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ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR	HR.	HOUR
A.F.S.	ABOVE FINISH SURFACE	INT.	INTERIOR
ALT.	ALTERNATE	LAV.	LAVATORY
CBC	CALIF. BUILDING CODE	MAX.	MAXIMUM
G.L.	CENTER LINE	MIN.	MINIMUM
CLG.	CEILING	MFR.	MANUFACTURER
C.M.U.	CONCRETE MASONRY UNIT	(N)	NEW
COL.	COLUMN	N.A.	NOT APPLICABLE
CONC.	CONCRETE	N.I.C.	NOT IN CONTRACT
CPT.	CARPET	O.C.	ON CENTER
CT	CERAMIC TILE	O.F.G.I.	OWNER-FURNISHED, CONTRACTOR-INSTALLED
DN.	DOWN	O.F.O.I.	OWNER-FURNISHED, OWNER-INSTALLED
D.S.	DOWNSPOUT	OPP.	OPPOSITE
DTL.	DETAIL	P.L.	PROPERTY LINE
(E)	EXISTING	REF.	REFRIGERATOR
ELEC.	ELECTRICAL	REV.	REVERSE
EQ.	EQUAL	R.O.M.	RIGHT-OF-WAY
E.M.	EACH WAY	R.T.S.	RUBBER TOP SET
EXT.	EXTERIOR	SHT.	SHEET
F.F.	FINISH FLOOR	SIM.	SIMILAR
FIN. CLG.	FINISH CEILING	SPECS.	SPECIFICATIONS
FIN. FLR.	FINISH FLOOR	SV	SHEET VINYL
F.O.	FACE OF	T.O.	TOP OF
F.O.C.	FACE OF CONCRETE	T.O.C.	TOP OF CONCRETE
F.O. FIN.	FACE OF FINISH	T.O.P.	TOP OF PARAPET
F.O.M.	FACE OF MASONRY	T.O.PL.	TOP OF PLATE
F.O.S.	FACE OF STUD	T.O. SHTG	TOP OF SHEATHING
F.O. SHTG.	FACE OF SHEATHING	T.O.W.	TOP OF WALL
FRP	FIBER REINFORCED PLASTIC PANELS	TYP.	TYPICAL
F.S.	FINISH SURFACE	UN.O	UNLESS NOTED OTHERWISE
GA.	GAUGE	W	WITH
GYP. BD.	GYP. BOARD	WD	WOOD

PROJECT TEAM

ARCHITECT:	OWNER:
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PROJECT SCOPE

THE PROJECT INCLUDES ACCESSIBILITY UPGRADES TO EXISTING PUBLIC RESTROOMS, TO INCLUDE REPLACEMENT PLUMBING FIXTURES AND MECHANICAL VENTILATION, AND REPLACEMENT LED LIGHTING. REFER TO DRAWINGS FOR THE QUANTITY OF PLUMBING FIXTURES TO BE PROVIDED. ALL INTERIOR FINISHES TO REMAIN WHERE UNDISTURBED BY THE SCOPE OF WORK.

THE PROJECT ALSO INCLUDES UPGRADE TO (1) EXISTING TRASH ENCLOSURE; TO INCLUDE REPLACEMENT COVERED ROOF, BIRD SCREEN, AND AN ACCESSIBLE MAN GATE AT THE EXISTING CONCRETE ENCLOSURE OPENING. THE PROJECT DOES NOT INCLUDE A COMPLETE PATH OF TRAVEL OUTSIDE THE VEHICLE WAY FOR ACCESS TO THE EXISTING ENCLOSURE. CREATING THIS PATH SEVERELY IMPACTS EXISTING DRAINAGE COURSES THAT CURRENTLY CONVEY STORM WATER, IMPACTS THE QUANTITY OF PARKING SPACES ON THE SITE, REDUCES EXISTING PERMEABLE LANDSCAPE THUS TECHNICALLY INFEASIBLE.

CODE SUMMARY

APPLICABLE CODES:

2016	CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR))
2016	CALIFORNIA BUILDING CODE (PART 2, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR))
2016	CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR))
2016	CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR))
2016	CALIFORNIA PLUMBING CODE (PART 5, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR))
2016	CALIFORNIA FIRE CODE (PART 9, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR))
2016	CALIFORNIA GREEN BUILDING STANDARDS CODE (CALIFORNIA CODE OF REGULATIONS TITLE 24)

LOCAL JURISDICTIONS:

BUILDING OFFICIAL:	CITY OF VENTURA
FIRE OFFICIAL:	CITY OF VENTURA

CONSTRUCTION TYPE: V-B

FULLY SPRINKLERED: YES

EXISTING USE: RETAIL SALES

PROPOSED USE: RETAIL SALES

OCCUPANCY GROUP: M

AREA OF (E) RESTROOMS:	307 S.F.
AREA OF (E) TRASH ENCLOSURE:	254 S.F.

INDEX OF DRAWINGS

T	TITLE SHEET
ARCHITECTURAL	
A1.1	MASTER SITE PLAN
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A2.1	DEMOLITION, PROPOSED FLOOR PLANS, INTERIOR ELEVATIONS
A2.2	REFLECTED CEILING PLAN, SCHEDULES, GENERAL NOTES
A2.3	DETAILS
GB-1	GREEN BUILDING CODE NON-RESID. MANDATORY MEASURES
GB-2	GREEN BUILDING CODE NON-RESID. MANDATORY MEASURES
MECHANICAL	
MPO.1	MECHANICAL PLUMBING COVER SHEET
M1.01	HVAC DEMO & NEW FLOOR PLAN
PLUMBING	
P1.01	PLUMBING DEMO & NEW FLOOR PLAN
P2.01	PLUMBING SCHEDULES & DETAILS
ELECTRICAL	
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E2	GENERAL ELECTRICAL SPECIFICATIONS SHEET
E3	ELECTRICAL POWER & LIGHTING PLAN-DEMOLITION
E4	ELECTRICAL POWER & LIGHTING PLAN-PROPOSED
E4	ELECTRICAL FIXTURE SCHEDULE, DETAILS
E6	ELECTRICAL TITLE 24 DOCUMENTATION
E7	ELECTRICAL TITLE 24 DOCUMENTATION

VENTURA HARBOR VILLAGE

ADA COMPLIANCE RESTROOM REMODEL, TRASH ENCLOSURE UPGRADE

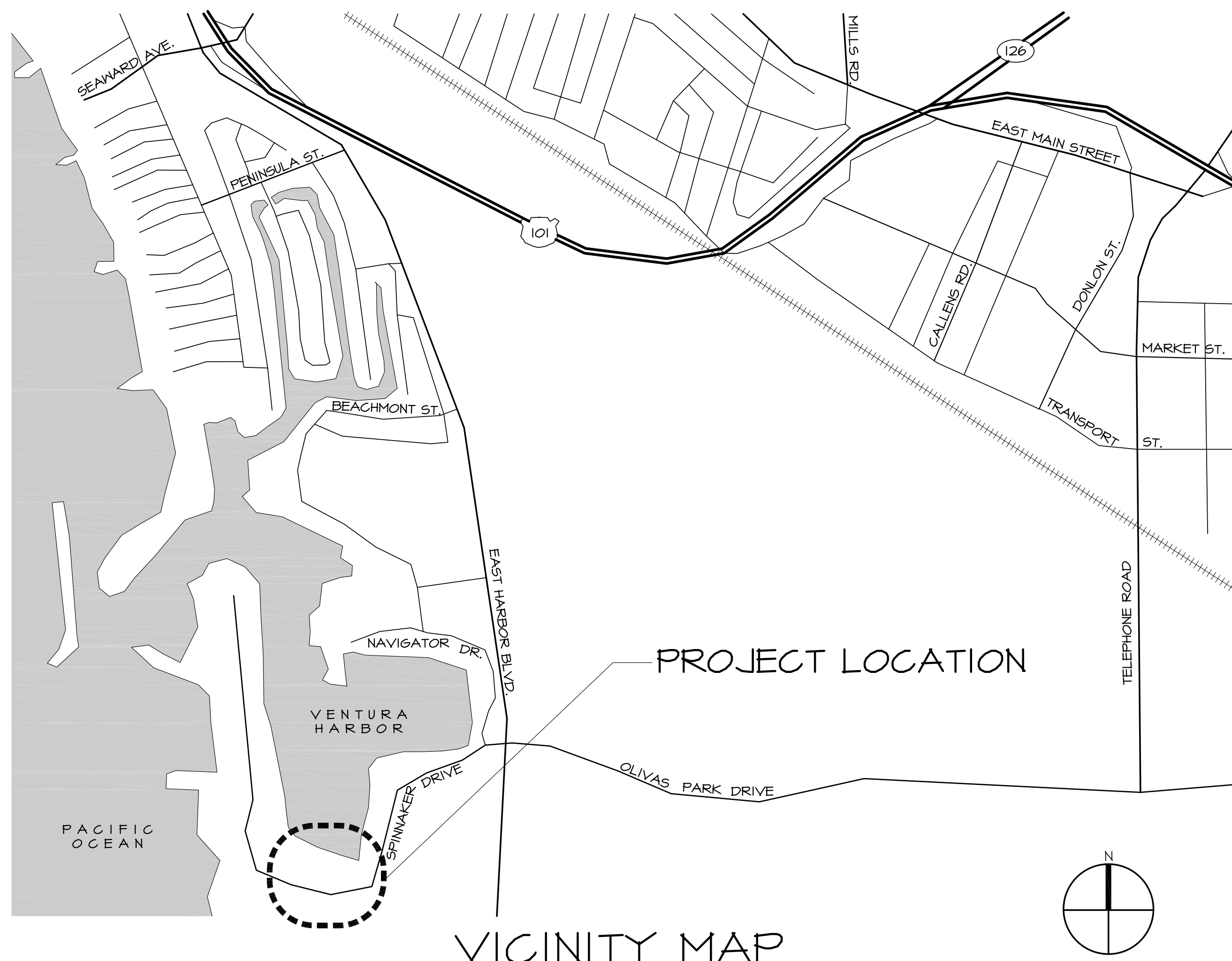
VENTURA, CALIFORNIA

LIST OF SYMBOLS

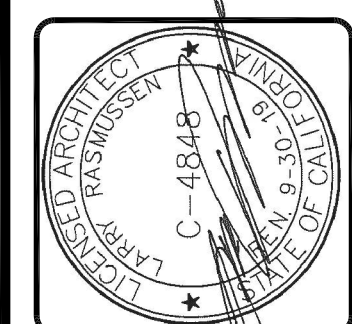
	WINDOW TYPE
	DOOR CONSECUTIVE NUMBER
	ROOM CONSECUTIVE NUMBER
	INDICATES DETAIL NUMBER SHEET WHERE DETAIL IS DRAWN
	SECTION SHEET WHERE DETAIL IS DRAWN
	INTERIOR ELEVATION IDENTIFICATION SHEET WHERE INTERIOR ELEVATION IS DRAWN
	NUMBER OF CIRCLE CORRESPONDS TO NUMBER ON NOTE LEGEND
	LETTER IN OVAL CORRESPONDS TO WALL CONSTRUCTION TYPE
	NORTH ARROW, ORIENTATION TO TRUE NORTH
	REVISION CLOUD INDICATES AREA REVISED
	WORK POINT, CONTROL, ELEVATION OR DATUM POINT

MATERIALS LEGEND

	EARTH
	GRAVEL OR CRUSHED ROCK BASE
	ASPHALTIC CONCRETE PAVING
	CONCRETE
	MASONRY
	PLYWOOD
	WOOD, ROUGH OR DIM. LUMBER
	INSULATION
	PLASTER
	GYP. WALL BOARD



RASMUSSEN & ASSOCIATES



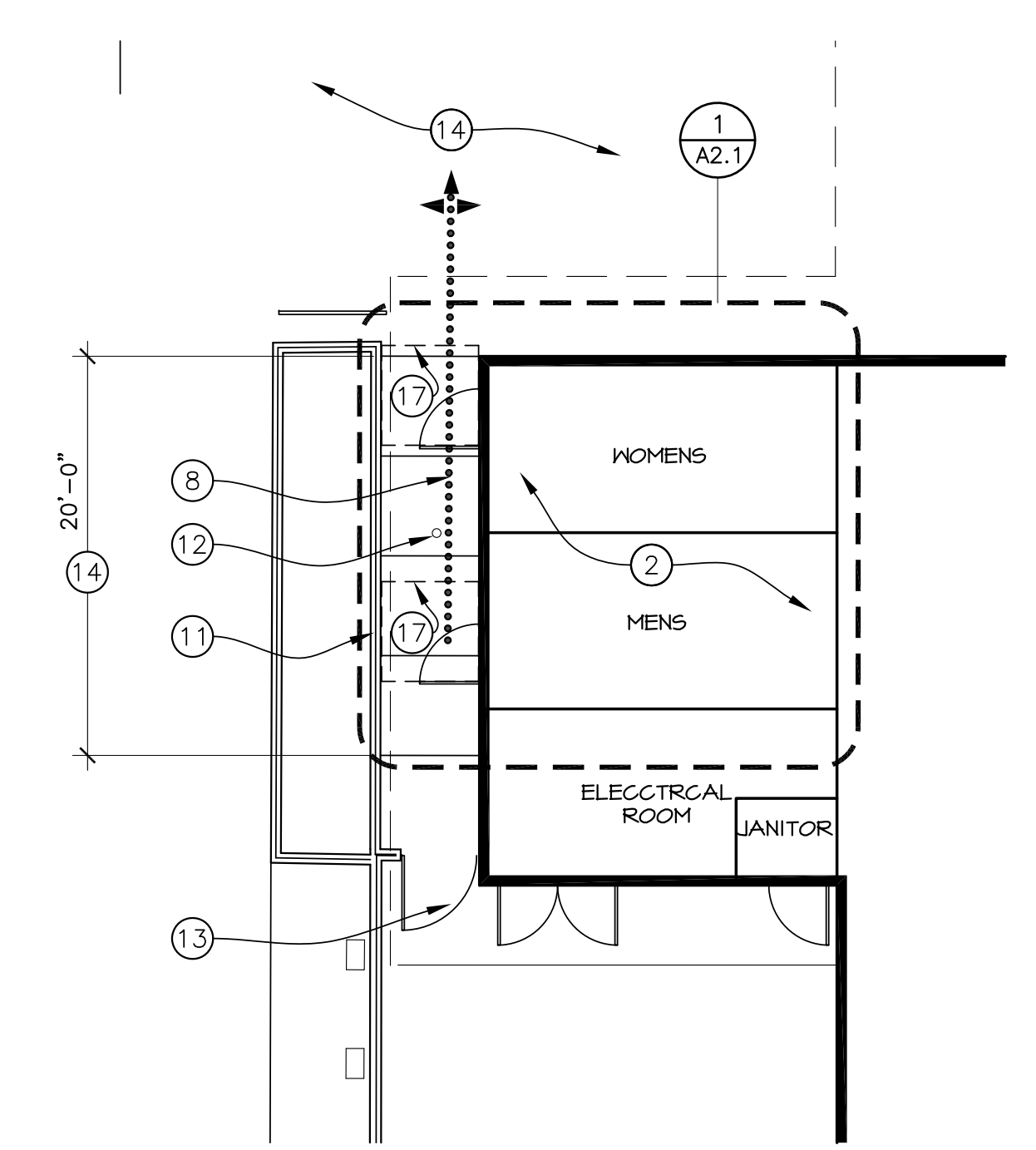
TITLE SHEET

Revisions	R&A No: A060622	Date: 11/19/2018	Drawn: AE	Checked: L.U.U.	Consult: No: XXX
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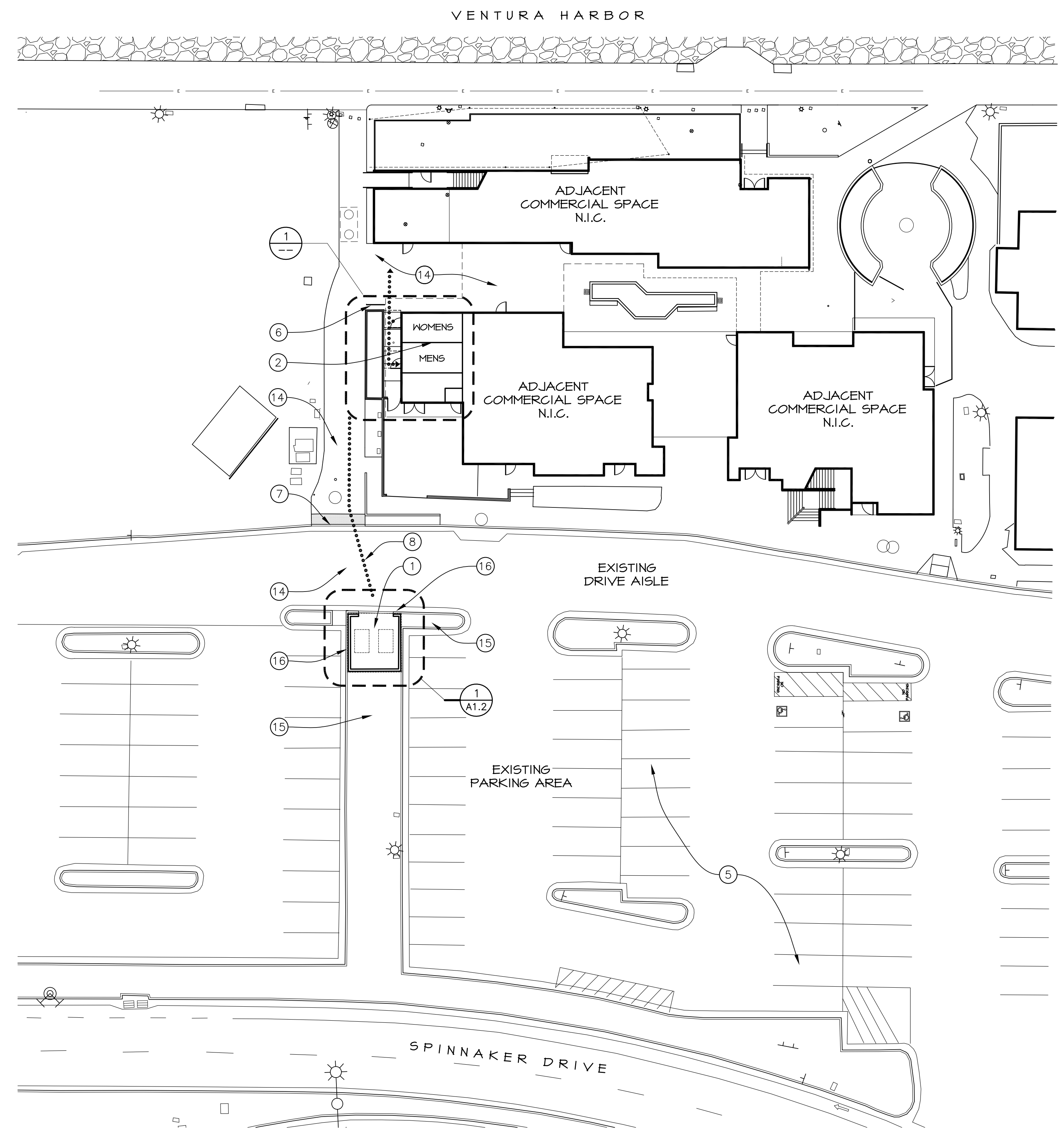
RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE
 1591 SPINNAKER DRIVE
 VENTURA, CALIFORNIA

Sheet No.
T

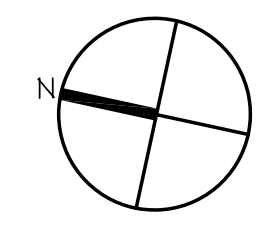
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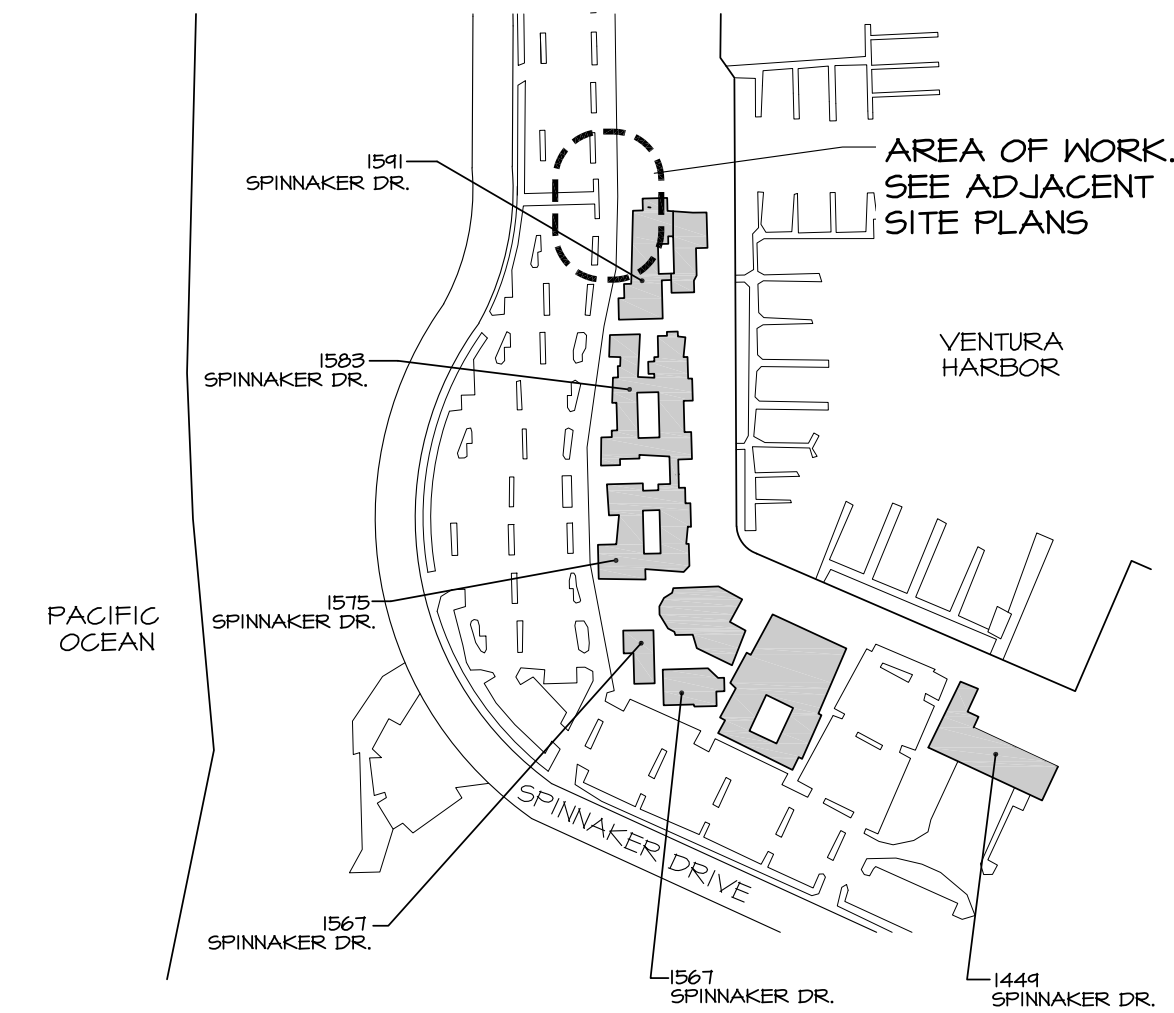
1 RESTROOM ACCESS
SCALE 1/8" = 1'-0"



MASTER SITE PLAN
SCALE 1" = 20'-0"



SITE VICINITY MAP



NOTE LEGEND

- 1 TRASH ENCLOSURE.
- 2 EXISTING PUBLIC RESTROOMS TO BE UPGRADED. SEE FLOOR PLAN DRAWINGS.
- 4 EXISTING PAVING TO REMAIN.
- 5 EXISTING AC PAVED PARKING AREA.
- 6 EXISTING BIKE RACK TO REMAIN.
- 7 EXISTING "ZERO" CURB, 3'-0" DEEP YELLOW TRUNCATED DOMES WHERE ACCESSIBLE PATH INTERSECTS VEHICULAR WAY.
- 8 PATH OF TRAVEL, MINIMUM 4'-0" WIDE, MAXIMUM 4.99% SLOPE, 2% CROSS SLOPE, MEETING REQUIREMENT FOR SITE ACCESSIBILITY.
- 9 EXISTING LANDSCAPE TO REMAIN.
- 10 EXISTING CURB TO REMAIN.
- 11 EXISTING RAISED PLANTER TO REMAIN.
- 12 EXISTING AREA DRAIN LOCATION TO REMAIN.
- 13 EXISTING MAINTENANCE GATE TO REMAIN, NOT WITHIN SCOPE OF WORK.
- 14 EXISTING PAVING TO REMAIN, PROTECT IN PLACE.
- 15 EXISTING LANDSCAPE TO REMAIN.
- 16 EXISTING CONCRETE CURBS TO REMAIN, SITE DRAINAGE COURSE TO REMAIN.
- 17 60" MANEUVERING CLEARANCE AT DOOR ON FULL SIDE OF TOILET ROOM DOORS. SLOPE DOES NOT EXCEED 2%.

MASTER SITE PLAN

Revisions	R&A No. A060622	Date: 11/19/2018	Drawn: R&A	Checked: L.U.U.	Consult: No. XXX
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**RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE**

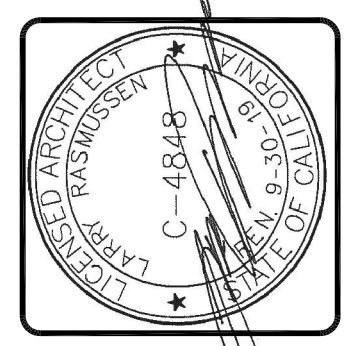
1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

Sheet No.
A1.1

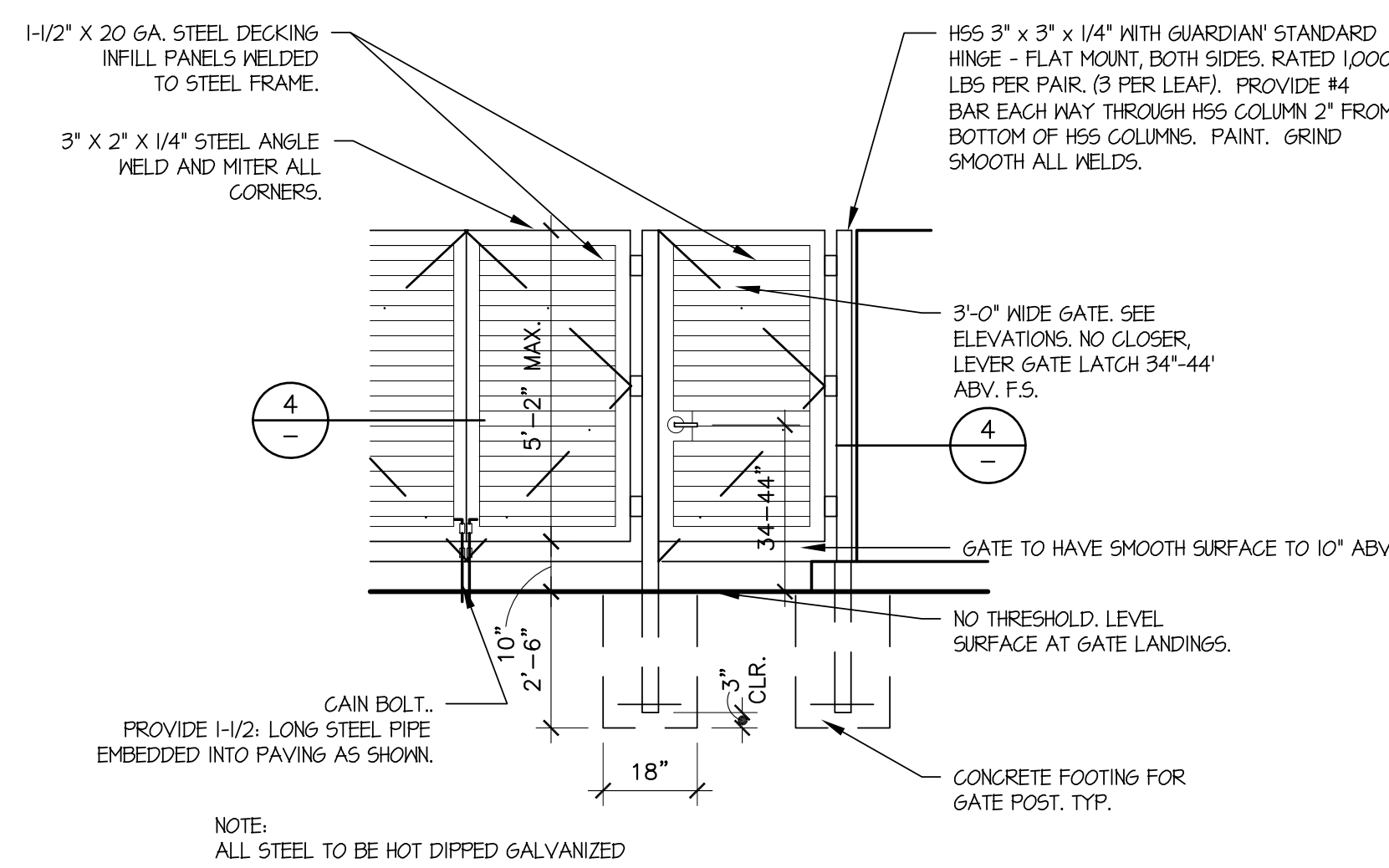
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Architecture
Planning
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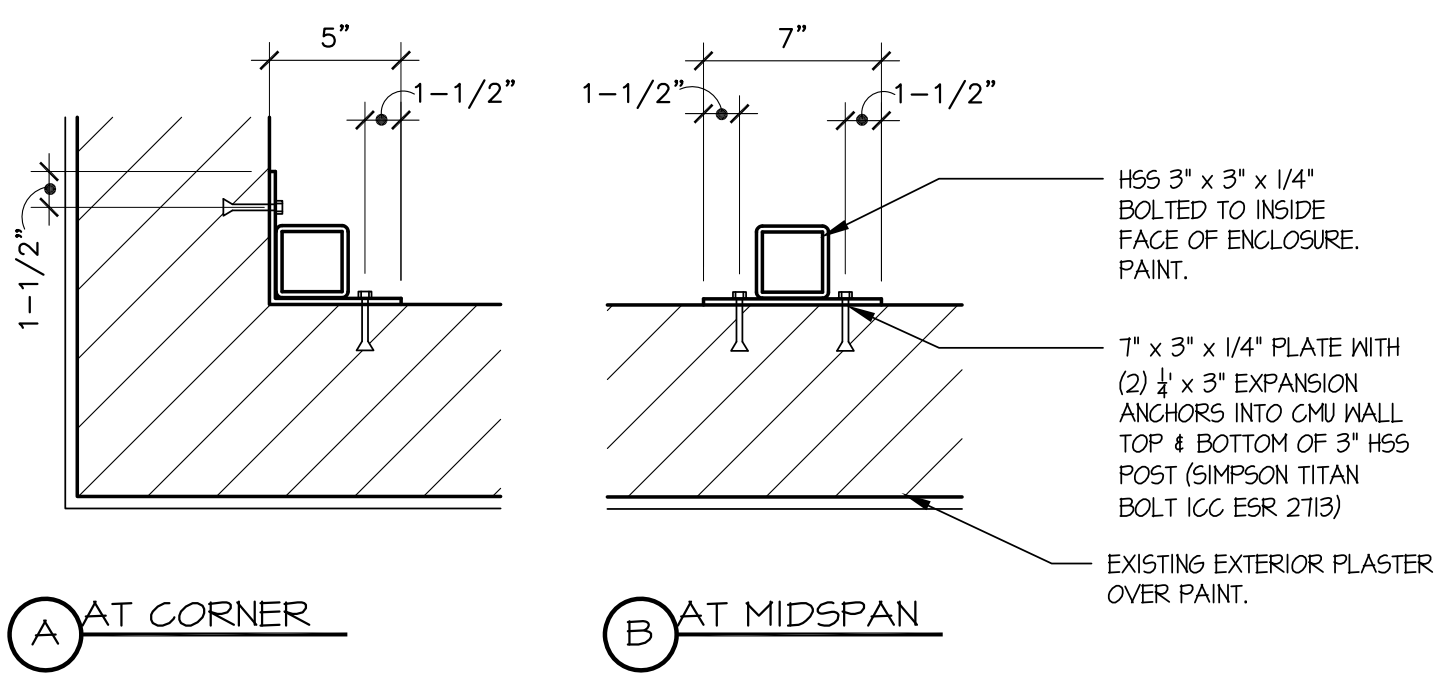
21 S. California Street
Fourth Floor
Ventura, California 93001
(805) 648-1234



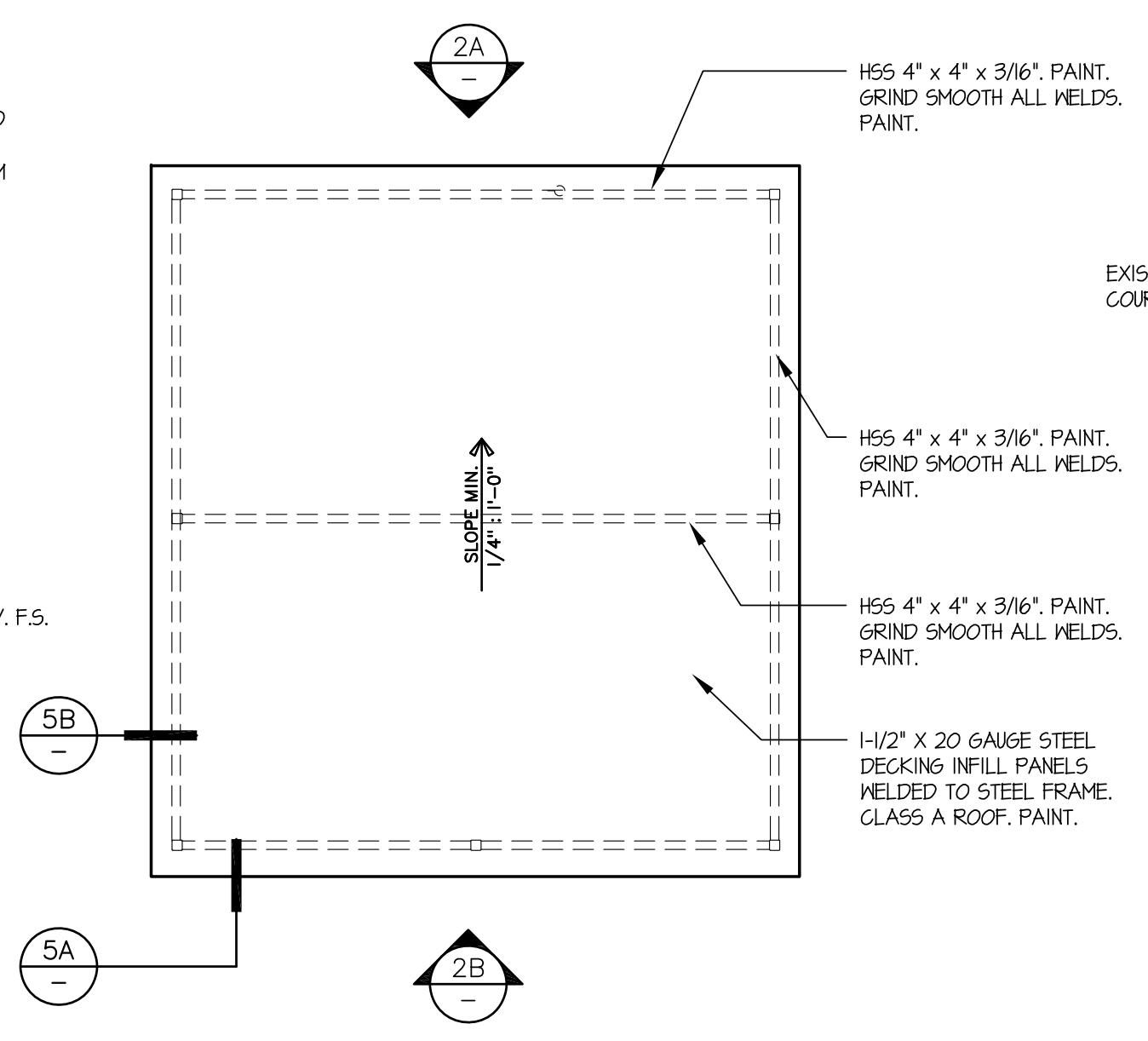
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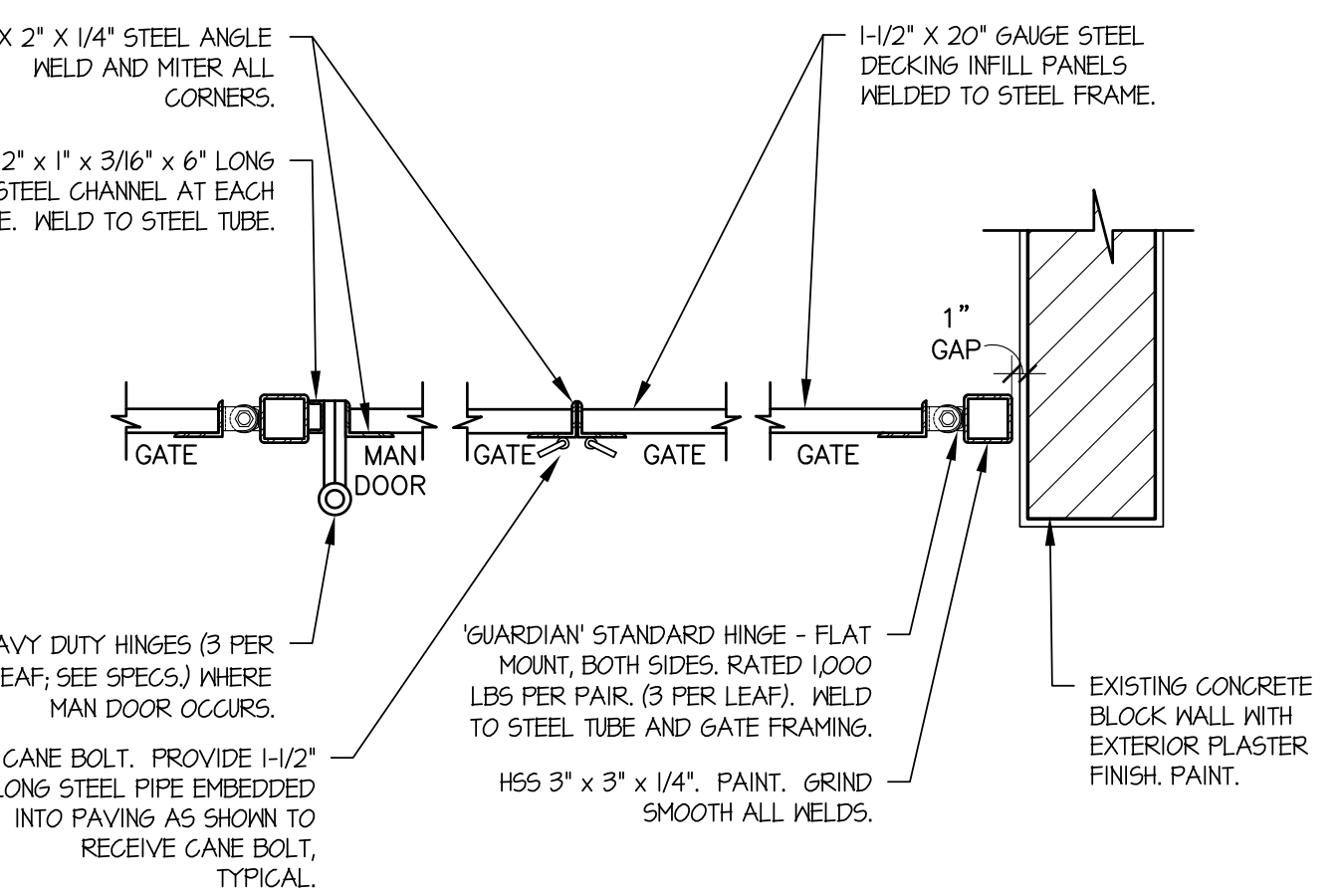
6 TRASH ENCLOSURE GATES
SCALE 3/8" : 1'-0"



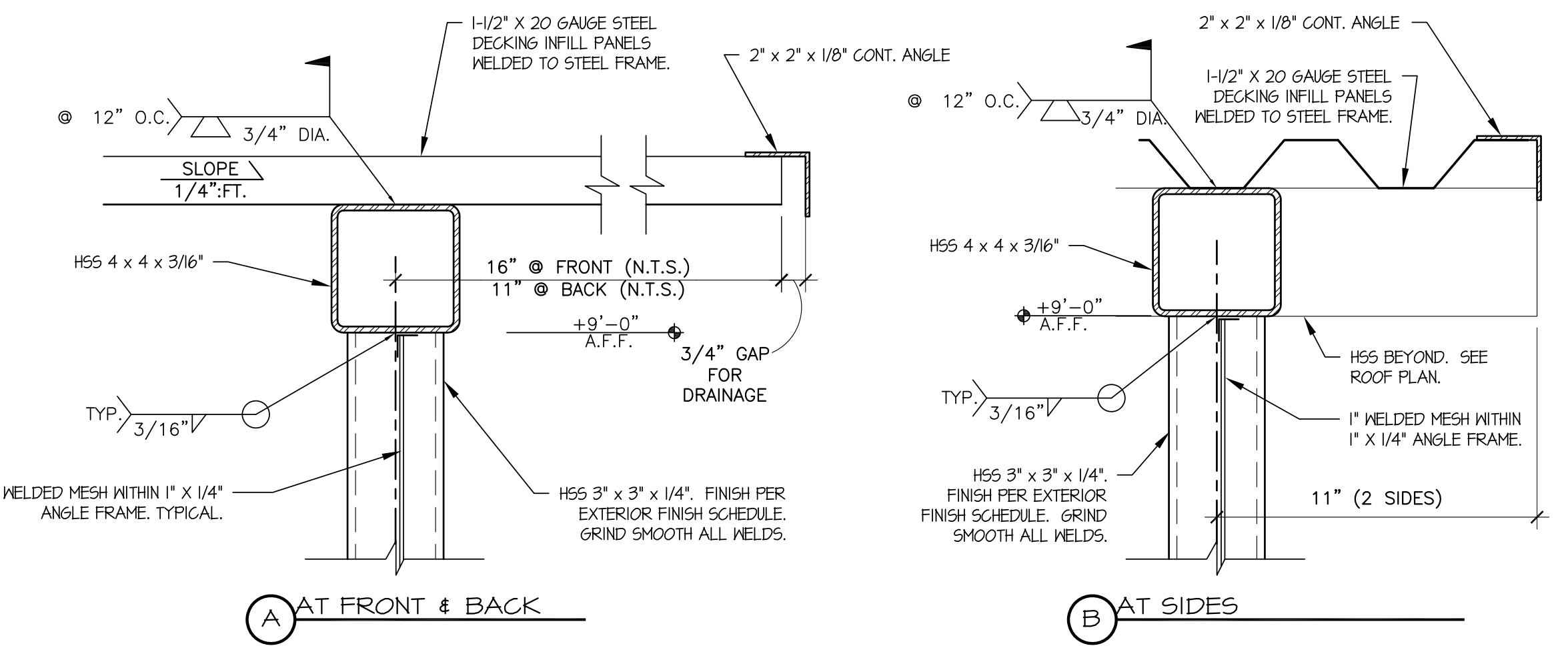
7 ENCLOSURE COVER ATTACHMENT
SCALE 1/2" : 1'-0"



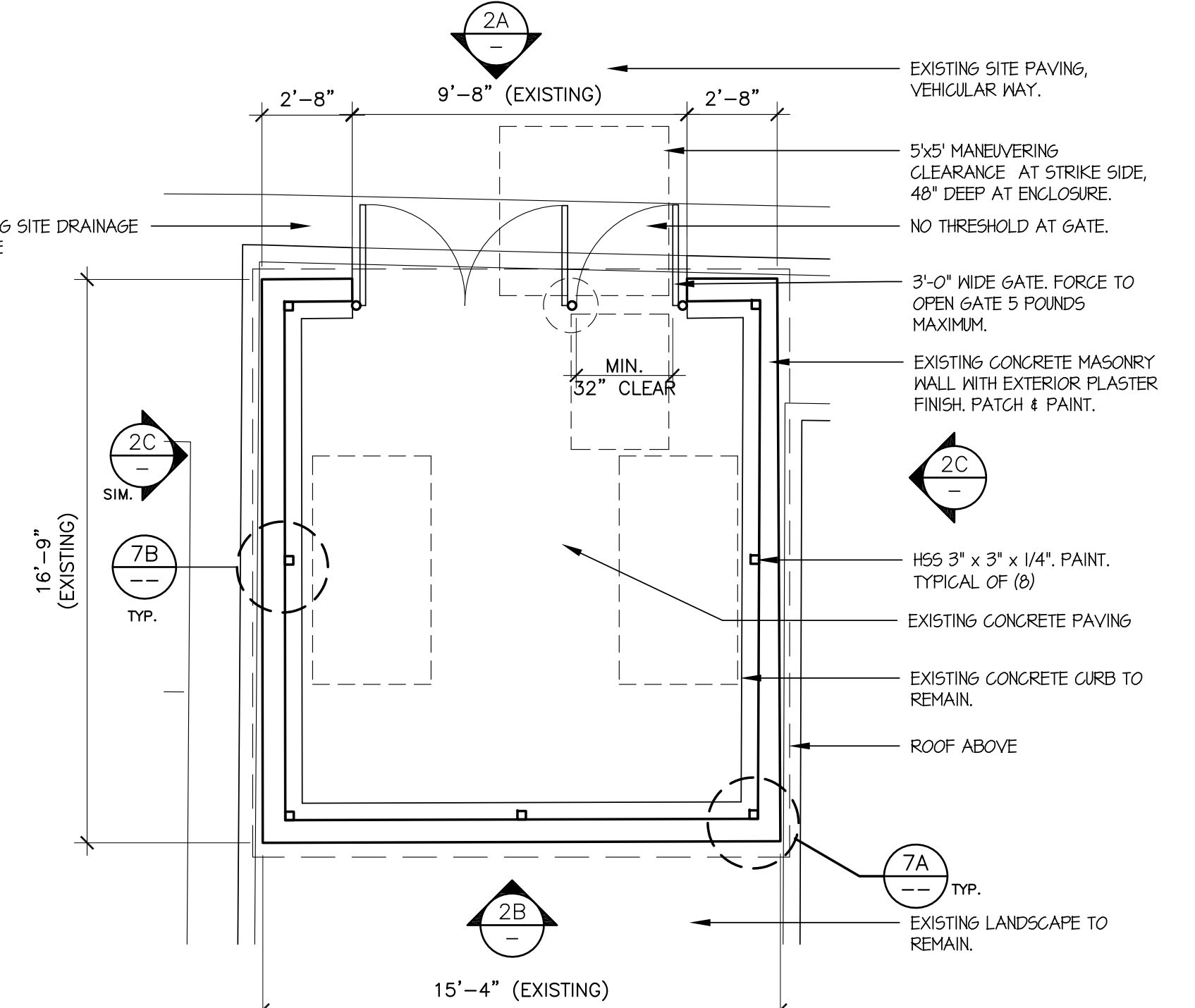
3 TRASH ENCLOSURE ROOF
SCALE 1/4" : 1'-0"



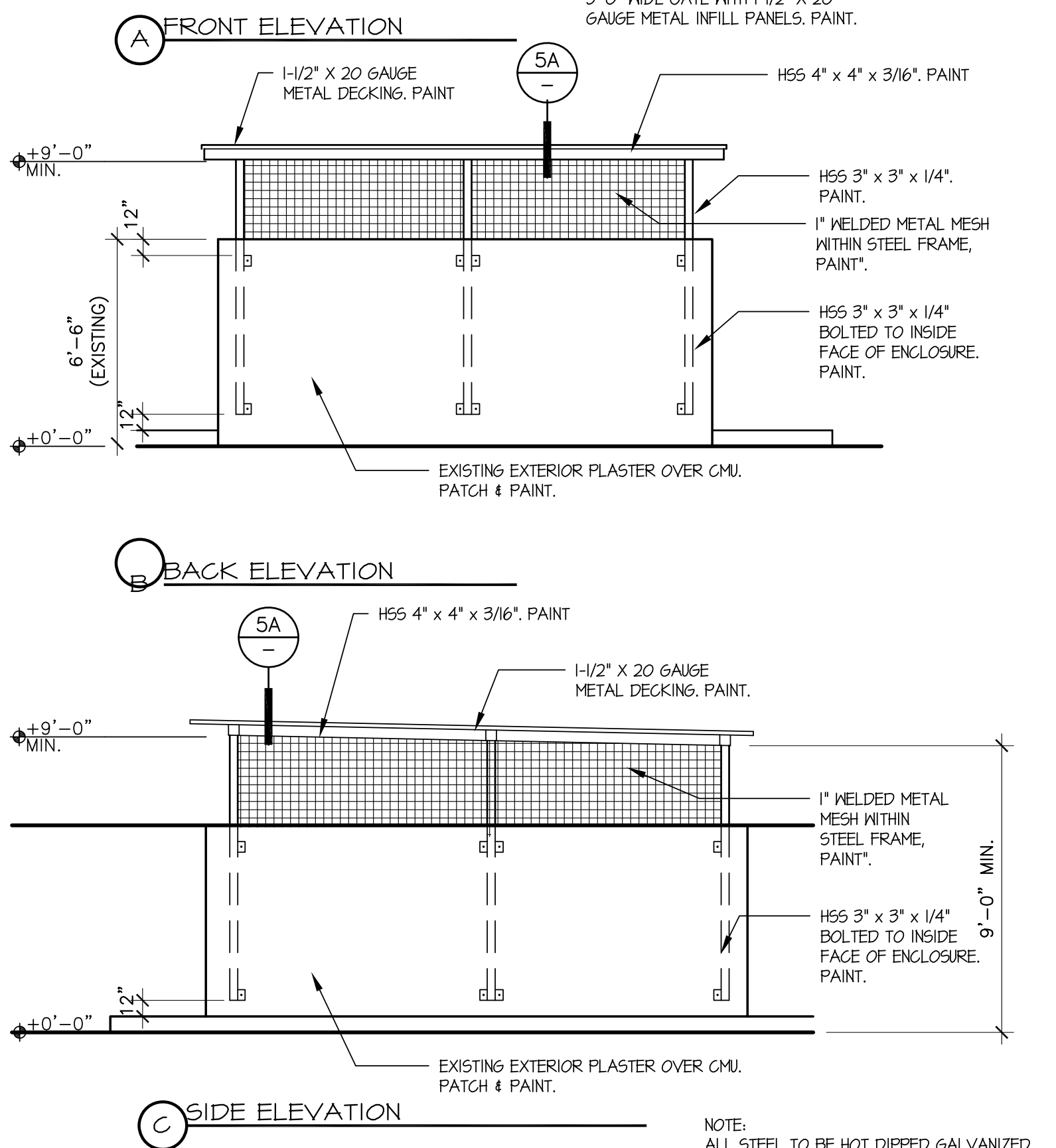
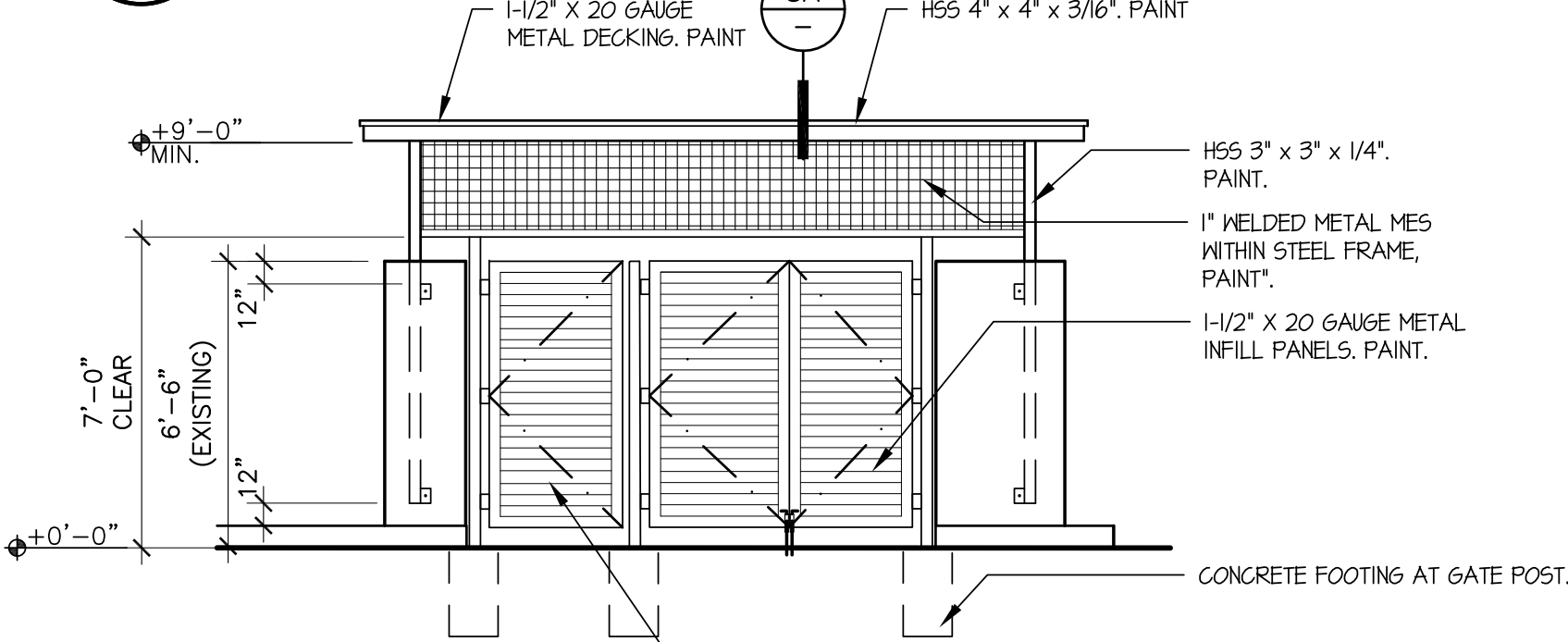
4 TRASH ENCLOSURE GATE HINGE
SCALE 1" : 1'-0"



5 TRASH ENCLOSURE COVER
SCALE 3" : 1'-0"



1 TRASH ENCLOSURE PLAN
SCALE 1/4" : 1'-0"



2 TRASH ENCLOSURE ELEVATIONS
SCALE 1/4" : 1'-0"

NOTE

THE EXISTING CONCRETE MASONRY TRASH ENCLOSURE STRUCTURE WITH EXTERIOR PLASTER FINISH TO REMAIN. EXISTING CHAIN LINK ROOF COVER, EXISTING WOOD GATES, HARDWARE AND GATE POSTS TO BE REMOVED. FILL AND PATCH STRUCTURE WHERE THESE ITEMS ARE REMOVED. IN ADDITION, FILL AND PATCH EXTERIOR AND INTERIOR OF THE ENCLOSURE AS NEEDED. THE ENTIRE EXTERIOR AND INTERIOR OF THE STRUCTURE TO BE PAINTED.

GENERAL NOTES

- ALL WORK SHALL CONFORM WITH THE 2016 CALIFORNIA BUILDING CODE, (CBC), THE 2015 INTERNATIONAL BUILDING CODE, (IBC), AND ALL LOCAL ORDINANCES.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING CONSTRUCTION AND BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES OR INCONSISTENCIES.
- NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, BORED OR OTHERWISE WEAKENED EXCEPT AS ALLOWED BY THE CALIFORNIA BUILDING CODE OR APPROVED BY THE ENGINEER.
- THE ENGINEER SHALL BE NOTIFIED OF ANY UNUSUAL OR UNFORSEEN CONDITION WHICH AFFECTS THE STRUCTURAL STABILITY OF THE BUILDING PRIOR TO CONTINUING WITH CONSTRUCTION. SHOULD ANY CONDITION ARISE WHERE THERE APPEARS TO BE AN ERROR ON THE DRAWINGS OR A DISCREPANCY BETWEEN THE DRAWINGS AND CONDITIONS IN THE FIELD, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUING WITH THE WORK.
- IN THE CASE WHERE TWO OR MORE DETAILS APPLYING TO THE SAME PART OF THE WORK ARE IN CONFLICT, THE MOST RESTRICTIVE SHALL GOVERN UNLESS CLARIFIED OR OTHERWISE APPROVED BY THE ENGINEER.
- REVIEW OF SHOP DRAWINGS MEANS REVIEW OF GENERAL METHOD OF FABRICATION ONLY. DIMENSIONS AND QUANTITIES MAY NOT BE CHECKED, AND REVIEW OF THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS UNLESS SPECIFICALLY SO INDICATED IN THE REVIEW.
- THE ENGINEER HAS NOT BEEN RETAINED FOR SUPERVISION OR INSPECTION DURING CONSTRUCTION, BUT WILL RESOLVE STRUCTURAL ITEMS BROUGHT TO HIS ATTENTION DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO PROTECT PERSONNEL AND ADJACENT PROPERTY DURING CONSTRUCTION. THE CONTRACTOR SHALL ADEQUATELY BRACE ELEMENTS OF THE STRUCTURE DURING CONSTRUCTION TO ENSURE THE SAFETY OF THE STRUCTURE.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS, AND SLOPES NOT SHOWN ON THE STRUCTURAL DRAWINGS.

FOUNDATION

- THERE IS NO SOILS REPORT FOR THIS PROJECT. THE CONTRACTOR SHALL VERIFY THAT ALL FOOTINGS BEAR A MINIMUM OF 12" INTO FIRM, UNDISTURBED SOILS.
- ALLOWABLE SOIL BEARING VALUE IS: 1,000 PSF FOR ALL FOOTINGS AND ALL FOOTINGS SHALL BARE INTO FIRM UNDISTURBED SOILS.
- ALL EARTH CUTS OVER 5'-0" IN HEIGHT SHALL BE BRACED BY TEMPORARY SHORING OR A TWO PHASE SLOT CUT WITH MAX. 8'-0" SLOTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF TEMPORARY SHORING AND BRACING.
- ALL GRADES AROUND THE PERIMETER OF THE STRUCTURE SHALL SLOPE AWAY FROM THE STRUCTURE TO PREVENT WATER FROM ENTERING THE BUILDING OR PONDING ADJACENT TO THE FOOTINGS.

CONCRETE

- ALL CONCRETE UNLESS OTHERWISE SHOWN ON THE PLANS SHALL BE HARDROCK CONFORMING TO ASTM C-94, WITH A MIN. COMPRESSIVE STRENGTH AT 28 DAYS OF $F_c = 2,500$ PSI.
- AGGREGATE FOR THE CONCRETE SHALL CONFORM TO ASTM C-33, INCLUDING APPENDIX "XII".
- THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS FOR MIXING, PLACING, FINISHING, CURING, AND PROTECTING CONCRETE DURING UNFAVORABLE WEATHER CONDITIONS.
- ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A-615, GRADE 60 EXCEPT #3 BARS MAY BE GRADE 40. ALL WELDED REINFORCING STEEL SHALL BE ASTM A-706. ALL BARS SHALL BE FREE OF RUST, GREASE, MILL SCALE OR ANY OTHER MATERIALS WHICH MIGHT AFFECT ITS BOND TO THE CONCRETE. ALL BAR BENDS SHALL BE MADE COLD.
- PROVIDE 3/4" CHAMFER ON ALL EXPOSED CORNERS.
- BAR SPLICES SHALL BE LAP SPLICES W/ MIN. 40 BAR DIAM. LAP W/ AN 18" MIN. (WHICHEVER IS GREATER). STAGGER LAP SPLICES OF MULTIPLE BARS, (i.e. IN CONT. FOOTING W/ 2 HORIZ. BARS TOP AND BOTTOM STAGGER TOP BAR LAP SPLICES AND STAGGER BOTTOM BAR LAP SPLICES. SPLICES DO NOT HAVE TO BE STAGGERED BETWEEN TOP AND BOTTOM BARS).
- REINFORCING BARS SHALL HAVE THE FOLLOWING CONCRETE COVER, (UNLESS NOTED OTHERWISE IN DETAILS):
CONCRETE POURED AGAINST EARTH 3 INCHES
CONCRETE BEAMS AND COLUMNS 2 INCHES
CONCRETE SLABS ABOVE GRADE 1 INCH
- DRYPACK SHALL BE MIXED IN THE PROPORTIONS OF 1 PART PORTLAND CEMENT TO 2-1/2 PARTS SAND WITH ENOUGH WATER TO PRODUCE STIFF MIX. DRYPACK SHALL BE THOROUGHLY TAIRPED INTO PLACE TO ENSURE A DENSE FINISH, FREE OF VOIDS.
- THE SLUMP OF THE CONCRETE SHALL BE THE MINIMUM THAT IS PRACTICABLE. WHEN VIBRATORS ARE USED TO CONSOLIDATE THE CONCRETE, THE SLUMP SHALL NOT EXCEED 4 INCHES, OTHERWISE THE SLUMP SHALL NOT EXCEED 6 INCHES.
- ALL CONCRETE SHALL BE ADEQUATELY CONSOLIDATED DURING PLACEMENT AND ALL REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
- EXCEPT WHERE INDICATED OTHERWISE, ALL REINFORCING STEEL SHALL BE BENT AND PLACED IN ACCORDANCE WITH THE "CODE OF STANDARD PRACTICE AND THE SPECIFICATIONS FOR PLACING REINFORCING STEEL" OF THE CONCRETE REINFORCING STEEL INSTITUTE.

STRUCTURAL STEEL

- ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 EXCEPT FOR WIDE FLANGE SHAPES WHICH SHALL CONFORM TO ASTM A-992, GRADE 50. SEE NOTE "2" BELOW FOR PIPES AND TUBE SHAPES.
- STEEL PIPE SHALL CONFORM TO ASTM A-53, GRADE "B" AND TUBULAR STEEL MEMBERS SHALL CONFORM TO ASTM A-500, GRADE "B".
- ALL WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES CONFORMING TO AWS D11.1, LATEST EDITION. PROVIDE BACKING PLATES AS REQUIRED FOR FULL PENETRATION WELDS.
- STRUCTURAL STEEL SHALL BE DETAIL, FABRICATED, AND ERRECTED IN ACCORDANCE WITH THE "SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS BY THE A.I.S.C. LATEST EDITION.
- ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS IN THE SHOP OF A FABRICATOR APPROVED BY THE LOCAL BUILDING DEPARTMENT FOR WELDING IN THE SHOP. FOR SHOPS NOT APPROVED, WELDING SHALL BE CONTINUOUSLY INSPECTED BY A LICENSED DEPUTY INSPECTOR PER SECTION 1704.2.5 OF THE CBC.
- CONTINUOUS INSPECTION BY A LICENSED DEPUTY INSPECTOR IS REQUIRED FOR ALL FIELD WELDING PER SEC. 1705.2 OF THE CBC, EXCEPT MINOR ITEMS WHEN APPROVED BY THE ENGINEER AND BUILDING INSPECTOR.
- ALL FABRICATED ITEMS SHALL BE SHOP PAINTED WITH ONE COAT OF SHOP PRIMER EXCEPT FOR ITEMS ENCASED IN CONCRETE AND SURFACES TO BE WELDED. STEEL SURFACES ENCASED IN CONCRETE SHALL BE LEFT UNPAINTED, BUT FREE FROM RUST, OIL, OR OTHER DELETERIOUS MATERIALS WHEN ENCASED.
- BOLT HOLES SHALL BE 1/8 INCH LARGER THAN BOLT DIAMETER UNLESS SLOTTED HOLES ARE INDICATED IN DETAILS. BOLT HOLES SHALL BE PUNCHED OR DRILLED, BURNED HOLES ARE NOT PERMITTED.
- BOLT HEADS OR NUTS BEARING ON SLOPING SURFACES SHALL BE EQUIPPED WITH BEVELED WASHERS.
- MACHINE BOLTS SHALL CONFORM TO ASTM A-307 AND ANCHOR BOLTS TO ASTM A-307 UNLESS OTHERWISE NOTED ON PLANS.

SPECIAL INSPECTIONS

- PROVIDE SPECIAL INSPECTION BY A LICENSED DEPUTY INSPECTOR APPROVED BY THE LOCAL BUILDING OFFICIAL FOR THE FOLLOWING WORK IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE CALIFORNIA BUILDING CODE.
- FOR ALL CONCRETE WITH AN F_c OVER 2,500 PSI.
- FOR ALL REINFORCING STEEL WHICH IS PLACED IN CONCRETE WITH AN F_c OVER 2,500 PSI.
- FOR ALL FIELD WELDING.
- FOR ALL STRUCTURAL STEEL FABRICATED IN THE SHOP OF A FABRICATOR NOT APPROVED BY THE LOCAL BUILDING DEPARTMENT FOR FABRICATION. A FABRICATOR SHALL BE CONSIDERED "APPROVED" ONLY IF THE FABRICATOR HAS COMPLIED WITH THE REQUIREMENTS OF SECTION 1701.7 OF THE CBC.

RASMUSSEN & ASSOCIATES
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(805) 648-1234

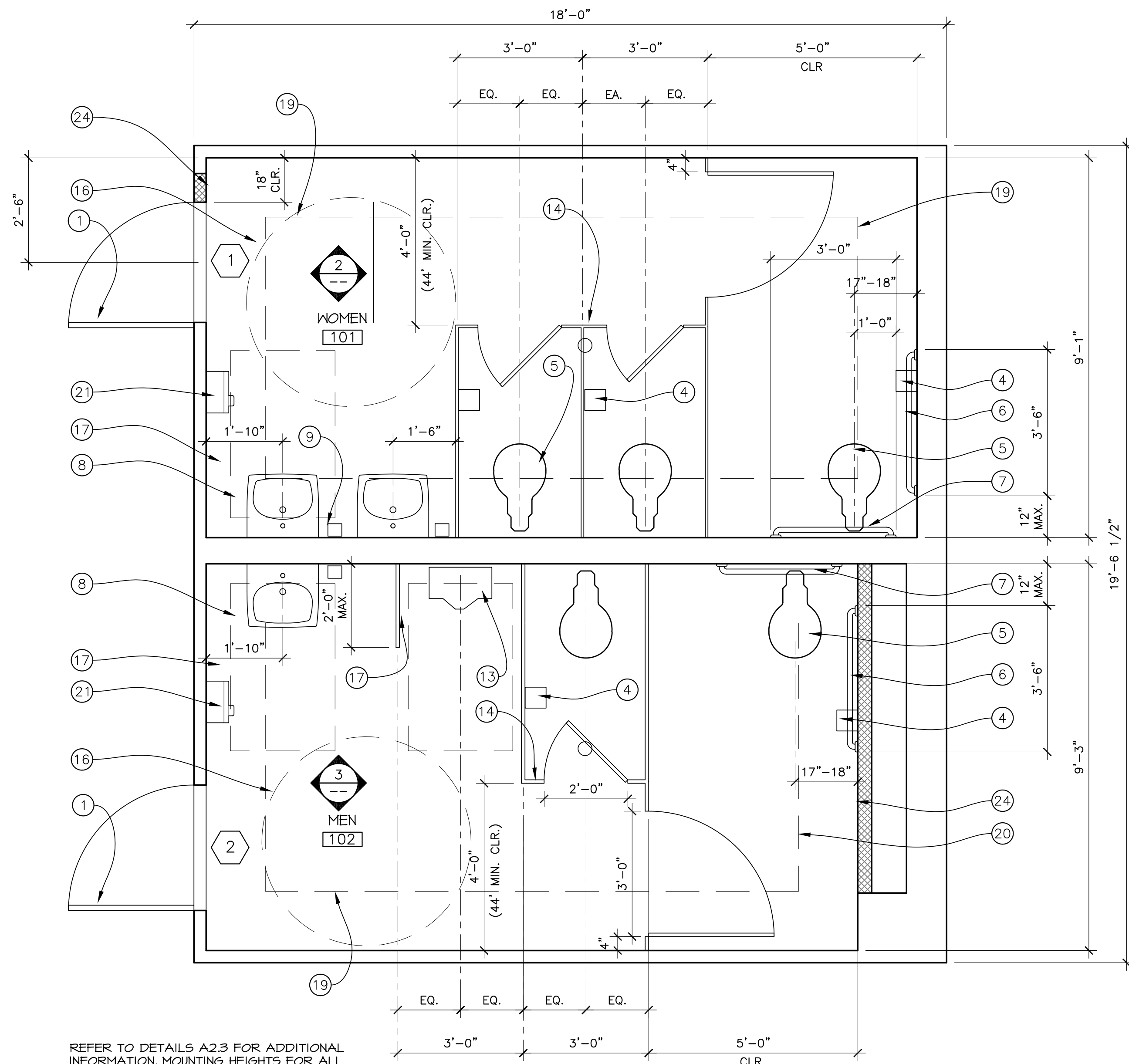
TRASH ENCLOSURE
PLANS & DETAILS

Revisions	R&A No: A060622	Date: 11/19/2018	Drawn: R&A	Checked: L.U.U.	Consult: No: XXX
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RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE

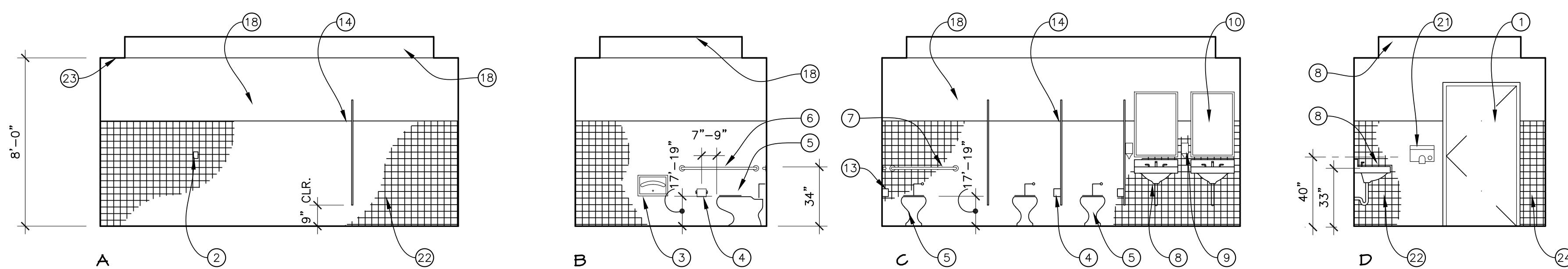
1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

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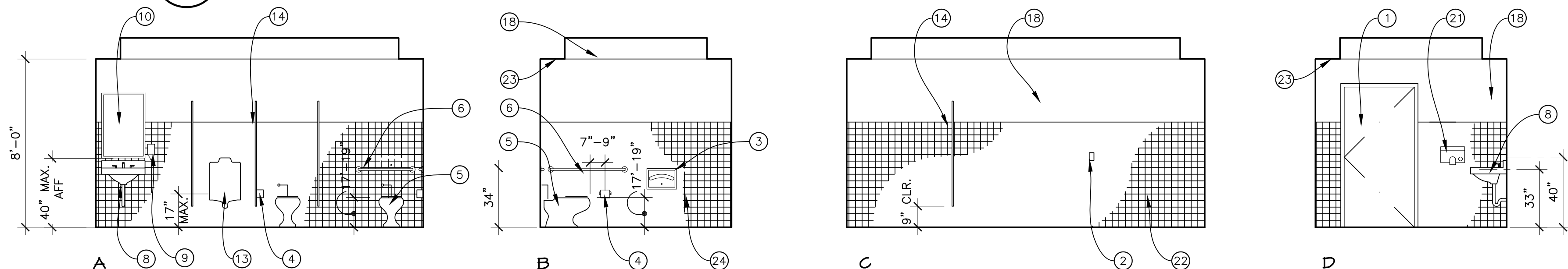
REFER TO DETAILS A2.3 FOR ADDITIONAL INFORMATION, MOUNTING HEIGHTS FOR ALL PLUMBING FIXTURES AND ACCESSORIES.

1 PROPOSED FLOOR PLAN
SCALE 1/2" : 1'-0"



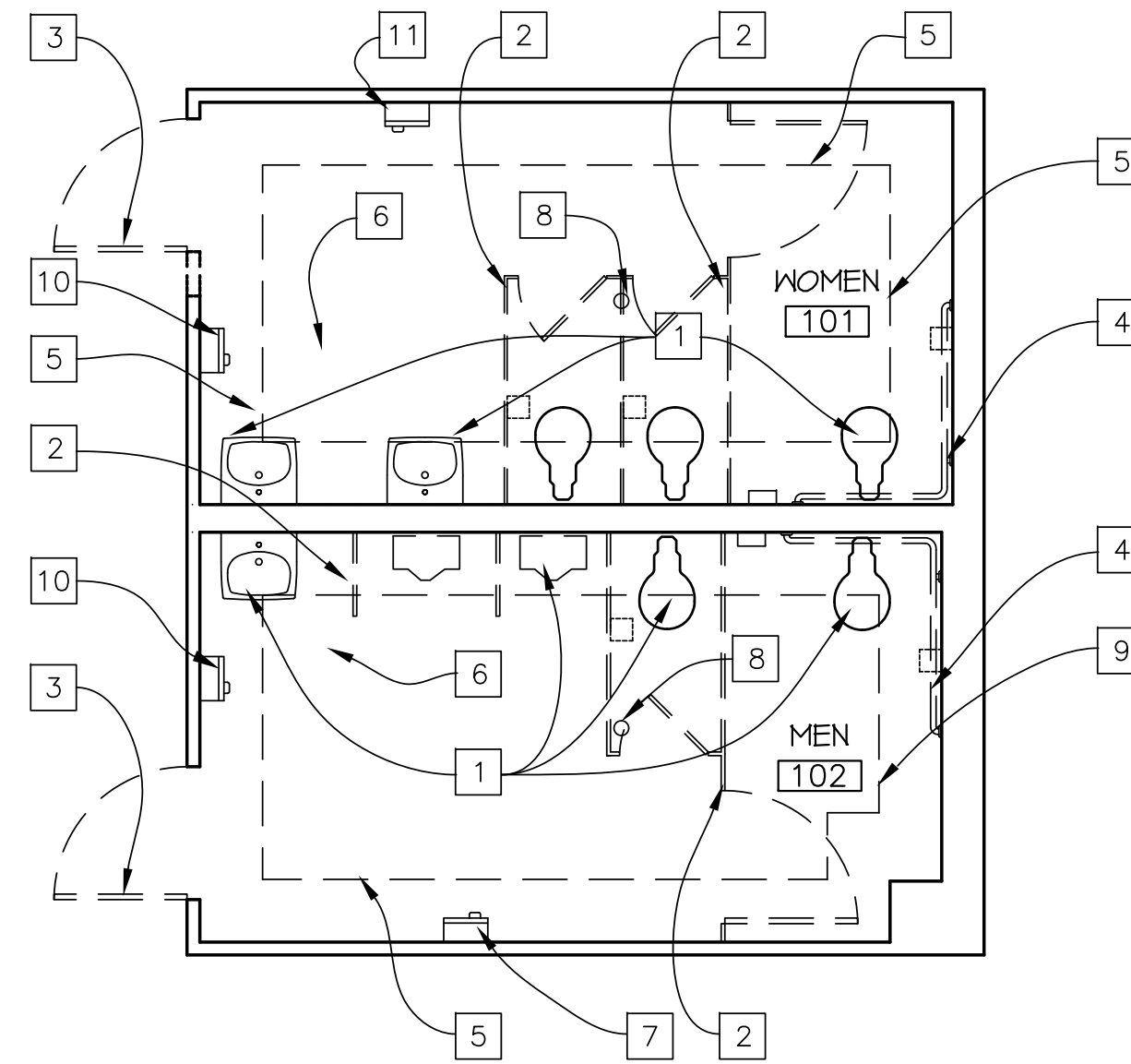
REFER TO DETAILS A2.3 FOR ADDITIONAL INFORMATION, MOUNTING HEIGHTS FOR ALL PLUMBING FIXTURES AND ACCESSORIES.

2 WOMEN TOILET
SCALE 1/4" : 1'-0"



REFER TO DETAILS A2.3 FOR ADDITIONAL INFORMATION, MOUNTING HEIGHTS FOR ALL PLUMBING FIXTURES AND ACCESSORIES.

3 MEN TOILET
SCALE 1/4" : 1'-0"



NOTE:
ALL INTERIOR FINISHES, INCLUDING GYPSUM BOARD, CERAMIC TILED FLOORS AND WALLS, CEILING FINISHES TO REMAIN. REMOVE AND PROVIDE MATCHING REPLACEMENT FLOOR AND WALL TILED FINISHES AS REQUIRED TO INSTALL FIXTURES AND ACCESSORIES.

DEMOLITION FLOOR PLAN
SCALE 1/4" : 1'-0"

DEMOLITION NOTE LEGEND

- REMOVE EXISTING PLUMBING FIXTURES, TYPICAL.
- REMOVE EXISTING PARTITIONS.
- REMOVE EXISTING DOOR AND DOOR FRAME.
- REMOVE EXISTING GRAB BARS, ACCESSORY DISPENSERS AND RECEPTACLES.
- EXISTING FRAMED SOFFIT TO BE REMAIN, EXISTING DIFFUSER TO BE REPLACED.
- EXISTING FLOORING TO BE REMAIN. PROTECT IN PLACE.
- EXISTING HAND DRYER TO BE REMOVED. PROVIDE COVER PLATE.
- EXISTING DRAIN LOCATION TO REMAIN.
- PORTION OF EXISTING SOFFIT TO BE REMOVED AT RELOCATED WALL.
- EXISTING HAND DRYER TO REMAIN.

DEMOLITION GENERAL NOTES

- ALL INTERIOR FINISHES, INCLUDING GYPSUM BOARD, CERAMIC TILED FLOORS AND WALLS, CEILING FINISHES TO REMAIN. REMOVE AND PROVIDE MATCHING REPLACEMENT FLOOR AND WALL TILED FINISHES AS REQUIRED TO INSTALL FIXTURES AND ACCESSORIES.
- REFER TO ELECTRICAL DRAWINGS.
- ALL PLUMBING FIXTURES, PIPING TO BE REMOVED WHERE REQUIRED IN WALLS AND FLOOR FOR PROPOSED REPLACEMENT PLUMBING FIXTURE LOCATIONS.
- ALL GRAB BARS, ACCESSORY DISPENSERS AND RECEPTACLES TO BE REMOVED & REPLACED.
- ALL MECHANICAL DIFFUSERS/MECHANICAL FANS TO BE REMOVED, REPLACED. SEE MECHANICAL DRAWINGS.

ACCESSIBILITY NOTE

REFER TO DETAILS A2.3 FOR ADDITIONAL INFORMATION, MOUNTING HEIGHTS FOR ALL PLUMBING FIXTURES AND ACCESSORIES.

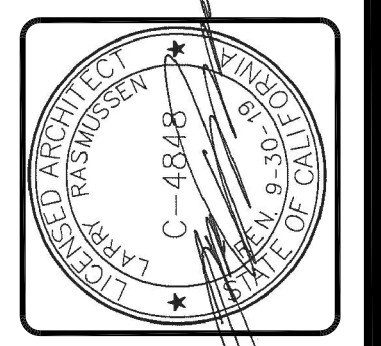
NOTE LEGEND

- DOOR & FRAME, ACCESSIBLE SIGNAGE AND THRESHOLD. SEE DOOR SCHEDULE.
- COVER PLATE AT HAND DRYER REMOVED.
- STAINLESS STEEL TOILET SEAT COVER DISPENSER.
- SURFACE MOUNTED STAINLESS STEEL TOILET PAPER DISPENSER.
- TOILET LEVER TO BE LOCATED ON WIDE SIDE AT ACCESSIBLE STALL. SEE PLUMBING DRAWINGS.
- 1-1/2" DIAMETER X 42" LONG STAINLESS STEEL GRAB BAR MOUNTED 33" ABOVE FINISHED FLOOR. MOUNTING HEIGHT TO TOP OF BAR.
- 1-1/2" DIAMETER X 36" LONG STAINLESS STEEL GRAB BAR MOUNTED 33" ABOVE FINISHED FLOOR. PROVIDE BLOCKING. MOUNTING HEIGHT TO TOP OF BAR.
- WALL HUNG LAVATORY WITH LEVER CONTROLS, INSULATED HOT WATER AND DRAIN LINES. SEE PLUMBING DRAWINGS.
- WALL MOUNTED SOAP DISPENSER.
- 24" X 36" MIRROR STAINLESS STEEL FRAME. MIRROR TO BE INSTALLED WITH ANTI GRAFFITI SCRATCH FILM.
- FLOOR DRAIN. SEE PLUMBING DRAWINGS.
- URINAL. SEE PLUMBING DRAWINGS.
- PRIVACY PARTITION SCREEN. PROVIDE 9" CLEAR AT BOTTOM OF PARTITION TO FINISHED FLOOR.
- 3'-0" WIDE COMPARTMENT DOOR WITH GRASPING HARDWARE, SELF CLOSER.
- 60" DIAMETER TURNING RADIUS.
- 30' X 48" MINIMUM CLEAR.
- GYPSUM BOARD WALL, CEILING AND/OR SOFFIT FINISH. PAINT.
- EXISTING SOFFIT, REPLACEMENT LIGHTING. SEE ELECTRICAL DRAWINGS.
- REPLACEMENT SOFFIT AND LIGHTING AT PORTION OF MENS ROOM.
- EXISTING ELECTRIC HAND DRYER. HAND DRYER MAY EXTEND INTO ADJACENT 30" X 48" CLEAR AREA 4" MAXIMUM.
- EXISTING CERAMIC TILE WAINSCOT TO REMAIN.
- REPLACEMENT LIGHTING PANEL AT SOFFIT. SEE REFLECTED CEILING PLAN.
- REPLACEMENT CERAMIC TILE WAINSCOT TO MATCH EXISTING AS REQUIRED.

WALL LEGEND

- EXISTING WALL TO BE REMOVED
- EXISTING WALL TO REMAIN.
- METAL STUD WALL WITH 5/8" WATER RESISTANT GYPSUM BOARD TYPE "X" ON EXPOSED SIDE. PROVIDE REPLACEMENT TILED WAINSCOT TO MATCH EXISTING. AT EXTERIOR WALLS, PROVIDE FRAMING, EXTERIOR PLASTER TO MATCH EXISTING. PAINT.

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FLOOR PLAN INTERIOR ELEVATIONS	
Revisions	
R&A No:	A060622
Date:	1/19/2018
Drawn:	M.C.C.
Checked:	L.U.U.
Consult:	No: XXX

RESTROOM/SITE ADA UPGRADE VENTURA HARBOR VILLAGE
1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

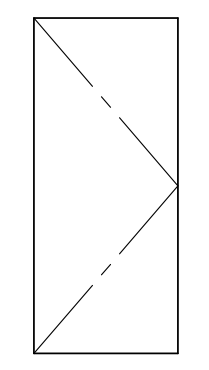
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ROOM FINISH SCHEDULE											
ROOM NO.	ROOM NAME	CEILING			FLOOR			WALLS			REMARKS
		HEIGHT	MATERIAL	FINISH	MATERIAL	FINISH	BASE	MATERIAL	FINISH		
101	WOMEN	8'-0"	GB	S	CT	MFR	CT	GB	S	MFR	ALL TILED FINISHES TO BE EXISTING (U.N.O.) PATCH TO MATCH (E) FINISH
102	MEN	8'-0"	GB	S	CT	MFR	CT	GB	S	MFR	ALL TILED FINISHES TO BE EXISTING (U.N.O.) PATCH TO MATCH (E) FINISH

NOTE:
 PAINT ALL EXISTING GYPSUM BOARD WALL AND CEILING FINISHES
 EXISTING TILE FINISHES TO REMAIN. PROVIDE REPLACEMENT TILE TO MATCH EXISTING
 WHERE REQUIRED TO BE REPLACED FOR INSTALLATION OF FIXTURES AND ACCESSORIES

DOOR SCHEDULE															
DOOR NO.	TYPE	SIZE		FINISH	DETAIL			FRAME		HARDWARE SET	LABEL	HARDWARE TYPE	CLOSER	SIGN	REMARKS
		WIDTH	HEIGHT		HEAD	JAMB	THRESHOLD	MATERIAL	FINISH						
1	AI	3'-0"	7'-0"	S	8/A2.3	8/A2.3	7/A2.3	HM	S	I	N	L	Y	HC	SEE DETAILS 546/A2.3
1	AI	3'-0"	7'-0"	S	8/A2.3	8/A2.3	7/A2.3	HM	S	I	N	L	Y	HC	SEE DETAILS 546/A2.3

DOOR TYPES



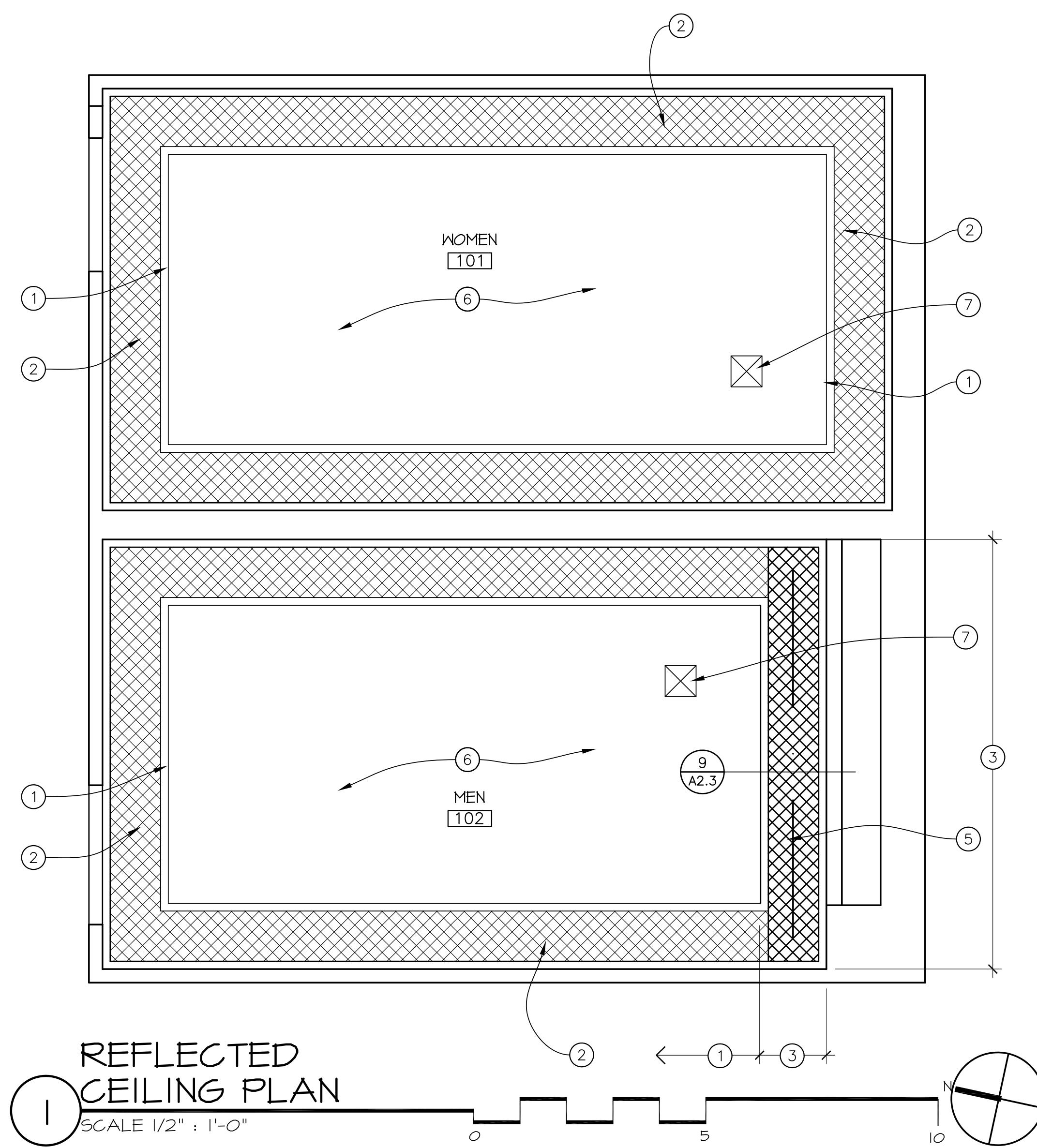
HOLLOW METAL

ABBREVIATIONS

- CT CERAMIC TILE
- EX EXISTING
- GB 5/8" GYPSUM BOARD
- HC ACCESSIBLE SIGNAGE: MENS-WOMENS SEE DETAIL 546/A2.3
- HM HOLLOW METAL
- L LEVER TYPE HARDWARE
- MFR MANUFACTURER'S STANDARD FINISH/ MANUFACTURER'S SUPPLIED ITEM
- N NO OR NONE
- PL EXTERIOR PLASTER FINISH
- S PAINT PROCESS "S" (SEMI-GLOSS ENAMEL)
- VAR VARIES
- Y YES

GENERAL FINISH & DOOR NOTES

1. DOOR & GATE HARDWARE:
 - A. ALL DOOR AND LATCHES SHALL BE LEVER TYPE AND SHALL BE LOCATED 34"-44" ABOVE FINISH FLOOR.
 - B. DOOR HARDWARE SHALL NOT REQUIRE MORE THAN 5 LBS. OF PRESSURE TO OPERATE EXTERIOR DOOR AND NO MORE THAN 5 LBS. OF PRESSURE TO OPERATE INTERIOR DOORS. FIRE RATED DOORS MAY REQUIRE 15 LBS. OF PRESSURE TO OPERATE. PRESSURE TO OPERATE DOORS SHALL BE MEASURED AT RIGHT ANGLES TO THE HINGED DOORS.
 - C. THRESHOLDS MAY NOT BE MORE THAN 1/2" HIGH AND EXPOSED EDGES SHALL BE BEVELED, WITH A SLOPE NO GREATER THAN 45 DEGREES. MAXIMUM ALLOWED SINGLE VERTICAL CHANGE IN ELEVATION SHALL BE 1/4".
 - D. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
 - E. THE BOTTOM 10" OF ALL DOORS AND GATES SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE TO ALLOW THE DOOR OR GATE TO BE OPENED BY A WHEEL CHAIR FOOTREST WITHOUT CREATING A TRAP HAZARDOUS CONDITION. WHERE NARROW FRAME DOORS ARE USED, A 10" HIGH SMOOTH PANEL SHALL BE INSTALLED ON THE PUSH SIDE OF THE DOOR, WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEEL CHAIR FOOTREST WITHOUT CREATING A TRAP HAZARDOUS CONDITION. EXCEPTION FOR SLIDING DOORS.
 - F. ALL FIRE DOOR ASSEMBLIES SHALL BE LABELED BY AN APPROVED AGENCY. THE LABELS SHALL COMPLY WITH NFPA 80, AND SHALL BE PERMANENTLY AFFIXED TO THE DOOR.
 - G. WHERE DOOR SWINGS OVER THE LANDINGS, LANDING DEPTH SHALL BE 60" MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION AND THE WIDTH OF LEVEL AREA SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE EXTERIOR DOOR AND 18" PAST THE STRIKE EDGE OF THE INTERIOR DOOR.
 WHERE DOOR DOES NOT SWING OVER THE LANDINGS, LANDING DEPTH SHALL BE 58" MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION.
2. WALL, FLOOR AND CEILING MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN C.B.C. 803.5.
3. INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL COMPLY WITH C.B.C. 804.2 THROUGH 804.4.1 CARPET SHALL COMPLY WITH C.B.C. 11B-302.2.
4. ACCESSIBILITY AND SIGNAGE:
 - A. MENS & WOMENS RESTROOM SIGN CENTERED ON DOOR AND MOUNTED AT 58"-60" A.F.F. SIGN TO BE 1/4" THICK, 12" DIAMETER AND EQUILATERAL TRIANGLE IN CONTRASTING COLORS. WALL MOUNTED SIGNAGE TO THE LATCH SIDE OF THE DOOR. 6" SQUARE INTERNATIONAL SYMBOL OF ACCESSIBILITY WITH VERBAL DESCRIPTION BELOW. SEE CBC 11B-703.4.1.
5. DOORS WITHIN THE ACCESSIBLE PATH OF TRAVEL:
 - A. ALL LATCHING AND LOCKING HAND ACTIVATED DOORS SHALL OPERATE WITH A SINGLE EFFORT WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. LOCKED EXIT DOORS SHALL OPERATE AS ABOVE IN EGRESS DIRECTION.
 - B. DOOR SHALL BE OF A SIZE TO PERMIT INSTALLATION OF A DOOR NOT LESS THAN 3" IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. WHEN INSTALLED EXIT DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE MOUNTED SO THAT THE CLEAR WIDTH OF THE EXIT DOOR IS NOT LESS THAN 32". MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITES TOP. THE BOTTOM 10" OF DOORS SHALL BE A SMOOTH SURFACE.
6. WATER CLOSETS:
 - A. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
 - B. CONTROLS FOR THE FLUSH VALVES FOR TOILETS SHALL BE MOUNTED (ON THE WIDE SIDE OF TOILET AREAS) NO MORE THAN 44" A.F.F. AND REQUIRE NOT MORE THAN 5 LBS. OF FORCE TO OPERATE. BOTH SHALL MEET PERFORMANCE STANDARDS ESTABLISHED.
 - C. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. OF FORCE.
 - D. WATER CLOSETS AND ASSOCIATED FLUSHOMETER VALVES SHALL USE NO MORE THAN 1.6 GALLONS PER FLUSH; ALSO URINALS AND ASSOCIATED FLUSHOMETER BOTH SHALL MEET PERFORMANCE STANDARDS ESTABLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE STANDARD A112.19.2 H & S CODE, SECTION 17921.3(b).
7. LAVATORIES:
 - A. ALL WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED. C.B.C. 11B-606.5.
 - B. FAUCET CONTROLS AND OPERATING MECHANISM (OPERABLE WITH ONE HAND) SHALL BE OF THE TYPE NOT REQUIRING TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST (SUCH AS LAVER-OPERATED) AND AN OPERATING FORCE NOT EXCEEDING 5 LBS.
 - C. IF SELF-CLOSING VALVES ARE USED, THEY SHALL REMAIN OPEN FOR AT LEAST TEN SECONDS.
8. LAVATORIES:
 - A. ALL WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED. C.B.C. 11B-606.5.
 - B. FAUCET CONTROLS AND OPERATING MECHANISM (OPERABLE WITH ONE HAND) SHALL BE OF THE TYPE NOT REQUIRING TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST (SUCH AS LAVER-OPERATED) AND AN OPERATING FORCE NOT EXCEEDING 5 LBS.
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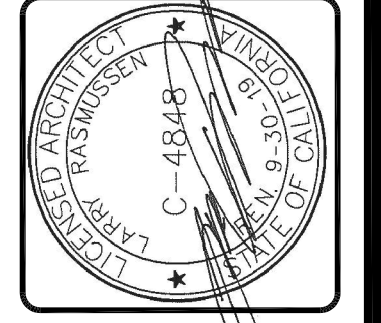
- NOTE LEGEND
1. EXISTING FRAMED GYPSUM BOARD SOFFIT TO REMAIN. PAINT.
 2. REPLACEMENT TRANSLUCENT SOFFIT LIGHTING PANEL AND LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
 3. RE-LOCATED FRAMED GYPSUM BOARD SOFFIT.
 4. EXISTING LIGHTING WITHIN SOFFIT TO REMAIN.
 5. REPLACEMENT LIGHTING WITHIN RE-LOCATED SOFFIT. SEE ELECTRICAL DRAWINGS.
 6. EXISTING GYPSUM BOARD CEILING. PAINT.
 7. REPLACEMENT EXHAUST FAN. SEE MECHANICAL DRAWINGS.

RESTROOM/SITE ADA UPGRADE
 VENTURA HARBOR VILLAGE
 1591 SPINNAKER DRIVE
 VENTURA, CALIFORNIA

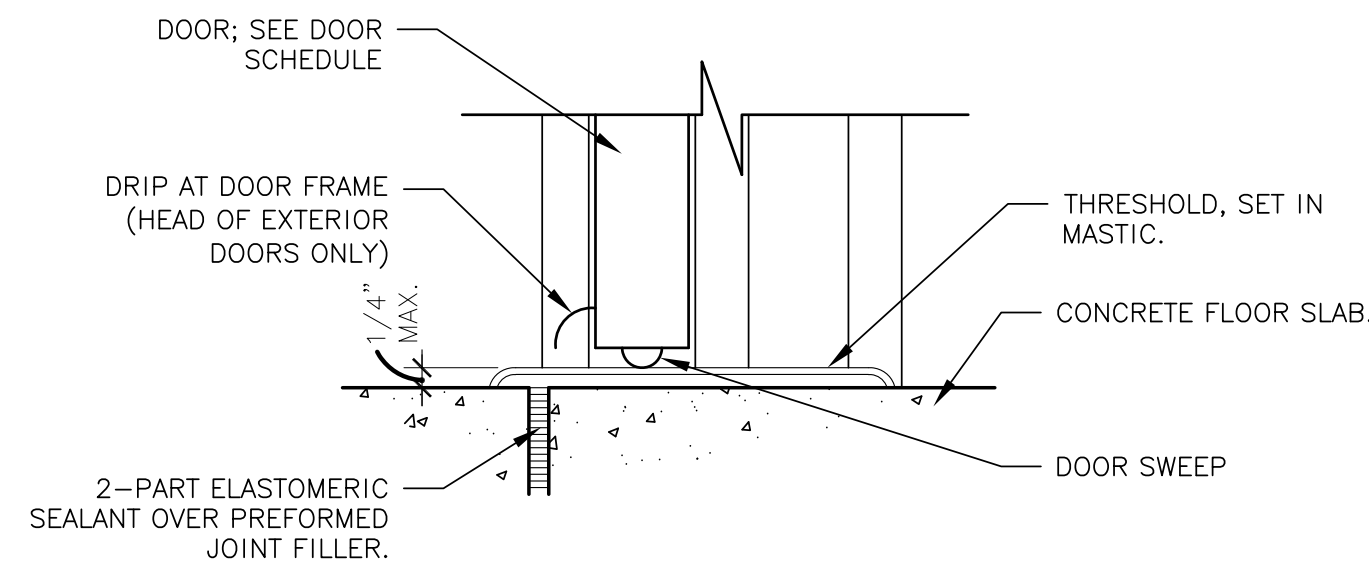
REFLECTED CEILING PLAN SCHEDULES & NOTES

Revisions	R&A No: A060622
Date: 11/19/2018	Drawn: M.C.C.
Checked: L.U.U.	Consult: No: XXX

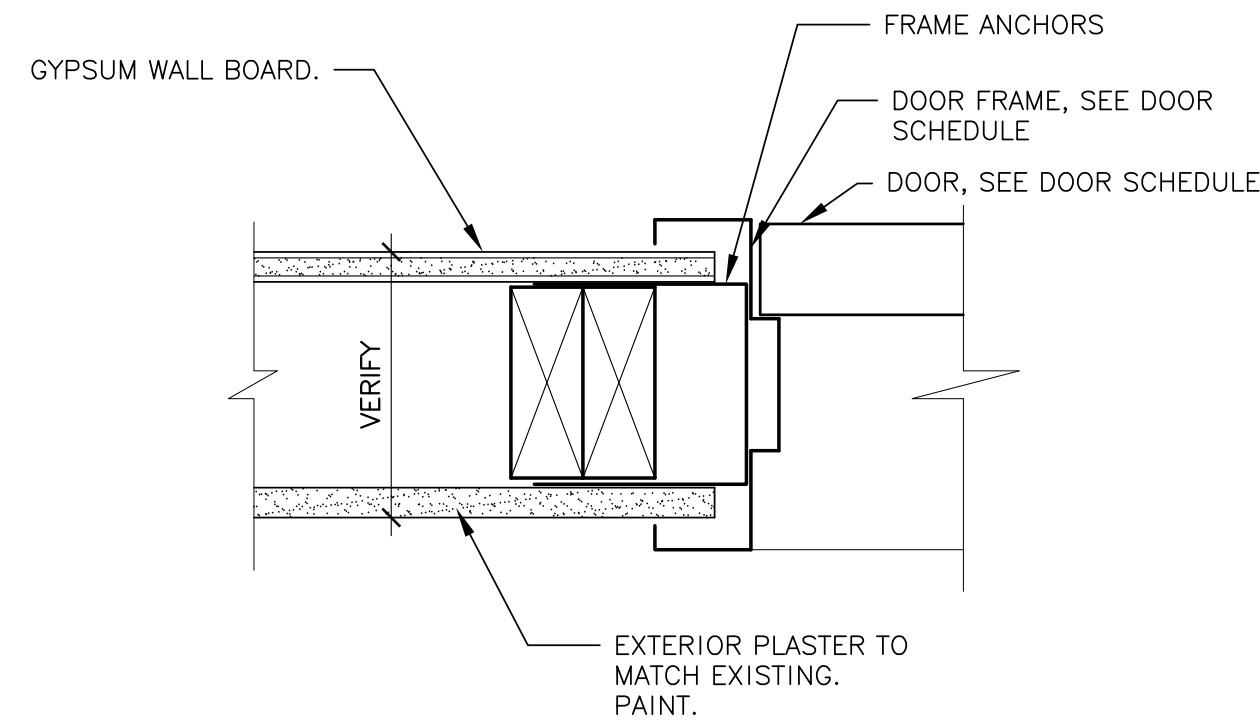
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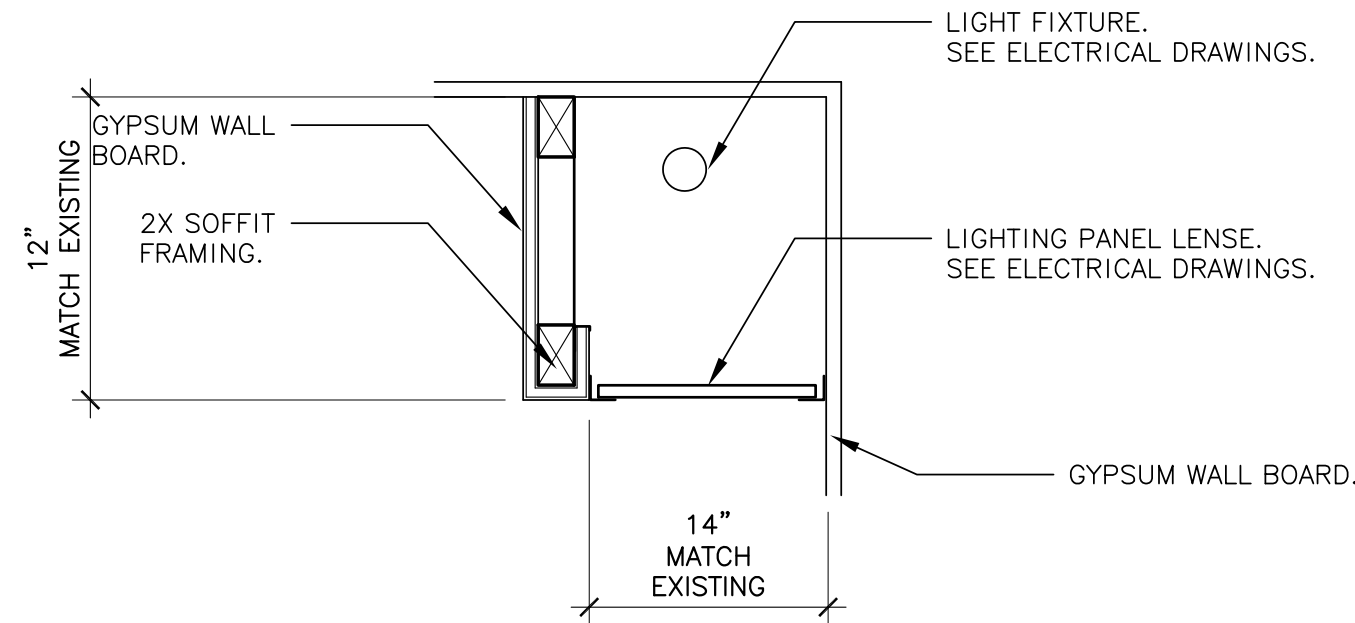
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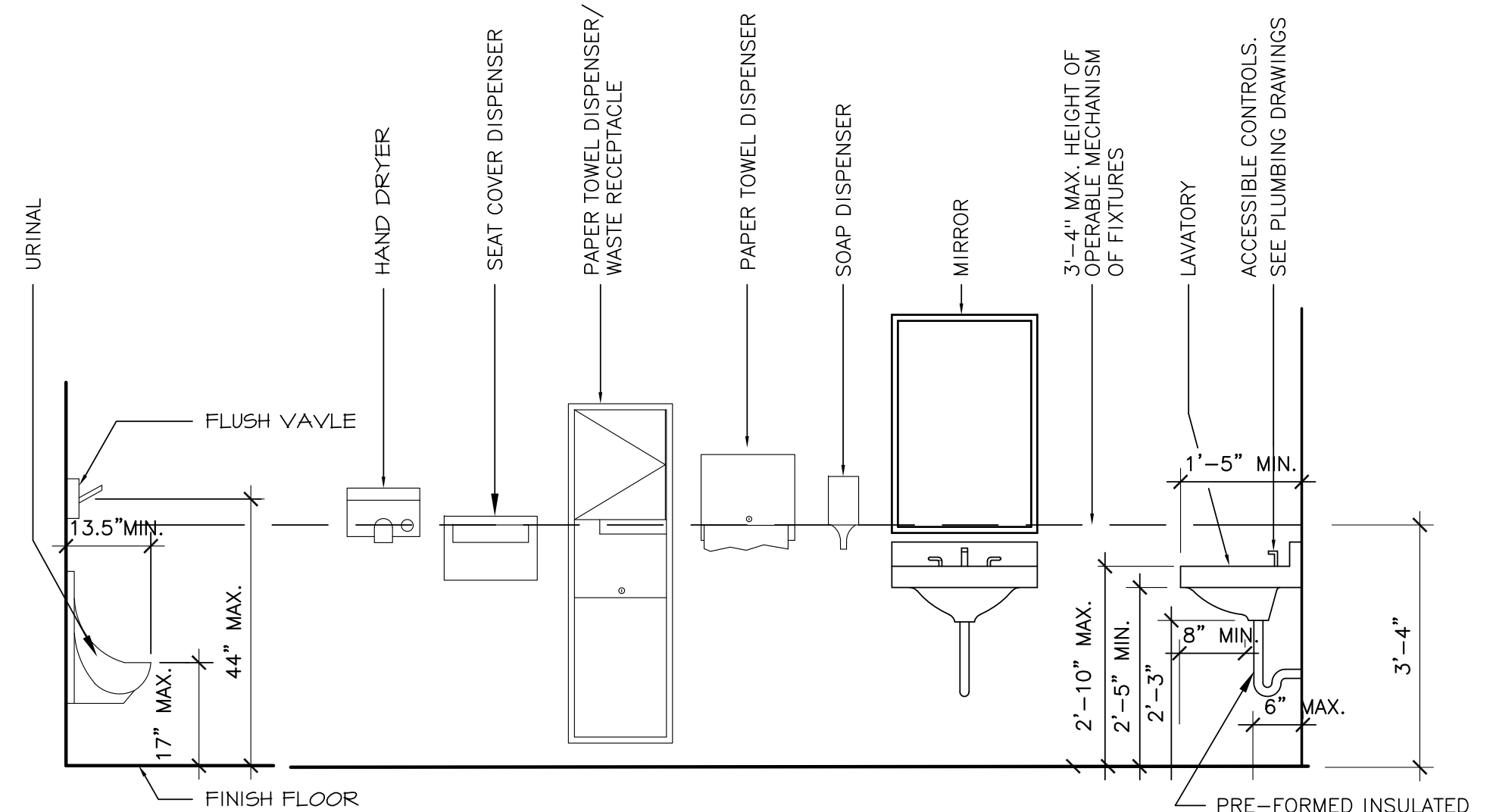
7 EXTERIOR DOOR THRESHOLD
SCALE 3" : 1'-0"



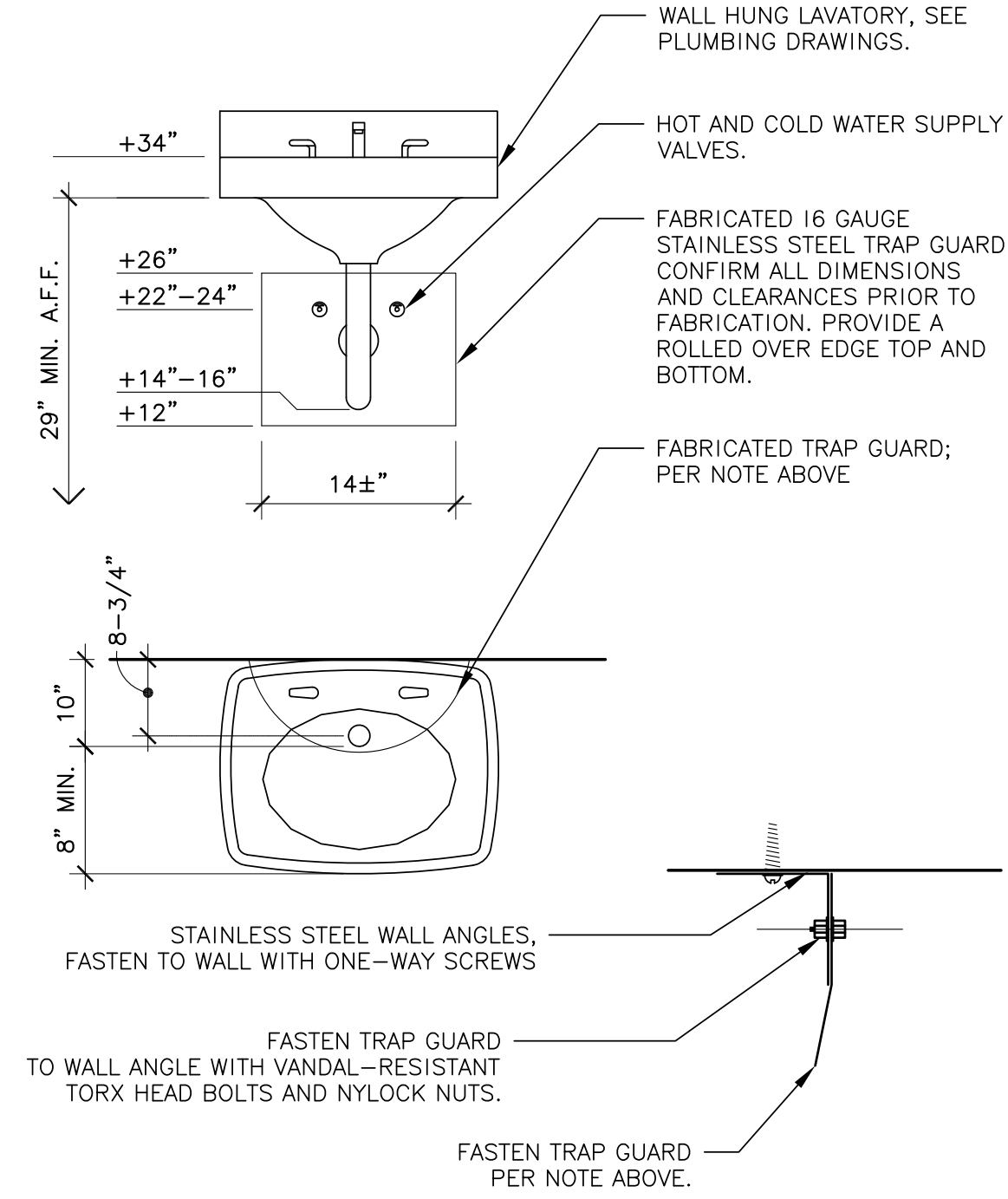
8 HOLLOW METAL DOOR JAMB (HEAD SIM.)
SCALE 3" : 1'-0"



9 SOFFIT
SCALE 1-1/2" : 1'-0"

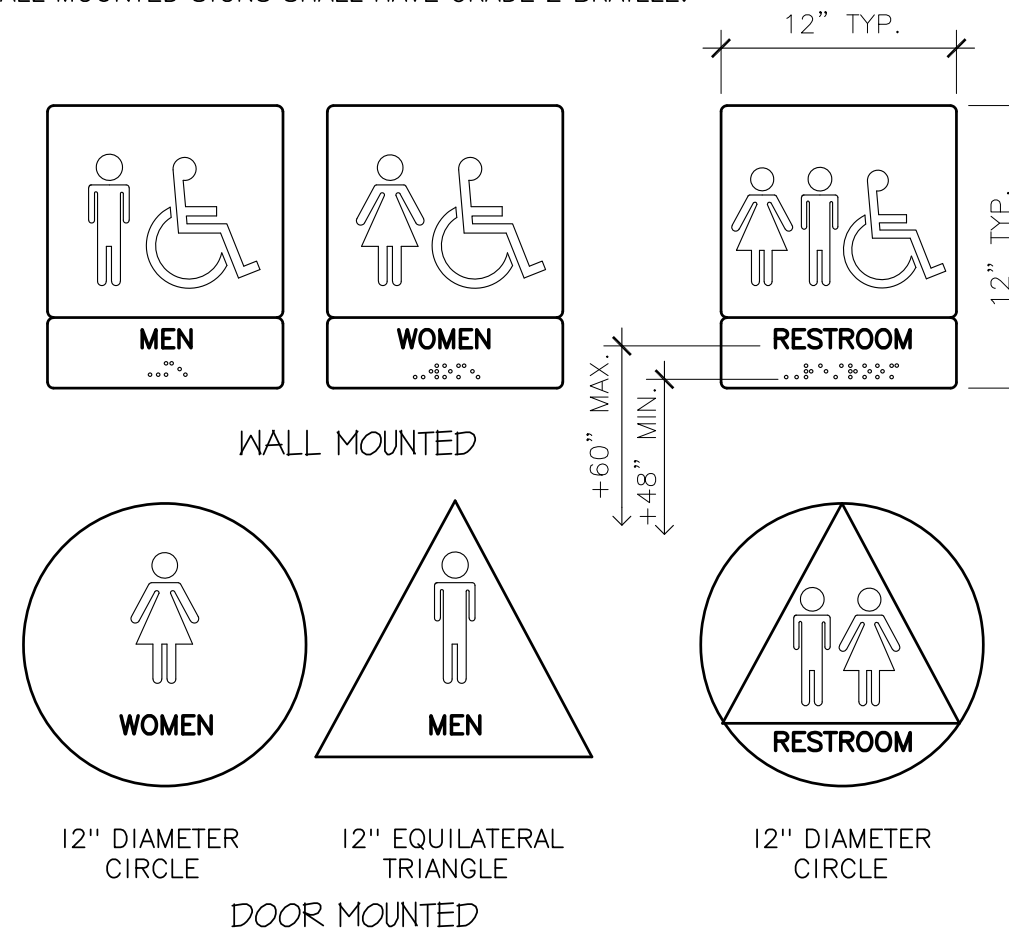


10 ACCESSIBLE RESTROOM FIXTURES
NOT TO SCALE

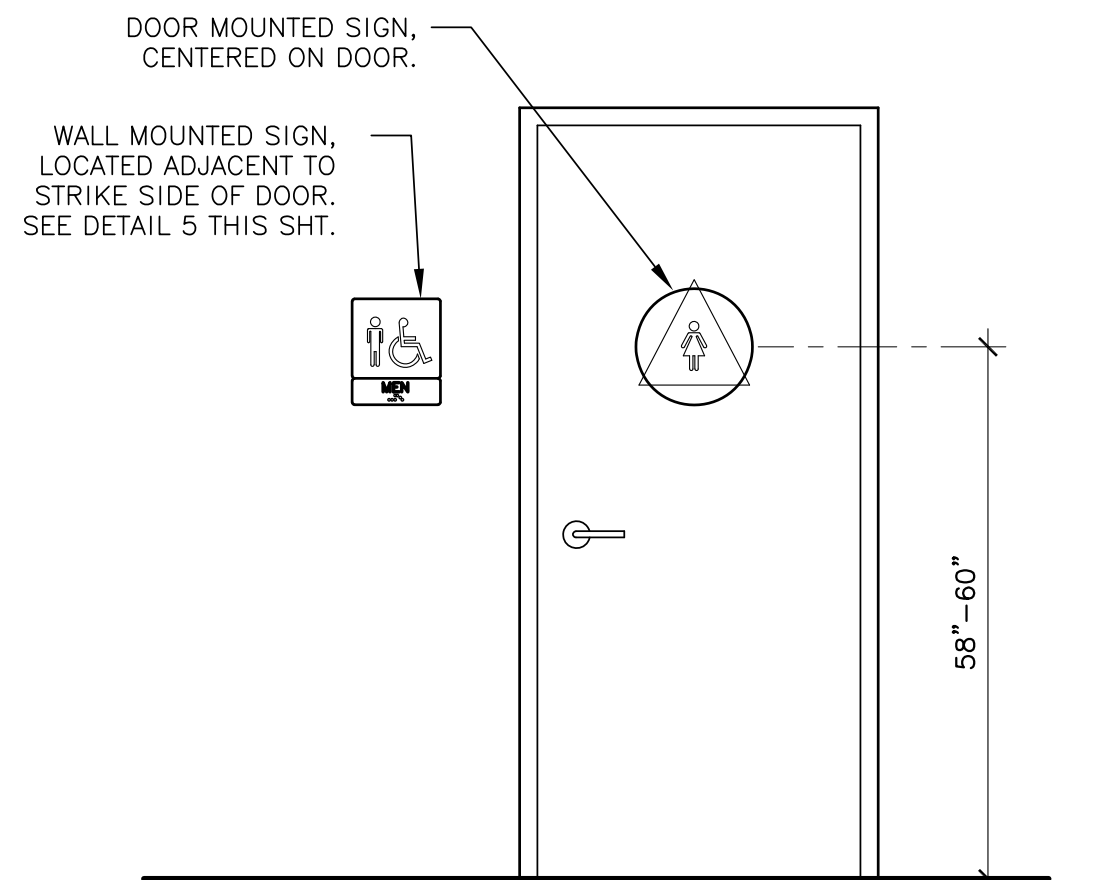


4 LAVATORY
SCALE 1" : 1'-0"

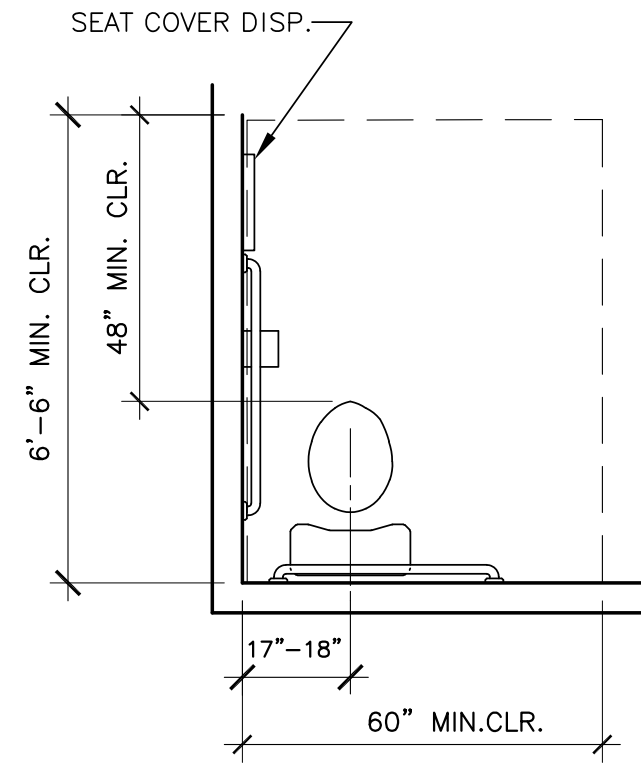
- SIGNS SHALL BE MATTE FINISH PLASTIC, WHITE GRAPHICS ON CONTRASTING BACKGROUND.
- WALL MOUNTED SIGN TEXT SHALL BE BETWEEN 5/8" - 2" HIGH, AND SHALL BE RAISED 1/32".
- WALL MOUNTED SIGNS SHALL HAVE GRADE 2 BRAILLE.



5 TOILET ROOM SIGNS
NOT TO SCALE

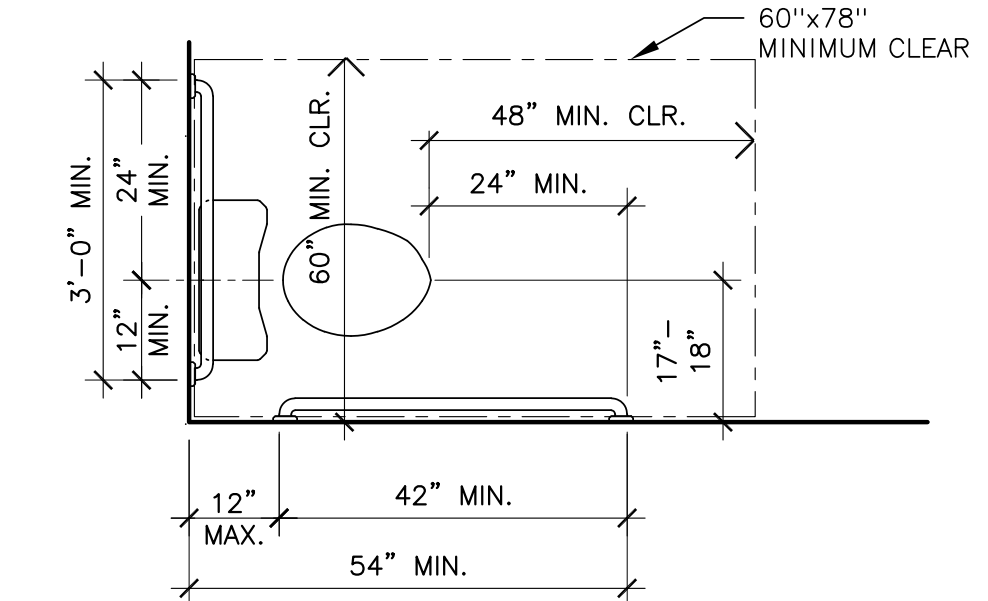


6 DOOR SIGNAGE
NOT TO SCALE

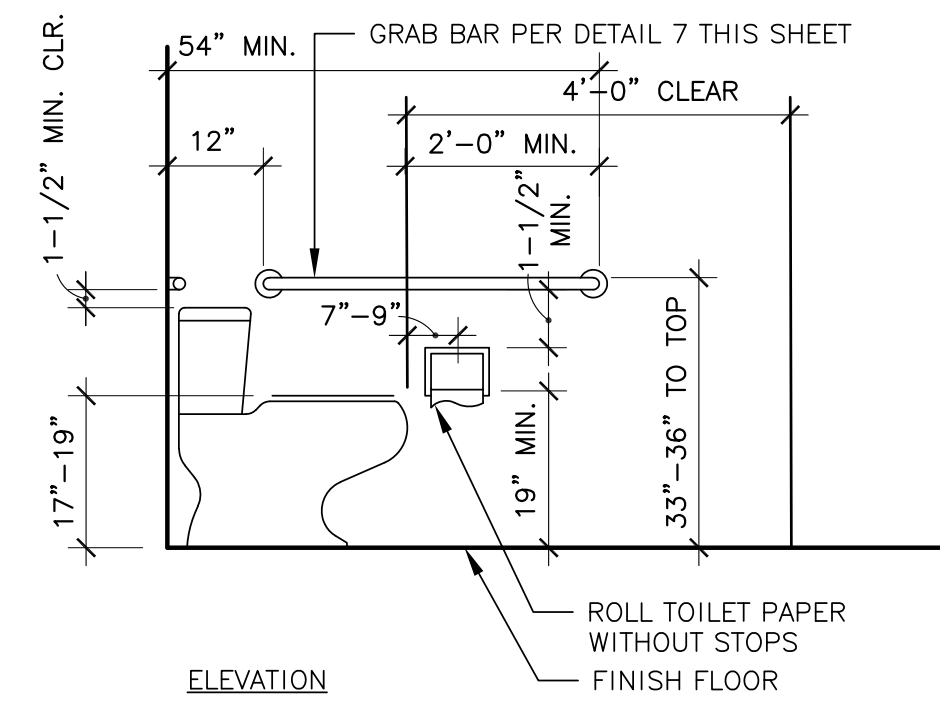


SEE DETAILS 2 AND 4 THIS SHEET FOR ADDITIONAL INFORMATION AND REQUIRED DIMENSIONS
ALL DIMENSIONS SHOWN ON THIS DETAIL ARE TO FINISH SURFACES OR FIXTURE CENTERLINES

1 TOILET STALL
SCALE 3/8" : 1'-0"

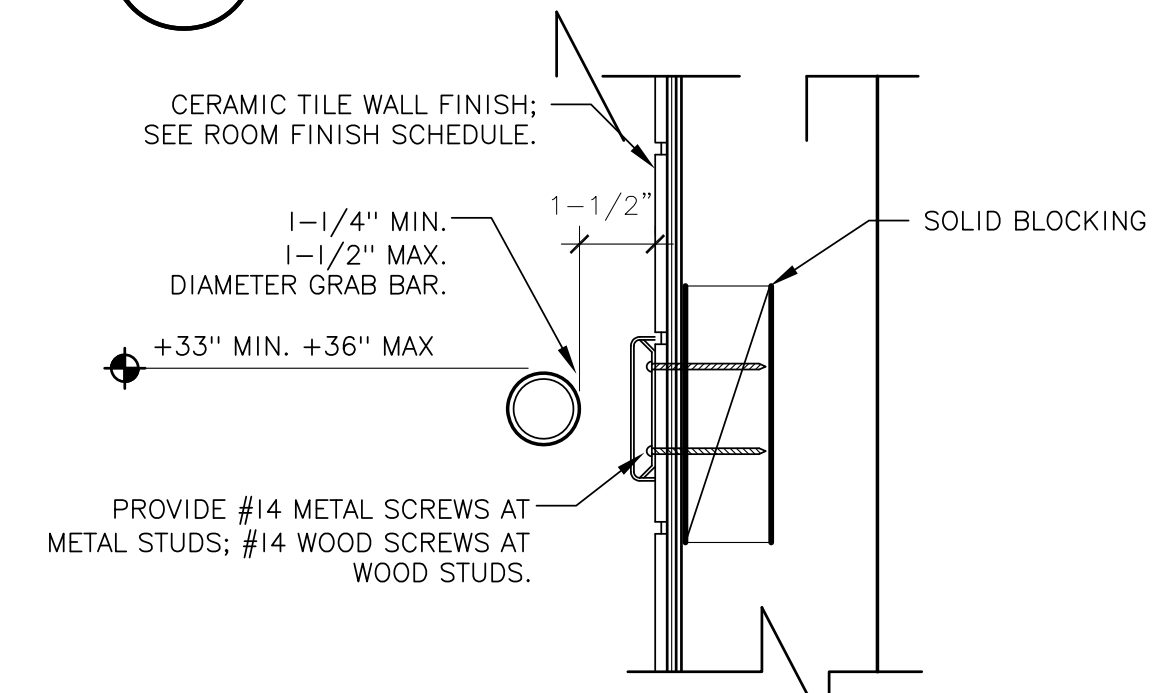


PLAN
FLUSH VALVE SHALL BE LOCATED AT WIDE SIDE OF TOILET (44" HIGH MAX)



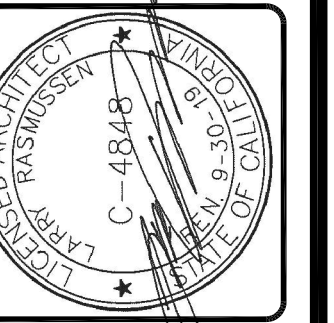
ELEVATION

2 TOILET DIMENSIONS
SCALE 1/2" : 1'-0"



ANY WALL OR OTHER SURFACE ADJACENT TO HANDRAIL SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS
BARS ARE SMOOTH WITH A MINIMUM RADIUS OF 1/8"
MINIMUM STRUCTURAL STRENGTH OF GRAB BAR(S) WILL SUPPORT A 250 LB. POINT LOAD

3 GRAB BAR ANCHOR
SCALE 3" : 1'-0"



Revisions	R&A No.	Date	Drawn	M.C.C.	Checked	L.U.U.	Consult	No.
	A060622	1/19/2018						XXX

2016 CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES, SHEET 1

THIS SHEET WAS ORIGINALLY PRINTED ON A 24"x36" SHEET.
FILE PATH & NAME: P:\A060622 VENTURA HARBOR VILLAGE 1591 RESTROOM ADA UPGRADE\DRAWINGS\CONST DOCS\GB_02.DWG PLOTTED: 12:13 PM

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INSPECTOR SIGNOFF

CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed building [N] or to additions and alterations [AA]. When the code section applies to both, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 Scope. The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES. Eligible vehicles are limited to the following:

- Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT ZEV) or CNG fueled (original equipment manufacturer only) regulated under Health and Safety Code section 43000 and CCR, Title 13, Sections 1961 and 1962.
- High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.501 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ride-sharing.

Note: Source: Vehicle Code, Division 1, Section 668

ZEV. Any vehicle certified to zero-emission standards.

SECTION 5.106 SITE DEVELOPMENT

5.106.1 STORM WATER POLLUTION PREVENTION. Newly constructed projects and additions which disturb less than one acre of land shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

5.106.1.2 Best Management Practices (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP.

- Soil loss BMP that should be considered for each project include, but are not limited to, the following:
 - Scheduling construction activity.
 - Preservation of natural features, vegetation and soil.
 - Drainage swales or lined ditches to control stormwater flow.
 - Mulching or hydroseeding to stabilize disturbed soils.
 - Erosion control to protect slopes.
 - Protection of storm drain inlets (gravel bags or catch basin inserts).
 - Perimeter sediment control (perimeter silt fence, fiber rolls).
 - Sediment trap or sediment basin to retain sediment on site.
 - Stabilized construction exits.
 - Wind erosion control.
- Other soil loss BMP acceptable to the enforcing agency.
- Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
 - Material handling and waste management.
 - Building materials stockpile management.
 - Management of washout areas (concrete, paints, stains, etc.).
 - Control of vehicle/equipment fueling to contractor's staging area.
 - Vehicle and equipment cleaning performed off site.
 - Spill prevention and control.
 - Other housekeeping BMP acceptable to the enforcing agency.

5.106.4 Bicycle parking. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

5.106.4.1 Bicycle parking. [BSC] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. [BSC] If the project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.

Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with over 10 tenant-occupants or for additions or alterations that add 10 or more tenant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicle parking spaces being added, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and shall meet one of the following:

- Covered, lockable enclosures with permanently anchored racks for bicycles;
- Lockable bicycle rooms with permanently anchored racks; or
- Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.

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5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

- Covered, lockable enclosures with permanently anchored racks for bicycles;
- Lockable bicycle rooms with permanently anchored racks; or
- Lockable, permanently anchored bicycle lockers.

5.106.5.2 DESIGNATED PARKING. 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 as follows:

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
25-50	3
51-75	6
76-100	8
101-150	11
151-200	16
201 AND OVER	AT LEAST 8% OF TOTAL

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 / VAN POOL / EV

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.

5.106.5.3 Electric vehicle (EV) charging. [N] 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). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:

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:

- The type and location of the EVSE.
- A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.
- The raceway shall not be less than trade size 1".
- 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.
- 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 space 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:

- The type and location of the EVSE.
- The raceway(s) shall originate at a service panel or 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.
- Plan design shall be based upon 40-ampere minimum branch circuits.
- 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.
- 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] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

- Where there is insufficient electrical supply.
- Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES
0-50	0
51-75	1
76-100	2
101-200	3
201 and over	3% ¹

1. Calculation for spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for the 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.

Notes:

- The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/trfops/policy/13-01.pdf
- See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.
- The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides detailed information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.

5.106.8 LIGHT POLLUTION REDUCTION. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

- The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
- Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and
- Allowable BUG ratings not exceeding those shown in Table 5.106.8, or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

- Luminaires that qualify as exceptions in Section 147 of the California Energy Code.
- Emergency lighting.

Note: [N] See also California Building Code, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.

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:

- Swales.
- Water collection and disposal systems.
- French drains.
- Water retention gardens.
- Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

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DIVISION 5.2 ENERGY EFFICIENCY

SECTION 5.201 GENERAL

5.201.1 Scope. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION

SECTION 5.301 GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following terms are defined in Chapter 2 (and are included here for reference)

GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance California Code of Regulations, Title 23, Division 2, Chapter 2.7, regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of CALGreen, a dedicated meter may be considered a submeter.

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

SECTION 5.303 INDOOR WATER USE

5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:

- For each individual leased, rented or other tenant space within the building projected to consume more than 350,000 gallons (350,000 gpd), including, but not limited to, spaces used for laundry or cleaning, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
- Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
 - Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
 - Makeup water for evaporative coolers that use less than 6 gpm (0.04 L/s).
 - 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 within an addition that is projected to consume more than 1,000 gpd.

5.303.2 Reserved.

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:

5.303.3.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specifications for Tank-Type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduces flushes and one full flush.

5.303.3.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads.

5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.

5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 (rim space (inches) at 60 psi).

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 (rim space (inches) at 60 psi).

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.4 Areas of addition 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 shall apply to new fixtures in additions of areas of alteration to the building.

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 1401.1 of the California Plumbing Code and in Chapter 6 of this code.

SECTION 5.304 OUTDOOR WATER USE

5.304.1 WATER BUDGET. A water budget shall be developed for landscape irrigation use that installed in conjunction with a new building or an addition or alteration conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Water Efficient Landscape Ordinance where no local ordinance is applicable.

Note: Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at: <http://www.water.ca.gov/waterefficiency/docs/WaterOrdSec492.cfm>

5.304.2 OUTDOOR POTABLE WATER USE. For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which Water Code §535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.

5.304.3 IRRIGATION DESIGN. In new nonresidential construction with at least 1,000 but not more than 2,500 square feet of cumulative landscaped area (the level at which the MWELO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

5.304.3.1 Irrigation controllers. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

- Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
- Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

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DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL

5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402 DEFINITIONS

5.402.1 Definitions. The following terms are defined in Chapter 2 .

ADJUST, BALANCE, BUILDING COMMISSIONING, TEST.

SECTION 5.407 WATER 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 1403.2 (Weather Protection) and California Energy Code Section 150, (Mandatory Features and Devices), manufacturer's installation instructions or local ordinance, whichever is more stringent.

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 spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain 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:

- An installed awning at least 4 feet in depth.
- The door is protected by a roof overhang at least 4 feet in depth.
- The door is recessed at least 4 feet.
- Other methods which provide equivalent protection.

5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 50% of the non-hazardous 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.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:

- Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
- Determines if construction and demolition waste materials will be sorted on-site (collected-separated) or bulk mixed (single stream).
- Identifies diversion facilities where construction and demolition waste material collected will be taken.
- Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

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.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

- Excavated soil and land-clearing debris.
- Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
- Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 50% minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

- Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.
- Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. [BSC] 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

- If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
- For a map of known pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdffa.ca.gov)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the disposal, recycling, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals or meet a lawfully enacted local recycling ordinance, if more restrictive..

5.410.1.1 Additions. [A] All additions conducted within a 12-month period under single or multiple permits, resulting in an increasing building floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the Public Resources Code. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. [N] For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include:

- Owner's or Owner representative's project requirements.
- Basic Design.
- Commissioning measures shown in the construction documents.
- Commissioning plan.
- Functional performance testing.
- Documentation and training.
- Commissioning report.

Exceptions:

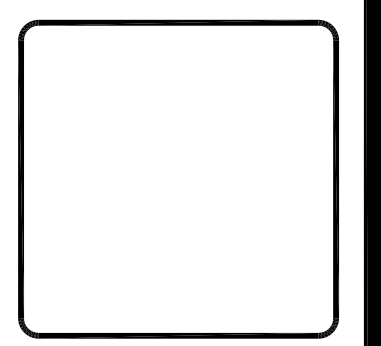
- Unconditioned warehouses of any size.
- Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
- Tenant improvement less than 10,000 square feet as described in Section 303.1.1.
- Commissioning requirements for energy systems covered by the California Energy Code.
- Open parking garages of any size or open parking garage areas, of any size, within a structure.

Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air conditioning.

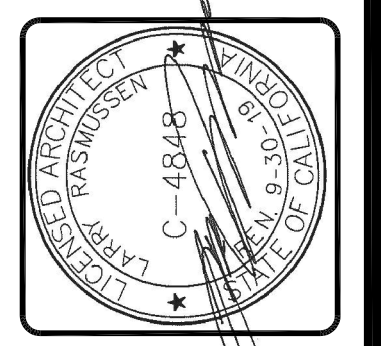
All building systems and components covered by Title 24, Part 6, as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements.

Informational Notes:

- IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 does not certify individuals to conduct functional performance tests or to adjust and balance systems.
- Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the California Energy Code.



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GREEN BUILDING MEASURES

RESTROOM/SITE ADA UPGRADE VENTURA HARBOR VILLAGE

1591 SPINNAKER DRIVE VENTURA, CALIFORNIA

Sheet No.

GB1

2016 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES, SHEET 2

THIS SHEET WAS ORIGINALLY PRINTED ON A 24" x 36" SHEET.

FILE PATH & NAME: P:\A060622 VENTURA HARBOR VILLAGE\1591 RESTROOM ADA UPGRADE\DRAWINGS\CONST DOCS\GB_ GB2.DWG PLOTTED: 12:14 PM

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5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:

1. Environmental and sustainability goals.
2. Energy efficiency goals [refer to 2013 California Energy Code, Section 120.8(b)].
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

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. The Basis of Design document shall cover the following systems:

1. Heating, ventilation, air conditioning (HVAC) systems and controls [refer to 2013 California Energy Code, Section 120.8].
2. Indoor lighting system and controls [refer to 2013 California Energy Code, Section 120.8(c)].
3. Water heating system [refer to 2013 California Energy Code, Section 120.8(c)].
4. Renewable energy systems.
5. Landscape irrigation systems.
6. Water reuse systems.

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:

1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
 - a. An explanation of the original design intent.
 - b. Equipment and systems to be tested, including the extent of tests.
 - c. Functions to be tested.
 - d. Conditions under which the tests shall be performed.
 - e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 Documentation and training. [N] Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:

1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events, etc.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of certifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

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 documented in the commissioning report and shall include the following:

1. System equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. 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.

Note: Guidance on implementation and enforcement of commissioning requirements, including sample compliance forms and templates, may be found in Appendix A6, Division A6.1, of this code.

5.410.4 TESTING AND ADJUSTING. Testing and adjusting of systems shall be required for 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 at a minimum, as applicable to the project:

1. HVAC systems and controls.
2. Indoor and outdoor lighting and controls.
3. Water heating systems.
4. Renewable energy systems.
5. Landscape irrigation systems.
6. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing, Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards 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 (O & M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of warranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS

5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

Note: See CCR, Title 17, Section 93120.1.

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2-1999.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 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 160. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA Phase II emission limits where applicable.

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SECTION 5.504 POLLUTANT CONTROL

5.504.1.3 Temporary ventilation. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. 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 the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, or 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 collect in the system.

5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks 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. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 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.

TABLE 5.504.4.1 - ADHESIVE VOC LIMIT_{1,2}

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	60
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF

TABLE 5.504.4.2 - SEALANT VOC LIMIT

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Building and Construction Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.2.1, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PVMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

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TABLE 5.504.4.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS_{1,2}

COATING CATEGORY	CURRENT VOC LIMIT
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS	
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS ₁	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACs:	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

5.504.4.4 Carpet Systems. All carpet installed in the building interior shall meet at least one of the testing and product requirements:

1. Carpet and Rug Institute's Green Label Plus Program.
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350).
3. NSF/ANSI 140 at the Gold level or higher;
4. Scientific Certifications Systems Sustainable Choice; or
5. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1 (formerly EQ 2.2) dated July 2012 and listed in the CHPS High Performance Product Database.

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 Green Label program.

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

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 buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CR 93120 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown 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 EN 13986 standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS₁

PRODUCT	CURRENT LIMIT
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION	
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD ₁	0.11
THIN MEDIUM DENSITY FIBERBOARD ₂	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD, AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

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5.504.4.6 Resilient flooring systems. For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least 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 the Testing and Evaluation Chambers, Version 1.1, February 2010;
3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 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 & Schools Program)

5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

5.504.4.5.3 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 Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 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:

1. An ASHRAE 10% to 15% efficiency filter shall be permitted for an HVAC unit meeting the 2013 California Energy Code having 60,000 Btu/h or less capacity per fan coil. If the energy use of the air delivery system is 0.4 Wd/m or less at design air flow.
2. Existing mechanical equipment.

5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as otherwise 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. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1203 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.

SECTION 5.506 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 (Requirements For Ventilation) of the 2013 California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

5.506.2 CARBON DIOXIDE (CO₂) MONITORING. For buildings or additions equipped with demand control ventilation, CO₂ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the 2013 California Energy Code, Section 120(c)(4).

SECTION 5.507 ENVIRONMENTAL COMFORT

5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

Exception: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-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.

Exception:

 - a. L₅₀ or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
 - b. L₅₀ or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.
2. Within the 65 CNEL or L₅₀ noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

5.507.4.2 Performance Method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source 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.

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.

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. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Note: Examples of alternative various STC ratings may be found at the California Office of Noise Control: www.tootbase.org/PDF/CasesStudies/stc_lcc_ratings.pdf.

CHAPTER 7

INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and control of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

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GREEN BUILDING MEASURES

Revisions

R&A No:	A060622
Date:	11/19/2018
Drawn:	R&A
Checked:	L.U.U.
Consult:	No: XXX

RESTROOM/SITE ADA UPGRADE VENTURA HARBOR VILLAGE

1591 SPINNAKER DRIVE VENTURA, CALIFORNIA

Sheet No.

GB2

HVAC AND PIPING NOTES

ALL LOCATIONS OF EQUIPMENT, PIPING AND DUCTWORK ARE SHOWN DIAGRAMMATICALLY. NO ATTEMPT HAS BEEN MADE TO SHOW ALL OFF-SETS OR TRANSITIONS. THE MECHANICAL CONTRACTOR SHALL COORDINATE ALL AIR TERMINAL INSTALLATIONS WITH THE REFLECTED CEILING PLAN AND VERIFY THE CORRECT PLACEMENT OF ALL DUCTING WITH THE VARIOUS TRADES PRIOR TO FABRICATION. CONTRACTOR SHALL ADHERE TO THE DRAWINGS AS CLOSELY AS POSSIBLE, VARYING DUCT RUNS AND SHAPE OF THE DUCTWORK AS REQUIRED TO MEET STRUCTURAL AND OTHER INTERFERENCES AS REQUIRED BY THE PROJECT.

ALL DUCT SIZES ARE INSIDE CLEAR DIMENSIONS.

INSTALL MANUAL VOLUME DAMPERS AT EACH AIR DIFFUSER BRANCH AS FAR FROM THE DIFFUSER AS POSSIBLE. FOR NON-PROCESS SYSTEMS, DAMPERS SHALL BE POTTERFF CD-10R (FOR ROUND DUCTS) AND MD-42 (FOR RECTANGULAR DUCTS). LOCATE IN ACCESSIBLE AREAS. IN CASE OF A PLASTER OR OTHERWISE "SOLID" CEILING CONSTRUCTION, BALANCE OF AIR SYSTEM SHALL BE CONDUCTED PRIOR TO COMPLETION OF SAID CEILING UNLESS ALL VOLUME DAMPERS ARE DEEMED ACCESSIBLE BY SOME OTHER MEANS. IF PROJECT PLANS OR SPECIFICATIONS CONFLICT WITH THIS NOTE AS FAR AS DAMPER SPECIFICATIONS, PLANS AND/OR SPECIFICATIONS SHALL GOVERN.

VERIFY ALL SECTIONS AND ELEVATIONS PRIOR TO DUCT FABRICATION AND EQUIPMENT PLACEMENT. CONTRACTOR SHALL NOTIFY PROJECT ARCHITECT PROMPTLY WHEN CONFLICTS OCCUR.

ALL SUPPLY AND RETURN DROPS AND PLENUMS FROM ROOF-MOUNTED PACKAGED AIR CONDITIONING UNITS SHALL BE ACOUSTICALLY LINED FOR THE ENTIRE DROP UP TO 15' IN LENGTH. LINER SHALL BE FIBERGLASS MAT FACED DUCT LINER, 1" THICK, R-4.2. WHERE DUCTING IS EXPOSED TO AIR AT AMBIENT TEMPERATURE (INSTALLED OUTDOORS), DUCTS SHALL BE LINED WITH MIN. 2" DUCT LINER, R8.0. LINER SHALL BE JOHNS MANVILLE LINACOUSSTIC RC OR APPROVED EQUAL AND SHALL BE INSTALLED IN STRICT ADHERENCE TO PRINTED INSTALLATION BY JOHNS MANVILLE.

ALL WORK SHALL COMPLY WITH STATE, LOCAL AND NATIONAL CODES AND ORDINANCES. IN THE EVENT OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

ROUND DUCTWORK SHALL BE GALVANIZED STEEL SHEET METAL, SPIRAL SEAM, WITH GAUGE AS SPECIFIED IN SMACNA 2006 HVAC DUCT CONSTRUCTION STANDARDS. VERIFY PRESSURE CLASS OF DUCTWORK WITH PROJECT ENGINEER AT NIBECKER & ASSOCIATES.

THE LAST 5 FEET OF A BRANCH DUCT TO AN AIR TERMINAL MAY BE INSTALLED WITH FLEX DUCT. FLEX SHALL BE EQUIVALENT TO CASCO L-181M, R-4.2 INSULATION. FLEX DUCT SHALL NOT BE UTILIZED FOR EXHAUST SYSTEMS UNLESS NOTED OTHERWISE ON PLANS.

RECTANGULAR DUCT SHALL BE GALVANIZED STEEL SHEET METAL, OF GAUGE AS CALLED FOR IN SMACNA 2006 HVAC DUCT CONSTRUCTION STANDARDS. VERIFY PRESSURE CLASS OF DUCTWORK WITH PROJECT ENGINEER AT NIBECKER AND ASSOC.

ALL DUCT JOINTS SHALL BE ACCOMPLISHED UTILIZING A LIQUID TYPE DUCT SEALANT SPECIFICALLY FORMULATED FOR DUCT SEALANT, MCGILL AIRSEAL CORP. UNI-MASTIC 181 OR APPROVED EQUAL. UNDER NO CIRCUMSTANCES SHALL ANY TYPE OF DUCT TAPE BE CONSIDERED AN ACCEPTABLE JOINT SEALER. SEALING SHALL BE PER PAGES 1.11, 1.12, 1.13 AND TABLE 1-2, 2006 SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL & FLEXIBLE.

CONCEALED DUCTS SHALL BE ADEQUATELY SUPPORTED PER THE DETAILS ON PLANS AND IN COMPLIANCE WITH PAGES 5.1 AND 5.2 OF THE SMACNA 2006 HVAC DUCT CONSTRUCTION STANDARDS & SEC. 603.0, 2016 CMC. FOR STRAP AND ROD HANGER SIZING SEE TABLES 5-1 & 5-2, 2006 SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL DUCTWORK SHALL BE SEISMICALLY BRACED PER SECTION 603.2.5, 2016 CMC & ASCE 7-14, CHAPTER 13.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CATALOG CUTS OF ALL PROPOSED HVAC EQUIPMENT, DUCT MATERIAL, JOINT SEALING, CONTROLS AND DUCT INSTALLATION TO THE PROJECT ENGINEER AT NIBECKER AND ASSOC. FOR REVIEW AND APPROVAL PRIOR TO BEGINNING WORK OR ORDERING ANY EQUIPMENT.

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT ALLOWING FOR THE MANUFACTURER'S RECOMMENDED CLEARANCE FOR MAINTENANCE AND PROPER EQUIPMENT OPERATION. CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE NECESSARY TO MAINTAIN THE SYSTEM.

WHERE 'SMACNA HVAC DUCT CONSTRUCTION STANDARDS' ARE REFERENCED, REFERS TO "HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE", 2006 EDITION, PUBLISHED BY SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC.

ALL INDIRECT WASTE LINES SHALL DRAIN INTO WASTE SYSTEM AND SHALL BE INSTALLED WITH AN AIR GAP AS REQUIRED BY CODE. CONDENSATE DRAINS FROM HVAC EQUIPMENT SHALL BE INSTALLED WITH TRAP AND REQUIRED AIR GAP. CONDENSATE DRAINS SHALL BE INSULATED WITH MIN. 1/2" THICK CLOSED CELL SOFT NEOPRENE INSULATION WHEN INSTALLED WITHIN THE BUILDING ENVELOPE. CONDENSATE DRAINS SHALL BE CONNECTED TO THE NEAREST APPROVED RECEPTOR. CONDENSATE DRAINS SHALL HAVE A MIN. SLOPE OF 1/8" PER LINEAR FOOT DOWNWARD TO POINT OF CONNECTION.

NO PIPING SHALL BE INSTALLED IN LOAD BEARING FOOTINGS.

TRENCHING REQUIREMENTS FOR YARD PIPING SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. THE LOCATION OF EXISTING UTILITIES ARE INDICATED AS APPROXIMATIONS ONLY. THE PLUMBING CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. PLUMBING CONTRACTOR SHALL REPAIR OR REPLACE, AT HIS OWN EXPENSE, UTILITIES WHICH ARE DAMAGED BY HIS WORK. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF UTILITIES.

ALL CONNECTIONS FEES, PERMITS, AND FEES FOR EXTENDED LENGTH SERVICES SHALL BE OBTAINED AND PAID FOR BY THE PLUMBING CONTRACTOR. PLUMBING CONTRACTOR SHALL ARRANGE WITH UTILITIES FOR ALL SERVICES SHOWN.

WASTE VENTS SHALL NOT TERMINATE LESS THAN 25 FEET FROM, NOR

LESS THAN 3 FEET ABOVE, ANY OPERABLE WINDOW, DOOR, OPENING, OR AIR INTAKE.

FOR SERVICE TAKE-OFFS FROM GAS MAINS, USE RIGHT AND LEFT COUPLINGS ON PIPING. CONNECT TO EQUIPMENT WITH GROUND UNION JOINTS. INSTALL BALL VALVES AT OUTLETS AND EQUIPMENT CONNECTIONS. INSTALL A.G.A. APPROVED GAS REGULATORS WHERE REQUIRED TO PROVIDE LOW PRESSURE (APPROX. 8" WC) SERVICE. INSTALL WIRE WOUND BELLOW TYPE BRONZE EXPANSION JOINTS AT EACH SERVICE CONNECTION TO EQUIPMENT. USE REDUCING FITTINGS WHERE PIPES REDUCE IN SIZE.

INSTALL WATER HAMMER ARRESTORS IN UPRIGHT POSITION IN HOT AND COLD WATER LINES BEFORE LAST FIXTURE ON BRANCH LINES AND/OR ANY WATER SERVICE SERVING ANY AUTOMATIC VALVE (CLOTHES WASHER, DISHWASHER)

ROUGH-IN AND INSTALL PLUMBING FIXTURES AT A HEIGHT RECOMMENDED BY THE MANUFACTURER UNLESS OTHERWISE INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS OR HANDICAPPED CODES AND REQUIREMENTS.

PROVIDE DIELECTRIC INSULATORS BETWEEN DISSIMILAR METALS. INSTALL UNIONS ON EACH BRANCH FROM HORIZONTAL MAIN ADJACENT TO EACH SCREWED VALVE AND ON CONNECTIONS TO EQUIPMENT.

PROVIDE PROTECTIVE PANS UNDER OR OVER INDIVIDUAL PIPES PASSING OVER HIGH VOLTAGE ELECTRICAL BUS DUCT, SWITCHGEAR EQUIPMENT OR ELEVATOR EQUIPMENT.

HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND UNIFORM SLOPE OF NOT LESS THAN ONE-FOURTH OF AN INCH PER FOOT OR TWO PERCENT TOWARD THE POINT OF DISPOSAL, UNLESS OTHERWISE SHOWN ON DRAWINGS OR SPECIFICATIONS.

COLD AND HOT WATER PIPING SHALL BE SEAMLESS COPPER TUBING, DRAWN TEMPER TYPE L WHEN INSTALLED ABOVE GROUND AND TYPE K WHEN INSTALLED BELOW GROUND.

WATER PRESSURE IS TO BE A MIN. OF 50 PSI AND A MAX. OF 80 PSI SERVICE AS PER 2016 CALIFORNIA PLUMBING CODE, SECTION 608.2. WHERE WATER PRESSURE IS ABOVE 80 PSIG, THE CONTRACTOR SHALL INSTALL A PRESSURE REGULATOR ABOVE GRADE ON WATER MAIN INTO BUILDING.

ALL HOSE BIBBS, JANITORS SINKS OR SERVICE SINKS SHALL BE INSTALLED WITH AN APPROVED VACUUM BREAKER. AN APPROVED BACKFLOW PREVENTOR SHALL BE INSTALLED AT EACH CONNECTION BETWEEN POTABLE WATER PIPING AND CHEMICALLY TREATED OR OTHERWISE CONTAMINATED WATER PIPING.

CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF UTILITIES.

ALL CONNECTIONS FEES, PERMITS, AND FEES FOR EXTENDED LENGTH SERVICES SHALL BE OBTAINED AND PAID FOR BY THE PLUMBING CONTRACTOR. PLUMBING CONTRACTOR SHALL ARRANGE WITH UTILITIES FOR ALL SERVICES SHOWN.

WASTE VENTS SHALL NOT TERMINATE LESS THAN 25 FEET FROM, NOR

ENERGY REQUIREMENTS

ALL MECHANICAL, PLUMBING AND CONTROL SYSTEMS SHOWN ON THESE DRAWINGS AND INDICATED IN THE SPECIFICATIONS SHALL CONFORM TO THE FOLLOWING.

EQUIPMENT AND SYSTEMS EFFICIENCY:

SEE EQUIPMENT SCHEDULES FOR APPLICABLE COEFFICIENT OF PERFORMANCE, ENERGY EFFICIENCY RATING AND/OR COMBUSTION EFFICIENCY OF SPECIFIED EQUIPMENT. NO SUBSTITUTION OF EQUIPMENT HAVING A LOWER EFFICIENCY RATING SHALL BE ALLOWED.

ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THE 2016 CALIFORNIA ENERGY CODE (CEC) REGULATIONS THAT THE APPLIANCE COMPLIES W/ THE APPLICABLE STANDARDS FOR THAT APPLIANCE. INCLUDED ARE ROOM AIR CONDITIONERS, CENTRAL AIR CONDITIONING HEAT PUMPS (REGARDLESS OF CAPACITY, EXCEPT THAT REQUIREMENTS FOR CENTRAL AIR CONDITIONING HEAT PUMPS WITH COOLING CAPACITY OF 135,000 BTU/HR OR MORE APPLY TO HEATING PERFORMANCE, HEAT PUMPS AND CONDENSING UNITS > 135,000 BTU/HR; ALL WATER CHILLING, COOLING, GAS-FIRED BOILERS > 300,000 BTU/HR; ALL OIL-FIRED BOILERS>225,000 BTU/HR; AND ALL WARM AIR FURNACES & COMBINATION WARM AIR FURNACES/AIR CONDITIONING UNITS>225,000 BTU/HR. FAN TYPE CENTRAL FURNACES SHALL NOT HAVE A PILOT LIGHT.

THE FOLLOWING SPACE CONDITIONING EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN SEC. 110 OF THE 2016 CEC; ALL AIR CONDITIONERS, HEAT PUMPS AND CONDENSING UNITS > 135,000 BTU/HR; ALL WATER CHILLING, COOLING, GAS-FIRED BOILERS > 300,000 BTU/HR; ALL OIL-FIRED BOILERS>225,000 BTU/HR; AND ALL WARM AIR FURNACES & COMBINATION WARM AIR FURNACES/AIR CONDITIONING UNITS>225,000 BTU/HR. FAN TYPE CENTRAL FURNACES SHALL NOT HAVE A PILOT LIGHT.

PIPING, EXCEPT THOSE CONVEYING FLUIDS AT TEMPERATURES BETWEEN 80 DEG. F. AND 105 DEG. F., OR WITHIN HVAC EQUIPMENT, SHALL BE INSTALLED IN ACCORDANCE W/ THE 2016 CEC, SEC. 120.3.

AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED, SEALED, AND INSULATED AS PROVIDED IN CHAPTER 6 OF THE 2016 CMC AND SEC. 120.4, 2016 CEC.

CONTROLS:

WHEN USED TO CONTROL COMFORT HEATING, THE THERMOSTAT SHALL BE CAPABLE OF BEING SET, LOCALLY OR REMOTELY, DOWN TO 55F OR LOWER. WHEN USED TO CONTROL COMFORT COOLING, THE THERMOSTAT SHALL BE CAPABLE OF BEING SET, LOCALLY OR REMOTELY, UP TO 85F OR HIGHER. WHERE USED TO CONTROL BOTH COMFORT HEATING & COOLING, THE THERMOSTAT SHALL ALSO BE CAPABLE OF PROVIDING A TEMPERATURE RANGE OR DEAD BAND OF AT LEAST 5F WITHIN WHICH THE SUPPLY OF HEATING & COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

EACH UNITARY SPACE CONDITIONING SYSTEM SHALL BE INSTALLED W/ THE THERMOSTATS THAT PROVIDE THE FOLLOWING:

1. ALL HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL BE INSTALLED W/ CONTROLS THAT COMPLY WITH SEC. 110.2(b), 2016 CEC.

CONTROL CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SYSTEM DURING PERIODS OF NONUSE & SHALL HAVE:

AN AUTOMATIC TIME SWITCH CONTROL DEVICE COMPLYING W/ SEC. 110.9(c), 2016 CEC

AN OCCUPANCY SENSOR OR A 4-HOUR TIMER THAT CAN BE MANUALLY OPERATED.

3. THE CONTROL SHALL AUTOMATICALLY RESTART & TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN A SETBACK HEATING THERMOSTAT SETPOINT IF THE SYSTEM PROVIDES MECHANICAL HEATING AND A SETUP COOLING THERMOSTAT SETPOINT IF THE SYSTEM PROVIDES MECHANICAL COOLING.

MULTI-PURPOSE ROOMS LESS THAN 1000 FT2, CLASSROOMS GREATER THAN 750 FT2 & CONFERENCE, CONVENTION, AUDITORIUM & MEETING CENTER ROOMS GREATER THAN 750 FT2 THAT DO NOT HAVE PROCESSES OR OPERATIONS THAT GENERATE DUSTS, FUMES, VAPORS OR GASSES SHALL BE EQUIPPED W/ OCCUPANT SENSOR(S) TO ACCOMPLISH THE FOLLOWING DURING UNOCCUPIED PERIODS:

AUTOMATICALLY SET UP THE OPERATING COOLING TEMPERATURE SET POINT BY 2F OR MORE & SET BACK THE OPERATING HEATING TEMPERATURE SET POINT BY 2F OR MORE &

AUTOMATICALLY RESET THE MINIMUM REQUIRED VENTILATION RATE WITH AN OCCUPANT SENSOR VENTILATION CONTROL DEVICE ACCORDING TO SEC. 120.1(c)5, 2016 CEC.

EACH SPACE CONDITIONING SYSTEM SERVING MULTIPLE ZONES WITH A COMBINED CONDITIONED FLOOR AREA MORE THAN 25,000 SQUARE FEET SHALL BE DESIGNED, INSTALLED & CONTROLLED TO SERVE ISOLATION AREAS.

EACH ZONE, OR ANY COMBINATION OF ZONES NOT EXCEEDING 25,000 FT2, SHALL BE A SEPARATE ISOLATION AREA.

EACH ISOLATION AREA SHALL BE PROVIDED W/ ISOLATION DEVICES, SUCH AS VALVES OR DAMPERS, THAT ALLOW THE SUPPLY OF HEATING OR COOLING TO BE SETBACK OR SHUT OFF INDEPENDENTLY OF OTHER ISOLATION AREAS

EACH ISOLATION AREA SHALL BE CONTROLLED BY A DEVICE MEETING THE REQUIREMENTS OF SEC. 120.2(e)1.

THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN DEG. F.

THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINTS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.

WALL MOUNTED THERMOSTATS SHALL BE LOCATED AT 36" TO 48" ABOVE FINISHED FLOOR.

VENTILATION:

CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR DEVICES TO BE OPERATED AT THE VENTILATION RATES AS SPECIFIED IN THESE PLANS.

GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.

ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT FOR COMBUSTION AIR OPENINGS.

AIR BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS (2014), OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS (2014).

OUTSIDE AIR CERTIFICATION: THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, & SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR.

THE LESSER OF THE MINIMUM RATE OF OUTSIDE AIR REQUIRED BY PLANS OR THREE COMPLETE AIR CHANGES, SHALL BE SUPPLIED TO THE ENTIRE BUILDING DURING THE ONE-HOUR PERIOD IMMEDIATELY BEFORE THE BUILDING IS NORMALLY OCCUPIED.

DUCT INSULATION:

ALL DUCT INSULATION SHALL MEET THE REQUIREMENTS OF THE 2016 CEC, SECTION 120.4 AND 2016 CMC, SECTIONS 601, 602, 603, 604, 605 & ANSI/SMACNA 006-2006 HVAC DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE 3RD EDITION. INSULATION APPLIED TO EXTERIOR SURFACE OF DUCT SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT EXCEEDING 50.

S/A & R/A DUCTING INSTALLED ON ROOF, OUTDOORS, IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING, IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES, IN AN UNCONDITIONED CRAWLSPACE OR OTHER UNCONDITIONED SPACES:

2 INCH THICK FIBER GLASS DUCT LINER, R-8.0 MINIMUM, JOHNS MANVILLE LINACOUSSTIC RC INSTALLED IN STRICT ADHERENCE TO PRINTED INSTALLATION RECOMMENDATIONS BY JOHNS MANVILLE.

ALL OTHER LOCATIONS:

1-1/2" THICK FIBER GLASS DUCT WRAP WITH INTEGRAL VAPOR BARRIER, R-4.2 MINIMUM, JOHNS MANVILLE MICROLITE XG WITH FSK ALUMINUM FOIL FACING

DUCT CONSTRUCTION:

ALL DUCT WORK SHALL BE CONSTRUCTED, ERECTED AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS, PROCEDURES DETAILED IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, 3RD EDITION, 2005. USE OF FLEXIBLE DUCTING, OTHER THAN THAT INDICATED ON THESE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS IS EXPRESSLY PROHIBITED. DUCT LINING WHERE INDICATED SHALL BE MIN. 1 IN. THK. ACOUSTICAL DUCT LINER GLUED AND RIVETTED (PINNED) IN PLACE WHEN DUCTING IS ROUTED WITHIN CONDITIONED OR INDIRECTLY CONDITIONED SPACE.

REQUIREMENTS FOR PIPE INSULATION:

ALL SPACE CONDITIONING AND SERVICE HOT WATER PIPING SHALL

BE INSULATED ACCORDING TO THE REQUIREMENTS SET FORTH IN SECTION 120.3 & TABLE NO. 120.3-A OF THE 2016 CEC.

INSULATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE 2016 CBC, CMC, AND CALIFORNIA FIRE CODE (CFC).

SERVICE WATER HEATING SYSTEMS:

DOMESTIC HOT WATER SYSTEMS/EQUIPMENT SHALL MEET THE APPLICABLE REQUIREMENTS OF THE APPLIANCE EFFICIENCY REGULATIONS AS REQUIRED BY SECTION 110.1, 2016 CEC.

ANY SERVICE WATER HEATING SYSTEM OR EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE SYSTEM OR EQUIPMENT COMPLIES WITH ALL REQUIREMENTS OF SECTION 110.3, 2016 CEC.

UNFIRED SERVICE WATER HEATER STORAGE TANKS AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS SHALL HAVE EITHER EXTERNAL INSULATION WITH AN INSTALLED R-VALUE OF AT LEAST R-12, INTERNAL AND EXTERNAL INSULATION WITH A COMBINED R-VALUE OF AT LEAST R-16, OR SUFFICIENT INSULATION SO THAT THE HEAT LOSS OF THE TANK SURFACE BASED ON AN 80 DEG. F. WATER-AIR TEMPERATURE DIFFERENCE SHALL BE LESS THAN 6.5 BTU/HR/SF.

IF A CIRCULATING HOT WATER SYSTEM IS INSTALLED, IT SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP(S) WHEN HOT WATER IS NOT REQUIRED.

LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH:

OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.5 GALLONS PER MINUTE.

FOOT ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.

PROXIMITY SENSOR ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.

SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.25 GALLONS/CYCLE (CIRCULATING SYSTEM).

SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.50 GALLONS/CYCLE (NON-CIRCULATING SYSTEM).

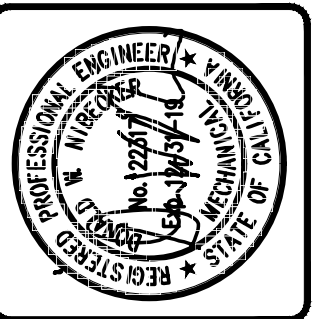
SELF-CLOSING VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 2.5 GALLONS PER MINUTE, AND 0.75 GALLONS/CYCLE (FOOT SWITCHES AND PROXIMITY SENSOR CONTROLS).

LAVATORIES IN RESTROOM OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATURE TO 110 DEG. F.

CONSTRUCTION COMPLIANCE:

PER SECTION 120.5, 2016 CEC, PRIOR TO OCCUPANCY OF THE BUILDING, THE FOLLOWING EQUIPMENT & SYSTEMS SHALL BE CERTIFIED AS MEETING THE ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE, AS SPECIFIED BY THE REFERENCE NONRESIDENTIAL APPENDIX NA7. A CERTIFICATE OF ACCEPTANCE SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY THAT CERTIFIES THAT THE EQUIPMENT & SYSTEMS MEET THE ACCEPTANCE REQUIREMENTS.

1. OUTDOOR AIR VENTILATION SYSTEMS TESTED IN ACCORDANCE W/ NA7.5.1
2. CONSTANT VOLUME SINGLE ZONE UNITARY AIR CONDITIONING & HEAT PUMP UNIT CONTROLS, TESTED IN ACCORDANCE W/ NA7.5.2
3. DUCT SYSTEMS TESTED IN ACCORDANCE W/ NA7.5.3 WHERE EITHER THEY ARE NEW DUCT SYSTEMS THAT MEET THE CRITERIA OF SEC. 140.4(f)1, 140.4(f)2 & 140.4(f)3 OR THEY ARE PART OF A SYSTEM THAT MEETS THE CRITERIA OF SECTION 140.0(b)2D, 2016 CEC.
4. AIR ECONOMIZERS TESTED IN ACCORDANCE W/ NA7.5.4
5. DEMAND CONTROL VENTILATION SYSTEMS REQUIRED BY SEC. 120.1(c)3 SHALL BE TESTED IN ACCORDANCE W/ NA7.5.4.2
6. SUPPLY FAN VARIABLE FLOW CONTROLS SHALL BE TESTED IN ACCORDANCE W/ NA7.5.6



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MECHANICAL/PLUMBING
COVER SHEET

Revisions
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Date: 1/19/2016
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Checked: D.N.
Consult: No: 21806

RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE

1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

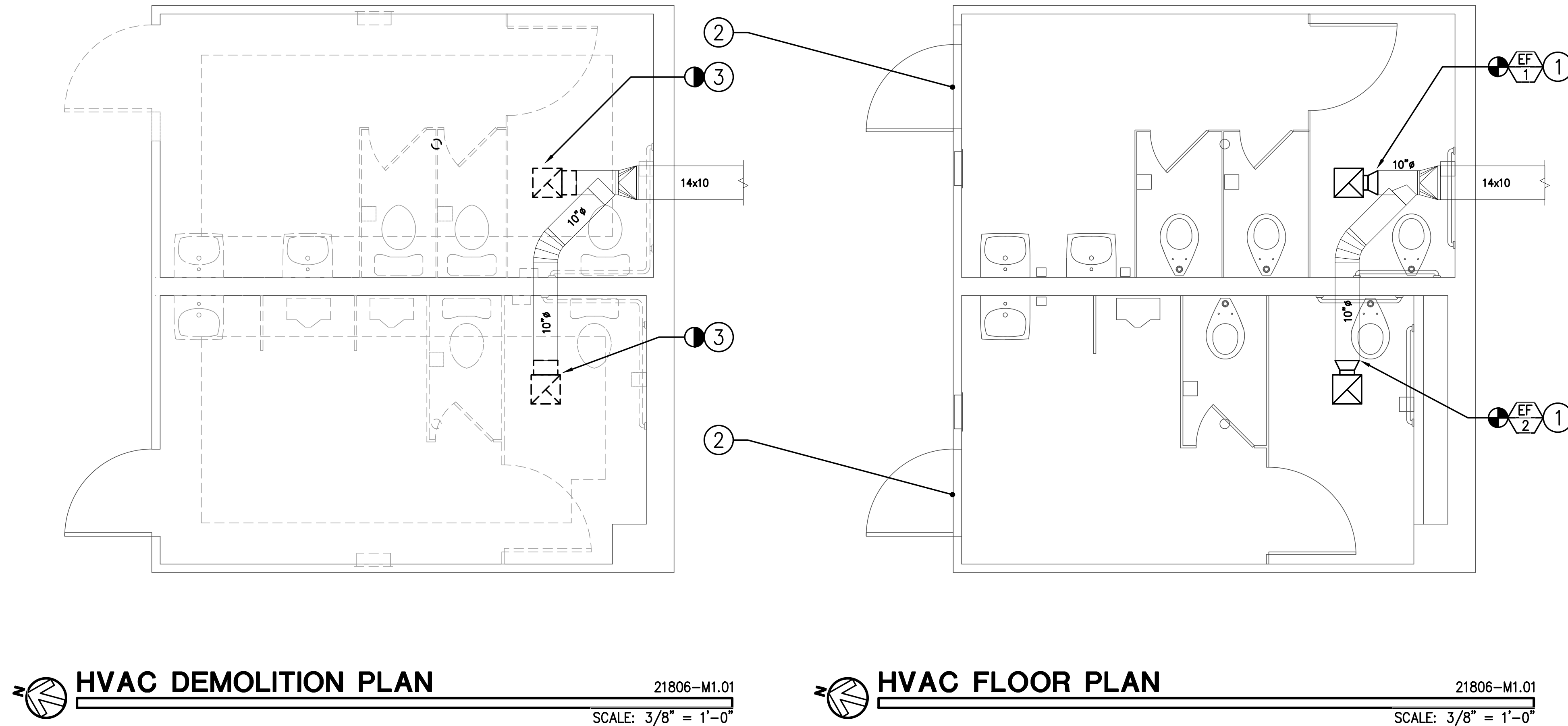
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HVAC DEMOLITION PLAN 21806-M1.01
SCALE: 3/8" = 1'-0"

HVAC FLOOR PLAN 21806-M1.01
SCALE: 3/8" = 1'-0"

FAN SCHEDULE											
MARK	MAKE	MODEL	CFM	S.P. IWG	FAN RPM	CURB SIZE	FLA	POWER HP/W	VOLTAGE-PHASE	WEIGHT (LBS)	REMARKS
EF 1	COOK	GC-188	230	.375	1,450	N/A	-	109W	120V-1Ø	13	.
EF 2	COOK	GC-188	230	.375	1,450	N/A	-	109W	120V-1Ø	13	.

REFERENCE NOTES

- 1 CEILING-MOUNTED CABINET EXHAUST FAN. TRANSITION FROM 6"Ø CONNECTION AT FAN TO 10"Ø & CONNECT TO (E)10"Ø EXHAUST SERVING FAN THAT WAS REMOVED FROM THIS LOCATION. SEE ELECTRICAL PLANS FOR FAN CONTROL.
- 2 20"x12" DOOR LOUVER INSTALLED LOW ON DOOR FOR EXHAUST AIR MAKE-UP. DOOR LOUVER SHALL BE KRUEGER 5600A.
- 3 (E) CEILING-MOUNTED CABINET EXHAUST FAN TO BE REMOVED. REMOVE FAN COMPLETELY INCLUDING CONNECTION FROM FAN DISCHARGE TO (E)10"Ø EXHAUST DUCTING. SEE ELECTRICAL PLANS FOR ELECTRICAL SERVICE REQUIREMENTS.

GENERAL NOTES

- A. AN AIR BALANCE CONTRACTOR IS A REQUIREMENT FOR THIS PROJECT. EXHAUST AIR QUANTITIES SHALL BE SET TO AIRFLOW QUANTITIES INDICATED ON THESE PLANS WITH A TOLERANCE OF PLUS/MINUS 10%. CONTRACTOR SHALL NOTIFY THIS OFFICE IF THE SYSTEM AIR BALANCE IS OUTSIDE OF THIS TOLERANCE.
- B. GENERAL DUCT CONSTRUCTION: DUCT CONSTRUCTION, GAUGE, REINFORCEMENT, & HANGING METHODS SHALL CONFORM TO STANDARDS AS SET FORTH IN SECTIONS 602, 603 & 604, 2016 CALIFORNIA MECHANICAL CODE AND THE ANSI/SMACNA 006-2006 HVAC DUCT CONSTRUCTION STANDARDS-METAL & FLEXIBLE. ROUND DUCTING SHALL BE RIGID SPIRAL ROUND PIPE, WITH CONNECTIONS SCREWED & SEALED AIR-TIGHT WITH MCGILL AIRSEAL UNI-MASTIC 181 DUCT SEALER OR EQUIV. ADHESIVE COMPOUND. USE OF FLEX DUCT ON THIS JOB SHALL BE LIMITED TO DIFFUSER RUNOUTS FROM BRANCH DUCTS & SHALL NOT EXCEED 5 FEET IN LENGTH. FLEX DUCTS SHALL BE HUNG TO ELIMINATE SAGS. RECTANGULAR DUCTING, AS REFERENCED ON PLAN, SHALL BE SEALED AT JOINTS WITH MCGILL AIRSEAL UNI-MASTIC 181 DUCT SEALER, EQUIVALENT ADHESIVE COMPOUND, OR AIRBOL METHOD. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.
- C. PROVIDE MANUAL VOLUME DAMPERS AT EXHAUST BRANCHES & WHERE INDICATED. MANUAL VOLUME DAMPERS SHALL BE POTTORFF MODEL CD-10R W/ LOCKING QUADRANT. PROVIDE 1-1/2" STAND-OFF QUADRANT ON INSULATED DUCTWORK.
- D. AT THE TIME OF ROUGH INSTALLATION & DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL START-UP OF THE HVAC EQUIPMENT, ALL DUCT & 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 & DEBRIS WHICH MAY ENTER THE SYSTEM(S).
- E. AT FINAL INSPECTION, PROVIDE THE BUILDING OWNER OR HIS REPRESENTATIVE WITH DETAILED OPERATING & MAINTENANCE INSTRUCTIONS & COPIES OF GUARANTIES/WARRANTIES FOR EACH HVAC SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SEC. 5142 & OTHER RELATED REGULATIONS.
- F. FINISH MATERIALS UTILIZED FOR THE HVAC SYSTEMS SHALL COMPLY W/ TABLE 5.504.4.1, 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE.

DEMOLITION GEN. NOTES

- A. CONTRACTOR SHALL FIELD VERIFY (E) CONDITIONS PRIOR TO SUBMITTING BID.
- B. WHERE REMOVAL IS INDICATED FOR DUCTING OR EQUIPMENT, THIS WORK SHALL INCLUDE ALL ASSOCIATED SUPPORTS, INSULATION, CONTROLS AND ELECTRICAL SERVICE.
- C. ALL HOLES LEFT IN WALLS, FLOORS AND CEILINGS AS A RESULT OF DEMOLITION WORK SHALL BE FILLED AND PATCHED. SEE ARCHITECTURAL PLANS FOR COMPLETE REQUIREMENTS.
- D. ALL DUCTING AND EQUIPMENT SUPPORTS SHALL BE ENTIRELY REMOVED UNLESS OTHERWISE NOTED. WHERE REMOVAL OF SUPPORTS LEAVES BOLT HOLES IN WALLS/CEILINGS/ROOFS/FLOORS, PATCH HOLES TO MATCH FINAL FINISH. SEE ARCHITECTURAL PLANS FOR REQUIREMENTS.

H.V.A.C. DEMOLITION LEGEND

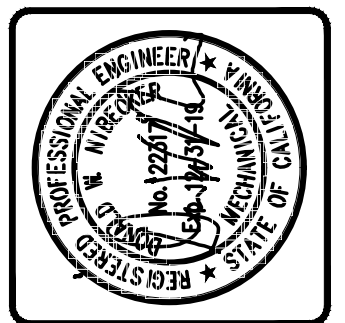
SYMBOL	DESCRIPTION
[]	EXISTING DUCTING/EQUIP. TO BE REMOVED
[- - -]	EXISTING FLEX DUCT TO BE REMOVED
[]	EXISTING H.V.A.C. EQUIP. TO REMAIN
[- - -]	EXISTING H.V.A.C. DUCT TO REMAIN
(E)	EXISTING
P.O.D.	POINT OF DEMOLITION
●	POINT OF DEMOLITION

H.V.A.C. LEGEND

SYMBOL	DESCRIPTION
⊠	EXHAUST AIR GRILLE
⊠ OR ⊙	EXHAUST DUCT RISER
Ø	DUCT DIAMETER
[]	H.V.A.C. DUCTING
[- - -]	FLEX DUCT
[]	(E) H.V.A.C. DUCTING



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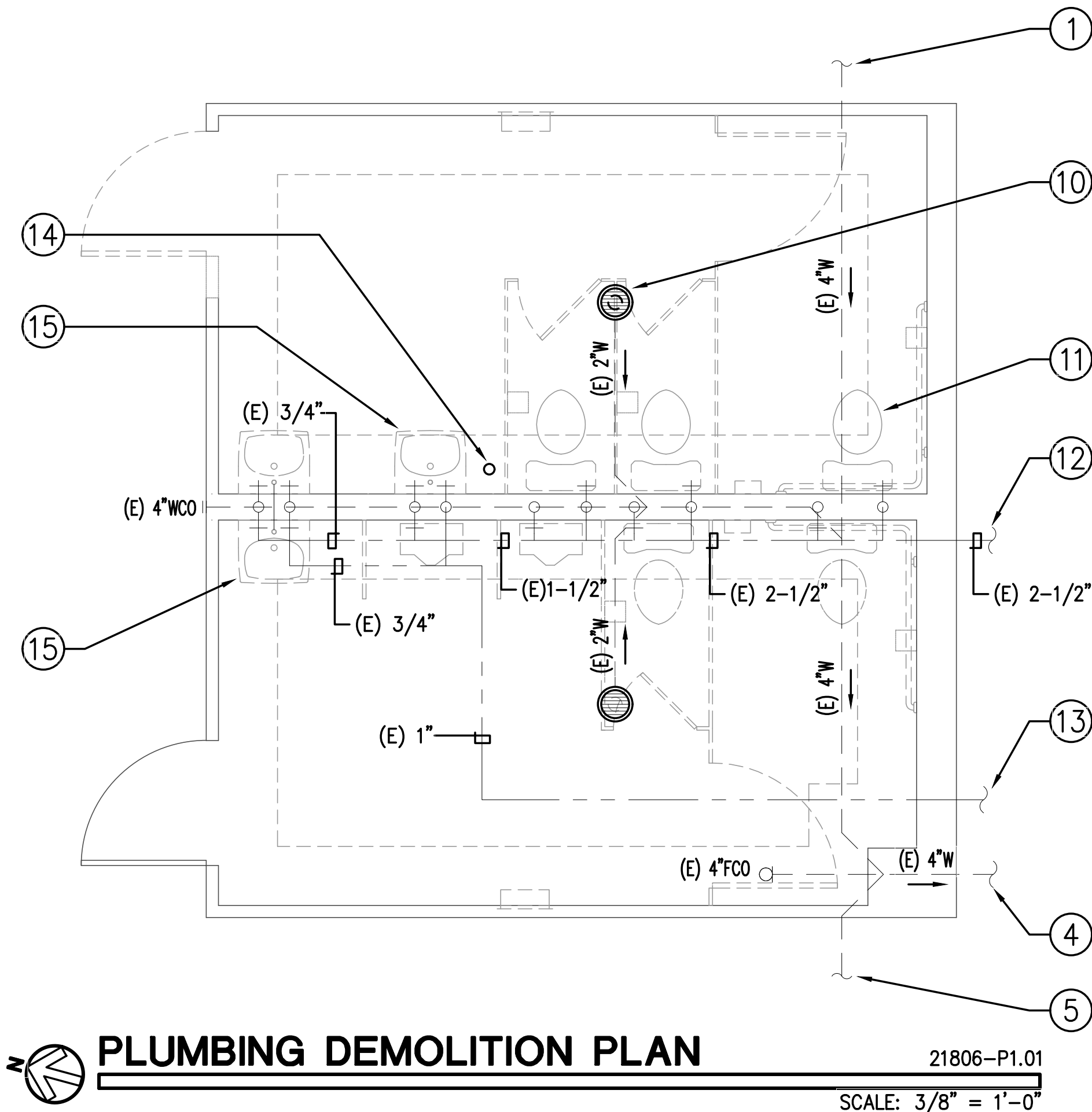
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Title	FLOOR PLAN
Revisions	
R&A No.	AD60682
Date:	11/19/2018
Drawn:	
Checked:	D.N.
Consult:	No. 21806

**RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE**

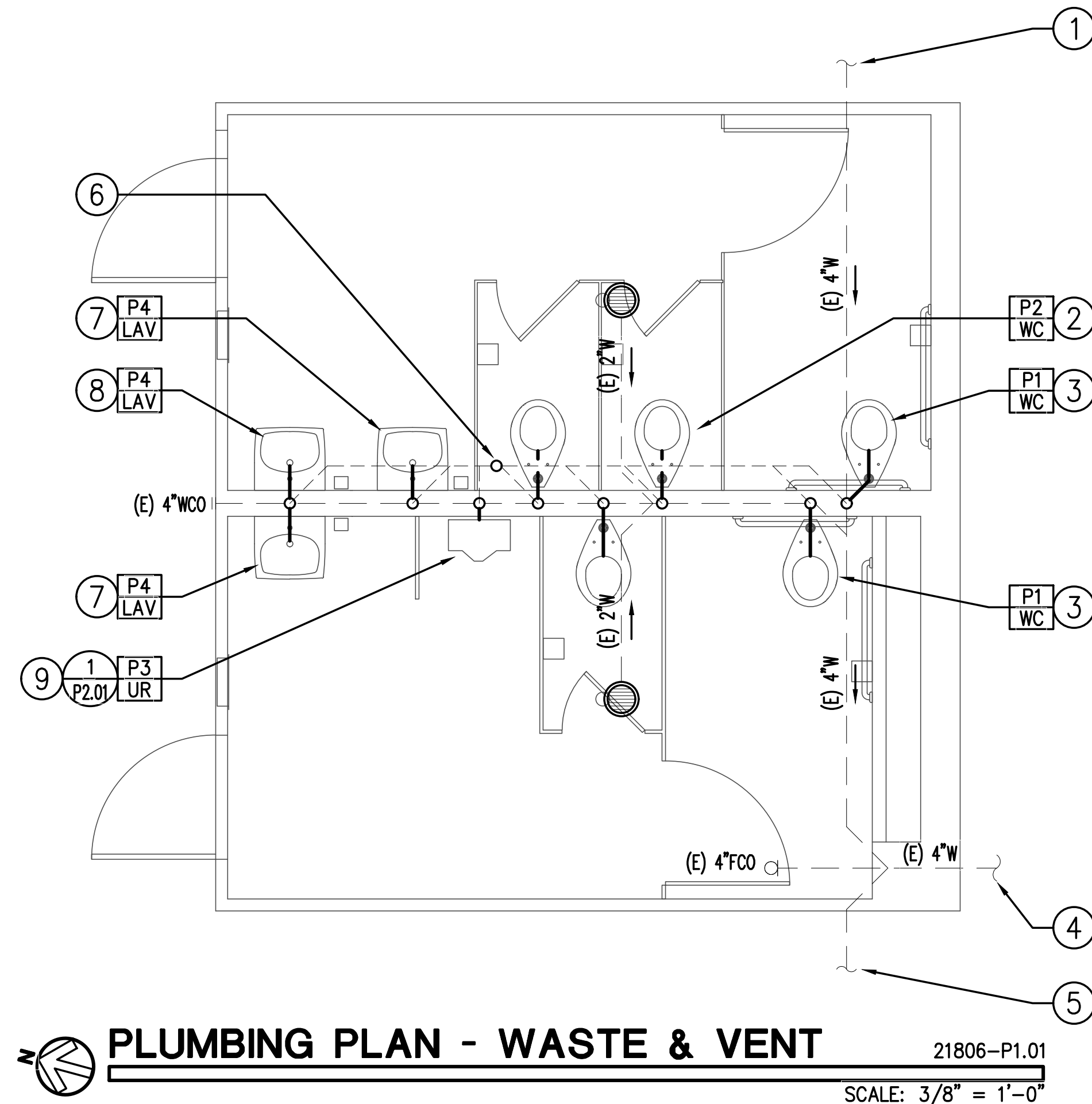
1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

Sheet No.
M1.01

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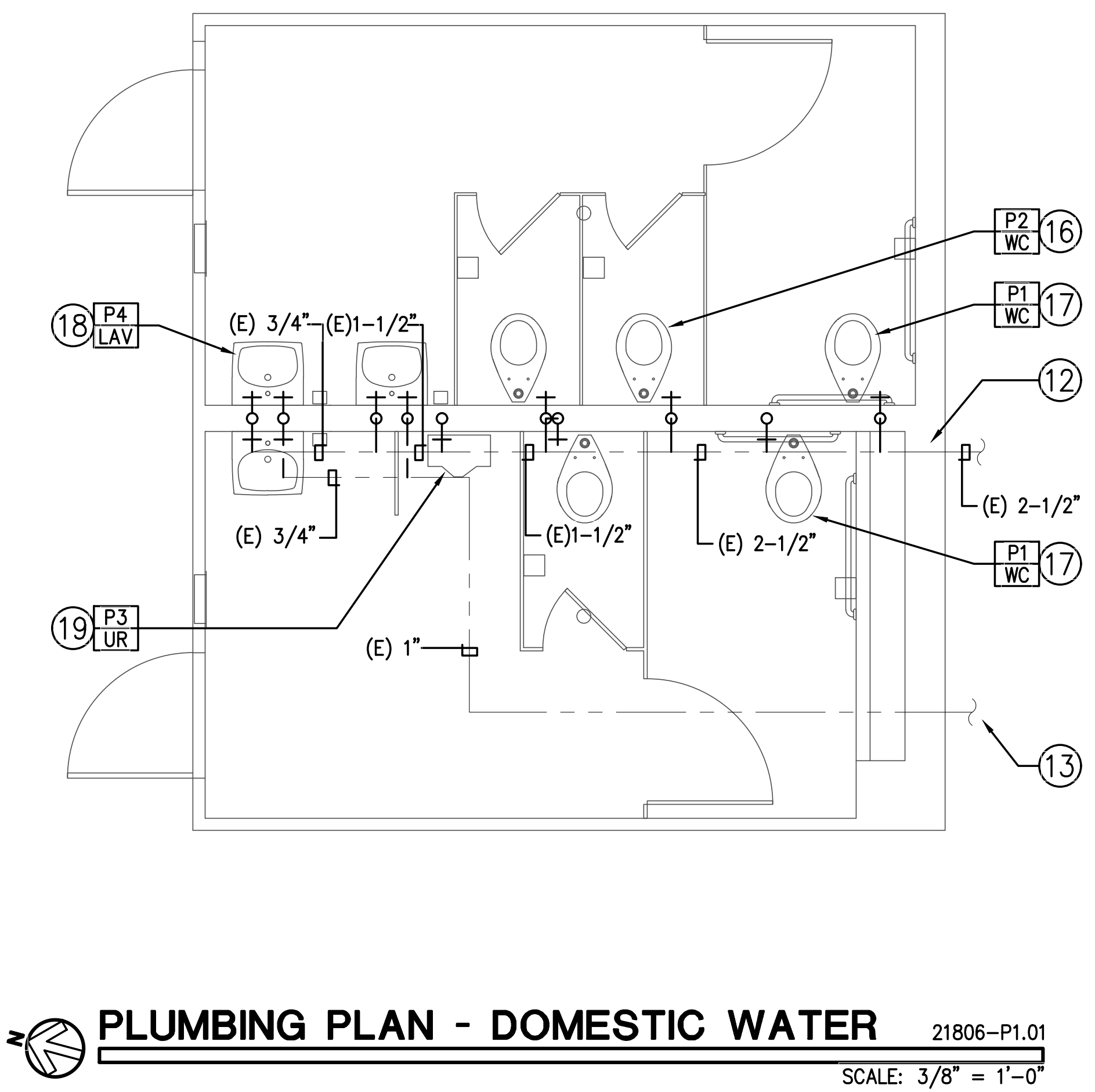
PLUMBING DEMOLITION PLAN 21806-P1.01
SCALE: 3/8" = 1'-0"



PLUMBING PLAN - WASTE & VENT 21806-P1.01
SCALE: 3/8" = 1'-0"

- ### REFERENCE NOTES
- (E) 4"W. VERIFY LOCATION OF ALL (E) UTILITIES PRIOR TO BEGINNING WORK.
 - FLOOR-MOUNTED WATER CLOSET REPLACING (E) WATER CLOSET IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 4"W & 2"V THAT SERVED REMOVED FIXTURE. THIS FIXTURE IS TYPICAL (3) PLCS.

- ### GENERAL NOTES
- CONTRACTOR TO VERIFY EXACT SIZE, SLOPE & LOCATION OF ALL EXISTING UTILITIES PRIOR TO SUBMITTING BID FOR CONSTRUCTION.
 - ALL SEWER & VENT PIPING SHALL BE SCHED. 40 PVC DWV W/ SOLVENT JOINTS FROM 5' OUTSIDE THE BUILDING, INWARD. BELOW SLAB WASTE PIPING SHALL BE LAID ON COMPACTED BED W/ MIN. 6" OF CLEAN SAND, RUN AT MIN. 2% SLOPE.
 - ALL WATER PIPING SHALL BE HARD DRAWN TYPE "L" COPPER PIPE W/ LEAD-FREE SOLDER JOINTS. CW & HW PIPING ROUTED BELOW BUILDING SLAB SHALL BE TYPE L SOFT TEMPER W/ NO JOINTS ALLOWED BELOW SLAB. UNDERSLAB COPPER PIPING SHALL BE WRAPPED W/ MIN. 4 MIL. CONTINUOUS PIPE SLEEVE, OATEY PIPE GUARD OR APPROVED EQUAL, RED FOR HW, BLUE FOR CW.
 - ALL DOMESTIC POTABLE WATER PIPING SHALL BE CLEANED & DISINFECTED PRIOR TO FINAL OCCUPANCY PER 2016 CPC, SECTION 609.9.
 - ALL PLUMBING FIXTURES SHALL COMPLY W/ FLOW REQUIREMENTS OF THE 2016 GREEN BUILDING STANDARDS CODE. WATER CLOSETS SHALL BE 1.28 GPF, URINAL SHALL BE 0.5 GPF, ALL LAVATORY FAUCETS SHALL BE SUPPLIED W/ A 0.5 GPM FLOW RESTRICTOR.
 - ALL COLD WATER & HOT WATER SHUT-OFF VALVES SHALL BE 1/4-TURN BRONZE BODY BALL VALVES, FULL PORT W/ CHROME PLATED BALL.
 - ALL HW PIPING SHALL BE INSULATED W/ PIPE INSULATION HAVING A MINIMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE FOR A PIPE UP TO 2 INCHES IN DIAMETER W/ THE EXCEPTION OF PIPING LESS THAN 1" WHICH SHALL BE PROVIDED W/ 1" THICK INSULATION. INSULATION THICKNESS SHALL NOT BE LESS THAN 2 INCHES FOR PIPING 2 INCHES OR MORE IN DIAMETER. PIPE INSULATION SHALL BE ARMAFLEX PIPE INSULATION BY ARMSTRONG.
 - ALL EXPOSED LAVATORY TRAPS, TRAP ARMS & WATER SUPPLIES UNDER ACCESSIBLE FIXTURES SHALL BE PROVIDED WITH PROFLO PF202WH INSULATED COVERS.
 - WASTE & VENT: EACH SECTION SHALL BE FILLED W/ WATER, BUT NO SECTION SHALL BE TESTED W/ LESS THAN A TEN-FOOT HEAD OF WATER. THE WATER SHALL BE KEPT IN THE SYSTEM, OR IN THE PORTION UNDER TEST, FOR NOT LESS THAN FIFTEEN MINUTES BEFORE INSPECTION STARTS, CPC SEC. 712.2, BUILDING SEWER TEST CPC SEC. 723. NO AIR TESTING FOR PLASTIC PIPING PER CPC SEC. 712, 723.
 - UPON COMPLETION OF A SECTION OR OF THE ENTIRE HOT & COLD WATER SUPPLY SYSTEM, IT SHALL BE TESTED & PROVED TIGHT UNDER A WATER PRESSURE NOT LESS THAN THE WORKING PRESSURE UNDER WHICH IT IS TO BE USED. THE WATER USED FOR TESTS SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY. EXCEPT FOR PLASTIC PIPING, A 50 PSI AIR PRESSURE SHALL BE PERMITTED TO BE SUBSTITUTED FOR THE WATER TEST. IN EITHER METHOD OF TEST, THE PIPING SHALL WITHSTAND THE TEST WITHOUT LEAKING FOR A PERIOD OF NOT LESS THAN 15 MINUTES. CPC SEC. 609.4.



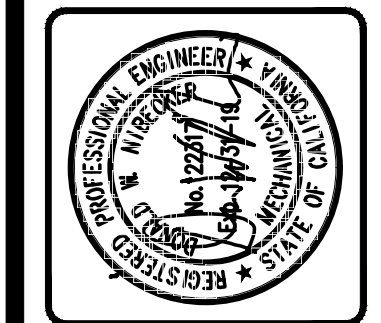
PLUMBING PLAN - DOMESTIC WATER 21806-P1.01
SCALE: 3/8" = 1'-0"

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
●	P.O.C. POINT OF CONNECTION
---	W WASTE
---	(E)W (E) WASTE
⊥	WCO WALL CLEANOUT
○	CO CLEANOUT
---	CW DOMESTIC COLD WATER
---	(E)CW (E) DOMESTIC COLD WATER
---	HW HOT WATER
---	(E)HW (E) HOT WATER
---	VTR VENT THRU ROOF
(E)	EXISTING
WC	WATER CLOSET
LAV	LAVATORY
UR	URINAL
FD	FLOOR DRAIN

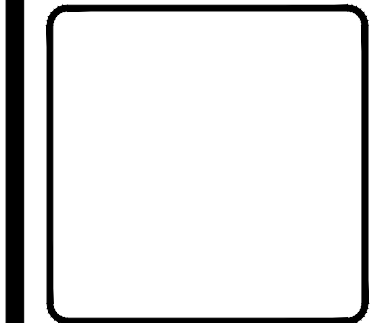
DEMOLITION LEGEND	
SYMBOL	DESCRIPTION
●	P.O.D. POINT OF DEMOLITION
(E)	EXISTING
---	W WASTE PIPING
---	CW CW PIPING
---	HW HOT WATER PIPING
---	V VENT PIPING
---	W (E) W
---	CW (E) CW
---	HW (E) HW
---	(E) TO BE REMOVED

- ### PLUMBING DEMOLITION NOTES
- CONTRACTOR SHALL FIELD VERIFY (E) CONDITIONS PRIOR TO SUBMITTING BID.
 - WHERE REMOVAL IS INDICATED FOR PIPING OR EQUIPMENT, THIS WORK SHALL INCLUDE ALL ASSOCIATED SUPPORTS, INSULATION, CONTROLS AND ELECTRICAL SERVICE.
 - ALL HOLES LEFT IN WALLS, FLOORS AND CEILINGS AS A RESULT OF DEMOLITION WORK SHALL BE FILLED AND PATCHED. SEE ARCHITECTURAL PLANS FOR COMPLETE REQUIREMENTS.
 - ALL PIPING INDICATED FOR REMOVAL SHALL BE COMPLETELY REMOVED. WHERE REMOVAL OF SUPPORTS LEAVES BOLT HOLES IN WALLS/FLOORS/ROOFS, PATCH HOLES TO MATCH FINAL FINISH. SEE ARCHITECTURAL PLANS FOR COMPLETE REQUIREMENTS.

- ### REFERENCE NOTES
- FLOOR-MOUNTED WATER CLOSET REPLACING (E) WATER CLOSET IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 4"W & 2"V THAT SERVED REMOVED FIXTURE.
 - (E) 4"W.
 - (E) 3"W FROM (E) ADJACENT MOP SINK IN (E) JANITOR'S CLOSET.
 - (E) 2-1/2"VTR SERVING FIXTURES IN MEN'S & WOMEN'S RESTROOMS.
 - WALL-MOUNTED LAVATORY REPLACING (E) LAVATORY IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 2"W & 1-1/2"V THAT SERVED REMOVED FIXTURE. PROVIDE JAY R. SMITH 2698-ADA PRIME-EZE WATER SAVING TRAP PRIMER AT LAV, CONNECT 1/2" DISCHARGE FROM TRAP PRIMER TO (E) 1/2" TRAP PRIMER PIPING SERVING (E) FLOOR DRAIN IN RESTROOM.
 - WALL-MOUNTED LAVATORY REPLACING (E) LAVATORY IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 2"W & 1-1/2"V THAT SERVED REMOVED FIXTURE.
 - WALL-MOUNTED URINAL REPLACING (E) URINAL IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 2"W & 2"V THAT SERVED REMOVED FIXTURE. PROVIDE 2"WCO ABOVE FIXTURE.
 - (E) FLOOR DRAIN TO REMAIN, TYP. (2) PLCS.
 - REMOVE ALL (E) PLUMBING FIXTURES IN THESE (2) RESTROOMS. (E) W, V, CW & HW MAISE IN RESTROOM SERVING (E) FIXTURES IS TO BE RE-USED TO SERVE REPLACEMENT FIXTURES.
 - (E) 2-1/2"CW SERVING THESE (2) RESTROOMS W/ PIPING ROUTED IN PLUMBING WALL & (E) SHUT-OFF VALVE BEHIND WALL ACCESS PANEL ABOVE WATER CLOSET IN MEN'S RESTROOM, PIPING SHOWN OUTSIDE WALL FOR GRAPHICAL CLARITY.
 - (E) 1"HW FROM (E) WATER HEATER IN ADJACENT JANITOR'S CLOSET.
 - (E) 2-1/2"VTR SERVING THESE (2) RESTROOMS.
 - REMOVE (E) TRAP PRIMER ON CW SUPPLY TO THIS LAV & CAP (E) 1/2" TRAP PRIMER PIPING FROM TRAP PRIMER LOCATION FOR RE-CONNECTION TO TRAP PRIMER INSTALLED W/ REPLACEMENT LAV, SEE REFERENCE NOTE 7 ABOVE.
 - FLOOR-MOUNTED WATER CLOSET REPLACING (E) WATER CLOSET IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 1-1/4"CW THAT SERVED REMOVED FIXTURE, THIS FIXTURE IS TYPICAL (3) PLCS.
 - FLOOR-MOUNTED WATER CLOSET REPLACING (E) WATER CLOSET IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 1-1/4"CW THAT SERVED REMOVED FIXTURE.
 - WALL-MOUNTED LAVATORY REPLACING (E) LAVATORY IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION, RE-CONNECT FIXTURE TO (E) 3/4"CW & 3/4"HW THAT SERVED REMOVED FIXTURE. WALL-MOUNT FAUCET CONTROL MODULE HIGH BENEATH SINK WITH SERVICE/BATTERY REPLACEMENT ACCESS PANEL ACCESSIBLE. THIS FIXTURE IS TYPICAL (3) PLCS.
 - WALL-MOUNTED URINAL REPLACING (E) URINAL IN THIS APPROXIMATE LOCATION. FIXTURE IS RELOCATED SLIGHTLY FROM PREVIOUS LOCATION. RE-CONNECT FIXTURE TO (E) 1"CW THAT SERVED REMOVED FIXTURE.



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Sheet	PLUMBING DEMO & NEW FLOOR PLAN
Title	FLOOR PLAN
Revisions	
R&A No.	AD060622
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RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE
1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

Sheet No.
P1.01

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PLUMBING FIXTURE SCHEDULE

MARK	TYPE	MANUFACTURER AND MODEL NUMBER	PIPING CONNECTIONS TO FIXTURES					REMARKS
			CW	HW	WASTE	VENT	GAS	
P1 WC	ADA FLUSH VALVE WATER CLOSET	SLOAN WETS 2020.1401-1.28 G2, WHITE FINISH W/ G2 1.28 SENSOR-ACTIVATED FLUSH VALVE, BATTERY OPERATED	1"	--	4"	2"	--	W/ SOLID PLASTIC ELONGATED OPEN-FACE SEAT, MOUNT FLUSH LEVER ON WIDE SIDE OF WATER CLOSET. WATER USE, 1.28 GPF.
P2 WC	FLUSH VALVE WATER CLOSET	SLOAN WETS 2000.1401-1.28 G2, WHITE FINISH W/ G2 1.28 SENSOR-ACTIVATED FLUSH VALVE, BATTERY OPERATED	1"	--	4"	2"	--	W/ SOLID PLASTIC ELONGATED OPEN-FACE SEAT, MOUNT FLUSH LEVER ON WIDE SIDE OF WATER CLOSET. WATER USE, 1.28 GPF.
P3 UR	URINAL (ADA ACCESSIBLE)	SLOAN WEUS-1005.1401, WHITE FINISH W/ G2 0.5 GPM SENSOR-ACTIVATED FLUSH VALVE, BATTERY OPERATED	3/4"	--	2"	1-1/2"	--	MOUNT PER ADA MOUNTING HEIGHT STANDARDS, PROVIDE SMITH URINAL SUPPORT MOD. 0617 W/ BEARING PLATE
P4 LAV	ADA WALL-HUNG LAVATORY	AM. STD. LUCERNE MOD. 0355.012 W/ CONCEALED ARMS SUPPORT & SLOAN SF-2350 FAUCET, W/ 0.5 GPM VANDAL RESISTANT SPRAY HEAD	1/2"	1/2"	1-1/2"	1-1/2"	--	W/ J.R. SMITH MOD. 0720 CARRIER, SEE ARCH. ELEV. FOR MOUNTING HEIGHT, CHROME-PLATED P-TRAP, BRASS SUPPLY STOPS, BRADLEY S59-4000A THERMOSTATIC MIXING VALVE SET FOR 110°F, FAUCET WATER FLOW, 0.5 GPM

TYPE "L" COPPER PIPING SIZING-4 PSI/100'

SIZE	CW F. TANK F.U.	HW F.U.	F. VALVE F.U.
1/2"	1	1	--
3/4"	6	6	--
1"	15	15	--
1-1/4"	30	28	--
1-1/2"	56	46	14
2"	205	119	95
2-1/2"	455	245	329
3"	719	406	665
TOTAL G.P.M.: 43 (PROPOSED FIXTURES)			

WATER FIX. UNIT CALC.

Ventura Harbor Restrms, 1591 Spinnaker Dr., Oxnard, CA

QTY (D) (P)	DESCRIPTION (PUBLIC FIXTURES)	FU/ FIXTURE	TOTAL
5 5	WATER CLOSET (FLUSH VALVE)	5.0	25.0
2 1	URINAL	4.0	4.0
3 3	LAVATORY	1.0	3.0
TOTAL FIXTURE UNITS:			32.0
TOTAL G.P.M. DEMAND:			43.0
WATER SERVICE TO SPACE: 2-1/2"			

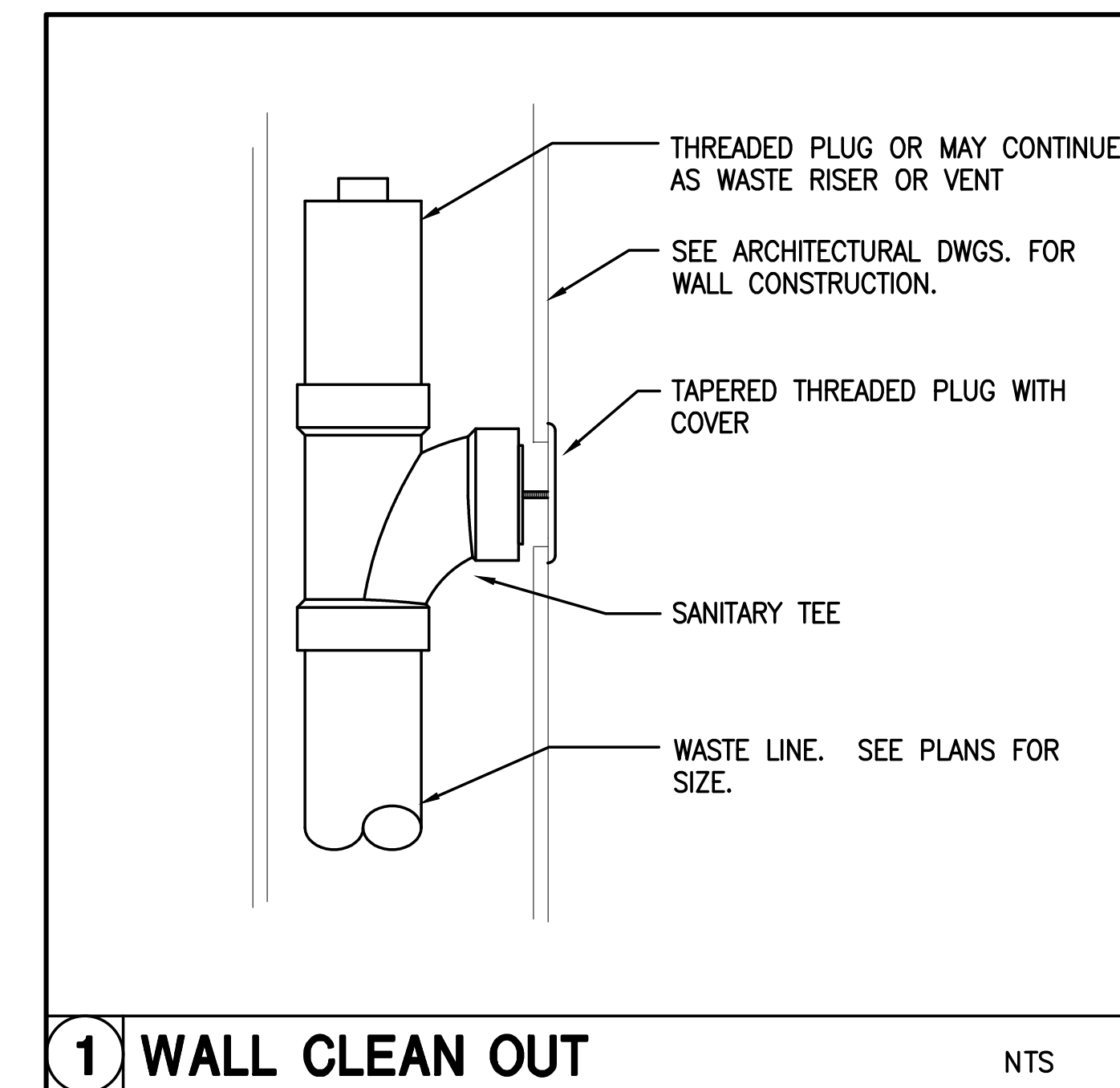
WATER PIPING SIZED IN ACCORDANCE WITH APPENDIX 'A' OF THE 2016 CALIFORNIA PLUMBING CODE
 (D) = (E) PLUMBING FIXTURE REMOVED
 (P) = PROPOSED PLUMBING FIXTURE

SEWER FIX. UNIT CALC.

Ventura Harbor Restrms, 1591 Spinnaker Dr., Oxnard, CA

QTY (D) (P)	DESCRIPTION (PUBLIC FIXTURES)	FU/ FIXTURE	TOTAL
5 5	WATER CLOSET (FLUSH VALVE)	4.0	20.0
2 1	URINAL	2.0	2.0
3 3	LAVATORY	1.0	3.0
0 2	(E) FLOOR DRAIN REMAINING	2.0	4.0
TOTAL FIXTURE UNITS:			29
MIN. SEWER REQUIRED:			4"

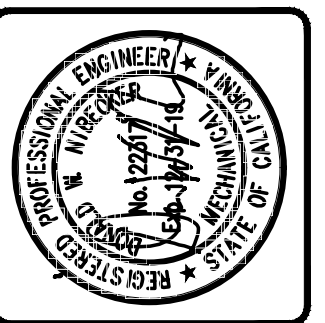
SEWER PIPING SIZED IN ACCORDANCE WITH TABLES 702.1, & 703.2 OF THE 2016 CALIFORNIA PLUMBING CODE



1 WALL CLEAN OUT NTS



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PLUMBING SCHEDULES & DETAILS

Sheet Title	R&A No.	AD606622
Revisions	Date:	11/19/2018
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RESTROOM/SITE ADA UPGRADE
 VENTURA HARBOR VILLAGE

1591 SPINNAKER DRIVE
 VENTURA, CALIFORNIA

Sheet No.

P2.01

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ABBREVIATIONS		
A AMPERES	IDF INTERMEDIATE DISTRIBUTION FRAME	
AC ALTERNATING CURRENT	I.G. ISOLATED GROUND	
AF AMP FRAME/AMP FUSE	JUNCTION BOX	
AFC AVAILABLE FAULT CURRENT	KV KILO VOLT	
AFF ABOVE FINISHED FLOOR	KVA KILOVOLT AMPS=1000VA	
AFS ABOVE FINISHED SURFACE	KW KILOWATT	
AIC AMPERES INTERRUPTING CAPACITY	KMIL THOUSAND MILS	
AL ALUMINUM	LC LIGHTING CONTROLLER	
ARCH ARCHITECT	LCL LONG CONTINUOUS LOAD	
AS AMP SWITCH RATING	LT NOT TO SCALE	
AT AMP TRIP	MDF MAIN DISTRIBUTION FRAME	
ATS AUTOMATIC TRANSFER SWITCH	MTB MAIN TELEPHONE BACKBOARD	
AV AUDIO VISUAL	MTG MOUNTING	
AW AMERICAN WIRE GAGE	NH METAL HALIDE	
BKBD BACKBOARD	MF MANUFACTURER	
BLDG. BUILDING	MFG MANUFACTURER	
BL BASIC IMPULSE LEVEL	MPEO MAIN POINT OF ENTRY	
C CONDUIT	(N) NEW	
CB CIRCUIT BREAKER	(N) NORMALLY CLOSED	
CBC CALIFORNIA BUILDING CODE	NEC NATIONAL ELECTRICAL CODE	
CEC CALIFORNIA ELECTRICAL CODE	NIC NOT IN CONTACT	
CF CONTACT FLOURESCENT	NL NIGHT LIGHT	
CFC CALIFORNIA FIRE CODE	NO NORMALLY OPEN	
CONT. CONTINUATION	NTS NOT TO SCALE	
CKT CIRCUIT	P POWER OR POLE	
CO CEILING	PBD PROVIDED BY OTHERS	
CO CONDUIT ONLY	PNL PANEL	
CSFM CA. STATE FIRE MARSHALL	R REMOVED	
CV CABLE TELEVISION	RM ROOM	
(CU) COPPER	RS CALVANIZED STEEL CONDUIT	
CSM COLD WATER PIPE	RSN ROOM	
COMM COMMUNICATION	SN SYSTEM NEUTRAL	
DIS DISCONNECT	TIME CLOCK	
DS DISCONNECT SWITCH	TTB TELEPHONE TERMINAL BOARD	
ENG DRAWING	TRM TELEPHONE TERMINAL CABINET	
ELECTRICAL CONTRACTOR	TRP TRANSFORMER	
(F) FRONT	UNSW UNSWITCHED	
FAU FORCED AIR UNIT	UNSW UNSWITCHED	
FS SHALLOW FLOOR BOX	UNSW UNSWITCHED	
GC GENERAL CONTRACTOR	V VOLTS/VOLTAGE	
GFI GROUND FAULT INTERRUPTER	W WAITS/VOLTAGE	
GND GROUND	W/ WEATHERPROOF	
HID HIGH INTENSITY DISCHARGE	W/ WITH	
HP HORSEPOWER	(X) EXISTING	
HV HIGH VOLTAGE		
HZ HERTZ		

U.L. STANDARD 486P TORQUING RECOMMENDATIONS						
TIGHTENING TORQUE FOR SCREWS (a)						
TORQUE, POUND - INCHES						
WIRE SIZE	SLOTTED HEAD NO. 10 AND LARGER (b)		HEXAGONAL HEAD/EXTERNAL DRIVE SOCKET WRENCH		OTHER CONNECTORS	
	TO 3/64	OVER 3/64 TO 1/4	OVER 1/4	OVER 1/4	CONNECTORS	CONNECTORS
18-10 AWG	20	35	20	35	80	75
8	25	40	25	40	80	75
6	35	45	35	45	185	110
4	45	45	45	45	165	110
3	50	50	50	50	275	150
2	50	50	50	50	275	150
1/2	50	50	50	50	275	150
1/0	50	50	50	50	385	180
2/0	50	50	50	50	385	180
3/0	50	50	50	50	500	250
4/0	50	50	50	50	500	250
250 kcmil	50	50	50	50	650	325
300	50	50	50	50	650	325
350	50	50	50	50	650	325
400	50	50	50	50	825	325
500	50	50	50	50	825	375
600	50	50	50	50	1000	375
700	50	50	50	50	1000	375
750	50	50	50	50	1000	375
800	50	50	50	50	1100	500
900	50	50	50	50	1100	500
1000	50	50	50	50	1100	500
1250	50	50	50	50	1100	600
1500	50	50	50	50	1100	600
1750	50	50	50	50	1100	600
2000	50	50	50	50	1100	600

THIS TABLE GIVES RECOMMENDED CONNECTOR INSTALLING TORQUES FOR COPPER AND ALUMINUM CONDUCTORS. THEY ARE FOR GUIDANCE ONLY WHERE NO TIGHTENING INFORMATION IS AVAILABLE AND SHOULD BE USED TO REPLACE MANUFACTURER'S INSTRUCTIONS WHICH SHOULD ALWAYS BE FOLLOWED.

(c) CLAMPING SCREWS WITH MULTIPLE TIGHTENING MEANS, FOR EXAMPLE, TORQUE TO THE HIGHEST TORQUE VALUE ASSOCIATED WITH THE HIGHEST TORQUE VALUE.

(d) FOR VALUES OF SLOT WIDTH OR LENGTH OTHER THAN THOSE SPECIFIED, SELECT THE LARGEST TORQUE VALUE ASSOCIATED WITH CONDUCTOR SIZE.

CEC ART. 310 CONDUCTOR DERATING		
NEC §310.15 (B)(3)(c) ADJUSTMENT FACTORS		
(a) MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE	PERCENT OF VALUES IN TABLES AS ADJUSTED FOR AMBIENT TEMPERATURE	F NECESSARY
NUMBER OF CURRENT-CARRYING CONDUCTORS		
1 THROUGH 6	80	
7 THROUGH 9	70	
10 THROUGH 20	60	
21 THROUGH 30	45	
31 THROUGH 40	45	
41 AND ABOVE	30	

WHERE SINGLE CONDUCTORS OR MULTICONDUCTOR CABLES ARE STACKED OR BUNDLED LONGER THAN 24 INCHES (610 mm) WITHOUT MAINTAINING SPACING AND ARE NOT INSTALLED IN RACEWAYS, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ABOVE TABLE.

EXCEPTION NO. 1: WHERE CONDUCTORS OF DIFFERENT SYSTEMS, AS PROVIDED IN SECTION 300-3, ARE INSTALLED IN A COMMON RACEWAY OR CABLE, THE DERATING FACTORS SHOWN ABOVE SHALL APPLY TO THE NUMBER OF POWER AND LIGHTING (ARTICLES 210, 215, 220, AND 230) CONDUCTORS ONLY.

EXCEPTION NO. 2: FOR CONDUCTORS INSTALLED IN CABLE TRAYS, THE PROVISIONS OF SECTION 392.11 SHALL APPLY.

EXCEPTION NO. 3: DERATING FACTORS SHALL NOT APPLY TO CONDUCTORS IN NIPPLES HAVING A LENGTH NOT EXCEEDING 24 INCHES (610mm).

EXCEPTION NO. 4: DERATING FACTORS SHALL NOT APPLY TO UNDERGROUND CONDUCTORS ENTERING OR LEAVING AN OUTDOOR TRENCH IF THOSE CONDUCTORS HAVE PHYSICAL PROTECTION IN THE FORM OF RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, OR RIGID NONMETALLIC CONDUIT HAVING A LENGTH NOT EXCEEDING 10 FEET (3.05m) ABOVE GRADE AND THE NUMBER OF CONDUCTORS DOES NOT EXCEED FOUR.

CEC WIRE FILL TABLE 314.16(a)						
JUNCTION BOX DIMENSION, INCHES TRADE SIZE OR TYPE	MIN. CU. IN. CAP.	MAXIMUM NUMBER OF CONDUCTORS				
		NO.14	NO.12	NO.10	NO.8	NO.6
4 x1-1/4 ROUND OR OCTAGONAL	12.5	6	5	5	5	2
4 x1-1/2 ROUND OR OCTAGONAL	15.5	7	6	6	5	3
4 x2-1/8 ROUND OR OCTAGONAL	21.5	10	8	7	4	
4 x1-1/4 SQUARE	18.0	9	8	7	6	3
4 x1-1/2 SQUARE	21.0	10	9	8	7	4
4 x2-1/8 SQUARE	30.3	15	13	12	10	6
4-11/16 x1-1/4 SQUARE	25.5	12	11	10	8	5
4-11/16 x1-1/2 SQUARE	29.5	14	13	11	9	5
4-11/16 x2-1/8 SQUARE	42.0	21	18	16	14	8
3 x2 x1-1/2 DEVICE	7.5	3	3	3	2	1
3 x2 x2 DEVICE	10.0	4	4	3	2	
3 x2-1/4 DEVICE	10.5	5	4	4	3	2
3 x2 x1-1/2 DEVICE	12.5	6	5	5	4	2
3 x2 x3/4 DEVICE	14.0	7	6	5	4	2
3 x2 x1-1/2 DEVICE	18.0	9	7	6	3	
4 x2-1/8 x1-1/2 DEVICE	10.3	5	4	4	3	2
4 x2-1/8 x1-7/8 DEVICE	13.0	6	5	5	4	2
4 x2-1/8 x2-1/8 DEVICE	14.5	7	6	5	4	2
3-3/4 x2 x2-1/2 MASONRY BOX / GANG	14.0	7	6	5	4	2
3-3/4 x2 x3-1/2 MASONRY BOX / GANG	21.0	10	9	8	7	4
FS - MINIMUM INTERNAL DEPTH 1-3/4 SINGLE COVER / GANG	13.5	6	6	5	4	2
FD - MINIMUM INTERNAL DEPTH 2-3/8 SINGLE COVER / GANG	18.0	9	8	7	6	3
FS - MINIMUM INTERNAL DEPTH 1-3/4 MULTIPLE COVER / GANG	18.0	9	8	7	6	3
FD - MINIMUM INTERNAL DEPTH 2-3/8 MULTIPLE COVER / GANG	24.0	12	10	9	8	4

GENERAL ELECTRICAL NOTES

A. GENERAL

1. THE DRAWINGS AND THESE GENERAL NOTES DESCRIBE THE SCOPE OF WORK AND SYSTEMS. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING PRINCIPAL SYSTEMS AND EQUIPMENT.

2. PERMITS AND CHARGES
OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS, INSPECTION FEES, AND OTHER CHARGES BY AGENCIES HAVING JURISDICTION.

3. REGULATIONS AND CODES
PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, CALIFORNIA ADMINISTRATIVE CODE TITLE 24, AND OTHER CODES AND REGULATIONS HAVING JURISDICTION. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND THE MANUFACTURER'S RECOMMENDATIONS.
CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:
APPLICABLE CODES
2016 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.;
2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.;
2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.;
2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.;
2016 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R.;
2016 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.
2016 TITLE 19 C.C.R. PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:
NFPA 13-AUTOMATIC SPRINKLER SYSTEMS, 2016 EDITION
NFPA 14-STANDBY SYSTEMS, 2016 EDITION
NFPA 17A-WET CHEMICAL SYSTEMS, 2017 EDITION
NFPA 24-PRIVATE FIRE MANS, 2016 EDITION - PART OF NFPA 13 CHAPTER 5
NFPA 72 (CALIFORNIA AMENDED) - NATIONAL FIRE ALARM CODES, 2016 EDITION
NFPA 101 LIFE SAFETY CODE, 2015 EDITION
NFPA 253-CRITICAL RADIAN FLUX OF FLOOR COVERING SYSTEMS, 2015 EDITION
NFPA 2001-CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, 2015 EDITION

4. VERIFYING EXISTING CONDITIONS
BEFORE SUBMITTING BID, BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING SITE. THE INTENT OF THE WORK IS TO BE DESCRIBED HEREAFTER. BY THE ACT OF SUBMITTING A BID PROPOSAL FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE. NO REQUEST FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS WHICH MAY EXIST.

5. COORDINATION
COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTION RECORDS WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE VERIFIED.

6. SERVICE CONTINUITY
UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY POWER AREAS OF THE SITE DURING THE WORK. TEMPORARY SERVICES AS MAY BE REQUIRED IDENTIFY THEM AT BID TIME. ALL WORK TO BE DONE ON PREMIUM TIME AND THE TOTAL OVERTIME MAN-HOURS REQUIRED FOR COMPLETION.

7. AS BUILT
PROVIDE RECORD DRAWINGS TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL BE SIGNED AND DATED BY CONTRACTOR PRIOR TO RELEASE OF FINAL RETENTION OF ALL MONIES.
MARK PROJECT RECORD DOCUMENTS DAILY TO INDICATE ALL CHANGES MADE IN THE FIELD.
A) IN ADDITION TO GENERAL REQUIREMENTS OF PROJECT RECORD DRAWINGS, INDICATE ON DRAWINGS, CHANGES OF EQUIPMENT LOCATIONS AND RATINGS, TRIP SIZES, AND SETTINGS ON CIRCUIT BREAKERS, ALTERATIONS IN RACEWAY RUNS AND SIZES, CHANGES IN WIRE SIZES, CIRCUIT DESIGNATIONS, INSTALLATION DETAILS, ONE-LINE DIAGRAMS, CONTROL DIAGRAMS AND SCHEDULES.
USE GREEN TO INDICATE DELETIONS AND RED TO INDICATE ADDITIONS.
A) USE THE SAME SYMBOLS AND FOLLOW THE SAME DRAFTING PROCEDURES USED ON THE CONTRACT DRAWINGS.
AT THE COMPLETION OF UNDERGROUND CONDUIT INSTALLATION PROVIDE UNDERGROUND CONDUIT RECORD DOCUMENTS TO OWNER'S REPRESENTATIVE.
TWO COPIES, IN BINDER FORM, OF ALL TEST RESULTS AS REQUIRED BY THESE DOCUMENTS.
TWO COPIES OF LOCAL AND/OR STATE CODE ENFORCING AUTHORITIES FINAL INSPECTION CERTIFICATES.
TWO COPIES, IN BINDER FORM, OF ELECTRICAL EQUIPMENT CUT SHEETS, MANUFACTURER'S INSTALLATION INSTRUCTIONS, WARRANTY CERTIFICATES, AND PRODUCT LITERATURE FOR ALL PRODUCTS UTILIZED ON PROJECT.

8. WARRANTY
CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR.

9. SHOP DRAWINGS
SUBMIT SHOP DRAWINGS AND MATERIAL LIST FOR REVIEW PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH U.L. LISTED LABORATORY. SHOP DRAWINGS MUST BE STAMPED BY THE CONTRACTOR FOR CONFORMANCE PRIOR TO SUBMITTAL.
SUBMIT SIX SETS OF SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASING ALL BREAKER MOUNTING HARDWARE, DISCONNECT SWITCHES, FUSES, CONTROLLERS, LIGHTING FIXTURES, LIGHT SWITCHES, RECEPTACLES, ETC.

10. CONTRACTOR BID
CONTRACTOR'S BID SHALL BE BASED ON ALL WORK SHOWN ON THE PLANS AND AS SPECIFIED. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION OF THE OWNER AND ENGINEER PRIOR TO BID IN WRITING. ALL SUBSTITUTIONS MUST BE REVIEWED BY THE ENGINEER IN WRITING. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK, THE OWNER, ENGINEER OF RECORD OR THE WORK OF OTHER CONTRACTORS.

11. MATERIAL AND INSTALLATION
ALL WORK AND MATERIAL SHALL CONFORM TO THE LATEST RULES OF THE GOVERNING ELECTRICAL CODE AND INSTALLATION SHALL BE OF THE LATEST INDUSTRY STANDARDS OF WORKMANSHIP.
ALL MATERIALS SHALL BE NEW AND LISTED BY UNDERWRITERS LABORATORY (U.L.).

1. CONDUITS
CONDUIT SHALL BE EMT, PVC, IMC, RIGID OR FLEXIBLE STEEL TYPE. CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH U.L.-1. A GROUND WIRE IS REQUIRED IN ALL FLEXIBLE CONDUIT AND UNDERGROUND CONDUIT. BUSHINGS SHALL BE INSTALLED ON ALL COMMUNICATION, TELEPHONE & SPEAKER CONDUITS. PROVIDE 3/16" NYLON PULL STRING IN ALL EMPTY CONDUITS. NO IMC, BX OR ACG90 SHALL BE PERMITTED.

2. SWITCHES AND RECEPTACLES
PROVIDE 20AMP NEMA RATED SWITCHES AND RECEPTACLES OF SPECIFICATION GRADE. ALL SWITCHES SHALL BE RATED FOR 120 AND/OR 277 VOLT AND RECEPTACLES SHALL BE NEMA 5-20R. IN ALL OFFICES AND OFFICE AREAS DEVICES SHALL BE DECORA TYPE WITH COLOR SELECTION BY CONTRACTOR/OWNERS REPRESENTATIVE.

3. FEEDERS AND BRANCH CIRCUITS IDENTIFICATION
IDENTIFY FEEDERS WITH THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, LOAD END, AND IN PULL BOXES WITH E-2 CODE OR OTHER APPROVED WIRE MARKER.
IDENTIFY BRANCH CIRCUITS WITH I.D. MARKERS, THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, IN ALL SPACES IN JUNCTION BOXES, AND IN OUTLETS. USE GYRO COATED SELF-STICKING MARKERS SUCH AS THOMAS & BETTS E-2 CODE FOR IDENTIFICATION OF CONDUCTORS.
IDENTIFY SIGNAL & COMMUNICATION CABLES AT TERMINAL AND OUTLET.

4. CONDUITORS
DELIVER ALL CONDUCTORS TO THE JOB SITE IN ORIGINAL UNBROKEN CARTON OR REEL, PROPERLY TAGGED WITH U.L. LABEL, SIZE, TYPE, MANUFACTURER, TRADE NAME AND THE DATE OF MANUFACTURE. (MUST BE MANUFACTURED WITHIN 6 MONTHS)
PROVIDE COPPER CONDUCTORS #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. PROVIDE STRANDED COPPER CONDUCTORS FOR ALL WIRING. USE CONDUCTORS WITH THHN/THWN 600 VOLTS INSULATION, UNLESS OTHERWISE NOTED.

5. LIGHTING FIXTURES
PROVIDE LIGHTING FIXTURES WITH ELECTRONIC BALLASTS PER SCHEDULE, PROVIDE WITH LAMPS BY G.E., PHILIPS OR SYLVANIA AS STATED IN THE SCHEDULE.

B. DEMOLITION
NOTIFY THE OWNER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, AND WHICH IS NOT INDICATED ON THE PLANS.

1. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER TO BE SCRAP.

2. ALL REMOVED CIRCUITS, CONDUCTORS, FEEDERS ETC., WHEN NOTED TO BE REMOVED, SHALL BE REMOVED TO THE LAST ACTIVE DEVICE. ALL OVER-CURRENT PROTECTION AND DISCONNECT DEVICES NO LONGER UTILIZED BUT REMAINING AS LAST ACTIVE DEVICE SHALL BE LABELED AS "SPARE". COORDINATE ALL OUTAGES WITH OWNERS REPRESENTATIVE.

C. EXISTING
CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE CONFINES AS MUCH AS POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.

1. EQUIPMENT, MATERIALS AND SUPPLIES REQUIRED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.

2. DO ALL DRILLING, CUTTING, CHANNELING AND PATCHING REQUIRED TO INSTALL ELECTRICAL WORK AS INDICATED OR HEREIN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS INDICATED OTHERWISE. PAINT ALL NEW ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES AND FITTINGS PENETRATING INTO FIRE RATED ENCLOSURES, SPACES, ETC.

3. ALL CONDUIT RUNS SHALL BE CONCEALED, UNLESS SHOWN OTHERWISE. PROVIDE A PULL WIRE IN ALL EMPTY CONDUITS.

4. EXISTING CONDUIT SHOWN IS FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITION AT SITE.

5. ALL WORK SHOWN IS NEW UNLESS SPECIFICALLY INDICATED AS EXISTING (X). ALL ELECTRICAL EQUIPMENT MOUNTING AND ANCHORAGE MUST CONFORM WITH LOCAL AND STATE SEISMIC CODES.

D. GROUNDING & BONDING
FURNISH AND INSTALL COMPLETE BONDING AND GROUNDING SYSTEM AS REQUIRED BY CODES. CONTINUITY OF GROUNDING SHALL BE MAINTAINED MECHANICALLY AND ELECTRICALLY THROUGHOUT THE SYSTEM. A GREEN GROUNDING CONDUIT SIZE CONDUCTOR SHALL BE CARRIED IN ALL CONDUITS.

E. INSTALLATION
IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, BOXES, CONNECTORS AND HARDWARE. REFER ALSO TO WRITTEN SPECIFICATIONS FOR GENERAL, MECHANICAL AND ELECTRICAL SECTIONS.

1. PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION THEREWITH. COMPLY WITH CODES: NOTHING IN THESE PLANS AUTHORIZES DEVIATION FROM APPLICABLE CODES.

2. DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF ARCHITECT FOR VISUAL AND STRUCTURAL REASONS.

3. PROVIDE A CODE APPROVED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF EVERY MOTOR AND FEED MOTOR AREAS OF THE SITE DURING THE WORK. PROTECT THROUGHOUT A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES.

4. FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS, AQUASTATS, SOLENOID VALVES AND OTHER MECHANICAL EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS REFER TO MECHANICAL PLANS AND DETERMINE EXACT LOCATIONS UNDER DIRECTION OF HEATING AND VENTILATING CONTRACTOR.

5. DO NOT RUN ANY CONDUIT IN SLAB IF ITS OUTSIDE DIAMETER EXCEEDS 1/3 THE THICKNESS OF THE SLAB. LOCATE CONDUITS WITHIN THE MIDDLE OF THE SLAB, WHERE CONDUITS ARE GROUPED IN PARALLEL RUNS, SPACE THEM 3" OR MORE APART. WHERE CONDUITS CROSS EACH OTHER, THICKEN SLAB PROPORTIONATELY OVER A HORIZONTAL AREA EQUAL TO TEN TIMES THE DIAMETER OF THE LARGEST CONDUIT. REFER ALSO TO DETAILS SHOWN.

6. FOR CIRCUITS FED THROUGH FLOURESCENT FIXTURE CHANNELS AND FEEDS TO RECESSED INCANDESCENT FIXTURES USE INSULATED WIRE OF 105 DEG. CELSIUS RATING.

7. SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.

8. EXAMINE PLANS TO DISCERN CEILING WITH A FIRE RATING OF ONE HOUR OR MORE, PROVIDE A ONE HOUR FIRE-RATED ENCLOSURE OVER EACH LIGHT FIXTURE RECESSED THEREIN.

9. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH, OR AT RIGHT ANGLES TO, COLUMN LINES OR BEAMS AND SEPARATED BY AT LEAST THREE (3) INCHES FROM WATER LINES WHENEVER THEY RUN LONG SIDE OR ACROSS SUCH LINES. CONDUIT SHALL NOT BE RUN BELOW CABLE TRAYS OR LIGHT FIXTURES WITHOUT SPECIFIC APPROVAL OF THE OWNERS REPRESENTATIVE. HANGERS SHALL BE FASTENED TO STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING. HANGERS AND SUPPORT SYSTEMS ARE AN INTEGRAL PART OF THE VISUAL ENVIRONMENT. ALL HANGERS AND SUPPORTS EXPOSED TO PUBLIC VIEW MUST BE SHOWN IN DETAIL ON PLANS SUBMITTED TO LANDLORD FOR APPROVAL OF APPEARANCE. ALL HANGERS MUST BE UNIFORMLY SPACED AND NEATLY INSTALLED WITH NO EXCESS MATERIAL BEYOND WHAT IS REQUIRED FOR THE SUPPORT FUNCTION. CONTRACTOR SHALL SELECT ACCESSORIES AND HARDWARE WITH A SMOOTH, NEAT FINISHED APPEARANCE AND PAINT ALL EXPOSED CONDUIT HANGERS TO MATCH THE ADJACENT FINISHES.

10. ALL WALL SWITCHES AND RECEPTACLES SHALL BE MOUNTED BETWEEN 18" AND 48" TO TOP OF OUTLET BOX PER ADA REQUIREMENTS UNLESS NOTED OTHERWISE.
ELECTRICAL SWITCHES, CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF OUTLET BOX NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM.
ELECTRICAL RECEPTACLE OUTLETS, ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM.

11. CONTRACTOR SHALL EXAMINE PLANS AND VERIFY IN FIELD LOCATIONS OF ALL FIRE RATED WALLS, CEILING AND FLOORS. CONTRACTOR SHALL SEAL ALL ELECTRICAL SYSTEM PENETRATIONS THROUGH FIRE RATED WALLS, CEILING AND FLOORS WITH U.L. LISTED MATERIAL APPROVED BY THE AUTHORITY HAVING JURISDICTION.

12. SURFACE MOUNTED RACEWAY COMPLETENESS: CONTRACTOR SHALL PROVIDE ALL RACEWAY, FITTINGS, SUPPORTS, BOXES, DEVICES PLATES, ETC. NECESSARY FOR A COMPLETE AND WORKABLE SURFACE MOUNTED ELECTRICAL RACEWAY SYSTEM. PRIOR TO INSTALLATION CONTRACTOR SHALL PERFORM A PREINSTALLATION SURFACE MOUNTED RACEWAY JOB WALK WITH OWNER & ARCHITECT FOR CONTRACTOR TO FIELD VERIFY EXACT ROUTING OF ANY & ALL SURFACE MOUNTED RACEWAYS.

* SEE LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.

ELECTRICAL DRAWING SHEET INDEX

SHEET	DESCRIPTION	SHEET	DESCRIPTION
E1	GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS, ETC.		
E2	GENERAL ELECTRICAL SPECIFICATIONS SHEET		
E3	DEMOLITION POWER & LIGHTING PLANS		
E4	ELECTRICAL POWER & LIGHTING PLANS		
E5	LIGHTING FIXTURE SCHEDULE AND ELECTRICAL DETAILS		
E6	ELECTRICAL TITLE 24 DOCUMENTATION		
E7	ELECTRICAL TITLE 24 DOCUMENTATION		

ELECTRICAL SYMBOLS

POWER

⊖ SINGLE RECEPTACLE, WALL MOUNTED @ +18" AFF, NEMA 5-20R U.O.N.
⊖ DUPLEX RECEPTACLE, WALL MOUNTED @ +18" AFF, NEMA 5-20R U.O.N. (GFI DENOTES GROUND FAULT RECEPTACLE)
⊖ ISOLATED (ORANGE) GROUND DUPLEX RECEPTACLE, WALL MTD.@18" AFF, NEMA 5-20R U.O.N.
⊖ DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, WALL MOUNTED @ +18" AFF
⊖ DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, WALL MOUNTED @ +18" AFF
⊖ QUAD RECEPTACLE WITH ONE DUPLEX RECEPTACLE CONTROLLED BY TITLE 24 REQUIRED OCCUPANCY SENSOR.
⊖ DUPLEX RECEPTACLE, WALL MOUNTED @ +18" NEMA 5-20R U.O.N. TOP RECEPTACLE SWITCHED
⊖ CEILING MOUNTED DUPLEX RECEPTACLE, 5-20R
⊖ SPECIAL OUTLET, TYPE AS REQUIRED BY EQUIPMENT.
⊖ JUNCTION BOX (CEILING MTD.) SIZE PER TABLE AND CEC ARTICLE 314
⊖ JUNCTION BOX (WALL MTD.) SIZE PER TABLE AND CEC ARTICLE 314
⊖ THERMOSTAT
⊖ BRANCH CIRCUIT PANELBOARD - 240/120V, 12, 3W OR 36, 3W, 240VAC OR 120/208VAC, 3ø, 4W, OR 277/480 VAC 3ø, 4W.

SWITCHES

\$ SINGLE-POLE SWITCH MOUNTED @ +42" AFF
\$2 DOUBLE-POLE SWITCH MOUNTED @ +42" AFF
\$3 3-WAY SWITCH @ +42" AFF
\$4 4-WAY SWITCH @ +42" AFF
\$3ab 3-WAY SWITCH, a & b INDICATES LIGHT FIXTURE TO BE SWITCHED (EACH A 3-WAY) MOUNTED @ 42" AFF
\$x KEY SWITCH MOUNTED @ +42" AFF
⊖ DUAL TECHNOLOGY OCCUPANCY SENSOR
⊖ POWER/RELAY PACK

LIGHTING FIXTURE SYMBOLS

⊖ 2'x4' CEILING MOUNTED LIGHT FIXTURE (RECESSED, SURFACE MOUNTED)
⊖ a & b, ETC. INDICATES SWITCH IDENTIFICATION NUMBER INDICATES LIGHT FIXTURE CIRCUIT
⊖ 48" LED STRIP LIGHT (SURFACE MOUNTED)
⊖ LED EMERGENCY BUGEYE LIGHT FIXTURE

CIRCUIT BREAKERS & FUSES

⊖ DISCONNECT SWITCH, 60AMP SWITCH, 35 AMP FUSE, 3 POLE W/ OVERCURRENT PROTECTION U.O.N.
⊖ COMBINATION STARTER/VFD DISCONNECT SWITCH SIZED PER PLAN
⊖ 100A UTILITY METER (OR AS NOTED)
⊖ FUSED DISCONNECT SWITCH 100AMP SWITCH RATING WITH 60 AMP FUSES, 3 POLE
⊖ 200AF 150AT 3P MOLDED CASE CIRCUIT BREAKER 200 AMP FRAME, 150 AMP TRIP RATING, 3 POLE
⊖ SCHWITZER RAY MODEL #751A
⊖ STRESS CONE OR MODULAR ELBOW HIGH VOLTAGE CABLE CONNECTION
⊖ MEDIUM VOLTAGE DRAWOUT VACUUM CIRCUIT BREAKER

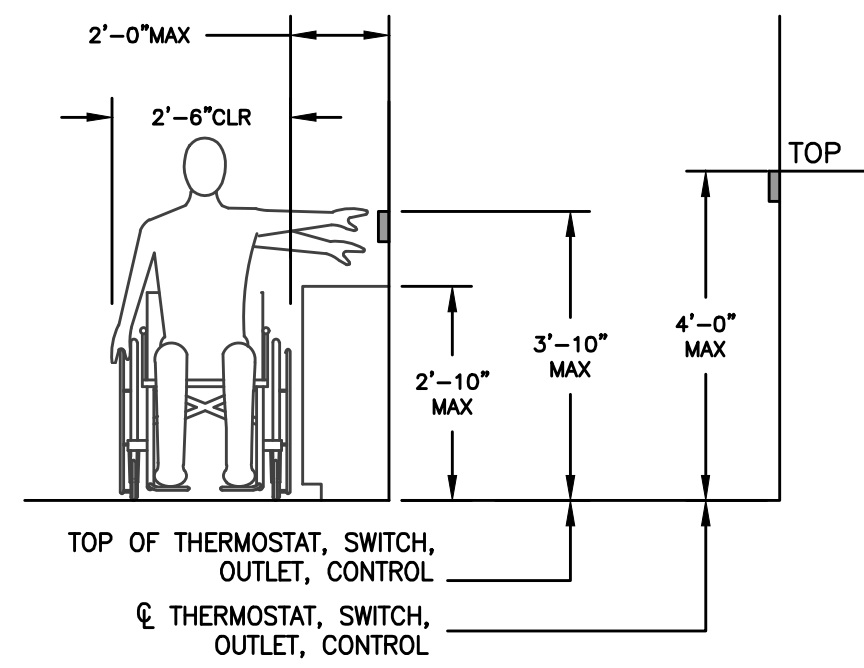
ANNOTATIONS & CALLOUTS

⊖ SEE KEY NOTE #1 AS INDICATED ON DRAWING
⊖ REVISION CLOUD WITH DELTA
⊖ INDICATES DETAIL NUMBER
⊖ SHEET NUMBER TO FIND DETAIL
⊖ INDICATES LIGHTING FIXTURE TAG NUMBER (FOUND ON LIGHTING FIXTURE SCHEDULE)
⊖ NUMBER OF LIGHTING FIXTURES IN AREA
⊖ INDICATES MECHANICAL/PLUMBING EQUIPMENT OR DEVICE (FOUND ON ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT OR ON MECHANICAL PLANS)
⊖ MECHANICAL/PLUMBING TAG NUMBER. SEE ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT.
⊖ BREAK LINE INDICATES WORK EXTENDED BEYOND LIMITS SHOWN ON DRAWING

CONDUIT & WIRING SYMBOLS

⊖ CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS, 1" O.C. TELEPHONE CONDUIT. ARROW DENOTES HOME RUN TO TELEPHONE BACKBOARD.
⊖ CONDUIT RUN CONCEALED BELOW FLOOR OR UNDERGROUND FLEXIBLE CONDUIT (WITH GROUND CONDUCTOR, PROVIDE LIQUID TIGHT CONDUIT IN ALL EXPOSED AREAS)
⊖ CONDUIT STUB UP, CAP AND IDENTIFY
⊖ CONDUIT TURNS UP
⊖ CONDUIT TURNS DOWN
⊖ CONDUIT FITTING SEALED WITH APPROVED COMPOUND FOR ENVIRONMENT SEPARATION.
⊖ HASH MARKS INDICATE QUANTITY OF #12 CONDUCTORS, NO HASH MARKS INDICATE (2)#12AWG. (PROVIDE GROUND CONDUCTOR IN ALL CONDUITS.)
⊖ WHERE NO NUMBER IS INDICATED, THE CONDUCTORS ARE 2#12AWG & #12 EQUIPMENT GROUND CONDUCTOR. CONDUIT SIZE IS AS REQUIRED BY ELECTRICAL CODE (3/4" CONDUIT MINIMUM) (1" CONDUIT MINIMUM UNDERGROUND)
⊖ INDICATES A HOMERUN TO PNL 2LA, CKTS 1-3-5 WITH SHARED NEUTRAL & CKT 7 WITH DEDICATED NEUTRAL.
⊖ 3/4"-2#12 & #12 GND
⊖ 3/4"-3#12 & #12 GND
⊖ 3/4"-4#12 & #12 GND
⊖ 3/4"-5#12 & #12 GND
⊖ 3/4"-6#12 & #1

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MOUNTING HEIGHT OVER OBSTRUCTION

SCALE: NONE

CALIFORNIA BUILDING CODE NOTES:

- CBC 11B-308.1.2 -- ALL WORK FOR THIS PERMIT SHALL COMPLY WITH CBC ACCESSIBILITY STANDARDS.
- CBC 11B-308.2 -- FORWARD REACH OBSTRUCTED -- ELECTRICAL RECEPTACLE OUTLETS SHALL BE LOCATED NO MORE THAN 44 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX WHEN OBSTRUCTION IS OVER 20" AND DOES NOT EXCEED 25". WHEN THE DEPTH IS LESS THAN 20" HEIGHT CAN INCREASE TO 48". (DESK COUNTERS)
- CBC 11B-308.3 -- SIDE REACH OBSTRUCTED -- ELECTRICAL RECEPTACLE OUTLETS SHALL BE LOCATED NO MORE THAN 46 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX WHEN THE OBSTRUCTION IS OVER 10" AND DOES NOT EXCEED 24". WHEN THE DEPTH IS LESS THAN 10" HEIGHT CAN BE INCREASED TO 48"

10 GENERAL

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM AS SHOWN ON THE DRAWING(S). THE COMPLETE INSTALLATION SHALL MEET REQUIREMENTS OF THE LATEST NATIONAL ELECTRICAL CODE AND ALL LOCALLY ADOPTED AMENDMENTS, INCLUDING BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:

- CALIFORNIA ELECTRICAL CODE - LATEST EDITION
- CALIFORNIA ADMINISTRATIVE CODE, TITLE 24
- CALIFORNIA ADMINISTRATIVE CODE, TITLE 19, FIRE CODE
- UNDERWRITERS LABORATORY
- AMERICAN NATIONAL STANDARD INSTITUTE
- NEMA (NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION)
- ALL OTHER APPLICABLE STATE, LOCAL LAWS AND REGULATIONS 7.

WHERE THESE SPECIFICATIONS CALL FOR A HIGHER STANDARD THAN THE ABOVE-MENTIONED RULES, THE SPECIFICATIONS SHALL GOVERN.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ALL WORK IN ACCORDANCE WITH STAMPED PLANS APPROVED BY THE ELECTRICAL DIVISION OF THE DEPARTMENT OF BUILDING AND SAFETY.

PRIOR TO CONTRACTOR SUBMITTING HIS BID, HE SHALL VISIT THE JOB SITE TO BECOME COMPLETELY FAMILIAR WITH ALL ASPECTS OF THE NEW CONSTRUCTION AND ALL REQUIREMENTS THAT MAY BE IMPOSED BY THE OWNER. FAILURE TO DO THIS WILL RELIEVE OWNER FROM ANY FINANCIAL OBLIGATION FOR EXTRA WORK OR COST INCURRED BY THE CONTRACTOR. CONTRACTOR TO RESIGN AND ACCEPT ANY LIABILITY ARISING OUT OF PRODUCT FAILURE OR MANUFACTURING DEFECT OF THE EQUIPMENT THEY FURNISH.

ALL PERMITS SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR. ACCURATE RECORD DRAWINGS SHALL BE MAINTAINED AND PRESENTED TO THE OWNER AND THE ELECTRICAL ENGINEER AT THE TIME OF OCCUPANCY PERMIT.

THE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL HIS WORK FOR ONE YEAR AFTER ACCEPTANCE AND FURNISH ALL MANUFACTURER WARRANTIES FOR THE EQUIPMENT HE FURNISHES.

THE CONTRACTOR SHALL INSTALL ALL ELECTRIC EQUIPMENT IN A NEAT AND WORKMANLIKE MANNER. ELECTRICAL EQUIPMENT SHALL BE FIRMLY SECURED TO THE SURFACE ON WHICH IT IS MOUNTED.

THE ELECTRICAL CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF THE SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL WITHIN THIRTY (30) DAYS AFTER THE AWARD OF THE GENERAL CONTRACT. IF SUCH A SCHEDULE CANNOT BE MET, THE ELECTRICAL CONTRACTOR MAY REQUEST IN WRITING FOR AN EXTENSION OF TIME TO THE ARCHITECT. IF THE ELECTRICAL CONTRACTOR DOES NOT SUBMIT SHOP DRAWINGS IN THE PRESCRIBED TIME, THE ARCHITECT HAS THE RIGHT TO DRAW UP THE EQUIPMENT.

SHOP DRAWINGS SHALL BE SUBMITTED ON ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT, INCLUDING SERVICE-ENTRANCE EQUIPMENT, LIGHTING FIXTURES, PANELS, SWITCHES, WIRING DEVICES, AND PLATES, AND EQUIPMENT FOR MISCELLANEOUS SYSTEMS. EACH ITEM OF EQUIPMENT PROPOSED SHALL BE A STANDARD CATALOG PRODUCT OF AN ESTABLISHED MANUFACTURER. THE SHOP DRAWING SHALL GIVE COMPLETE INFORMATION ON THE PROPOSED EQUIPMENT. EACH ITEM OF THE SHOP DRAWINGS SHALL BE PROPERLY LABELED, INDICATING THE INTENDED SERVICE OF THE MATERIAL, THE JOB NAME AND ELECTRICAL CONTRACTOR'S NAME.

WHERE EQUIPMENT IS IDENTIFIED BY MANUFACTURER AND CATALOG NUMBER, IT SHALL BE CONSTRUED AS THE BASE OF REQUIREMENTS FOR QUALITY AND PERFORMANCE. WHERE MANUFACTURERS FOR EQUIPMENT ARE IDENTIFIED BY NAME, THE ELECTRICAL SUBCONTRACTOR MAY SUBMIT FOR APPROVAL, SIMILAR EQUIPMENT OF OTHER MANUFACTURERS AS SUBSTITUTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVE SUFFICIENT INFORMATION TO PERMIT EVALUATION OF THE PROPOSED SUBSTITUTE WITH RESPECT TO QUALITY, PERFORMANCE, SERVICEABILITY, AND WARRANTY. THE ENGINEER'S DECISION AS TO WHETHER THE SUBMITTED EQUIPMENT IS ACCEPTABLE SHALL BE FINAL AND BINDING.

ALL CHANGES NECESSARY TO ACCOMMODATE THE SUBSTITUTED EQUIPMENT SHALL BE MADE AT THE CONTRACTOR'S EXPENSE, AND SHALL BE AS APPROVED BY THE ENGINEER. DETAILED DRAWINGS INDICATING THE REQUIRED CHANGES SHALL BE SUBMITTED FOR APPROVAL AT THE TIME THE SUBSTITUTION IS REQUESTED.

IF SUBSTITUTIONS ARE MADE IN LIEU OF THE LIGHTING FIXTURES SPECIFIED, POINT BY POINT PHOTOMETRIC CALCULATIONS, PHOTOMETRIC PERFORMANCE, FORM, DIMENSION, DESIGN AND PROFILE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

AT COMPLETION OF WORK, THIS CONTRACTOR SHALL CLEAN UP AND REMOVE ALL DEBRIS AND CONDUIT DAMAGE, ONLY GALVANIZED IRON IN AN ENVIRONMENTALLY APPROVED MANNER, LEAVING REMOISES CLEAN.

ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY CONSTRUCTION SERVICE IF REQUIRED FOR THIS PROJECT TO MAINTAIN ESSENTIAL SERVICES DURING CIRCUIT CUT-OVER PERIODS.

SECURE PERMISSION FROM THE OWNER BEFORE PERFORMING ANY CUTTING OR PATCHING WORK WHICH IS LIKELY TO AFFECT THE STRENGTH OF A STRUCTURAL MEMBER. ALL PENETRATIONS THROUGH CONCRETE CONSTRUCTION SHALL BE DONE BY THE MEANS DENOTED BY ARCHITECT.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL EQUIPMENT AND WIRING AS REQUIRED AND AS INDICATED ON MECHANICAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. SEE MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LAYOUTS AND REQUIREMENTS INCLUDING SIZES, VOLTAGES, CONTROL WIRING, CONTROL DEVICES TO BE FURNISHED AND/OR INSTALLED, LOCATIONS AND OTHER REQUIREMENTS.

CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS AND ROUTING TO BE DETERMINED IN THE FIELD TO SUIT CONDITIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE AND OBTAIN APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATIONS OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY APPROVED AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD (AS-BUILT) DRAWINGS.

ALL MATERIAL AND EQUIPMENT SHALL BE NEW, UL LISTED, APPROVED BY THE LOCAL JURISDICTION AND, UNLESS OTHERWISE NOTED, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. EQUIPMENT EXPOSED TO WEATHER SHALL BE UL LISTED WEATHERPROOF.

ALL MOTORS OR EQUIPMENT LOCATED OUT OF SIGHT OR MORE THAN 50 FEET FROM THE PANEL SHALL HAVE HORSEPOWER RATED DISCONNECTS INSTALLED AT THE MOTOR EQUIPMENT.

ALL REQUIRED POWER OUTAGES THAT ARE NECESSARY IN ORDER TO COMPLETE ANY PORTION OF THE WORK SHALL BE ENTIRELY AT THE OWNER'S CONVENIENCE AND AT A TIME DESIGNATED BY HIM AND BE FULLY COORDINATED WITH THE OWNER'S REPRESENTATIVE. A MINIMUM OF 48 HOURS OF ADVANCED NOTICE SHALL BE GIVEN TO THE OWNER OF TIME DESIRED. OWNER SHALL APPROVE TIME OF OUTAGE BEFORE THIS CONTRACTOR DISCONNECTS ANY CIRCUITS. CONTRACTOR SHALL FURNISH, INSTALL, AND REMOVE ANY TEMPORARY JUMPERS ETC. TO MAINTAIN ALL LOADS THAT THE OWNER DESIGNATES AS NOT BEING ABLE TO SHUT DOWN DURING CONSTRUCTION.

SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS THAT CAUSE DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL IN A TIMELY MANNER SO NOT TO IMPAIR THE CONSTRUCTION SCHEDULE OR SEQUENCE OF EVENTS, SUBMIT A WRITTEN REPORT OF THE CONDITIONS FOUND TO THE OWNER'S REPRESENTATIVE FOR APPROPRIATE DIRECTION ON HOW TO COMPLETE THE WORK IN QUESTION.

PRIOR TO START OF INSTALLATION THE CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EACH LIGHT FIXTURE, SWITCH, DISCONNECT, RACEWAY, PANELBOARD, OUTLET, OCCUPANCY SENSOR, WIREMOLD, FIRE ALARM DEVICE, DATA PORT, SPEAKER, MISCELLANEOUS PROJECT DEVICE, ETC. WITH THE OWNER'S REPRESENTATIVE. THE OWNER RESERVES THE RIGHT TO RELOCATE ANY OUTLET OR DEVICE UP TO 8 FEET FROM THE LOCATION INDICATED ON THE PLANS AT NO ADDITIONAL COST.

ALL FEEDER LENGTHS INDICATED ON SINGLE LINE DIAGRAMS OR FEEDER SCHEDULE ARE FOR VOLTAGE DROP PURPOSES ONLY AND ARE NOT TO BE USED FOR MATERIAL TAKE-OFF OR BIDDING PURPOSES.

COORDINATE ALL EXIT SIGN LOCATIONS WITH THE LOCAL FIRE MARSHAL PRIOR TO BEGINNING WORK.

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS TO VERIFY DIMENSIONS, CLEARANCES, OBSTRUCTIONS, TYPE OF CONSTRUCTION, DOOR SWINGS, SINK AND SPLASH BOARD DIMENSIONS AND BATH MIRRORS, TO CLEAR SWITCHES AND RECEPTACLES PRIOR TO INSTALLATION.

GENERAL ELECTRICAL SPECIFICATIONS SHEET

6.0 CIRCUIT BREAKERS

MOLDED CASE CIRCUIT BREAKERS SHALL BE OF THE QUICK-MAKE, QUICK-BREAK, TRIP-FREE, THERMAL MAGNETIC BOLT-ON TYPE WITH ON-OFF-TRIPPED POSITIONS.

CIRCUIT BREAKERS ABOVE 225 AMPERE TRIP RATING SHALL HAVE INTERCHANGEABLE TRIP ELEMENTS.

ALL BREAKERS SHALL BE CALIBRATED FOR OPERATION IN AN AMBIENT TEMPERATURE OF 40° C.

ALL MULTI-POLE BREAKERS SHALL BE SO DESIGNED THAT AN OVERLOAD IN ONE POLE AUTOMATICALLY CAUSES ALL POLES TO OPEN.

ALL PANELBOARD CIRCUIT BREAKERS USED FOR DIRECT SWITCHING OR LIGHTING CIRCUITS, SHALL BE SWITCH DUTY RATED.

ALL CIRCUIT BREAKERS SHALL HAVE A MINIMUM 10,000 AC RATING FOR 250V PANELS AND 14,000 AC RATING FOR 600V PANELS.

ALL MULTIWIRE BRANCH CIRCUIT HOMERUNS & WIRING WITH A SHARED NEUTRAL SHALL BE SUPPLIED WITH A MULTIPOLE CIRCUIT BREAKER PER 210 EC 210.4(B)

7.0 FUSES

ALL FUSES SHALL BE AS MANUFACTURED BY GOULD SHAMUT, LITELFUSE, OR BUSSMANN MANUFACTURING CO.

8.0 WIRING DEVICES

SINGLE-POLE SWITCHES SHALL BE 20 AMPERES, 120/277 VOLT, AC, VERIFY FINISH COLOR WITH ARCHITECT, SIDE AND BACK WIRE, HUBBELL CAT. #HBL-1221-W EQUAL BY, G.E., PASS & SEYMOUR, OR LEVITON.

THREE-WAY SWITCHES SHALL BE 20 AMPERES, 120/277 VOLT, AC, VERIFY FINISH WITH ARCHITECT, SIDE AND D BACK WIRE, HUBBELL CAT. #HBL-1223-W OR EQUAL BY, G.E., PASS & SEYMOUR, OR LEVITON.

DIMMER SWITCHES SHALL BE SLIDE CONTROL, 800W, 120 VOLT, AC, FOR INCANDESCENT LOADS OR AS INDICATED ON PLANS.

DUPLEX RECEPTACLES FOR 120 VOLT, SINGLE-PHASE SERVICE TO BE RATED 20 AMPERES, 125 VOLT, BACK AND SIDE WIRE, 2-WIRE (NEHA 5-20R) GFCI TYPE, WP, HUBBELL CAT #HBL532W OR EQUAL BY ARCHITECT, HUBBELL CAT. #HBL532W OR EQUAL BY PASS & SEYMOUR, G.E., OR LEVITON.

DOUBLE DUPLEX RECEPTACLES (4-PLX). TO BE SAME AS DUPLEX RECEPTACLES. TWO DUPLEX RECEPTACLES IN 4" X 4" OUTLET BOX WITH ONE TWO-PHASE FACEPLATE, LEVITON, PASS & SEYMOUR, G.E., OR HUBBELL.

ALL DEVICE PLATES SHALL BE OF THE UNBREAKABLE PLASTIC TYPE, MANUFACTURED BY PASS & SEYMOUR, LUTRON, LEVITON G.E., OR HUBBELL AND OF VERIFY FINISH COLOR WITH ARCHITECT. DEVICE PLATES FOR EQUIPMENT, STORAGE, AND KITCHEN AREAS SHALL BE STAINLESS STEEL.

OUTLETS AND DEVICES SHALL BE SET RIGID, PLUMB, FASTENED SECURELY; WHERE CONCEALED, SET FLUSH WITH FINISH SURFACE.

WIRING CONNECTIONS: CURL WIRE AROUND TERMINAL SCREWS AND TIGHTEN SCREWS FIRMLY. SNAP-IN, PRESSURE-TYPE TERMINALS NOT ACCEPTABLE.

EXTERIOR DUPLEX RECEPTACLES FOR 120 VOLT, SINGLE-PHASE SERVICE TO BE RATED 20 AMPERES, 125 VOLT, BACK AND SIDE WIRE, 2-WIRE (NEHA 5-20R) GFCI TYPE, WP, HUBBELL CAT #HBL532W TAYM&C CORPORATION #20510 COVER OR EQUAL.

ALL RECEPTACLE AND SWITCH COVER PLATES SHALL CLEARLY INDICATE, WITH PERMANENT BLACK MARKER ON THE INSIDE OF THE PLATE, THE CIRCUIT NUMBER AND THE SOURCE OF POWER FEEDING THAT SWITCH OR RECEPTACLE.

ALL WALL SWITCHES AND RECEPTACLES SHALL BE MOUNTED BETWEEN 18" AND 48" TO TOP OF OUTLET BOX PER ADA REQUIREMENTS UNLESS NOTED OTHERWISE.

ELECTRICAL SWITCHES, CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF OUTLET BOX NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM.

9.0 LIGHTING

ALL LIGHTING FIXTURES SHALL BE UL LISTED.

PROVIDE LIGHTING FIXTURES WHERE INDICATED ON PLANS AND AS INDICATED IN FIXTURE SCHEDULE. LAMPS SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL INCLUDE IN HIS BID ALL LABOR AND MATERIAL TO INSTALL ALL FIXTURES, INCLUDING THOSE FURNISHED BY THE OWNER. PROVIDE 1-1/2" CEILING SPACERS FOR FLUORESCENT FIXTURES WHERE REQUIRED.

ALL RECESSED LIGHTING FIXTURES SHALL HAVE JUNCTION BOXES APPROVED FOR THE NUMBER OF CONDUCTORS REQUIRED. BOXES MAY BE LOCATED IN NEARBY ACCESSIBLE AREAS SUCH AS STORAGE ROOMS, EQUIPMENT ROOMS, CLOSETS, ACCESSIBLE CEILING SPACES OR IN REMOTE AREAS AS APPROVED, BUT NOT WHERE VISIBLE TO PUBLIC.

PROVIDE LENSED LIGHTING FIXTURES WITH LENSES OF 100% PURE VIRGIN ACRYLIC.

PROJECT SHALL BE BID WITH LIGHTING FIXTURES AND OTHER EQUIPMENT AS SPECIFIED ON PLANS. SUBSTITUTIONS SHALL BE LISTED AS ALTERNATE.

WHERE THERE IS INSUFFICIENT SPACE FOR A SPECIFIED RECESSED FIXTURE, PROVIDE EITHER A MORE SHALLOW FIXTURE AS APPROVED, OR A SURFACE-MOUNTED FIXTURE OF EQUAL QUALITY AND SIMILAR PHYSICAL APPEARANCE TO MATCH OTHER FIXTURES IN THE SAME AREAS AS APPROVED.

PROVIDE ALL NECESSARY SUPPORTS FOR LIGHTING FIXTURES AS REQUIRED. WHERE FIXTURES ARE INSTALLED ON OR IN SUSPENDED CEILINGS, SECURE FIXTURES TO CEILING FRAME SYSTEM AND PROVIDE FIXTURE SUPPORTS INDEPENDENT OF THE CEILING SUSPENSION SYSTEM AS REQUIRED.

PROVIDE PENDANT FIXTURES WITH SWIVEL HANGER, LEGALLY APPROVED FOR WEIGHT SUPPORTED AND FOR EARTHQUAKE COMPLIANCE. WHEN INSTALLED, ALL PENDANT FIXTURES INCLUDING CONTINUOUS FLUORESCENT ROWS SHALL SWING A MINIMUM OF 20° IN ANY DIRECTION.

WHERE ACCESS PANELS FOR ACCOMMODATING ELECTRICAL WORK ARE LOCATED AND/OR SIZED ON THESE DRAWINGS OR DRAWINGS PREPARED UNDER SEPARATE DIVISIONS OF THE WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RE-SIZE AND/OR PROVIDE SUITABLE ACCESS PANELS FOR THE CONDITIONS WHERE INSUFFICIENT SPACE EXISTS TO ACCOMMODATE LARGER ACCESS PANELS, A SUITABLE ALTERNATIVE IS TO MOUNT THE ELECTRICAL COMPONENTS TO THE BACKSIDE OF THE HINGED DOOR WITH AN APPROPRIATELY SIZED AND CODE APPROVED FLEXIBLE FITTING, THIS ALLOWING ACCESS TO ELECTRICAL COMPONENTS FROM THE OCCUPIED SPACE IN LIEU OF THE ATIC.

WHERE ELECTRICAL RACEWAYS ARE INSTALLED THROUGH 2 TO 4-HOUR RATED FLOORS OR WALLS, THE CONTRACTOR SHALL PROVIDE APPROPRIATE FITTINGS APPROVED BY ALL LOCAL AUTHORITIES FOR THE INTENDED PURPOSE AND APPLICATION. FITTINGS SHALL SEAL TIGHT THE INTERIOR AND EXTERIOR OF EACH RACEWAY PENETRATION TO PROHIBIT FIRE PASSING FROM ONE AREA TO ANOTHER. WHERE EMPTY CONDUITS ARE INSTALLED FOR FUTURE USE, THE CONTRACTOR SHALL PROPERLY SEAL THE RACEWAY TO COMPLY WITH THE PROVISIONS INDICATED ABOVE. THE ELECTRICAL CONTRACTOR SHALL SUBMIT THE ENGINEER FOR REVIEW THE PROPOSED FITTINGS TO BE USED AND DETAILS REGARDING THE INSTALLATION METHODS PRIOR TO THEIR INSTALLATION. THE INSTALLATION SHALL NOT BE COMPLETED UNTIL FINAL APPROVAL HAS BEEN RECEIVED FROM THE ARCHITECT TO PROCEED.

AS A CONDITION FOR FURNISHING MATERIAL TO THIS PROJECT, THE MANUFACTURERS AND SUPPLIERS AGREE TO DEFEND, HOLD HARMLESS, AND TO INDEMNIFY OWNER, ARCHITECT, ELECTRICAL ENGINEER, AND ALL RELATED SUBSIDIARIES AGAINST ANY LIABILITY ARISING OUT OF PRODUCT FAILURE OR MANUFACTURING DEFECT OF THE EQUIPMENT THEY FURNISH.

2.0 DEMOLITION

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OF THE NECESSARY REMOVAL WORK REQUIRED TO ACCOMMODATE THE REMODELING WITHIN THE VARIOUS AREAS. RESTORE CONTINUITY OF ALL EXISTING CIRCUITING THAT IS TO REMAIN THAT BECOMES DISTURBED AS A RESULT OF THE NEW WORK. FURNISH ALL LABOR AND MATERIAL TO REROUTE CIRCUITRY TO REMAIN, CONCEAL FROM VIEW IN PUBLIC AREAS AND MAINTAIN ALL CODE REQUIRED CLEARANCES AND ACCESSIBILITY. FIELD VERIFY ALL CONDITIONS AND REQUIREMENTS PRIOR TO STARTING WORK. WHERE EXISTING CONDUITS BECOME EXPOSED AS A RESULT OF THE NEW WORK, CONTRACTOR SHALL REWORK AS REQUIRED TO SUIT CONDITIONS TO CONCEAL SUCH CONDUIT FROM VIEW IN ALL PUBLIC AND BACK OF HOUSE AREAS.

ALL WIRING WITHIN EXISTING OUTLETS ARE TO BE RE-IDENTIFIED WITH EASY-MARKERS TO REFLECT THE NEW CIRCUIT DESIGNATIONS WHERE REWORK OR EXISTING IS REQUIRED TO COMPLETE NEW WORK.

ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL THAT IS REMOVED AS A PART OF THIS WORK SHALL BE DELIVERED TO OWNER AT A LOCATION ON THE PROPERTY THAT HE DESIGNATES.

WHERE EXISTING OUTLETS, AFFECTED BY THE NEW WORK ARE TO BE ABANDONED, REMOVE EXISTING OUTLET AND WIRING, CUT OFF AND PLUG EXISTING CONDUIT. WHERE THERE IS A POSSIBILITY TO REUSE A PORTION OF THE EXISTING CONDUIT SYSTEM, EXTEND EXISTING CONDUIT TO NEAREST ACCESSIBLE LOCATION AND PROVIDE A JUNCTION BOX WITH ADAPTOR COVER. COORDINATE EXTENT OF THIS WORK WITH OWNER'S REPRESENTATIVE.

8.0 WIRE AND CABLE

ALL WIRING SHALL BE COPPER, MINIMUM SIZE #12-AWG. USE THHN IN DRY LOCATIONS ONLY AND THWN IN WET LOCATIONS.

ALL FIXED ELECTRICAL APPLIANCES SHALL BE WIRED IN APPROVED WIRING ENCLOSURES.

ALL FINAL FLEX CONDUIT CONNECTIONS TO ANY EQUIPMENT SHALL INCLUDE SUFFICIENT CABLE IN FLEX TO MOVE WITH THE EQUIPMENT.

ALL CONDUITS SHALL BE IDENTIFIED FOR USE AND SYSTEM PER CCC ARTICLE 200, COLOR CODE SECONDARY SERVICE, FEEDER, AND BRANCH CIRCUIT CONDUCTORS WITH FACTORY APPLIED COLOR AS FOLLOWS:

208Y/120 VOLTS	PHASE	480Y/277 VOLTS
RED	B	ORANGE
BLUE	BL	YELLOW
WHITE	NEUTRAL	GRAY
GREEN	GROUND	GREEN W/ YELLOW STRIPE

4.0 CONDUIT

CONDUIT INSTALLED WITHIN CONCEALED AREAS MAY BE EMT OR RIGID STEEL IN EXPOSED AREAS SUBJECT TO CONDUIT DAMAGE, ONLY GALVANIZED IRON STEEL MAY BE USED. ALL CONDUIT IN FINISHED AREAS TO BE CONCEALED OTHERWISE.

A MAXIMUM OF 4' OF CONDUIT AND WIRE SHALL BE SOLAR EXPOSED

ALL CONDUITS INSTALLED UNDERGROUND SHALL BE MINIMUM 1" UNDERGROUND. ALL CONDUITS SHALL BE PVC, SCHEDULE 40 ELECTRICAL CONDUIT FOR 0-600 VOLT SYSTEMS, SCHEDULE 80 ELECTRICAL CONDUIT FOR 600 TO 25KV SYSTEMS, AS MANUFACTURED BY CARLON OR EQUAL UNLESS NOTED OTHERWISE.

CONDUITS SHOWN ON THE DRAWINGS HAVE BEEN SIZED BASED ON METALLIC RACEWAYS UNLESS NOTED. ELECTRICAL CONTRACTOR MAY OPT TO USE SCHEDULE 40 PVC WHERE PERMITTED BY CODE AND THE OWNER. IF PVC IS USED, ELECTRICAL CONTRACTOR SHALL SIZE ALL SUCH CONDUITS AS REQUIRED TO INCLUDE GROUND CONDUCTOR, AND SHALL SIZE GROUND WIRE PER CODE. PVC RACEWAYS SHALL NOT BE INSTALLED ABOVE GROUND. ALL FLEX CONDUITS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED PER THE NEC.

ALL UNDERGROUND CONDUITS SHALL UTILIZE COATED OR WRAPPED RIGID STEEL ELBOWS AND RISERS WHEN RISING ABOVE GRADE, EXCEPT IN AREAS NOT SUBJECT TO MECHANICAL DAMAGE AND WITH PRIOR APPROVAL FROM THE ELECTRICAL ENGINEER.

MAINTAIN A MINIMUM OF 6" CLEARANCE BETWEEN ALL CONDUIT SLEEVES. VERIFY WITH GENERAL CONTRACTOR.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE EXPANSION/DEFLECTION FITTINGS FOR CONDUITS CROSSING EXPANSION JOINTS. FITTINGS SHALL BE SUITABLE FOR CONDITIONS TO BE ENCOUNTERED. CONSULT WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK. SUBMIT SHOP DRAWINGS FOR REVIEW.

UNDERGROUND CONDUITS SHALL HAVE A MINIMUM 24" OF COVER.

6.0 OUTLET, PULL AND JUNCTION BOXES

JUNCTION BOXES AND OUTLET BOXES SHALL BE SIZED PER CODE, BUT IN NO CASE LESS THEN THE FOLLOWING: OUTLETS WITH 9 OR LESS #12 CONDUCTORS SHALL BE 4" X 2-1/2" D) AND OUTLETS WITH 10 THROUGH 18 CONDUCTORS SHALL BE 4-11/16" X 2-1/8" D).

ALL JUNCTION BOXES SHALL CLEARLY INDICATE WITH PERMANENT BLACK MARKER, IN 1/2-INCH LETTERING THE CIRCUIT NUMBERS AND THE SOURCE OF POWER OF ALL CONDUCTORS CONTAINED WITHIN THAT JUNCTION BOX.

OUTLETS FOR THE ATTACHMENT OF THE FIXTURES TO BE PROVIDED WITH 3/8" MALLEABLE IRON FIXTURE STUDS AND BOX HANGERS WHERE REQUIRED.

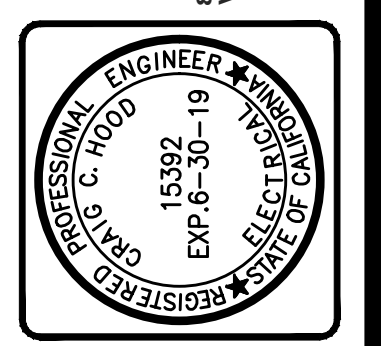
TELEPHONE OUTLETS SHALL BE DOUBLE GANG BOX WITH SINGLE GANG 1-HOLE TELEPHONE COVER PLATE, UNLESS OTHERWISE NOTED ON DRAWINGS.

CABLE TELEVISION OUTLETS SHALL BE DOUBLE GANG BOX WITH SINGLE GANG 1-HOLE CATV COVER PLATE, UNLESS OTHERWISE NOTED ON DRAWINGS.

INTERIOR BOXES SHALL BE GALVANIZED STEEL, MANUFACTURERS: B & C METAL STAMPING, BRYANT, GENERAL ELECTRIC, LEVITON COMPANY, MORRIS STEEL CITY, CROUSE-HINDS, APPLETON, RACO, CARLON.

EXTERIOR BOXES SHALL BE "S" TYPE BOXES WITH THREADED HUBS AS REQUIRED AND FULLY GASKETED UNLESS OTHERWISE NOTED.

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GENERAL ELECTRICAL SPECIFICATIONS SHEET

Revisions	R&A No.	Date	Drawn	Checked	Consult
	A060622	11/19/2018	A. MONZON	C. HOOD	No. 17-760

**RESTROOM/SITE ADA UPGRADE
VENTURA HARBOR VILLAGE**
1591 SPINNAKER DRIVE
VENTURA, CALIFORNIA

Sheet No.
E2