" OF EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE, USE 3"X3"X1/4" SQUARE WASHER SPECIFIED IN SECTION 2306. ALL INTERIOR NON-SHEAR WALLS TO HAVE HILTI X-CR (WITH A MINIMUM PENETRATION OF 1-1/4" INTO SLAB) AT 24" ON CENTER, UNLESS NOTED OTHERWISE, TO BE INSTALLED IN ACCORDANCE WITH ICC ES# ESR-1663 AND LARR# 25646. ACTUAL SLAB THICKNESS TO BE MINIMUM OF 3½".
9. CONTINUOUS FOOTING IN ADDITION (1) #4 BAR EXTRA FOR ELECTRICAL GROUND. LOCATION TO BE VERIFIED WITH ELECTRICAL CONTRACTOR.
10. PROVIDE 2-#4 REINFORCING BAR TOP & BOTTOM OF ALL CONTINUOUS FOOTINGS.

CONCRETE

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4000 PSI.
2. ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE V.
3. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33.
4. ALL CONCRETE UNLESS OTHERWISE NOTED ON PLANS WILL BE REGULAR WEIGHT HARD ROCK TYPE (150 LB./CU.FT.) AGGREGATE SHALL CONFORM TO A.S.T.M. C-33 WITH PROVEN SHRINKAGE CHARACTERISTICS PER A.S.T.M. C-157.
5. MAXIMUM SLUMP OF CONCRETE USED IN FLOOR SLAB AT FLAT WORK SHALL BE FOUR (4") INCHES.
6. VIBRATION: VIBRATION OF CONCRETE SHALL BE IN ACCORDANCE WITH GENERAL PROVISION OUTLINED IN PORTLAND CEMENT ASSOCIATION SPECIFICATIONS ST26.
7. CURING: CONCRETE SHALL BE MAINTAINED IN MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER ITS PLACEMENT. APPROVED CURING COMPOUND MAY BE USED IN LIEU OF MOIST CURING.
8. STRENGTH TEST OF CONCRETE SHALL BE REQUIRED AS PER CODE AND OUTLINED IN SPECIFICATION REPORT SHALL BE FORWARDED TO THE STRUCTURAL ENGINEER.
9. ANCHOR BOLTS, DOWELS, INSERT, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
10. THE ENGINEER MUST APPROVE LOCATION OF CONSTRUCTION OR POUR JOINTS.
11. PIPES OR DUCTS EXCEEDING ONE THIRD THE SLAB, OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. SEE MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES ETC.
12. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN.
13. PROVIDE 3/4 INCH CHAMFER AT ALL EXPOSED CORNERS.
14. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR GROUNDS REQUIRED TO BE CAST IN CONCRETE, AND FOR LOCATIONS OF FLOOR FINISHED AND SLAB DEPRESSIONS.
15. CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED FOR ALL CONCRETE DESIGNED WITH F'C GREATER THAN 2500 PSI.

REINFORCING STEEL

1. ALL REINFORCING SHALL CONFORM TO ASTM A615, 60 KSI UNLESS OTHERWISE NOTED.
2. REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVERAGE. PLACE BARS AS NEAR TO THE CONCRETE SURFACE AS THESE MINIMUMS PERMIT WHEREVER POSSIBLE UNLESS NOTED OTHERWISE:

	MIN. CONCRETE COVER
CONCRETE POURED AGAINST EARTH	3"
FORMED CONCRETE IN CONTACT WITH EARTH	2"
EXPOSED TO WEATHER (#6 AND LARGER)	2"
EXPOSED TO WEATHER (#5 AND SMALLER)	1-1/2"
SLABS & WALLS NOT EXPOSED TO WEATHER	1"
NOT EXPOSED TO WEATHER	1-1/2"

3. #5 AND LARGER REINFORCING BARS SHALL NOT BE SPLICED EXCEPT AS LOCATED AND DETAILED ON THE DRAWINGS. #4 AND SMALLER BARS WITH LENGTH NOT SHOWN SHALL BE CONTINUOUS, LAPPING 1'-6" MINIMUM IN CONCRETE (SEE TYPICAL DETAILS). HORIZONTAL WALL SPLICES SHALL BE STAGGERED. VERTICAL BARS SHALL NOT BE SPLICED EXCEPT AT HORIZONTAL SUPPORT, SUCH AS FLOOR OR ROOF, UNLESS DETAILED OTHERWISE. ALL BARS ENDING AT THE FACE OF A WALL, COLUMN, OR BEAM SHALL EXTEND TO WITHIN 2" OF THE FAR FACE AND HAVE A 90 DEGREE HOOK UNLESS OTHERWISE SHOWN.
4. BARS SHALL BE FIRMLY SUPPORTED AND ACCURATELY PLACED AS REQUIRED BY THE A.C.I. STANDARDS, USING TIE AND SUPPORT BARS IN ADDITION TO REINFORCEMENT SHOWN WHERE NECESSARY FOR FIRM AND ACCURATE PLACING. ALL DOWELS SHALL BE ACCURATELY SET IN PLACE BEFORE PLACING CONCRETE.
5. DRAWINGS SHOW TYPICAL REINFORCING CONDITIONS. CONTRACTOR SHALL PREPARE DETAILED PLACEMENT DRAWINGS OF ALL CONDITIONS SHOWING QUANTITY, SPACING, SIZE, CLEARANCES, LAPS, INTERSECTIONS AND COVERAGE REQUIRED BY STRUCTURAL DETAILS, APPLICABLE CODE AND TRADE STANDARDS. CONTRACTOR SHALL NOTIFY REINFORCING INSPECTOR OF ANY ADJUSTMENTS FROM TYPICAL CONDITIONS THAT ARE PROPOSED IN PLACEMENT DRAWINGS TO FACILITATE FIELD PLACEMENT OF REINFORCING STEEL AND CONCRETE.
6. NO WELDING OF REINFORCEMENT (INCLUDING TACK WELDING) SHALL BE DONE UNLESS SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, WELDING OF REINFORCING STEEL SHALL BE PERFORMED BY WELDERS SPECIFICALLY CERTIFIED FOR REINFORCING STEEL. USE E90XX ELECTRODES.

ADHESIVE AND EXPANSION ANCHORS

1. MECHANICAL ANCHORS INTO CONCRETE: HILTI CARBON STEEL KWIK-BOLT TZ2 (ESR-4266) OR RAMSET RED HEAD TRUBOLT (ESR-1799).
2. ADHESIVE ANCHORS AND DOWELS INSTALLED INTO CONCRETE AND GROUT-FILLED MASONRY UNITS: EPOXY-TIE 'SET-XP' BY SIMPSON STRONG-TIE (ESR-2508).
3. ADHESIVE ANCHORS AND DOWELS INSTALLED INTO HOLLOW MASONRY UNITS AND UNREINFORCED BRICK MASONRY (URM): EPOXY-TIE 'SET-XP' BY SIMPSON STRONG-TIE (ESR-2508). USE SCREENS AS SPECIFIED BY THE MANUFACTURER.
4. MECHANICAL FASTENERS: STAINLESS STEEL FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.
5. ADHESIVE ANCHORS: ASTM A36 THREADED RODS WITH ASTM A 563 GRADE A NUTS AND ANSI B18.22.1 TYPE A WASHERS, UNLESS OTHERWISE NOTED. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS TO USE ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F 436 WASHERS.
6. ADHESIVE DOWELS: ASTM A615 GRADE 60 REINFORCING STEEL.
7. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ICC ESR REPORT AND MANUFACTURERS RECOMMENDATIONS.
8. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM EMBEDMENT OF ANCHORS PER MANUFACTURERS RECOMMENDATIONS.
9. PRIOR TO ALL DRILLING OR CORING, THE CONTRACTOR SHALL (1) VERIFY THE EXISTING CONCRETE OR MASONRY THICKNESS TO PREVENT DAMAGE TO THE OPPOSITE FACE OF CONCRETE AND MAINTAIN 1-1/2" CLEAR COVER U.N.O., AND (2) IDENTIFY EXISTING REINFORCING LOCATIONS BY PACHHOMETER, PROBING, CHIPPING, ETC. TO AVOID DAMAGE EXISTING REINFORCING.
10. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.

PARALLAM BEAMS

1. PARALLAM WOOD BEAMS (PLB) SHALL BE MANUFACTURED BY TRUSS JOIST MAC MILLAN, OR EQUAL OF BOISE, ID PER MANUFACTURER'S SPECIFICATIONS AND PER ICBO REPORT NO. 4979, LARR #25202.
2. PROPERTIES OF PLB SHALL BE AS FOLLOWS:
   E = 2.0×10^6 PSI Fc = 1,600 PSI (PARALLEL TO GRAIN)
   Fb = 2,900 PSI Fv = 290 PSI

SHEAR WALL HOLD-DOWNS:

1. THE CONCRETE CONTRACTOR IS TO VERIFY LOCATION OF HOLD-DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION, WITH THE FRAMING CONTRACTOR.
2. ALL 'HDU' HOLD-DOWNS ARE TO BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC-ES# ESR-2330 AND LARR# 25720.
3. 'HDU' HOLD-DOWNS SHALL BE INSTALLED IN FOOTINGS HAVING A MINIMUM WIDTH OF AT LEAST 8" (U.N.O.)
4. ALL HOLD-DOWN ANCHORS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.

SPECIAL INSPECTION

1. PROVIDE CONTINUOUS INSPECTION FOR THE FOLLOWING:
   - DURING PLACING OF ALL STRUCTURAL CONCRETE F'C > 2500 PSI @ 28 DAYS
   - DURING ALL STRUCTURAL STEEL WELDING
   - DURING BOLTING WITH HIGH TENSILE BOLTS
   - DURING INSTALLATION OF EXPANSION ANCHORS
   - DURING INSTALLATION OF EPOXY ANCHORS / DOWELS JUST PRIOR TO PLACING CONCRETE FOUNDATIONS TO ENSURE SUBGRADE IS SUITABLE, FREE FROM LOOSE SOIL, AND FOUNDATIONS ARE OF PROPER DIMENSIONS
   - DURING INSTALLATION OF HOLD-DOWN ANCHORS AT PLYWOOD SHEAR WALLS.
   - ROOF AND WALLS NAILING IN PROGRESS VISUAL INSPECTION PER AWS D1.1-94 IS REQUIRED FOR ALL WELDING (CUTOUTS, CLEAN-UP, ROOT PASSES, FILL-IN PASSES ETC.). WELDING INSPECTORS ARE TO BE AWS Q.C.-1 CERTIFIED. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS. ANY DETAIL WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ENGINEER FOR INTERPRETATION OR CLARIFICATION.
2. CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED FOR EDGE DISTANCE OF ANCHOR BOLTS.
3. CONTRACTORS RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM/COMPONENT LISTED INT THE "STATEMENT OF SPECIAL INSPECTION" SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE LADBS INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SEC 1706.1.
4. CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR FIELD WELDING, CONCRETE STRENGTH f'c>2500 psi, HIGH STRENGTH BOLTING, SPRAYED-ON WATERPROOFING, ENGINEERED MASONRY, HIGH-LIFT GROUTING, PRE-STRESSED CONCRETE, HIGH LOAD DIAPHRAGMS AND SPECIAL MOMENT-RESISTING CONCRETE FRAMES.
5. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS, AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHIRING, AND OTHER FASTENING TO COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM. SPECIAL INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED WHERE THE FASTENER SPACING OF THE SHEATHING IS 4 INCHES ON CENTER OR LESS.

HARDWARE	LARR #	2020 LABC EXPIRATION DATE	ICC-ES ESR#
HDU HOLD-DOWNS	25720	05/01/2024	2330
MST STRAPS, CMST12, CMST14	25713	01/01/2024	2105
A34, A35	25814	08/31/2023	ER-112
LTP4	25814	08/31/2023	2606
JOIST HANGERS	25800; 25802-804	01/01/2024	1866; 2549; 2553
SIMPSON 'SET-XP' EPOXY	25744	07/01/2024	2508
H2.5	25718	01/01/2024	2105
HARDY FRAME WALL	25759	09/01/2023	2089
PARALLAM BEAMS	25202	02/01/2024	1387

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DESIGN CRITERIA

1. BUILDING CODE:

   ALL WORK SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF 2021 INTERNATIONAL BUILDING CODES AND 2022 CALIFORNIA BUILDING CODE.

2. VERTICAL LOADS:

	LIVE LOAD	DEAD LOAD
ROOF LOAD	20 PSF	13 PSF
FLOOR LOAD	40 PSF	13 PSF
DECK LOAD	100 PSF	13 PSF

   ROOFING MATERIAL SHALL NOT EXCEED 6.0 POUNDS PER SQUARE FOOT.

3. WIND FACTORS:

BASIC WIND SPEED (3 SEC GUST)		= 110 MPH
WIND EXPOSURE		= C
BUILDING RISK CATEGORY		= II, STANDARD
WORKING STRESS LEVEL BASE SHEAR	Vw	= 38.3 KIPS

4. SEISMIC FACTORS:

BASIC SEISMIC-FORCE-RESISTING SYSTEM		= LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS
BUILDING OCCUPANCY CATEGORY		= II, STANDARD
ANALYSIS PROCEDURE USED		= EQUIVALENT LATERAL FORCE ASCE7-16 - 12.8
RESPONSE MODIFICATION FACTOR	R	= 6.5
SEISMIC RISK CATEGORY		= E
SOIL SITE CLASS		= D
LATITUDE		= 33.829288
LONGITUDE		= -117.7965
RESPONSE SPECTRAL ACC. (0.2 SEC)	Ss	= 1.550 g
RESPONSE SPECTRAL ACC. (1.0 SEC)	S1	= 0.549 g
SEISMIC RESPOND COEFFICIENT	Sds	= 1.24 g
SEISMIC RESPOND COEFFICIENT	Sd1	= 0.641 g
TOTAL WEIGHT OF BUILDING	W	= 375.6 KIPS
SEISMIC RESPONSE COEFFICIENT	Cs	= 0.191
REDUNDANCY FACTOR USED	p	= 1.3
WORKING STRESS LEVEL BASE SHEAR	V	= 66.5 KIPS (GOVERNS)

5. SOILS REPORT:

ALLOWABLE BEARING CAPACITY = 1500 PSF

REVISIONS

	△

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 12/31/26
CIVIL
STATE OF CALIFORNIA

SAN MINA ENGINEERING, INC.
24310 MOULTON PKWY. STE. O-105
LAGUNA HILLS, CA. 92637
TEL. # (949) 446-1417

SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

GENERAL NOTES

SHEET
S-0.0

SCALE

WOOD FRAME

1. ALL WOOD SHALL CONFORM TO THE CHAPTER 230F C.B.C AND 2015 NDS. ALL STRUCTURAL FRAMING MEMBERS SHALL BE GRADE MARKED DOUGLAS FIR AS FOLLOWS UNLESS NOTED OTHERWISE ON PLANS (MOISTURE 19% MAXIMUM):

   2X RAFTERS AND JOISTS (U.O.N.) ..... NO. 2
   ALL 4x10 AND LARGER HORIZONTAL FRAMING MEMBERS..... NO. 1
   4X HEADERS ..... NO. 2
   6X BEAMS AND STRINGERS..... NO. 1
   LAMINATED BEAMS .....24F–V3, V4 OR V8 FOR CANTILEVER
   POSTS AND TIMBER.....NO. 1
   ALL STUDS AND BRACES.....NO. 1 OR BETTER U.O.N.
   NON–BEARING WALL STUDS, PARTITION WALLS STUDS.....NO. 2

   GRADE AND SPECIES OF ALL LUMBER MUST BE GRADE MARKED.
2. ALL BOLTS SHALL BE STANDARD MACHINE BOLTS WITH M.I.OR STEEL PL WASHERS WHEN HEAD OR NUT BEARS ON WOOD. HOLES FOR BOLTS SHALL BE DRILLED WITH A BIT 1/32" LARGER THAN THE NOMINAL BOLT DIAMETER. TIGHTEN ALL BOLTS BEFORE PLASTERING.
3. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. ANY CUTTING, NOTCHING, BORING OF WOOD SHALL CONFORM THE LOCAL BUILDING CODE. DO NOT NOTCH JOISTS, RAFTERS OR BEAMS, EXCEPT WHERE SHOWN IN DETAILS.
   OBTAIN ENGINEER'S APPROVAL FOR ANY HOLES OR NOTCHES NOT DETAILED. HOLES THROUGH SILLS, PLATES, STUDS, AND DOUBLE PLATES IN INTERIOR BEARING AND SHEAR WALLS SHALL NOT EXCEED 1/3 THE PLATE WIDTH. USE BORED HOLES LOCATED IN THE CENTER OF THE STUD OR PLATE.
4. TYPICAL SILL BOLTING SHALL BE 5/8" DIA. X 10" ANCHOR BOLTS AT 4'–0" O.C. PROVIDE ONE BOLTS WITHIN NINE INCHES OF EACH END OF EACH SILL PIECE AND AT CORNERS.
5. UNLESS OTHERWISE NOTED ON PLANS, ALL STRUCTURAL PLYWOOD SHALL BE INTERIOR GRADE PLYWOOD WITH EXTERIOR GLUE. STRUCTURAL I CONFORMING TO DOC PS 10R PS2, LATEST EDITION.
6. FOR NAILING (ALL NAILS SHALL BE COMMON U.N.O.) OF LUMBER SEE TABLE 2304.9.10F C.B.C., LATEST EDITION. (SEE TABLE BELOW)
7. ALL SILL PLATES RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR UTILITY GRADE OR FOUNDATION GRADE REDWOOD.
8. ALL LEDGER BOLTS SHALL BE SET IN WALLS TO INSURE PROPER ROOF SLOPE PER DRAINAGE PLAN. VERIFY ALL CONDI–TIONS PRIOR TO SETTING BOLTS.
9. LAG BOLTS AND SCREWS SHALL BE PREDRILLED. THE DIA. OF PREDRILLEDHOLES SHALL BE 60% OF SHANK DIAMETER. THE THREADED PORTION OF THE SCREW SHALL BE INSERTED BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. PENETRATION OF THREADED PORTION SHALL BE 7 DIAMETER MINIMUM.
10. WHEN LAMINATING VERTICALLY 2–2" X MEMBERS TOGETHER, USE 16d NAILS AT 9" O.C. STAGGERED.
11. AROUND TOP. END AND SIDES UNLESS WOOD IS TREATED WITH APPROVED PRESERVATIVES.
12. ALL HARDWARE CONNECTING WOOD MEMBERS SHALL BE RE–CESSED WHEN REQUIRED BY ARCHITECTURAL FINISH. VERIFY WITH ARCHITECTURAL PLANS, TYPICAL.
13. FRAMING ANCHORS, JOIST HANGERS, POST CAPS, POST BASES, TIE DOWNS, ETC., SHALL BE AS MANUFACTURED BY "SIMPSON" OR AN APPROVED EQUAL.
14. NOTCHING OF EXTERIOR AND BEARING/NON–BEARING WALLS STUDS SHALL NOT EXCEED 25%/40% RESPECTIVELY. BORED HOLES IN BEARING/NON–BEARING WALLS STUDS SHALL NOT EXCEED 40% / 60% RESPECTIVELY.
15. NAILING FOR DIAPHRAGMS AND FOR ALL SHEAR WALLS SHALL BE INSPECTED PRIOR TO COVERING
16. STUDS IN EXTERIOR WALLS OR INTERIOR BEARING PARTITIONS SHALL BE CUT OR NOTCHED NO MORE THAN 25% OF THEIR WIDTH. INTERIOR NON–BEARING PARTITIONS MAY BE NOTCHED 40% OF THEIR WIDTH.
17. BORED HOLES IN ANY STUD SHALL BE LIMITED TO 40% OF THEIR WIDTH AND SHALL BE LOCATED AT LEAST 5/8" FROM THE EDGE OF THE STUD.
18. A REGISTERED STAMP OR BRAND OF THE DOUGLAS FIR PLYWOOD ASSOCIATION SHALL IDENTIFY EACH SHEET OF PLYWOOD.
19. TOP PLATE OF ALL STUD WALLS SHALL BE 2 PIECES THE SAME SIZE AS STUDS. SPLICES TO LAP 4'–0' MINIMUM AND BE NAILED WITH 12–16D MINIMUM EACH SIDE OF JOINT.
20. EDGES OF ALL OPENINGS THROUGH THE ROOF SHALL BE NAILED PER BOUNDARY OF PLYWOOD DIAPHRAGM NAILING REQUIREMENTS.
21. PROVIDE LX6 DIAGONAL LET–IN BRACING (AT APPROX. 45 DEGREE) EVERY 25'–0' MAXIMUM IN ALL STUD WALLS NOT PLYWOOD SHEATHED. BRACING SHALL RUN CONTINUOUS FROM SILL PLATE TO TOP PLATE. NAIL WITH 2–8D PER STUD AND 3–10D EACH END TO PLATES.
22. PROVIDE FIRE STOPS AT ALL INTERSECTIONS OF STUD WALLS AT FLOOR, CEILING, AND ROOF. FIRE STOPS SHALL BE 2X NOMINAL THICKNESS OF WOOD AND SHALL BE THE FULL WIDTH OF THE ENCLOSED SPACE. PLACE FIRE STOPS AT A MAXIMUM SPACING OF 8'–0" IN THE VERTICAL DIRECTION. PROVIDE 2X FIRE STOPS IN ALL FURRED SPACES, VERTICAL AND HORIZONTAL, AND AT THE SAME LINES AS FIRE STOPS IN ADJACENT STUD WALLS.
23. PROVIDE 2X SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS. BLOCKING SHALL BE ONE PIECE AND THE FULL DEPTH OF THE JOIST OR RAFTER.
24. ALL STUD PARTITIONS OR WALLS OVER 10–FT. HEIGHT SHALL HAVE 2X BRIDGING, SAME WIDTH AS THE STUD, PREFERABLY AT MID–HEIGHT BUT NOT TO EXCEED INTERVALS OF 8 FT.
25. CROSS BRIDGING SHALL BE PROVIDED AT 8'–0" O.C. MAXIMUM FOR ALL JOISTS AND RAFTERS MORE THAN 8" DEEP.
26. PROVIDE DOUBLE JOISTS UNDER PARTITIONS, WHICH ARE PARALLEL TO THE JOISTS.
27. BOLTS SHALL BE PLACED 9 INCHES FROM THE END OF A PLATE, OR FROM A NOTCH GREATER THAN 1/2 THE WIDTH OF A PLATE, AND SPACED AT INTERVALS NOTED.
28. FASTENERS IN PRESERVATIVE TREATED WOOD OR FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC COATED GALVANIZED STEEL OR STAINLESS STEEL.

TABLE 2304.10.1 FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER [d]	SPACING AND LOCATION
R O O F		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3–8d COMMON (2 1/2" x 0.131"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2–8d COMMON (2 1/2" x 0.131") 2–3" x 0.131" NAILS 2–3" 14 GAGE STAPLES	EACH END, TOENAIL
	2–16d COMMON (3 1/2" x 0.162") 3–3" x 0.131" NAILS 3–3" 14 GAGE STAPLES	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON (3 1/2" x 0.162") @ 6" O.C. 3" x 0.131" NAILS @ 6" O.C. 3" 14 GAGE STAPLES @ 6" O.C.	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	3–8d COMMON (2 1/2" x 0.131"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST, TOENAIL
3. CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	3–16d COMMON (3 1/2" x 0.162"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
4. CEILING JOISTS ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	3–10d COMMON (3" x 0.148"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	3–10d COMMON (3" x 0.148"); OR 3–16d BOX (3 1/2" x 0.135"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
7. ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2–INCH RIDGE BEAM	2–16d COMMON (3 1/2" x 0.162"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN; OR	END NAIL
	3–10d COMMON (3" x 0.148"); OR 3–16d BOX (3 1/2" x 0.135"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
W A L L		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (3 1/2" x 0.162"); OR	24" O.C. FACE NAIL
	10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON (3 1/2" x 0.162"); OR	16" O.C. FACE NAIL
	16d BOX (3 1/2" x 0.135"); OR	12" O.C. FACE NAIL
	3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
10. BUILT–UP HEADER (2" TO 2" HEADER)	16d COMMON (3 1/2" x 0.162"); OR	16" O.C. EACH EDGE, FACE NAIL
	16d BOX (3 1/2" x 0.135")	12" O.C. EACH EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	4–8d COMMON (2 1/2" x 0.131"); OR 4–10d BOX (3" x 0.128")	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON (3 1/2" x 0.162"); OR	16" O.C. FACE NAIL
	10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END POINTS	8–16d COMMON (3 1/2" x 0.162"); OR 12–10d BOX (3" x 0.128"); OR 12–3" x 0.131" NAILS; OR 12–3" 14 GAGE STAPLES, 7/16" CROWN	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3 1/2" x 0.162"); OR	16" O.C. FACE NAIL
	16d BOX (3 1/2" x 0.135"); OR 3" x 0.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	12" O.C. FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	2–16d COMMON (3 1/2" x 0.162"); OR 3–16d BOX (3 1/2" x 0.135"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	4–8d COMMON (2 1/2" x 0.131"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
	2–16d COMMON (3 1/2" x 0.162"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
17. TOP OR BOTTOM PLATE TO STUD	2–16d COMMON (3 1/2" x 0.162"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
18. TOP PLATES, LAPS AT CORNERS AND INTERSECTION	2–16d COMMON (3 1/2" x 0.162"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
19. 1" BRACE TO EACH STUD AND PLATE	2–8d COMMON (2 1/2" x 0.131"); OR 2–10d BOX (3" x 0.128"); OR 2–3" x 0.131" NAILS; OR 2–3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
20. 1" x 6" SHEATHING TO EACH BEARING	2–8d COMMON (2 1/2" x 0.131"); OR 2–10d BOX (3" x 0.128")	FACE NAIL
21. 1" x 8" AND WIDER SHEATHING TO EACH BEARING	3–8d COMMON (2 1/2" x 0.131"); OR 3–10d BOX (3" x 0.128")	FACE NAIL

TABLE 2304.10.1 FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER [d]	SPACING AND LOCATION
F L O O R		
22. JOIST TO SILL, TOP PLATE. OR GIRDER	3–8d COMMON (2 1/2" x 0.131"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
23. RIM JOIST, BAND JOIST OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d COMMON (2 1/2" x 0.131"); OR 10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	6" O.C., TOENAIL
24. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST	2–8d COMMON (2 1/2" x 0.131"); OR 2–10d BOX (3" x 0.128")	FACE NAIL
25. 2" SUBFLOOR TO JOIST OR GIRDER	2–16d COMMON (3 1/2" x 0.162")	FACE NAIL
26. 2" PLANKS (PLANK & BEAM– FLOOR & ROOF)	2–16d COMMON (3 1/2" x 0.162")	FACE NAIL
27. BUILT–UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d COMMON (4" x 0.192")	
	10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS; OR 3" 14 GAGE STAPLES, 7/16" CROWN	24" O.C. FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
	AND: 2–20d COMMON (4" x 0.192"); OR 3–10d BOX (3" x 0.128"); OR 3–3" x 0.131" NAILS; OR 3–3" 14 GAGE STAPLES, 7/16" CROWN	ENDS AND AT EACH SPLICE, FACE NAIL
28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3–16d COMMON (3 1/2" x 0.162"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST OR RAFTER, FACE NAIL
29. JOIST TO BAND JOIST OR RIM JOIST	3–16d COMMON (3 1/2" x 0.162"); OR 4–10d BOX (3" x 0.128"); OR 4–3" x 0.131" NAILS; OR 4–3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL
30. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2–8d COMMON (2 1/2" x 0.131"); OR 2–10d BOX (3" x 0.128"); OR 2–3" x 0.131" NAILS; OR 2–3" 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER [d]	SPACING AND LOCATION	
WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING [c]		EDGES (INCHES)	INTERMEDIATE SUPPORTS (INCHES)
31. 3/8" – 1/2"	6d COMMON OR DEFORMED (2" x 0.113") (SUBFLOOR AND WALL)	6	12
	8d BOX OR DEFORMED (2 1/2"x 0.113") (ROOF)	6	12
	2 3/8" x 0.113" NAIL (SUBFLOOR AND WALL)	6	12
	1 3/4" 16 GAGE STAPLE, 7/16" CROWN (SUBFLOOR AND WALL)	4	8
	2 3/8" x 0.113" NAIL (ROOF)	4	8
	1 3/4" 16 GAGE STAPLE, 7/16" CROWN (ROOF)	3	6
32. 19/32" – 3/4"	8d COMMON OR DEFORMED (2 1/2" x 0.131"); OR 6d DEFORMED (2" x 0.113")	6	12
	2 3/8" x 0.113" NAIL; OR 2" 16 GAGE STAPLE, 7/16" CROWN (ROOF)	4	8
33. 7/8" – 1 1/4"	10d COMMON (3" x 0.148"); OR 8d DEFORMED (2 1/2" x 0.131")	6	12
O T H E R E X T E R I O R W A L L S H E A T H I N G			
34. 1/2" FIBERBOARD SHEATHING [b]	1 1/2" GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER); OR 1 1/4" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN	3	6
35. 25/32" FIBERBOARD SHEATHING [b]	1 3/4" GALVANIZED ROOFING NAIL (7/16" HEAD DIAMETER); OR 1 1/2" 16 GAGE STAPLE WITH 7/16" OR 1" CROWN	3	6
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
36. 3/4" AND LESS	8d COMMON (2 1/2" x 0.131"); OR 6d DEFORMED (2" x 0.113")	6	12
37. 7/8" – 1"	8d COMMON (2 1/2" x 0.131"); OR 8d DEFORMED (2 1/2" x 0.131")	6	12
38. 1 1/8" – 1 1/4"	10d COMMON (3" x 0.148"); OR 8d DEFORMED (2 1/2" x 0.131")	6	12
P A N E L S I D I N G T O F R A M I N G			
39. 1/2" OR LESS	6d CORROSION–RESISTANT SIDING (1 7/8" x 0.106"); OR 6d CORROSION–RESISTANT CASING (2" x 0.099")	6	12
40. 5/8"	8d CORROSION–RESISTANT SIDING (2 3/8" x 0.128"); OR 8d CORROSION–RESISTANT CASING (2 1/2" x 0.113")	6	12
I N T E R I O R P A N E L I N G			
41. 1/4"	4d CASING (1 1/2" x 0.080"); OR 4d FINISH (1 1/2" x 0.072")	6	12
42. 3/8"	6d CASING (2" x 0.099"); OR 6d FINISH (PANEL SUPPORTS AT 24 INCHES)	6	12

FOR SI: 1 INCH = 25.4 mm.
A. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
B. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
C. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.
D. STAPLES SHALL NOT BE USED TO RESIST OR TRANSFER SEISMIC FORCES IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E, OR F.

REVISIONS

	△

OWNER

PROJECT
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Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 3/31
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SM ENGINEERING

PROJECT NO:	85–25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10–16–25

SHEET TITLE:

GENERAL NOTES

SHEET
S-0.1

SCALE

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED BY AN APPROVED AND LICENSED FABRICATOR IN ACCORDANCE WITH PART I, PART III AND SUPPLEMENT NO.2 OF THE SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, APRIL 15, 1997, PUBLISHED BY (AISC). THESE PROVISIONS SHALL BE APPLIED IN CONJUNCTION WITH CHAPTER 22, DIVISION II

2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (UNO):

STRUCTURAL STEEL GRADES		
A.	ALL WIDE FLANGE SECTIONS	ASTM A992
B.	SQUARE OR RECTANGLE HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE B (Fy= 46 KSI)
C.	ROUND HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE B (Fy= 42 KSI)
D.	PIPES	ASTM A3, TYPE E OR S, GARDE B, (Fy= 35 KSI)
E.	PLATES, ANGLES, CHANNELS & TEES	ASTM A36
F.	MACHINE BOLTS (MB)	ASTM A307
G.	HIGH STRENGTH BOLTS (HSB)	ASTM A325 TYPE N
H.	WELDED HEADED STUDS	ASTM A108
I.	THREADED RODS FOR ANCHOR BOLTS	ASTM F1554, GRADE 36

3. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS TO THE ARCHITECT OF ALL STEEL FOR ARCHITECTS AND STRUCTURAL ENGINEERS REVIEW AND APPROVAL BEFORE FABRICATION.

4. BOLT HOLES USED IN STEEL SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED.

5. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, OR MASONRY, SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED.

6. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND THE CODE FOR WELDING IN BUILDING CONSTRUCTION (AWS D1.1 LATEST REVISION) OF THE AMERICAN WELDING SOCIETY. SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENTS.

7. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION 9TH EDITION, SECTION J2.1b

8. ALL EXPOSED STRUCTURAL STEEL AND MISCELLANEOUS METAL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

9. ALL BOLTS USED IN SEISMIC FORCE RESISTING SYSTEM SHALL BE FULLY TENSIONED, HIGH STRENGTH BOLTS.

10. LADBS LICENSED FABRICATOR IS REQUIRED FOR STRUCTURAL STEEL.

11. STRUCTURAL STEEL USED IN SEISMIC LOAD RESISTING (SLRS) SHALL MEET REQUIREMENTS OF AISC 360 SECTION A 3.1A EXCEPT AS MODIFIED BY AISC 341. THE MINIMUM YIELD STRESS OF STEEL TO BE USED FOR MEMBERS IN WHICH INELASTIC BEHAVIOR IS EXPECTED SHALL NOT EXCEED 50 KSI FOR SMF AND IMF, NOR EXCEED 55 KSI FOR OMF, UNLESS THE SUITABILITY OF THE MATERIAL IS DETERMINED BY TESTING OR OTHER RATIONAL CRITERIA. THIS LIMITATION DOES NOT APPLY TO COLUMNS FOR WHICH THE ONLY EXPECTED INELASTIC BEHAVIOR IS YIELDING AT THE COLUMN BASE.

WELDING

1. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1, 2000 AND APPROVED BY ENGINEER OF RECORD.

2. THE CONTRACTOR SHALL PROVIDE WELDING PROCEDURE SPECIFICATION (WPS) FOR REVIEW AND APPROVAL PRIOR TO STARTING OF FABRICATION. THE WELDING ELECTRODE MANUFACTURERS' SPECIFICATIONS SHOULD BE ATTACHED TO THE WPS ON ALL JOBS. ALL WELDERS AND INSPECTORS SHALL BE INFORMED OF AND MUST ADHERE TO THE WPS AND SHALL RETAIN A COPY.

3. ALL COMPLETE-JOINT-PENETRATION GROOVE WELDS USED IN SEISMIC FORCE RESISTING SYSTEM SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT MINUS 20°F.

4. WELDING OF STRUCTURAL STEEL SHALL BE BY MANUAL SHIELD METAL ARC OR SUBMERGED ARC PROCESS USING E70XX ELECTRODES.

5. LENGTHS OF WELDS ARE EFFECTIVE LENGTHS AS SPECIFIED IN THE UNIFORM BUILDING CODE. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE FULL PENETRATION UNLESS NOTES OTHERWISE.

6. WELDERS SHALL BE QUALIFIED FOR THE WORK THEY WILL BE DOING AND SHALL HAVE CERTIFICATIONS CURRENT.

7. FACES OF FILLET WELDS EXPOSED TO VIEW SHALL HAVE AS-WELDED SURFACES THAT ARE REASONABLY SMOOTH AND UNIFORM. NO FINISHING OR GRINDING SHALL BE REQUIRED, EXCEPT WHERE CLEARANCES OR FIT OF OTHER ITEMS MAY SO NECESSITATE.

8. ALL PARTIAL AND FULL PENETRATION WELDS THAT ARE EXPOSED TO VIEW SHALL BE GROUND SMOOTH AND FLUSH WITH FINISH SURFACE OF STEEL. HOLES SHALL BE FILLED WITH WELD METAL OR BODY SOLDER AND SMOOTHED BY GRINDING OR FILING.

9. CLEAN GROOVE PREPARATION THERMAL CUTS BY GRINDING.

10. WELDS SHALL BE TERMINATED AT THE END OF A JOINT IN A MANNER THAT WILL ENSURE SOUND WELDS. WHENEVER NECESSARY THIS SHALL BE DONE BY USE OF EXTENSION BARS AND RUN OFF TABS. RUN OFF TABS USED AT BEAM FLANGE CONNECTION SHALL BE REMOVED AND THE WELDS FINISHED TO A SMOOTH CONTOUR (1" RADIUS). NO WELD DAMS ARE ALLOWED.

11. AFTER FULL PENETRATION WELDING, THE BACKING BAR IS TO BE REMOVED, THE WELD ROOT INSPECTED AND TESTED FOR IMPERFECTIONS,WHICH IF FOUND, ARE TO BE REMOVED BY BACKGOUGING TO SOUND MATERIAL. THE BACKGOUGED AREA IS TO BE WELDED AND A FILLET WELD SHALL BE APPLIED TO REINFORCE THE JOINT. THE SIZE OF THE REINFORCING FILLET WELD SHALL BE EQUAL TO 1/4 THE PLATE THICKNESS, BUT NOT LESS THAN 1/4" NOR MORE THAN 3/8".

12. TO ASSURE THE PROPER AMPERAGE AND VOLTAGE OF THE WELDING PROCESS, THE USE OF A HAND HELD CALIBRATED AMP AND VOLT METER SHALL BE USED. THIS EQUIPMENT SHALL BE USED BY THE FABRICATOR, ERECTOR AND THE INSPECTORS. AMPERAGE AND VOLTAGE SHALL BE MEASURED AT THE ARC WITH THIS EQUIPMENT. TRAVEL SPEED AND ELECTRODE STICK OUT SHALL BE VERIFIED TO BE IN COMPLIANCE WITH THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS.

13. ULTRASONIC TESTING IS REQUIRED FOR ALL PARTIAL AND COMPLETE PENETRATION WELDS. TEST GROVE WELDING ON CONTINUITY PLATES BY ULTRASONIC TESTING AFTER BEAM FLANGE WELD CONNECTION. TESTING SHALL BE PERFORMED NO SOONER THAN 24 HOURS AFTER COMPLETION OF WELDING.

14. DISCONTINUITIES IN WELD CREATED BY ERRORS OR BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND FLAME CUTTING, SHALL BE REPAIRED AS REQUIRED BY THE ENGINEER OF RECORD.

15. FOR CONNECTIONS WITH WELDED FLANGE JOINTS, WELDED BACKING AND RUN-OFF TABS SHALL BE REMOVED AND REPAIRED INCLUDING THE USE OF REINFORCING FILLET WELD, EXCEPT THAT THE TOP-FLANGE BACKING IS PERMITTED TO REMAIN IN PLACE IF IT IS ATTACHED TO THE COLUMN FLANGE WITH A CONTINUOUS FILLET WELD ON THE EDGE BELOW THE COMPLETE-JOINT-PENETRATION GROOVE WELD.

16. FIELD WELDING TO BE DONE BY WELDERS CERTIFIED BY THE LA DBS FOR STRUCTURAL STEE, REINFORCING STEEL AND LIGHT GAGE STEEL. CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED.

17. SHOP WELDS MUST BE PERFORMED IN LA CITY BUILDING DEPT. LICENSED FABRICATOR SHOP.

STEEL DECK

1. ROOF AND FLOOR DECK SHALL BE AS NOTED ON THE DRAWINGS. PROPERTIES ARE AS FOLLOWS:

DECK SIZE AND GAUGE	I (in4)	S (in3)
3" x 20 GA DECK	.896	.534
3" x 18 GA DECK	1.203	.767

2. DECK SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND SHALL INDICATE STUD LAYOUT.

3. THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATIONS FOR THE DESIGN OF LIGHT GAUGE STEEL STRUCTURAL MEMBERS" SHALL GOVERN THE DESIGN OF ALL DECK UNITS, STEEL DECK AND ALL OF ITS CLOSURES AND FLASHINGS SHALL CONFORM TO ASTM A653 SQ, GRADE 33, FY 38,000 PSI MIN.

4. ACCEPTABLE STEEL DECK MANUFACTURERS ARE AS FOLLOWS:
   VERCO MANUFACTURING, INC. (ICBO #2078, LARR #23243)
   ASC PACIFIC (ICBO # 2757, LARR #23783, 23784 AND 23803)

5. UNITS SHALL BE CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT. SHORING MAY BE REQUIRED AT NON-CONTINUOUS SPANS. DECK SHOP DRAWINGS SHALL INDICATE WHERE SHORING WILL BE REQUIRED. DECK SHALL BEAR 2" MINIMUM AT ALL SUPPORTS.

6. ALL WELDING OF STEEL DECK SHALL BE DONE BY CERTIFIED LIGHT GAGE WELDERS IN ACCORDANCE WITH AWS "SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES", AWS D1.3-81.

7. UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE END OF THE UNITS AND AT INTERMEDIATE SUPPORTS AND TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY 3/4" DIAMETER PUDDLE WELDS AT 1'-0" O.C. SHEAR STUDS WELDED THROUGH DECK MAY BE USED IN PLACE OF 3/4" DIAMETER PUDDLE WELDS.

8. THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY BUTTON PUNCHING AT 3'-0" O.C. MAX. CONTRACTOR MAY DECREASE SPACING OF SIDE LAP ATTACHMENTS TO ACCOMMODATE CONSTRUCTION LOADING AS REQUIRED.

9. PROVIDE FLASHING AND CLOSURE PLATES AT ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CONCRETE.

10. ALLOWABLE LOADS FOR DECK PER VERCO CATALOG (ICBO #2078).

11. METAL DECK TO BE VENTED DECK.

12. ALL METAL DECK TO BE GALVANIZED.

ADHESIVE AND EXPANSION ANCHORS

1. MECHANICAL ANCHORS INTO CONCRETE: HILTI CARBON STEEL KWIK-BOLT II (ICBO #4627, COLA RR #25226) OR RAMSET RED HEAD TRUBOLT (ICBO #1372, COLA RR #2748.

2. ADHESIVE ANCHORS AND DOWELS INSTALLED INTO CONCRETE AND GROUT-FILLED MASONRY UNITS: CIA-GEL 7000 BY COVERT OPERATIONS (ICBO #4846, COLA RR #25113), HIT HY-150 BY HILTI (ICBO #5193, COLA RR #25257), OR EPOXY-TIE 'SET-XP' BY SIMPSON STRONG-TIE (ICC-ES #ESR-2508, LARR #25744).

3. ADHESIVE ANCHORS AND DOWELS INSTALLED INTO HOLLOW MASONRY UNITS AND UNREINFORCED BRICK MASONRY (URM): CIA-GEL 7000 BY COVERT OPERATIONS (ICBO #4846, COLA RR #25113), HIT HY-20 BY HILTI (ICBO #4815, COLA RR #24564), OR EPOXY-TIE 'SET-XP' BY SIMPSON STRONG-TIE (ICC-ES #ESR-2508, LARR #25744). USE SCREENS AS SPECIFIED BY THE MANUFACTURER.

4. MECHANICAL FASTENERS: STAINLESS STEEL FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.

5. ADHESIVE ANCHORS: ASTM A36 THREADED RODS WITH ASTM A 563 GRADE A NUTS AND ANSI B18.22.1 TYPE A WASHERS, UNLESS OTHERWISE NOTED. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS TO USE ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F 436 WASHERS.

6. ADHESIVE DOWELS: ASTM A615 GRADE 60 REINFORCING STEEL.

7. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ICBO AND COLA REPORT AND MANUFACTURERS RECOMMENDATIONS.

8. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM EMBEDMENT OF ANCHORS PER ICBO, COLA REPORTS & MANUFACTURERS RECOMMENDATIONS.

9. PRIOR TO ALL DRILLING OR CORING, THE CONTRACTOR SHALL (1) VERIFY THE EXISTING CONCRETE OR MASONRY THICKNESS TO PREVENT DAMAGE TO THE OPPOSITE FACE OF CONCRETE AND MAINTAIN 1-1/2" CLEAR COVER U.N.O., AND (2) IDENTIFY EXISTING REINFORCING LOCATIONS BY PACHHOMETER, PROBING, CHIPPING, ETC. TO AVOID DAMAGE EXISTING REINFORCING.

10. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.

REVISIONS

	△

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 12-31-26
CIVIL
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SAN MINA ENGINEERING, INC.
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SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

GENERAL NOTES

SHEET
S-0.2

SCALE

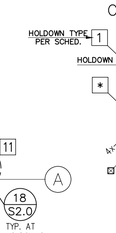
FOUNDATION NOTES

1. CONCRETE STRENGTH SHALL BE MINIMUM 4000 PSI .
2. DESIGN THE MAXIMUM SOIL BEARING PRESSURE ALLOWABLE BEARING CAPACITY = 1500 PSF
3. ALL HOLDOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR-2330 AND LARR #25720.
4. ALL CONTINUOUS EXTERIOR FOOTINGS SHALL HAVE 5/8" DIAMETER X 12" A.B.'S WITH 3"X3"X1/4" WASHERS, MIN. 7" EMBEDMENT ONTO CONCRETE, AT 48" O.C. UNLESS NOTED OTHERWISE ON PLANS. ONE ANCHOR BOLT SHOULD BE LOCATED MAX. 12" AWAY FROM THE END OF THE SILL PLATES. MIN. (2) A.B.'S PER SILL PLATE PER SHEAR PANEL.
5. ALL INTERIOR NON-BEARING WALLS SHALL HAVE HILTI X-CR WITH MIN. PENETRATION OF 1 1/4" INTO SLAB, AT 24" O.C. UNLESS NOTED OTHERWISE. TO BE INSTALLED IN ACCORDANCE WITH ICC ES #ESR-1663 AND LARR #25646. ACTUAL SLAB THICKNESS SHALL BE MINIMUM 3-1/2".
6. MIN. CONCRETE WIDTH SHALL BE 8" FOR RECEIVING 'HDU' HOLD-DOWNS. VERIFY LOCATIONS OF HOLD-DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.
7. PROVIDE #3X24" DOWEL AT 24" O.C. AND 12" FROM THE CORNER AT ALL CONCRETE STOOP AND PORCHES.
8. ALL FOOTINGS SHALL BE FOUNDED IN UNDISTURBED SOIL PER CODE, A MINIMUM OF 24" INTO COMPETENT BEARING MATERIALS, NATURAL SOILS OR COMPACTED FILL. SEE SOIL REPORT WHERE IT IS REQUIRED.
9. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING:
   (TABLE 2306.4.1 FOOTNOTE 8)
   a. 3x FOUNDATION SILL PLATES
   b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
   c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
   d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
   e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE .229"x3"x3" PLATE WASHERS WITH SLOTTED CUT HOLE AS AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON-SLOTTED CUT PLATE WASHERS.
10. VERIFY MINIMUM FOUNDATION DEPTH, WIDTH, REINFORCING STEEL AND ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT (WHERE IT IS REQUIRED) AND IF ANY MORE RESTRICTIVE THEY SHALL SUPERSEDE THE ABOVE MINIMUMS.
11. FOUNDATION DRAWING SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
12. TO REPLACE MISSING OR DISLOCATED 5/8" DIAMETER ANCHOR BOLTS, USE 5/8" DIAMETER THREADED RODS EMBEDDED MIN. 7" INTO CONCRETE WITH SIMPSON STRONG-TIE "SET-XP" EPOXY. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION. FOLLOW MANUFACTURER'S RECOMMENDATIONS, ICC ES #ESR-2508 AND LARR #25744.
13. SEE 8/S4.0 FOR SHEAR WALL SCHEDULE.
14. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE TIGHTENED PRIOR TO COVERING OF WALL. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE 2305.5 OF THE LA BUILDING CODE.
15. USE 2X6, 2-2x4 OR 3x4 @ 16" O.C. STUD WALL FRAMING AT ALL 1ST FLOOR EXTERIOR WALLS AND LOAD-BEARING WALLS. USE 2x4 @ 16" O.C. STUD WALL FRAMING AT ALL INTERIOR NON-LOAD BEARING WALLS U.N.O.
16. HOLDOWN HARDWARE SHALL BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
17. CONTINUOUS INSPECTION BY DEPUTY INSPECTOR IS REQUIRED FOR INSTALLING SIMPSON STRONG WALL OR HARDY FRAME HOLD-DOWNS.
18. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS INVESTIGATION REPORT MAY BE REQUIRED.
19. DESIGN FOR EXPANSIVE SOIL OR SUBMIT A SOILS REPORT TO THE GRADING DIVISION PER INFORMATION BULLETIN p/bc 2008-116 AND 91.1805.8
20. IN THE EVENT EXCAVATIONS REVEAL UNFAVORABLE CONDITIONS, THE SERVICES OF A SOILS ENGINEER AND/OR GEOLOGIST MAY BE REQUIRED.
21. EXCAVATIONS SHALL BE MADE IN COMPLIANCE WITH CAL/OSHA REGULATIONS.
22. NAILS IN PRESSURE TREATED WOOD SILL PLATES SHALL BE HOT DIPPED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. [CBC 2304.9.5]
23. FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

ALL FOUNDATION EXCAVATIONS MUST BE OBSERVED AND APPROVED BY THE PROJECT GEOTECHNICAL CONSULTANT PRIOR TO PLACEMENT OF REINFORCING STEEL.

LEGEND:

- F1 — 2'-6" SQ. x 2'-0" DEEP PAD FOOTING W/ 3-#4 E.W. @ BOTTOM
- F2 — 3'-6" SQ. x 2'-0" DEEP PAD FOOTING W/ 4-#4 E.W. @ BOTTOM
- F3 — 3'-0" SQ. x 4'-0" DEEP PAD FOOTING W/ 4-#5 'U' BARS AND #4 STIRRUPS @ 6" O.C. SEE DETAIL 17/S2.0
- F4 — SIZE PER PLAN x 2'-0" DEEP PAD FOOTING W/ #6 @ 12" O.C. E.W. AT BOTTOM
- CF-1 — EXTERIOR CONT. FOOTING: 18" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 1-6/S2.1
- CF-2 — INTERIOR CONT. FOOTING: 18" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 9-10/S2.1

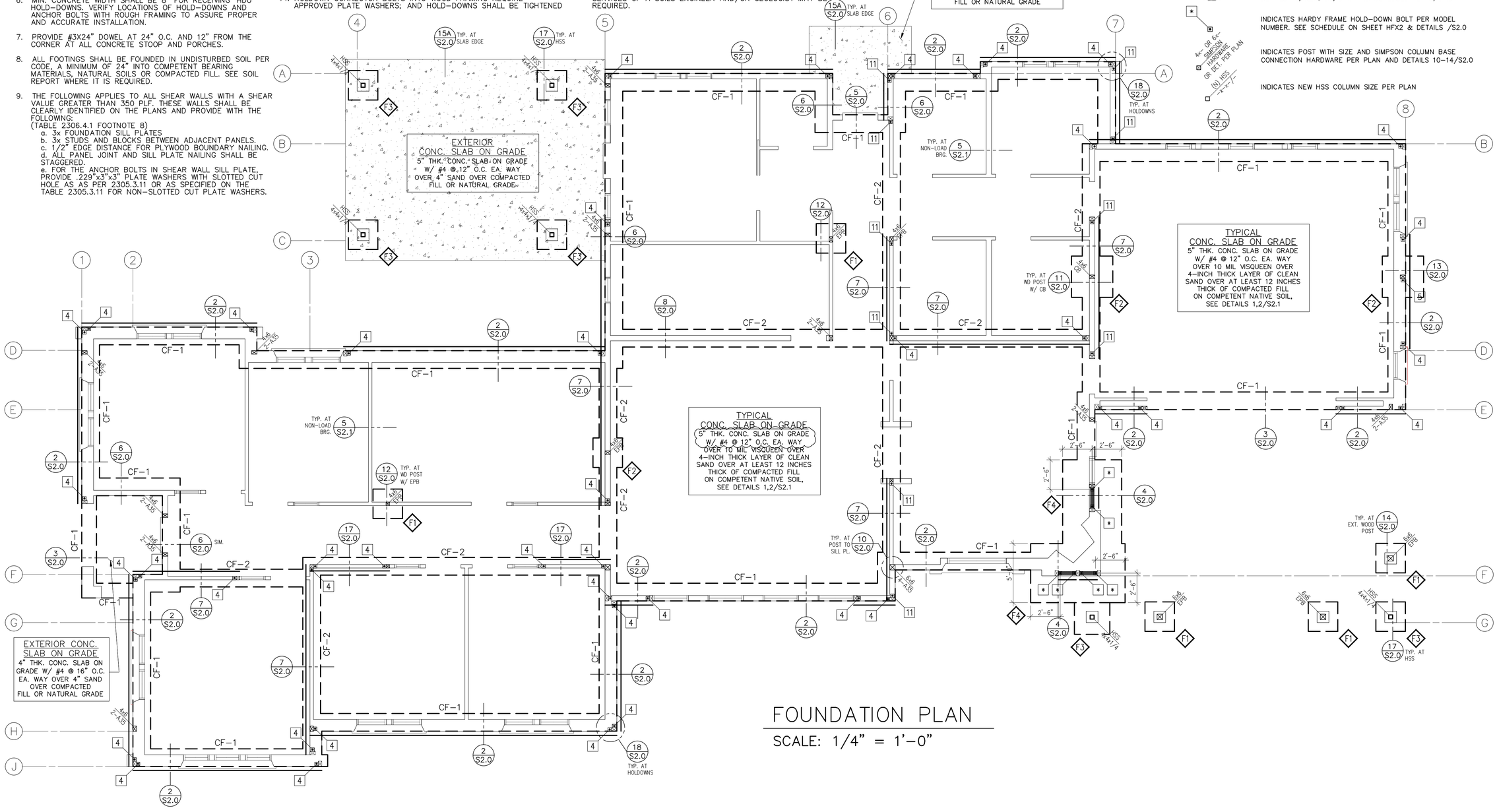


INDICATES WOOD POST SIZE & HOLDOWN SIZE PER TYP. DETAILS 18/S2.0, 8C/S4.0 AND SCHEDULE PER 8/S4.0

INDICATES HARDY FRAME HOLD-DOWN BOLT PER MODEL NUMBER. SEE SCHEDULE ON SHEET HFX2 & DETAILS /S2.0

INDICATES POST WITH SIZE AND SIMPSON COLUMN BASE CONNECTION HARDWARE PER PLAN AND DETAILS 10-14/S2.0

INDICATES NEW HSS COLUMN SIZE PER PLAN



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

REVISIONS

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PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

MAIN BUILDING FOUNDATION PLAN

SHEET
S-1.0

SCALE

ROOF FRAMING NOTES:

1. FRAMING PLAN SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. SPLICE PLATES OF EXTERIOR WALLS AND SHEAR WALLS W/(14) 16d AT 4'-0" SPLICE (U.O.N.).
3. PROVIDE MULTIPLE STUDS UNDER MULTIPLE JOISTS.
4. STRUCTURAL WOOD PANEL SHEAR WALLS SHALL BE COVERED WITH MINIMUM 2 LAYERS 15# FELT UNDERLAYMENT PRIOR TO PLACING FINISH MATERIAL.
6. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
7. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING: (TABLE 2306.4.1 FOOTNOTE 8)
   a. 3x FOUNDATION SILL PLATES
   b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
   c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
   d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
   e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE .229"x3"x3" PLATE WASHERS WITH SLOTTED CUT HOLE AS AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON-SLOTTED CUT PLATE WASHERS.
8. SEE 8/S4.0 FOR SHEAR WALL SCHEDULE.
9. USE 2-2X BLOCKING OR 2-2X JOIST AT ALL DRAG STRAPS.
10. LAG BOLTS: PROVIDE LEAD HOLE 40%-70% OF THREADED SHANK DIA. AND FULL DIA. FOR SMOOTH SHANK PORTION. 2015 NDS.
11. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
12. USE 4x6 POST TO SUPPORT 5.25x PRLLM OR 6x BEAMS U.N.O.
13. ALL ROOF AND ROOF DECK SHEAR TRANSFER NAILING SHALL BE VERIFIED BY THE CITY BUILDING DIVISION PRIOR TO COVERING. ANY CRICKETS OR SIMILAR COVERING SHALL BE ENTIRELY REMOVED BEFORE THE HORIZONTAL DIAPHRAGM INSPECTION WILL BE MADE BY THE CITY BUILDING DIVISION.
14. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE & GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.7.
15. USE 2x6 @ 16" O.C. STUD WALL FRAMING AT ALL EXTERIOR WALLS AND 2x4 OR 3x4 @ 16" O.C. STUD WALL FRAMING AT ALL INTERIOR WALLS UNLESS NOTED OTHERWISE.

TYPICAL ROOF SHEATHING: USE 1/2" STRUCT. 1 PLYWOOD, P.I. 24/0 WITH 10d COMMON NAILS AT 6"-6"-12" O/C LAY PERPENDICULAR TO FRAMING. USE 1X8 T&G SELECT SPRUCE AT EXPOSED EAVES, (U.O.N.). SEE DETAIL 7/S4.0

LEGEND:

SW TYPE / SW LENGTH / SW NUMBER SEE CALC — INDICATES PLYWOOD SHEAR WALL TYPE & LENGTH. SEE 8/S4.0 FOR SHEAR WALL TYP. DETAILS & SCHEDULE.

HARDY FRAME HFX-SERIES MODEL NUMBER / HFX-SW / WALL NUMBER PER CALCS. — INDICATES HARDY FRAME HFX-SERIES, LARR#25759. INSTALL ALL HOLD DOWN BOLTS PER MANUFACTURER'S SPECS. (TYP.) SEE SHEETS HFX1, HFX2 & HFX3

MST37 DRAG STRUT STRAP ACROSS ALL BEAM AT TOP PLATE U.O.N. PER DETAILS 1,2/S4.0 & 1/S4.1

4X/6X HDR — INDICATES 4x OR 6x HEADER BEAM U.O.N. USE GRADE GRADE DF-L #2 FOR 4x10 AND SMALLER HEADER SIZE. USE GRADE DF-L #1 FOR 4x12 AND 6x HEADER SIZES. SEE DETAIL 2/S4.1

RR — INDICATES DIRECTION OF WOOD ROOF RAFTER. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE

RJ — INDICATES DIRECTION OF WOOD ROOF JOIST. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE

CJ — INDICATES DIRECTION OF WOOD CEILING JOIST. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE

RB- 4x/6x- — INDICATES ROOF BEAM SIZE (GRADE D.F.# 1)

RB- -"X -" PRLLM — INDICATES ROOF BEAM SIZE (GRADE PARALLAM 2.0E)

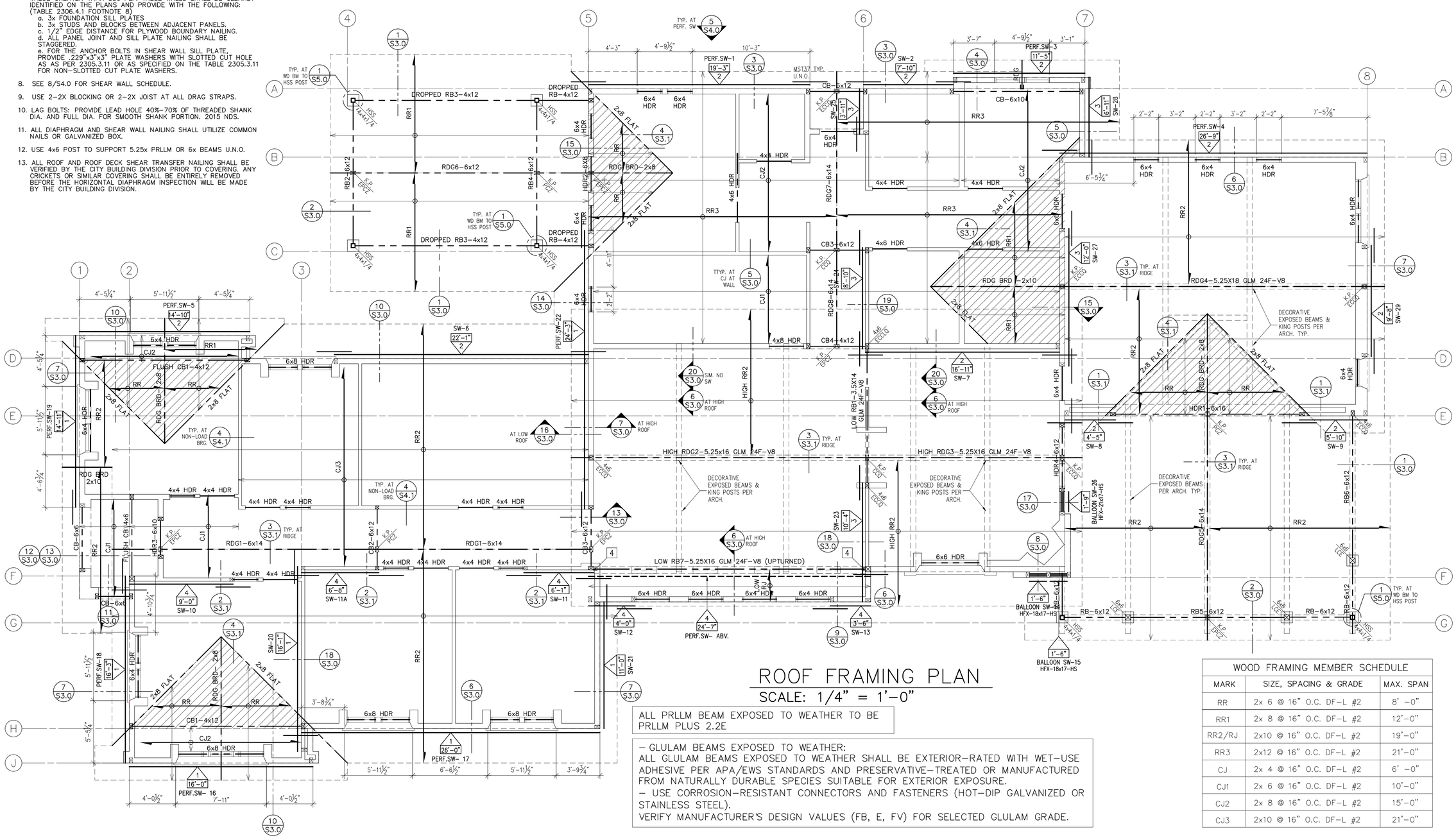
CB- 4x/6x- — INDICATES CEILING BEAM SIZE (GRADE D.F.# 1)

CB- -"X -" PRLLM — INDICATES CEILING BEAM SIZE (GRADE PARALLAM 2.0E)

4x SIMPSON HARDWARE OR DET. X/A — INDICATES POST WITH SIZE AND SIMPSON COLUMN CAP HARDWARE PER PLAN. SEE 1-3/S4.2; OR PER DETAIL INDICATED ON PLAN
-USE 4"x4" WOOD POST TYPICAL U.O.N.
-USE 4x6 POST TO SUPPORT 6x BEAMS, 5.25x & 7x PRLLM/LVL BEAMS
- POST TO HEADER CONNECTION, SEE 4/S4.2

K.P. SIMPSON HARDWARE OR DET. X/A — INDICATES KING POST WITH SIMPSON COLUMN CAP HARDWARE PER PLAN. SEE 10-11/S4.2;
-USE 4"x4" WOOD POST TYPICAL U.O.N.
-USE 4x6 POST TO SUPPORT 6x BEAMS, 5.25x & 7x PRLLM/LVL BEAMS

SIMPSON HANGER — INDICATES BEAM WITH HANGER HARDWARE PER 7/S4.2 TYPICAL U.O.N.



ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

ALL PRLLM BEAM EXPOSED TO WEATHER TO BE PRLLM PLUS 2.2E

- GLULAM BEAMS EXPOSED TO WEATHER:
ALL GLULAM BEAMS EXPOSED TO WEATHER SHALL BE EXTERIOR-RATED WITH WET-USE ADHESIVE PER APA/EWS STANDARDS AND PRESERVATIVE-TREATED OR MANUFACTURED FROM NATURALLY DURABLE SPECIES SUITABLE FOR EXTERIOR EXPOSURE.
- USE CORROSION-RESISTANT CONNECTORS AND FASTENERS (HOT-DIP GALVANIZED OR STAINLESS STEEL).
VERIFY MANUFACTURER'S DESIGN VALUES (FB, E, FV) FOR SELECTED GLULAM GRADE.

WOOD FRAMING MEMBER SCHEDULE

MARK	SIZE, SPACING & GRADE	MAX. SPAN
RR	2x 6 @ 16" O.C. DF-L #2	8' -0"
RR1	2x 8 @ 16" O.C. DF-L #2	12'-0"
RR2/RJ	2x10 @ 16" O.C. DF-L #2	19'-0"
RR3	2x12 @ 16" O.C. DF-L #2	21'-0"
CJ	2x 4 @ 16" O.C. DF-L #2	6' -0"
CJ1	2x 6 @ 16" O.C. DF-L #2	10'-0"
CJ2	2x 8 @ 16" O.C. DF-L #2	15'-0"
CJ3	2x10 @ 16" O.C. DF-L #2	21'-0"

REVISIONS

OWNER

PROJECT
352 E 20th St
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REGISTERED PROFESSIONAL ENGINEER AMCAD SAMWEL BENJAMIN No. C 64449 EXP. 06/30/27 CIVIL STATE OF CALIFORNIA

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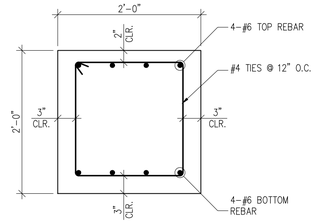
SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:
MAIN BUILDING ROOF FRAMING PLAN

SHEET
S-1.1

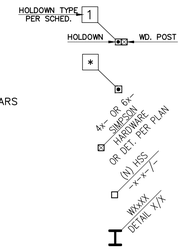
SCALE



1 / S1.2 GB-1 SECTION
SCALE: 1" = 1'-0"

LEGEND:

F1	2'-6" SQ. x 2'-0" DEEP PAD FOOTING W/ 3-#4 E.W. @ BOTTOM
F2	3'-6" SQ. x 2'-0" DEEP PAD FOOTING W/ 4-#4 E.W. @ BOTTOM
F3	3'-0" SQ. x 4'-0" DEEP PAD FOOTING W/ 4-#5 'U' BARS AND #4 STIRRUPS @ 6" O.C. SEE DETAIL 17/S2.0
F4	SIZE PER PLAN x 2'-0" DEEP PAD FOOTING W/ #6 @ 12" O.C. E.W. AT BOTTOM
F5	SIZE PER PLAN x 24" DEEP PAD FOOTING W/ #5 @ 10" O.C. E.W. AT BOTTOM
CF-1	EXTERIOR CONT. FOOTING: 18" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 1-6/S2.1
CF-1A	EXTERIOR CONT. FOOTING: 2'-0"" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 1-6/S2.1
CF-2	INTERIOR CONT. FOOTING: 18" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 9-10/S2.1
GB-1	INDICATES GRADE BEAM PER SECTION 1/S1.2



INDICATES WOOD POST SIZE & HOLDOWN SIZE PER TYP. DETAILS 18/S2.0, 8C/S4.0 AND SCHEDULE PER 8/S4.0

INDICATES HARDY FRAME HOLD-DOWN BOLT PER MODEL NUMBER. SEE SCHEDULE ON SHEET HFX2 & DETAILS /S2.0

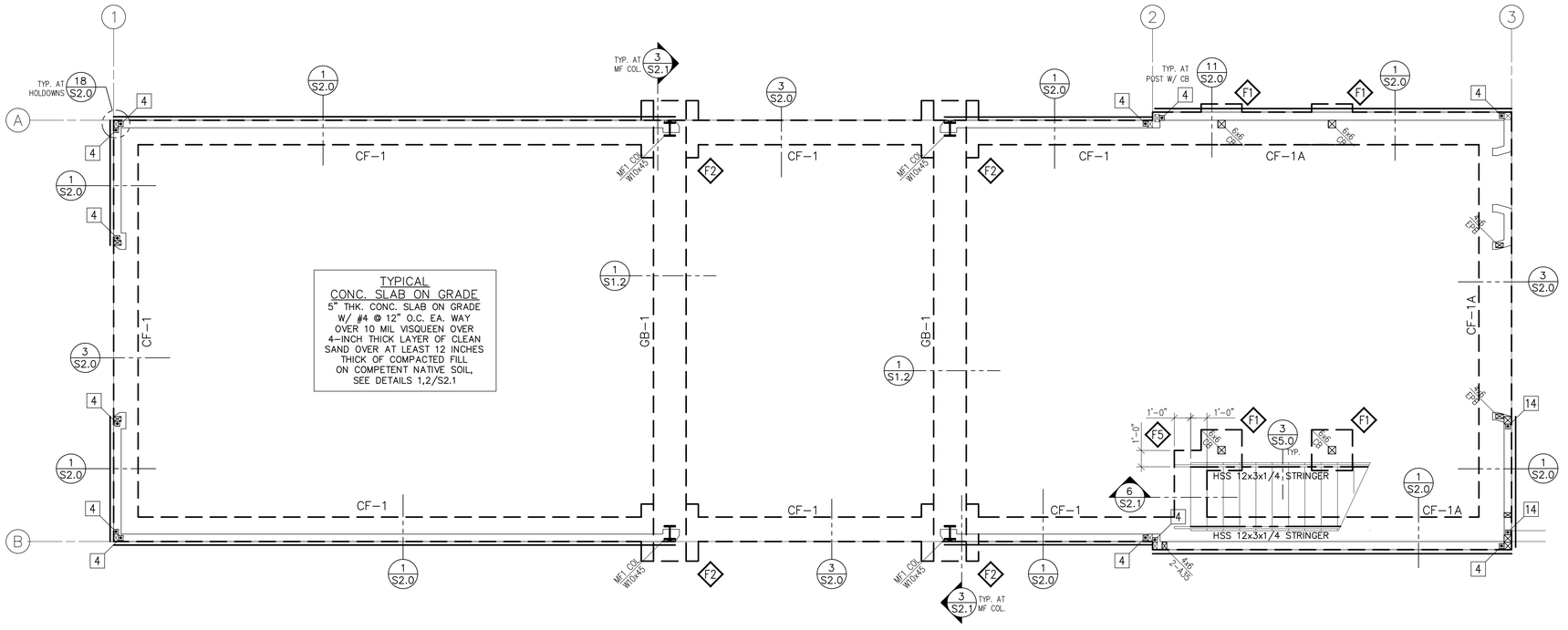
INDICATES POST WITH SIZE AND SIMPSON COLUMN BASE CONNECTION HARDWARE PER PLAN AND DETAILS 10-14/S2.0

INDICATES NEW HSS COLUMN SIZE PER PLAN

INDICATES WIDE FLANGE COLUMN SIZE AND BASE CONNECTION DETAIL PER PLAN

FOUNDATION NOTES

1. CONCRETE STRENGTH SHALL BE MINIMUM 4000 PSI .
2. DESIGN THE MAXIMUM SOIL BEARING PRESSURE ALLOWABLE BEARING CAPACITY = 1500 PSF
3. ALL HOLDOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR-2330 AND LARR #25720.
4. ALL CONTINUOUS EXTERIOR FOOTINGS SHALL HAVE 5/8" DIAMETER X 12" A.B.'S WITH 3"X3"X1/4" WASHERS, MIN. 7" EMBEDMENT ONTO CONCRETE, AT 48" O.C. UNLESS NOTED OTHERWISE ON PLANS. ONE ANCHOR BOLT SHOULD BE LOCATED MAX. 12" AWAY FROM THE END OF THE SILL PLATES. MIN. (2) A.B.'S PER SILL PLATE PER SHEAR PANEL.
5. ALL INTERIOR NON-BEARING WALLS SHALL HAVE HILTI X-CR WITH MIN. PENETRATION OF 1 1/4" INTO SLAB, AT 24" O.C. UNLESS NOTED OTHERWISE. TO BE INSTALLED IN ACCORDANCE WITH ICC ES #ESR-1663 AND LARR #25646. ACTUAL SLAB THICKNESS SHALL BE MINIMUM 3-1/2".
6. MIN. CONCRETE WIDTH SHALL BE 8" FOR RECEIVING 'HDU' HOLD-DOWNS. VERIFY LOCATIONS OF HOLD-DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.
7. PROVIDE #3X24" DOWEL AT 24" O.C. AND 12" FROM THE CORNER AT ALL CONCRETE STOOP AND PORCHES.
8. ALL FOOTINGS SHALL BE FOUNDED IN UNDISTURBED SOIL PER CODE, A MINIMUM OF 24" INTO COMPETENT BEARING MATERIALS, NATURAL SOILS OR COMPACTED FILL. SEE SOIL REPORT WHERE IT IS REQUIRED.
9. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING:
   (TABLE 2306.4.1 FOOTNOTE 8)
   a. 3x FOUNDATION SILL PLATES
   b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
   c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
   d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
   e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE .229"x3"x3" PLATE WASHERS WITH SLOTTED CUT HOLE AS AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON-SLOTTED CUT PLATE WASHERS.
10. VERIFY MINIMUM FOUNDATION DEPTH, WIDTH, REINFORCING STEEL AND ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT (WHERE IT IS REQUIRED) AND IF ANY MORE RESTRICTIVE THEY SHALL SUPERSEDE THE ABOVE MINIMUMS.
11. FOUNDATION DRAWING SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
12. TO REPLACE MISSING OR DISLOCATED 5/8" DIAMETER ANCHOR BOLTS, USE 5/8" DIAMETER THREADED RODS EMBEDDED MIN. 7" INTO CONCRETE WITH SIMPSON STRONG-TIE "SET-XP" EPOXY. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION. FOLLOW MANUFACTURER'S RECOMMENDATIONS, ICC ES #ESR-2508 AND LARR #25744.
13. SEE 8/S4.0 FOR SHEAR WALL SCHEDULE.
14. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE TIGHTENED PRIOR TO COVERING OF WALL. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE 2305.5 OF THE LA BUILDING CODE.
15. USE 2X6, 2-2x4 OR 3x4 @ 16" O.C. STUD WALL FRAMING AT ALL 1ST FLOOR EXTERIOR WALLS AND LOAD-BEARING WALLS. USE 2x4 @ 16" O.C. STUD WALL FRAMING AT ALL INTERIOR NON-LOAD BEARING WALLS U.N.O.
16. HOLDOWN HARDWARE SHALL BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
17. CONTINUOUS INSPECTION BY DEPUTY INSPECTOR IS REQUIRED FOR INSTALLING SIMPSON STRONG WALL OR HARDY FRAME HOLD-DOWNS.
18. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS INVESTIGATION REPORT MAY BE REQUIRED.
19. DESIGN FOR EXPANSIVE SOIL OR SUBMIT A SOILS REPORT TO THE GRADING DIVISION PER INFORMATION BULLETIN p/bc 2008-116 AND 91.1805.8
20. IN THE EVENT EXCAVATIONS REVEAL UNFAVORABLE CONDITIONS, THE SERVICES OF A SOILS ENGINEER AND/OR GEOLOGIST MAY BE REQUIRED.
21. EXCAVATIONS SHALL BE MADE IN COMPLIANCE WITH CAL/OSHA REGULATIONS.
22. NAILS IN PRESSURE TREATED WOOD SILL PLATES SHALL BE HOT DIPPED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. [CBC 2304.9.5]
23. FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.



STORAGE- FOUNDATION PLAN (PART 1)

SCALE: 1/4" = 1'-0"

REVISIONS

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 12/31/26
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SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

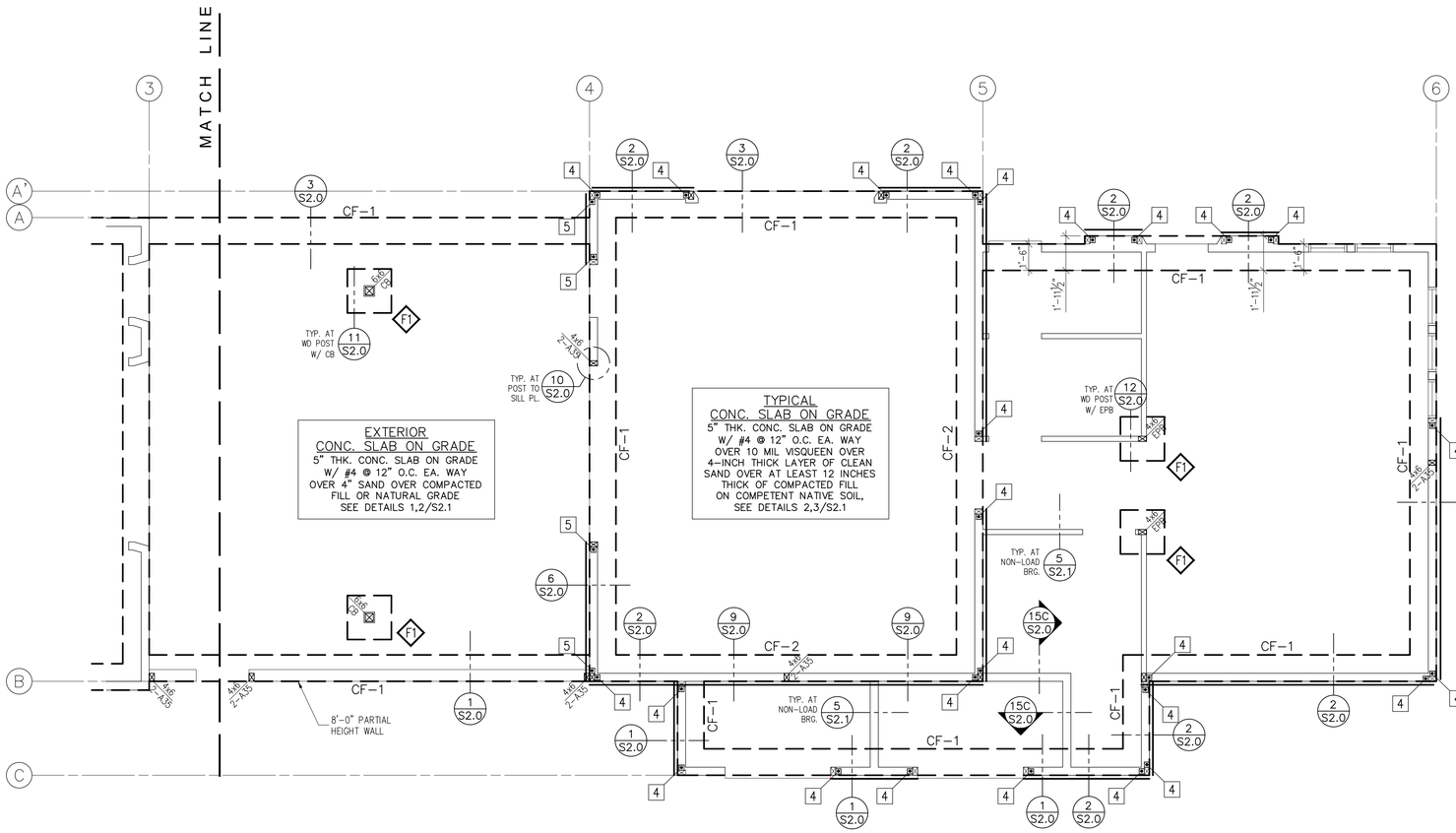
SHEET TITLE:
STORAGE FOUNDATION PLAN- PART 1

SHEET
S-1.2

SCALE

LEGEND:

F1	2'-6" SQ. x 2'-0" DEEP PAD FOOTING W/ 3-#4 E.W. @ BOTTOM
F2	3'-6" SQ. x 2'-0" DEEP PAD FOOTING W/ 4-#4 E.W. @ BOTTOM
F3	3'-0" SQ. x 4'-0" DEEP PAD FOOTING W/ 4-#5 'U' BARS AND #4 STIRRUPS @ 6" O.C. SEE DETAIL 17/S2.0
F4	SIZE PER PLAN x 2'-0" DEEP PAD FOOTING W/ #6 @ 12" O.C. E.W. AT BOTTOM
CF-1	EXTERIOR CONT. FOOTING: 18" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 1-6/S2.1
CF-2	INTERIOR CONT. FOOTING: 18" WIDE X 2'-0" DEEP W/ 2-#4 BARS TOP & BOTTOM. SEE SECTIONS 9-10/S2.1



STORAGE FOUNDATION PLAN- PART 2

SCALE: 1/4" = 1'-0"

FOUNDATION NOTES

1. CONCRETE STRENGTH SHALL BE MINIMUM 4000 PSI .
2. DESIGN THE MAXIMUM SOIL BEARING PRESSURE ALLOWABLE BEARING CAPACITY = 1500 PSF
3. ALL HOLDOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR-2330 AND LARR #25720.
4. ALL CONTINUOUS EXTERIOR FOOTINGS SHALL HAVE 5/8" DIAMETER X 12" A.B.'S WITH 3"X3"X1/4" WASHERS, MIN. 7" EMBEDMENT ONTO CONCRETE, AT 48" O.C. UNLESS NOTED OTHERWISE ON PLANS. ONE ANCHOR BOLT SHOULD BE LOCATED MAX. 12" AWAY FROM THE END OF THE SILL PLATES. MIN. (2) A.B.'S PER SILL PLATE PER SHEAR PANEL.
5. ALL INTERIOR NON-BEARING WALLS SHALL HAVE HILTI X-CR WITH MIN. PENETRATION OF 1 1/4" INTO SLAB, AT 24" O.C. UNLESS NOTED OTHERWISE. TO BE INSTALLED IN ACCORDANCE WITH ICC ES #ESR-1663 AND LARR #25646. ACTUAL SLAB THICKNESS SHALL BE MINIMUM 3-1/2".
6. MIN. CONCRETE WIDTH SHALL BE 8" FOR RECEIVING 'HDU' HOLD-DOWNS. VERIFY LOCATIONS OF HOLD-DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.
7. PROVIDE #3X24" DOWEL AT 24" O.C. AND 12" FROM THE CORNER AT ALL CONCRETE STOOP AND PORCHES.
8. ALL FOOTINGS SHALL BE FOUNDED IN UNDISTURBED SOIL PER CODE, A MINIMUM OF 24" INTO COMPETENT BEARING MATERIALS, NATURAL SOILS OR COMPACTED FILL. SEE SOIL REPORT WHERE IT IS REQUIRED.
9. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING:
   (TABLE 2306.4.1 FOOTNOTE 8)
   a. 3x FOUNDATION SILL PLATES
   b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
   c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
   d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
   e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE .229"x3"x3" PLATE WASHERS WITH SLOTTED CUT HOLE AS AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON-SLOTTED CUT PLATE WASHERS.
10. VERIFY MINIMUM FOUNDATION DEPTH, WIDTH, REINFORCING STEEL AND ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT (WHERE IT IS REQUIRED) AND IF ANY MORE RESTRICTIVE THEY SHALL SUPERSEDE THE ABOVE MINIMUMS.
11. FOUNDATION DRAWING SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
12. TO REPLACE MISSING OR DISLOCATED 5/8" DIAMETER ANCHOR BOLTS, USE 5/8" DIAMETER THREADED RODS EMBEDDED MIN. 7" INTO CONCRETE WITH SIMPSON STRONG-TIE "SET-XP" EPOXY. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION. FOLLOW MANUFACTURER'S RECOMMENDATIONS, ICC ES #ESR-2508 AND LARR #25744.
13. SEE 8/S4.0 FOR SHEAR WALL SCHEDULE.
14. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE TIGHTENED PRIOR TO COVERING OF WALL. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE 2305.5 OF THE LA BUILDING CODE.
15. USE 2X6, 2-2x4 OR 3x4 @ 16" O.C. STUD WALL FRAMING AT ALL 1ST FLOOR EXTERIOR WALLS AND LOAD-BEARING WALLS. USE 2x4 @ 16" O.C. STUD WALL FRAMING AT ALL INTERIOR NON-LOAD BEARING WALLS U.N.O.
16. HOLDOWN HARDWARE SHALL BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
17. CONTINUOUS INSPECTION BY DEPUTY INSPECTOR IS REQUIRED FOR INSTALLING SIMPSON STRONG WALL OR HARDY FRAME HOLD-DOWNS.
18. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS INVESTIGATION REPORT MAY BE REQUIRED.
19. DESIGN FOR EXPANSIVE SOIL OR SUBMIT A SOILS REPORT TO THE GRADING DIVISION PER INFORMATION BULLETIN p/bc 2008-116 AND 91.1805.8
20. IN THE EVENT EXCAVATIONS REVEAL UNFAVORABLE CONDITIONS, THE SERVICES OF A SOILS ENGINEER AND/OR GEOLOGIST MAY BE REQUIRED.
21. EXCAVATIONS SHALL BE MADE IN COMPLIANCE WITH CAL/OSHA REGULATIONS.
22. NAILS IN PRESSURE TREATED WOOD SILL PLATES SHALL BE HOT DIPPED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER. [CBC 2304.9.5]
23. FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

REVISIONS

	△

OWNER

PROJECT
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REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
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EXP. 12/31/26
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SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:
STORAGE FOUNDATION PLAN- PART 2

SHEET
S-1.3

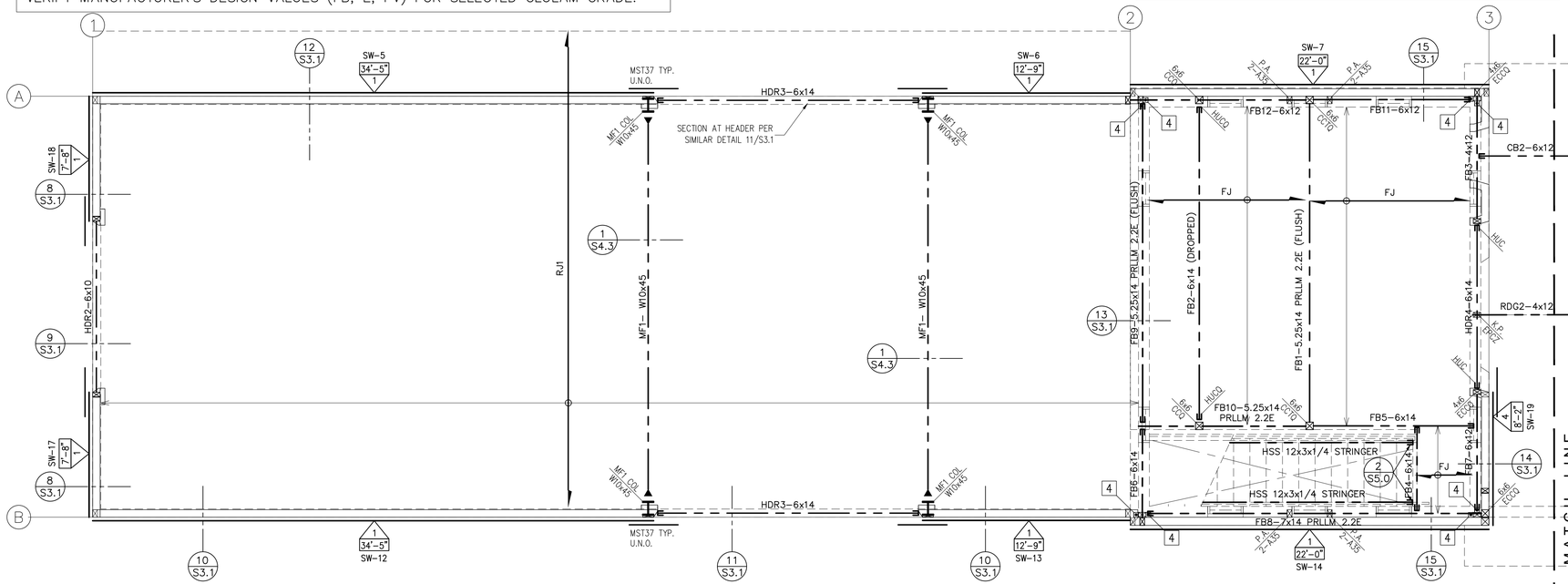
SCALE

– GLULAM BEAMS EXPOSED TO WEATHER:
ALL GLULAM BEAMS EXPOSED TO WEATHER SHALL BE EXTERIOR–RATED WITH WET–USE ADHESIVE PER APA/EWS STANDARDS AND PRESERVATIVE–TREATED OR MANUFACTURED FROM NATURALLY DURABLE SPECIES SUITABLE FOR EXTERIOR EXPOSURE.
– USE CORROSION–RESISTANT CONNECTORS AND FASTENERS (HOT–DIP GALVANIZED OR STAINLESS STEEL).
VERIFY MANUFACTURER'S DESIGN VALUES (FB, E, FV) FOR SELECTED GLULAM GRADE.

ALL PRLLM BEAM EXPOSED TO WEATHER TO BE PRLLM PLUS 2.2E

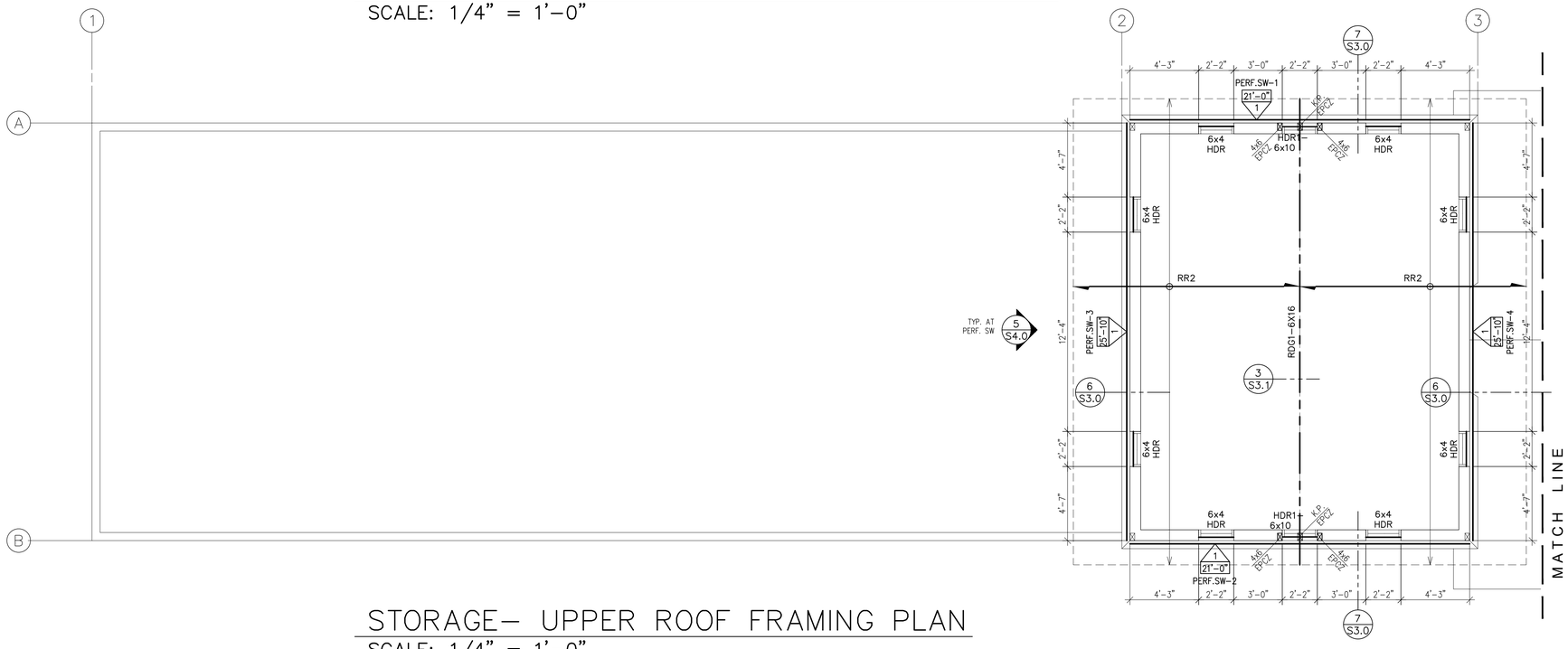
TYPICAL FLOOR SHEATHING USE 1 1/8" CDX T&G PLYWOOD P.I 32/16 WITH 10d COMMON NAILS AT 4"–6"–12" O/C, NAIL AND GLUE PLYWOOD TO FRAMING. LAY PERPENDICULAR TO FRAMING. SEE DETAIL 7/S4.10

TYPICAL ROOF SHEATHING: USE 1/2" STRUCT. 1 PLYWOOD, P.I. 24/0 WITH 10d COMMON NAILS AT 6"–6"–12" O/C LAY PERPENDICULAR TO FRAMING. USE 1X8 T&G SELECT SPRUCE AT EXPOSED EAVES, (U.O.N.). SEE DETAIL 1/S4.0



STORAGE ROOF FRAMING PLAN & MEZZANINE FLOOR FRAMING PLAN– PART 1

SCALE: 1/4" = 1'–0"



STORAGE– UPPER ROOF FRAMING PLAN

SCALE: 1/4" = 1'–0"

FRAMING NOTES:

1. FRAMING PLAN SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ALL HOLDOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG–TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR–2330 AND LARR #25720 AND SHALL BE TIED IN–PLACE PRIOR TO FOUNDATION INSPECTION.
3. SPLICE PLATES OF EXTERIOR WALLS AND SHEAR WALLS W/(14) 16d AT 4'–0" SPLICE (U.O.N.).
4. PROVIDE MULTIPLE STUDS UNDER MULTIPLE JOISTS.
5. STRUCTURAL WOOD PANEL SHEAR WALLS SHALL BE COVERED WITH MINIMUM 2 LAYERS 15# FELT UNDERLAYMENT PRIOR TO PLACING FINISH MATERIAL.
6. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
7. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLDOWNS SHALL BE TIGHTENED PRIOR TO COVERING OF WALL. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE 2306.5 OF THE LA BUILDING CODE.
8. ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED (11.1.2.2, 2015 NDS).
9. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING: (TABLE 2306.4.1 FOOTNOTE 8)
   a. 3x FOUNDATION SILL PLATES
   b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
   c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
   d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
   e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE .229"x3"x3" PLATE WASHERS WITH SLOTTED CUT HOLE AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON–SLOTTED CUT PLATE WASHERS.
10. WHERE POST IS NOT CONTINUOUS BETWEEN FLOORS, PROVIDE FULL HEIGHT KING STUD EACH SIDE OF POST WITH 16d @ 12" O.C.
11. SEE 8/S4.0 FOR SHEAR WALL SCHEDULE.
12. USE 2–2X BLOCKING OR 2–2X JOIST AT ALL DRAG STRAPS.
13. LAG BOLTS: PROVIDE LEAD HOLE 40%–70% OF THREADED SHANK DIA. AND FULL DIA. FOR SMOOTH SHANK PORTION. 2015 NDS.
14. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
15. USE DOUBLE JOISTS/BLOCKINGS UNDER JACUZZI, BATHTUB AND ANY WATER CONTAINING FIXTURES AT ALL FLOORS.
16. USE 4x6 POST TO SUPPORT 5.25x PRLLM OR 6x BEAMS U.N.O.
17. ALL ROOF AND ROOF DECK SHEAR TRANSFER NAILING SHALL BE VERIFIED BY THE CITY BUILDING DIVISION PRIOR TO COVERING. ANY CRICKETS OR SIMILAR COVERING SHALL BE ENTIRELY REMOVED BEFORE THE HORIZONTAL DIAPHRAGM INSPECTION WILL BE MADE BY THE CITY BUILDING DIVISION.
18. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE & GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.7.
19. USE 2x6 @ 16" O.C. STUD WALL FRAMING AT ALL EXTERIOR WALLS AND 2x4 OR 3x4 @ 16" O.C. STUD WALL FRAMING AT ALL INTERIOR WALLS UNLESS NOTED OTHERWISE.

LEGEND:

- SW TYPE / SW LENGTH / SW NUMBER SEE CALC — INDICATES PLYWOOD SHEAR WALL TYPE & LENGTH. SEE 8/S4.0 FOR SHEAR WALL TYP. DETAILS & SCHEDULE.
- MST 37 TYP. — MST37 DRAG STRUT STRAP ACROSS ALL BEAM AT TOP PLATE U.O.N. PER DETAILS 1,2/S4.0 & 1/S4.1
- 4X/6X HDR — INDICATES 4x OR 6x HEADER BEAM U.O.N. USE GRADE GRADE DF–L #2 FOR 4x10 AND SMALLER HEADER SIZE. USE GRADE DF–L #1 FOR 4x12 AND 6x HEADER SIZES. SEE DETAIL 2/S4.1
- RR — INDICATES DIRECTION OF WOOD ROOF RAFTER. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE
- RJ — INDICATES DIRECTION OF WOOD ROOF JOIST. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE
- FJ — INDICATES DIRECTION OF WOOD FLOOR JOIST. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE
- MF — INDICATES MOMENT FRAME BEAM–COLUMN CONNECTION SEE DWG. S5.1
- FB– 4x/6x– — INDICATES FLOOR BEAM SIZE (GRADE D.F.# 1)
- FB– –"X –" PRLLM — INDICATES FLOOR BEAM SIZE (GRADE PARALLAM 2.0E)
- 4x SIMPSON HARDWARE OR DET. X/X — INDICATES POST WITH SIZE AND SIMPSON COLUMN CAP HARDWARE PER PLAN. SEE 1–3/S4.2; OR PER DETAIL INDICATED ON PLAN
  –USE 4"x4" WOOD POST TYPICAL U.O.N.
  –USE 4x6 POST TO SUPPORT 6x BEAMS, 5.25x & 7x PRLLM/LVL BEAMS
  – POST TO HEADER CONNECTION, SEE 4/S4.2
- K.P. SIMPSON HARDWARE OR DET. X/X — INDICATES KING POST WITH SIMPSON COLUMN CAP HARDWARE PER PLAN. SEE 10–11/S4.2;
  –USE 4"x4" WOOD POST TYPICAL U.O.N.
  –USE 4x6 POST TO SUPPORT 6x BEAMS, 5.25x & 7x PRLLM/LVL BEAMS
- SIMPSON HANGER — INDICATES BEAM WITH HANGER HARDWARE PER 7/S4.2 TYPICAL U.N.O.

WOOD FRAMING MEMBER SCHEDULE

MARK	SIZE, SPACING & GRADE	MAX. SPAN
RR2	2x10 @ 16" O.C. DF–L #2	19'–0"
RJ1	14" TJI 360 @ 16" O.C.	24'–6"
FJ	14" TJI 360 @ 16" O.C.	15'–0"

REVISIONS

OWNER

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Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
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SM ENGINEERING

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SHEET TITLE:
STORAGE ROOF & MEZZANINE FRAMING PLAN- PART 1

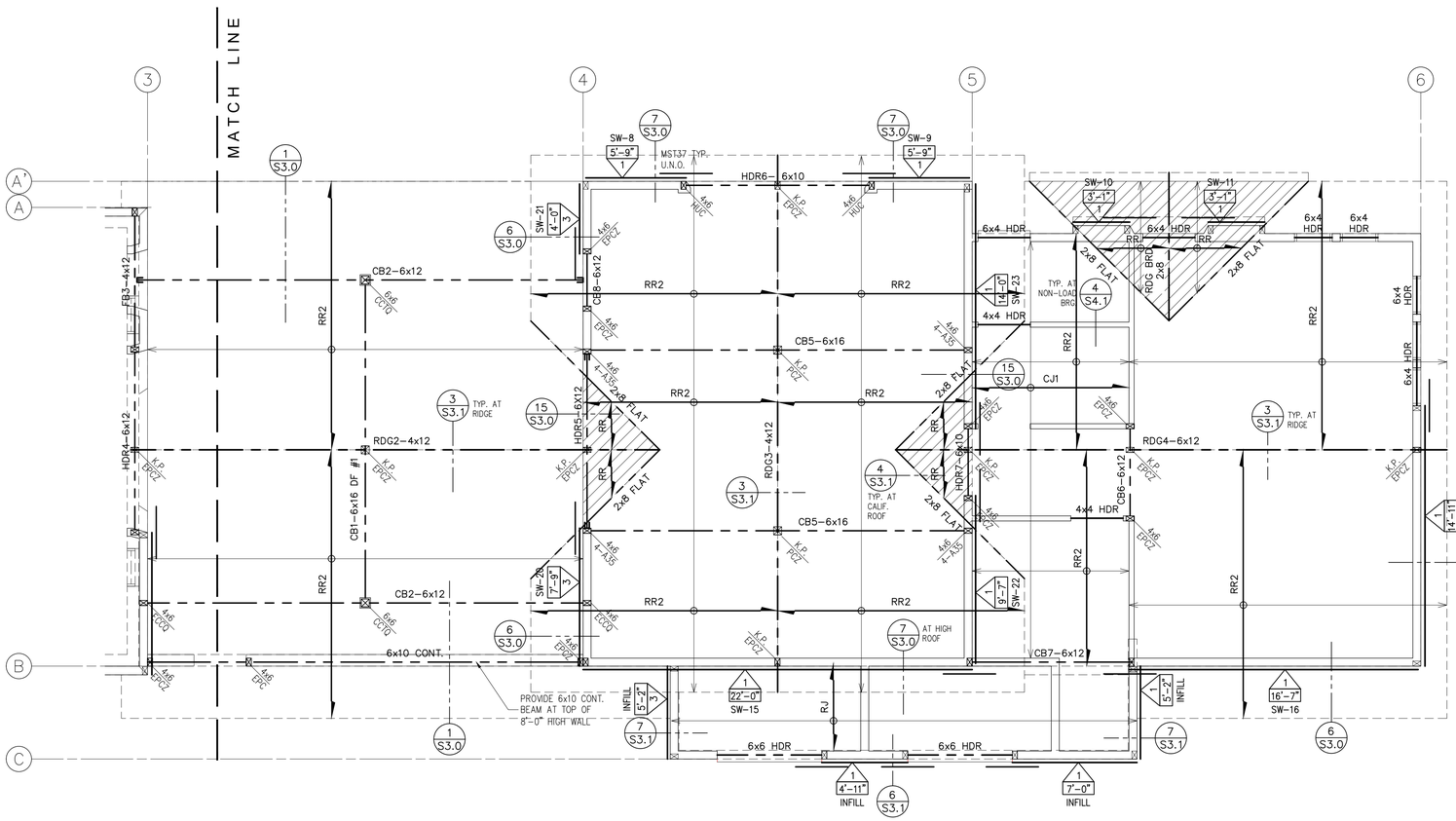
SHEET
S-1.4

SCALE

– GLULAM BEAMS EXPOSED TO WEATHER:
ALL GLULAM BEAMS EXPOSED TO WEATHER SHALL BE EXTERIOR–RATED WITH WET–USE ADHESIVE PER APA/EWS STANDARDS AND PRESERVATIVE–TREATED OR MANUFACTURED FROM NATURALLY DURABLE SPECIES SUITABLE FOR EXTERIOR EXPOSURE.
– USE CORROSION–RESISTANT CONNECTORS AND FASTENERS (HOT–DIP GALVANIZED OR STAINLESS STEEL).
VERIFY MANUFACTURER'S DESIGN VALUES (FB, E, FV) FOR SELECTED GLULAM GRADE.

ALL PRLLM BEAM EXPOSED TO WEATHER TO BE PRLLM PLUS 2.2E

WOOD FRAMING MEMBER SCHEDULE		
MARK	SIZE, SPACING & GRADE	MAX. SPAN
RR	2x 6 @ 16" O.C. DF–L #2	8' –0"
RR1	2x 8 @ 16" O.C. DF–L #2	12'–0"
RR2/RJ	2x10 @ 16" O.C. DF–L #2	19'–0"
CJ	2x 4 @ 16" O.C. DF–L #2	6' –0"
CJ1	2x 6 @ 16" O.C. DF–L #2	10'–0"
CJ2	2x 8 @ 16" O.C. DF–L #2	12'–0"
CJ3	2x10 @ 16" O.C. DF–L #2	16'–0"



STORAGE ROOF FRAMING PLAN– PART 2
SCALE: 1/4" = 1'–0"

FRAMING NOTES:

1. FRAMING PLAN SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ALL HOLDOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG–TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR–2330 AND LARR #25720 AND SHALL BE TIED IN–PLACE PRIOR TO FOUNDATION INSPECTION.
3. SPLICE PLATES OF EXTERIOR WALLS AND SHEAR WALLS W/(14) 16d AT 4'–0" SPLICE (U.O.N.).
4. PROVIDE MULTIPLE STUDS UNDER MULTIPLE JOISTS.
5. STRUCTURAL WOOD PANEL SHEAR WALLS SHALL BE COVERED WITH MINIMUM 2 LAYERS 15# FELT UNDERLAYMENT PRIOR TO PLACING FINISH MATERIAL.
6. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
7. HOLDOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLDOWNS SHALL BE TIGHTENED PRIOR TO COVERING OF WALL. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS IN ACCORDANCE WITH TABLE 2306.5 OF THE LA BUILDING CODE.
8. ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED (11.1.2.2, 2015 NDS).
9. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING: (TABLE 2306.4.1 FOOTNOTE 8)
   a. 3x FOUNDATION SILL PLATES
   b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
   c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
   d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
   e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE .229"x3"x3" PLATE WASHERS WITH SLOTTED CUT HOLE AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON–SLOTTED CUT PLATE WASHERS.
10. WHERE POST IS NOT CONTINUOUS BETWEEN FLOORS, PROVIDE FULL HEIGHT KING STUD EACH SIDE OF POST WITH 16d @ 12" O.C.
11. SEE 8/S4.0 FOR SHEAR WALL SCHEDULE.
12. USE 2–2X BLOCKING OR 2–2X JOIST AT ALL DRAG STRAPS.
13. LAG BOLTS: PROVIDE LEAD HOLE 40%–70% OF THREADED SHANK DIA. AND FULL DIA. FOR SMOOTH SHANK PORTION. 2015 NDS.
14. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
15. USE DOUBLE JOISTS/BLOCKINGS UNDER JACUZZI, BATHTUB AND ANY WATER CONTAINING FIXTURES AT ALL FLOORS.
16. USE 4x6 POST TO SUPPORT 5.25x PRLLM OR 6x BEAMS U.N.O.
17. ALL ROOF AND ROOF DECK SHEAR TRANSFER NAILING SHALL BE VERIFIED BY THE CITY BUILDING DIVISION PRIOR TO COVERING. ANY CRICKETS OR SIMILAR COVERING SHALL BE ENTIRELY REMOVED BEFORE THE HORIZONTAL DIAPHRAGM INSPECTION WILL BE MADE BY THE CITY BUILDING DIVISION.
18. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE & GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.7.
19. USE 2x6 @ 16" O.C. STUD WALL FRAMING AT ALL EXTERIOR WALLS AND 2x4 OR 3x4 @ 16" O.C. STUD WALL FRAMING AT ALL INTERIOR WALLS UNLESS NOTED OTHERWISE.

TYPICAL ROOF SHEATHING: USE 1/2" STRUCT. 1 PLYWOOD, P.I. 24/0 WITH 10d COMMON NAILS AT 6"–6"–12" O/C LAY PERPENDICULAR TO FRAMING. USE 1X8 T&G SELECT SPRUCE AT EXPOSED EAVES, (U.O.N.). SEE DETAIL 1/S4.0

LEGEND:

- SW TYPE / SW LENGTH / SW–X / SW NUMBER SEE CALC — INDICATES PLYWOOD SHEAR WALL TYPE & LENGTH. SEE 8/S4.0 FOR SHEAR WALL TYP. DETAILS & SCHEDULE.
- MST 37 TYP. — MST37 DRAG STRUT STRAP ACROSS ALL BEAM AT TOP PLATE U.O.N. PER DETAILS 1,2/S4.0 & 1/S4.1
- 4X/6X HDR — INDICATES 4x OR 6x HEADER BEAM U.O.N. USE GRADE GRADE DF–L #2 FOR 4x10 AND SMALLER HEADER SIZE. USE GRADE DF–L #1 FOR 4x12 AND 6x HEADER SIZES. SEE DETAIL 2/S4.1
- RR — INDICATES DIRECTION OF WOOD ROOF RAFTER. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE
- RJ — INDICATES DIRECTION OF WOOD ROOF JOIST. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE
- CJ — INDICATES DIRECTION OF WOOD FLOOR JOIST. SIZE, SPACING & GRADE PER WOOD FRAMING SCHEDULE
- RB– 4x/6x– — INDICATES ROOF BEAM SIZE (GRADE D.F.# 1)
- RB– –"X –" PRLLM — INDICATES ROOF BEAM SIZE (GRADE PARALLAM 2.0E)
- CB– 4x/6x– — INDICATES CEILING BEAM SIZE (GRADE D.F.# 1)
- CB– –"X –" PRLLM — INDICATES CEILING BEAM SIZE (GRADE PARALLAM 2.0E)
- 4x SIMPSON HARDWARE OR DET. X/X — INDICATES POST WITH SIZE AND SIMPSON COLUMN CAP HARDWARE PER PLAN. SEE 1–3/S4.2; OR PER DETAIL INDICATED ON PLAN
  –USE 4"x4" WOOD POST TYPICAL U.O.N.
  –USE 4x6 POST TO SUPPORT 6x BEAMS, 5.25x & 7x PRLLM/LVL BEAMS
  – POST TO HEADER CONNECTION, SEE 4/S4.2
- K.P. SIMPSON HARDWARE OR DET. X/X — INDICATES KING POST WITH SIMPSON COLUMN CAP HARDWARE PER PLAN. SEE 10–11/S4.2;
  –USE 4"x4" WOOD POST TYPICAL U.O.N.
  –USE 4x6 POST TO SUPPORT 6x BEAMS, 5.25x & 7x PRLLM/LVL BEAMS
- SIMPSON HANGER — INDICATES BEAM WITH HANGER HARDWARE PER 7/S4.2 TYPICAL U.N.O.

REVISIONS

	△

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 12/31/26
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SAN MINA ENGINEERING, INC.
24310 MOULTON PKWY, STE. O–105
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TEL.: # (949) 446–1417
SM ENGINEERING

PROJECT NO:	85–25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10–16–25

SHEET TITLE:
STORAGE ROOF FRAMING PLAN- PART 2

SHEET
S-1.5

SCALE

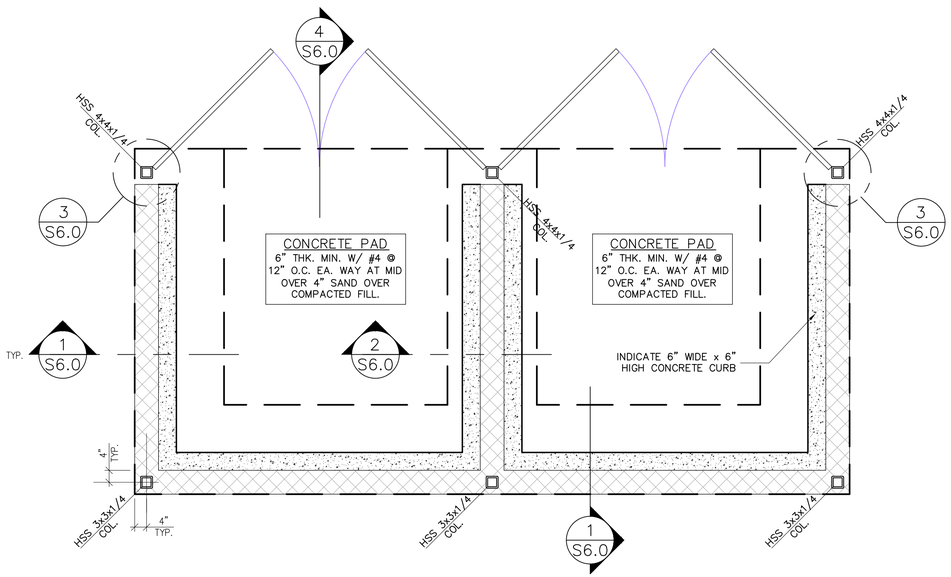
FOUNDATION NOTES

1. CONCRETE STRENGTH SHALL BE MINIMUM 2500 PSI.
2. THE MAXIMUM SOIL BEARING PRESSURE IS 1500 PSF PER TABLE 1806.2.
3. ALL CONTINUOUS EXTERIOR FOOTINGS SHALL HAVE 5/8" DIAMETER X 12" A.B.'S WITH 3"X3"X1/4" WASHERS, MIN. 7" EMBEDMENT ONTO CONCRETE, AT 48" O.C. UNLESS NOTED OTHERWISE ON PLANS. ONE ANCHOR BOLT SHOULD BE LOCATED MAX. 12" AWAY FROM THE END OF THE SILL PLATES. MIN. (2) A.B.'S PER SILL PLATE PER SHEAR PANEL.
4. ALL INTERIOR NON-BEARING WALLS SHALL HAVE HILTI X-CR WITH MIN. PENETRATION OF 1 1/4" INTO SLAB, AT 24" O.C. UNLESS NOTED OTHERWISE. TO BE INSTALLED IN ACCORDANCE WITH ICC ES #ESR-1663 AND LARR #25646. ACTUAL SLAB THICKNESS SHALL BE MINIMUM 3-1/2".
5. PROVIDE #3X24" DOWEL AT 24" O.C. AND 12" FROM THE CORNER AT ALL CONCRETE STOOP AND PORCHES.
6. ALL FOOTINGS SHALL BE FOUNDED IN UNDISTURBED SOIL PER CODE, A MINIMUM OF 24" INTO COMPETENT BEARING MATERIALS, NATURAL SOILS OR COMPACTED FILL. SEE SOIL REPORT WHERE IT IS REQUIRED.
7. VERIFY MINIMUM FOUNDATION DEPTH, WIDTH, REINFORCING STEEL AND ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT (WHERE IT IS REQUIRED) AND IF ANY MORE RESTRICTIVE THEY SHALL SUPERSEDE THE ABOVE MINIMUMS.
8. FOUNDATION DRAWING SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
9. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS INVESTIGATION REPORT MAY BE REQUIRED.
10. DESIGN FOR EXPANSIVE SOIL OR SUBMIT A SOILS REPORT TO THE GRADING DIVISION PER INFORMATION BULLETIN p/bc 2008-116 AND 91.1805.8
11. IN THE EVENT EXCAVATIONS REVEAL UNFAVORABLE CONDITIONS, THE SERVICES OF A SOILS ENGINEER AND/OR GEOLOGIST MAY BE REQUIRED.
12. EXCAVATIONS SHALL BE MADE IN COMPLIANCE WITH CAL/OSHA REGULATIONS.

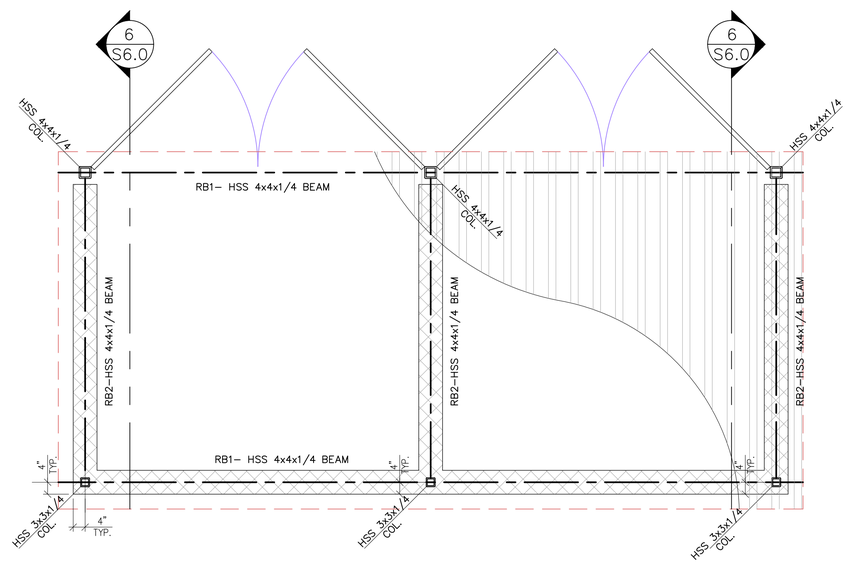
LEGEND:

CF-1 — CONT. EXTERIOR SLAB FTG.: 30" WIDE TYP. U.N.O. x 18" DEEP W/ #5 @ 8" BARS TOP & BOTTOM. SEE DETAILS 7/S2.0.

CMU WALL PER DETAIL 7/S2.0



TRASH ENCLOSURE-
FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



TRASH ENCLOSURE-
ROOF FRAMING PLAN
SCALE: 1/2" = 1'-0"

REVISIONS

	△

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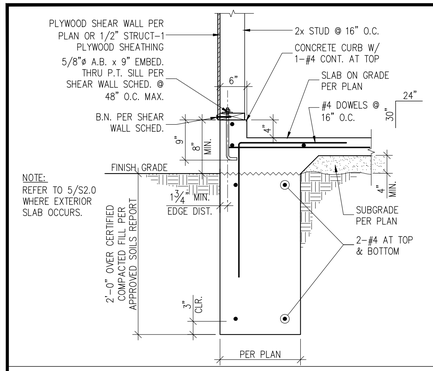
SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

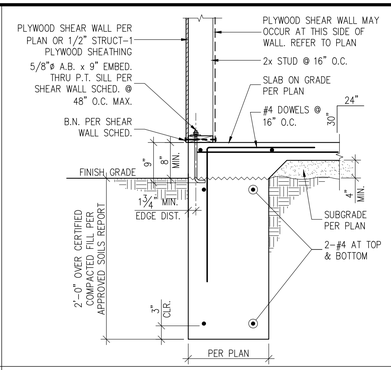
SHEET TITLE:
TRASH ENCLOSURE ROOF FRAMING & FOUNDATION PLANS

SHEET
S-1.6

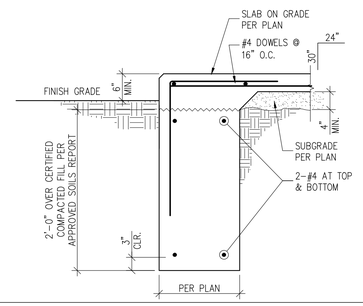
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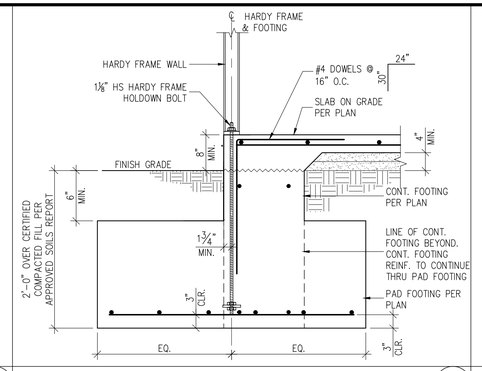
EXTERIOR SLAB FOOTING AT GARAGE (1)



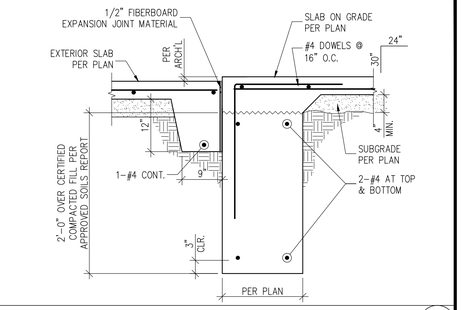
EXTERIOR SLAB FOOTING (2)



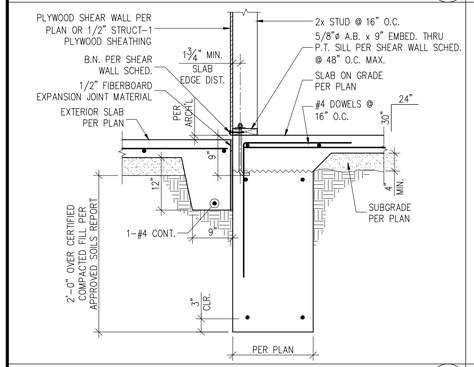
EXTERIOR SLAB FOOTING (3)



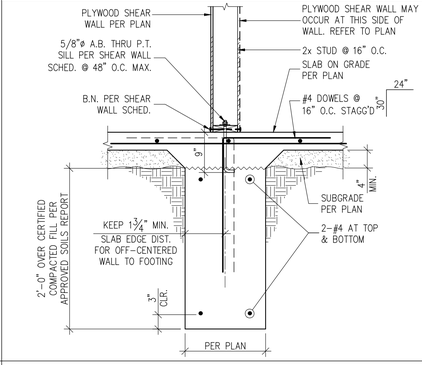
EXT. SLAB FTG. & PAD FTG. AT HARDY FRAME (4)



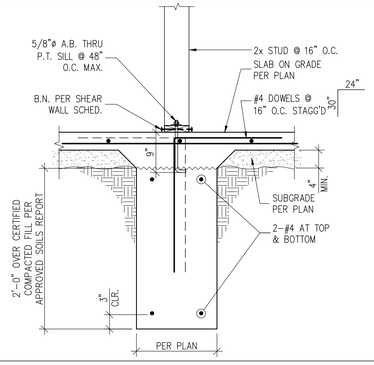
EXTERIOR SLAB FOOTING AT HOUSE/PORCH (5)



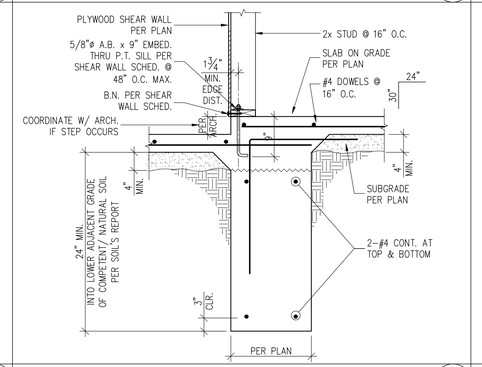
EXTERIOR SLAB FOOTING AT HOUSE/PORCH (6)



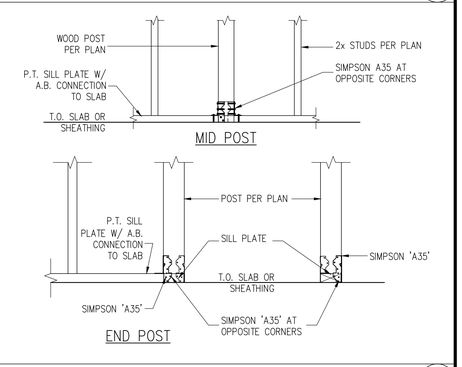
INTERIOR SLAB FOOTING (7)



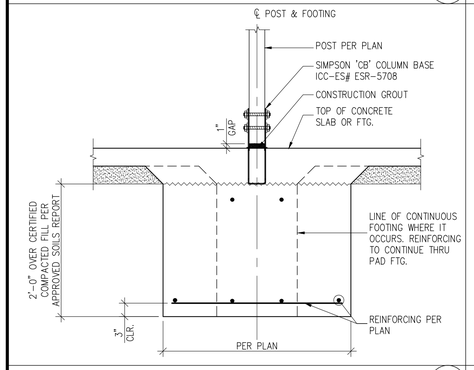
INTERIOR SLAB FOOTING (8)



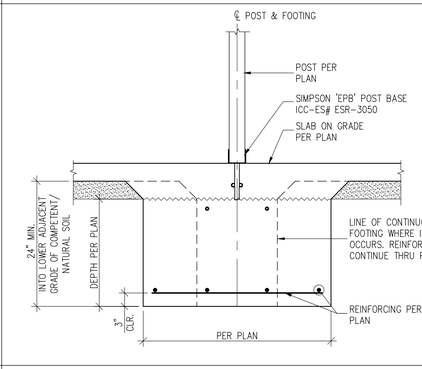
INTERIOR SLAB FOOTING AT STEPPED SLAB (9)



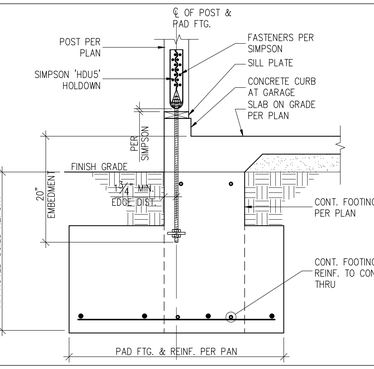
TYPICAL POST TO SILL PLATE CONNECTION (10)



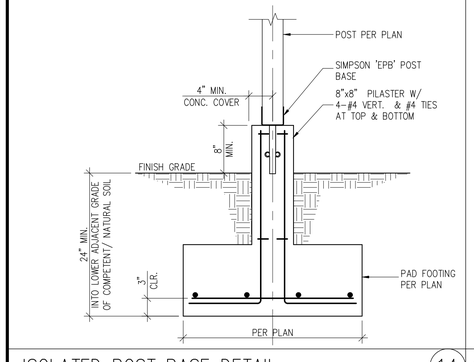
TYP. POST TO INT. PAD FOOTING (11)



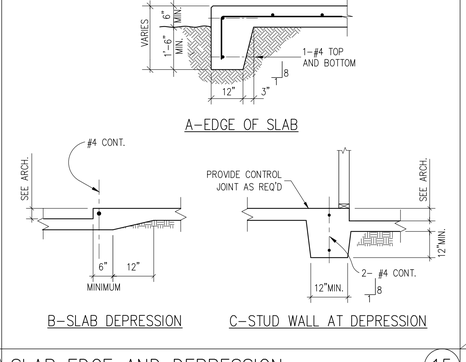
POST TO INT. PAD FOOTING (12)



POST AT EXT. SLAB FTG W/ PAD FTG. (13)

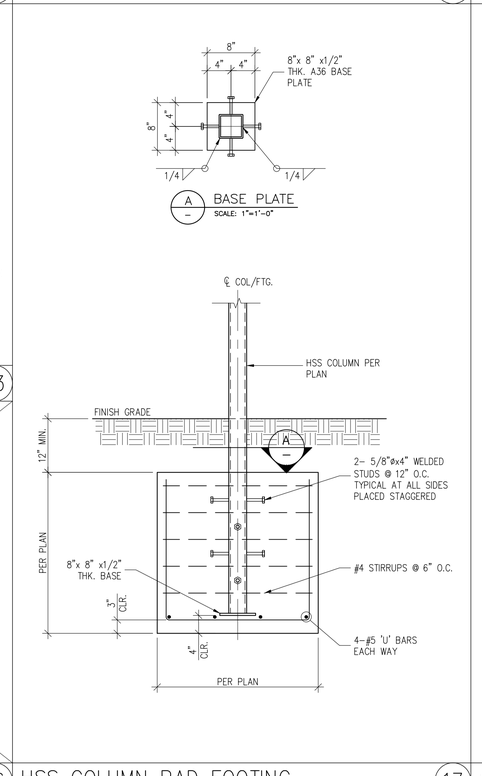


ISOLATED POST BASE DETAIL (14)

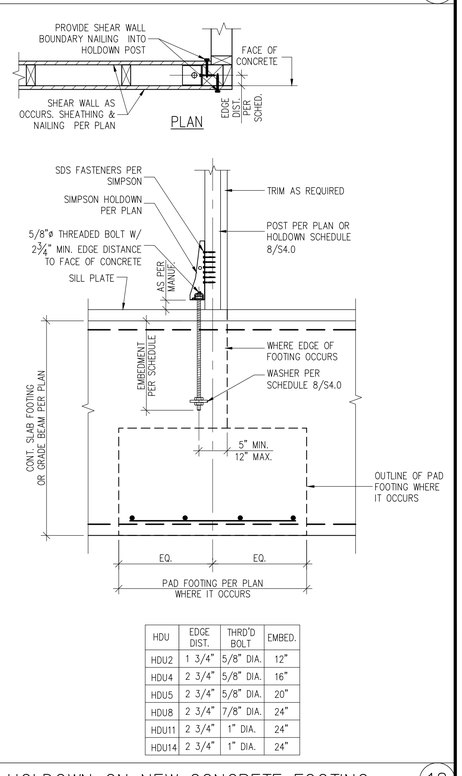


SLAB EDGE AND DEPRESSION (15)

(16)



HSS COLUMN PAD FOOTING (17)



HDU	EDGE DIST.	THRD'D BOLT	EMBED.
HDU2	1 3/4"	5/8" DIA.	12"
HDU4	2 3/4"	5/8" DIA.	16"
HDU5	2 3/4"	5/8" DIA.	20"
HDU8	2 3/4"	7/8" DIA.	24"
HDU11	2 3/4"	1" DIA.	24"
HDU14	2 3/4"	1" DIA.	24"

HOLDOWN ON NEW CONCRETE FOOTING (18)

REVISIONS

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SM ENGINEERING

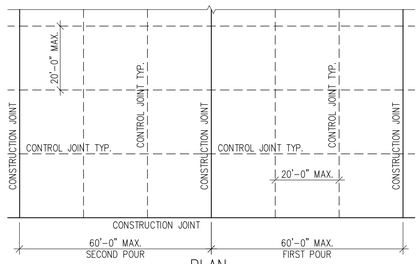
PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

FOUNDATION DETAILS

SHEET
S-2.0

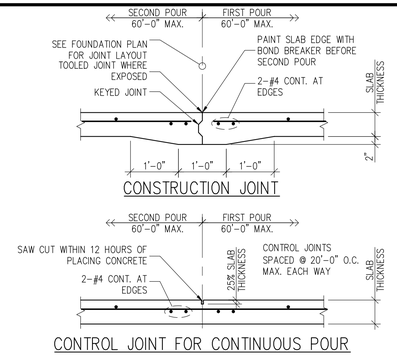
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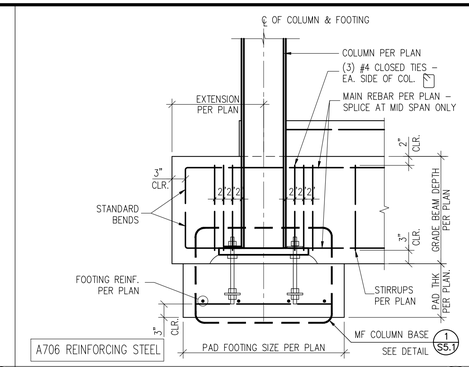
PLAN

NOTES:
1. FOR CONSTRUCTION JOINT AND CONTROL JOINT. SEE TYPICAL DETAILS.
2. WHERE PLAN CONFIGURATION DIFFERS FROM ABOVE, CONTRACTOR TO SUBMIT PROPOSED POUR SEQUENCE TO STRUCTURAL ENGINEER FOR APPROVAL.
3. AVOID RE-ENTRANT CORNERS AT CONSTRUCTION & CONTROL JOINTS.

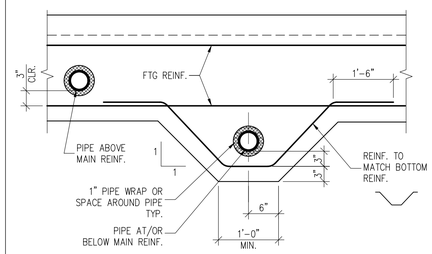
1 STANDARD METHOD OF POURING SLAB ON GRADE



2 JOINTS IN CONCRETE SLAB ON GRADE

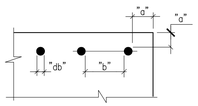


3 MF COLUMN BASE



4 FOUNDATION PIPE PENETRATION

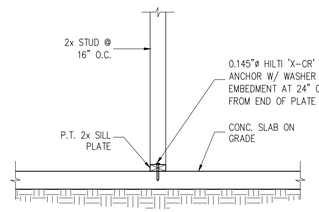
	TENSION LAP SPLICE LENGTH (CLASS B)						DEVELOPMENT LENGTH (ld) (CLASS A)					
	3000 PSI CONC f'c		4000 PSI CONC f'c		5000 PSI CONC f'c		3000 PSI CONC f'c		4000 PSI CONC f'c		5000 PSI CONC f'c	
BAR SIZE	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	29	22	28	20	28	20	23	17	21	15	21	15
#4	39	29	34	25	30	23	30	22	26	19	23	17
#5	48	36	42	31	38	28	37	28	32	24	29	22
#6	58	43	50	37	45	34	45	33	39	29	35	26
#7	81	63	71	54	63	49	63	48	54	42	49	38
#8	93	72	81	62	72	56	72	55	62	48	56	43
#9	105	81	91	70	81	63	81	62	70	54	63	48
#10	118	91	102	79	92	70	91	70	79	61	70	54
#11	131	101	113	87	102	78	101	78	87	67	78	60



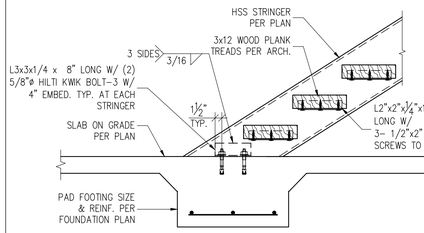
WHERE: "a" IS THE CLEAR COVER
"b" IS THE CLEAR SPACING
"db" IS THE BAR DIA.

NOTES:
1. ALL SPLICES SHALL BE TENSION LAP SPLICES U.N.O.
2. LENGTHS SHOWN ARE FOR GRADE 60 UNCOATED BARS.
3. LENGTHS SHOWN ARE IN INCHES.
4. INCREASE LENGTHS 30% FOR LIGHT WEIGHT CONCRETE AND AT FOUR BAR BUNDLES (WHERE 2 BARS LAP WITH 2 OTHER BARS) INDIVIDUAL BARS WITHIN A BUNDLE SHALL NOT OVERLAP.
5. TOP BARS = HORIZONTAL BARS PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THEM .
6. INCREASE LENGTHS 50% WHERE a < db OR WHERE b < db FOR BEAMS AND COLUMNS OR WHERE b < 2db FOR OTHER ELEMENTS.
7. FOR #14 AND #18 BARS, USE MECHANICAL SPLICE IN ACCORDANCE WITH UBC REQUIREMENTS.

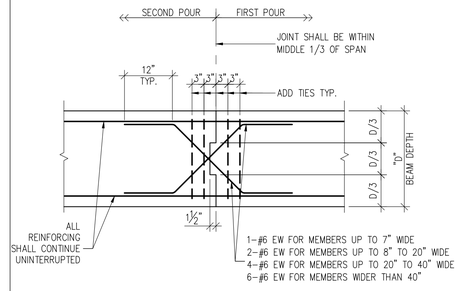
9 TENSION LAP SPLICE SCHEDULE



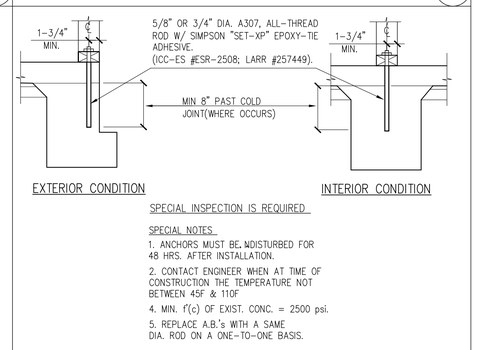
NON-LOAD-BEARING WALL TO CONC. SLAB 5



6 STAIR BASE



7 FOOTING CONSTRUCTION JOINT

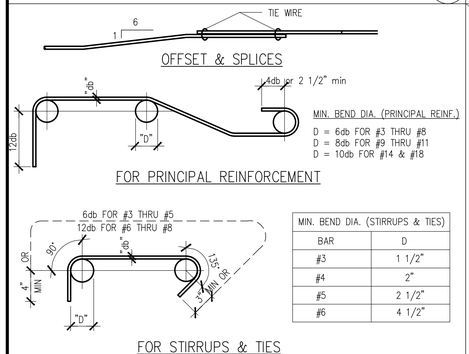


SPECIAL INSPECTION IS REQUIRED

SPECIAL NOTES

1. ANCHORS MUST BE UNDISTURBED FOR 48 HRS. AFTER INSTALLATION.
2. CONTACT ENGINEER WHEN AT TIME OF CONSTRUCTION THE TEMPERATURE NOT BETWEEN 45F & 110F
4. MIN. f'(c) OF EXIST. CONC. = 2500 psi.
5. REPLACE A.B.'s WITH A SAME DIA. ROD ON A ONE-TO-ONE BASIS.

8 RETROFIT FOR MISSED A.B.



MIN. BEND DIA. (STIRRUPS & TIES)	
BAR	D
#3	1 1/2"
#4	2"
#5	2 1/2"
#6	4 1/2"

FOR STIRRUPS & TIES

STANDARD HOOK DETAILS 10

11

12

13

14

15

16

17

18

19

REVISIONS

	△

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 12-31
CIVIL
STATE OF CALIFORNIA

SAN MINA ENGINEERING, INC.
24310 MOULTON PKWY, STE. O-105
LAGUNA HILLS, CA 92637
TEL. # (949) 446-1417

SM ENGINEERING

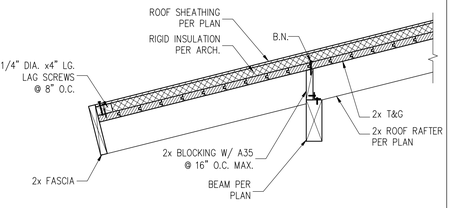
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CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

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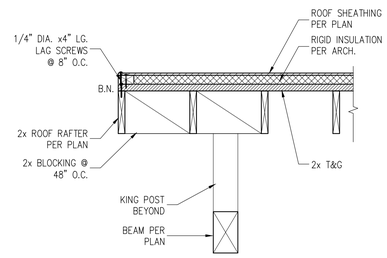
FOUNDATION DETAILS

SHEET
S-2.1

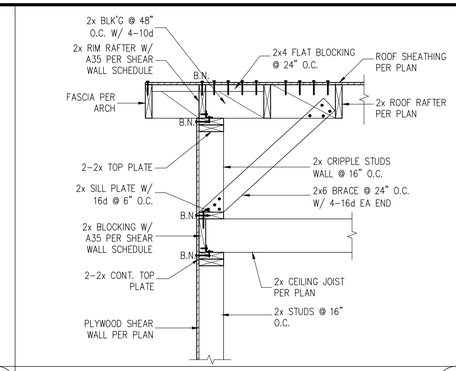
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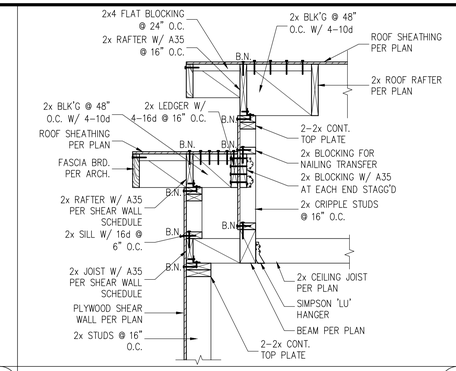
ROOF FRAMING TO BEAM (1)



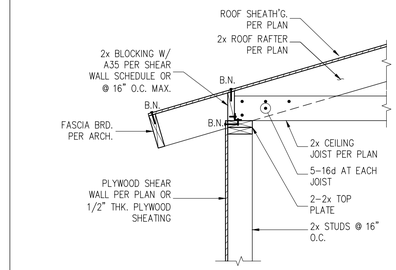
ROOF FRAMING TO BEAM (2)



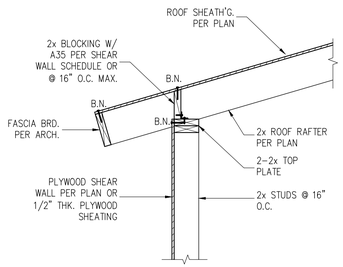
ROOF & CEILING TO EXTERIOR WALL (3)



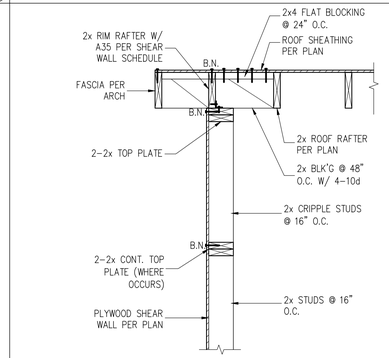
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (4)



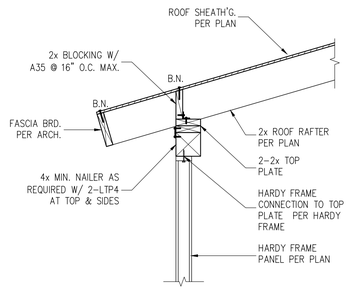
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (5)



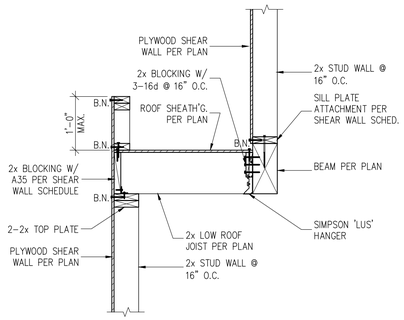
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (6)



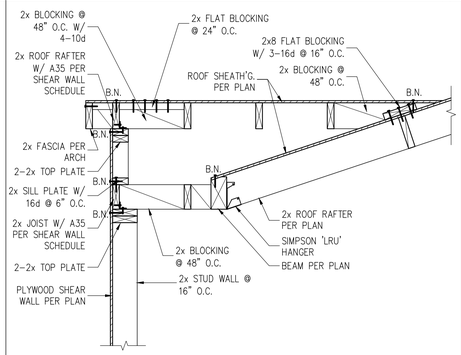
SHEAR TRANSFER TO ROOF AT EXT. WALL (7)



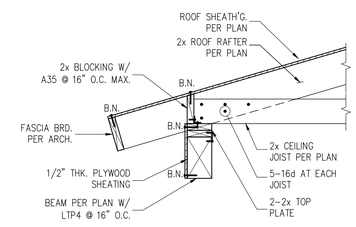
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (8)



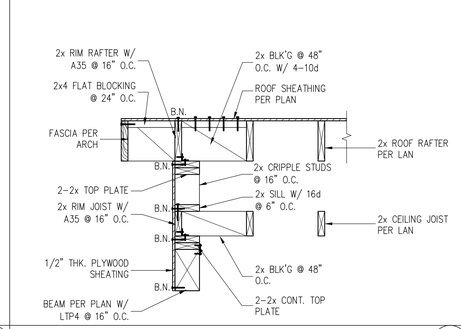
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (9)



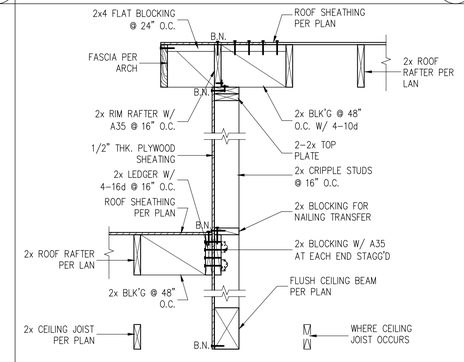
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (10)



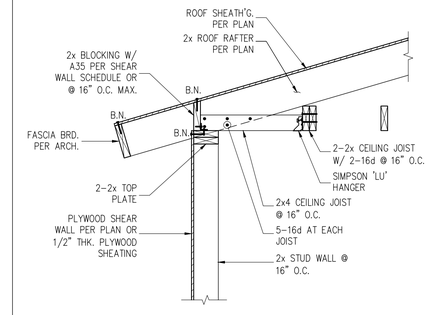
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (11)



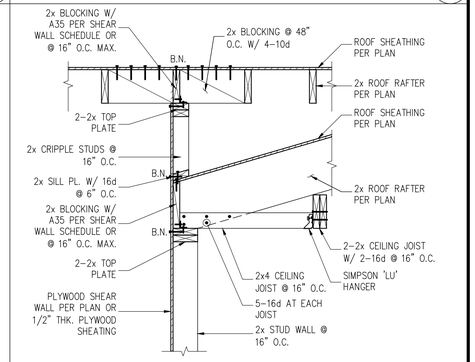
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (12)



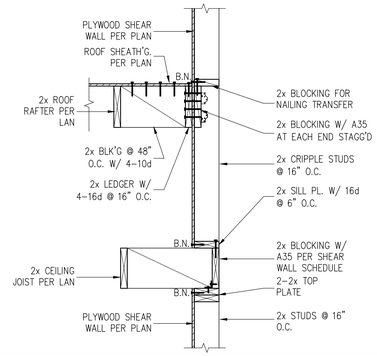
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (13)



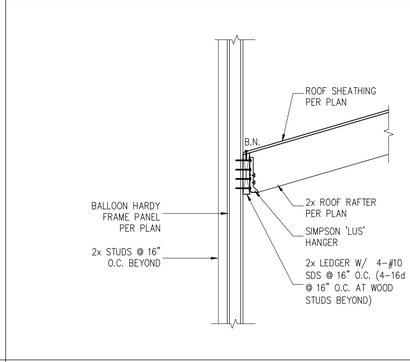
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (14)



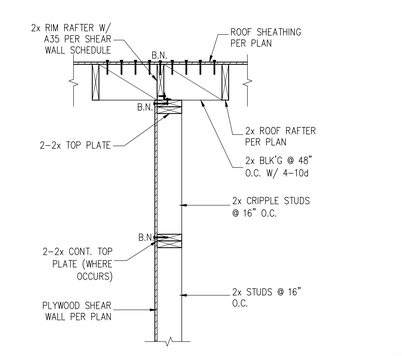
SHEAR TRANSFER TO ROOF AT INTERIOR WALL (15)



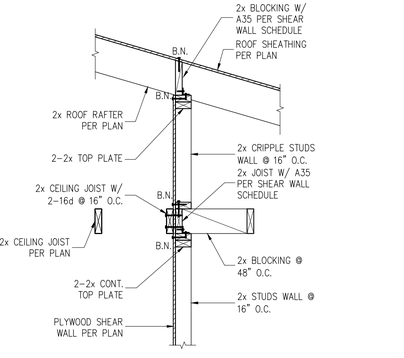
SHEAR TRANSFER TO ROOF AT INTERIOR WALL (16)



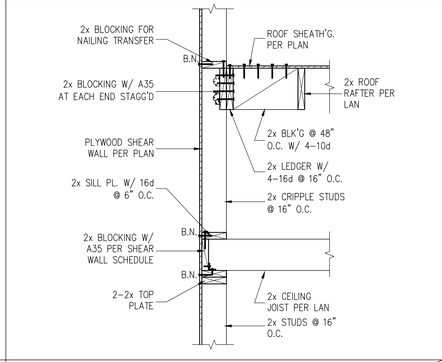
SHEAR TRANSFER TO ROOF AT INTERIOR WALL (17)



SHEAR TRANSFER TO ROOF AT INT. WALL (18)



ROOF & CEILING TO INTERIOR SHEAR WALL (19)



SHEAR TRANSFER TO ROOF AT INTERIOR WALL (20)

REVISIONS

OWNER

PROJECT

352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 12-31-26
CIVIL
STATE OF CALIFORNIA

SAN MINA ENGINEERING, INC.
24310 MOULTON PKWY. STE. O-105
LAGUNA HILLS, CA 92637
TEL: # (949) 446-1417

SM ENGINEERING

PROJECT NO:	85-25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

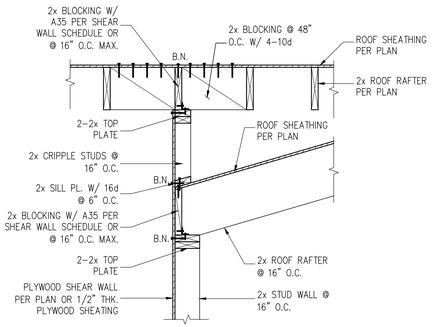
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ROOF FRAMING SECTIONS

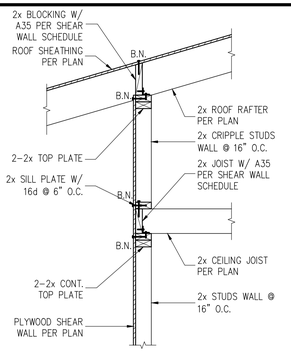
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S-3.0

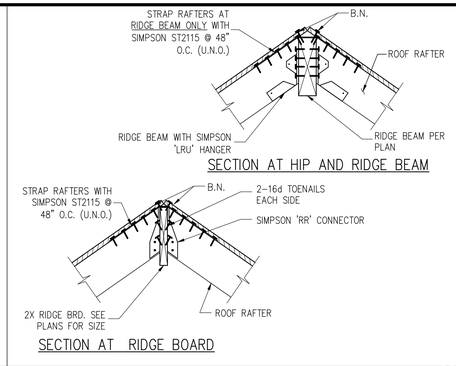
SCALE



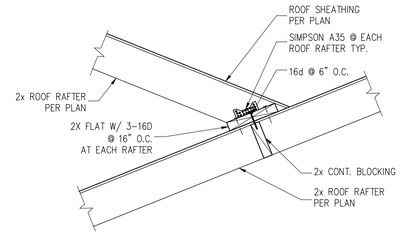
SHEAR TRANSFER TO ROOF AT INTERIOR WALL (1)



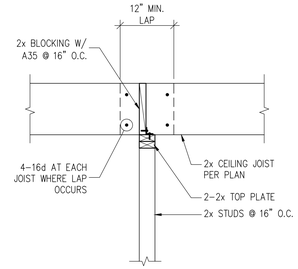
ROOF & CEILING TO INTERIOR SHEAR WALL (2)



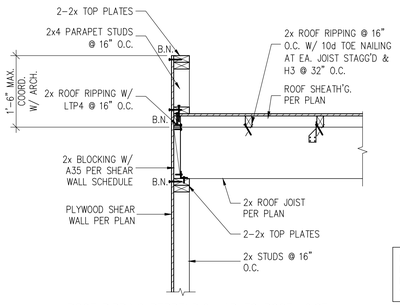
TYP. RIDGE/HIP FRAMING (3)



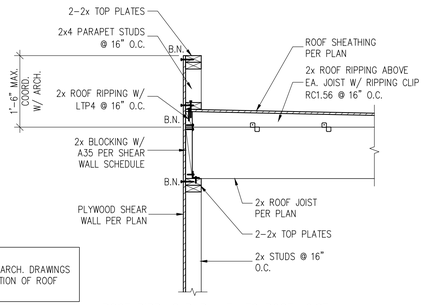
CALIFORNIA ROOF FRAMING (4)



CEILING JOIST LAP AT STUD WALL (5)



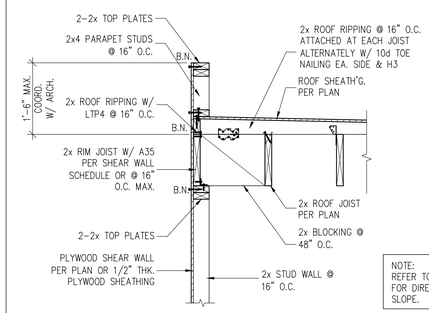
ROOF RIPPING PERPENDICULAR TO ROOF JOIST



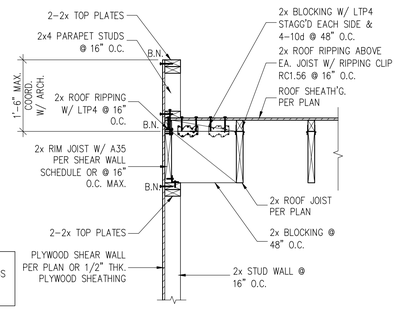
ROOF RIPPING PARALLEL TO ROOF JOIST

NOTE:
REFER TO ARCH. DRAWINGS FOR DIRECTION OF ROOF SLOPE.

SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (6)



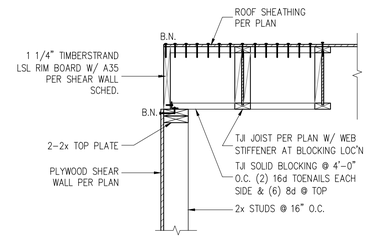
ROOF RIPPING PERPENDICULAR TO ROOF JOIST



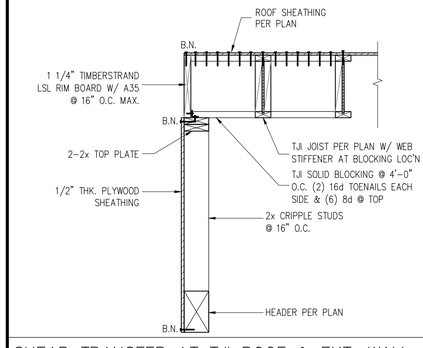
ROOF RIPPING PARALLEL TO ROOF JOIST

NOTE:
REFER TO ARCH. DRAWINGS FOR DIRECTION OF ROOF SLOPE.

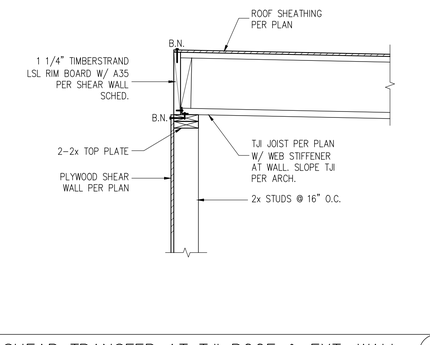
SHEAR TRANSFER TO ROOF AT EXTERIOR WALL (7)



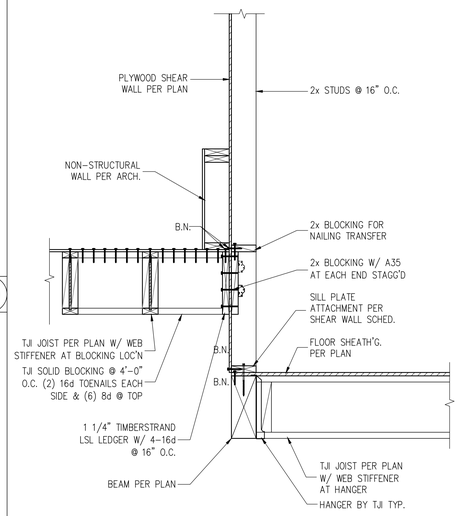
SHEAR TRANSFER AT TJI ROOF & EXT. WALL (8)



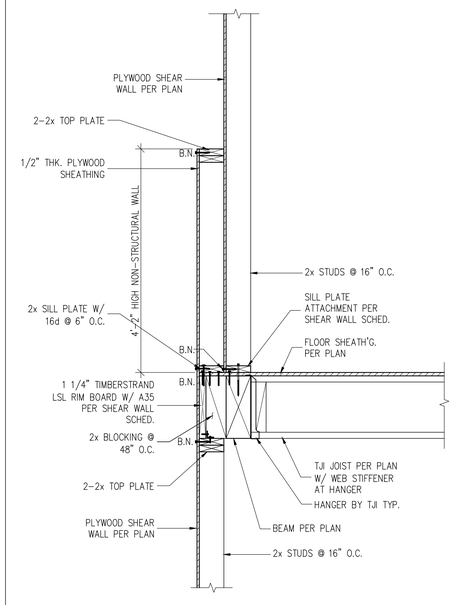
SHEAR TRANSFER AT TJI ROOF & EXT. WALL (9)



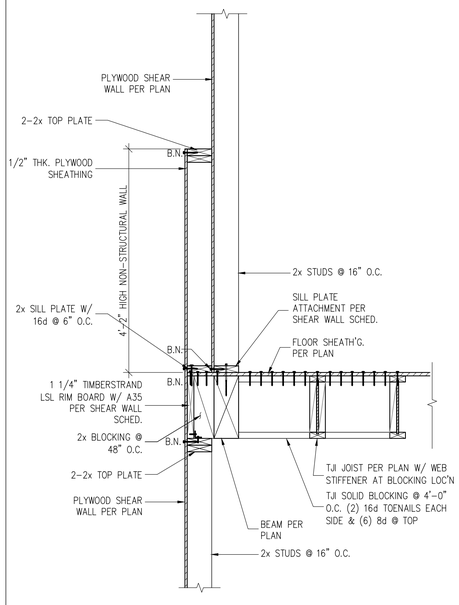
SHEAR TRANSFER AT TJI ROOF & EXT. WALL (10)



SHEAR TRANSFER AT TJI ROOF & EXT. WALL (13)



SHEAR TRANSFER AT TJI ROOF & EXT. WALL (14)



SHEAR TRANSFER AT TJI ROOF & EXT. WALL (15)

REVISIONS

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
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SM ENGINEERING

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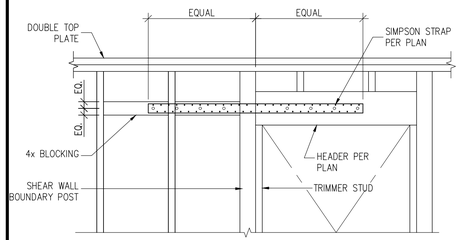
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ROOF & FLOOR FRAMING SECTIONS & DETAILS

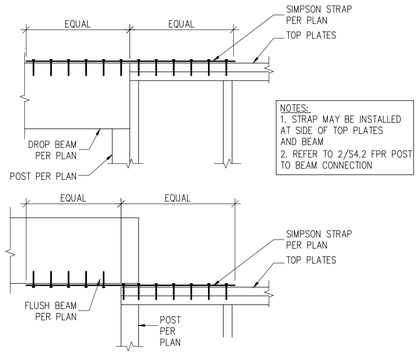
SHEET

S-3.1

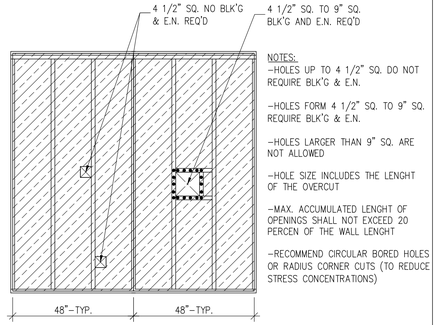
SCALE



DRAG STRUT CONNECTION (1)



DRAG DROP BEAM/FLUSH BEAM (2)



NOTES:
-HOLES UP TO 4 1/2" SQ. DO NOT REQUIRE BLK'G & E.N.

-HOLES FORM 4 1/2" SQ. TO 9" SQ. REQUIRE BLK'G & E.N.

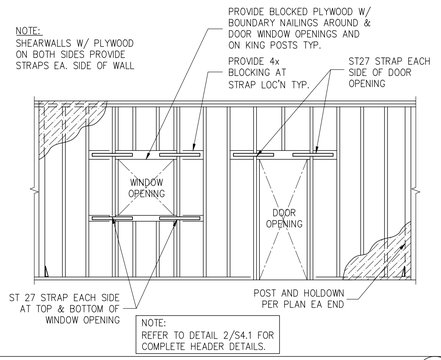
-HOLES LARGER THAN 9" SQ. ARE NOT ALLOWED

-HOLE SIZE INCLUDES THE LENGHT OF THE OVERCUT

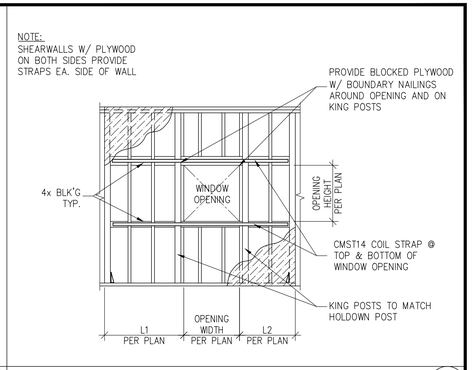
-MAX. ACCUMULATED LENGHT OF OPENINGS SHALL NOT EXCEED 20 PERCEN OF THE WALL LENGHT

-RECOMMEND CIRCULAR BORED HOLES OR RADIUS CORNER CUTS (TO REDUCE STRESS CONCENTRATIONS)

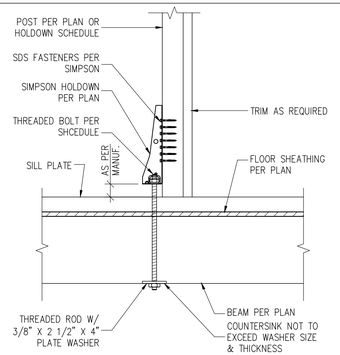
SHEAR WALL PENETRATIONS (3)



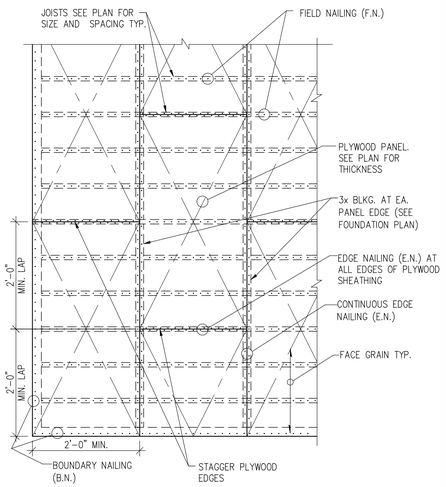
PERFORATED SHEAR WALL ELEVATION (4)



SHEAR WALL W/ OPENING (5)



HOLDOWN ABOVE BEAM (6)



NOTE:
ROOF DIAPHRAGM IS NOT BLOCKED.
USE 3x BLOCKING ON FLOOR DIAPHRAGM ONLY WHERE T&G SHEATHING IS NOT USED

NOTES:
1. PROVIDE NAIL SIZE AND SPACING AS NOTED ON PLANS.
2. ALL PLYWOOD END JOINTS SHALL BE STAGGERED 2'-0" MIN AS INDICATED.
3. LONG DIMENSION OF PLYWOOD SHEATHING SHALL BE LAID PERPENDICULAR TO JOIST.
4. PROVIDE MIN. 1/2" EDGE DISTANCE FOR PLYWOOD EDGE NAILING.
5. USE TONGUE AND GROOVE PLYWOOD AT ALL UNBLOCKED FLOOR. U.N.O.
6. NAILS TO BE OVER-DRIVED THRU PLYWOOD TOP LAYER.
7. PROVIDE 1/16" GAP BETWEEN PLYWOOD SHEATHING.
8. REPLACE PLYWOOD W/ OSB WITH SAME GRADE, THICKNESS AND EXPOSURE.

TYP. FLOOR AND ROOF SHEATHING (7)

SHEAR WALL SCHEDULE

MARK	MATERIAL	NO. OF SIDES	NAILING		A35 SHEAR CLIPS	SILL PLATE ATTACHMENT U.N.O. ⑦		ALLOWABLE SHEAR FOR SEISMIC/WIND (#/FT)	REMARKS
			EDGE (E.N.)	FIELD (F.N.)		FRAMED FLOOR ⑧⑨	⑤ FOUNDATION (A307 BOLTS)		
1	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	1	10d @ 6" O.C.	10d @ 12" O.C.	16" O.C.	1/4" DIA. x 7" LAG @ 24" O.C.	5/8"ø A.B. @ 48" O.C.	255	③④
2	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	1	10d @ 4" O.C.	10d @ 12" O.C.	8" O.C.	1/4" DIA. x 7" LAG @ 16" O.C.	5/8"ø A.B. @ 32" O.C.	380	①②③④
3	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	1	10d @ 3" O.C.	10d @ 12" O.C.	8" O.C.	1/4" DIA. x 7" LAG @ 12" O.C.	5/8"ø A.B. @ 24" O.C.	500	①②③④
4	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	1	10d @ 2" O.C.	10d @ 12" O.C.	8" O.C.	1/4" DIA. x 7" LAG @ 9" O.C.	5/8"ø A.B. @ 16" O.C.	650	①②③④⑥
5	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	2	10d @ 4" O.C.	10d @ 12" O.C.	8" O.C.	1/4" DIA. x 7" LAG @ 9" O.C.	5/8"ø A.B. @ 24" O.C.	765	①②③④
6	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	2	10d @ 3" O.C.	10d @ 12" O.C.	8" O.C.	1/4" DIA. x 7" LAG @ 9" O.C.	5/8"ø A.B. @ 12" O.C.	1030	①②③④⑥
7	15/32" STRUCT-I PLYWD (PI 32/16) 5-PLY	2	10d @ 2" O.C.	10d @ 12" O.C.	8" O.C.	1/4" DIA. x 7" LAG @ 9" O.C.	5/8"ø A.B. @ 12" O.C.	1305	①②③④⑥

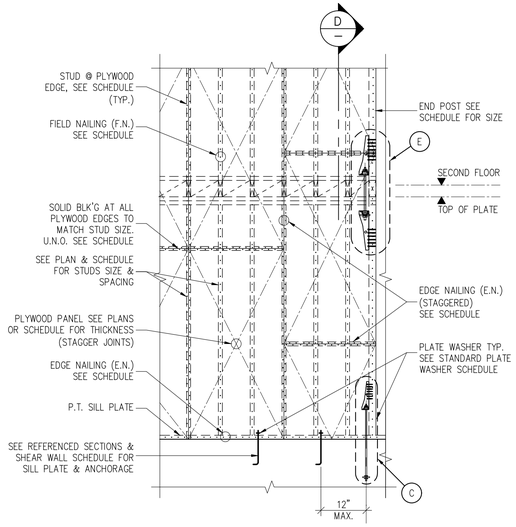
HOLDOWN SCHEDULE

	HOLD-DOWN TYPE	"A" 1/4x2.5 SDS	THREADED BOLT "B"	THREADED BOLT "C"	FASTENER SDS SIZE	FASTENER QTY	"D" ①	HOLDOWN SUBSTITUTE "E" (ONLY BETWEEN FLOORS) SEE DETAIL E
2	HDU2	NO. PER MANUF.	5/8" DIA.	12"	1/4x2.5	6	4x4	MST48
4	HDU4	NO. PER MANUF.	5/8" DIA.	16"	1/4x2.5	10	4x4	MST60
5	HDU5	NO. PER MANUF.	5/8" DIA.	20"	1/4x2.5	14	4x4	MST72
8	HDU8	NO. PER MANUF.	7/8" DIA	24"	1/4x2.5	20	4x6	
11	HDU11	NO. PER MANUF.	1" DIA	24"	1/4x2.5	30	4x6	
14	HDU14	NO. PER MANUF.	1" DIA	24"	1/4x2.5	36	4x8/6x6	

HOLDOWN NOTES:
① PROVIDE MIN. POST SIZE AS INDICATED, INCREASE SIZE TO MATCH WALL THICKNESS.
② FOR HDU11 & HDU14, ADD 1-#5 TOP & BOTTOM TO THE FOOTING REINFORCEMENT.

PLATE WASHER SCHEDULE

BOLT SIZE (INCHES)	PLATE WASHER SIZE (INCHES)
1/2	5/16 x 3 x 3
5/8	5/16 x 3 x 3
3/4	3/8 x 3 x 3
7/8	3/8 x 3 x 3
1	3/8 x 3-1/2 x 3-1/2



B SHEAR WALL & HOLD-DOWN
NTS

NOTES:

1. FRAMING AT ADJOINING PANEL EDGES SHALL BE 3" (INCH) NOMINAL OR THICKER (i.e. MIN 3x VERTICAL STUDS AND BLOCKING). NAILS SHALL BE STAGGERED IN TWO LINES ALONG PANEL EDGES WHERE NAILS ARE SPACED 2" INCHES ON CENTER OR WHEN 10d COMMON NAILS SPACED 3" O.C. PENETRATE FRAMING MINIMUM OF 1 1/2".

2. WHERE PLYWOOD APPLIES ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" INCHES ON CENTER ON EITHER SIDE. PANEL JOINTS SHALL HAVE MIN 3x (VERTICAL STUDS & BLOCKING) AND NAILS SHALL BE STAGGERED. OFFSET PANEL JOINTS TO FALL ON DIFFERENT FRAMING MEMBER WHERE PLYWOOD IS PLACED AT BOTH FACES.

3. NAILS SHALL BE PLACED NOT LESS THAN 1/2" INCH FROM PANEL EDGES.

4. FOR HOLDOWNS AT THE END OF THE SHEAR WALL, SEE PLANS AND SCHEDULE. PROVIDE PLATE WASHER PER STANDARD PLATE WASHER SCHEDULE AT ALL SILL PLATE ANCHOR BOLTS AND AT ALL HOLD-DOWN BOLTS CONNECTED TO VERTICAL POSTS.

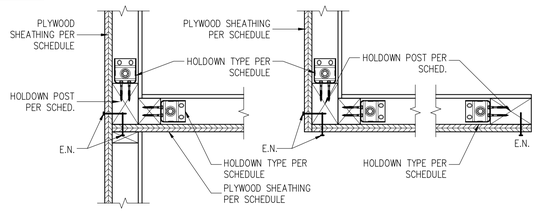
5. USE WELDED STUD BOLTS OF SAME SIZE & SPACING AS OF SILL PLATE ANCHOR BOLTS, WHERE STEEL BEAM OCCURS UNDER SHEAR WALL.

6. PROVIDE DOUBLE PARALLAM BLOCKING TO ACCOMMODATE 2 ROWS OF SIMPSON SDS SCREWS

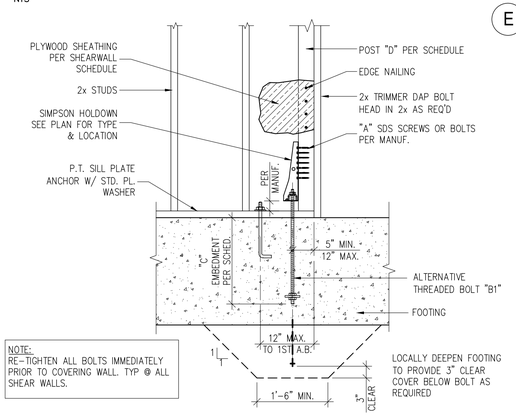
7. FOUNDATION AND WALL SILL PLATE SHALL BE 2x. U.N.O. – USE 3 x SILL PLATE WHEN ALLOWABLE SHEAR EXCEEDS 350#/FT.

8. SIMPSON SDS 1/4"x6" WOOD SCREWS. TYP. USE TB1475S INTO NAILER AT STEEL BEAMS.

9. WHERE 2-2x SILL PLATES ARE USED SCREW LOWER PLATE TO FRAMING BELOW. DRILL HOLE IN UPPER SILL PLATE FOR SCREW HEAD SO THAT UPPER PLATE SITS FLAT ON LOW SILL PLATE.

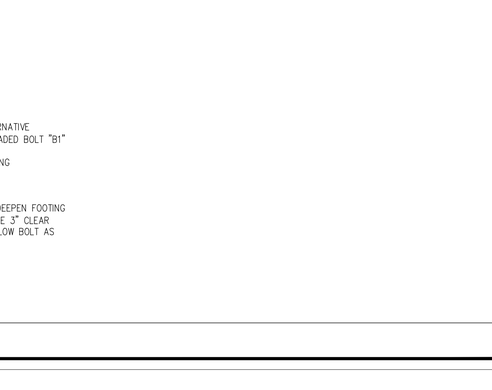


A HOLDOWNS AT DIFF. WALL CONDITIONS
NTS



NOTE:
RE-TIGHTEN ALL BOLTS IMMEDIATELY PRIOR TO COVERING WALL. TYP @ ALL SHEAR WALLS.

C HOLDOWN TO FOUNDATION



D HOLDOWN STRAP BETWEEN FLOORS
NTS

E HOLDOWN IN-BETWEEN FLOORS
NTS

TYP. SHEAR WALL SCHEDULE AND DETAIL FOR 2-STOREY (8)

REVISIONS

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
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STATE OF CALIFORNIA

SAN MINA ENGINEERING, INC.
24310 MOULTON PKWY, STE. O-105
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SM ENGINEERING

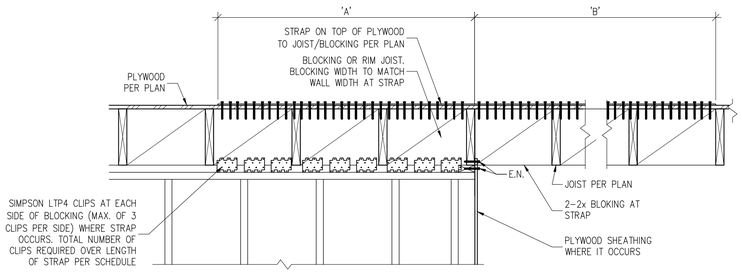
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CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

SHEAR WALL DETAILS

SHEET
S-4.0

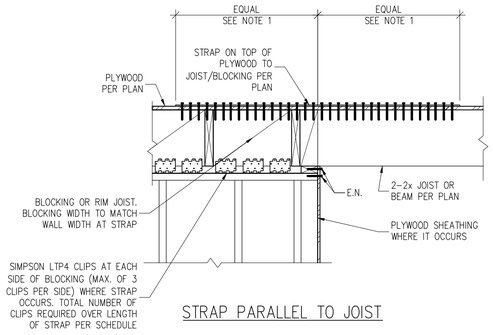
SCALE



STRAP PERPENDICULAR TO JOIST

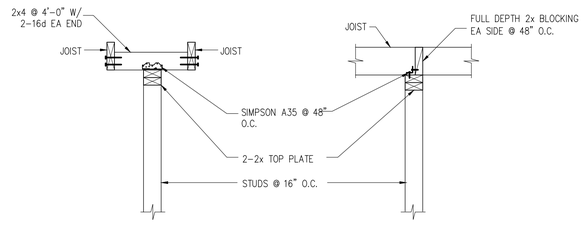
NOTES:
1. FIXED LENGTH STRAP
   'A' = 'B'
2. COILED STRAP
   'A' = 4'-0" MIN. FOR CMST & CMSTC STRAPS
   2'-0" MIN. FOR SC STRAPS
   'B' = 8'-0" MIN. U.N.O. ON PLAN

NOTE:
1. THE MINIMUM TOTAL LENGTH OF COIL STRAPS SHALL BE 8'-0". CENTER STRAP AS SHOWN.

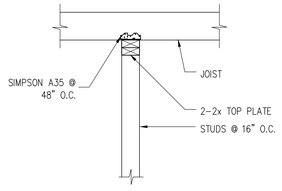


STRAP PARALLEL TO JOIST

TYP. DRAG CONNECTION AT SHEAR WALLS (1)



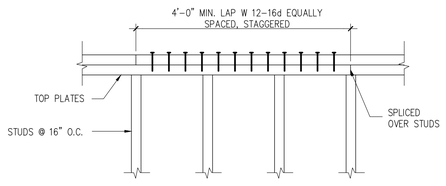
PARALLEL TO JOISTS



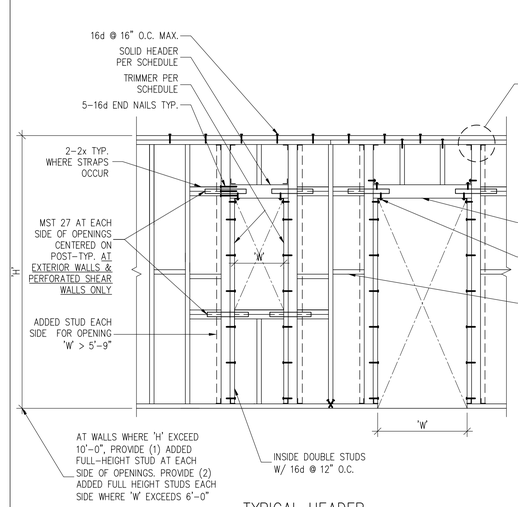
PERPENDICULAR TO JOISTS

NOTE:
DO NOT INSTALL NON-BEARING PARTITIONS UNTIL DEAD LOAD IS IN PLACE. (AT ROOF CONSTRUCTION AND WHERE A DEFLECTION SPACE HAS BEEN PROVIDED FOR THIS REQUIREMENT MAY BE WAIVED).

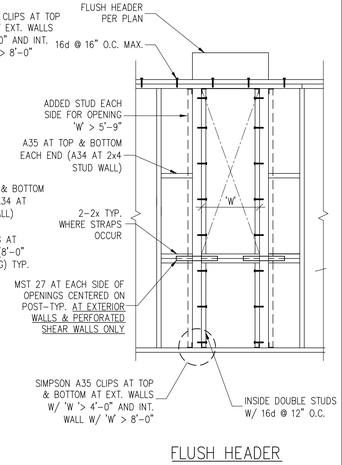
NON-LOAD-BEARING PARTITION TOP PLATE ANCHORAGE TO JOIST (4)



TYP. TOP PLATES SPLICE DETAIL (8)



TYPICAL HEADER

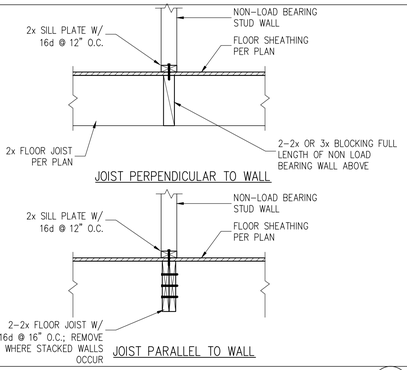


FLUSH HEADER

HEADER SCHEDULE												
NON LOAD-BEARING							LOAD-BEARING					
SPAN	HEADER SIZE					TRIMMERS	SPAN	HEADER SIZE				TRIMMERS
	FLOOR		ROOF					FLOOR		ROOF		
UP TO 4'-0"	4x6	6x4	4x4	6x4	1-2x		UP TO 3'-0"	4x8	6x6	4x6	6x4	1-2x
>4'-0" TO 6'-0"	4x8	6x8	4x6	6x4	2-2x		>3'-0" TO 5'-0"	4x10	6x8	4x8	6x6	2-2x
>6'-0" TO 8'-0"	4x10	6x10	4x8	6x8	2-2x		>5'-0" TO 6'-0"	4x12	6x10	4x10	6x8	2-2x
>8'-0" TO 10'-0"	4x12	6x12	4x10	6x10	3-2x		>6'-0" TO 8'-0"	-	6x12	4x12	6x10	3-2x

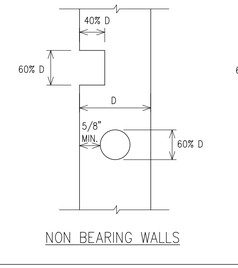
NOTE:
- USE GRADE DF-L #2 FOR 4x6 TO 4x10 HEADER SIZES
- USE GRADE DF-L #1 FOR 4x12 AND 6x HEADER SIZES

TYP. STUD WALL FRAMING ELEVATION & HEADER SCHEDULE (2)

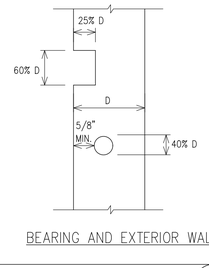


NOTCH/BORE % OF STUD	2X4 STUDS	2X6 STUDS
25%	7/8"	1 3/8"
40%	1 3/8"	2 1/8"
60%	2"	3 1/4"

NOTE:
ONLY ONE NOTCH OR HOLE ALLOWED PER EACH STUD. (EXCLUDING LET-IN BRACES).

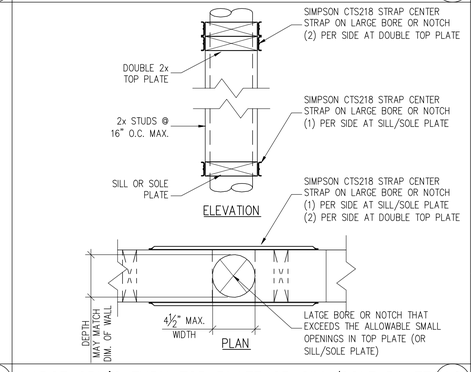


NON BEARING WALLS

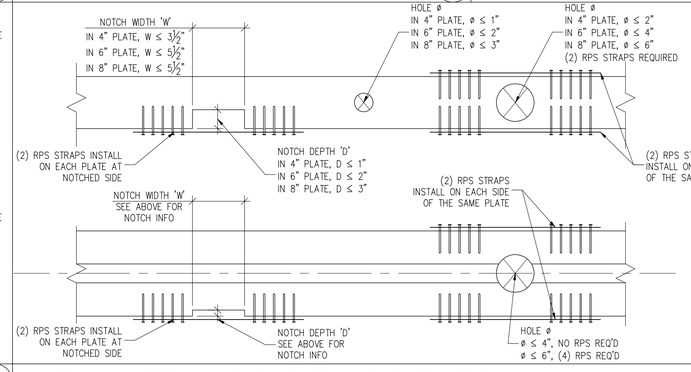


BEARING AND EXTERIOR WALLS

NON-LOAD BEARING WALL SILL PLATE CONNECTION (5)



STUD NOTCHING AND BORING (6)

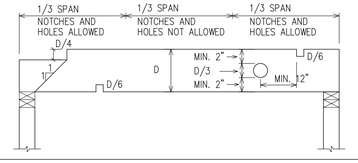


NOTES:
1. NOTCHES SHALL HAVE A MINIMUM HOLE SPACING OF 6'-0".
2. HOLES ALL HAVE A MINIMUM HORIZONTAL SPACING OF 12".
3. INSTALL RPS STRAPS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
4. NOTIFY ENGINEER OF ANY PENETRATION THAT DOES NOT MEET THE REQUIREMENTS NOTED ABOVE.

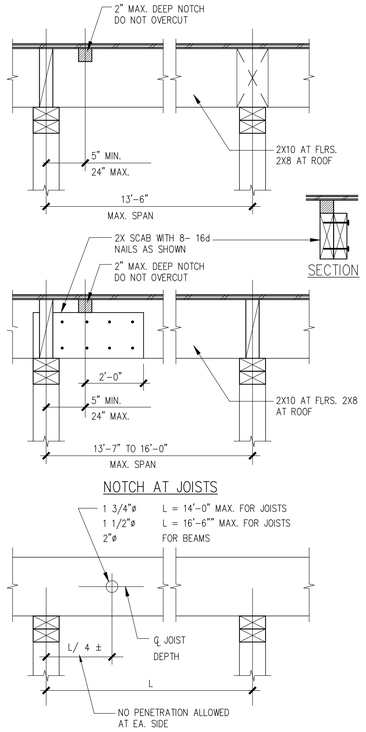
HOLES THRU JOISTS & BEAMS (3)

MAX. SIZE JOIST SIZE	MAX NOTCH D/4	MAX NOTCH D/6	HOLE: D/3
2X6	1 3/8"	7/8"	1 1/2"
2X8	1 3/4"	1 1/8"	2 3/8"
2X10	2 1/4"	1 1/2"	3"
2X12	2 3/4"	1 7/8"	3 3/4"
2X14	3 1/4"	2 1/8"	4 3/8"

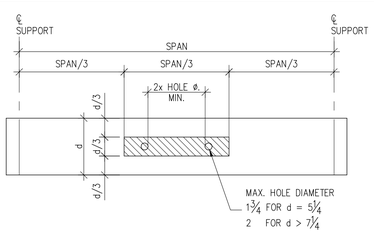
NOTES:
-DO NOT NOTCH BOTH TOP AND BOTTOM SURFACES WITHIN THE SAME ⅓ SPAN
-MAX ALLOWED IS A COMBINATION OF TWO NOTCHES AND / OR HOLES PER ⅓ SPAN
-THIS DETAIL DOES NOT APPLY TO NOTCHES AND HOLES IN STRUCTURAL BEAMS, THEY MUST BE SPECIFICALLY DETAILED
-NOTCHES AND HOLES ARE NOT ALLOWED IN CANTILEVERED JOISTS
-REFER TO MANUFACTURER'S RECOMMENDATIONS FOR NOTCHES AND HOLES WHERE PLYWOOD WEB TRUSSESARE USED



JOIST NOTCHING AND BORING (7)



PSL/LVL BEAM NOTCH & HOLE DIAGRAM (9)



NOTES:
1. ALLOWABLE HOLE ZONE FOR HEADERS AND BEAMS WITH UNIFORM LOADING ONLY.
2. ROUND HOLES ONLY.
3. NO HOLES IN CANTILEVERS.
4. NOTIFY ENGINEER FOR REVIEW FOR ANY PENETRATION THAT DOES NOT MEET THE REQUIREMENTS NOTED ABOVE,

LARGE OPN'G THRU TOP PLATE OR SILL/SOLE PLATE (10)

LIMITS ON NOTCH AND BORING IN TOP PLATES (11)

REVISIONS

	△

OWNER

PROJECT
352 E 20th St
Upland, Ca 91784

REGISTERED PROFESSIONAL ENGINEER
AMGAD SAMWEL BENJAMIN
No. C 64449
EXP. 3/31
CIVIL
STATE OF CALIFORNIA

SAN MINA ENGINEERING, INC.
24310 MOULTON PKWY. STE. O-105
LAGUNA HILLS, CA 92637
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SM ENGINEERING

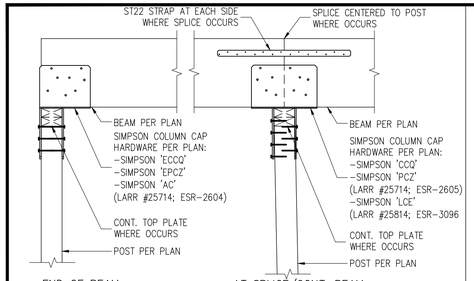
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CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

TYPICAL WOOD DETAILS

SHEET
S-4.1

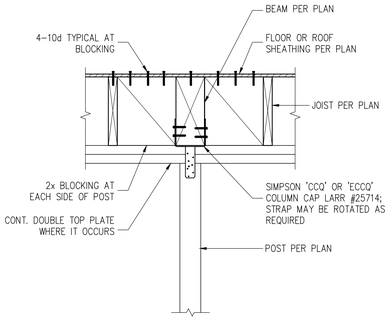
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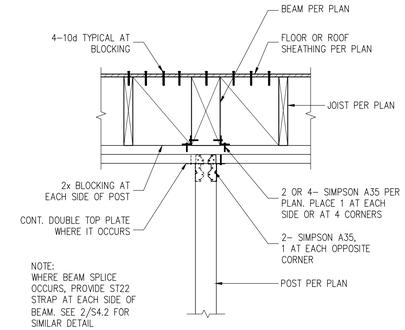
NOTES:

1. USE SIMPSON STRONG TIE ECCLQ, CCCQ, CCTQ OR LCE FOR POST CAP SUPPORTING MULTIPLE BEAMS, AS INDICATED ON PLANS.
2. ROTATE 'ECCQ' & 'CCQ' STRAPS TO ALLOW FOR CONT. TOP PLATES.

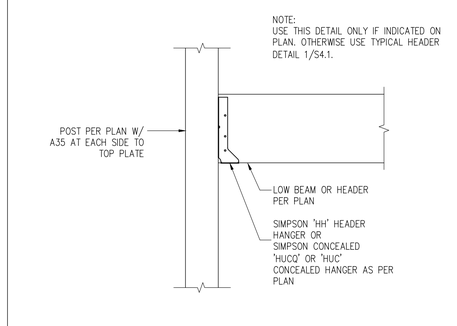
WOOD BEAMS TO POST (1)



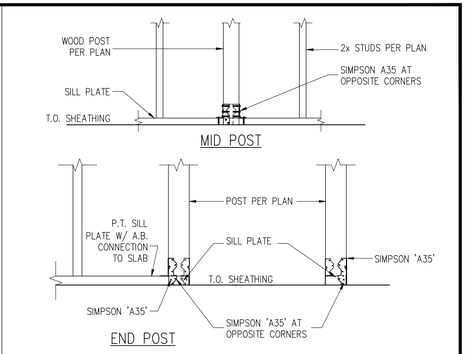
WOOD POST TO BEAM PARALLEL TO JOIST (2)



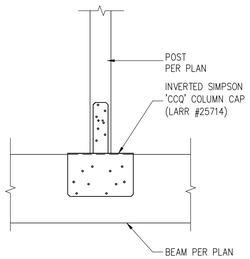
WOOD POST TO BEAM PARALLEL TO JOIST (3)



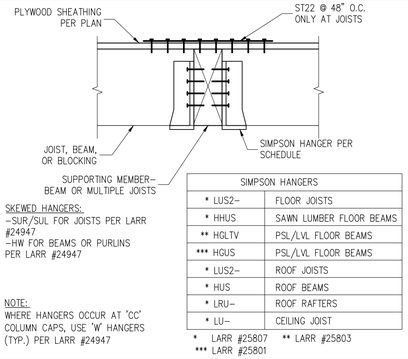
HEADER/LOW BEAM TO POST (4)



TYPICAL POST TO SILL PLATE CONNECTION (5)



POST ABOVE BEAM CONNECTION (6)



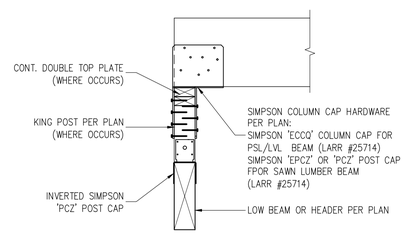
SKEWED HANGERS:
–SUR/SUL FOR JOISTS PER LARR #24947
–HW FOR BEAMS OR PURLINS PER LARR #24947

NOTE:
WHERE HANGERS OCCUR AT 'CC' COLUMN CAPS, USE 'W' HANGERS (TYP.) PER LARR #24947

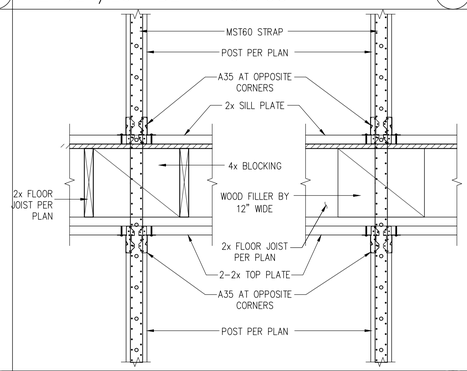
SIMPSON HANGERS	
* LUS2–	FLOOR JOISTS
* HHUS	SAWN LUMBER FLOOR BEAMS
** HGLTV	PSL/LVL FLOOR BEAMS
*** HGUS	PSL/LVL FLOOR BEAMS
* LUS2–	ROOF JOISTS
* HUS	ROOF BEAMS
* LRU–	ROOF RAFTERS
* LU–	CEILING JOIST

* LARR #25807 ** LARR #25803
*** LARR #25801

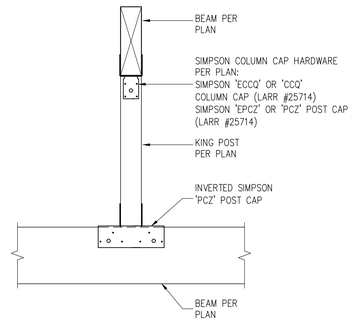
JOIST/BEAM TO BEAM CONNECTION (7)



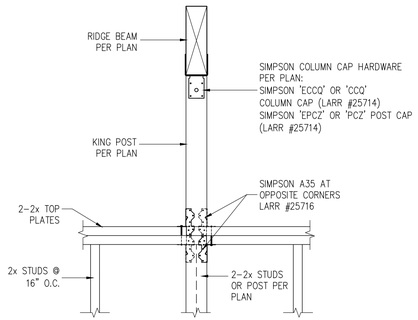
BEAM ABOVE HEADER OR LOW BEAM (8)



POST CONNECTION AT FLOOR (9)



BEAM & KING POST ABOVE BEAM (10)



RIDGE BEAM & KING POST ABOVE STUD WALL CONN. (11)

(12) (13) (14) (15) (16) (17) (18) (19) (20)

REVISIONS

OWNER

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SM ENGINEERING

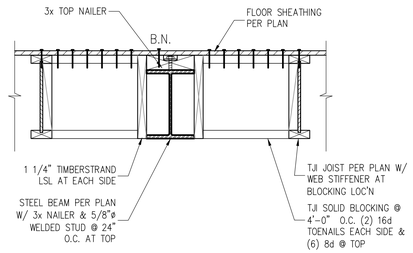
PROJECT NO:	85–25
CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10–16–25

SHEET TITLE:

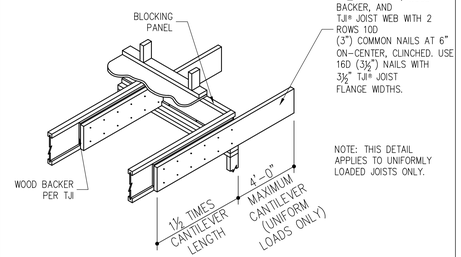
TYPICAL WOOD DETAILS

SHEET
S-4.2

SCALE

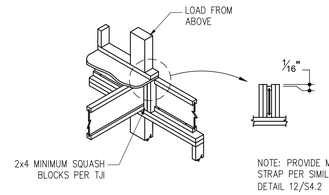


TJI ROOF TO STEEL BEAM 1



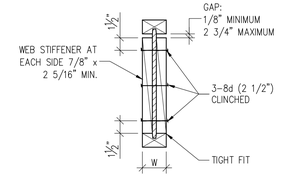
NOTE: THIS DETAIL APPLIES TO UNIFORMLY LOADED JOISTS ONLY.

CANTILEVERED TJI JOIST 2



NOTE: PROVIDE MST60 STRAP PER SIMILAR DETAIL 12/S4.2

LOAD TRANSFER AROUND TJI 3



W	WEB STIFFENER SIZE	W	WEB STIFFENER SIZE
1½"	½" x 2⁵⁄₁₆" MINIMUM	2⁵⁄₁₆"	⅞" x 2⁵⁄₁₆" MINIMUM
1¾"	⅝" x 2⁵⁄₁₆" MINIMUM	2½"	1" x 2⁵⁄₁₆" MINIMUM
2⁵⁄₁₆"	¾" x 2⁵⁄₁₆" MINIMUM	3½"	2x4

TJI WEB STIFFENER ATTACHMENT 4

NAILING REQUIREMENTS

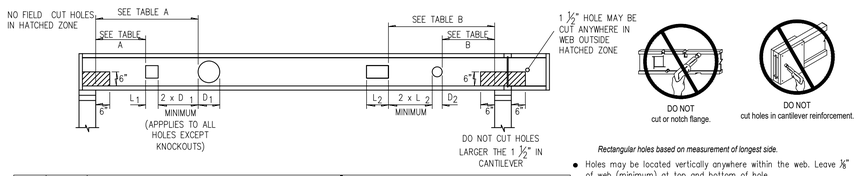
TJI® joists at bearings: One 8d (2½") box nail each side. Drive nails at an angle at least 1½" from end.

Blocking panels, rim joist or rim board to bearing plate:
TJI® blocking panels or rim joist: 10d (3") box nails at 6" o.c.
Trus Joist rim board: Toenail with 10d (3") box nails at 6" o.c. or 16d (3½") box nails at 12" o.c.
Shear transfer: Connections equivalent to decking nail schedule.

Rim board, rim joist or closure to TJI® joist:
1¾" width or less: One 10d (3") box nail into each.
2⁵⁄₁₆" thru 2½" widths: One 16d (3½") box nail into each flange.
3½" width: One 10d (3") box nails,one each side of TJI® joist flange.

2x4 minimum squash blocks: One 10d (3") box nail into each flange.

5



DEPTH	TJI®	ROUND HOLE SIZE								SQUARE OR RECTANGULAR HOLE SIZE							
		2"	3"	4"	6½"	8⅛"	11"	13"		2"	3"	4"	6½"	8⅛"	11"	13"	
Table A - End Support Minimum distance from edge of hole to inside face of nearest end support																	
11⅞"	360	1'-0"	1'-0"	1'-6"	4'-6"	7'-0"				1'-0"	1'-0"	2'-6"	6'-6"	7'-6"			
Table B - Intermediate or Cantilever Support Minimum distance from edge of hole to inside face of nearest intermediate or cantilever support																	
11⅞"	360	2'-0"	3'-0"	4'-0"	7'-0"	11'-0"				2'-0"	3'-6"	5'-0"	9'-6"	11'-0"			

Rectangular holes based on measurement of longest side.

- Holes may be located vertically anywhere within the web. Leave ⅛" of web (minimum) at top and bottom of hole.
- Knockouts are located in web at approximately 12" on–center; they do not affect hole placement.
- For simple span (5' minimum) uniformly loaded joists meeting the requirements of current Trus Joist product guides, one maximum size round hole may be located at the center of the joist span provided no other holes occur in the joist.
- Distances are based on the maximum uniform loads shown in current Trus Joist product guides. For other load conditions or hole configurations contact your Trus Joist representative.

ALLOWABLE HOLES– TJI JOISTS 6

7 8 9

10 11 12 13 14

15 16 17 18 19

REVISIONS

	△

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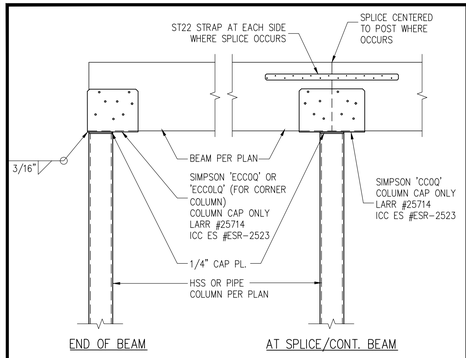
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DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10–16–25

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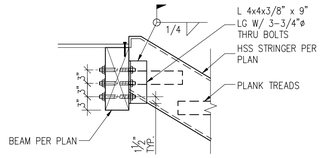
TJI DETAILS

SHEET
S-4.3

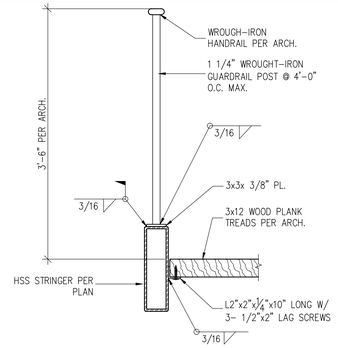
SCALE



WOOD BEAM TO HSS COLUMN (1)

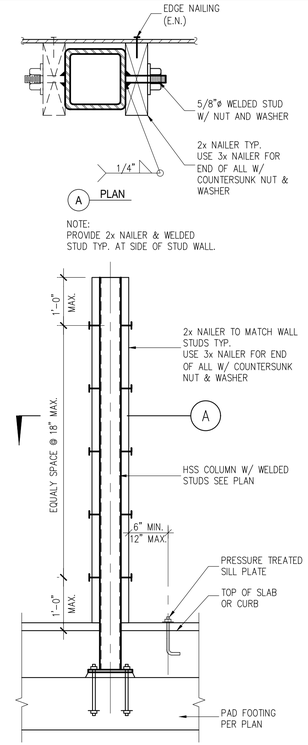


HSS STRINGER TO WOOD BEAM (2)



SECTION AT STRINGER & GUARDRAIL (3)

(4)



STEEL COLUMN IN STUD WALL (9)

(5) (6) (7) (8)

(10) (11) (12) (13) (14)

(15) (16) (17) (18) (19)

REVISIONS

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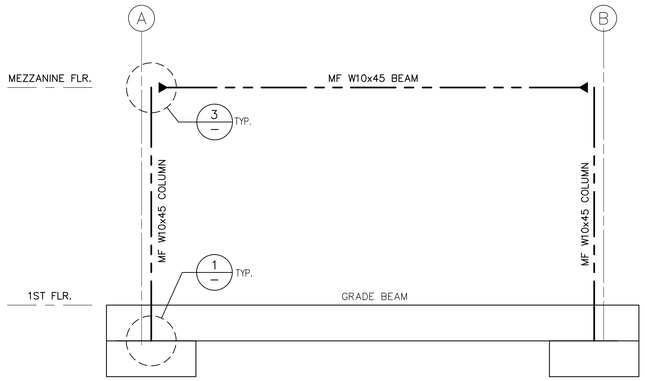
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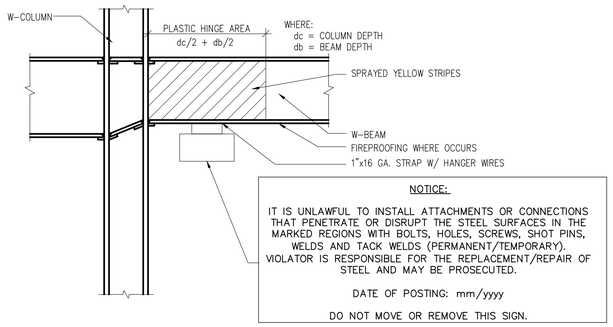
STEEL DETAILS

SHEET
S-5.0

SCALE



2A TYP. MF ELEVATION



NOTICE:

IT IS UNLAWFUL TO INSTALL ATTACHMENTS OR CONNECTIONS THAT PENETRATE OR DISRUPT THE STEEL SURFACES IN THE MARKED REGIONS WITH BOLTS, HOLES, SCREWS, SHOT PINS, WELDS AND TACK WELDS (PERMANENT/TEMPORARY). VIOLATOR IS RESPONSIBLE FOR THE REPLACEMENT/REPAIR OF STEEL AND MAY BE PROSECUTED.

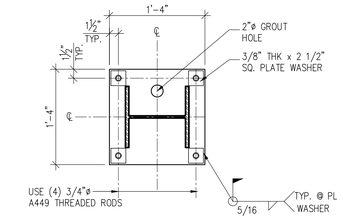
DATE OF POSTING: mm/yyyy

DO NOT MOVE OR REMOVE THIS SIGN.

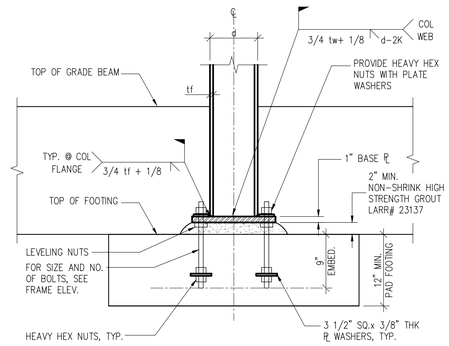
PER L.A. CITY DBS
DOC. NO.: P/BC 2002-098
FIGURE #1

2B PLASTIC HINGE ZONE

TYP. MOMENT FRAME ELEVATION



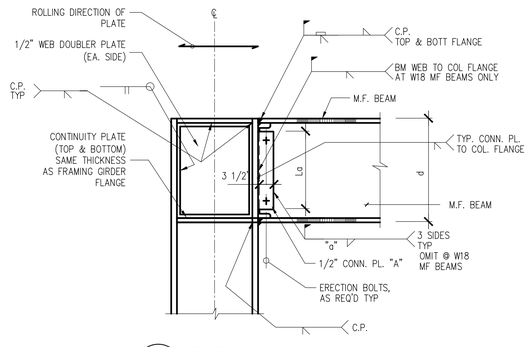
1A BASE PLATE PLAN



1B BASE SECTION

MF COLUMN BASE CONNECTION

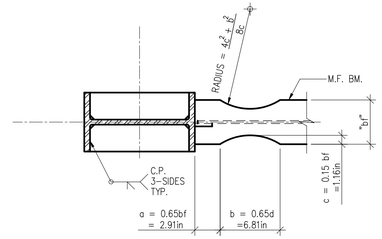
1



3A ELEVATION
N.T.S.

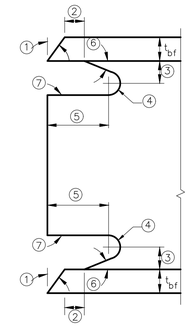
NOTES:

1. AFTER FULL PENETRATION WELDING, THE BACKING BAR IS TO BE REMOVED, THE WELD ROOT INSPECTED AND TESTED FOR IMPERFECTIONS, WHICH IF FOUND, ARE TO BE REMOVED BY BACKGOUGING TO SOUND MATERIAL & CLEANED BY GRINDING IF BACKGOUGED BY AIR ARC. THE BACKGOUGED AREA IS TO BE WELDED AND A FILLET WELD SHALL BE APPLIED TO REINFORCE THE JOINT. THE SIZE OF THE REINFORCING FILLET WELD SHALL BE EQUAL TO 1/4 THE PLATE THICKNESS, BUT NOT LESS THAN 1/4", NOR MORE THAN 3/8" PER NOTE J OF FIGURE 2.4 OF AWS D1.1-96.
2. SEE SCHEDULE 4/S4.0 FOR SHEAR CONNECTION SCHEDULE.
3. THE SHEAR PLATE WELDING SHALL BE PERFORMED AFTER ALL FLANGE WELDING HAS BEEN COMPLETED.
4. HAUNCH PLATE WELDING SHALL BE PERFORMED AFTER ALL FLANGE WELDING HAS BEEN COMPLETED.
5. ALL CONNECTION PLATES AND STIFFENER PLATES SHALL BE A572 GRADE 50.



3B PLAN
N.T.S.

TYP. MOMENT FRAME CONNECTION DETAIL (RBS)



NOTES:

1. BEVEL AS REQUIRED BY A SELECTED AWS PREQUALIFIED CJP GROOVE WELDED JOINT DETAIL.
2. LARGER OF t_{bf} OR 1/2" (PLUS 1/2 t_{bf}, OR MINUS 1/4 t_{bf}).
3. 3/4 t_{bf} TO t_{bf}, 3/4" MINIMUM (r 1/4").
4. 3/8 MINIMUM RADIUS (PLUS NOT LIMITED, OR MINUS 0).
5. 3 t (r1/2").
6. TOLERANCES SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACCESS HOLE CUT TO THE FLANGE SURFACE EXCEED 25-.
7. WELD ACCESS HOLE SHALL BE GROUND SMOOTH TO A SURFACE ROUGHNESS VALUE NOT TO EXCEED 500 MICRO INCH; AND SHALL BE FREE OF NOTCHES AND GOUGES.

(from FEMA 350 "Recommended Seismic Design Criteria for New Steel Moment Frame Building" Figure 3-5)

WELD ACCESS HOLE DETAIL

REVISIONS

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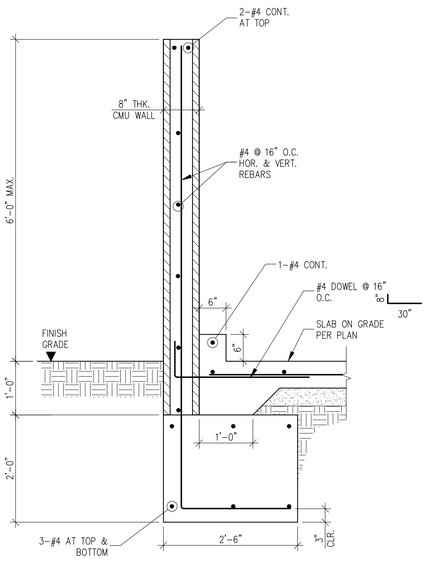
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CAD DWG FILE:	
DRAWN BY :	A.B.
CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

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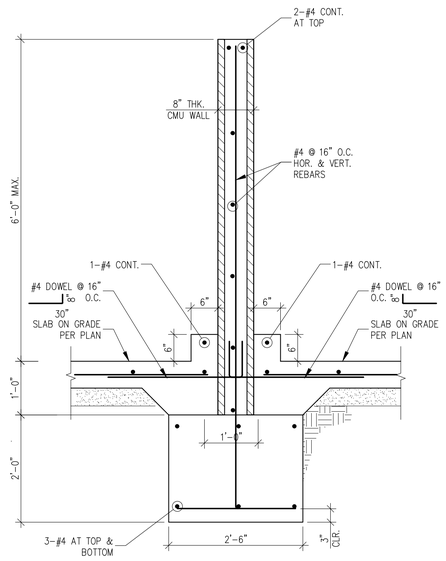
MOMENT FRAME DETAILS

SHEET
S-5.1

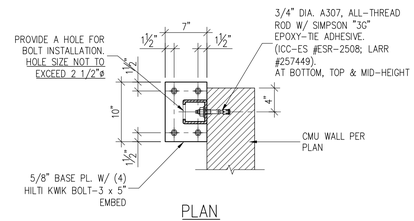
SCALE



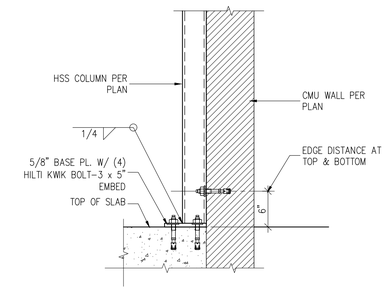
TYP. CMU WALL SECTION (1)



TYP. CMU WALL SECTION (2)

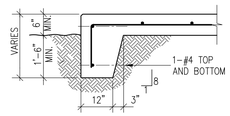


PLAN

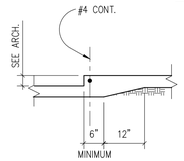


SECTION

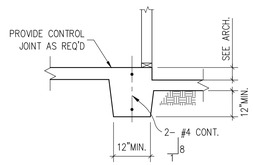
HSS COLUMN FOR GATE SUPPORT (3)



A-EDGE OF SLAB



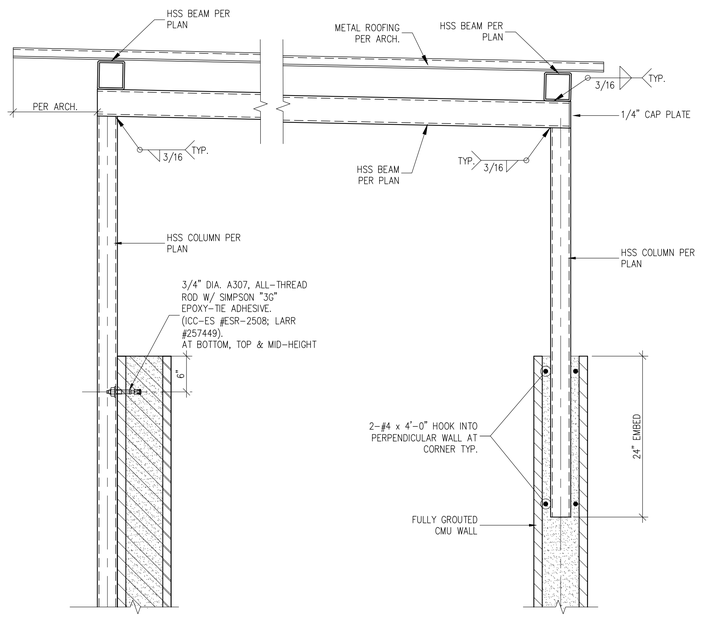
B-SLAB DEPRESSION



C-STUD WALL AT DEPRESSION

SLAB EDGE AND DEPRESSION (4)

5



TRASH ENCLOSURE- ROOF SECTION (6)

REVISIONS

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SM ENGINEERING

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CHECKED BY:	E.M.
SCALE:	NOTED
DATE :	10-16-25

SHEET TITLE:

TRASH ENCLOSURE DETAILS

SHEET

S-6.0

SCALE

GENERAL NOTES

1–BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR PROBLEMS.

2–EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS.

3–SEE ARCHITECTURAL DRAWINGS FOR HANDICAP FIXTURE LOCATIONS AND MOUNTING HEIGHTS. FURNISH ALL EXPOSED WATER AND DRAIN PIPING BELOW ALL LAVATORIES AND SINKS WITH McGUIRE PROWRAP PRE–WRAPPED TAILPIECES AND P–TRAPS. ALL WATER CLOSET FLUSHING LEVERS SHALL BE TO THE WIDE SIDE OF THE STALL.

4–TRAPS FOR ALL LAVATORIES AND SINKS SHALL TRAP STRAIGHT BACK TO WALL WITH ALL REQUIRED OFFSETS HAPPENING WITHIN THE WALL.

5–ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING.

6–ALL CLEANOUTS SHALL BE INSTALLED WHERE EASILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH ALL EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.

7–ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS PIPE UNLESS INDICATED ON DRAWINGS.

8–UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH VALVE AND AND PRIOR TO ALL EQUIPMENT CONNECTIONS.

9–ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THIS PROJECT:

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.

10–BEFORE FABRICATION OR INSTALLATION THIS CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED UNDER ANOTHER SECTION OF SPECIFICATIONS. EXACT ROUGH–IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN THE FIELD.

11–ALL LAVATORIES AND SINKS SHALL SHALL HAVE SHUT–OFF VALVES FOR BOTH HOT AND COLD WATER SUPPLY LINES ABOVE CEILING, LAVATORIES IN COMMUNITY AND RECREATION BUILDINGS SHALL BE PROVIDED WITH THERMOSTATIC TEMPERING VALVES SET @120°F.

12–ALL WASTE AND VENT PIPING SHALL SLOPE AT 2% UNLESS OTHERWISE INDICATED ON THE PLANS.

13–ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTERS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON–ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.

14–ALL PLUMBING FIXTURES AND EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA STATE ENERGY COMMISSION TO COMPLY WITH EFFICIENCY STANDARDS PER AUTHORITY WITH JURISDICTION.

15–INSULATION SHALL BE PROVIDED ON ALL HOT WATER PER SPECIFICATIONS.

16–ALL BRACING OF PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY AUTHORITY WITH JURISDICTION.

17–WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND THE FIELD ENGINEER.

18–THE FLOW RATES FOR ALL PLUMBING FIXTURES SHALL COMPLY WITH THE MAXIMUM FLOW SPECIFIED IN SECTION 4.303.1.

19–THE HOT WATER SYSTEM SHALL NOT ALLOW MORE THAN 0.6 GALLONS OF WATER TO BE DELIVERED TO ANY FIXTURE BEFORE HOT WATER ARRIVES.

20–PRIOR TO USE OF POTABLE WATER, THE SYSTEM SHALL BE DISINFECTED ACCORDING TO THE PROCEDURE SET IN SECTION 609.9 OF THE CALIFORNIA PLUMBING CODE 2022.

21–WATER SUPPLY AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE BE CONFIGURED TO PROTECT AGAINST CONTACT. PROTECTORS, INSULATORS, OR BOTH SHALL COMPLY WITH ASME A112.18.9.

22–WATER PIPE AND FITTINGS WITH A LEAD CONTENT WHICH EXCEED 0.25% SHALL BE PROHIBITED IN SYSTEMS CONVEYING POTABLE WATER. (CPC 604.2 & CALIFORNIA HEALTH & SAFETY CODE 116875).

23–ALL FIXTURES IN HANDICAP RESTROOMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA HANDICAP CODE AND LOCAL HANDICAP CODES HAVING JURISDICTION.

24–ALL FIXTURES, EQUIPMENT, PIPING, AND MATERIALS SHALL BE LISTED. (CPC 301.1)

25–ALL PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED THOSE SHOWN IN CPC TABLE 313.1.

26–EACH PLUMBING FIXTURE SHALL BE INDEPENDENTLY VALVED PER CODE.

27–INSTALL ALL PLUMBING TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING. NO WATER OR DRAIN LINES PERMITTED OVER OR UNDER ELECTRICAL PANELS.

28–ALL REQUIRED CLEANOUTS SHOULD BE INSTALLED AS PER CPC SEC. 707.0 & 719.0.

29–BUILDING REVIEW MUST BE APPROVED PRIOR TO OBTAINING SEPARATE MECHANICAL/ELECTRICAL/PLUMBING PERMITS ASSOCIATED WITH THIS PROJECT.

30–ALL EXPOSED GAS PIPING SHALL BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL APPROVED FOR SUCH APPLICATIONS SECTION 1210.2 AS PER CALIFORNIA PLUMBING CODE.

31–NO GAS PIPING SHALL BE INSTALLED IN OR ON THE GROUND UNDER ANY BUILDING, STRUCTURE, OR FOUNDATION UNLESS INSTALLED IN GAS TIGHT CONDUIT IF PROTECTION TERMINATES OUTSIDE, SECTION 1210.1 AS PER CALIFORNIA PLUMBING CODE.

32– ALL HORIZONTAL SEWER AND WASTE WATER PIPES SHALL RUN @ MINIMUM 2% SLOPE.

LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	W	WASTE ABOVE CEILING
	W	WASTE BELOW FLOOR
	V	VENT
	CW	COLD WATER
	HW	HOT WATER
		ITEMS TO BE REMOVED
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	SOV	SHUT–OFF VALVE (SECTIOAL VA.)
		RISER UP
		DROP DOWN
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
(E)	EXIST	EXISTING
	CO	CLEANOUT
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	GW	GREASE WASTE
	BEL	BELOW
	EL	ELEVATION
	CLG	CEILING
	DN	DOWN
	FLR	FLOOR
	SCD	SECONDARY CONDENSATE DRAIN
	PRV	PRESSURE REDUCING VALVE
	SV	SOLENOID VALVE
	SOV	SHUT–OFF VALVE IN YARDBOX

PIPE SCHEDULE

SERVICE	LOCATION	MATERIAL
DOMESTIC WATER	COLD WATER	TYPE "L" COPPER PIPING WITH WROUGHT COPPER SWEAT FITTINGS
	HOT WATER	SAME AS ABOVE INSULATED PER SPECIFICATIONS
SANITARY WASTE	ABOVE FLOOR	PVC SCHEDULE 40
	BELOW FLOOR	PVC SCHEDULE 40
SANITARY VENT	CONCEALED	PVC SCHEDULE 40
	EXPOSED	PVC SCHEDULE 40
INDIRECT WASTE		TYPE "L" COPPER TUBING W/ WROUGHT COPPER SWEAT FITTINGS
GAS PIPE		BLACK STEEL

NOTES -- ACCESSIBILITY

1. WATER CLOSET CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. CONTROLS FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREA, NO MORE THAN 44 INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE SHALL BE NO GREATER THAN 5 LBS.
2. ALL ROUGH SURFACES AND PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
3. THE HEIGHT OF ACCESSIBLE WATER CLOSETS SHALL BE MINIMUM 17 INCHES AND A MAXIMUM OF 19 INCHES TO THE TOP OF THE TOILET SEAT.
4. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER OPERATED, PUSH TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF–CLOSING VALVES ARE ALLOWED IF FAUCETS REMAIN OPEN FOR AT LEAST 10 SECONDS.
5. URINAL FLUSH VALVES ARE TO BE 44 INCHES MAXIMUM ABOVE FINISHED FLOOR.

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

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4	-

DATE: 9/8/2025
SCALE: AS NOTED
JOB NO: 23100
DWN BY: CCW
CHK BY: EGP

SHEET NO.

P-1

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	DESCRIPTION	DESCRIPTION			
			WASTE	VENT	CW	HW
WC 1	FLOOR MOUNTED FLUSH VALVE TYPE TOILET ADA	"KOHLER" FloWise MNo: 2854.128, FLOOR MOUNTED ELONGATED FLUSHOMETER TOILET SYSTEM, VITREOUS CHINA, 1½" TOP SPUD, 16½" RIM HEIGHT. ADA COMPLIANT, MNo:K-13517 MANUAL FLUSH VALVE 1.28 GPF, FRONT OPEN SEAT MNo:5901.100 WITH SELF-SUSTAINING CONCEALED CHECK HINGES, WHITE COLOR. THE FLUSH HANDLE SHALL BE INSTALLED ON THE WIDE SIDE OF WATER CLOSET ENCLOSURE.	4"ø	2"ø	1¼"ø	–
WC 2	FLOOR MOUNTED FLUSH VALVE TYPE TOILET ADA	"KOHLER" FloWise MNo: 2854.128, FLOOR MOUNTED ELONGATED FLUSHOMETER TOILET SYSTEM, VITREOUS CHINA, 1½" TOP SPUD, 16½" RIM HEIGHT. ADA COMPLIANT, MNo:K-13517 MANUAL FLUSH VALVE 1.28 GPF, FRONT OPEN SEAT MNo:5901.100 WITH SELF-SUSTAINING CONCEALED CHECK HINGES, WHITE COLOR. THE FLUSH HANDLE SHALL BE INSTALLED ON THE WIDE SIDE OF WATER CLOSET ENCLOSURE.	4"ø	2"ø	1¼"ø	–
L 1	WALL MOUNTED LAVATORY	"KOHLER" WALL MOUNTED LAVATORY MNo:K2007-R FOR CONCEALED ARMS SUPPORT AND SUPPORTS, VITREOUS CHINA, FRONT OVERFLOW, SINGLE HOLE ON CENTER FAUCET HOLE, 21¼"x18⅛", P-TRAP AND LOOSE KEY ANGLE VALVE. COMPLETE WITH "KOHLER" SENSOR ACTIVATED AC OPERATED FAUCET MNo: K-103B77-SANA 0.5 GPM @ 20PSI.	2"ø	1½"ø	½"ø	½"ø
WH 1	HEAT PUMP STORAGE TYPE WATER HEATER	"RHEEM" MNo: XE40T10H22U0 HEAT PUMP TYPE WATER HEATER, 40 GALLONS CAPACITY. 2,250 ELEMENT 15 AMP BREAKER SIZE. DIMENSIONS 22¼"ø x62"H.	–	–	¾"ø	–
WHA 1	WATER HAMMER ARRESTOR	"WATTS" WATER HAMMER ARRESTOR, MNo: LF15M2-F THREADED. COPPER BODY.	–	–	¾"ø	–
PRV 1	PRESSURE REDUCING VALVE	"ZURN" 2"ø WATER PRESSURE REDUCING VALVE MODEL No.500XL HE ASSEMBLY	–	–	2"	–

WATER PIPE CALCULATION

PRESSURE AVAILABLE MAXIMUM = 95 P.S.I

MINIMUM = 75 – P.S.I

PRV PRESSURE SETTING 65.0 P.S.I

PRESSURE REQUIRED AT FARTHEST FIXTURE 25.0 P.S.I

PRESSURE LOSS DUE TO HEIGHT 12' 5.2 P.S.I

PRESSURE LOSS THRU 1.5"ø WATER METER 6.8 P.S.I

PRESSURE LOSS THRU 2"ø REDUCED PRESSURE VALVE ZURN 2" MODEL: 975XL3 12.0 P.S.I

PRESSURE LOSS THRU 2"ø PRESSURE REDUCING VALVE ZURN 2" MODEL: 500XL 7.0 P.S.I

TOTAL LOSSES 56.0 P.S.I

LOSS AVAILABLE FOR FRICTION

65.0 – 56.0 = 9.0 P.S.I

LENGTH OF RUN FROM METER TO FARTHEST FIXTURE:

OUTSIDE BUILDING: 10 FT.

INSIDE BUILDING: 45 FT.

TOTAL: 55 FT.

EQUIVALENT RUN: 55 x 1.25 = 69 FT.

ALLOWABLE FRICTION LOSSES:

PRESSURE AVAILABLE 9.0 P.S.I x 100 = 13.1 P.S.I/100 FT.

EQUIVALENT LENGTH 69 FT.

PIPE SIZING SCHEDULE

BASED ON 13.1 PSI/100

SIZE	DOMESTIC WATER PIPE SIZING FU		FLUSH VALVE FU
	HOT WATER	COLD WATER	COLD WATER
½"	3	4	0
¾"	8	13	0
1"	16	30	0
1¼"	28	56	14
1½"	46	103	35
2"	119	254	132

FIXTURE UNIT CALCULATION

QTY	FIXTURES	CW FU	HW FU	TOTAL CW	TOTAL HW	W FU	TOTAL
3	WATER CLOSET (FV)	–	–	90.0	–	4.0	12.0
3	LAVATORY	1.0	1.0	3.0	3.0	1.0	3.0
1	SINK	1.5	1.5	1.5	1.5	2.0	2.0
	TOTAL UNITS			94.5	4.5		17.0
	TOTAL DEMAND GPM			66.0			

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

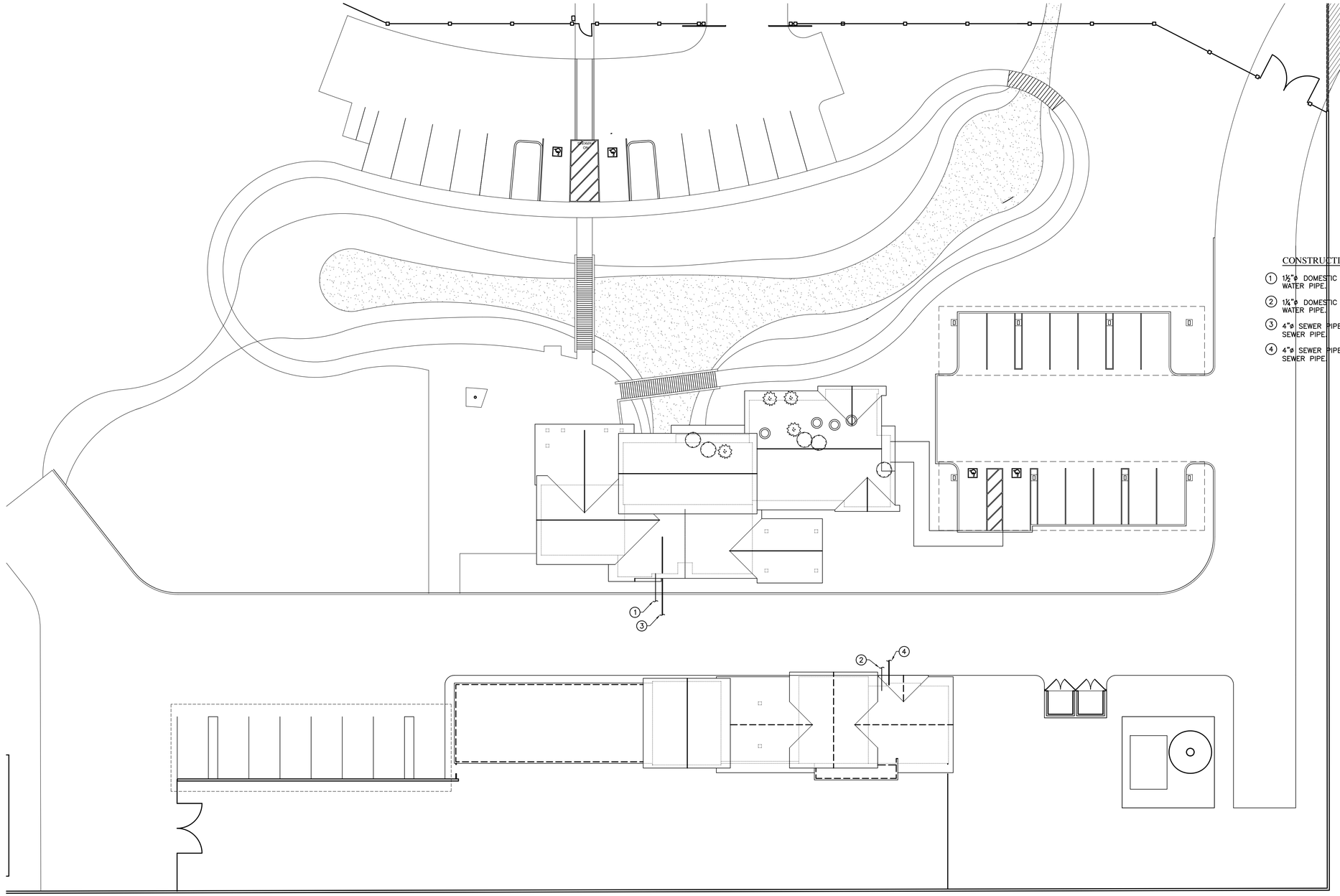
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SCALE: AS NOTED
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CHK BY: EGP

SHEET NO.

P-2



CONSTRUCTION KEYNOTES

1. 1½"ø DOMESTIC WATER ROUTED AND CONNECTED TO MAIN WATER PIPE.
2. 1¼"ø DOMESTIC WATER ROUTED AND CONNECTED TO MAIN WATER PIPE.
3. 4"ø SEWER PIPE ROUTED AND CONNECTED TO MAIN SEWER PIPE.
4. 4"ø SEWER PIPE ROUTED AND CONNECTED TO MAIN SEWER PIPE.

P–3 PLUMBING SITE UTILITY PLAN
1/16"=1'–0"

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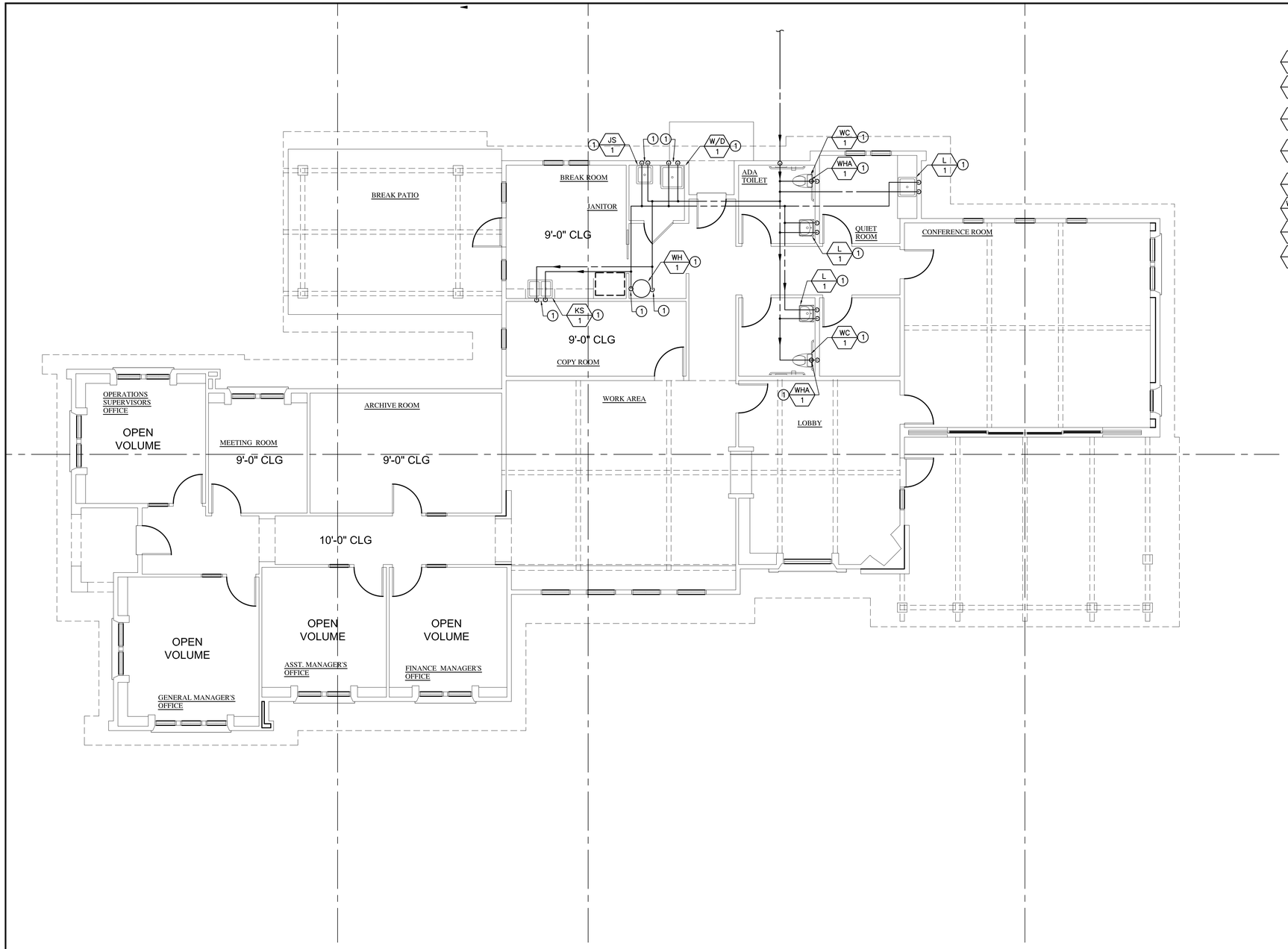
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P-3



CONSTRUCTION KEYNOTES

WC 1 — (1) FURNISH AND INSTALL FLOOR MOUNTED WATER CLOSET, MAKE AND MODEL PER PLUMBING SCHEDULE.

L 1 — (2) FURNISH AND INSTALL WALL MOUNTED LAVATORY COMPLETE WITH FAUCET, MAKE AND MODEL PER PLUMBING SCHEDULE.

S 1 — (3) FURNISH AND INSTALL COUNTER MOUNTED SINK COMPLETE WITH FAUCET, MAKE AND MODEL PER PLUMBING SCHEDULE.

WH 1 — (4) FURNISH AND INSTALL FLOOR MOUNTED HEAT PUMP STORAGE TYPE WATER HEATER, MAKE AND MODEL PER PLUMBING SCHEDULE.

TP 1 — (5) FURNISH TRAP PRIMER MAKE AND MODEL PER PLUMBING SCHEDULE.

WHA 1 — (6) FURNISH AND INSTALL WATER HAMMER ARRESTOR, MAKE AND MODEL PER PLUMBING SCHEDULE.

FD 1 — (7) FURNISH AND INSTALL FLOOR DRAIN, MAKE AND MODEL PER PLUMBING SCHEDULE.

WB 1 — (8) FURNISH AND INSTALL WASH BOX, MAKE AND MODEL PER PLUMBING SCHEDULE.

(9) 1½"ø COLD WATER PIPE FROM EXISTING COLD WATER PIPE ROUTED AND CONNECTED TO MAIN PIPE.

(10) 1½"ø COLD WATER PIPE DOWN IN WALL TO WATER CLOSET'S FLUSH VALVE.

(11) 1"ø HOT WATER PIPE FROM WATER HEATER TO ABOVE CEILING LEVEL.

(12) ½"ø COLD WATER PIPE DOWN IN WALL TO TRAP PRIMER'S INLET CONNECTION WITH ½"ø TRAP PRIMER PIPES DOWN IN WALL TO BELOW FLOOR LEVEL, ROUTED AND CONNECTED FLOOR DRAIN'S PRIMER CONNECTION.

(13) ½"ø HOT AND COLD WATER PIPES DOWN IN WALL TO LAVATORY'S FAUCET THRU THERMOSTATIC TEMPERING VALVE.

(14) ½"ø HOT AND COLD WATER PIPES DOWN IN WALL TO SINK'S FAUCET THRU THERMOSTATIC TEMPERING VALVE.

(15) ¾"ø HOT AND COLD WATER PIPES DOWN IN WALL TO WASH BOX'S INLET CONNECTION.

P–4 | PLUMBING HOT AND COLD WATER PIPING MAIN BUILDING FLOOR PLAN

3/16"=1'-0"

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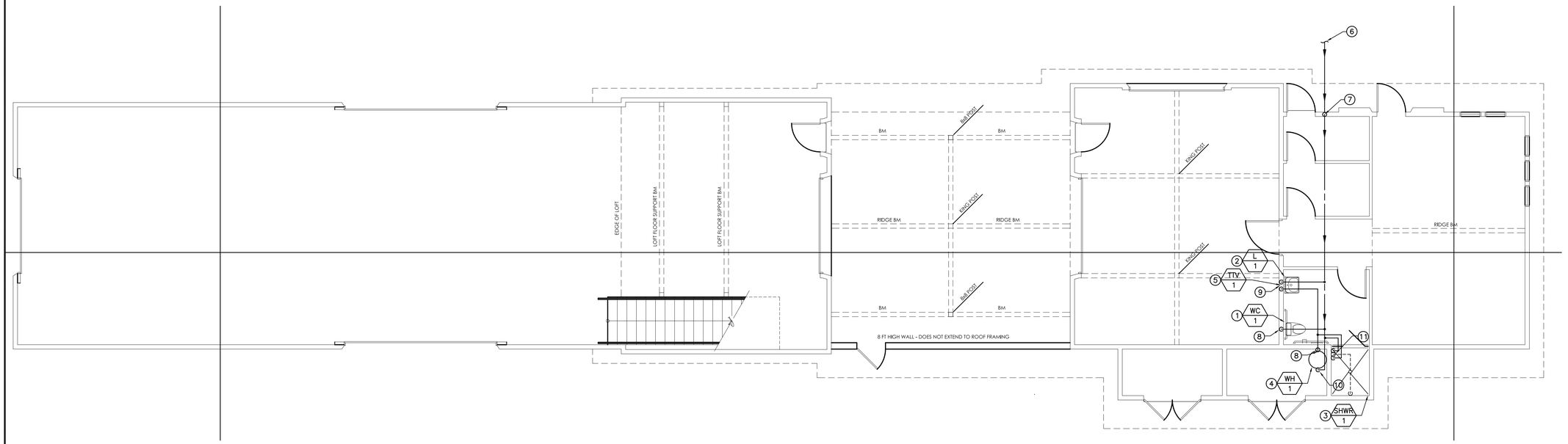
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P-4



CONSTRUCTION KEYNOTES

WC 1 — (1) FURNISH AND INSTALL FLOOR MOUNTED WATER CLOSET, MAKE AND MODEL PER PLUMBING SCHEDULE.

L 1 — (2) FURNISH AND INSTALL WALL MOUNTED LAVATORY WITH SENSOR OPERATED FAUCET, MAKE AND MODEL PER PLUMBING SCHEDULE.

SHWR 1 — (3) FURNISH AND INSTALL SHOWER MIXER VALVE, CONTROL VALVE AND SHOWER HEAD, MAKE AND MODEL PER PLUMBING SCHEDULE.

WH 1 — (4) FURNISH AND INSTALL WATER HEATER, MAKE AND MODEL PER PLUMBING SCHEDULE.

TTV 1 — (5) FURNISH AND INSTALL THERMOSTATIC TEMPERING VALVE, MAKE AND MODEL PER PLUMBING SCHEDULE.

(6) 1¼"ø COLD WATER PIPE FROM MAIN.

(7) 1¼"ø COLD WATER UP IN WALL TO ABOVE CEILING LEVEL, AND RUNNING ABOVE CEILING LEVEL.

(8) 1¼"ø COLD WATER DOWN IN WALL TO TOILET'S FLUSH VALVE.

(9) ½"ø HOT AND COLD WATER PIPES DOWN IN WALL ROUTED AND CONNECTED TO FAUCET THRU THERMOSTATIC TEMPERING VALVE.

(10) ¾"ø HOT AND COLD WATER PIPE ROUTED AND CONNECTED TO WATER HEATER'S INLET AND OUTLET CONNECTIONS.

(11) ¾"ø HOT AND COLD WATER PIPES DOWN IN WALL TO SHOWER'S MIXER VALVE WITH ¾"ø TEMPERED WATER PIPE UP IN WALL TO ABOVE CEILING LEVEL AND IN WALL TO SHOWER HEAD.

P-5 | PLUMBING HOT AND COLD WATER LAYOUT MAINTENACE BUILDING FLOOR PLAN

3/16""=1'-0"

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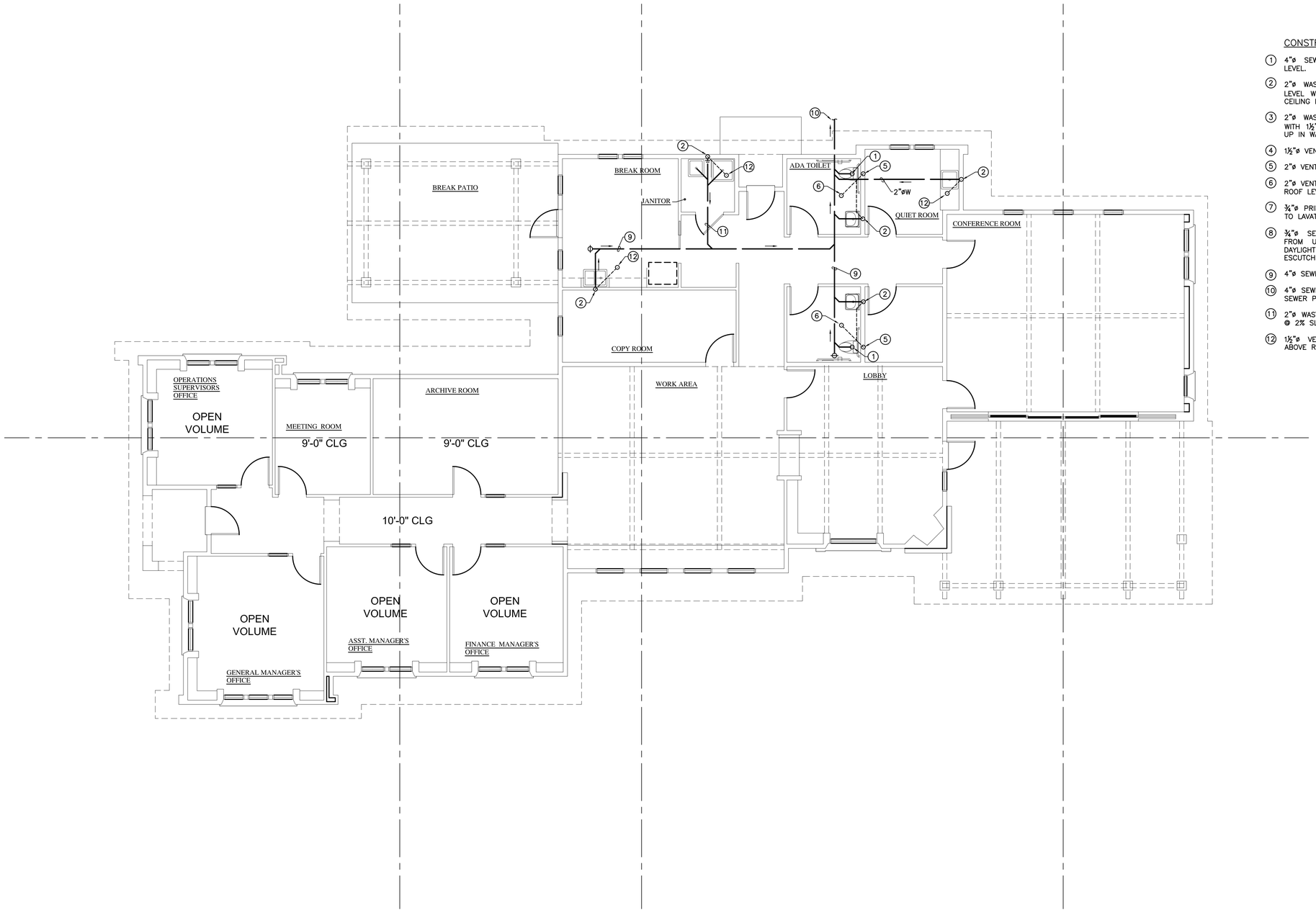
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JOB NO:	23100
DWN BY:	CCW
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SHEET NO.

P-5



CONSTRUCTION KEYNOTES:

1. 4"ø SEWER FROM TOILET DOWN TO BELOW FLOOR LEVEL.
2. 2"ø WASTE PIPE DOWN IN WALL TO BELOW FLOOR LEVEL WITH 1½"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
3. 2"ø WASTE PIPE RUNNING TO BELOW FLOOR LEVEL WITH 1½"ø VENT PIPE RUNNING BELOW FLOOR, ROUTED UP IN WALL TO ABOVE CEILING LEVEL.
4. 1½"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
5. 2"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
6. 2"ø VENT PIPE UP THRU ROOF TERMINATING 12" ABOVE ROOF LEVEL.
7. ¾"ø PRIMARY CONDENSATE DRAIN PIPE DOWN IN WALL TO LAVATORY'S TAILPIECE.
8. ¾"ø SECONDARY CONDENSATE DRAIN PIPE ROUTED FROM UNIT'S SECONDARY CONDENSATE OUTLET, TO DAYLIGHT @ FACE OF CEILING TERMINATING IN AN ESCUTCHEON ABOVE LAVATORY.
9. 4"ø SEWER PIPE RUNNING @ 2% SLOPE.
10. 4"ø SEWER PIPE ROUTED AND CONNECTED TO EXISTING SEWER PIPE.
11. 2"ø WASTE WATER PIPE RUNNING BELOW FLOOR LEVEL @ 2% SLOPE.
12. 1½"ø VENT PIPE UP THRU ROOF TERMINATING 15" ABOVE ROOF LEVEL.

P–6 PLUMBING SEWER AND VENT FLOOR PLAN BUILDING A

3/16"=1'–0"

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MOHAMMAD ARIF KHAN
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Exp. 09/30/2026
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PROJECT

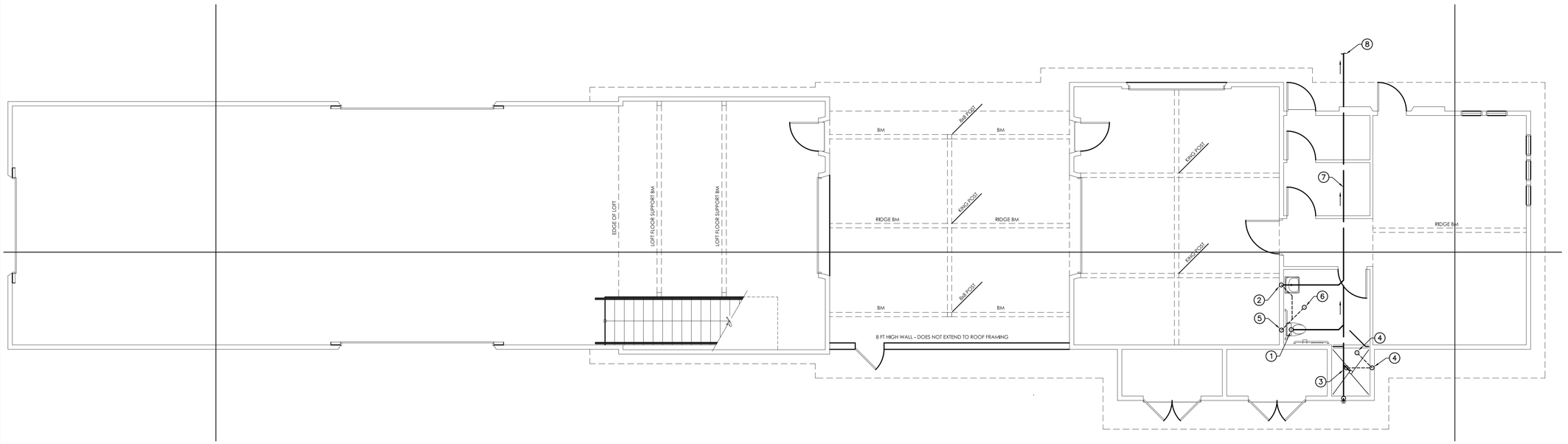
SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS	
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3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

P-6



CONSTRUCTION KEYNOTES:

1. 4"ø SEWER FROM TOILET DOWN TO BELOW FLOOR LEVEL.
2. 2"ø WASTE PIPE DOWN IN WALL TO BELOW FLOOR LEVEL WITH 1½"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
3. 2"ø WASTE PIPE RUNNING TO BELOW FLOOR LEVEL WITH 1½"ø VENT PIPE RUNNING BELOW FLOOR, ROUTED UP IN WALL TO ABOVE CEILING LEVEL.
4. 1½"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
5. 2"ø VENT PIPE UP IN WALL TO ABOVE CEILING LEVEL.
6. 2"ø VENT PIPE UP THRU ROOF TERMINATING 15" ABOVE ROOF LEVEL.
7. 4"ø SEWER PIPE RUNNING @ 2% SLOPE.
8. 4"ø SEWER PIPE ROUTED AND CONNECTED TO EXISTING SEWER PIPE.
9. 1½"ø VENT PIPE CONNECTED TO 2"ø WASTE WATER PIPE ROUTED UP IN WALL TO ABOVE CEILING LEVEL.
10. 1½"ø VENT PIPE UP THRU ROOF TERMINATING 15" ABOVE ROOF LEVEL.

P–7 PLUMBING SEWER AND VENT FLOOR PLAN

3/16"=1'–0"

CEDGARCHITECTS

ARCHITECTURE //
BUILD //
LANDSCAPE //

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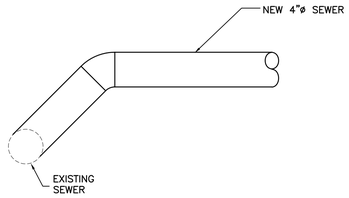
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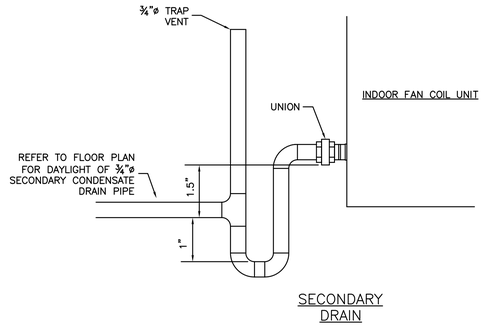
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P-7



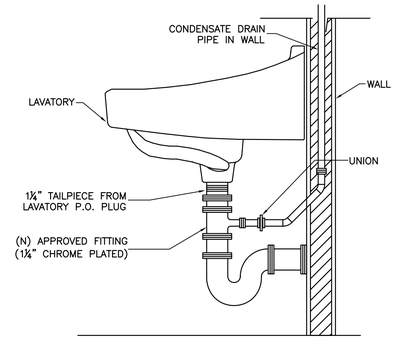
SEWER CONNECTION TO EXISTING 3 P-8

SCALE : NONE



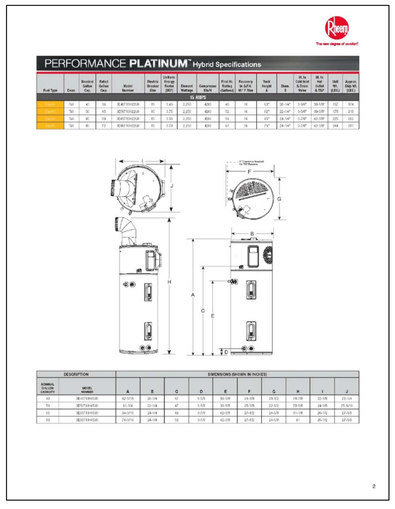
PRIMARY/SECONDARY CONDENSATE DRAIN PIPING DETAIL 2 P-8

SCALE : NONE



CONDENSATE TO TAILPIECE 1 P-8

SCALE : NONE



PERFORMANCE PLATINUM™ Hybrid Specifications

Fuel Type	Model Number	Nominal Capacity	Uniform Energy Factor (UEF)	Recovery Efficiency	Max. Gallons per Minute (GPM)	Dimensions (H x W x D)	Shipping Weight
ELECTRIC							
Electric	XE40T10H22U1	40 gal	3.75	98%	22	60 1/4" x 22 1/4" x 24 1/4"	182 lbs
Electric	XE50T10H22U1	50 gal	3.75	98%	22	75" x 22 1/4" x 24 1/4"	205 lbs
Electric	XE65T10H22U1	65 gal	3.75	98%	22	75" x 22 1/4" x 24 1/4"	251 lbs
Electric	XE80T10H22U1	80 gal	3.75	98%	22	75" x 22 1/4" x 24 1/4"	297 lbs

DESCRIPTION		DIMENSIONS (SHOWN IN INCHES)									
NOMINAL CAPACITY (GALLONS)	MODEL NUMBER	A	B	C	D	E	F	G	H	I	J
40	XE40T10H22U1	60 3/16	20 1/16	47	5 1/2	55 1/16	25 5/8	29 1/2	55 7/8	22 1/8	25 1/4
50	XE50T10H22U1	61 7/8	22 1/4	47	5 1/2	55 5/8	25 5/8	31 1/2	79 1/8	24 1/8	25 9/16
65	XE65T10H22U1	59 5/16	28 1/4	48	5 1/2	62 5/8	27 5/8	34 5/8	81 1/8	26 1/2	27 1/4
80	XE80T10H22U1	74 5/16	28 1/4	52	5 1/2	62 5/8	27 5/8	34 5/8	91	26 1/2	27 1/2



PERFORMANCE PLATINUM™

PERFORMANCE PLATINUM™ Hybrid Electric is the most efficient water heater available

Efficiency
- High 3.45 - 3.75 UEF reduces operating cost
- ENERGY STAR® rated

Performance
- Delivers hot water faster than most standard electric water heaters – 46-67 gallons first-hour delivery, depending on model
- Ambient operating range: 37-145° F is ecided in class, offering more days of HP operation annually; designed to meet Northern Climate Spec (Tier 4)

Easy Installation
- Easy access side connections
- Quick access to electrical junction box
- Easily replaces a standard electric water heater

Integration
- Electronic control for easy temperature adjustment and mode management
- Audible alarm for service alerts

EcoNet®
- Integrated EcoNet® WiFi-connected® technology (2.4 GHz only) and free mobile app gives users control over water systems, allowing for customizable temperature, vacation settings, energy savings and system monitoring at home or away. Visit Rheem.com/EcoNetConnect
- Demand Response Ready – CTA-2045 Port easily connects to utility programs

Operation Modes
- Energy Saver
- Heat Pump
- High Demand
- Electric
- Vacation/Away: 2-28 days (or placed on hold indefinitely)

Plus...
- Premium grade anode rod with resistor extends the life of the tank
- 3/4" NPT water inlet and outlet; 3/4" condensate drain connections
- Incoloy stainless steel resistor elements
- Dry-fire protection
- Easy access, top mounted washable air filter
- 2" Non-CFC foam insulation
- Enhanced flow brass drain valve
- Temperature and pressure relief valve installed
- Design certified to NSF/ANSI 372 (Lead Content)

Warranty
- 10-Year limited warranty for tank defect with 6 year full in-home labor warranty
  Visit rheem.com/warranty
  See Residential Warranty Certificate for complete information

Units meet or exceed ANSI requirements and have been tested according to D.O.E. procedures. Units meet or exceed the energy efficiency requirements of ENERGY STAR® and are certified to meet all state energy efficiency performance criteria.

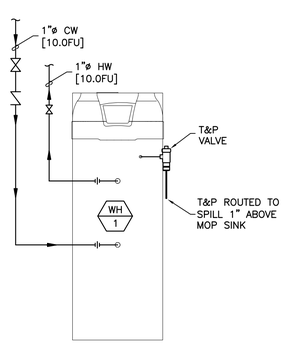
* WiFi broadband internet connection required

PERFORMANCE PLATINUM Hybrid
40, 50, 65 and 80-Gallon Capacities
208-240 Volt / 1 PH Electric

See specifications chart on back.

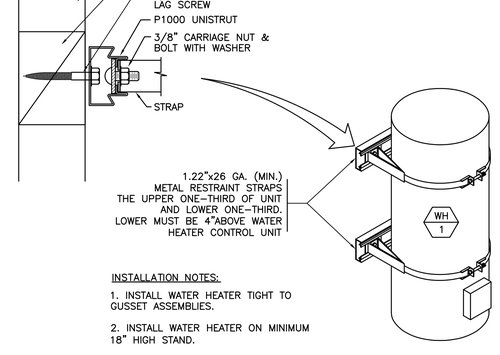
WATER HEATER CUT-SHEETS 6 P-8

SCALE : NONE



WATER HEATER PIPING DETAIL 5 P-8

SCALE : NONE



INSTALLATION NOTES:

1. INSTALL WATER HEATER TIGHT TO GUSSET ASSEMBLIES.

2. INSTALL WATER HEATER ON MINIMUM 18" HIGH STAND.

WATER HEATER MOUNTING DETAIL 4 P-8

SCALE : NONE

CEDGARCHITECTS

ARCHITECTURE //
BUILD //
LANDSCAPE //

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P-8

PLUMBING SPECIFICATION

1.01 WORK INCLUDED

A. FURNISH ALL LABOR, MATERIALS, SERVICES, AND EQUIPMENT NECESSARY FOR THE COMPLETION OF ALL PLUMBING WORKS. WORK, MATERIALS AND EQUIPMENT NOT INDICATED OR SPECIFIED WHICH ARE NECESSARY FOR THE COMPLETE AND PROPER OPERATION OF THE WORK OF THIS SECTION IN ACCORDANCE WITH THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS SHALL BE PROVIDED AND INCORPORATED AT NO ADDITIONAL COST TO THE OWNER.

1.02 QUALITY ASSURANCE

CODE REQUIREMENTS: ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES.
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.

A. ACCESS PLUMBING FIXTURES SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF CBC.

B. HEIGHTS AND LOCATION OF ALL FIXTURES SHALL BE ACCORDING TO CBC TABLE 1115B–1.

C. FIXTURE CONTROLS SHALL COMPLY WITH CBC SECTION 1118B.

1.03 DRAWINGS

BECAUSE OF THE SMALL SCALE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES. THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. THE WORK AND THE INSTALLATION IS IN ACCORDANCE WITH ALL GOVERNING AUTHORITIES.

1.04 PERMITS, INSPECTIONS AND LICENSES

ALL PERMITS; INSPECTIONS AND LICENSES REQUIRED BY THE LEGALLY CONSTITUTED AUTHORITIES FOR INSTALLATION OF THE WORK ACCORDING TO THE PLANS AND SPECIFICATIONS SHALL BE OBTAINED AND PAID AS A PART OF THE WORK OF THIS SECTION.

1.05 UTILITIES

SEE DRAWINGS FOR POINTS OF CONNECTION.

A. GAS SERVICE AND METER ASSEMBLY: THE CONTRACTOR SHALL ARRANGE WITH THE SERVING UTILITY COMPANY FOR THE ADJUSTMENT EXISTING GAS METER AND REGULATOR FOR GAS DEMAND AS INDICATED AND IN THE LOCATION AS SHOWN ON THE SITE PLAN.

B. WATER SERVICE FOR DOMESTIC: THE CONTRACTOR SHALL ARRANGE WITH THE SERVING UTILITY COMPANY FOR THE REPLACEMENT OF EXISTING ⅝"ø WATER METER WITH 1"ø WATER METER. AND ANY REQUIRED APPURTENANCES, IN ACCORDANCE WITH SERVING UTILITY STANDARDS AND SHALL PAY ALL COSTS INCURRED.

1.06 EXAMINATION OF PREMISES

A. BEFORE BIDDING ON THIS WORK, CONTRACTORS SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISES AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE REQUIREMENTS OF THE CONTRACT. BY THE ACT OF SUBMITTING A PROPOSAL FOR THE WORK INCLUDED IN THIS CONTRACT, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION, AND THAT HE IS FAMILIAR WITH AND ACCEPTS ALL CONDITIONS OF THE SITE.

1.07 PROTECTION

ALL WORK, EQUIPMENT AND MATERIALS SHALL BE PROTECTED AT ALL TIMES. CONTRACTOR SHALL MAKE GOOD ALL DAMAGE CAUSED EITHER DIRECTLY OR INDIRECTLY BY HIS OWN WORKMEN. HE SHALL CLOSE ALL PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION.

1.08 SUBMITTAL DATA:
FURNISH, ALL AT ONE TIME, PRIOR TO ANY INSTALLATION, VALID SUBMITTAL DATA ON ALL FIXTURES, MATERIAL, EQUIPMENT AND DEVICES. A LIST OF NAMES IS NOT A VALID SUBMITTAL.

1.09 UNINSPECTED WORK:

CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF HIS WORK TO BE COVERED UP BEFORE IT HAS BEEN DULY INSPECTED, TESTED AND APPROVED BY INSPECTOR OF RECORD.

1.13 GUARANTEES:

CONTRACTOR SHALL GUARANTEE THE ENTIRE PLUMBING AND PIPING SYSTEMS UNCONDITIONALLY FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE.

2.01 MATERIALS AND EQUIPMENT:

A. PROVIDE ALL MATERIALS AND EQUIPMENT AS SPECIFIED OR REQUIRED IN THE WORK, NEW AND FREE FROM DEFECTS AND IMPERFECTIONS.

B. PIPE AND FITTINGS:

a. SOIL AND WASTE PIPING WITHIN THE BUILDING AND OUTSIDE REFER TO PIPE SCHEDULE.
b. DOMESTIC WATER PIPE REFER TO PIPE SCHEDULE.
c. VENT PIPING REFER TO PIPE SCHEDULE.
d. GAS PIPING REFER TO PIPE SCHEDULE.

C. GAS PIPING:

NO GAS PIPE SHALL RUN BELOW BUILDING.

F. VALVES:

1. GENERAL:

a. PIPING SYSTEMS SHALL BE SUPPLIED WITH VALVES ARRANGED SO AS TO GIVE COMPLETE AND REGULATING CONTROL OF THE BUILDING AND PIPING SYSTEMS THROUGHOUT THE BUILDING, AND LOCATED SO ALL PARTS ARE EASILY ACCESSIBLE AND MAINTAINED.

b. VALVE DESIGN: RISING STEM OR OUTSIDE SCREW AND YOKE STEMS. NON–RISING STEM VALVES MAY BE USED WHERE SPACE CONDITIONS PREVENT FULL EXTENSION OF RISING STEMS.

c. SIZES: SAME SIZE AS UPSTREAM PIPE, UNLESS OTHERWISE INDICATED.

2. PROVIDE CLASS 150 VALVES MEETING THE VALVE SPECIFICATIONS WHERE CLASS 125 VALVES ARE SPECIFIED BUT ARE NOT AVAILABLE.

3. VALVES:

a. ALL GATE, CHECK, BALL, SHALL BE CAST BRONZE BODY.

3. VALVES: (FOR GAS SERVICE)

a. HAMMOND BALL VALVE, 8901 UL, FM, 2–INCH AND SMALLER: MSS–SP110, RATED AT 150 WSP–600 WOG, UL LISTED, BRASS BODY, STAINLESS STEEL BALL, AND THREADED ENDS. VALVE SHALL BE C.S.A. CERTIFIED.

b. WALWORTH #1797F PLUG VALVES, 2–1/2 INCH AND LARGER: MSS SP–67; RATED AT 200 PSI CWP; LUBRICATED PLUG TYPE, WITH CAST IRON BODY, SINGLE GLAND, WRENCH OPERATED, AND FLANGED ENDS.

6. GLOBE VALVES:

a. GLOBE VALVES (HAMMOND IB 418), 2–INCH AND SMALLER: MSS SP–80; CLASS 125; ND CAP CONFORMING TO ASTM B 62; HORIZONTAL OR ANGLE PATTERN, LIFT–TYPE VALVE, WITH STAINLESS STEEL SPRING, BRONZE DISC HOLDER WITH RENEWABLE "TEFLON" DISC. PROVIDE VALVES CAPABLE OF BEING REFITTED AND GROUND WHILE THE VALVE REMAINS IN THE LINE.

7. HOSE BIBBS: SHALL BE ACORN OR APPROVED EQUAL.

a. HOSE BIBBS SHALL BE BRONZE BODY WITH CHROME OR NICKEL PLATED FINISH, WITH RENEWABLE COMPOSITION DISC, HAVE LOOSE KEY 3/4" HOSE END WITH 3/4" FEMALE INLET AND VACUUM BREAKER. VACUUM BREAKER SHALL CONFORM TO ASSE STANDARD 1011 WITH FINISH TO MATCH HOSE BIBB

8. COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVES: SHALL BE MCDONALD, WATTS, OR APPROVED EQUAL, BRONZE BODY, TEST LEVER, THERMOSTAT, COMPLYING WITH ANSI Z21.22 LISTING REQUIREMENTS FOR TEMPERATURE DISCHARGE CAPACITY. RELIEF VALVES SHALL BE FACTORY SET FOR 210 DEGREE F. AND 150 P.S.I. PRESSURE. RELIEF VALVES SHALL BE TYPE AS RECOMMENDED BY WATER HEATER MANUFACTURER.

9. FLOOR CLEANOUTS: SHALL J.R. SMITH, ZURN OR AS SPECIFIED IN THE SCHEDULE.

10. WALL CLEANOUTS: ZURN NO. Z–1468 FOR STEEL PIPE AND ZURN NO. Z–1446–NH FOR CAST IRON PIPE.

11. CLEANOUTS TO GRADE: ZURN HEAVY DUTY CLEAN–OUT HOUSING Z–1474–SG–IN WITH BRONZE PLUG SET FLUSH WITH SURFACE FOR CONCRETE AREAS. ASPHALT OR NON–SURFACED AREAS SHALL BE INSTALLED WITH RING OF CONCRETE POURED AROUND THE BOTTOM FLANGE SIX INCHES (6") BELOW SURFACE. USE CAST IRON SOIL PIPE ON CLEANOUT RISERS. FOR CLEANOUTS IN NON–TRAFFIC AREAS, TERMINATE CLEANOUT PLUG IN CONCRETE YARD BOX.

12. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MISCELLANEOUS IRON WORK INCLUDING ANGLES, CHANNELS, ETC., REQUIRED TO APPROPRIATELY SUPPORT THE VARIOUS PIPING SYSTEMS. HANGER SPACING AND LOCATION SHALL CONFORM TO CALIFORNIA PLUMBING CODE REQUIREMENTS.

13. ALL HORIZONTAL RUNS OF PIPING WITHIN THE BUILDING, EXCEPT FOR COPPER WATER SUPPLY STUB–OUTS AT FIXTURES AND COPPER SUPPLY HEADERS WITHIN WALLS, TO BE SUPPORTED FROM THE STRUCTURAL FRAMING WITH STEEL RODS, TOLCO, OR APPROVED EQUAL. COPPER STUB–OUTS AND COPPER HEADERS WITHIN WALLS TO BE SUPPORTED FROM THE WALL FRAMING WITH HOLDRITE PIPE HANGERS AND SUPPORTS.

14. HANGER RODS AND SPACING SHALL CONFORM TO THE FOLLOWING TABLE:

PIPE SIZES	SPACING	RODS
2 INCH AND SMALLER	6 FEET	3/8 INCH
2–1/2 INCH TO 3 INCH	8 FEET	1/2 INCH
4 INCH AND LARGER	8 FEET	5/8 INCH

15. SHIELDS: PROVIDE 20 GAUGE GALVANIZED SHEET METAL SHIELDS AT PIPING HANGERS FOR ALL INSULATED PIPING. SIZE SHIELDS FOR EXACT FIT TO MATE WITH PIPE INSULATION.

16. INSULATION:

INSULATION SHALL BE PROVIDED ON ALL HOT WATER AND CIRCULATING PIPING AND FIRST 5' ON THE COLD WATER FROM THE HOT WATER HEATER PER CALIFORNIA PLUMBING CODE.

a) INSULATION WALL THICKNESS FOR PIPE UPTO 1"ø SHALL BE 1" THICK PER TITLE 24 PART 6, 120.4.

b) INSULATION WALL THICKNESS FOR 1½"ø PIPE SHALL BE 1½" THICK PER TITLE 24 PART 6, 120.4.

c) INSULATION WALL THICKNESS SHALL NOT BE LESS THAN 2" FOR A PIPE FOR A PIPE 2" OR MORE IN DIAMETER. CPC 609.11.2.

d) INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50. ALL INSULATION SHALL BE CONTINUOUS THROUGH SUPPORTS AND HANGERS.

17. EQUIPMENT AND FIXTURES: REFER TO SCHEDULE ON DRAWINGS.

PART 3 – EXECUTION

3.01 INSTALLATION – GENERAL

A. LOCATIONS AND ACCESSIBILITY: INSTALL EQUIPMENT FOR EASE OF MAINTENANCE AND REPAIR. IF CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE MADE BY THE CONTRACTOR, THEY SHALL BE MADE WITHOUT ADDITIONAL CHARGES.

B. OPENINGS: FURNISH INFORMATION TO THE OTHER TRADES ON SIZE AND LOCATION OF OPENINGS WHICH ARE REQUIRED IN WALLS, SLABS, ROOF, FOR PIPING AND EQUIPMENT AT THE PROPER TIMES.

C. CLOSING–IN OF UNINSPECTED WORK: DO NOT ALLOW OR CAUSE ANY OF THE WORK TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE ARCHITECT. ANY WORK ENCLOSED OR COVERED PRIOR TO SUCH INSPECTION AND TEST SHALL BE UNCOVERED AND, AFTER IT HAS BEEN INSPECTED, TESTED, AND APPROVED, MAKE ALL REPAIRS WITH SUCH MATERIALS AS MAY BE NECESSARY TO RESTORE ALL WORK, INCLUDING THAT OF OTHER TRADES, TO ITS ORIGINAL AND PROPER CONDITION.

D. BEFORE LAYING OF ANY PIPE OR DIGGING OF ANY TRENCHES, CONTRACTOR SHALL DETERMINE BY ACTUAL EXCAVATION AND MEASUREMENT EXACT LOCATIONS AND DEPTH OF EXISTING UTILITY AND SERVICE LINES TO WHICH HE IS GOING TO CONNECT. SHOULD EXISTING CONDITIONS PREVENT FOR INSTALLATION OF PIPING AS DETAILED ON DRAWINGS OR TO MAKE CONNECTION IN MANNER INDICATED, CONTRACTOR SHALL CONFER WITH THE ARCHITECT, OWNER'S REPRESENTATIVE AND ENGINEER FOR DIRECTION.

E. EXCAVATION, TRENCHING AND BACKFILL: DO ALL NECESSARY TRENCH EXCAVATION, SHORING, BACKFILLING AND COMPACTION REQUIRED FOR THE PROPER LAYING OF THE PIPE LINES. REMOVE ALL SURPLUS EARTH MATERIALS FROM SITE.

1. BACKFILL SHALL BE CLEAN SOIL FREE FROM ROCKS AND DEBRIS. COMPACT TO NINETY PERCENT (90%) OF SURROUNDING SOIL. ALL PIPING BOTH INSIDE AND OUTSIDE OF BUILDING SHALL BE INSTALLED IN A MINIMUM 6" SAND BED AND COVERED WITH 6" OF SAND PRIOR TO BACKFILL. CONTINUE BACKFILL WITH MATERIALS FREE OF ROCKS AND DEBRIS, PROPERLY MOISTENED AND MECHANICALLY TAPERED AND COMPACTED TO 90% OF SURROUNDING SOIL. COMPACTION BY FLOODING OR JETTING IS EXPRESSLY PROHIBITED.

2. WATER, SOIL AND WASTE PIPING SHALL HAVE TWENTY FOUR (24") OF COVER MINIMUM, EXCEPT ALL PVC PIPE MATERIAL AND ALL GAS PIPING SHALL HAVE THIRTY (30") OF COVER MINIMUM AND FIRE LINES 36 INCHES OF COVER MINIMUM. ALL OTHER PIPE SHALL HAVE NOT LESS THAN EIGHTEEN INCHES (18") OF COVER, UNLESS OTHERWISE NOTED ON THE DRAWINGS. OFFSET GAS AND WATER PIPING AS REQUIRED TO PERMIT CROSSOVER OF UNDERGROUND PIPING SYSTEMS, AND ELECTRICAL CONDUIT SYSTEMS.

3. WATER PIPING SHALL NOT BE RUN IN THE SAME TRENCH WITH SEWER OR DRAINAGE PIPING UNLESS SEPARATED AS REQUIRED BY CPC AS FOLLOWS. THE BOTTOM OF WATER PIPE AT ALL POINTS SHALL BE AS LEAST TWELVE (12) INCHES ABOVE THE TOP OF THE SEWER OR DRAIN LINE. THE WATER PIPE SHALL BE PLACED ON A SOLID SHELF EXCAVATED AT ONE SIDE OF THE COMMON TRENCH WITH A MINIMUM CLEAR HORIZONTAL DISTANCE OF AT LEAST TWELVE (12) INCHES FROM THE SEWER OR DRAIN LINE.

4. NO PIPING SHALL RUN IN, THROUGH OR ABOVE ANY ELECTRICAL EQUIPMENT ROOMS OR SPACES AT ANY TIME.

5. HORIZONTAL SOIL AND WASTE PIPING SHALL BE INSTALLED TO A UNIFORM GRADE OF NOT LESS THAN ONE–FOURTH INCH (1/4") PER FOOT, UNLESS OTHERWISE INDICATED OR DIRECTED.

F. PIPING INSTALLATION:

1. ALL PIPING SHALL BE CONCEALED IN FINISHED PORTION OF THE BUILDING EXCEPT WHERE OTHERWISE INDICATED OR DIRECTED AT THE TIME THE WORK IS DONE. ALL PIPING SHALL BE INSTALLED TO CLEAR ALL FRAMING MEMBERS AND BEAMS, EVEN IF DRAWINGS DO NOT INDICATE SAME. CONTRACTOR SHALL CONSTANTLY CHECK THE WORK OF OTHER TRADES SO AS TO PREVENT ANY INTERFERENCE WITH THE INSTALLATION OF THIS WORK.

2. CONNECTIONS BETWEEN COPPER TUBING AND EQUIPMENT SHALL BE WITH MUELLER BRASS COMPANY, OR APPROVED EQUAL, BRASS STREAM LINE COPPER TO P.P.S. GROUND JOINT UNIONS.

3. CORROSION PROTECTION:

A. ALL UNDERGROUND METALLIC PIPING INCLUDING CAST IRON (SOIL & STORM DRAIN), COPPER (WATER) OR STEEL (GAS) LOCATED BOTH INSIDE AND OUTSIDE OF THE BUILDING SHALL BE ENCASED WITHIN A MINIMUM OF 8 MIL POLYETHYLENE PLASTIC SLEEVE.

B. ALL UNDERGROUND METALLIC VALVES, UNIONS, FITTINGS, FLANGES, BOLTS & APPURTENANCES THAT ARE UNABLE TO BE ENCASED WITHIN SLEEVE AS NOTED ABOVE SHALL BE PROTECTED AS FOLLOWS.

1) PROVIDE HEAVY COATING OF "HENRYS" OIL BASE ROOF MASTIC OVER ENTIRE EXPOSED SURFACE.

2) AFTER MASTIC COATING IS COMPLETED AND INSPECTED, WRAP ENTIRE METALLIC COMPONENT WITH A MINIMUM OF 8 MIL. POLYETHYLENE WRAP OVERLAPPED 50% OF THE CIRCUMFERENCE AND EXTENDED BEYOND ENDS OF COMPONENT AS REQUIRED FOR POLYETHYLENE TO BE SECURED TO PIPING. THE OVERLAP SEAM SHALL BE LOCATED TO AVOID BACKFILL MATERIAL FROM ENTERING THE ENCAPSULATED AREA. THE ENDS AND SEAM OF THE OF THE POLYETHYLENE MATERIAL SHALL BE SECURED TO THE PIPING AND SEALED WITH 3M SCOTCH/WRAP N. 50, 8 MIL., 2" WIDE, PRINTED, PIPE WRAP SEALING TAPE.

b. SOLDER JOINTS FOR COPPER SHALL BE MADE WITH 95/5 LEAD FREE SOLDER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR THE SERVICE INTENDED AND SHALL BE NSF/61 CERTIFIED APPROVED.

c. USE THREADED ADAPTERS ON COPPER TUBING WHERE THREADED CONNECTIONS ARE REQUIRED.

2. WELDED JOINTS: ALL WELDING TO BE PERFORMED BY WELDERS CERTIFIED AS PASSING ASME BOILER AND PRESSURE CODE (SECTION IX) AND SHALL COMPLY WITH ASME STD. B31.1.0 AND THE AMERICAN WELDING SOCIETY, WELDING HANDBOOK.

C. ALL CLOSET BENDS SHALL BE ADEQUATELY BLOCKED AND SECURED. TRAP ARMS AND SIMILAR CONNECTIONS INSTALLED BELOW THE FLOOR LEVEL OR UNDER CONCRETE SLABS SHALL BE ADEQUATELY SUPPORTED AND ANCHORED TO PREVENT MOTION IN ANY DIRECTION. ALL PIPING INSTALLED ABOVE GRADE WITHIN BUILDINGS SHALL BE SECURED TO STRUCTURAL FRAMING WITH UNISTRUT OR PIPE CLAMPS TO PROVIDE A RIGID INSTALLATION. PIPING UTILIZING GASKETS AS A SEAL SHALL BE GIVEN PRIME CONSIDERATION TO PROVIDING ADEQUATE STABILITY THROUGH PROPER SUPPORTS AND ANCHORS BECAUSE OF ITS FLEXIBLE NATURE.

D. FLEXIBLE PIPING OF ANY KIND WILL NOT BE PERMITTED EXCEPT WHEN INDICATED ON DRAWINGS PROVIDE HOSE MASTER INC., FLEXIBLE PIPE APPLIANCE CONNECTOR, MALE NIPPLE AND PLASTIC COVER, FOR KITCHEN EQUIPMENT ONLY.

E. INSTALLATION OF PLUMBING FIXTURES:

1. INSTALL EACH FIXTURE AT THE EXACT HEIGHT AND LOCATION SHOWN ON THE ARCHITECTURAL DRAWINGS.

2. SET FIXTURES, SUPPLIES, TRAP AND TRAP OUTLET SQUARE WITH THE WALL, IN LINE WITH FIXTURE OUTLETS WITHOUT ANY OFFSETS, ANGLES, OR BENDS.

4. STERILIZATION OF DOMESTIC WATER LINES

STERILIZE WATER LINES BY FILLING WITH A SOLUTION CONTAINING FIFTY (50) PARTS OF CHLORINE PER MILLION PARTS WATER AND HOLDING THE SOLUTION THEREIN FOR AT LEAST TWENTY–FOUR (24) HOURS WITH A WATER HEAD OF AT LEAST FIVE FEET (5') ABOVE THE HIGHEST POINT IN THE SYSTEM. UNLESS OTHERWISE DIRECTED, THOROUGHLY FLUSH EACH LINE PRIOR TO STERILIZATION. INTRODUCTION OF STERILIZING SOLUTION OR MATERIALS INTO THE LINES SHALL BE SUCH AS TO PROVIDE THOROUGH AND UNIFORM DISTRIBUTION THROUGHOUT THE SYSTEM.

5. TESTING

NO PIPING WORK SHALL BE CONCEALED OR COVERED UNTIL PIPING HAS BEEN TESTED, INSPECTED AND APPROVED BY THE INSPECTOR. ALL PIPING FOR PLUMBING SYSTEMS SHALL BE COMPLETELY INSTALLED AND TESTED AS REQUIRED BY THE CALIFORNIA PLUMBING CODE. TEST PRESSURES AND TIMES INDICATED ARE A MINIMUM ONLY. ALL TESTS SHALL BE AS REQUIRED BY THE GOVERNING AUTHORITY AS WELL.

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REN. 10-31-2025
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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS	
1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

P-9

SPLIT HEAT PUMP SYSTEM OUTDOOR UNIT SCHEDULE

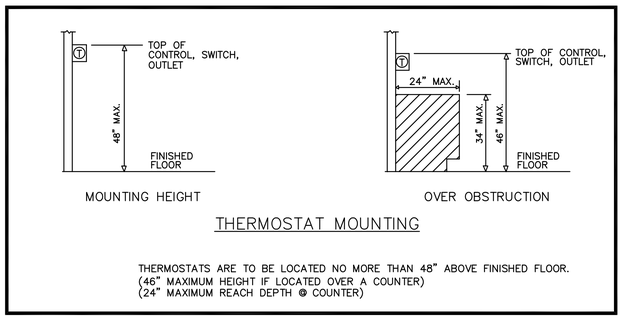
UNIT NO.	MANUFACTURER & MODEL NO.	NOMIMAL CAPACITY TONS	COOLING AT A.R.I. CONDITIONS				HEATING CAPACITY		ELECTRICAL							UNIT DIMENSIONS (L"xW"xH")	OPER. WT. (LBS)	REMARKS
			TOTAL BTUH	SENSIBLE BTUH	SEER	EER	TOTAL BTUH	INTEGRATED BTUH	COMPRESSOR			OUTDOOR FAN		MCA	MOCP	VOLTAGE V/PH/HZ		
									QTY	L.R.A.	R.L.A.	QTY	F.LA.					
HP 1	CARRIER 27SCA536A005	3.0	35,050	26,570	14.3	12.0	34,000	34,000	1	70.0	9.0	1	1.2	12.5	20	208/230–3–60	31⅛"x31⅛"x35½"	193	UNIT TO BE FACTORY ASSEMBLED, TESTED AND READY FOR INSTALLATION. INSTALLATION TO BE PER MANUFACTURER'S GUIDELINE.
HP 2	CARRIER 27SCA524A003	2.0	22,810	17,230	14.3	12.0	24,060	24,060	1	64.4	10.3	1	0.6	13.5	20	208/230–1–60	31⅛"x31⅛"x35½"	196	
HP 3	CARRIER 27SCA524A003	2.0	22,810	17,230	14.3	12.0	24,060	24,060	1	64.4	10.3	1	0.6	13.5	20	208/230–1–60	31⅛"x31⅛"x35½"	196	
HP 4	CARRIER 27SCA524A003	2.0	22,810	17,230	14.3	12.0	24,060	24,060	1	64.4	10.3	1	0.6	13.5	20	208/230–1–60	31⅛"x31⅛"x35½"	196	
HP 5	CARRIER 27SCA536A005	3.0	35,050	26,570	14.3	12.0	34,000	34,000	1	70.0	9.0	1	1.2	12.5	20	208/230–3–60	31⅛"x31⅛"x35½"	193	
HP 6	CARRIER 27SCA536A005	3.0	35,050	26,570	14.3	12.0	34,000	34,000	1	70.0	9.0	1	1.2	12.5	20	208/230–3–60	31⅛"x31⅛"x35½"	193	
HP 7	CARRIER 27SCA524A003	2.0	22,810	17,230	14.3	12.0	24,060	24,060	1	64.4	10.3	1	0.6	13.5	20	208/230–1–60	31⅛"x31⅛"x35½"	196	

SPLIT HEAT PUMP SYSTEM INDOOR UNIT SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	NOM. COOLING C.F.M.	EXT. S.P.	COIL DATA				FAN					MIN. OSA	UNIT DIMENSIONS (L"xW"xH")	OPER. WT. (LBS)	REMARKS
				FACE AREA (SQ. FT.)	ROWS FINS/IN	E.A.T D.B.(°F)	L.A.T D.B.(°F)	FLA	HP	MCA	MOCP	VOLTAGE V/PH/HZ				
FC 1	CARRIER FT5ANXC48L00	1,600	0.60	3.46	3 14.5	80.0	55	5.7	1/2	7.1	15.0	208/1/60	370	22"x21⅛"x53½"	168	UNIT TO BE FACTORY ASSEMBLED, TESTED AND READY FOR INSTALLATION. PROVIDE FULLY PROGRAMMABLE DIGITAL THERMOSTAT WITH 5°F DEAD BAND. UNIT FURNISHED WITH MINIMUM "MERV–13" FILTER. UNIT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND GUIDELINE.
FC 2	CARRIER FT5ANXB24L00	800	0.60	3.46	3 14.5	80.0	59.7	4.0	1/2	5.0	15.0	208/1/60	370	22"x24¾"x59⅛"	168	
FC 3	CARRIER FT5ANXB24L00	800	0.60	3.46	3 14.5	80.0	59.7	4.0	1/2	5.0	15.0	208/1/60	370	22"x24¾"x59⅛"	168	
FC 4	CARRIER FT5ANXB24L00	800	0.60	3.46	3 14.5	80.0	59.7	4.0	1/2	5.0	15.0	208/1/60	370	22"x24¾"x59⅛"	168	
FC 5	CARRIER FT5ANXC36L00	1,200	0.60	3.46	3 14.5	80.0	59.7	6.8	1/2	5.0	15.0	208/1/60	370	22"x24¾"x59⅛"	146	
FC 6	CARRIER FT5ANXC36L00	1,200	0.60	3.46	3 14.5	80.0	59.7	6.8	1/2	5.0	15.0	208/1/60	370	22"x24¾"x59⅛"	146	
FC 7	CARRIER FT5ANXB24L00	800	0.60	3.46	3 14.5	80.0	59.7	4.0	1/2	5.0	15.0	208/1/60	370	22"x24¾"x59⅛"	168	

EXHAUST FAN SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	TYPE	AREA SERVED	DRIVE	C.F.M.	E.S.P. (IN.)	SOUND SONES	AMPS	HP	ELECTRICAL V/PH/HZ	OPER. WT. (LBS.)	REMARKS
EF 1	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	SEE FLOOR PLAN	DIRECT	80	0.25	<0.3	2.0	–	120/1/60	12.2	UNIT SHALL BE PROVIDED WITH ULTRA GREEN ENERGY SAVING DC MOTOR, ULTRASILENT SOUND TECHNOLOGY, ULTRASMART CONTROL TECHNOLOGY TO PROVIDE ADJUSTABLE CFM, OPERATED BY WALL MOUNTED ON/OFF SWITCH.
EF 2	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	SEE FLOOR PLAN	DIRECT	80	0.25	<0.3	2.0	–	120/1/60	12.2	
EF 3	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	SEE FLOOR PLAN	DIRECT	80	0.25	<0.3	2.0	–	120/1/60	12.2	
EF 4	"BROAN" XB80	CEILING MOUNTED CENTRIFUGAL VENTILATOR	SEE FLOOR PLAN	DIRECT	80	0.25	<0.3	2.0	–	120/1/60	12.2	



THERMOSTAT MOUNTING

THERMOSTATS ARE TO BE LOCATED NO MORE THAN 48" ABOVE FINISHED FLOOR.
(46" MAXIMUM HEIGHT IF LOCATED OVER A COUNTER)
(24" MAXIMUM REACH DEPTH @ COUNTER)

LEGEND & ABBREVIATIONS

SYMBOL	ABB.	DESCRIPTION	SYMBOL	ABB.	DESCRIPTION
	SAD	AIR SUPPLY DUCT		AC	AIR CONDITIONING UNIT
	RAD	RETURN AIR DUCT		AP	ACCESS PANEL
	OSA	OUTSIDE AIR		B.D.D.	BACK DRAFT DAMPER
	EAD	EXHAUST AIR DUCT		BHP	BRAKE HORSEPOWER
	CA	COMBUSTION AIR		CFM	CUBIC FEET PER MINUTE
	(L)	LINED DUCTWORK		CONC.	CONCRETE
	CD	CEILING DIFFUSER		COND.	CONDENSATE
	RAR	RETURN AIR REGISTER		D.B.	DRY BULB
	EAR	EXHAUST AIR REGISTER		ENT.	ENTERING
	MVD	MANUAL VOLUME DAMPER		EF	EXHAUST FAN
DL	DL	DOOR LOUVER		E.S.P.	EXTERNAL STATIC PRESSURE
UC	UC	UNDERCUT DOOR		F.P.I.	FINS PER INCH
T	STAT	THERMOSTAT		FIN. FLR.	FINISH FLOOR
BT	BT	BY–PASS TIMER		FLA.	FULL LOAD AMPS
	S.A.	SUPPLY AIR		FT.	FEET
	R.A.	RETURN AIR		GC	GENERAL CONTRACTOR
	E.A.	EXHAUST AIR		HP	HORSEPOWER
	T.A.	TRANSFER AIR		IN.	INCHES
	O.A.	OUTSIDE AIR		CU	CONDENSING UNIT
	TYP.	TYPICAL		L.R.A.	LOCKED ROTOR AMPS
FD	FD	COMBO. SMOKE AND FIRE DAMPER		M.C.A.	MINIMUM CIRCUIT AMPS
FD	FD	FUSIBLE LINK FIRE DAMPER		MIN.	MINIMUM
TG	TG	TRANSFER GRILLE		M.O.C.A.	MAX. OVER CURRENT PROTEC. AMPS
SD	SD	S.A. DUCT DETECTOR		PH	PHASE
	S/M	SHEET METAL		PRESS.	PRESSURE
P.O.R.	P.O.R.	POINT OF REMOVAL		PSI	POUNDS PER INCH
P.O.C.	P.O.C.	POINT OF CONNECTION		RPM	REVOLUTIONS PER MINUTE
SD	SD	SMOKE DETECTOR		R.L.A.	RATED LOAD AMPS
CM	CM	CARBON MONOXIDE DETECTOR			
	DN.	DOWN			

AIR DISTRIBUTION SCHEDULE

TYPE	SIZE	CAPACITY (C.F.M.)	MAX. NECK VEL	MAX. N.C.	MAX. S.P. DROP	REMARKS
ADJUSTABLE MODULAR CORE S–1 –	8x8	0–180	400	13	0.06	PROVIDE WITH OPPOSED BLADE VOLUME DAMPERS MOUNTING FRAME TO BE COMPATIBLE W/ CEILING TYPE COMPLETE WITH FILLER PLATE
	10x10	181–280		13	0.06	
	12x12	281–400		16	0.06	
	14x14	401–550		17	0.06	
	16x16	551–720		18	0.06	
	18x18	721–910		19	0.06	
	20x20	911–1120		20	0.06	
	22x22	1121–1370		21	0.06	
ALUMINUM EGGCRATE R–1 – E–1 – G–1 – T–1 –	8x8	0–180	400	15	0.03	PROVIDE WITH OPPOSED BLADE VOLUME DAMPERS MOUNTING FRAME TO BE COMPATIBLE W/ CEILING TYPE
	10x10	181–280		15	0.03	
	12x12	281–400		15	0.03	
	14x14	401–550		15	0.03	
	16x16	551–720		15	0.03	
	18x18	721–910		15	0.03	
	20x20	911–1120		15	0.03	
	22x22	1121–1370		15	0.03	
	22x46	1801–2800		15	0.03	
ALUMINUM ROUND DIFFUSERS S–2 –	8"ø	0–140	400	<20	0.01	FOR SUPPLY PROVIDE WITH EQUALIZING GRID AND VOLUME DAMPER FOR RETURN PROVIDE WITH VOLUME DAMPER
	10"ø	141–220		<20	0.01	
	12"ø	221–310		<20	0.01	
	14"ø	311–428		<20	0.02	
	16"ø	429–559		<20	0.02	
	18"ø	560–707		<20	0.02	
	20"ø	708–873		<20	0.02	
	24"ø	874–1257		<20	0.02	
	30"ø	1258–1963		<20	0.02	

LEGEND

- S–1 / 000 — CEILING DIFFUSER DESIGN SUPPLY CFM
- R–1 / 000 — CEILING RETURN REGISTER DESIGN RETURN CFM
- T–1 / 000 — CEILING TRANSFER REGISTER DESIGN TRANSFER CFM
- E–1 / 000 — CEILING EXHAUST REGISTER DESIGN EXHAUST CFM

GENERAL NOTES

1–ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 CALIFORNIA MECHANICAL CODE, 2022 CALIFORNIA BUILDING CODE, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.

2–COORDINATE ENTIRE INSTALLATION OF THE HVAC SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO CARRYING OUT ANY CONSTRUCTION.

3–COORDINATE THE LOCATION OF ALL ROOF PENETRATIONS AND THE LOCATION WITH STRUCTURAL MEMBERS.

4–PLATFORMS, CURBS, AND FLASHING FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE MECHANICAL DESIGN DRAWINGS.

5–FURNISH AND INSTALL AC EQUIPMENT MAKE AND MODEL PER SCHEDULE OR APPROVED EQUAL.

6–PROVIDE WALL MOUNTED FULLY PROGRAMMABLE THERMOSTAT T–24 COMPLAINT WITH ADR CAPABILITY AND LISTED ON CEC APPROVED LIST.

7–INDOOR FAN COIL UNITS SHALL BE WIRED FOR CONTINUOUS OPERATION DURING OCCUPANCY.

8–FURNISH AND INSTALL WHERE INDICATED DUCT DETECTOR INSTALLED AT FAN DISCHARGE TO SHUT DOWN A/C UNIT. DETECTOR "SYSTEM SENSOR" DUCT SMOKE DETECTOR SHALL BE LABELED BY AN APPROVED AGENCY, APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHALL AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S APPROVED INSTALLATION INSTRUCTIONS.

9–ALL HVAC UNITS WITH 2,000 CFM OR MORE OR SERVING A COMMON AIR SPACE MUST BE INTERCONNECTED TO SHUT DOWN IMMEDIATELY UPON ALARM CONDITION FROM DUCT DETECTORS.

10–ALL AREAS OF THE BUILDING THAT ARE MECHANICALLY VENTILATED, PROVIDE FILTERS OF MINIMUM MERV–8 FOR ALL OUTSIDE AND RETURN AIR.

11–ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.

12–MAINTENANCE LABEL SHALL BE AFFIXED TO ALL MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNER'S USE.

13–ALL LINE AND LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT AND LINE VOLTAGE WIRING, INCLUDING FINAL CONNECTIONS, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN THE ELECTRICAL SECTION OF THE SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS OF ALL GOVERNING BODIES HAVING JURISDICTION THEREOF.

12–E INDICATES ITEMS FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS SHOWN ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN THE ELECTRICAL SECTIONS OF THE SPECIFICATIONS.

13–M INDICATES ITEMS FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR AS SHOWN ON THE MECHANICAL DRAWINGS OR SPECIFIED IN THE MECHANICAL SECTIONS OF THE SPECIFICATIONS.

14–ALL THERMOSTATS SHALL BE OF THE ELECTRONIC, PROGRAMMABLE, AUTOMATIC CHANGEOVER TYPE TO SEQUENCE HEATING OR COOLING. SET POINT RANGE SHALL BE 10 DEGREES F. BETWEEN FULL HEATING AND COOLING. THEY SHALL HAVE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70 DEGREES F., AND COOLING AT A TEMPERATURE NOT LESS THAN 78 DEGREES F. ADJUSTABLE TEMPERATURE DIFFERENTIAL SHALL BE 1½ DEGREES F. CONTROL LIMITS SHALL BE FROM 55 DEGREES F. TO 85 DEGREES F. MOUNT AT 48 INCHES ABOVE FLOOR OR AS REQUIRED BY LOCAL AUTHORITIES OR HANDICAP CODES.

15–BEFORE BIDDING ON THIS WORK, THE CONTRACTOR SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISES. HE SHALL DEFINITELY DETERMINE IN ADVANCE, THE METHODS OF INSTALLING AND CONNECTING THE EQUIPMENT WITH ITS ASSOCIATED DUCTWORK, THE MEANS TO BE PROVIDED FOR GETTING THE EQUIPMENT AND MATERIALS INTO PLACE AND SHALL MAKE HIMSELF THOROUGHLY FAMILIAR WITH ALL OF THE REQUIREMENTS OF THE PROJECT.

16–ALL DIMENSIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE CONFIRMED ON SITE.

17–ALL EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES.

18–ALL HVAC EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY.

19–MATERIALS DELIVERED TO THE CONSTRUCTION SITE SHALL BE PROTECTED FROM RAIN OR OTHER SOURCES OF MOISTURE.

20–ALL DUCTS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL UNTIL THE FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT.

21–AN OPERATION AND MAINTENANCE MANUAL INCLUDING AT A MINIMUM.

M–1.0 | MECHANICAL SCHEDULE, GENERAL NOTES
1/8"=1'–0"

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.0

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
This document is used to demonstrate compliance with mandatory requirements in 110.8(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel/ motel, multifamily and mixed-use buildings, and 141.0(b)1/ 180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/ 180.1/ 180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.		
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 1 of 12)**
Project Address: 139 N. Euclid Ave	**Date Prepared:**	12/9/2025

A. GENERAL INFORMATION

01	Project Location (city)	Upland	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	92880	06	Total Conditioned Floor Area (ft²)	3758
03	Climate Zone	9	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per 100.0(f).	08	☐	Project includes unconditioned enclosed space(s) > 5,000 ft² under a roof with a ceiling height of at least 15 ft.[1]	
• Office					

[1] FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in 140.3(c)/ 170.2(b). Compliance with 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.

B. PROJECT SCOPE

This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/ 170.2 and 141.0(a)1/ 180.1 and 141.0(b)1 and 2/ 180.2 for additions and alterations.

My project consists of (check all that apply)			Component Types				
01			02				
☒	New Construction or Newly Conditioned Space		☒	Walls	☐	Exterior Opaque Doors
	☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft	Roof	☐	Floors	☒	Fenestration/ Glazed Doors[1]
☐	Addition of conditioned space		☐	Walls	☐	Exterior Opaque Doors
	☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft	Roof				
	☐ Addition is <=700 ft²		☐	Floors	☐	Fenestration/ Glazed Doors[1]
	☐ Addition is >700 ft²					
☐	Alteration of conditioned space	☐	Roof Assembly	☐	Walls	
	☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐	Roofing Material[2]	☐	Floors	☐ Fenestration

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 2 of 12)**
	Date Prepared:	12/9/2025

B. PROJECT SCOPE

[1]FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.
[2]Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	COMPLIES
Yes	Yes	Yes			Yes		

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ROOF ASSEMBLY SCHEDULE

This table demonstrates compliance for prescriptive roof assembly requirements in 140.3(a)1B/ 170.2(a)1B for new construction, 141.0(a)/ 180.1 for additions, or 141.0(b)2Bii/ 180.2 for alterations.

01	Indicate roof types included in the project:	☒ Framed	☐ Framed-Multifamily	☐ SIPS	☐ Span Deck & Concrete	☐ Metal Panels	☐ Metal Building

Framed Roof Assemblies

01	02	03	04	05	06
	☒	Include Framed Roof Assemblies in Area-Weighted Average U-factor Calculation[1]			

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 3 of 12)**
	Date Prepared:	12/9/2025

F. ROOF ASSEMBLY SCHEDULE

Framed Roof Assemblies

Tag/Plan Detail ID	Name/Description	Status	Exception to Roof Insulation Requirements in §141.0(b)2Bii (Alts. Only)	Occupancy Type
R-30 Flat Roof	Roof	New		Nonresidential/ Relocatable 1 CZ
R-30 Flat Roof	Roof	New		Nonresidential/ Relocatable 1 CZ
R-30 Flat Roof	Roof	New		Nonresidential/ Relocatable 1 CZ
R-30 Flat Roof	Roof	New		Nonresidential/ Relocatable 1 CZ
R-30 Flat Roof	Roof	New		Nonresidential/ Relocatable 1 CZ

07	08	09	10	11	12	13	14	15		16
Tag/Plan Detail ID	How Design U-factor was determined	Roof Type & Frame Material	Frame Spacing Depth	Cavity Insulation per Design[2]	Continuous Insulation per Design[2]	Thermal Performance Unit	Required Thermal Performance[3]	U-factor per Design		Net Area[4] ft²
Roof	JA4 Tables	Wood		30	1	U-factor	0.034	per JA4 per Software/ Other	0.034	1436
Roof	JA4 Tables	Wood		30	1	U-factor	0.034	per JA4 per Software/ Other	0.034	463
Roof	JA4 Tables	Wood		30	1	U-factor	0.034	per JA4 per Software/ Other	0.034	329
Roof	JA4 Tables	Wood		30	1	U-factor	0.034	per JA4 per Software/ Other	0.034	560

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
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	Date Prepared:	12/9/2025

F. ROOF ASSEMBLY SCHEDULE

07	08	09	10	11	12	13	14	15		16
Tag/Plan Detail ID	How Design U-factor was determined	Roof Type & Frame Material	Frame Spacing Depth	Cavity Insulation per Design[2]	Continuous Insulation per Design[2]	Thermal Performance Unit	Required Thermal Performance[3]	U-factor per Design		Net Area[4] ft²
Roof	JA4 Tables	Wood		30	1	U-factor	0.034	per JA4 per Software/ Other	0.034	940

[1]FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.
[2] For alterations using U-factor as the Thermal Performance Unit, at least R-10 insulation must be above deck.
[3] If "R-value" is shown in cell 13 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C.
[4] Roof area minus any fenestration/ skylight area

Area-Weighted Average U-factor Compliance Calculation for Framed/ SIPs/ Span Deck & Concrete/ Metal Panel Roofs

01	02	03	04	05
Roof Type	Total Area of Roof Type (ft²)	Area-weighted U-factor for Roof Type		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
Framed	3728	0.034	0.034	
Total for all Roof Types:	**3728**	**0.034**	**0.034**	**COMPLIES**

G. RATED ROOFING MATERIAL (COOL ROOF)

This table demonstrates compliance with prescriptive roof material requirements in 140.3(a)1A/ 170.2(a)1A for new construction, 141.0(a)/ 180.1 for additions, and 141.0(b)2B/ 180.2 for alterations. Roof recovers and replacements must also document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.

01	02	03	04	05	06	07	08	09	10
Tag/Plan Detail ID	Name/ Description/ Location	Status	Occupancy Type	Roof Slope	Roof Material	Compliance Method	Required Minimum Material Performance	Designed Material Performance	U-factor / R-value of Assembly

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 5 of 12)**
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G. RATED ROOFING MATERIAL (COOL ROOF)

R-30 Flat Roof	Roof	New	Nonresidential	Low slope	To Be Determined	Aged solar reflectance and thermal emittance	Reflectance	0.63	Reflectance[1]	0.65		
							Emittance	0.75	Emittance	0.85		
							SRI		SRI			

H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☒ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

Framed Walls

01	☐	Calculate Area-Weighted Average U-factor for Metal Framed Walls[1]
02	☒	Include Wood Framed Walls in Area-Weighted Average U-factor Calculation[1]

03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location/ Fire Rating	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance	U-factor per Design		Net Area[1] ft²
North	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	0.059	400
South	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	0.059	314

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 5 of 12)**
	Date Prepared:	12/9/2025

G. RATED ROOFING MATERIAL (COOL ROOF)

R-30 Flat Roof	Roof	New	Nonresidential	Low slope	To Be Determined	Aged solar reflectance and thermal emittance	Reflectance	0.63	Reflectance[1]	0.65		
							Emittance	0.75	Emittance	0.85		
							SRI		SRI			

H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☒ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

Framed Walls

01	☐	Calculate Area-Weighted Average U-factor for Metal Framed Walls[1]
02	☒	Include Wood Framed Walls in Area-Weighted Average U-factor Calculation[1]

03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location/ Fire Rating	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance	U-factor per Design		Net Area[1] ft²
North	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	0.059	400
South	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	0.059	314

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STAMP

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REN. 10-31-2025
STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD ARIF KUDDUS
No. 32,868
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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.1

M—1.1 T—24 DOCUMENTS
N.T.T.

H. WALL ASSEMBLY SCHEDULE

03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location/ Fire Rating	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance	U-factor per Design		Net Area[3] ft²
North	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	 0.059	396
West	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	 0.059	177
East	Nonresidential/ Relocatable 1 CZ: New	JA4 Tables	Exterior wall	Wood 1/2" gyp 16" OC 2x4	15	6.5	U-factor	0.059	per JA4 per Software/ Other	 0.059	54

[1]*FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal framed walls may not be combined with other wall types. Wood framed walls are combined with SIPS, spandrel & curtain, metal panel and straw bale wall types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.*
[2] *If "R-value" is shown in cell 10 as the Thermal Performance Unit, the R-value shown here is for cavity insulation per 141.0(b)1B.*
[3] *Wall area minus any fenestration area*

Area-Weighted Average U-factor Compliance Calculation for Wood Framed/ SIPs/ Spandrel/ Curtain/ Metal Panel/ Straw Bale Wall Types

01	02	03	04	05
Wall Type	Total Area of Wall Type (ft²)	Area-weighted U-factor for Wall Type		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
Framed	2509.5	0.059	0.059	
Total for all Wall Types:	2509.5	0.059	0.059	COMPLIES

I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

J. EXTERIOR DOOR SCHEDULE

This section does not apply to this project.

K. FENESTRATION AND GLAZED DOOR SCHEDULE

This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/ 170.2(a)3 for new constructions, 141.0(a)/ 180.1 for additions, or 141.0(b)2A/ 180.2 for alterations. Exterior doors that are more than 25% glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☒ Vertical (alterations)	☐ Vertical (new)	☐ Skylights	☐ Glazed Doors (new only)

[1] *FOOTNOTES: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

01	☒	Calculate Area-Weighted Average U-factor for Vertical Fenestration and Glazed Doors[1]
02	☒	Calculate Area-Weighted Average (R)SHGC for Vertical Fenestration and Glazed Doors[1]
03	☒	Calculate Area-Weighted Average VT for Vertical Fenestration and Glazed Doors[1]

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft²
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	98
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	40
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft²
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	68
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	42.5
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	20
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	40
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	30
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.34	0.3	30
					☐ Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.22	0.2		
						VT (min)	0.42	0.45		

K. FENESTRATION AND GLAZED DOOR SCHEDULE

[1]*FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.*
[2] *The NA6 Default Calculation can only be used for alterations or dwelling units in buildings with <= 3 habitable stories. Alterations are limited to 200ft² of site built glazing and dwelling units are limited to 250ft² or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.*
[3] *Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.*
[4] *Projecting includes casement and awning windows.*

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration And Glazed Doors

01	02	03	04	05
Product Performance Unit	Total Area of Fenestration (ft²)	Area-weighted Calculation for Fenestration		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
U-Factor	368.5	0.34	0.3	COMPLIES
(R)SHGC	368.5	0.22	0.2	COMPLIES
VT	368.5	0.42	0.45	COMPLIES

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This section does not apply to this project.

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ENV-01-E - Must be submitted for all buildings

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title	Systems\Spaces To Be Field Verified
NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.	Fenestration;

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Krishna Kumar P.E.	Documentation Author Signature:
Company: KK Engg.	Signature Date: 12-09-2025
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-12-09
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7377

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STAMP

LICENSED ARCHITECT ERIK G. PETERSON No. C26285 REN. 10-31-2025 STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER MOHAMMAD ARIF IRFAN No. 32,868 Exp. 09/30/2026 MECHANICAL STATE OF CALIFORNIA

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE: 9/8/2025
SCALE: AS NOTED
JOB NO: 23100
DWN BY: CCW
CHK BY: EGP

SHEET NO.

M-1.2

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.		
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 1 of 23)**
Project Address: 139 N. Euclid Ave	**Date Prepared:**	12/9/2025

A. GENERAL INFORMATION

01	Project Location (city)	Upland	04	Total Conditioned Floor Area	3758
02	Climate Zone	9	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

• Office

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01		02		03	
Air System(s)		Wet System Components		Dry System Components	
☒	Heating Air System	☐	Water Economizer	☐	Air Economizer
☒	Cooling Air System	☐	Pumps	☐	Electric Resistance Heat
	Mechanical Controls	☐	System Piping	☒	Fan Systems
☒	Mechanical Controls (existing to remain, altered or new)	☐	Cooling Towers	☒	Ductwork (existing to remain, altered or new)
		☐	Chillers	☒	Ventilation
		☐	Boilers	☐	Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 2 of 23)**
	Date Prepared:	12/9/2025

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)												COMPLIES			

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
Zone FC-1- 4 Ton Split HP	1	Single zone	New/ Addition		☐
Zone FC-2- 1.5 Ton Split HP	1	Single zone	New/ Addition		☐
Zone FC-3- 1.5 Ton Split HP	1	Single zone	New/ Addition		☐
Zone FC-4- 1.5 Ton Split HP	1	Single zone	New/ Addition		☐

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Mechanical Systems CALIFORNIA ENERGY COMMISSION

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
Zone FC-1- 4 Ton Split HP	1	Single zone	New/ Addition		☐
Zone FC-2- 1.5 Ton Split HP	1	Single zone	New/ Addition		☐
Zone FC-3- 1.5 Ton Split HP	1	Single zone	New/ Addition		☐
Zone FC-4- 1.5 Ton Split HP	1	Single zone	New/ Addition		☐

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3all	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
Zone FC-1- 4 Ton Split HP	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	33.31	48	0	38.76	34.5	52.39	40.71
Zone FC-2- 1.5 Ton Split HP	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	12.49	18	0	14.65	13.2	13.13	15.65
Zone FC-3- 1.5 Ton Split HP	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	12.49	18	0	14.33	13.2	10.93	14.85
Zone FC-4- 1.5 Ton Split HP	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	12.49	18	0	15.02	13.2	16.61	18.66
Zone FC-5- 3 Ton Split HP	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	24.98	36	0	30.58	27.5	25.52	33.31

[1]*FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.*
[2]*It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).*

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
Zone FC-1- 4 Ton Split HP	<65,000		HSPF2	7.5	10	SEER2	14.3	14.5
Zone FC-2- 1.5 Ton Split HP	<65,000		HSPF2	7.5	10	SEER2	14.3	14
Zone FC-3- 1.5 Ton Split HP	<65,000		HSPF2	7.5	10	SEER2	14.3	14
Zone FC-4- 1.5 Ton Split HP	<65,000		HSPF2	7.5	10	SEER2	14.3	14
Zone FC-5- 3 Ton Split HP	<65,000		HSPF2	7.5	8.5	SEER2	14.3	14

G. PUMPS

This section does not apply to this project.

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H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	Zone FC-1- 4 Ton Split HP	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,600	Site Elevation	563	Economizer	NA: Special OA filtration
01	02	03	04			05		06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			100			371		Manufacturer provided				0.54
			MERV 13-16 Filter upstream of thermal conditioning equipment			100			222						
			Hydronic/DX cooling coil or heat pump coil			100			222						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1			Fan System Electrical Output (kW)	0.54

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	Zone FC-2- 1.5 Ton Split HP	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	600	Site Elevation	563	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			100			139		Manufacturer provided				0.13
			MERV 13-16 Filter upstream of thermal conditioning equipment			100			83						
			Hydronic/DX cooling coil or heat pump coil			100			83						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1			Fan System Electrical Output (kW)	0.13

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.3

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	Zone FC-3-1.5 Ton Splt HP	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	600	Site Elevation	563	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			100			139		Manufacturer provided				0.13
			MERV 13-16 Filter upstream of thermal conditioning equipment			100			83						
			Hydronic/DX cooling coil or heat pump coil			100			83						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)			0.13

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	Zone FC-4-1.5 Ton Splt HP	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	600	Site Elevation	563	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			100			139		Manufacturer provided				0.13
			MERV 13-16 Filter upstream of thermal conditioning equipment			100			83						
			Hydronic/DX cooling coil or heat pump coil			100			83						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)			0.13

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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name	Zone FC-5-3 Ton Splt HP	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,200	Site Elevation	563	Economizer	NA: Special OA filtration
01	02	03	04			05		06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			100			278		Manufacturer provided				0.25
			MERV 13-16 Filter upstream of thermal conditioning equipment			100			167						
			Hydronic/DX cooling coil or heat pump coil			100			167						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[3]		1	Fan System Electrical Output (kW)			0.25

[1] FOOTNOTES: Fans serving spaces with design background noise goals below NC35
[2] Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.
[3] Fan system allowance includes fan system base allowance.
[4] Filter pressure loss can only be counted once per fan system.
[5] Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.
[6] Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document..

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11

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H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
Zone FC-1- 4 Ton Splt HP	Altered Fan System	
Zone FC-2- 1.5 Ton Splt HP	Altered Fan System	
Zone FC-3- 1.5 Ton Splt HP	Altered Fan System	
Zone FC-4- 1.5 Ton Splt HP	Altered Fan System	
Zone FC-5- 3 Ton Splt HP	Altered Fan System	

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I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
Zone FC-1- 4 Ton Splt HP	Single zone	<= 25,000 ft^2	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
Zone FC-2- 1.5 Ton Splt HP	Single zone	<= 25,000 ft^2	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
Zone FC-3- 1.5 Ton Splt HP	Single zone	<= 25,000 ft^2	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
Zone FC-4- 1.5 Ton Splt HP	Single zone	<= 25,000 ft^2	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project
Zone FC-5- 3 Ton Splt HP	Single zone	<= 25,000 ft^2	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project

[1] FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

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J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(c)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and du24refroinlnk/160.2, 160.3(a)3iD, 170.2(e)4N, 170.2(e)4IC for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05			06			07
System Name	Zone FC-1- 4 Ton Splt HP	System Design OA CFM Airflow[1]		431	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]
								Provided
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[4] 160.2(c)5D 160.2(c)5E 160.2(c)5D
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV: NA: Not required per §120.1(d)3
Zone FC-1	Office space	1436			215.4	0	0	Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				215	18	Ventilation for this System Complies?	Yes
04		05			06			07
System Name	Zone FC-2- 1.5 Ton Splt HP	System Design OA CFM Airflow[1]		139	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]
								Provided
08	09	10	11	12	13	14	15	16

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.4

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3				Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D		
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Zone FC-2	Office space	463			69.4	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				69	18	Ventilation for this System Complies?		Yes
	04	05			06			07	
System Name	Zone FC-3- 1.5 Ton Split HP	System Design OA CFM Airflow[1]		99	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3				Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3] 160.2(c)5D 160.2(c)5E 160.2(c)5D		
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Zone FC-3	Office space	329			49.4	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				49	18	Ventilation for this System Complies?		Yes
	04	05			06			07	
System Name	Zone FC-4- 1.5 Ton Split HP	System Design OA CFM Airflow[1]		177	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	

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J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3				Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D		
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Zone FC-4	Office space	590			88.5	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				88	18	Ventilation for this System Complies?		Yes
	04	05			06			07	
System Name	Zone FC-5- 3 Ton Split HP	System Design OA CFM Airflow[1]		282	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3				Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3] 160.2(c)5D 160.2(c)5E 160.2(c)5D		
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Zone FC-5	Office space	940			141	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				141	18	Ventilation for this System Complies?		Yes

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system

[2] Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.

[3] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 15 of 23)**
	Date Prepared:	12/9/2025

J. VENTILATION AND INDOOR AIR QUALITY

[4] See Standards Tables 120.1-A and 120.1-B.

[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.

[6] 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	Zone FC-1- 4 Ton Split HP	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 16 of 23)**
	Date Prepared:	12/9/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-6	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:			**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 17 of 23)**
	Date Prepared:	12/9/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

		Zone FC-2- 1.5 Ton Split HP	**Dwelling Units:** Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-6	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:			**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	**(Page 18 of 23)**
	Date Prepared:	12/9/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

		Zone FC-3- 1.5 Ton Split HP	**Dwelling Units:** Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-6	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:			**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //

// 401 e. columbia ave.
pomona, ca 91767

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// info@cedgarchitects.com

STAMP

LICENSED ARCHITECT — ERIK G. PETERSON — No. C26289 — REN. 10-31-2025 — STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER — MOHAMMAD ARIF KUDDUS — No. 32,868 Exp. 09/30/2026 — MECHANICAL — STATE OF CALIFORNIA

MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.arifan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.5

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 19 of 23)
	Date Prepared:	12/9/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

		Zone FC-4- 1.5 Ton Split HP	**Dwelling Units:** Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-6	Duct Insulation R-value		
22				
23				
The answers to the questions below apply to the following duct systems:		Zone FC-5- 3 Ton Split HP	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 20 of 23)
	Date Prepared:	12/9/2025

L. DISTRIBUTION (DUCTWORK and PIPING)

			Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
			Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:		
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A		
18		All ductwork is an extension of an existing duct system		
19		Ductwork serving individual dwelling unit		
20		< 25 ft of new or replacement space conditioning ducts installed		
21	R-6	Duct Insulation R-value		
22				
23				

M. COOLING TOWERS

This section does not apply to this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 21 of 23)
	Date Prepared:	12/9/2025

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	4 Ton Split. HP; 1.5 Ton Split. HP; 1.5 Ton Split. HP; 3 Ton Split. HP;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes'. If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	4 Ton Split. HP; 1.5 Ton Split. HP; 1.5 Ton Split. HP; 3 Ton Split. HP;
NRCA-MCH-11-A Automatic Demand Shed Controls	4 Ton Split. HP; 1.5 Ton Split. HP; 1.5 Ton Split. HP; 3 Ton Split. HP;
NRCA-MCH-18-A Energy Management Control Systems	4 Ton Split. HP; 1.5 Ton Split. HP; 1.5 Ton Split. HP; 3 Ton Split. HP;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 22 of 23)
	Date Prepared:	12/9/2025

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location: M-Sheets

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 23 of 23)
Project Address: 139 N. Euclid Ave	**Date Prepared:**	12/9/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Krishna Kumar P.E.	Documentation Author Signature:
Company: KK Engg.	Signature Date: 12-09-2025
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-12-09
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951-532-7377

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.		
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 1 of 6)
Project Address: 139 N. Euclid Ave	**Date Prepared:**	12/9/2025

A. GENERAL INFORMATION

01	Project Location (city)	Upland	02	Climate Zone	9
03	Occupancy Types Within Project (select all that apply):				
• Office					

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./ 170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1]FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.
[2] Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.
[3] DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //
// 401 e. columbia ave.
pomona, ca 91767
// 909.625.3916
// cedgarchitects.com
// info@cedgarchitects.com

STAMP

LICENSED ARCHITECT — ERIK G. PETERSON — No. C26289 — REN. 10-31-2025 — STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER — MOHAMMAD ARIF QUDDUSI IRFAN — No. 32,868 Exp. 09/30/2026 — MECHANICAL — STATE OF CALIFORNIA

MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.arifan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.6

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 2 of 6)
	Date Prepared:	12/9/2025

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03	04			05	06			
System Name	40 Gallon Electric	Exception to 140.5(c)/ 170.2(d)3		☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %		
07	08	09	10		11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
40 Gallon Electric	Consumer Rated Electric Storage	40	34,130	FHR >=75	0.93	0.93	UEF		

[1]*FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☐	☐	☒	solation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft² and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 3 of 6)
	Date Prepared:	12/9/2025

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 4 of 6)
	Date Prepared:	12/9/2025

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a).
02	☐	☐	☒	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code 613.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d).
06	☐	☐	☒	Combustion air positive shut-off shall be provided per 160.4(3),on all newly installed commercial boilers as follows: • Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure • Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h
07	☐	☐	☒	Boiler combustion air fans with motor >= 10 hp shall meet one of the following • The fan motor shall be driven by a variable speed drive OR • The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume.
08	☐	☐	☒	Newly installed boilers with an input capacity (d gte/) 5MVBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 5 of 6)
	Date Prepared:	12/9/2025

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Main Bldg.	**Report Page:**	(Page 6 of 6)
Project Address: 139 N. Euclid Ave	**Date Prepared:**	12/9/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Krishna Kumar P.E.	Documentation Author Signature:
Company: KK Engg.	Signature Date: 12-09-2-25
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-12-09
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7377

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //

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STAMP

LICENSED ARCHITECT ERIK G. PETERSON No. C26289 REN. 10-31-2025 STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER MOHAMMAD ARIF IRFAN No. 32,868 Exp. 09/30/2026 MECHANICAL STATE OF CALIFORNIA

MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.a.irfan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.7

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 7 of 9)
	Date Prepared:	12/9/2025

K. FENESTRATION AND GLAZED DOOR SCHEDULE

[1]FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.
[2]The NA6 Default Calculation can only be used for alterations or dwelling units in buildings with <= 3 habitable stories. Alterations are limited to 200ft² of site built glazing and dwelling units are limited to 250ft² or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.
[3] Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.
[4]Projecting includes casement and awning windows.

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration And Glazed Doors

01	02	03	04	05
Product Performance Unit	Total Area of Fenestration (ft²)	Area-weighted Calculation for Fenestration		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
U-Factor	138	0.34	0.3	COMPLIES
(R)SHGC	138	0.22	0.2	COMPLIES
VT	138	0.42	0.45	COMPLIES

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This section does not apply to this project.

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ENV-01-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 8 of 9)
	Date Prepared:	12/9/2025

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title	Systems/Spaces To Be Field Verified
NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.	Fenestration;

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 9 of 9)
Project Address: 139 N. Euclid Ave	Date Prepared:	12/9/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

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Company: KK Engg.	Signature Date: 12-09-2025
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
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Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-12-09
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7377

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.		
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 1 of 10)
Project Address: 139 N. Euclid Ave	Date Prepared:	12/9/2025

A. GENERAL INFORMATION

01	Project Location (city)	Upland	04	Total Conditioned Floor Area	645
02	Climate Zone	9	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

• Office

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
☒ Heating Air System	☐ Water Economizer	☐ Air Economizer
☒ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☒ Fan Systems
☒ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 2 of 10)
	Date Prepared:	12/9/2025

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4E	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table L)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)														COMPLIES	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
Zone FC-6- 2 Ton Split HP	1	Single zone	New/ Addition		☐

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 3 of 10)
	Date Prepared:	12/9/2025

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
Zone FC-6- 2 Ton Split HP	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	16.65	24	0	20.39	18.2	36.36	23

[1]FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are excepted.
[2]It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
[3] If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
[4] Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
Zone FC-6- 2 Ton Split HP	<65,000		HSPF2	7.5	8.5	SEER2	14.3	14

G. PUMPS

This section does not apply to this project.

CEDGARCHITECTS
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STAMP

LICENSED ARCHITECT — ERIK G. PETERSON — No. C26289 — REN. 10-31-2025 — STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER — MOHAMMAD ARIFUDDIN IRFAN — No. 32,868 Exp. 09/30/2026 — MECHANICAL — STATE OF CALIFORNIA

MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.a.irfan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.9

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	Zone FC-6- 2 Ton Split HP	Quantity	1	Fan System Status	New	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	800	Site Elevation	563	Economizer	NA: <=33 kBtu/h cooling
01	02	03	04			05		06	07	08	09			10	11
									Allowance		Design				
Fan Name or Item Tag	Fan Type	Qty	Component			Airflow through Component (%)		Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method			Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away			100			186		Manufacturer provided				0.25
			MERV 13-16 Filter upstream of thermal conditioning equipment			100			111						
			Hydronic/DX cooling coil or heat pump coil			100			111						
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)						Fan System Allowance (kW)[5]		1			Fan System Electrical Output (kW)	0.25

[1] *FOOTNOTES: Fans serving spaces with design background noise goals below NC35*
[2] *Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.*
[3] *Fan system allowance includes fan system base allowance.*
[4] *Filter pressure loss can only be counted once per fan system.*
[5] *Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.*
[6] *Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document..*

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11
Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
Zone FC-6- 2 Ton Split HP	Altered Fan System	

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
Zone FC-6- 2 Ton Split HP	Single zone	<= 25,000 ft²	EMCS	NA: 7 day per 120.2(e)1	4 Hour Timer	EMCS	NA: Alteration	NA: Alteration Project

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireloces or decorative gas appliances, wood stoves are not required to have setback thermostats.*

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and dt2#refnolink}160.2, 160.3(a)3D, 170.2(a)4MN, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05			06			07
System Name	Zone FC-6- 2 Ton Split HP	System Design OA CFM Airflow[1]		194	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]
								Provided
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[4] 160.2(c)5D 160.2(c)5E 160.2(c)5D
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
Zone FC-6	Office space	645			96.8	0	0	DCV: NA: Not required per 6120.1(d)3
								Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				97	18	Ventilation for this System Complies?	Yes

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system*
[2] *Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B.*

J. VENTILATION AND INDOOR AIR QUALITY

[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).*

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	Zone FC-6- 2 Ton Split HP	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

L. DISTRIBUTION (DUCTWORK and PIPING)

		Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:	
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18		All ductwork is an extension of an existing duct system	
19		Ductwork serving individual dwelling unit	
20		< 25 ft of new or replacement space conditioning ducts installed	
21	R-6	Duct Insulation R-value	
22			
23			

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	2 Ton Split. HP;
NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	2 Ton Split. HP;
NRCA-MCH-11-A Automatic Demand Shed Controls	2 Ton Split. HP;
NRCA-MCH-18-A Energy Management Control Systems	2 Ton Split. HP;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location: M-Sheets

CEDGARCHITECTS
ARCHITECTURE //
BUILD //
LANDSCAPE //

// 401 e. columbia ave.
pomona, ca 91767

// 909.625.3916
// cedgarchitects.com
// info@cedgarchitects.com

STAMP

LICENSED ARCHITECT
ERIK G. PETERSON
No. C26289
REN. 10-31-2025
STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD ARIF QUDDUSI KHAN
No. 32,868
Exp. 09/30/2026
MECHANICAL
STATE OF CALIFORNIA

MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.arifan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.10

M-1.10 T-24 DOCUMENTS

N.T.T.

STATE OF CALIFORNIA

Mechanical Systems

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 10 of 10)
Project Address: 139 N. Euclid Ave	Date Prepared:	12/9/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Krishna Kumar P.E.	Documentation Author Signature:
Company: Kli Engg.	Signature Date: 12-09-2025
Address: 3677 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-12-09
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7377

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.		
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 1 of 6)
Project Address: 139 N. Euclid Ave	Date Prepared:	12/9/2025

A. GENERAL INFORMATION

01	Project Location (city)	Upland	02	Climate Zone	9
03	Occupancy Types Within Project (select all that apply):				

● Office

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./ 170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02		03		
My project consists of (check all that apply):	System Type[1,2]		System Components		
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)		☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)			☐ Equipment	☐ Distribution	☐ Controls

[1]*FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*

[2] *Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.*

[3] *DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies*

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 2 of 6)
	Date Prepared:	12/9/2025

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03	04			05		06		
System Name	Instantaneous Electric	Exception to 140.5(c)/ 170.2(d)3		☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %		
07	08	09	10	11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
Instantaneous Electric	Consumer Rated Electric Instantaneous (<=12kW)	0.1	10,329	FHR >=75	0.98	0.92	UEF		

[1]*FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☒	☐	☐	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft² and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 3 of 6)
	Date Prepared:	12/9/2025

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 3 of 6)
	Date Prepared:	12/9/2025

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Names: San Antonio Water Company- Maint. Bldg.	Report Page:	(Page 5 of 6)
	Date Prepared:	12/9/2025

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

M—1.11 T—24 DOCUMENTS

N.T.T.

CEDGARCHITECTS

ARCHITECTURE //
BUILD //
LANDSCAPE //

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pomona, ca 91767

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STAMP

LICENSED ARCHITECT — ERIK G. PETERSON — No. C26289 — REN. 10-31-2025 — STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER — MOHAMMAD ARIF UDDIN IRFAN — No. 32,868 Exp. 09/30/2026 — MECHANICAL — STATE OF CALIFORNIA

MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.a.irfan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.11

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: San Antonio Water Company- Maint. Bldg.	**Report Page:**	**(Page 6 of 6)**
Project Address: 139 N. Euclid Ave	**Date Prepared:**	12/9/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Krishna Kumar P.E.	
Company: KK Engg.	Signature Date: 12-09-2025
Address: 3877 Dwiggins St	CEA/ HERS Certification Identification (if applicable): M22176
City/State/Zip: Los Angeles Ca 90063	Phone: 714-742-4560

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Mohammad Irfan P.E.	Responsible Designer Signature:
Company: MN Engineering Group Inc.	Date Signed: 2025-12-09
Address: 6385 Marigold Street	License: M-32868
City/State/Zip: Eastvale/CA/92880	Phone: 951.532.7377

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000
Schema Version: rev 20220101

Compliance ID: EnergyPro-5726-1225-1735
Report Generated: 2025-12-09 13:51:13

M-1.12 T-24 DOCUMENTS

N.T.T.

CEDGARCHITECTS

ARCHITECTURE //
BUILD //
LANDSCAPE //

// 401 e. columbia ave.
pomona, ca 91767

// 909.625.3916
// cedgarchitects.com
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STAMP

LICENSED ARCHITECT
ERIK G. PETERSON
No. C26289
REN. 10-31-2025
STATE OF CALIFORNIA

CONSULTANTS

REGISTERED PROFESSIONAL ENGINEER
MOHAMMAD ARIF UDDIN IRFAN
No. 32,868
Exp. 09/30/2026
MECHANICAL
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MN Engineering Group, Inc.
MP Consulting Engineers
6385 Marigold Street
Eastvale, California 92880
Telephone: 951.532.7377
Email: mohammad.a.irfan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

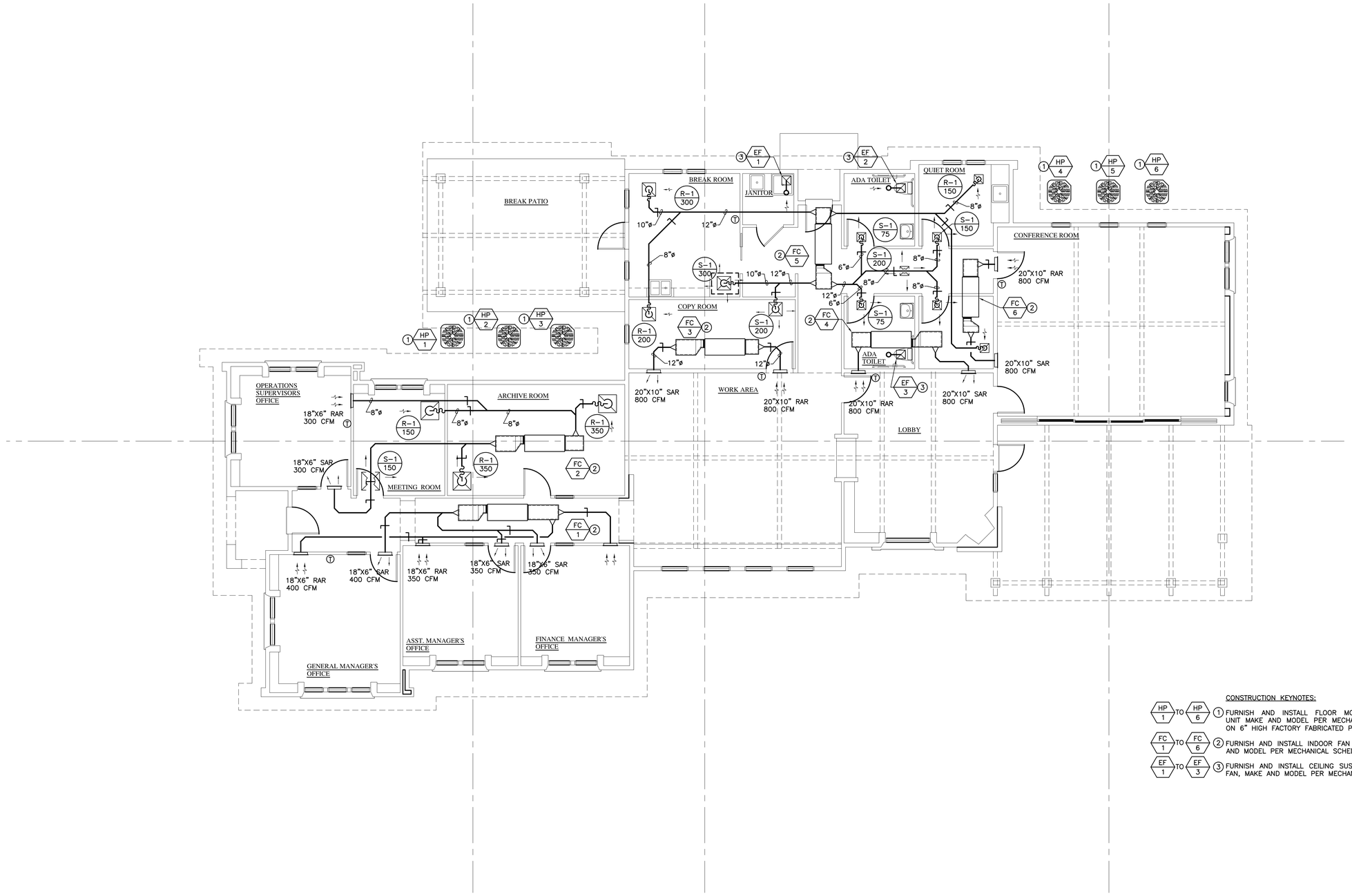
REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-1.12



CONSTRUCTION KEYNOTES:

HP 1 TO HP 6 (1) FURNISH AND INSTALL FLOOR MOUNTED OUTDOOR UNIT MAKE AND MODEL PER MECHANICAL SCHEDULE, ON 6" HIGH FACTORY FABRICATED PLATFORM.

FC 1 TO FC 6 (2) FURNISH AND INSTALL INDOOR FAN COIL UNIT, MAKE AND MODEL PER MECHANICAL SCHEDULE.

EF 1 TO EF 3 (3) FURNISH AND INSTALL CEILING SUSPENDED EXHAUST FAN, MAKE AND MODEL PER MECHANICAL SCHEDULE.

M-2 MECHANICAL FLOOR PLAN BUILDING A

3/16"=1'-0"

CEDGARCHITECTS

ARCHITECTURE //
BUILD //
LANDSCAPE //

// 401 e. columbia ave.
pomona, ca 91767

// 909.625.3916
// cedgarchitects.com
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STAMP

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

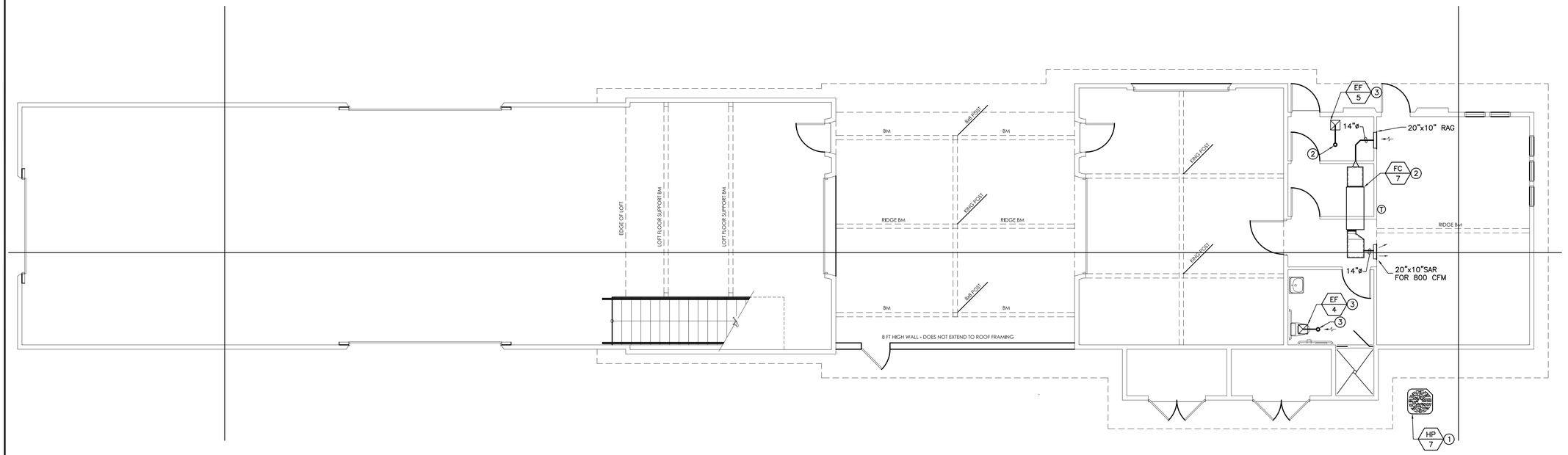
REVISIONS

1	-
2	-
3	-
4	-

DATE: 9/8/2025
SCALE: AS NOTED
JOB NO: 23100
DWN BY: CCW
CHK BY: EGP

SHEET NO.

M-2



CONSTRUCTION KEYNOTES:

HP 7 (1) FURNISH AND INSTALL FLOOR MOUNTED OUTDOOR UNIT MAKE AND MODEL PER MECHANICAL SCHEDULE, ON 6" HIGH FACTORY FABRICATED CURB.

FC 7 (2) FURNISH AND INSTALL INDOOR FAN COIL UNIT, MAKE AND MODEL PER MECHANICAL SCHEDULE.

EF 4 / EF 5 (3) FURNISH AND INSTALL CEILING SUSPENDED EXHAUST FAN, MAKE AND MODEL PER MECHANICAL SCHEDUL

M-3 | MECHANICAL FLOOR PLAN BUILDING B
1/8"=1'-0"

CEDGARCHITECTS

ARCHITECTURE //
BUILD //
LANDSCAPE //

// 401 e. columbia ave.
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// cedgarchitects.com
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STAMP

LICENSED ARCHITECT
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REGISTERED PROFESSIONAL ENGINEER
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Telephone: 951.532.7377
Email: mohammad.a.irfan@sbcglobal.net

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
2	-
3	-
4	-

DATE:	9/8/2025
SCALE:	AS NOTED
JOB NO:	23100
DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

M-3

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
———	CONDUIT RUN, CONCEALED IN CEILING, WALLS OR BELOW ROOF. CONDUIT MAY BE CONCEALED BELOW SLAB AS PERMITTED BY ENGINEER.
— — —	CONDUIT RUN, EXPOSED.
– – – – – –	CONDUIT RUN CONCEALED UNDERGROUND, BELOW GRADE OR SLAB.
———┘	CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE.
~~	FLEXIBLE CONDUIT. SEALTITE WHERE EXPOSED TO WEATHER. REFER TO SPECIFICATIONS FOR USE.
#10	CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #12 WIRES CONTAINED THEREIN. GROUND WIRE IS REQUIRED BUT NO INDICATED. TWO #12 ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN. NUMERALS ADJACENT TO CROSS LINES ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #12.
B–1,3,5–7	CONDUIT HOME RUN TO PANELBOARD. LETTER AND NUMERALS INDICATES ELECTRICAL PANEL AND CIRCUIT NUMBER. CIRCUITS 1,3,5 WITH SHARED NEUTRAL AND CIRCUIT 7 WITH DEDICATED NEUTRAL.
C.O.	CONDUIT ONLY, WITH PULL ROPE.
○	LED LIGHT FIXTURE.
●	SHADED SYMBOL INDICATES EMERGENCY LIGHTING FIXTURE
○	LED DOWNLIGHT.
●	SHADED SYMBOL INDICATES EMERGENCY LIGHTING FIXTURE
⊢○	WALL MOUNTED LED LIGHT FIXTURE.
⊢●	SHADED SYMBOL INDICATES EMERGENCY LIGHTING FIXTURE.
⊢○⊣	LED STRIP OR SURFACE MOUNTED LIGHT FIXTURE.
LL	EXIT LIGHT FIXTURE. ARROW INDICATES DIRECTION. "LL" INDICATES LOW LEVEL MOUNTED AT +10" ABOVE FLOOR.
⊗	EXIT LIGHT FIXTURE WITH TWO FACES.
A 90 3 +20'–0"	LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES TYPE OF FIXTURE. NUMERALS IN LOWER HALVE OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL AT TOP OF HEXAGON INDICATES NUMBER OF FIXTURES REQUIRED. NUMBER AT BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING.
Sa	WALL MOUNTED DIGITAL SWITCH COMPLETE WITH LOW VOLTAGE CABLES TO ROOM CONTROLLER. MOUNT AT +48".
D	WALL MOUNTED LED DIMMER BY LUTRON OR APPROVED EQUAL. (+48"AFF)
S	LINE VOLTAGE PASSIVE INFRARED, WALL MOUNTED, OCCUPANCY SENSOR FOR LIGHTING CONTROL.
OS	LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED COMPLETE WITH ROOM CONTROLLER.
PC	PHOTO CELL COMPLETE WITH ROOM CONTROLLER.
JB	JUNCTION BOX.
Sm	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD.
⊜	DUPLEX GROUNDING TYPE RECEPTACLE WALL MOUNTED (+18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED).
GFI	"GFI" ADJACENT TO SYMBOL INDICATES GROUND FAULT INTERRUPTING TYPE RECEPTACLE.
⊜	DOUBLE DUPLEX GROUNDING TYPE RECEPTACLE, WALL MOUNTED (+18" ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED).
⊘	SLASH INDICATES RECEPTACLE AS DESCRIBED ABOVE, EXCEPT WALL MOUNTED ABOVE COUNTER TOP, CABINET OR SHELF WITH GFI.
F	DUPLEX GROUNDING TYPE RECEPTACLE, FLOOR MOUNTED. F = FLUSH FLOOR MOUNTED COMPLETE WITH REQUIRED ADJUSTABLE FLOOR BOX, LEVELERS, GASKETS, FLANGES AND BRASS OUTLET COVER PLATE.
⊜	DUPLEX GROUNDING TYPE RECEPTACLE, CEILING MOUNTED.
⊙	30 AMP, 250V. 2 POLE, 3 WIRE SINGLE RECEPTACLE. WITH STAINLESS STEEL FACEPLATE, WALL MOUNTED +18".
⊙	JUNCTION BOX.
F	FUSED DISCONNECT SWITCH. COMPLETE WITH REQUIRED NUMBER OF "DUAL ELEMENT TIME DELAY" FUSES MANUFACTURER RECOMMENDATION AND SIZED PER EQUIPMENT NAMEPLATE RATING.
▬	BRANCH CIRCUIT PANEL, MOUNTING AS SHOWN ON SCHEDULES.
Sm	MOTOR RATED TOGGLE SWITCH.
M	MOTOR.

SYMBOL	DESCRIPTION
——IC——	INTERCOM CONDUIT, 3/4" MINIMUM SIZED AS REQUIRED BY MANUFACTURER'S WIRING DIAGRAMS (SEE INTERCOMMUNICATION SECTION OF THE SPECIFICATIONS).
——T1——	TELEPHONE CONDUIT RUN, 3/4" C. W/ (1) 4PAIR CAT 5E, LEVEL 5E CABLES MINIMUM, UNLESS OTHERWISE NOTED.
——T2——	TELEPHONE CONDUIT RUN, 1" C. W/ (2) 4PAIR CAT 5E, LEVEL 5E CABLES MINIMUM, UNLESS OTHERWISE NOTED.
——D2——	DATA NETWORK SYSTEM CONDUIT. (2) 4PAIR CAT 6, LEVEL 6 CABLES ROUTED IN 1" CONDUIT, UNLESS OTHERWISE NOTED.
——D4——	DATA NETWORK SYSTEM CONDUIT. (4) 4PAIR CAT 6, LEVEL 6 CABLES ROUTED IN 1" CONDUIT, UNLESS OTHERWISE NOTED.
Ⓢ	SPEAKER WITH BAFFLE AND BACKBOX RECESSED. CEILING MOUNTED.
Ⓢ	SPEAKER WITH BAFFLE AND BACKBOX, WALL MOUNTED AT +7'–2".
◀	TELEPHONE SYSTEM VOICE OUTLET +18" AFF FOR A DESK MOUNTED STAFF PHONE.
▽	TELEPHONE OUTLET FLUSH FLOOR, MOUNTED IN FLOOR BOX, COMPLETE WITH GASKETS, CARPET FLANGES AND BRASS OUTLET COVER PLATE
▽	COMPUTER/DATA OUTLET, PROVIDE 4S DEEP BOX SINGLE GANG RING, WITH (2) RJ–45 JACK, MOUNT AT +18" A.F.F.
▽2	COMPUTER/DATA OUTLET, PROVIDE 4S DEEP BOX SINGLE GANG RING, WITH (4) RJ–45 JACK, MOUNT AT +18" A.F.F.
▽	COMPUTER/DATA OUTLET FLUSH FLOOR, MOUNTED IN FLOOR BOX, COMPLETE WITH GASKETS, CARPET FLANGES AND BRASS OUTLET COVER PLATE.
TV	CABLE T.V. OUTLET AND CONVENIENCE DUPLEX RECEPTACLE MOUNTED IN BARRIERED OVERSIZED BOX, SEE DETAIL. MOUNT AT +6'–8", U.O.N.
◷	CLOCK SYSTEM, REFER TO SPECIFICATIONS.
▬▬	TERMINAL BACKBOARD, 8'–0" HIGH x 3/4" FIRE TREATED PLYWOOD, LENGTH AS INDICATED.
IDF	INTERMEDIATE DISTRIBUTION FRAME DESIGNATION (DATA NETWORK). PROVIDE 8' HIGH x 3/4" BACKBOARD, RACK AND SYSTEM COMPONENTS PER SPECS.
MDF	MAIN DISTRIBUTION FRAME DESIGNATION (DATA NETWORK). PROVIDE 8' HIGH x 3/4" BACKBOARD, RACK AND SYSTEM COMPONENTS PER SPECS.
FACP	FIRE ALARM CONTROL PANEL DESIGNATION.
FAA	FIRE ALARM ANNUNICATOR PANEL DESIGNATION.
FATC	FIRE ALARM TERMINAL CABINET & REMOTE POWER SUPPLY DESIGNATION.
CTC	COMMUNICATION TERMINAL CABINET DESIGNATION
TTB	TELEPHONE TERMINAL BACKBOARD DESIGNATION.
MTTB	MAIN TELEPHONE TERMINAL BACKBOARD DESIGNATION.
○	REFERNCE NOTE DESGINATION.
⬭	PANEL DESIGNATION.
(N)	NEW EQUIPMENT.
V.I.	VERIFY EXACT LOCATION IN FIELD.
U.O.N	UNLESS OTHERWISE NOTED.
WP	HEAVY–DUTY WEATHERPROOF ENCLOSURE.
WR	WEATHER RESISTANT RECEPTACLE.

APPLICABLE CODES

1. 2022 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2. 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2021 INTERNATIONAL BUILDING CODE VOLUMES 1–2 AND 2022 CALIFORNIA AMENDMENTS)
3. 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2020 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
4. 2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R. (2021 UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
5. 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5 TITLE 24 C.C.R. (2021 UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS)
6. 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
7. 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
8. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
9. 2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
10. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

GENERAL NOTES

1. LIGHT FIXTURE SUPPORTS:

   (A) ALL RECESSED FIXTURES LOCATED IN DRY WALL OR PLASTER CEILINGS SHALL HAVE 1 1/2" CARRIER CHANNEL ON EACH SIDE OF THE FIXTURE. THIS CARRIER CHANNEL SHALL SET ON TOP OF AND BE WIRED TO TWO PARALLEL MAIN CHANNELS OF THE CEILING SUSPENSION SYSTEM. THE FIXTURES SHALL BE MECHANICALLY ATTACHED TO THE CARRIER CHANNELS USING (2) 3/8" BOLTS ON EACH SIDE OF THE 4' OF FIXTURE LENGTH.

   (B) ALL RECESSED LIGHT FIXTURES LOCATED IN A SUSPENDED ACOUSTICAL CEILING SHALL BE SUPPORTED DIRECTLY FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE WITH A MINIMUM OF TWO 12 GAGE WIRES, LEVELING AND POSITIONING OF FIXTURE MAY BE PROVIDED BY THE CEILING GRID. FIXTURE SUPPORT WIRES MAY BE SLIGHTLY LOOSE TO ALLOW FIXTURE TO SEAT IN GRID SYSTEM.

   (C) SURFACE MOUNTED FIXTURES IN DRYWALL OR PLASTER CEILINGS SHALL BE MOUNTED WITH (2) 3/8" BOLTS AND RODS (PER 4' OF FIXTURE LENGTH) UP THROUGH CEILING AND BOLTED TO 1 1/2" CHANNELS 1 TO FIXTURE. ATTACH CHANNELS TO MAIN CHANNELS OF CEILING SYSTEM. FIXTURES IN SUSPENDED ACOUSTICAL CEILINGS SHALL BE MOUNTED TO SAME EXCEPT THAT EACH CHANNEL SHALL BE SUPPORTED WITH ONE 12 GAGE WIRE TO THE STRUCTURE ABOVE.
2. THE CONTRACTOR SHALL SECURE AND PAY FOR PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY THE LOCAL GOVERNMENT AGENCIES.
3. ALL OUTLETS LOCATION SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION.
4. THIS CONTRACTOR SHALL SUPPLY POWER TO AND MAKE CONNECTION TO ALL MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS SHOWN ON THE MECHANICAL AND PLUMBING DRAWINGS, INCLUDING ALL FRACTIONAL HORSEPOWER MOTORS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE DRAWINGS OF THE MECHANICAL AND PLUMBING DRAWINGS FOR DUCTS, LINES AND EQUIPMENT.
5. SEE SINGLE LINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZES, PANEL, TRANSFORMERS, MOTOR CONTROL CENTERS, MECHANICAL EQUIPMENT, ETC. HOMERUNS TO PANELS MAY NOT BE SHOWN ON PLANS BUT IS PART OF THE CONTRACT.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILINGS. WHERE FIXTURES ARE RECESSED IN PLASTER CEILINGS THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.
7. EXACT LOCATION OF ALL CEILING MOUNTED LIGHTING FIXTURES SHALL BE AS INDICATED ON ARCHITECTURAL REFLECTED CEILING PLANS.
8. UNLESS OTHERWISE NOTED MOUNTING HEIGHTS INDICATED ON ELECTRICAL OUTLETS ARE FROM FINISHED FLOOR TO CENTER OF OUTLETS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT–OUTS IN THE TILE OR COUNTER SPLASHES WHERE RECEPTACLES, OUTLETS, ETC., OCCUR.
10. ALL RECESSED LIGHTING FIXTURES, SPEAKERS, ETC. MOUNTED IN FIRE RATED CEILINGS SHALL BE ENCLOSED WITH AN APPROVED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING.
11. ALL SURFACE MOUNTED LIGHTING FIXTURES SHALL BE APPROVED FOR DIRECT MOUNTING ON LOW DENSITY COMBUSTIBLE CEILINGS.
12. THE NUMERAL(S) SHOWN AT THE TOP LIGHT FIXTURE IDENTIFICATION SYMBOL WHICH INDICATES NUMBER OF LIGHT FIXTURES REQUIRED SHALL NOT BE USED BY THE CONTRACTOR FOR HIS QUANTITY TAKEOFF AT BIDDING OR FOR DETERMINATION OF HOW MANY LIGHT FIXTURES WILL BE INSTALLED. THE CONTRACTOR SHALL INSTALL A LIGHT FIXTURE WHEREVER A FIXTURE OUTLET IS SHOWN ON DRAWINGS.
13. ALL PLASTIC LENSES OR DIFFUSERS FOR LIGHTING FIXTURES SHALL BE 100% VIRGIN ACRYLIC.
14. ATTENTION IS CALLED TO THE FACT THAT THE CEILING SYSTEMS FOR THE MOST PART ARE CONSIDERED TO BE INACCESSIBLE. THEREFORE, THE CONTRACTOR MUST STRATEGICALLY LOCATE BOXES, ETC., WHICH MUST BE CONSIDERED READILY ACCESSIBLE.
15. NO CONDUIT SHALL BE RUN HORIZONTALLY IN CONCRETE FLOOR SLABS.
16. ALL WIRING AND ELECTRICAL EQUIPMENT INSTALLED FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE IN ACCORDANCE WITH THESE DRAWINGS AND THE WIRING DIAGRAMS ON THE MECHANICAL AND PLUMBING DRAWINGS.
17. ALL FINAL CONNECTION TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE ELECTRICAL CONTRACTOR.
18. USE OF POWDER DRIVEN CONCRETE FASTENERS:

    USE OF POWER DRIVEN CONCRETE FASTENERS FOR TENSION LOADS IS LIMITED TO SUPPORT OF MINOR LOADS LIKE ACOUSTICAL CEILINGS, DUCT WORK, CONDUIT.

    ALLOWABLE LOADS – IN GENERAL, LOADS SHOULD BE LIMITED TO LESS THAN 100 POUNDS. HOWEVER, GREATER LOADS MAY BE PERMITTED FOR SPECIAL CASES WHEN APPROVED BY THE CHECKING SUPERVISOR FIELD ENGINEER.

    TESTING – THE OPERATOR, TOOL AND FASTENER SHALL BE PREQUALIFIED BY THE PROJECT INSPECTOR. HE SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL–OUT" LOAD WHICH IS NOT LESS THAN TWICE THE DESIGN LOAD OR 200 POUNDS, WHICHEVER IS GREATER, SHALL BE APPLIED TO THE PIN IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PIN. THEREAFTER, RANDOM TEST UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE TESTED. SHOULD FAILURE OCCUR ON ANY PIN TESTED, ALL INSTALLATION MUST BE TESTED AND UNFAIR PINS REPLACED.

    THESE REQUIREMENTS ARE TO BE NOTED ON THE PLANS, OR IN THE SPECIFICATIONS.
19. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND SERVICES REQUIRED FOR THIS COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS AS INDICATED AND SPECIFIED. ALL WORK SHALL BE NEW UNLESS NOTED OR SHOWN OTHERWISE.
20. CONTRACTOR SHALL VISIT THE SITE INCLUDING SPECIFICALLY ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THESE EXISTING CONDITIONS AND BY SUBMITTING A BID ACCEPTS CONDITIONS UNDER WHICH HE WILL BE REQUIRED TO PERFORM HIS WORK.
21. ALL ELECTRICAL EQUIPMENT MATERIAL AND DETAILS OF INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, OF THE STATE OF CALIFORNIA TITLE 24, BASIC ELECTRICAL REGULATIONS OF THE STATE FIRE MARSHALL AND OTHER APPLICABLE CODES. NOTHING IN THE PLANS OR THESE SPECIFICATIONS SHALL BE CONSTRUED AS PERMITTING WORK NOT CONFORMING TO THE MOST STRINGENT OF THE APPLICABLE CODES.
22. THE BIDDER SHALL VISIT THE SITE AND MAKE A SURVEY OF EXISTING CONDITIONS WHICH MAY AFFECT OR BE AFFECTED BY THE WORK UNDER THIS SECTION. REFERENCE MADE IN THE SPECIFICATIONS OR ON THE DRAWINGS TO EXISTING WORK OR CORRECTNESS OF WAYS AND MEANS OF PERFORMING SHALL BE SUBJECT TO VERIFICATIONS BY THE CONTRACTOR IN HIS SURVEY AND ON THE PROGRESS OF THE WORK.
23. WIRE SHALL BE COPPER TYPE THWN. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS NOTED OTHERWISE. WIRES SMALLER THAN #6 AWG SHALL BE SOLID AND #6 AWG AND LARGE SHALL BE STRANDED.
24. SPLICES IN #10 AWG AND SMALLER CONDUCTORS SHALL BE MADE WITH CONICAL SHAPED SPRING STEEL CONNECTORS PLATED FOR CORROSION PROTECTION. CONNECTORS MAY HAVE AN INSULATING, SEMI–RIGID OUTER SHELL. TWIST ON CONNECTORS OF PHENOLIC COMPOUND OR CRIMP–TYPE CONNECTIONS SHALL NOT BE USED.
25. WHEREVER CONDUCTORS ARE SPLICED OR TERMINATED IN A JUNCTION OR PULLBOX THEY SHALL BE MARKED WITH THEIR CIRCUIT NUMBER USING "BRADY" ADHESIVE MARKERS.
26. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT) AND RIGID STEEL CONDUIT INCLUDING COUPLING, CONNECTORS AND OTHER FITTINGS SHALL BE GALVANIZED OR SHERARDIZED. FITTINGS FOR EMT SHALL BE GLAND RING, WATER TIGHT COMPRESSION TYPE. UNLESS NOTES OTHERWISE.
27. FLEXIBLE STEEL CONDUIT SHALL BE GALVANIZED WITH FLEXIBLE OR CADMIUM–PLATED CONNECTORS OF THE TWIST–IN TYPE. FLEXIBLE CONDUIT SHALL ONLY BE USED AS APPROVED BY THE ENGINEER.
28. ALL EMPTY CONDUITS SHALL HAVE A 1/8" DIAMETER NYLON PULL CORD UNLESS OTHERWISE SPECIFIED.
29. ALL CONDUITS RUN EXPOSED SHALL BE INSTALLED PARALLEL OR AT RIGHT ANGLES TO BUILDING CONSTRUCTION.
30. BOXES SHALL BE GALVANIZED OR SHERARDIZED ONE PIECE PRESSED STEEL KNOCKOUT TYPE. MINIMUM SIZE BOX SHALL BE 4" BY 1 1/2" DEEP UNLESS OTHERWISE SPECIFIED OR INDICATED. BOXES SHALL HAVE PLASTER RINGS AS REQUIRED.
31. WIRING INSTALLED CONCEALED ABOVE GROUND IN DRY PLACES NOT IN CONCRETE WHERE NOT SUBJECT TO MECHANICAL DAMAGE SHALL BE IN EMT OR RIGID STEEL CONDUIT.
32. IN PANELS, PULLBOXES, OUTLET BOXES, GUTTERS, ETC., CONDUCTOR SHALL BE TIED WITH PLASTIC TIES, NEATLY FANNED OUT AND TAGGED WITH ADHESIVE MARKERS WHICH ARE CLEARLY MARKED WITH CIRCUIT NUMBERS, ALL IN AN APPROVED WORKMANLIKE MANNER.
33. THE CONTRACTOR SHALL NOT DISCONNECT OR TUN OFF ANY SERVICES UNTIL SUCH ACTION IS APPROVED BY THE OWNER. ALL OUTAGES SHALL BE SCHEDULED WITH THE OWNER MAINTENANCE SUPERVISOR AT LEAST FIVE (5) WORKING DAY PRIOR TO THE OUTAGE.
34. EXACT ROUTING OF ALL CONDUIT WITHIN EXISTING BUILDING SHALL BE DETERMINED BY THE CONTRACTOR. ANY COST REQUIRED TO ROUTE CONDUIT DIFFERENT THAN IS SHOWN ON THESE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR.
35. THE CONTRACTOR SHALL SECURE AND PAY FOR PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY THE LOCAL GOVERNMENT AND STATE AGENCIES.
36. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, CUTTING, PATCHING AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS MADE SHALL BE SEALED TO MEET THE RATED INTEGRITY OF THE PARTICULAR WALL, FLOOR OR CEILING.
37. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND/OR OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE DIRECTED BY THE STRUCTURAL ENGINEER.
38. ALL ELECTRICAL EQUIPMENT SHALL BE EMBRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE OF 20% OF ITS OPERATING WEIGHT ACTING IN ANY DIRECTION. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ELECTRICAL ENGINEER.
39. FINAL INSPECTION AND ACCEPTANCE: AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, THE DSA PROJECT INSPECTOR WILL INSPECT THE WORK. CONTRACTOR SHALL PROVIDE COMPETENT PERSONAL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
40. SHOP DRAWINGS SHALL BE SUBMITTED WITHIN TEN (10) DAYS AFTER AWARD OF THE CONTRACT. SUBMIT SIX (6) COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT PROPOSED FOR THE JOB. INCLUDE JOB DESCRIPTION ARCHITECT, AND ENGINEER IDENTIFICATION; ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, MANUFACTURER'S BROCHURES, ETC.
41. THE CONTRACTOR SHALL FURNISH ONE (1) YEAR WRITTEN GUARANTEE ON MATERIALS AND WORKMANSHIP, UNLESS MORE RESTRICTIVE WARRANTIES ARE NOTED IN SPECIFIED SECTIONS, FROM DATE OF ACCEPTANCE.
42. THE CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF RECORD DRAWINGS AND AFTER COMPLETION OF HIS WORK TURN THEM OVER TO THE ENGINEER/OWNER.
43. FINAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT SHALL BE MADE BY THIS CONTRACTOR.
44. ALL PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS, AND FLOORS SHALL BE SLEEVED WITH A NON–COMBUSTABLE METAL SLEEVE. ALL SUCH PENETRATIONS SHALL BE FIRE STOPPED WITH HILTI FIRESTOP SEALANT CS240 WITH A MINIMUM 1/2" DEPTH FOR A 2 HOUR FIRE BARRIER RATING AND 1" DEPTH FOR A FIRE RATING OF 3 HOURS. THE FIRE STOP MATERIAL SHALL MEET ASTM E–814 AND UL 1479.
45. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE SHUT–DOWN SCHEDULE AND TIME REQUIRED PRIOR TO DEMOLITION AND INSTALLATION OF NEW CONDUIT, WIRE, PANEL BOARDS FROM THE EXISTING SYSTEM. THE SHUTDOWN SHALL BE SCHEDULED IN SUCH A MANNER TO MINIMIZE INTERRUPTION OF REGULAR ACTIVITIES. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL PREMIUM TIME REQUIRED FOR THE NEW CONNECTIONS. (NO EXCEPTIONS WILL TAKEN DURING NORMAL BUSINESS HOURS).
46. ALL ELECTRICAL EQUIPMENT IS REQUIRED TO BE APPROVED BY AUTHORITY HAVING JURISDICTION PER NEC 110.2.
47. CEC 408.4(A) REQUIRES THAT ALL CIRCUIT DESCRIPTIONS DISTINGUISH EACH CIRCUIT FROM ALL OTHERS: (A) CIRCUIT DIRECTORY OR CIRCUIT IDENTIFICATION. EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. THE IDENTIFICATION SHALL INCLUDE AN APPROVED DEGREE OF DETAIL THAT ALLOWS EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS.
48. ALL ELECTRICAL EQUIPMENTS SHALL BE LABELED, LISTED OR CERTIFIED BY A NATIONAL RECOGNIZED TESTING LABORATORY ACCREDITED BY THE UNITED STATES OCCUPATIONAL SAFETY HEALTH ADMINISTRATION.
49. ALL ELECTRICAL WORK SHALL BE DESIGNED PER 2022 LOS ANGELES COUNTY ELECTRICAL CODE, 2022 CALIFORNIA ELECTRICAL CODE, 2020 NATIONAL ELECTRICAL CODE, AND 2022 BUILDING ENERGY EFFICIENCY STANDARDS.
50. THE MAXIMUM COMBINE VOLTAGE DROP ON BOTH INSTALLED FEEDER CONDUCTORS AND BRANCH CIRCUIT CONDUCTORS TO THE FARTHEST CONNECTED LOAD OR OUTLET SHALL NOT EXCEED 5 PERCENT.

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REGISTERED PROFESSIONAL ENGINEER IVAN YOWANTO No. 17238 Exp. 06/30/2026 ELECTRICAL STATE OF CALIFORNIA

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PROJECT

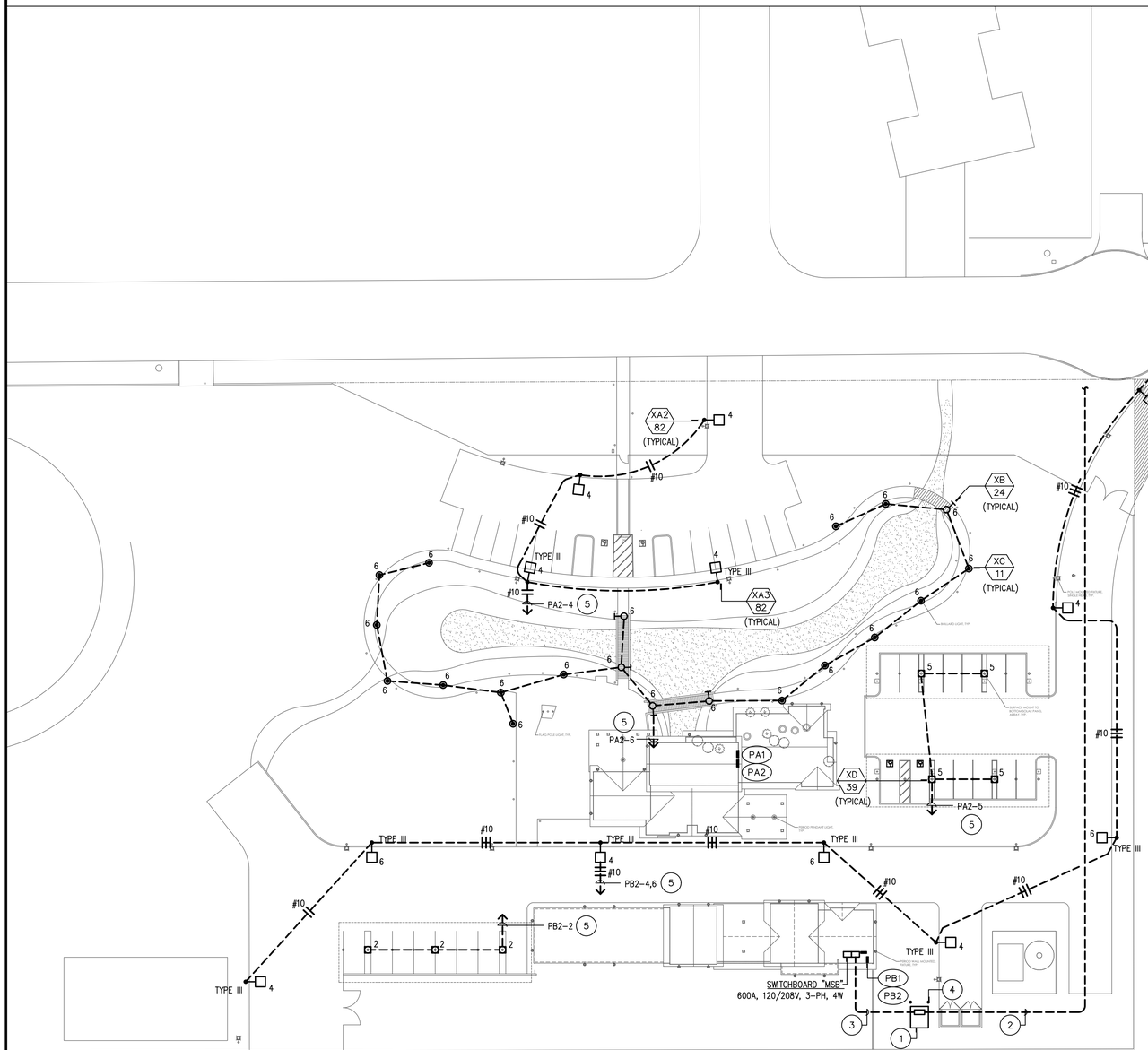
SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS	
1	-
2	-
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4	-

DATE:	04/21/2026
SCALE:	AS NOTED
JOB NO:	25-2192
DWN BY:	SC
CHK BY:	IY

SHEET NO.

E0.1



1

ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"

NOTES

1. REFERENCE SINGLE LINE DIAGRAM E4.1, FOR POWER CONDUIT AND CONDUCTORS SIZES AND QUANTITIES.
2. ALL CONDUIT AND CONDUCTORS INDICATED ON THE SINGLE LINE DIAGRAM SHALL BE A PART OF THIS CONTRACT. CONTRACTOR SHALL ROUTE CONDUIT, AS REQUIRED, TO MEET THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REQUIRED CLEARANCES BETWEEN UNDERGROUND ELECTRICAL CONDUITS AND FOOTINGS. CONDUIT STUB-UPS SHALL NOT BE INSTALLED IN FOOTINGS, EXACT METHOD FOR STUBBING-UP CONDUITS AT FOOTING LOCATIONS SHALL BE COORDINATED IN THE FIELD WITH THE GENERAL CONTRACTOR AND THE ARCHITECT.
4. REFERENCE GENERAL NOTES, SHEET E0.1, FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATIONS OF EXTERIOR AREA LIGHT STANDARDS WITH ARCHITECT AND ELECTRICAL ENGINEER IN FIELD PRIOR TO INSTALLATION.
6. ALL UNDERGROUND CONDUIT RUNS SHALL BE ENCASED IN A 3" CONCRETE ENVELOPE. CONCRETE SHALL BE TINTED RED. TYPICAL.
7. ALL UNDERGROUND CONDUITS SHALL CONTAIN GROUNDING CONDUCTORS.
8. SPLICING OF CONDUCTORS IN PULL BOXES IS NOT ALLOWED, CONDUCTORS SHALL BE TERMINATED ON APPROVED BLOCKS IN TERMINAL CABINETS AND IDENTIFIED.
9. LOCATION OF UNDERGROUND PULL BOXES AND CONDUIT ROUTING INDICATED ON THESE PLANS IS DIAGRAMMATIC. ACTUAL PULL BOX LOCATION AND ROUTING OF UDNERGROUND CONDUITS SHALL BE COORDINATED IN THE FIELD TO AVOID INTERFERENCE WITH OTHER UTILITIES AND TRADES.

REFERENCE NOTES

1. INSTALL 8'x10' CONCRETE PAD WITH SLAB BOX FOR UTILITY COMPANY TRANSFORMER. VERIFY EXACT REQUIREMENTS WITH UTILITY COMPANY. TRANSFORMER SHALL BE PROVIDED BY UTILITY COMPANY.
2. (1) 5" CONDUIT (PRIMARY CABLES) INSTALLED BY POWER COMPANY. VERIFY EXACT ROUTING AND POINT OF CONNECTION WITH UTILITY COMPANY.
3. (2) 4" CONDUITS (SECONDARY CABLES) INSTALLED BY CONTRACTOR PER POWER COMPANY REQUIREMENTS.
4. INSTALL CONCRETE FILLED PROTECTIVE BOLLARD. VERIFY EXACT LOCATION AND QUANTITY WITH UTILITY COMPANY.
5. INSTALL #10 WIRE FOR ALL EXTERIOR LIGHTING UNLESS OTHERWISE NOTED AND ROUTE ALL EXTERIOR LIGHTING CIRCUITS THROUGH LIGHTING CONTROL PANEL. TYPICAL.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER
XA2 82	POLE MOUNTED SINGLE HEAD LED LIGHT FIXTURE WITH 20 FT. SQUARE STEEL POLE, OCC SENSOR AND DIMMING DRIVER. (TYPE II).	COOPER LIGHTING #GLAN-SA2B-840-U-T2-BK-SPB4 #SSS-4-A-20-S-Y-N-1
XA3 82	POLE MOUNT SINGLE HEAD LED LIGHT FIXTURE WITH 20 FT. SQUARE STEEL POLE, OCC SENSOR AND DIMMING DRIVER. (TYPE III).	COOPER LIGHTING #GLAN-SA2B-840-U-T3-BK-SPB4 #SSS-4-A-20-S-Y-N-1
XB 24	POST MOUNT LED LIGHT FIXTURE WITH 12 FT. ROUND STEEL POLE, OCC SENSOR AND DIMMING DRIVER.. (TYPE III).	COOPER LIGHTING #ARB-B1-LED-D1-T3-BK-MS/DIM-L20 #RSS-4-A-12-S-Y-9
XC 11	LED PATHWAY BOLLARD WITH ASYMMETRIC DISTRIBUTION.	COOPER LIGHTING #ABB-B1-7040-LED-36-D1-A-BK
XD 39	UNDER CANOPY LED LIGHT FIXTURE WITH OCC SENSOR AND DIMMING DRIVER.	COOPER LIGHTING #TT-D2-740-U-WQ-BK-MS/DIM-L20

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

1	-
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4	-

DATE:	04/21/2026
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CHK BY:	IY

SHEET NO.

E1.1

NOTES

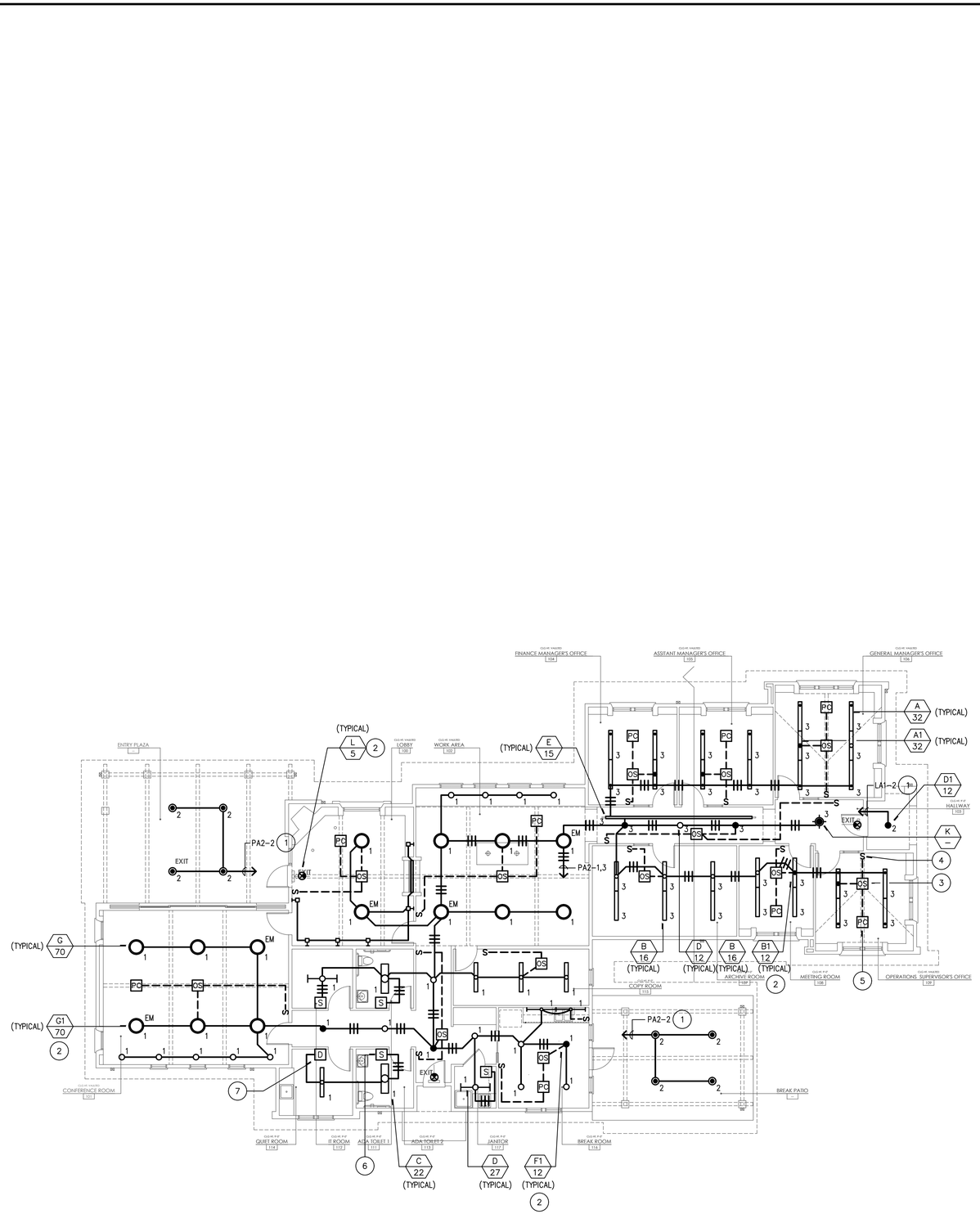
1. REFER TO GENERAL NOTES IN SHEET E-1 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO LIGHTING FIXTURE SCHEDULE IN THIS SHEET FOR TYPE OF FIXTURE TO BE PROVIDED AND INSTALLED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LIGHT SENSOR MANUFACTURER REPRESENTATIVE PRIOR TO ROUGH-IN AND COORDINATE THE EXACT LOCATION OF THE LIGHT SENSORS TO PROVIDE PROPER AREA COVERAGE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CEILING MOUNTED DEVICES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND MAKING REQUIRED ADJUSTMENTS TO AVOID INTERFERENCE WITH THE LIGHTING FIXTURES AND CEILING GRIDS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL EXHAUST FANS AND PROVIDING A 20A, SPST, COIL RELAY CONTROLLED BY LIGHT SWITCH.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POWER PACK FOR OCCUPANCY SENSOR IF REQUIRED FOR COMPLETE AND OPERABLE SYSTEM.
7. PHOTO CELL SENSOR FOR DAYLIGHT HARVESTING SHALL BE MOUNTED 2-3 TIMES THE HEIGHT OF THE WINDOW. REFER TO MANUFACTURER RECOMMENDATION FOR THE REQUIREMENTS.
8. PROVIDE SLOPE CEILING ADAPTER AND ALL NECESSARY HARDWARE AS REQUIRED. TYPICAL FOR FIXTURES MOUNTED ON SLOPE CEILING.

REFERENCE NOTES

1. ROUTE ALL EXTERIOR LIGHTING CIRCUITS THROUGH LIGHTING CONTROL WITH TIME CLOCK BY NX CONTROL #NXRCFX2-2RD-UNV. TYPICAL.
2. PROVIDE CONSTANT HOT WIRE ON ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGNS. TYPICAL.
3. INSTALL CEILING MOUNTED DUAL TECHNOLOGY SENSOR BY NX CONTROL #NXSMDT-OMNI SERIES COMPLETE WITH ROOM CONTROLLER #NXRCFX2-2RD-UNV. TYPICAL.
4. INSTALL WALL SWITCH BY NX CONTROL #NXSW2-4-WH TO ROOM CONTROLLER COMPLETE WITH CABLES PER MANUFACTURER'S REQUIREMENTS. COORDINATE WITH OWNER FOR PROGRAMMING. TYPICAL.
5. INSTALL PHOTO CELL BY NX CONTROL #NXSMP2-OMNI AND CONNECT TO ROOM CONTROLLER COMPLETE WITH CABLES PER MANUFACTURER'S REQUIREMENTS. COORDINATE WITH MANUFACTURER FOR RECOMMENDED PLACEMENT AND ADJUSTMENT. TYPICAL.
6. INSTALL WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR BY NX CONTROL #NXSMDT-LH1-WH. VERIFY EXACT LCATION IN FIELD. TYPICAL.
7. INSTALL WALL MOUNTED DIMMER BY NX CONTROL #RSD01080UNV. VERIFY EXACT LCATION IN FIELD. TYPICAL.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER
A 32	4' SECTION FOR CONTINUOUS PENDANT DIRECT/INDIRECT LINEAR LED FIXTURE WITH FLUSH LENS AND 0-10V DIMMING DRIVER.	PRUDENTIAL LIGHTING #BPRO2-LIN-FLSH-LED4-LO4-TMW-BTW-SCW-ADC-SC-UNV-CA48"-X3-DM01 OR APPROVED EQUAL
A1 32	4' SECTION FOR CONTINUOUS PENDANT DIRECT/INDIRECT LINEAR LED FIXTURE WITH FLUSH LENS AND 0-10V DIMMING DRIVER. (WITH 90-MINUTE EMERGENCY BATTERY).	PRUDENTIAL LIGHTING #BPRO2-LIN-FLSH-LED4-LO4-TMW-BTW-SCW-ADC-SC-UNV-CA48"-X3-DM01-EMH OR APPROVED EQUAL
B 16	4' SECTION FOR CONTINUOUS RECESSED LINEAR LED FIXTURE WITH SATIN LENS, 0-10V DIMMING DRIVER AND ALL NECESSARY MOUNTING HARDWARE.	PRUDENTIAL #BPRO2-REC-FLSH-LED4-LO-04-TMW-BTW-SC-UNV-X2-DM01 OR APPROVED EQUAL
B1 16	4' SECTION FOR CONTINUOUS RECESSED LINEAR LED FIXTURE WITH SATIN LENS, 0-10V DIMMING DRIVER AND ALL NECESSARY MOUNTING HARDWARE. (WITH 90-MINUTE EMERGENCY BATTERY).	PRUDENTIAL #BPRO2-REC-FLSH-LED4-MO-04-TMW-BTW-SC-UNV-X2-DM01-EMH OR APPROVED EQUAL
C 22	RECESSED MOUNTED 1'X4' LED LIGHT FIXTURE WITH CENTER ACRYLIC LENS AND 0-10V DIMMING DRIVER.	COLUMBIA #LJT14-40LW-G-FSA12F-ED-U OR APPROVED EQUAL
D 27	4' SURFACE MOUNTED LINEAR LED FIXTURE WITH FROSTED ACRYLIC LENS, 0-10V DIMMING DRIVER AND ALL NECESSARY MOUNTING HARDWARE.	COLUMBIA #MPS4-40-VW-C-W-ED-U OR APPROVED EQUAL
E 15	4' SECTION LED COVE LIGHTING WITH 0-10V REMOTE DIMMING DRIVER AND ALL NECESSARY MOUNTING HARDWARE.	PRUDENTIAL LIGHTING #MIR-PRO-LED4-LO-4-TMW-SC-UNV-DM01 OR APPROVED EQUAL
F 12	4" DIA. LED DOWNLIGHT SEMI SPECULAR REFLECTOR AND 0-10V DIMMING DRIVER.	PRESCOLITE #LTR-4RD-H-SL10L-DM1-LTR-4RD-T-SL40K8MD-SS-B6 OR APPROVED EQUAL
F1 12	4" DIA. LED DOWNLIGHT SEMI SPECULAR REFLECTOR AND 0-10V DIMMING DRIVER. (WITH 90-MINUTE EMERGENCY BATTERY).	PRESCOLITE #LTR-4RD-H-SL10L-DM1-LTR-4RD-T-SL40K8MD-SS-B6-EM OR APPROVED EQUAL
G 70	24" ROUND PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH LENS AND 0-10V DIMMING DRIVER.	PRUDENTIAL LIGHTING #O-20-LED4-SO-FWA-TMW-D9-SC-UNV-CA48"-X3-DM01 OR APPROVED EQUAL
G1 70	24" ROUND PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH LENS AND 0-10V DIMMING DRIVER. (WITH 90-MINUTE EMERGENCY BATTERY).	PRUDENTIAL LIGHTING #O-20-LED4-SO-FWA-TMW-D9-SC-UNV-CA48"-X3-DM01-EMHE OR APPROVED EQUAL
H 75	1'X4' LOW-BAY LED LIGHT FIXTURE WITH OCCUPANCY SENSOR AND 0-10V DIMMING DRIVER.	COLUMBIA #PELA-840-L12-B-ED-U-PM-F3C006-WSPDBT360 OR APPROVED EQUAL
H1 75	1'X4' LOW-BAY LED LIGHT FIXTURE WITH OCCUPANCY SENSOR AND 0-10V DIMMING DRIVER. (WITH 90-MINUTE EMERGENCY BATTERY).	COLUMBIA #PELA-840-L12-B-ED-U-PM-F3C006-WSPDBT360-ELL30 OR APPROVED EQUAL
2J 12	2' UNDER CABINET LED LIGHT FIXTURE WITH 0-10V DIMMING DRIVER AND ALL NECESSARY MOUNTING HARDWARE.	BARTCO #BSS305-2-40-D-L-F-WH OR APPROVED EQUAL
4J 24	4' UNDER CABINET LED LIGHT FIXTURE WITH 0-10V DIMMING DRIVER AND ALL NECESSARY MOUNTING HARDWARE.	BARTCO #BSS305-4-40-D-L-F-WH OR APPROVED EQUAL
L 5	LED EXIT SIGN WITH EMERGENCY LIGHTING, WHITE HOUSING AND GREEN LETTER. (90-MINUTE EMERGENCY BATTERY PACK).	DUAL-LITE #EVE-U-G-W-I OR APPROVED EQUAL OR APPROVED EQUAL



1

LIGHTING FLOOR PLAN

SCALE: 1/8" = 1'-0"

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LANDSCAPE //

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

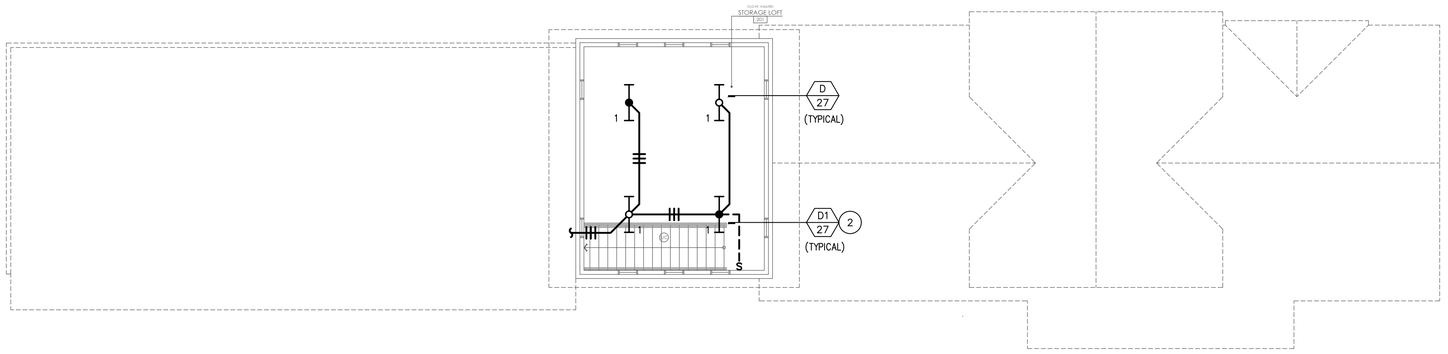
REVISIONS

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DATE:	04/21/2026
SCALE:	AS NOTED
JOB NO:	25-2192
DWN BY:	SC
CHK BY:	IY

SHEET NO.

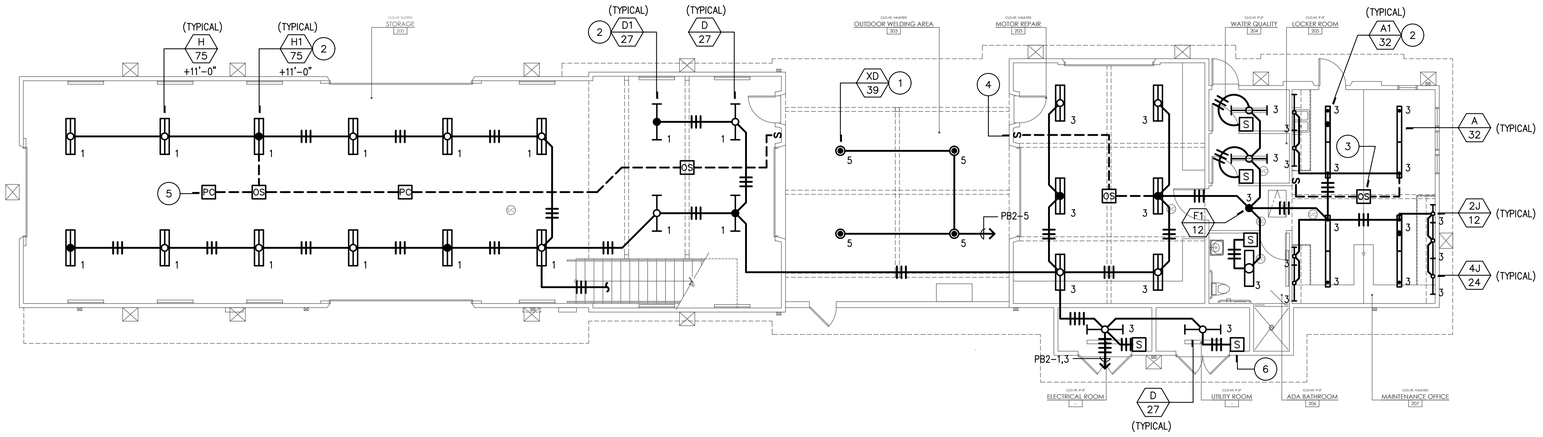
E2.1



LOFT LIGHTING FLOOR PLAN

SCALE: 1/8" = 1'-0"

2



FIRST FLOOR LIGHTING FLOOR PLAN

SCALE: 1/8" = 1'-0"

1

NOTES

1. REFER TO GENERAL NOTES IN SHEET E-0.1 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO LIGHTING FIXTURE SCHEDULE IN SHEET E2.1 FOR TYPE OF FIXTURE TO BE PROVIDED AND INSTALLED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LIGHT SENSOR MANUFACTURER REPRESENTATIVE PRIOR TO ROUGH-IN AND COORDINATE THE EXACT LOCATION OF THE LIGHT SENSORS TO PROVIDE PROPER AREA COVERAGE.
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REFERENCE NOTES

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2. PROVIDE CONSTANT HOT WIRE ON ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGNS. TYPICAL.
3. INSTALL CEILING MOUNTED DUAL TECHNOLOGY SENSOR BY NX CONTROL #NXSMDT-OMNI SERIES COMPLETE WITH ROOM CONTROLLER #NXRCFX2-2RD-UNV. TYPICAL.
4. INSTALL WALL SWITCH BY NX CONTROL #NXSW2-4-WH TO ROOM CONTROLLER COMPLETE WITH CABLES PER MANUFACTURER'S REQUIREMENTS. COORDINATE WITH OWNER FOR PROGRAMMING. TYPICAL.
5. INSTALL PHOTO CELL BY NX CONTROL #NXSMP2-OMNI AND CONNECT TO ROOM CONTROLLER COMPLETE WITH CABLES PER MANUFACTURER'S REQUIREMENTS. COORDINATE WITH MANUFACTURER FOR RECOMMENDED PLACEMENT AND ADJUSTMENT. TYPICAL.
6. INSTALL WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR BY NX CONTROL #NXSMDT-LH1-WH. VERIFY EXACT LCATION IN FIELD. TYPICAL.

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PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

REVISIONS

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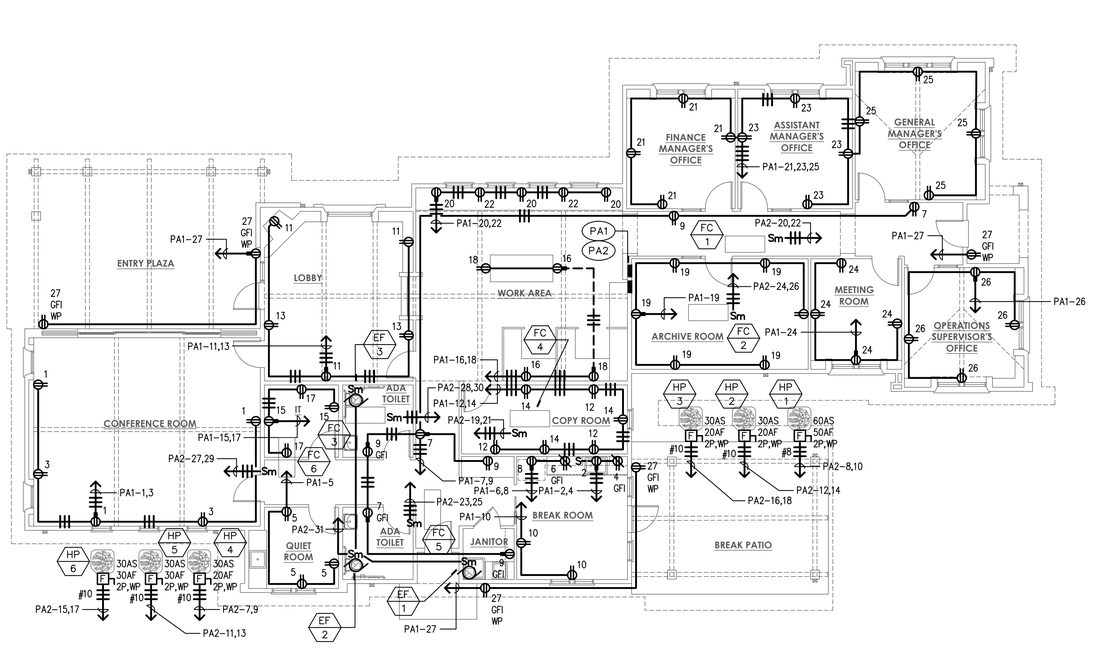
DATE:	04/21/2026
SCALE:	AS NOTED
JOB NO:	25-2192
DWN BY:	SC
CHK BY:	IY

SHEET NO.

E2.2

NOTES

1. REFER TO GENERAL NOTES ON SHEET E0.1 FOR ADDITIONAL REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL EXHAUST FANS AND PROVIDING A 20A, SPST COIL RELAY CONTROLLED BY LIGHT SWITCH.
3. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT EQUIPMENT LOCATIONS AND ELECTTRICAL REQUIREMENTS.
4. EXACT LOCATION OF OUTLETS SHOWN ON THESE DRAWINGS SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN AND SHALL BE LOCATED IN SUCH A MANNER TO AVOID INTERFERENCES WITH OTHER OUTLETS AND CASEWORK.



1

POWER FLOOR PLAN

SCALE: 1/8" = 1'-0"

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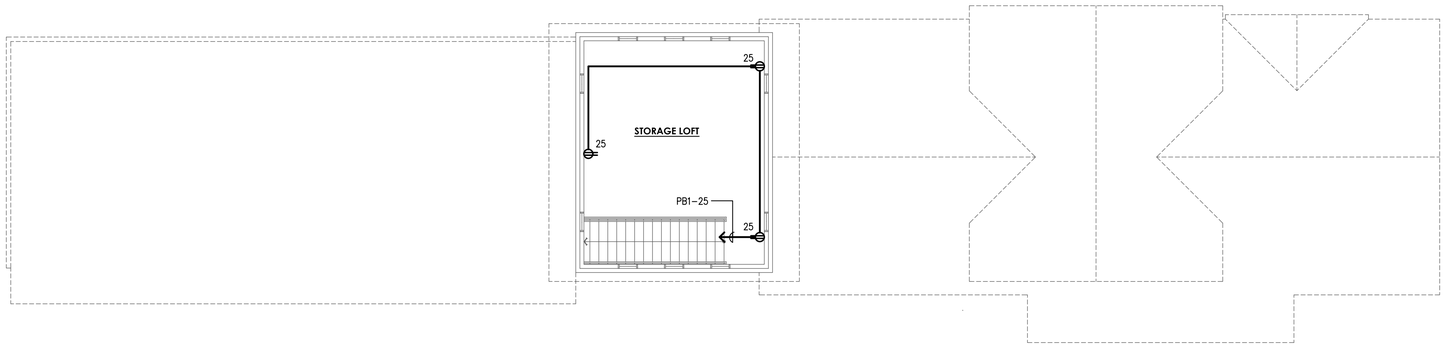
DATE:	04/21/2026
SCALE:	AS NOTED
JOB NO:	25-2192
DWN BY:	SC
CHK BY:	IY

SHEET NO.

E3.1

NOTES

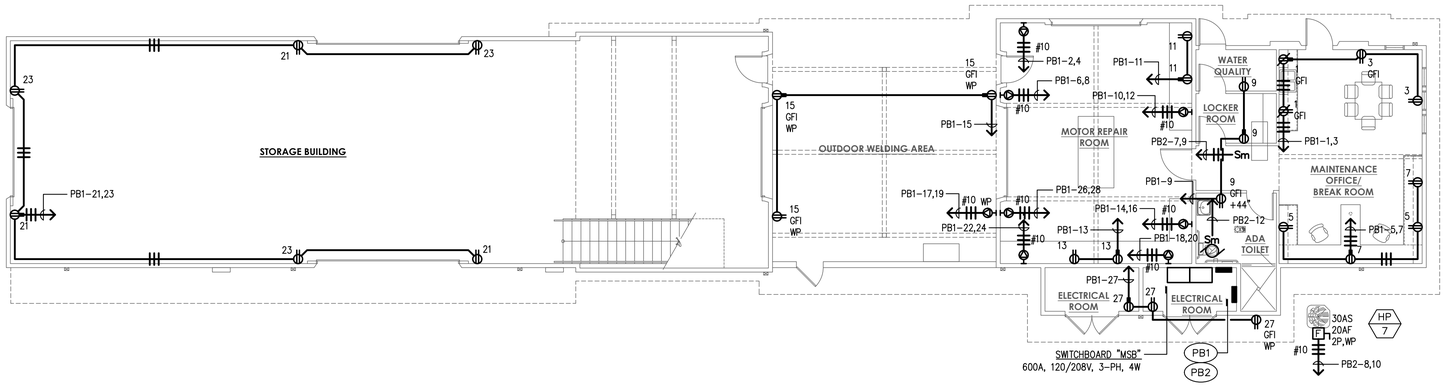
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2

LOFT POWER FLOOR PLAN

SCALE: 1/8" = 1'-0"



1

FIRST FLOOR POWER FLOOR PLAN

SCALE: 1/8" = 1'-0"

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SCALE:	AS NOTED
JOB NO:	25-2192
DWN BY:	SC
CHK BY:	IY

SHEET NO.

E3.2

VOLTAGE 120/208 3ø, 4W.
BUS AMPS 225
MAIN BREAKER ☐ A.F. A.T.
LUGS ONLY ☒

PANEL PB1

LOCATION
TOP FEED ☐ SURFACE MTG. ☐
BOTTOM FEED ☒ FLUSH MTG. ☒
REMARKS

DESCRIPTION	VOLT–AMPS A	B	C	LCL	OUTLETS L	R	M	CB	CKT	BUS A	B	C	CKT	CB	OUTLETS L	R	M	LCL	VOLT–AMPS A	B	C	DESCRIPTION
REC – MAINT. OFFICE/BREAK	1500					2		20/1	1				2	30/2			1		1000			MOTOR REPAIR EQUIP
REC – MAINT. OFFICE/BREAK		360				2		20/1	3				4	–			–			1000		–
REC – MAINT. OFFICE/BREAK			360			2		20/1	5				6	30/2			1				1000	MOTOR REPAIR EQUIP
REC – MAINT. OFFICE/BREAK	360					2		20/1	7				8	–			–		1000			–
REC – CONVENIENCE		540				3		20/1	9				10	30/2			1			1000		MOTOR REPAIR EQUIP
REC – MOTOR REPAIR ROOM			360			2		20/1	11				12	–			–				1000	–
REC – MOTOR REPAIR ROOM	360					2		20/1	13				14	30/2			1		1000			MOTOR REPAIR EQUIP
REC – OUTDOOR WELDING		720				4		20/1	15				16	–			–			1000		–
WELDING MACHINE			1000				1	30/2	17				18	30/2			1				1000	MOTOR REPAIR EQUIP
–	1000						–	–	19				20	–			–		1000			–
REC – STORAGE		540				3		20/1	21				22	30/2			1			1000		MOTOR REPAIR EQUIP
REC – STORAGE			540			3		20/1	23				24	–			–				1000	–
REC – STORAGE LOFT	540					3		20/1	25				26	30/2			1		1000			MOTOR REPAIR EQUIP
REC – ELEC ROOM		360				2		20/1	27				28	–			–			1000		–
									29				30									
									31				32									
									33				34									
									35				36									
									37				38									
									39				40									
									41				42									
SUB TOTALS	3760	2520	2260																5000	5000	4000	SUB TOTALS

CONN. PHASE TOTAL: A 8760 B 7520 C 6260 ; CONN. PANEL TOTAL 22540 VA; MAX. CONN. LINE CURRENT 73 AMPS

(KVA) PANEL TOTAL 22.54 + L.C.L. (.25) 0.00 = 22.54 KVA; BALANCED CURRENT 63 AMPS; DESIGN LOAD ____ KVA

VOLTAGE 120/208 3ø, 4W.
BUS AMPS 125
MAIN BREAKER ☒ 125 A.F. 100 A.T.
LUGS ONLY ☐

PANEL PA1

LOCATION
TOP FEED ☐ SURFACE MTG. ☐
BOTTOM FEED ☒ FLUSH MTG. ☒
REMARKS

DESCRIPTION	VOLT–AMPS A	B	C	LCL	OUTLETS L	R	M	CB	CKT	BUS A	B	C	CKT	CB	OUTLETS L	R	M	LCL	VOLT–AMPS A	B	C	DESCRIPTION
REC – CONFERENCE ROOM	540					3		20/1	1				2	20/1		1			1000			REC – GARBAGE DISPOSAL
REC – CONFERENCE ROOM		540				3		20/1	3				4	20/1		1				1500		REC – BREAK ROOM
REC – QUIET ROOM			540			3		20/1	5				6	20/1		1					1500	REC – BREAK ROOM
REC – CONVENIENCE	540					3		20/1	7				8	20/1		1			1000			REC – REFRIGERATOR
REC – CONVENIENCE		720				4		20/1	9				10	20/1		2				360		REC – BREAK ROOM
REC – LOBBY			540			3		20/1	11				12	20/1		3					540	REC – COPY ROOM
REC – LOBBY	360					2		20/1	13				14	20/1		2			360			REC – COPY ROOM
REC – IT		360				2		20/1	15				16	20/1		2				360		REC – WORK AREA
REC – IT			360			2		20/1	17				18	20/1		2					360	REC – WORK AREA
REC – ARCHIVE ROOM	900					5		20/1	19				20	20/1		3			540			REC – WORK AREA
REC – FINANCE MANAGER'S OFFICE		720				4		20/1	21				22	20/1		2				360		REC – WORK AREA
REC – ASST. MANAGER'S OFFICE			720			4		20/1	23				24	20/1		4					720	REC – MEETING ROOM
REC – GENERAL MGR. OFFICE	720					4		20/1	25				26	20/1		4			720			REC – OP. SUPERVISOR OFFICE
REC – EXTERIOR		540				3		20/1	27				28									
									29				30									
									31				32									
									33				34									
									35				36									
									37				38									
									39				40									
									41				42									
SUB TOTALS	3060	2880	2160																3620	2580	3120	SUB TOTALS

CONN. PHASE TOTAL: A 6680 B 5460 C 5280 ; CONN. PANEL TOTAL 17420 VA; MAX. CONN. LINE CURRENT 56 AMPS

(KVA) PANEL TOTAL 17.42 + L.C.L. (.25) 0.00 = 17.42 KVA; BALANCED CURRENT 48 AMPS; DESIGN LOAD ____ KVA

VOLTAGE 120/208 3ø, 4W.
BUS AMPS 125
MAIN BREAKER ☐ A.F. A.T.
LUGS ONLY ☒

PANEL PB2

LOCATION
TOP FEED ☐ SURFACE MTG. ☐
BOTTOM FEED ☒ FLUSH MTG. ☒
REMARKS

DESCRIPTION	VOLT–AMPS A	B	C	LCL	OUTLETS L	R	M	CB	CKT	BUS A	B	C	CKT	CB	OUTLETS L	R	M	LCL	VOLT–AMPS A	B	C	DESCRIPTION
LIGHTING	1000			•				20/1	1				2	20/1	3			•	120			LTG – COVERED PARKING
LIGHTING		1000		•				20/1	3				4	20/1	5			•		400		LIGHTPOLE
EXTERIOR LIGHTING			500	•				20/1	5				6	20/1	5			•			400	LIGHTPOLE
FC–7	520						1	15/2	7				8	20/2			1	•	1404			HP–7
–		520					–	–	9				10	–			–	•		1404		–
									11				12									
									13				14									
									15				16									
									17				18									
									19				20									
									21				22									
									23				24									
									25				26									
									27				28									
									29				30									
									31				32									
									33				34									
									35				36									
									37				38									
									39				40									
									41				42									
SUB TOTALS	1520	1520	500																1524	1804	400	SUB TOTALS

CONN. PHASE TOTAL: A 3044 B 3324 C 900 ; CONN. PANEL TOTAL 7268 VA; MAX. CONN. LINE CURRENT 28 AMPS

(KVA) PANEL TOTAL 7.27 + L.C.L. (.25) 1.56 = 8.83 KVA; BALANCED CURRENT 24 AMPS; DESIGN LOAD ____ KVA

VOLTAGE 120/208 3ø, 4W.
BUS AMPS 225
MAIN BREAKER ☒ 225 A.F. 225 A.T.
LUGS ONLY ☐

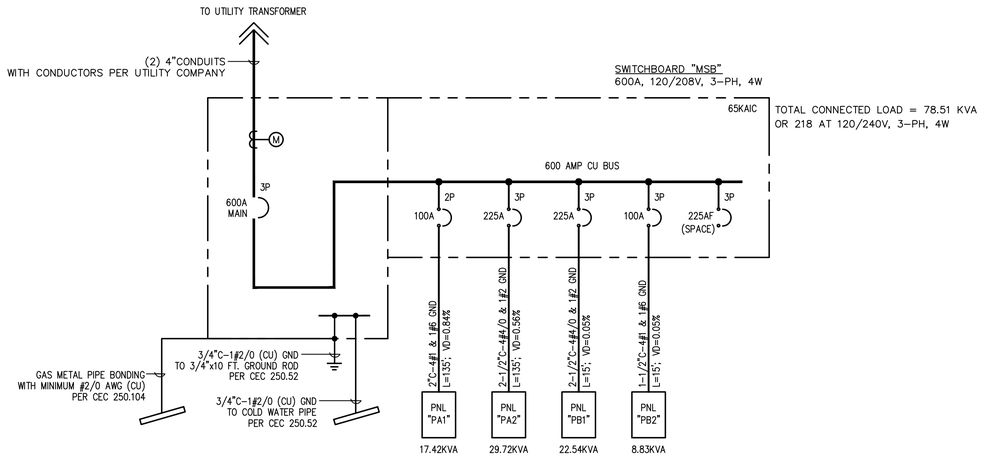
PANEL PA2

LOCATION
TOP FEED ☐ SURFACE MTG. ☐
BOTTOM FEED ☒ FLUSH MTG. ☒
REMARKS

DESCRIPTION	VOLT–AMPS A	B	C	LCL	OUTLETS L	R	M	CB	CKT	BUS A	B	C	CKT	CB	OUTLETS L	R	M	LCL	VOLT–AMPS A	B	C	DESCRIPTION
LIGHTING	1500			•				20/1	1				2	20/1				•	500			EXTERIOR LIGHTING
LIGHTING		1500		•				20/1	3				4	20/1	4			•		320		LIGHTPOLE
LTG – COVERED PARKING			160	•	4			20/1	5				6	20/1	20			•			500	LTG – WALKWAY
HP–4	1404						1	20/2	7				8	50/2			1		1810			HP–1
–		1404					–	–	9				10	–			–			1810		–
HP–5			1300				1	30/2	11				12	20/2			1				1404	HP–2
–	1300						–	–	13				14	–			–		1404			–
HP–6		1300					1	30/2	15				16	20/2			1			1404		HP–3
–			1300				–	–	17				18	–			–				1404	–
FC–4	520						1	15/2	19				20	15/2			1		739			FC–1
–		520					–	–	21				22	–			–			739		–
FC–5			520				1	15/2	23				24	15/2			1				520	FC–2
–	520						–	–	25				26	–			–		520			–
FC–6		520					1	15/2	27				28	15/2			1			520		FC–3
–			520				–	–	29				30	–			–					–
EF–1 – EF–3	720						3	15/1	31				32									
									33				34									
									35				36									
									37				38									
									39				40									
									41				42									
SUB TOTALS	5964	5244	3800																4973	4793	3828	SUB TOTALS

CONN. PHASE TOTAL: A 10937 B 10037 C 7628 ; CONN. PANEL TOTAL 28602 VA; MAX. CONN. LINE CURRENT 91 AMPS

(KVA) PANEL TOTAL 28.60 + L.C.L. (.25) 1.12 = 29.72 KVA; BALANCED CURRENT 83 AMPS; DESIGN LOAD ____ KVA



SINGLE LINE DIAGRAM NOTES

1. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL BE FULLY BUSSED.
2. PROVIDE CONTINUOUS GROUND BUSSING THROUGH ALL DISTRIBUTION BOARDS AND SWITCHBOARD SECTIONS.
3. PROVIDE ALL CABLE TERMINATION'S AT MAIN SERVICE SWITCHBOARD PER UTILITY COMPANY REQUIREMENTS.
4. SERIES RATING OF EQUIPMENT IS NOT ALLOWED.
5. PROVIDE SHORT CIRCUIT OR FAULT CURRENT AND COORDINATION STUDIES. ALL EQUIPMENT AND CIRCUIT BREAKERS AIC RATING SHALL EXCEED THE AVAILABLE FAULT CURRENT.
6. PROVIDE ARC FLASH STUDY AND INSTALL ARC FLASH LABELS ON SWITCHBOARD AND ALL PANEL BOARDS PER CEC 110.16.
7. CONTRACTOR SHALL BOND ALL METAL PIPING SYSTEMS AND EXPOSED STRUCTURAL STEEL PER NEC 250.104.
8. PROVIDE NAMEPLATES FOR ALL MISSING IDENTIFICATIONS, USE SCREW–ON TYPE.
9. PROVIDE AND INSTALL NEW IDENTIFICATION NAMEPLATES ON ALL PANELS AS INDICATED ON PANEL SCHEDULES.
10. REFERENCES PANEL LOCATION SHOWN IN POWER FLOOR PLAN.
11. THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CIRCUIT BREAKER OF THE RATING INDICATED ON THE SINGLE LINE DIAGRAM TO MATCH OR EXCEED UTILITY SHORT CIRCUIT DUTY. THE NEW CIRCUIT BREAKER SHALL BE COMPLETE WITH ALL REQUIRED MOUNTING HARDWARE.
12. GROUND RESISTANCE SHALL NOT EXCEED 25 OHMS.
13. UNDERGROUND CONDUCTORS SHALL BE LISTED FOR UNDERGROUND USE AND WET LOCATION (THHN–2/THWN–2) RATED AT 90°C.
14. LUGS SHALL BE LISTED FOR CU/AL AND 90°C.
15. FEEDER AND PANELBOARD SHALL BE COPPER.

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REGISTERED PROFESSIONAL ENGINEER IHMAN YOWANTO No. 17238 Exp. 06/30/2026 ELECTRICAL STATE OF CALIFORNIA

CONSULTANTS

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(909) 626–6291

PROJECT

SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

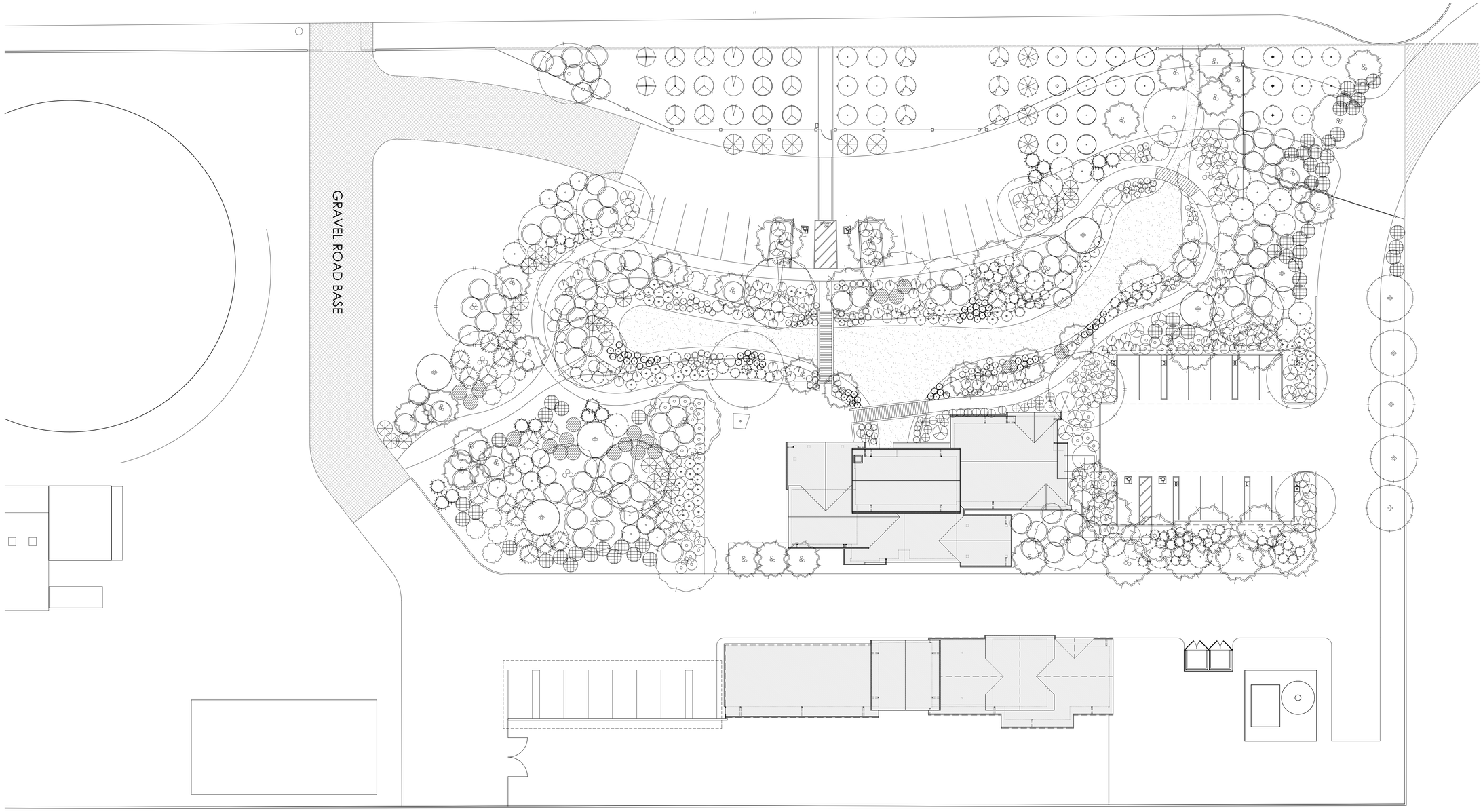
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DATE: 04/21/2026
SCALE: AS NOTED
JOB NO: 25-2192
DWN BY: SC
CHK BY: IY

SHEET NO.

E4.1



1 LANDSCAPE PLANTING PLAN
1/16"=1'-0"

FRUIT TREES

COMMON NAME	WUCOLS	SIZE	FORM	MIN SPREAD	MED HEIGHT	QTY
Fuya Persimmon	med	15 gal	std	16'	16'	5
Minneola Tangelo	med	15 gal	std	18'	18'	4
Valencia Orange	med	15 gal	std	18'	18'	5
Blood Orange	med	15 gal	std	18'	18'	2
Danny Tangerine	med	15 gal	std	15'	15'	6
Clementine Mandarian	med	15 gal	std	15'	15'	6
Meiwa Kumquat	med	15 gal	std	12'	12'	3
Cara Cara Orange	med	15 gal	std	18'	18'	8
Meyer Lemon	med	15 gal	std	20'	20'	6
New Zealand Lemonade Lemon	med	15 gal	std	15'	15'	3
Oroblanco Grapefruit	med	15 gal	std	20'	20'	6
Rio Red Grapefruit	med	15 gal	std	20'	20'	4

CALIFORNIA NATIVE TREES

BOTANICAL NAME	COMMON NAME	WUCOLS	SIZE	FORM	MIN SPREAD	MED HEIGHT	QTY
Chilopsis linearis	Desert Willow	low	24 box	multi	3' - 4'	5' - 6'	44
Quercus agrifolia std.	Coast Live Oak	low	24 box	std	3' - 4'	7' - 8'	6
Platanus Racemosa	Western Sycamore	low	24 box	multi	3' - 4'	5' - 6'	4
Quercus agrifolia multi.	Coast Live Oak	med	24 box	std	3' - 4'	5' - 6'	10
Quercus kelloggii	California Black Oak	low	24 box	std	3' - 4'	5' - 6'	4
Acer macrophyllum	Bigleaf Maple	med	24 box	std	3' - 4'	7' - 8'	4

CALIFORNIA NATIVE SHRUBS

BOTANICAL NAME	COMMON NAME	WUCOLS	SIZE	FORM	SPREAD	HEIGHT	QTY
Cercis occidentalis	Western Redbud	med	15 gal	Multi	10'	10'	6
Ceanothus thyrsiflorus var. 'Diamond Heights'	Carmel Ceanothus	low	5 gal	shrub	3'	6'	31
Carex splissa	San Diego Sedge	low	5 gal	shrub	2' - 3'	2' - 3'	70
Rhamnus californica 'Little Sur'	California Coffeeberry	low	5 gal	shrub	6'	6'	22
Ribes speciosum	Fuchsia-flowered Goosberry	low	5 gal	shrub	8'	8'	25
Achillea millefolium	Yarrow	low	1 gal	perr	2'	3'	66
Salvia leucophylla	Purple Sage	low	5 gal	shrub	18"	5'	97
Baccharis 'Stam'	Coyote Brush	low	5 gal	shrub	18"	5'	68

NON NATIVE SHRUBS

BOTANICAL NAME	COMMON NAME	WUCOLS	SIZE	FORM	SPREAD	HEIGHT	QTY
Carpenteria Californica	Bush Anemone	low	5 gal	shrub	5'	6'	23
Calliandra peninsularis	Powder Puff	low	5 gal	shrub	2' - 3'	2' - 3'	20
Ceanothus 'Dark Star'	California Lilac	low	5 gal	shrub	4'	6'	20
Hesperaloe parviflora	Red Yucca	low	5 gal	shrub	4'	4'	16
Iris douglasiana 'Burgundy'	Pacific Coast Iris	med	1 gal	bulb	18"	2'	40
Salvia greggii 'Furmans Red'	Autumn Sage	low	1 gal	perr	2'	2'	79
Dalea greggii'	Trailing Indigo	low	5 gal	perr	18"	5'	26
Dianella tasmanica	Flax Lilly	med	1 gal	shrub	18"	5'	15
Liriope m. 'Silvery Sunproof'	Variegated Lily Turf	med	1 gal	shrub	18"	18"	7
Rhaphiolepis I. 'Jack Evans'	Indian Hawthorn	med	5 gal	shrub	3'	4'	47
Rhaphiolepis I. 'Majestic Beauty'	Indian Hawthorn	med	5 gal	shrub	6'	6'	2
Camellia sasanqua	Sasanqua Camellia	med	5 gal	shrub	6'	6'	1

NON NATIVE GRASSES

BOTANICAL NAME	COMMON NAME	WUCOLS	SIZE	FORM	SPREAD	HEIGHT	QTY
Carex divulsa	Berkeley Sedge	med	1 gal	shrub	18"	18"	116
Festuca Idahoensis	Idaho Fescue	med	1 gal	shrub	12"	24"	67
Miscanthus sinesis 'Variegatus'	Japanese Silver Grass	med	1 gal	shrub	4"	4'	55

MULCH

Uniformly place a uniform 3" thick layer of medium grind mulch in all planting areas.

NON NATIVE TREES

BOTANICAL NAME	COMMON NAME	WUCOLS	SIZE	FORM	MIN SPREAD	MED HEIGHT	QTY
Parkinsonia x 'Desert Museum'	Desert Museum Palo Verde	low	24 box	multi	3' - 4'	5' - 6'	5

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SAN ANTONIO WATER COMPANY NEW OFFICE AND OPERATIONS YARD FACILITIES

LANDSCAPE PLANTING PLANS AND NOTES

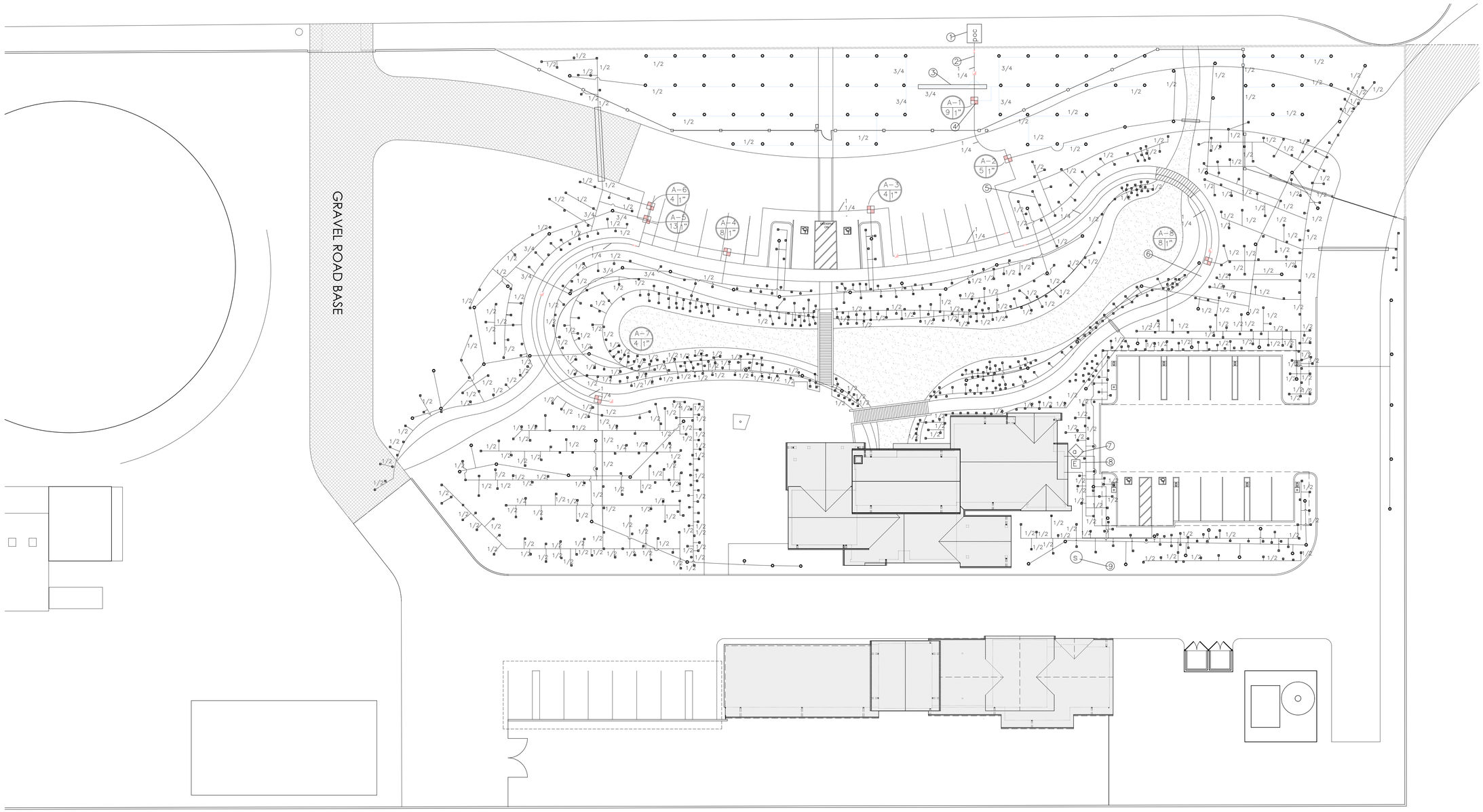
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DATE:	12/17/2025
SCALE:	AS NOTED
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DWN BY:	CCW
CHK BY:	EGP

SHEET NO.

L1.00



1 LANDSCAPE PLANTING PLAN

1/16"=1'-0"

IRRAGATION PLAN NOTES

1. IRRIGATION POC: PLACE BACKFLOW DEVICE, ENCLOSUCLOSURE AND SNSORS IN PLANTING AREA. THE CONTRACTOR SHALL COORDINATE CONNECTION TO THE WATER SYSTEM WITH THE WATER DISTRICT.
2. MAINLINE: ROUTE MAINLINE AND WIRE CONDUIT WITHIN PLANTING AREAS, ON-SITE MAINLINE 2' FROM HARDSCAPE. CONTROL WIRE SHALL BE PLACED IN A PVC CONDUIT. WIRE CONDUIT SHALL BE ROUTED WITH MAINLINE.
3. PIPE SLEEVE: PLACE PIPE SLEEVE / WIRE CONDUIT AT LOCATIONS SHOWN. SLEEVES SHALL BE INSTALLED WITH 24" OF MINIMUM COVER. EXTEND ENDS OF SLEEVE 12' BEYOND THE EDGE OF HARDSCAPE.
4. EQUIPMENT: PLACE VALVES, SENSORS, AND EQUIPMENT IN PLANTING AREAS.
5. LATERAL LINES: LATERAL LINE SHALL BE ROUTED AND PLACED TO NOT INTERRUPT OR ADJUST THE PLACEMENT OF TREES AND SHRUBS.
6. DRIP RINGS: DRIP RIGS SHALL BE PLACES UNIFORMLY AROUND TREES. DRIP RINGS SHALL BE ANCHORED WITH ANCHOR PINS PLACED AT 6" OC.
7. CONTROLLER: CONTROLLER SHALL BE PLACED IN PLANTING AREA AS DETERMINED BE WATER DISTRICT. LOCATE CONTROLLER TO BE ACCESSIBLE FROM PARKING LOT OR WALK. PLACE CONTROLLER IN SPECIFIED CABINET.
8. ELECTRICAL POC: PROVIDE 120V POWER TO IRRIGATION CONTROLLER. PROVIDE SEPARATE ELECTRICAL CIRCUIT FOR THE IRRIGATION CONTROLLER.
9. SENSOR LOCATION: LOCATE THE IRRIGATION CONTROLLER SENSORS IN A SUNNY LOCATION WITHIN 50' OF THE IRRIGATION CONTROLLER.

IRRAGATION PLAN LEGEND

POC — Irrigation POC:
Water Meter 1" Coordinate installation with water district

Backflow device Febco 825 YA: Install in in strongbox enclosure model C-30CR

Flow Sensor Hunter Flow-Click 1" FCT 100

Master Valve: 1" Model 3300 normally open

Disc Filter Amiad 700190-001205 1"

Valves:
Isolation Valve: Nibco T-113 1"

Quick coupler: Rainbird 1" 44 LRC

Drip Valve Assembly: Hunter Model ICZ-101

Emitters:
GPH Tree Drip Ring: GPH GPVCSSAR050 with GPH GXB(2 gph)D @ 12" oc

GPH Shrub Emitter: GPH GSTCV2D Emitter on G Flex Riser GFIH18ABR 1 per shrub

controller:
E — 12 volt Electrical connection for irrigation controller - Provided by owner.

Hunter HCC Controller Model HCC-800-PL Install in VIT Strongbox BC-30CR

Sensor: Hunter Rain-click

Lines:
Pressure Mainline: schedule 40 PVC 1 1/4" Provide 18" minimum cover

Lateral line: Schedule 40 PVC 1/2", 3/4" or 1" Provide 12" minmum cover.

ns — Wire Conduit: Gray Schedule 20 PVC 3" Route with mainline, provide 18" minimum cover.

Pipe Sleeve: Schedule 40 PVC 3" Dia.

Other Components:
ns — Valve Tags: GPH GID-Max

ns — Control Wire: Common 12 ga solid copper / pilot 12 ga solid copper

ns — PVC Cement: Weld-on Gray PVC Premier: Weld On Purple

ns — Wire Connectors: Hunter DBry Waterproof Splice Kit

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LANDSCAPE IRRIGATION PLANS AND NOTES

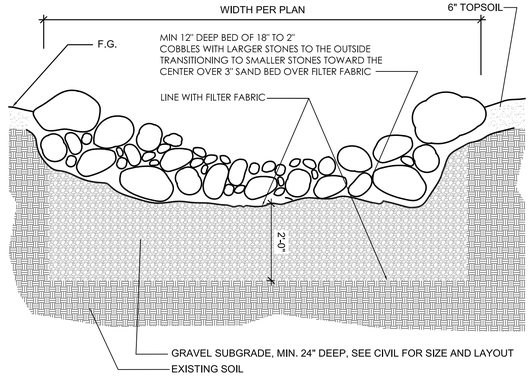
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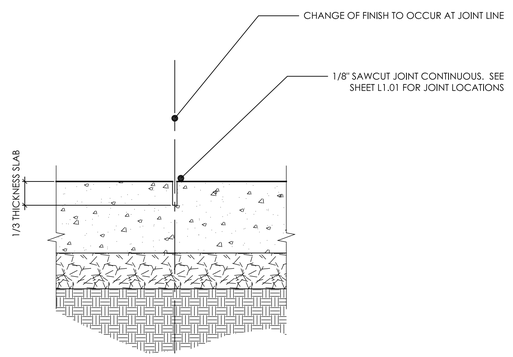
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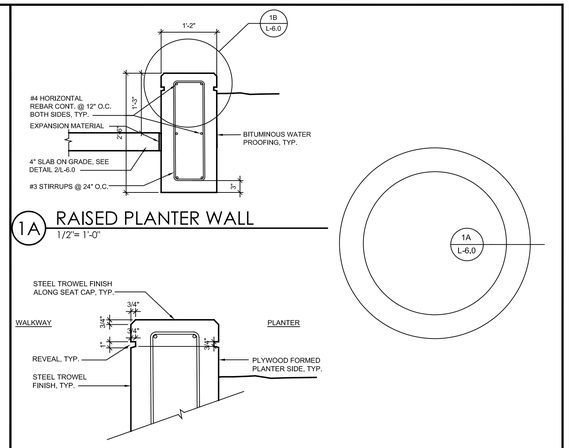


7 INFILTRATION BASIN BELOW SWALE
1/2" = 1'-0"



NOTE: TYP. SAWCUT CONTROL JOINT 10'-0" OC UNLESS NOTED, SEE SHEET L-1.01

4 CONTROL JOINT
3" = 1'-0"



1A RAISED PLANTER WALL
1/2"= 1'-0"

1B RAISED PLANTER SEAT DETAIL
1"= 1'-0"

1 RAISED PLANTER W/ SEAT DETAIL
1/4"= 1'-0"

8 TYP. SHOVEL CUT DETAIL
N.T.S.

5 TYP. BOLLARD
1"= 1'-0"

2 TYP. CONC WALKWAY/FLATWORK DETAIL
N.T.S.

6 TYP. IRRIGATION VALVE
N.T.S.

NOTE: PROVIDE 1/2" EXPANSION JOINT TO WALS AND BUILDINGS

3 TYP. EXPANSION JOINT DETAIL
N.T.S.

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LANDSCAPE DETAILS

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