EQ.

E.W.

EXT.

F.O.

F.O.S.

EQUAL

FIN. CLG. FINISH CEILING

FACE OF

F.O. FIN. FACE OF FINISH

GYP. BD. GYPSUM BOARD

FIN. FLR. FINISH FLOOR

EACH WAY

EXTERIOR

FINISH FLOOR

FACE OF CONCRETE

FACE OF MASONRY

FIBER REINFORCED

ARCHITECT:

FOURTH FLOOR

RASMUSSEN & ASSOCIATES

VOICE: (805)648-1234 EX:25

CONTACT: LARRY RASMUSSEN

JENSEN DESIGN & SURVEY

EMAIL:RGiroux@JDSCivil.com

STRUCTURAL ENGINEER:

STORK, WOLFE & ASSOCIATES

599 HIGUERA STREET, SUITE H

EMAIL: JustineSWA-Engineers.com

SAN LUIS OBISPO, CA. 93401

VOICE: (805)548-8600 CONTACT: JUSTIN WOLFE

WINDOW TYPE

DOOR CONSECUTIVE NUMBER

ROOM CONSECUTIVE NUMBER

SHEET WHERE DETAIL IS DRAWN

SHEET WHERE DETAIL IS DRAWN

- INTERIOR ELEVATION IDENTIFICATION

-SHEET WHERE INTERIOR ELEVATION IS DRAWN

NUMBER OF CIRCLE CORRESPONDS TO NUMBER

NORTH ARROW, ORIENTATION TO TRUE NORTH

REVISION CLOUD INDICATES AREA REVISED

WORK POINT, CONTROL, ELEVATION OR DATUM

LETTER IN OVAL CORRESPONDS TO WALL

CONSTRUCTION TYPE

LIST OF SYMBOLS

- INDICATES DETAIL NUMBER

EMAIL:LRasmussen@RA-Arch.com

21 S. CALIFORNIA STREET

VENTURA, CA. 93001

CIVIL ENGINEER:

1672 DONLON STREET

VENTURA, CA. 93003

VOICE: (805)645-6977

CONTACT: RICK GIROUX

PLASTIC PANELS

FINISH SURFACE

FACE OF STUD

F.O. SHTG. FACE OF SHEATHING

ABBREVIATIONS ABOVE FINISH FLOOR INTERIOR ABOVE FINISH SURFACE LAVATORY ALTERNATE CBC CALIF. BUILDING CODE C.L. CENTER LINE CLG. CEILING COL. COLUMN CONC. CONCRETE CPT. CARPET CT CERAMIC TILE DN. DOWN D.S. DOWNSPOUT DTL. DETAIL (E) EXISTING ELECTRICAL

PROJECT TEAM

OWNER:

SUITE #200

16795 VON KARMAN

IRVINE, CA. 92606

VOICE: (949)398-8750

CONTACT: JEFF LOCKNER

10335 JEFFERSON BLVD.

CULVER CITY, CA 90232

CONTACT: DÁVID LARKINS

SOILS ENGINEER:

FRESNO, CA. 93721

2527 FRESNO STRRET

VOICE: (559)268-7021 CONTACT: ALLEN HARKER

EMAIL: dlarkins@lrmltd.com

MOORE TWINING ASSOCIATES

EMAIL: allenHemooretwining.com

EMAIL: www.athena-pm.com

LANDSCAPE ARCHITECT:

VOICE: (310)839-6600 EX.24

LRM LANDSCAPE ARCHITECTURE

ATHENA PROPERTY MANAGEMENT

MINUTE MANUFACTURER NOT APPLICABLE NOT IN CONTRACT ON CENTER OWNER-FURNISHED, CONTRACTOR-INSTALLED OWNER-FURNISHED, OWNER-INSTALLED OPPOSITE PROPERTY LINE REFRIGERATOR REVERSE RIGHT-OF-WAY SIMILAR SHEET VINYL TOP OF TOP OF CONCRETE TOP OF PARAPET

TOP OF PLATE

TOP OF WALL

UNLESS NOTED OTHERWISE

T.O. SHTG TOP OF SHEATHING

WOOD

APPLICABLE CODES 2016 CALIFORNIA BUILDING CODE (CBC)

2016 CALIFORNIA ELECTRICAL CODE (CEC) 2016 CALIFORNIA MECHANICAL CODE (CMC)

2016 CALIFORNIA PLUMBING CODE (CPC) 2016 CALIFORNIA FIRE CODE (CFC)

2016 CALIFORNIA ENERGY CODE (CEC) 2016 CALIFORNIA GREEN BUILDING CODE (CGBC)

2017 CITY OF SAN BUENA MUNICIPAL CODE

GREEN BUILDING MEASURES

PROJECT SHALL COMPLY WITH ALL REQUIRED GREEN BUILDING CODE MEASURES, SEE SHEETS

DEFERRED APPROVALS

FOR THE PRODUCTS OR SYSTEMS INDICATED BELOW THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

- PREPARE SHOP DRAWINGS FOR THE PRODUCT OR SYSTEMS ADEQUATELY DESCRIBING THE WORK. PREPARE CALCULATIONS AS REQUIRED. FOR ALL ITEMS WITH CALCULATIONS. THE DRAWINGS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY A LICENSED CALIFORNIA ENGINEER OF THE APPROPRIATE DISCIPLINE.
- CONTRACTOR SHALL SUBMIT THE DRAWINGS AND CALCULATIONS TO THE ARCHITECT FOR REVIEW. CONTRACTOR SHALL RESPOND TO ANY COMMENTS THAT THE ARCHITECT HAS, AND RESUBMIT DRAWINGS AND CALCULATIONS AS REQUIRED
- UPON APPROVAL BY THE ARCHITECT, THE CONTRACTOR SHALL SUBMIT THE DRAWINGS AND CALCULATIONS TO THE AUTHORITY HAVING JURISDICTION FOR APPROVAL. CONTRACTOR SHALL REPRODUCE THE QUANTITY OF DRAWINGS AND CALCULATIONS AS REQUIRED BY THE JURISDICTION, COMPLETE THE PERMIT APPLICATION, AND PAY PLANCHECK AND PERMIT FEES AS MAY BE APPLICABLE.
- NO INSTALLATION SHALL BE PERFORMED UNTIL SUCH TIME AS THE CONTRACTOR HAS RECEIVED APPROVAL FROM THE AUTHORITY HAVING JURISDICTION.

DEFERRED APPROVALS

- EARTH GRAVEL OR CRUSHED ROCK BASE ASPHALTIC CONCRETE PAVING CONCRETE - MASONRY

- PLYWOOD

WOOD, ROUGH OR DIM. LUMBER

INSULATION

- PLASTER

- GYPSUM WALL BOARD

MATERIALS LEGEND

GENERAL NOTES

STORM WATER RUNOFF SHALL NOT DISCHARGE FROM THE CONSTRUCTION SITE TO THE CITY STREETS OR MUNICIPAL STORM DRAIN SYSTEM WITHOUT TREATMENT BY A SUITABLE POLLUTION CONTROL DEVICE. STORM WATER RUNOFF DISCHARGES WITHOUT TREATMENT IS A VIOLATION OF THE CITY'S STORM WATER ORDINANCE. DISCHARGING ANY MATERIAL OTHER THAN UNCONTAMINATED STORM WATER RUNOFF TO CITY STREETS OR TO THE MUNICIPAL STORM DRAIN SYSTEM IS PROHIBITED AND IS A VIOLATION OF THE MUNICIPAL CODE.

SITE MANAGER TO CONTACT: RUBY ESPINOSA PHONE: (949) 398-8750

PROJECT SUMMARY:

CONSTRUCTION TYPE:

REPLACEMENT TRASH ENCLOSURE

RIVIERA SHOPPING CENTER

VENTURA, CALIFORNIA

THE SCOPE OF THE PROJECT CONSISTS OF DEMOLITION OF EXISTING 2 BIN TRASH ENCLOSURE AND REPLACE WITH A 8 BIN 588 S.F. TRASH ENCLOSURE TO MATCH REST OF THE SHOPPING CENTER

NON COMBUSTIBLE

084-0-072-295

LOCAL JURISDICTIONS: CITY OF VENTURA BUILDING OFFICIAL CITY OF VENTURA FIRE OFFICIAL: FLOOD CONTROL COUNTY OF VENTURA

"NO OCCUPANCY" **OCCUPANCY:**

FIRE SPRINKLERS PROVIDED: AREA: 588 S.F.

T TITLE SHEET

CIVIL

LOF L GRADING IMPROVEMENT PLAN

ARCHITECTURAL

AI.I SITE PLAN

A2.1 FLOOR PLAN, ROOF PLAN & ELEVATIONS

INDEX OF DRAWINGS

A2.2 DETAILS

GBI GREEN BUILDING CODE

GB2 GREEN BUILDING CODE

STRUCTURAL

SO.I STRUCTURAL GENERAL NOTES

TYPICAL DETAILS

SI.2 TYPICAL DETAILS

LANDSCAPE

LO.00 LANDSCAPE COVER SHEET

LI.00 MWELO WORKSHEET L2.00 IRRIGATION PLAN

L2.I IRRIGATION DETAILS

L3.00 PLANTING PLAN



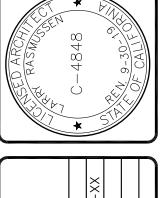
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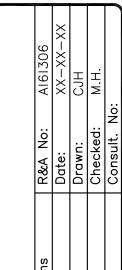
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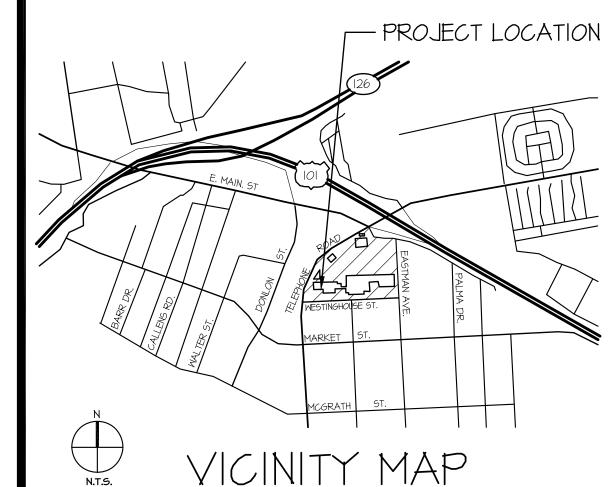
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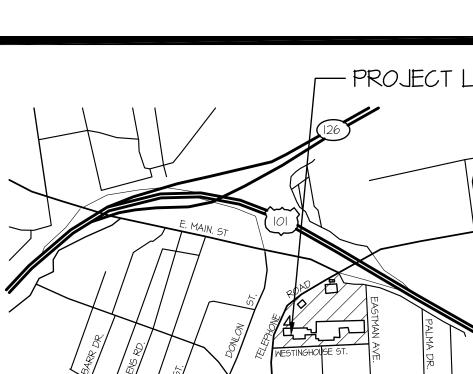


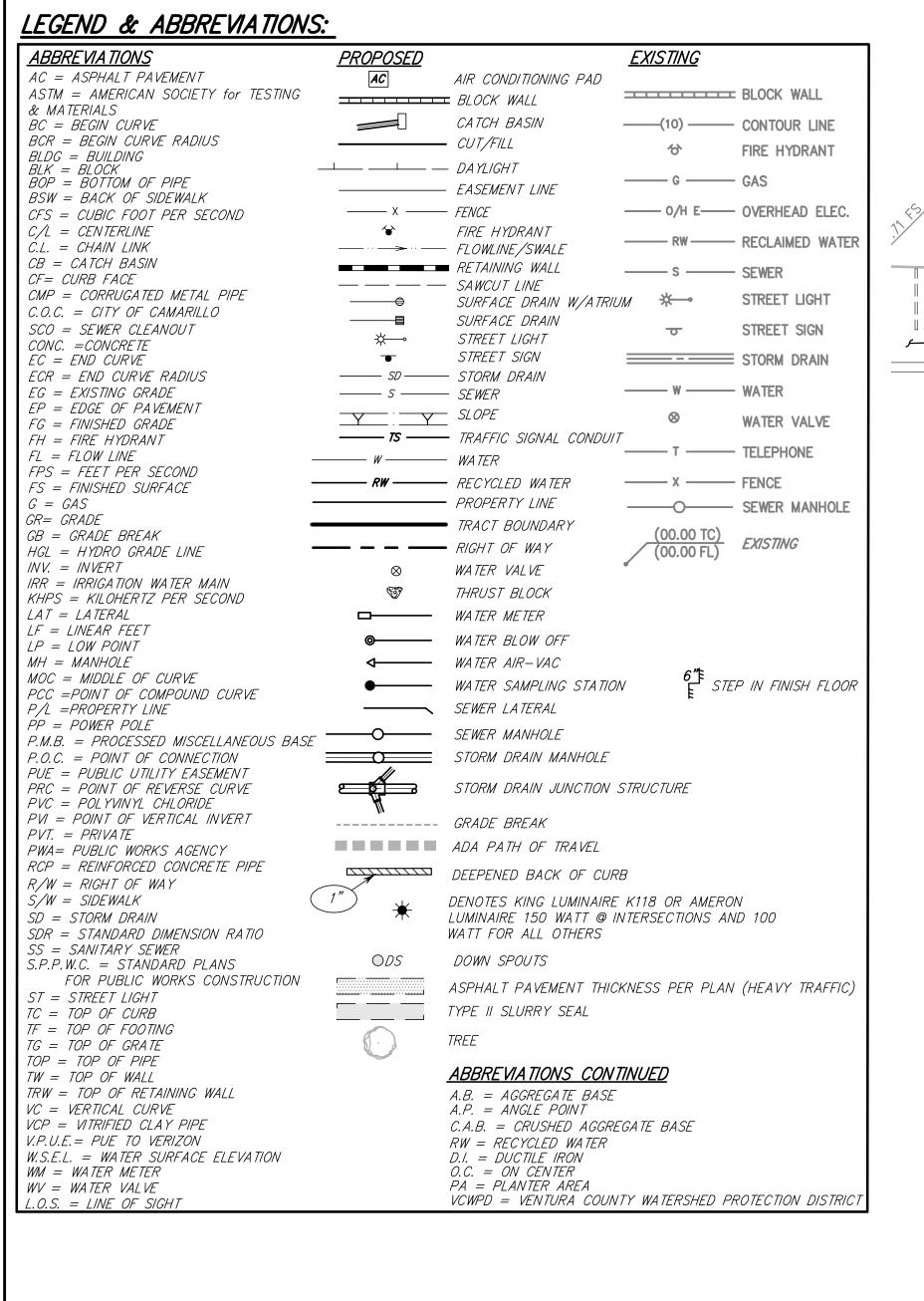


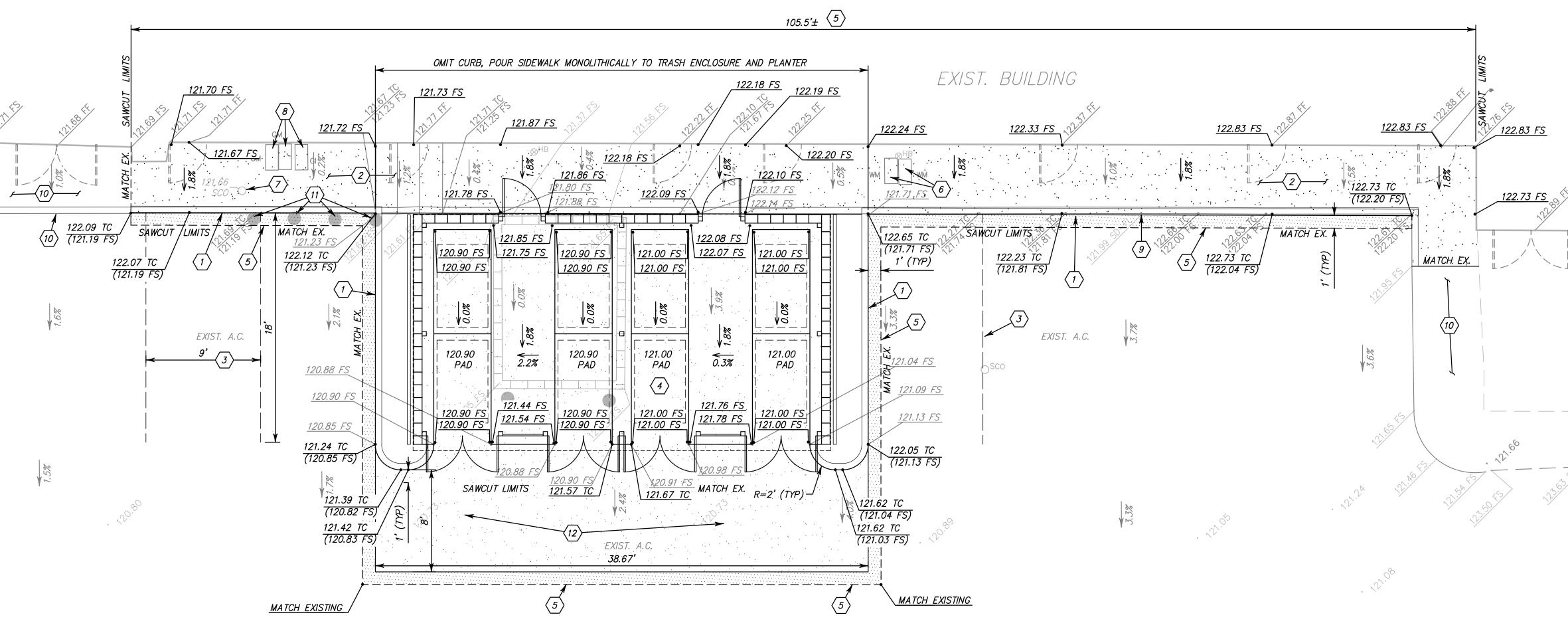
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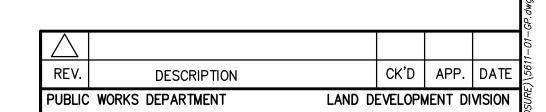


⟨ CONSTRUCTION NOTES | ⟨ CONSTRUCTION NO

- 1. CONSTRUCT 6" CURB ONLY PER CITY OF VENTURA STD. DETAIL No. 107.
- 2. CONSTRUCT PCC SIDEWALK PER VENTURA STD. DET. NO.102, FOR SOILS PREPARATION REFER TO SOILS REPORT E75208.02-01 RECOMMENDATIONS.
- 3. PAINT STANDARD 4" WIDE PARKING STALL DESIGNATION.
- 4. CONSTRUCT ENCLOSED TRASH ENCLOSURE PER CITY REFUSE & RECYCLING ENCLOSURE MINIMUM STANDARDS AND GUIDELINES. SEE ARCHITECTURAL PLANS.
- 5. SAWCUT REMOVE AND REPLACE IN KIND CURB/ CURB AND GUTTER, CONCRETE SIDEWALK (TO NEAREST SCORE LINE) & ASPHALT PER CITY STANDARDS. ANY NECESSARY ADDITIONAL SAW CUTTING IN ORDER TO MATCH EXISTING GRADES WILL BE DETERMINED BY FIELD SURVEY POINTS AND PROJECT CIVIL ENGINEER MUST BE CONTACTED.

일 ℃ No. C 057289

- 6. EXISTING WATER METERS TO REMAIN (PROTECT IN PLACE). LIDS TO BE ADJUSTED TO MATCH NEW ELEVATIONS.
- 7. EXISTING SEWER CLEANOUT TO REMAIN (PROTECT IN PLACE). LIDS TO BE ADJUSTED TO MATCH NEW ELEVATIONS.
- 8. EXISTING GAS METERS TO REMAIN (PROTECT IN PLACE).
- 9. EXISTING CURB DRAIN, REPLACE IN KIND.
- 10. EXISTING CONCRETE SIDEWALK TO REMAIN (PROTECT IN PLACE).
- 11. EXISTING BOLLARDS TO BE REMOVED.
- 12. 6" THICK 2500 PSI CONC. W/6x6 10x10 WWM



CITY OF SAN BUENAVENTURA

GRADING IMPROVEMENT PLAN

RIVIERA SHOPPING CENTER

NOTE:
THIS PLAN IS APPROVED FOR CONSTRUCTION WHEN SIGNED BY THE PERMITTING AGENCY AND CIVIL ENGINEER, AND A PERMIT HAS BEEN ISSUED.

PREPARED BY: 1672 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979 12/4/18 FREDERICK T. GIROUX RCE 057289 (EXP 12-31-19) DATE DRN. BY 1672 DONLON STREET VENTURA, CALIF. 93003 LAND 12/4/18 CITY E

REPLACEMENT TRASH ENCLOSURE

DRN. BY: RQ DES. BY: RQ CK'D BY: FTG

62381

LAND DEVELOPMENT ENGINEER R.C.E. NUMBER DATE

59254

CITY ENGINEER R.C.E. NUMBER DATE

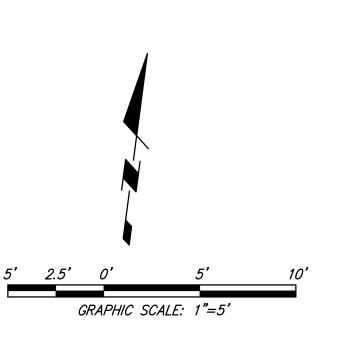
SID # - SHEET 1 OF 1 FILE NO. -

NOTICE TO THE CONTRACTOR

THE EARTHWORK SUMMARY IS PROVIDED AS A COURTESY AND CONVENIENCE TO THE CONTRACTOR. QUANTITIES SHOWN ARE APPROXIMATE, BASED ON THE DIFFERENCES BETWEEN EXISTING GROUND ELEVATIONS AND ROUGH GRADE ELEVATIONS. QUANTITIES PROVIDED MAKE NO PROVISIONS FOR STRIPPING, OR OVEREXCAVATION. VARIABLES SUCH AS COMPACTION, SHRINKAGE AND THE CONTRACTORS METHOD OF OPERATION, WILL CAUSE THE VOLUME OF DIRT MOVED IN THE FIELD TO DEVIATE FROM THE CALCULATED QUANTITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EARTHWORK REQUIREMENTS TO ROUGH GRADE THIS JOB.

CAUTION:

EXISTING UTILITIES WERE LOCATED FROM BEST AVAILABLE INFORMATION. CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.



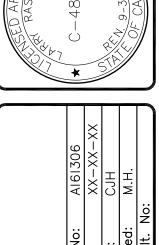
O NOTE LEGEND

- I EXISTING PROPERTY LINES.
- 2 EXISTING ACCESSIBLE PARKING "TOW AWAY" SIGN AT PARKING LOT ENTRANCE.
- 3 EXISTING FIRE HYDRANT.
- 4 EXISTING CURB TO REMAIN. SEE CIVIL DRAWINGS.
- 5 NEW CONCRETE APRON, SEE CIVIL DRAWINGS.
- 6 EXISTING AC PAVING TO REMAIN.
- 7 EXISTING CONCRETE WALKWAY TO REMAIN.
- 8 EXISTING TRASH ENCLOSURE TO BE REMOVED.
- 9 EXISTING PARKING STALL STRIPPING TO REMAIN.
- 10 NEW 6" CONCRETE CURB AND PLANTER.
- II. RESTRIPE PARKING TO HAVE 4 SPACES AT 9'-0" WIDE, COLOR TO BE WHITE.
- 12 REMOVE AND REPLACE EXISTING SIDEWALK AND CURB TO ALLOW ACCESSIBLE PATH OF TRAVEL. SEE CIVIL DRAWINGS FOR NEW GRADES.
- 13 DOTTED LINE INDICATES ACCESSIBLE ROUTE. SLOPE NOT TO EXCEED 4.99% WITH A 2% CROSS SLOPE.
- 14 EXISTING TENANT DOOR TO REMAIN.
- 15 EXISTING PAIR OF DOORS FOR ELECTRICAL ROOM TO REMAIN.
- 16 INDICATES AREA OF TENANTS SERVED WITH TRASH AND RECYCLABLE BINS. II,399 S.F. I BIN EACH PER 8,000 S.F. = 2 BINS EACH REQUIRED (4 BINS EACH PROVIDED).

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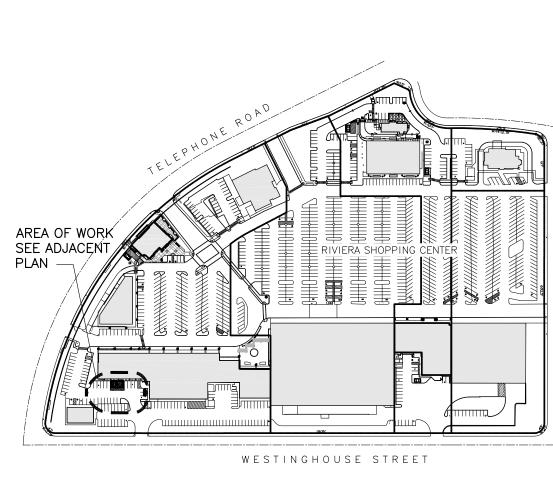
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REPLACEMENT TRASH ENCLOSURE

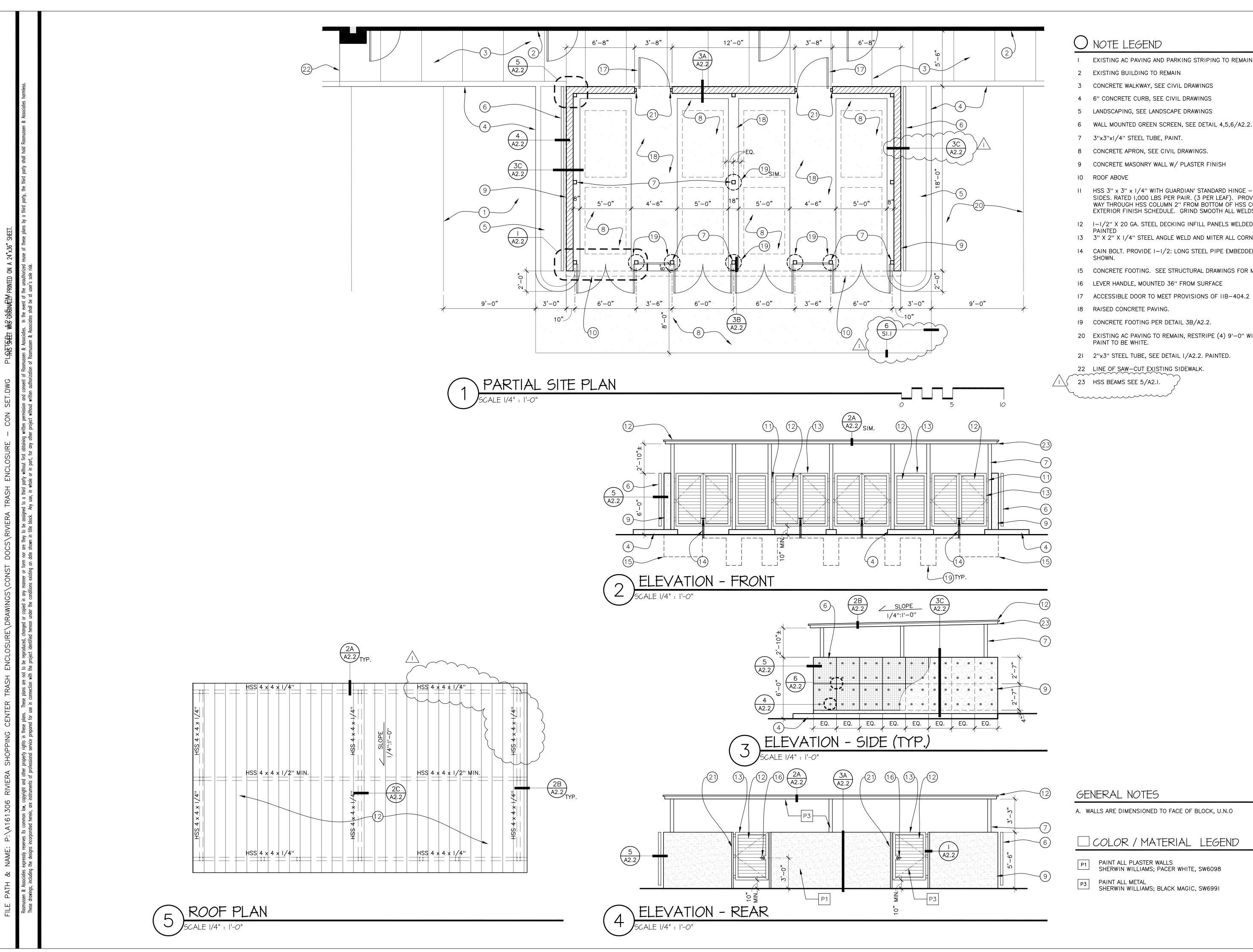
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A1.1



MASTER SITE KEY PLAN

N.T.S.



O NOTE LEGEND

- I EXISTING AC PAVING AND PARKING STRIPING TO REMAIN
- 3 CONCRETE WALKWAY, SEE CIVIL DRAWINGS
- 4 6" CONCRETE CURB, SEE CIVIL DRAWINGS

- 7 3"x3"x1/4" STEEL TUBE, PAINT.
- 8 CONCRETE APRON, SEE CIVIL DRAWINGS.
- 9 CONCRETE MASONRY WALL W/ PLASTER FINISH
- II HSS 3" x 3" x I/4" WITH GUARDIAN' STANDARD HINGE FLAT MOUNT, BOTH SIDES. RATED 1,000 LBS PER PAIR. (3 PER LEAF). PROVIDE #4 BAR EACH WAY THROUGH HSS COLUMN 2" FROM BOTTOM OF HSS COLUMNS. FINISH PER EXTERIOR FINISH SCHEDULE. GRIND SMOOTH ALL WELDS.
- 12 1/2" X 20 GA. STEEL DECKING INFILL PANELS WELDED TO STEEL FRAME.
- 13 3" X 2" X 1/4" STEEL ANGLE WELD AND MITER ALL CORNERS, PAINTED.
- 14 CAIN BOLT. PROVIDE I-I/2: LONG STEEL PIPE EMBEDDED INTO PAVING AS
- 15 CONCRETE FOOTING. SEE STRUCTURAL DRAWINGS FOR MORE INFORMATION.
- 16 LEVER HANDLE, MOUNTED 36" FROM SURFACE
- 17 ACCESSIBLE DOOR TO MEET PROVISIONS OF IIB-404.2
- 18 RAISED CONCRETE PAVING.
- 19 CONCRETE FOOTING PER DETAIL 3B/A2.2.
- 20 EXISTING AC PAVING TO REMAIN, RESTRIPE (4) 9'-0" WIDE PARKING SPACES. PAINT TO BE WHITE.
- 21 2"x3" STEEL TUBE, SEE DETAIL I/A2.2. PAINTED.
- 22 LINE OF SAW-CUT EXISTING SIDEWALK.
- 23 HSS BEAMS SEE 5/A2.I.

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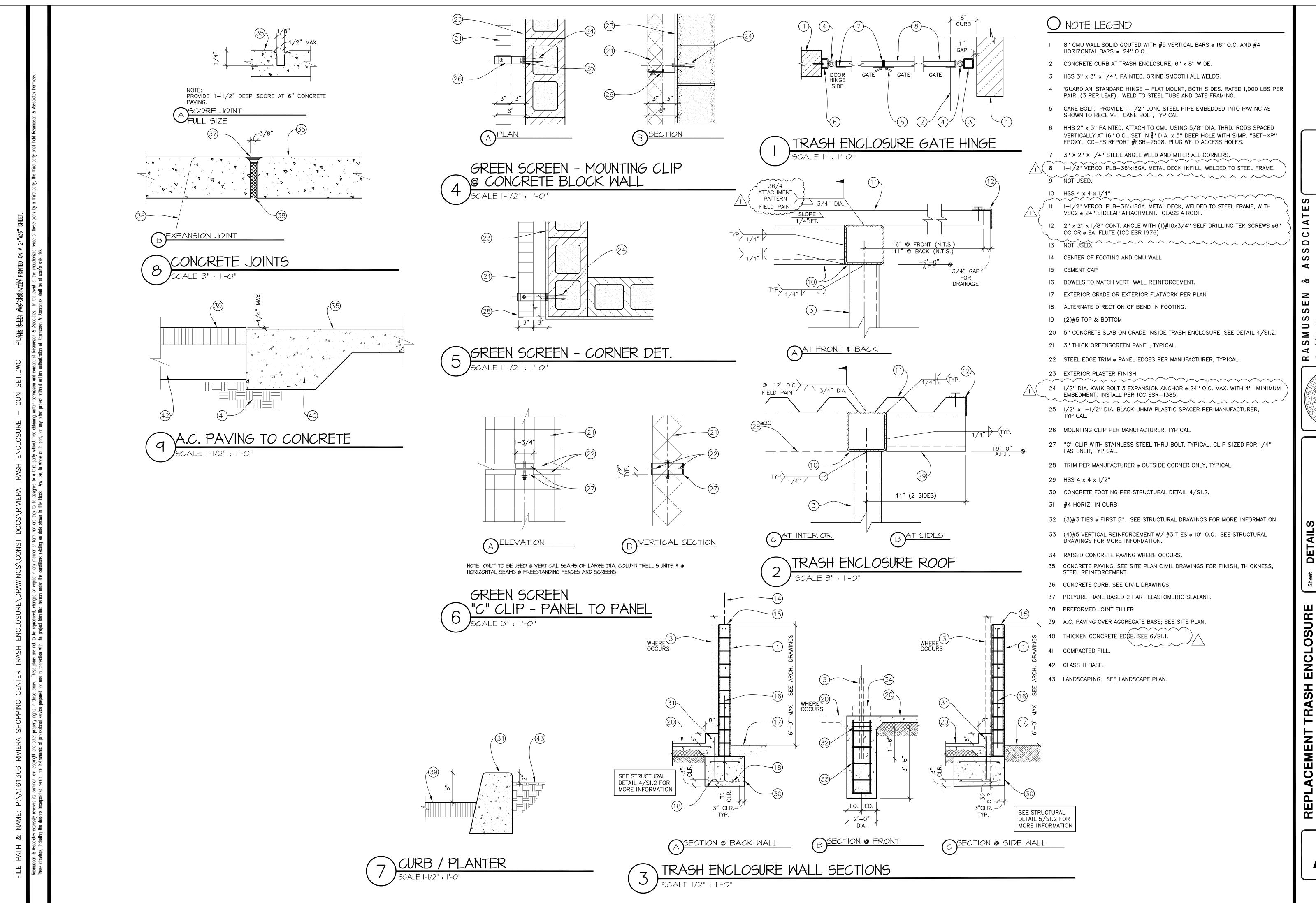
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PLANS & ELEVAT

REPLACEMENT TRASH ENCLOSURE

Sheet No. **A2.1**



Sheet No.

A2.2

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

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. CUTOFF LUMINAIRES.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES. NEIGHBORHOOD ELECTRIC VEHICLE (NEV).

TENANT-OCCUPANTS. VANPOOL VEHICLE.

ZEV.

SECTION 5.103 SITE SELECTION **SECTION 5.104** SITE PRESERVATION (Reserved)

SECTION 5.105 **DECONSTRUCTION AND REUSE** OF EXISTING STRUCTURES (Reserved)

SECTION 5.106 SITE DEVELOPMENT

5.106.1 Storm water pollution prevention. Newly constructed projects additions which disturb less than one acre of land shall prevent the llution of stormwater runoff from the construction activities through one nore of the following measures:

106.1.1 Local ordinance. Comply with a lawfully acted stormwater management and/or erosion control

5.106.1.2 Best management practices (BMP). Prevent the loss of soil through wind or water erosion by implementing fective combination of erosion and sediment

control and good housekeeping BMP. l loss BMP that should be considered for impleme oprate for each project include, but are not limited to, the

heduling construction activity. eservation of natural features, vegetation and soil uinage swales or lined ditches to control stormw d. Mulching or hydroseeding to stabilize disturbed soils

on control to protect slopes. f. Protection of storm drain inlets (gravel bags or catch basin in-

er sediment control (perimeter silt fence, fiber rolls). n. Sediment trap or sediment basin to retain sediment on site. i. Stabilized construction exits. . Wind erosion control.

k. Other soll loss BMP acceptable to the enforcing agency. 2. 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: ling and waste manageme b. Building materials stockpile managemen

c. Management of washout areas (concrete, paints, stucco, etc.). d. Control of vehicle/equipment fueling to contractor's staging area. e. Vehicle and equipment cleaning performed off site. f. Spill prevention and control.

g. 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-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is

5.106.4.1.1 Short-term bicycle parking. If the new 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 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity

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 10 or more 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 vehicular 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: 1. Covered, lockable enclosures with permanently anchored racks for

2. Lockable bicycle rooms with permanently anchored racks; or 3. Lockable, permanently anchored bicycle lockers.

Note: Additional info mation on recommended bicycle accommoditions 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.

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 purking facilities shall e convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for

2. Lockable bicycle rooms with permanently anchored racks; or

chable, permanently anchored bicycle lockers. 5.106.5.2 Designated parking for clean air vehicles. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuelefficient and carpool/van pool vehicles as follows:

	TABLE 5.10	06.5.2	
TOTAL	NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPA	CES
	0–9	0	
T	10-25	1	
	26–50	3	
	51–75	6	
T	76–100	8	
1	101–150	11	\
I	151–200	16	1
	201 and over	At least 8 percent of tota	1

5106.5.2.1 Parking stall marking. Paint, in the paint used for stall striping following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR/

VANPOOL/EV : Vehicles bearing Clean Air Vehicle stickers from expired HO rams may be considered eligible for designated parking spac 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 in talled, it shall be in accordance with the California Building Code, rnia Electrical Code and as follows:

5.106.5 3.1 Single charging space requirements. [N] When only a single 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: type and location of the EVSE.

ted raceway capable of accommodating a 208/240-volt dedicated branch circuit. 3. The raceway shall not be less than trade size 1." 4. The receway 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, 5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging 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:

1. The type and location of the EVSE. 2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es) enclosure(s) or equivalen 3. Plan design shall be based upon 40-ampère minimum branch

4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage. 5. The service panel or subpanel(s) shall have sufficient capacity to

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

accommodate the required number of dedicated branch circuit(s) for

determined EV charging and infrastructure is not feasible based upon one or more of the following con 1. Where there is insufficient electrical supply. 2. Where there is evidence suitable to the local enforcing agency

substatiating 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.

IADLE	γ.	00.5.3.3
TOTAL NUMBER OF ACTUAL PARKING SPACES		NUMBER OF REQUIRED EV CHARGING SPACES
0-9		0
10-25		1
26-50		2
51-75		4
76-100		5
101-150		7
151-200		10
201 and over		6 percent of total ¹

1. Calculation for spaces shall b 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 future EV charging as "IV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE." **5.106.5.3.5** [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

1. 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/traffops/polidy/13-01.pdf. 2. See Vehicle Code Section 22511 for EV charging spaces signage in offstreet parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful 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: 1. The minimum requirements in the *California Energy Code* for Lighting Zones 1-4 as defined in Chapter 10 of the California Administra ive Code; and 2. Backlight, Uplight and Glare (BUG) ratings as defined

in IES TM 3. Allowable BUG ratings not exceeding those shown in Table Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

1. Luminaires that qualify as exceptions in Section 140.7 of the California Energy Co

facade meeting the requirements in Table 140.7-B of the 3. Buildin California Energy Code, Part 6. 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of

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:

Water collection and disposal systems. French drains. . Water retention gardens.

5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. eption: Additions and alterations not altering the drainage path.

TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS 1.7

ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTING ZONE 2	LIGHTING ZONE 3	LIGHTING ZONE 4
Maximum Allowable backlight Rating ³				
numinaire greater than 2 mounting heights (MH) from property line	No Limit	No Limit	No Limit	No Limit
uminaire back hemisphere is 1 – 2 MH from property line	B2	В3	B4	B4
uminaire back hemisphere is 0.5 – 1 MH from property line	B1	B2	В3	В3
numinaire back hemisphere is less than 0.5 MH from property line	B0	В0	B1	B2
Maximum Allowable Uplight Rating				
or area lighting ⁴	70	U0	U0	U0
or all other outdoor lighting, including decorative luminaires	U1	U2	U3	U4
Maximum Allowable Glare Rating ⁵				
uminaire greater than 2 MH from property line	G1	G2	G3	G4
uminaire front hemisphere is 1 – 2 MH from property line	G0	G1	GI	G2
uminaire front hemisphere is 0.5 – 1 MH from property line	G0	G0	G1	G1
uminaire back hemisphere is less than 0.5 MH from property line	G0	G0	G0	GI

IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zone as defined in the California Energy Code and Chapter 10 of the Calif 2. For property lines that abut public walkways, bikeways, placas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section. 3. If the nearest property line is less t n or equal to two mounting heights from the back hemisphere of the luminaire istribution, the applicable reduced Backlight rating shall be met. 4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall preet these reduced ratings. Decorative luminaires located in these areas shall meet *U*-value limits for "all other outdoor lighting." 5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable ed Glare rating shall be met.

NONRESIDENTIAL MANDATORY MEASURES

Division 5.2 – ENERGY EFFICIENCY

SECTION 5.201

5.201.1 Scope [BSC-CG]. California Energy Code [DSASS]. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building

NONRESIDENTIAL MANDATORY MEASURES

GENERAL

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

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following terms are defined in Chapter 2. EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS] FOOTPRINT AREA [DSA-SS]

GRAYWATER. METERING FAUCET MODEL WATER EFFICIENT LANDSCAPE

ORDINANCE (MWELO). POTABLE WATER.

SUBMETER.

ses described in Sections 5.303.1.1 and 5.303.1.2. 03.1.1 New buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows: 1. For each individual leased, rented, or other tenant space with uilding projected to consume more than 100 gal/day (38) L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.

2. Where separate submeters for individual building ter unfeasible, for water supplied to the following subsyste a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s). b. Makeup water for evaporative coolers greater than 6 gpm (0.04

shall be provided for any terant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

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. Tark type water closets shall be certified

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush. 5.303.3.2 Urinals. 5.303.3.2.1 Wall-mounted urinals. The effective flush volume of wallmounted urinals shall not exceed 0.125 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. **5.303.3.3.7** Multiple showerheads serving one shower. When a shower is served by more than oneshowerhead, the combined flow rate of all

flow rate of 1.8 gallons per minute at 60 psi.

CHAPTER 5 Division 5.3 - WATER EFFICIENCY AND CONSERVATION

RECYCLED WATER. SPECIAL LANDSCAPE AREA (SLA). [DSA-SS]

SECTION 5.303 INDOOR WATER USE

Q3.1 Meters. Separate submeters or metering devices shall be installed

c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW). **5.303.1.2 Excess consumption.** A separate submeter or metering device

5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads)

to the performance criteria of the U.S. ENA WaterSense Specification for

5.303.3.2.2 Floor-mounted urinals. The effective tush volume of floor-

mounted or other ur hals shall not exceed 0.5 gallons per flush.

shower leads 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 lesigned to allow only one shower outlet to be in operation at a tim te: 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

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

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 cycle/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 Commercial kitchen equipment. 5.3034.1 Food waste disposers. Disposers shall either modulate the use water to he more than 1 gpm when the disposer is not in use (not actively od waste/noload) or shall automatically shut off after no more finactivity. Disposers shall use no more

Note: This code section does not affect local parisdiction authority to prohibit or require disposer in tallation **5.303.5** Areas of addition or alteration. For those occupancies within the authority of the California Building Standards Commission as specified in Sections 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building. 5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures all be installed in accordance with the California Plumbing shall meet the applicable standards referenced in Table 1701.1 of

OUTDOOR WATER USE

5304.1 Scope. The provisions of Section 5.304, Outdoor Water Use reference the mandatory Model Water Efficiency Landscape Ordinance (MVELO) contained within Chapter 2.7, Division 2, Title 23, Calif Code of Regulations.

fornia Plumbing Code and in Chapter 6 of this code.

5.304.2 Outdoor water use in landscape areas equal to or great than 500 square feet. When water is used for outdoor irrigation for new construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review, one of the following shall apply:

1. A local water efficient landscape ordinance that is, based on evidence in the record, at least as effective in conserving water as the updated model ordinance adopted by the Department of Water Resources (DWR) per Government Code Section 65595 (c). 2. The Call fornia Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) confimencing with Section 490 of Chapter 2.7, Division 2, Title 26, California Code of Regulations.

5.304.3 Outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 square feet. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review shall comply with Section 5.304.2, Item Nor 2.

5.304.4 Outdoor water use in landscape areas of 2,500 square feet or less. Any project with an aggregate and scape area of 2,500 square feet or less may comply with the performance requirements of MWELO or conform to the prescriptive compliance measures contained in MWELO's Appendix D. **5.304.5 Graywater or rainwater use in landscape areas.** For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2,500 square feet of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated of untreated graywater or through stored rainwater captured on site is subject only to Appendix D Section (5).

1. DWR's Model Water Efficient Landscape Ordinance, definitions and supporting documents are available at the following link: http://water.

ca.gov/wateruseefficiency/landscapeordinance/ 2. A water budget calculator is available at the following link: http:// water.ca.gov/wateruseef/lciency/landscapeord/nance/ 3. The MWELO prescriptive compliance measure Appendix D may be found at the following link: http://water.ca.gov/wateruseefficiency/

landscapeordinance In addition, a copy of MWALO Appendix D may be found in Chapter 8 of this code. 5.304.6 Outdoor potable water use in landscape areas [DSA-SS]. For public schools and community colleges, landscape projects as described in Sections 5.304.4.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.

feet or less may comply with the prescriptive measures contained Append x D of the MWELO. 5.304.6.1 Newly constructed landscapes. [DSA-SS] New construction projects with an aggregate landscape area equal to or greater than 50

5.304.6.2 Rehabilitated landscapes. [DSA-SS] Rehabilitated landscapes.

ojects with an aggregate landscape area equal to or greater than 1,200

Exception: Any project with an aggregate landscape area of 2,500 square

WATER REUSE SYSTEMS

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

(Reserved)

Division 5.4 - MATERIAL CONSERVATION AND

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.** ORGANIC WASTE

TEST.

SECTION 5.403 FOUNDATION SYSTEMS (Reserved)

SECTION 5.404

EFFICIENT FRAMING TECHNIQUES

(Reserved) SECTION 5.405 MATERIAL SOURCES (Reserved)

SECTION 5.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

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 rotection) 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 dscape irrigation systems to

5.407.2.2 Entries and openings. Resign subject to foot traffic or wind-driven cain 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 conabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings

exterior entries and/or openings

plus at least one of the following: 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least

prevent spray on structures

door is recessed at least 4 feet. ther methods which provide equivalent protection 7.2.2.2 Flashing. Install flashings integrated with a drainage

SECTION 5.408 CONSTRUCTION WASTE REDUCTION.

DISPOSAL AND RECYCLING 5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolitionwaste management ordinance that is more stringent, submit a construction waste management plan that 1. 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. 2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream). 3. Identifies diversion facilities where construction and demolition waste material collected will be taken.

4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by **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:

1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. 3. Demolition waste meeting local ordinance or calculated in

5.408.1.3 Waste stream reduction alternative. The combined weight of

consideration of local recycling facilities and markets.

new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65 percent 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

the enforcing agency. 1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at http://www.bsc.ca.gov/ Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.

2. Mixed construction and demolition debris (C&D) processors can

necessary and shall be accessible during construction for examination by

be located at the California Department of Resources Recycling and Recovery (CalRecycle). **5.408.2 Universal waste.** [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the

Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/ LawsRegsPolicies/Regs/upload/OEARA_REGS_UWR_FinalText.pdf **5.408.3 Excavated soil and land clearing debris.** 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. 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.

1. 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. (www.cdfa.ca.gov/exec/county/county_contacts.

2. For a map of known pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

SECTION 5.409 LIFE CYCLE ASSESSMENT

SECTION 5.410

BUILDING MAINTENANCE AND OPERATION 5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2)(A) et seq. shall also be exempt from ne organic waste portion of this section.

5 410.1.1 Additions. All additions conducted within a 12-month perio nder single or multiple permits, resulting in an increase of 30 percent ore in floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 0-percent increase in the tenant space floor area. **5.410.1.2 Sample ordinance.** Space allocation for recycling areas sh comply with Chapter 18, Part 3, Division 30 of the Public Resources C

Chapter 18 is known as the California Solid Waste Reuse and Recycling sample ordinance for use by local agencies may be found x A of the document at the CalRecycle's web site. **5.410.2 Commissioning.** [N] For new buildings 10.000 square f and over, building commissioning shall be included in the design 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 site and complexity. All occupancies other than I occupancies and L-occupancies shall comply with the California Energy Obde as prescribed in California Energy Code Section 120.8. For I-occupancies that are not regulated by OSHPD or for I-occupancies and I occupancies that are not regulated by the California Energy Code Section 100.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.

Commissioning requirements shall include: 1. Owner's or owner representative's project requirements. 2. Basis of design.

ning measures shown in the construction documents. 3. Commission 4. Commissioning plan. 5. Functional performance testing.

6. Documentation and training. 7. Commissioning report. **Exceptions:**

1. Unconditioned watehouses of any size. 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehou 3. Tenant improvements less than 10,000 square feet as described in

Section 303.1.1. 4. Open parking garages of any size, or open parking garage areas, of any **Note:** For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air

Informational Notes: 1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of ing personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 does not certify

balance systems. 2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code*. 5.410.2.1 Owner's or Owner representative's Project

individuals to conduct function I performance tests or to adjust and

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 sustaina it ity goals. Energy efficiency goals. 3. Indoor environmental quality requirements.

operation, and need for after hours operation. 5. Equipment and systems expectations 6. Building occupant and operation and maintenance (O&M) personnel expectation 5.410.2.2 Basis of Design (BOI). [N] A written explanation of how the

4. Project program, including facility functions and hours of

design of the building systems theets the OPA shall be completed at the design phase of the building project. The Basil of Design document shall cover the following systems:

1. Heating, ventilation, dir conditioning (HVAC) systems and 2. Indoor lighting system and controls. 3. Water heating system

c. Functions to be tested.

4. Renewable energy systems. 5. Landscape irrigation systems. Water reuse system 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 con nmissioning 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.

d. Conditions under which the test 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 tests shall demonstrate the correct installation and operation of each component, system and system- tosystem interface in accordance with the approved plant and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings an adjustments made.

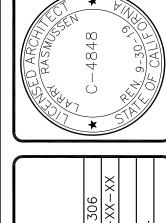
5.410.2.5 Documentation and training. [N] A systems manual a systems operations training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Tille 8, Section 5142, and other related regulations. 5.410.2.51 Systems manual. [N] Documentation of the operationa 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: Site information, including facility description, history and current

. Basic operations and maintenance, including general site operating

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procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.5. Site equipment inventory and maintenance notes.6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.
5.410.2.5.2 Systems operations training. [M] 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. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.
5.410.4 Testing and adjusting. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.
5.410.4.1 (Reserved)
5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project:1. HVAC systems and controls.
 Indoor and outdoor lighting and controls. Water heating systems. 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, balance the system 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 guaranties/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.
CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES
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 wellbeing of a building's installers, occupants and neighbors.
SECTION 5.502 DEFINITIONS
5.502.1 Definitions. The following terms are defined in Chapter 2. ARTERIAL HIGHWAY.
A-WEIGHTED SOUND LEVEL (dBA).
1 BTU/HOUR. COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). COMPOSITE WOOD PRODUCTS.
DAY-NIGHT AVERAGE SOUND LEVEL (L_{dn}) .

DECIBEL (dB).

EXPRESSWAY.

FREEWAY.

ENERGY EQUIVALENT (NOISE) LEVEL (L_{eq}).

GLOBAL WARMING POTENTIAL (GWP).

PRODUCT-WEIGHTED MIR (PWMIR).

REACTIVE ORGANIC COMPOUND (ROC).

HIGH-GWP REFRIGERANT.

LOW-GWP REFRIGERANT.

SCHRADER ACCESS VALVES.

SHORT RADIUS ELBOW.

6, Subchapter 7, Section

comply with applicable local ord

meet the emission limits.

conclusion of construction.

water and debris which may enter the system.

SUPERMARKET

VOC.

LONG RADIUS ELBOW.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE).

MAXIMUM INCREMENTAL REACTIVITY (MIR).

SECTION 5.503

FIREPLACES

sealed wood burning fireplace, or a sealed woodstove or pellet stove, and

SECTION 5.504

POLLUTANT CONTROL

5.504.1 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 percent based on ASHRAE 52.1-1992. Replace all filters immediately

prior to occupancy, or, if the building is occupied during alteration, at the

5.504.3 Covering of duct openings and protection of mechanical

equipment during construction. At the time of rough installation and

during storage on the construction site 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, sheetmetal or other

methods acceptable to the enforcing agency to reduce the amount of dust,

Fireplaces. Install only a direct-vent sealed-combus

applicable and shall have a permanent label indicating they are

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, http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.

1. Adhesives, adhesive bonding primers, adhesive primers,

as specified in subsection 2, below.

ARCHITECTURAL APPLICATIONS

Indoor carpet adhesives

Outdoor carpet adhesives

Wood flooring adhesive

Rubber floor adhesives

Ceramic tile adhesives

Cove base adhesives

PVC welding

ABS welding

Plastic cement welding

Γop and trim adhesive

Metal to metal

Contact adhesive

Adhesive primer for plastic

Special purpose contact adhesive

Structural wood member adhesive

SUBSTRATE SPECIFIC APPLICATIONS

Porous material (except wood)

VCT and asphalt tile adhesives

Multipurpose construction adhesive

Single-ply roof membrane adhesives

Other adhesive not specifically listed

SPECIALTY APPLICATIONS

Drywall and panel adhesives

Structural glazing adhesives

Subfloor adhesives

Carpet pad adhesives

sealants, sealant primers and caulks shall comply with local or

regional air pollution control or air quality management district

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

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

TABLE 5.504.4.1

ADHESIVE VOC LIMIT^{1,2}

Less Water and Less Exempt Compounds in Grams Per Liter

compounds, of California Code of Regulations, Title 17, commencing

50

150

100

60

50

65

50

50

50

70

100

250

50

510

490

325

250

550

80

250

140

250

30

50

50

rules where applicable, or SCAQMD Rule 1168 VOC limits, as

SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter

1. If an adhesive is used to bond dissimilar substrates together the adhesive

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 Porous	250 775
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

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested 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 4.21, 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 PWMIR 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. **5.504.4.3.2 Verification.** Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation

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

may include, but is not limited to, the following:

5.504.4 Finish material pollutant control. Finish materials shall comply TABLE 5.504.4.3 VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS^{2, 3} with Sections 5.504.4.1 through 5.504.4.6. Grams of VOC per Liter of Coating, **5.504.4.1 Adhesives, sealants and caulks.** Adhesives, sealants, and caulks Less Water and Less Exempt Compounds used on the project shall meet the requirements of the following standards:

COATING CATEGORY	CURENT LIMIT
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, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque 1 1 1	550
Specialty primers, sealers and under- coaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and 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 and including exempt 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, February 1, 2008. More information is available from the Air Resources

504.4.4 Carpet systems. All carpet installed in the building interior hall meet at least one of the following testing and product requirements Carpet and Rug Institute's Green Label Plus Program appliant with the VOC-emission limits and test ents specified in the California Department of Public Health tandard 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. Or Specification 3. NSF/ANSI 140 at the Gold 4. Scientific Certifications ns Sustainable Choice; or 5. Compliant with the Coll rative 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 Pr 5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building

neet the requirements of the Carpet and Rug Institute's .4.4.2 Carpet adhesive. All carpet adhesive shall meet the

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.) Those materials not exempted under the ATCM must meet the specified emission limits, as shown in

5.504.4.5.1 Early compliance. Reserved. **5.504.4.5.3 Documentation.** Verification of compliance with this section

shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following: 1. Product certifications and specifications. 2. Chain of custody certifications. 3. Product labeled and invoiced as meeting the Composite Wood

Products regulation (see CCR, Title 17, Section 93120, et seq.). 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/ NZS 2269 or European 636 3S standards. Other methods acceptable to the enforcing agency. TABLE 5.504.4.5

FORMALDEHYDE LIMITS¹ Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	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 E1333. 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 inch

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

1. Certified under the Resilient Floor Covering Institute (RFCI)

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.

5.504.5.3 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.

1. An ASHRAE 10-percent to 15-percent 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 W/cfm or less at design air flow. 2. Existing mechanical equipment.

5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

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 already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. 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 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

anically or naturally ventilated 5.506.1 Outside air delivery. For spaces in buildings, meet the rements of Section 120.1 California Energy Code, or the applicable local code. whichever is more stringent, and Division 1, Chapter 5.506.2 Carbon dioxide (CO2) monitoring. For buildings 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

507.4 Acoustical control. Employ building assemblies and components vita Sound Transmission Class (STC) values determined in accordance TM E90 and ASTM E413 or Outdoor-Indoor Sound s(OITC) determined in accordance with ASTM E1332, using either the ptive or performance method in Section 5.507.4.1 or

ENVIRONMENTAL COMFORT

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 by Exception: [DSA-SS] For public schools and community colleges,

the requirements of this section and all subsections aroly only to new construction. 5.507.4.1 Exterior noise transmission, prescription **method.** Wall and coof-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 vindows of a minimum STC of 40 or OITC of 30 in

the following locations 1. Within the 65 CNE noise contour of an airport. **Exceptions:**

1. L_{dn} or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan. 2. L_{dn} or CNEL for other tirports 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 $L_{\rm dn}$ pole contour of a freeway or expressway, railroad, industrial source or fixed guideway source as determined by the Noise Element of the General P. 5.507.4.1.1 Noise exposure where noise contours are

not readily available. Buildings exposed to a noise level of 65 dB L 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STQ rating of at least 43 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30

5.507.4.2 Performance method. For buildings lacated as defined in Section 5.507.4.1 or 5.507.4.1, wall and roofceiling 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 (L₂-1Hr) 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. **5.507.4.2.7** Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personn I approved by the architect or engineer of record. **5.507.4** Interior sound transmission. Wall and floorceiling a separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

te: Examples of assemblies and their various STC ratings may be found he California Office of Noise Control: http://www.toolbase.org/PINF/ laseStudies/stc_icc_ratings.pdf.

SECTION 5.508 OUTDOOR AIR QUALITY 5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508. 5.508.1.1 Chlorofluorocerbons (CFCs). Listall HVAC, refrigeration and fire suppression equipment the ration and fire suppression equipment that do not 5.508.2 Supermarket refrigerant leak reduction. New commercial systems shall comply with the provisions of this section when in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or

eezers connected to remote compressor units or condensing units. The reduction measures apply to refrigeration systems containing hi obal-warming potential (high-GWP) refrigerants with a GWP of 15 r greater. New refrigeration systems include both new facilities and the acement of existing refrigeration systems in existing facilities.

Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this action. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO2), and potentially

5.508.21 Refrigerant piping. Piping compliant with the *California Mechanical Code* shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted

5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the **5.508.2.1.2 Copper pipe.** Copper tubing with an OD less than 1/4 inch

may be used in systems with a refrigerant charge of a pounds or less. **5.508.2.1.2.1 Anchorage.** One-fourth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils. **5.508.2.1.3 Flared tubing connections.** Double-lared tubing connections may be used for pressure controls, valve pilot lines and oil. **Exception:** Single-fared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations.

5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elboy **5.508.2.2 Valves.** Valves and fittings shall comply with the *California* Mechanical Code and as follows.

5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valv **5.508.2.2.1.1 Pressure detection**. A pressure gauge, pressure transducer

or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief **5.508.2.2.2 Access valves.** Only Shrader access valves with a brass or steel body are permitted for use.

5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic. **5.508.2.2.2.2 Seal caps.** If designed for it, the cap shall have a neoprene **5.508.2.2.2.1 Chain tethers.** Chain tethers to fit over the stem are

required for valves designed to have seal caps. **Exception:** Valves with seal caps that are not removed from the valve

during stem operation **5.508.2.3 Refrigerated service cases.** Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless seel; or be coated to prevent corrosion from these substances. 5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coaling to maximize energy efficiency.

5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of refrigerant in the receiver. 5.508.2.5 Pressure testing. The system shall be pressure tested during

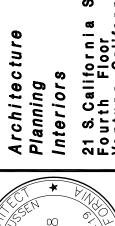
installation prior to evacuation and charging. **5.508.2.5.1 Minimum pressure.** The system shall be charged with regulated dry hitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum. **5.508.2.5.2 Leaks.** Check the system for leaks, repair any leaks, and retest

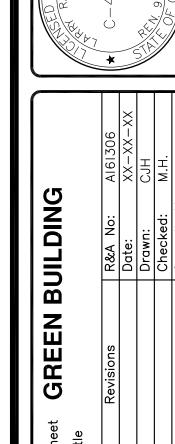
for pressure using the same gauge. 5.508.2.5 Allowable pressure change. The system shall s and, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge. **5.508.2 6 Evacuation.** The system shall be evacuated after pressure testing

5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 is (+/- 50 microns), and hold for 30 minutes. 8.2.6.2 Second vacuum. Pull a second system vacuum to a m nimum 00 microns and hold for 30 minutes.

508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum 00 microns, and hold for 24 hours with a maximum drift of 100 microns ver a 24-hour period.

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0 TRA EMENT REPLAC

> Sheet No. GB2

SPECIAL INSPECTIONS (CBC Sections 1704 & 1705)

The Owner or the Architect of record, acting as the Owner's agent, shall employ one or more special inspectors who shall provide inspections during construction on the types of work listed under Section 1705. Special Inspections are to be performed by an independent qualified third party. The Engineer of Record's structural observations do not eliminate the requirement for Special Inspection. Typically Special Inspections are performed by the Soils Engineer of Record.

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTIONS

For SI: 1 inch=25.4 mm.

a. Where applicable, see also Section 1705A.12, Special inspection for seismic resistance.

1705.6 Soils. Special inspections for existing site soil conditions, fill placement and load-bearing requirements shall be as required by this section and Table 1705.6. The approved geotechnical report, and the construction documents prepared by the registered design professional shall be used to determine compliance. During fill placement, the special inspector shall determine that proper materials and procedures are used in accordance with the provisions of the approved geotechnical

Hilti 'KB3' expansion anchor shall be be installed per ICC ESR-1385 in additional to manufacturer's instruction.

1705.2 Steel construction. The special inspections for steel elements of structures shall be as required in this section & Table 1705A.2.1

REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASKS	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.		X
2. Verify excavations are extended to proper depth and have reached proper material.		X
3. Perform classification and testing of compacted fill materials.		X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	
5. Prior to placement of compacted fill, observe subgrade and verify that the site has been prepared properly.	-	X

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD ^a	CBC REFERENCE
 Material verification of high-strength bolts, nuts and washers: 				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	***************************************	X	AISC 360, Section A3.3 and applicable ASTM material standards	
b. Manufacturer's certificate of compliance required.	***************************************	X		
2. Inspection of high—strength bolting:				
a. Snug–tight joints.		X		
b. Pretensioned and slip—critical joints using turn—of—nut with matchmarking, twist—off bolt or direct tension indicator methods of installation.		X	AISC 360, Section M2.5	
 c. Pretensioned and slip—critical joints using turn—of—nut without matchmarking or calibrated wrench methods of installation. 	X	Antoqueranovaren		
3. Material verification of structural steel and cold—formed steel deck:				
a. For structural steel, identification markings to conform to AISC 360.		X	AISC 360, Section A3.1	2203A.1
 b. For other steel, identificataion markings to conform to ASTM standards specified in the approved construction documents. 	**************************************	X	Applicable ASTM material standards	
c. Manufacturers' certified test reports.		X	water to the state of the state	
4. Material verification of weld filler materials:		·		
a. Identification markings to conform to AWS specification in the approved construction documents.	***************************************	X	AISC 360, Section A3.5 and applicable AWS A5 documents	
b. Manufacturer's certificate of compliance required.		X		
5. Inspection of welding:	· · · · · · · · · · · · · · · · · · ·	.		.1
a. Structural steel and cold-formed steel deck:	and decrease are no control of different and different actions are additionally defined as an action beautiful	der der som den den der det som med det det som med den som det det som med de som det de som de de som de des		***************************************
1) Complete and partial joint penetration groove welds.	X			<u> </u>
2) Multipass fillet welds.	X			
3) Single-pass fillet welds > 5/16"	X		AWS D1.1 AWS D1.8	1705A.2.1
4) Plug and slot welds.	X		AWS DI.O	
5) Single-pass fillet welds ≤ 5/16"		X		
6) Floor and roof deck welds.		X	AWS D1.3	
b. Reinforcing steel:		<u>L</u>		<u> </u>
1) Verification of weldability of reinforcing steel other than ASTM A 706.		X		
2) Reinforcing steel—resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	X		AWS D1.4 ACI 318: Section 26.6.4.1, 18.2.8, 25.5.7.4	
3) Shear reinforcement.	Χ			
4) Other reinforcing steel.	-	X		
6. Inspection of steel frame joint details for compliance:				
a. Details such as bracing and stiffening.	,	X		
b. Member locations.		X		1705A.2.2
c. Application of joint details at each connection.		X		1

GENERAL

- I. All materials and workmanship are subject to the review of the Architect and Structural Engineer.
- 2. Report any and all discrepancies, ambiguities, unclear items or items that are subject to more than one interpretation, on the Drawings and/or Specifications to the Structural Engineer for clarification before proceeding with Work.
- 3. All Work done under this contract is to comply with the 2016 edition of the California Building Code. 4. Design and install all temporary bracing and shoring to ensure the safety of the Work until it is in its completed form. When required by law, employ a Civil Engineer to design shoring, bracing, and
- installation plans for structural items. 5. Verify all dimensions prior to starting Work. The Architect and Structural Engineer are to be notified of any discrepancies or inconsistencies. Check and coordinate all dimensions. See architectural Drawings for dimensions and non-structural items not shown on these Plans. Do not scale the
- Drawings to obtain dimensions. 6. All scaffolding and shoring is to comply with the rules and regulations of the Industrial Safety Commission of the State of California.
- 7. The Structural Engineer will provide only periodic observation of the Work.
- 8. Fees or costs associated with the redesign or modification of these Plans by the Architect or Structural Engineer as a result of deviation by the Contractor from the Plans and Specifications, or due to errors, faulty materials or faulty workmanship, is to be paid to the Structural Engineer by the Contractor.
- 9. The Contractor is required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property. This requirement applies continuously and is not limited to normal working hours. The Contractor further agrees to defend, indemnify and hold harmless the Structural Engineer from any and all liability, real or alleged, in connection with the performance of Work of this project, excepting liability arising from the sole negligence of the Structural Engineer.
- 10. Neither the professional activities nor the presence of the Structural Engineer at the construction site relieves the Contractor of his obligation, duties and responsibilities for construction means, methods, sequences, techniques and procedures necessary for the Contractor to complete the Work in accordance with the Plans and Specifications in a manner to ensure the health and safety of persons who enter the construction site.
- 11. Any difference between the existing construction as observed in the field and as shown on the Drawings is to be reported to the Structural Engineer before proceeding with Work.
- 12. Bidders must visit the building site and familiarize themselves with the existing conditions. Discrepancies or deletions must be brought to the attention of the Architect and Structural Engineer before bid date for correction.

EXCAVATING, GRADING, AND FILLING

- 1. Notify the Geotechnical Engineer when clearing and demolition commence.
- 2. Notify the governmental agencies having jurisdiction over the project prior to grading commencing. Make all necessary arrangements for their inspection.
- 3. The existing ground surface in the building and surface improvement areas should be prepared for construction by removing existing structures, improvements, vegetation, large roots, debris, and other deleterious material. Any undocumented fill soils should be completely removed and replaced as compacted fill. Provide engineered fill and prepare subgrade per the geotechnical report. Any existing utilities that will not remain in service should be removed.
- 4. A geotechnical investigation report has been prepared by Moore Twining Associates, INC. dated 8/2/16 (revised 2/8/17) report number E75208.02-01. Earth and foundation Work is to be done in compliance with the recommendations of this report. A copy of the soils investigation is available at the Architect's office.

FOUNDATIONS

- . Extend all footings a minimum of 24" below finished subgrade elevation.
- 2. Prior to pouring concrete foundations, all loose earth, water, and debris is to be removed from
- foundation bed. 3. See Soils Report for special grading procedure under building and paved areas.
- 4. Footings are designed using a maximum allowable bearing capacity of 2,000 psf dead plus live loads. The allowable bearing capacity may be increased by one-third when transient loads such as wind or
- 5. The bottom elevation of all footings is subject to the approval of the Geotechnical Engineer.
- 6. Provide for de-watering of all excavations from either surface water or seepage.
- 7. Protect all foundation excavations on the site from caving. 8. After foundation excavations have been completed and prior to placing reinforcing and formwork, the
- foundation bed is to be inspected by the Soils Engineer. All loose material is to be removed. 9. Secure in position prior to inspection and pouring concrete or grouting block, all anchor bolts, holdown anchors, reinforcing steel, dowels, inserts, etc. For anchor bolts and holdowns, use Simpson Anchormate anchor bolt holders. Stabbing bolts after pouring will not be allowed.

- 1. Wide flange "W" shapes shall conform to ASTM A992 Grade 50, unless specifically specified elsewhere on the plans. "S", "M", "HP", and channels are to conform to ASTM A572, grade 50. Plates, angles, and misc. steel sections shall conform to ASTM A36. 2. Anchor bolts and threaded studs (hooked, headed, and threaded anchor rods): conform
- to ASTM F1554 unless noted otherwise on the Plans. 3. High strength bolts used in steel to steel connection: conform to ASTM A325N, Unless
- pre-tensioned or friction type connections are specified, tighten bolts requiring the full effort of an ironworker with an ordinary spud wrench. 4. Pipe columns: conform to ASTM A-53, grade B.
- 5. Tube and circular steel sections (HSS): conform to ASTM A-500, grade B Fy=46KSI 6. Welding: conform to AWS standards, latest addition: 7. All welding shall be done by the shielded arc method. All welders shall be properly qualified and AWS certified for the kind of weld they perform. Surplus metal shall be dressed off to smooth, even surfaces where welds are not exposed to view. All field-welding shall be inspected by a testing laboratory approved by the Structural
- 8. Use low hydrogen electrodes for welding reinforcing steel. All welded reinforcing steel to conform to ASTM A706.
- 9. All steel on the exterior of the building shall be hot dipped galvanized after fabrication. Field welds shall be painted with "Galvalloy."
- 10. All steel not encased in concrete or concrete block shall have one shop coat of zinc chromate, or other approved paint 2 mils thick. After erection, all nuts, bolt heads, and abrasions to the shop coat shall receive a touch up coat. Paint shall be omitted at places to receive sprayed on fire proofing, and areas with friction type bolts.
- 11. Submit shop drawings of all steel work to the Structural Engineer for review. Submit sufficient copies of shop drawings so that the Architect and Structural Engineer may each retain one copy for their record. Any fabrication prior to the review of shop drawings shall be done at the sole risk of the Contractor. The Structural Engineer will require that the shop drawings be in his office at least 1 week for review. Submit shop drawings soon enough so that the required Structural Engineer's review period will not impact the construction schedule. Contact the Structural Engineer when shop drawings are begun to confirm schedule. minum me

CONCRETE BLOCK

- 1. Concrete block is to be manufactured from medium weight aggregate and is to conform to grade N, type I Hollow Load Bearing Units ASTM C-90, f'm=1500 psi.
- 2. Mortar is to be CBC type "S" and have a minimum strength of 1500 psi at 28 days. Mortar proportions: 1 part cement, 1/4 to 1/2 hydrated lime, 3 parts
- 3. Grout is to be transit mixed and contain 7 sacks of cement per cubic yard of grout. Maximum slump is to be 9-1/2". Minimum ultimate compressive strength shall be 2000 psi at 28 days. Use Sika "Grout Aid" admixture per manufacturer's
- recommendations. Use open end block throughout.
- Pour grout in lifts not to exceed 5 feet. Splices in reinforcing bars are to be per typical details.
- Solid grout all walls.

Structural General Notes

CONCRETE

- 1. All concrete for the footings, flat work, and miscellaneous items is to have a minimum ultimate compressive strength of 2,500 psi at 28 days, unless noted otherwise on the Drawings.
- 2. Reinforcing bars are to be of intermediate grade conforming to ASTM A 615, grade 40 for #2 and #3
- bars and grade 60 for #4 bars and larger. 3. Cement is to be type II, low alkali (no higher than .4%), conforming to ASTM C-150. Up to a maximum
- of 18% of cement may be substituted with Fly Ash (type "F"). 4. All aggregate used in concrete are to conform to ASTM C-33. Aggregate shall be uniformly graded,
- with the maximum aggregate size required to be 1" to 3/4". 5. Coarse and fine aggregate (sand) are to come from a source proven to have non-reactive
- characteristics. Use an approximate 60% to 40% ratio of coarse aggregate to fine aggregate (by weight)
- 6. Splices of reinforcing steel are to be lapped per detail 4/S1.1 and securely wired together. Splices of adjacent reinforcing bars shall be staggered wherever possible. See Drawings for particular requirements for splice breaks.
- 7. Minimum concrete cover for reinforcing is as follows: Cast against and permanently exposed to earth Cast in forms and exposed to earth or weather Interior slabs, walls, and joists Interior beams, girders, and columns
- 8. Location of sleeves for pipes, and for pipes intended to be cast in concrete, for which no specific details are shown shall be subject to the review of the Structural Engineer.
- 9. Secure in position prior to inspection and pouring concrete, all anchor bolts, holdown anchors, reinforcing steel, dowels, inserts, etc. For anchor bolts and holdowns, use Simpson Anchormate anchor bolt holders. Stabbing bolts after pouring slab will not be allowed.
- 11. Concrete shall contain a minimum of 5.5 sacks of cement per cubic yard, a maximum water/cement ratio of .5, and shall have a slump no greater than 4". Do not exceed 36 galls of water per cubic yard of
- 10. Make and test concrete cylinders in accordance with Section 1704.4 of the CBC.
- 11. Vibrate all concrete as it is being placed with electrically-operated vibrating equipment.

NOTIFICATION

Notify the Structural Engineer 48 hours before the following times:

- 1. Foundation excavations.
- 2. Concrete pours.
- 3. CMU grout lifts

STRUCTURAL OBSERVATION

- I. The owner shall employ the structural engineer of record to perform structural observations as defined in CBC Section 1704 for the following items:
 - A. Foundation reinforcing and embedded items.
 - B. CMU reinforcing.

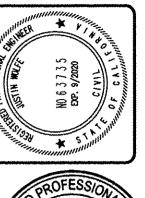
DESIGN PARAMETERS

- I. Risk Category II
- 2. Design Category E
- 3. $S_S 2.418$, $S_1 0.963$
- 4. SDS 1.452, SDI- 1.542
- 5. $S_{MS} 2.176$, $S_{MI} 2.311$ 6. Fa – 0.90, Fv – 2.40
- 7. Site Class E
- 8. Seismic Importance Factor 1.0
- 9. $a_D = 1.0$
- $10. R_D = 2.5$
- 11. $F_D = 0.44 W_D$
- 12. Max. wind speed = 110 mph
- 13. Wind Exposure B







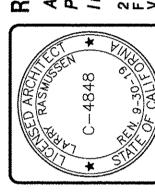




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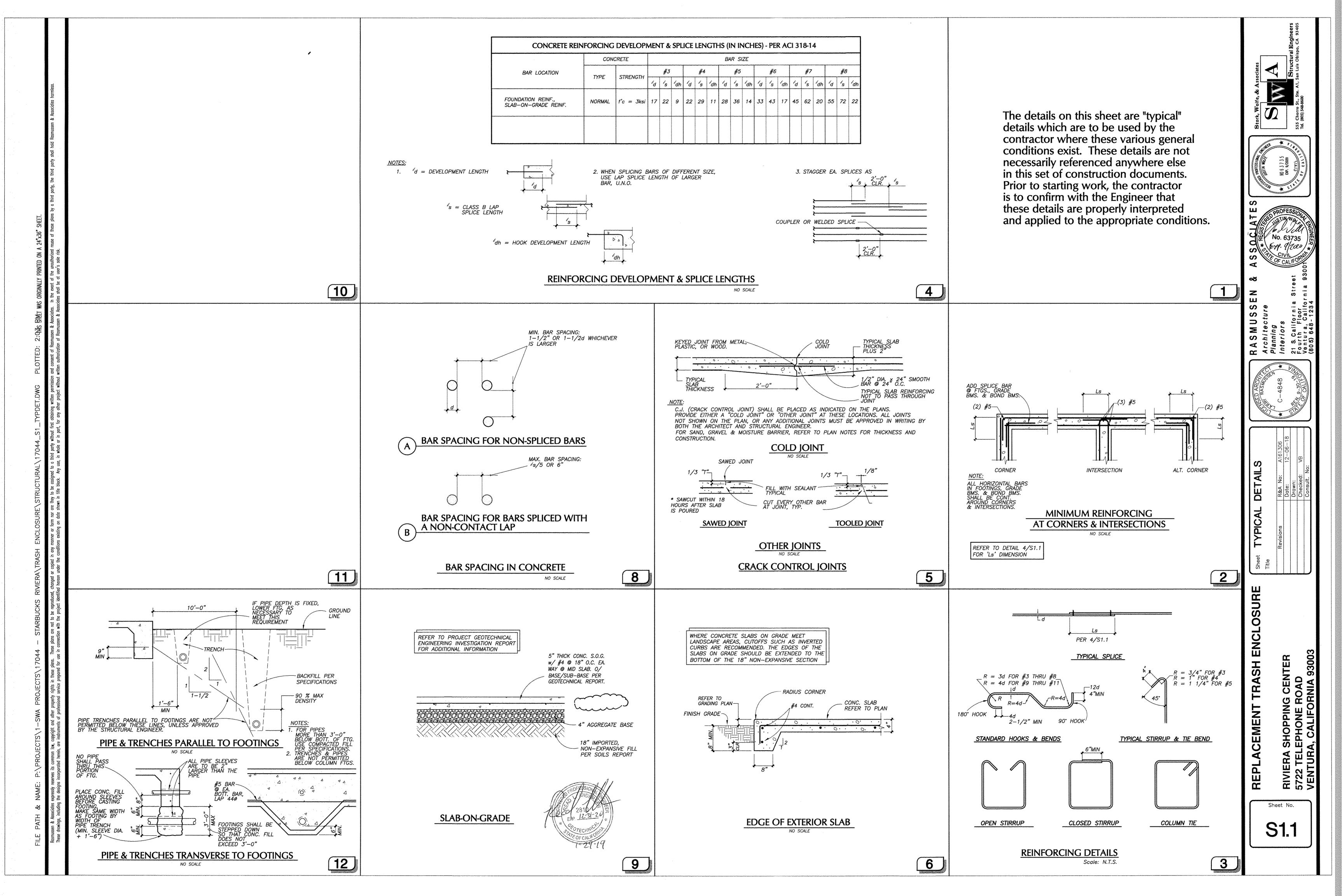
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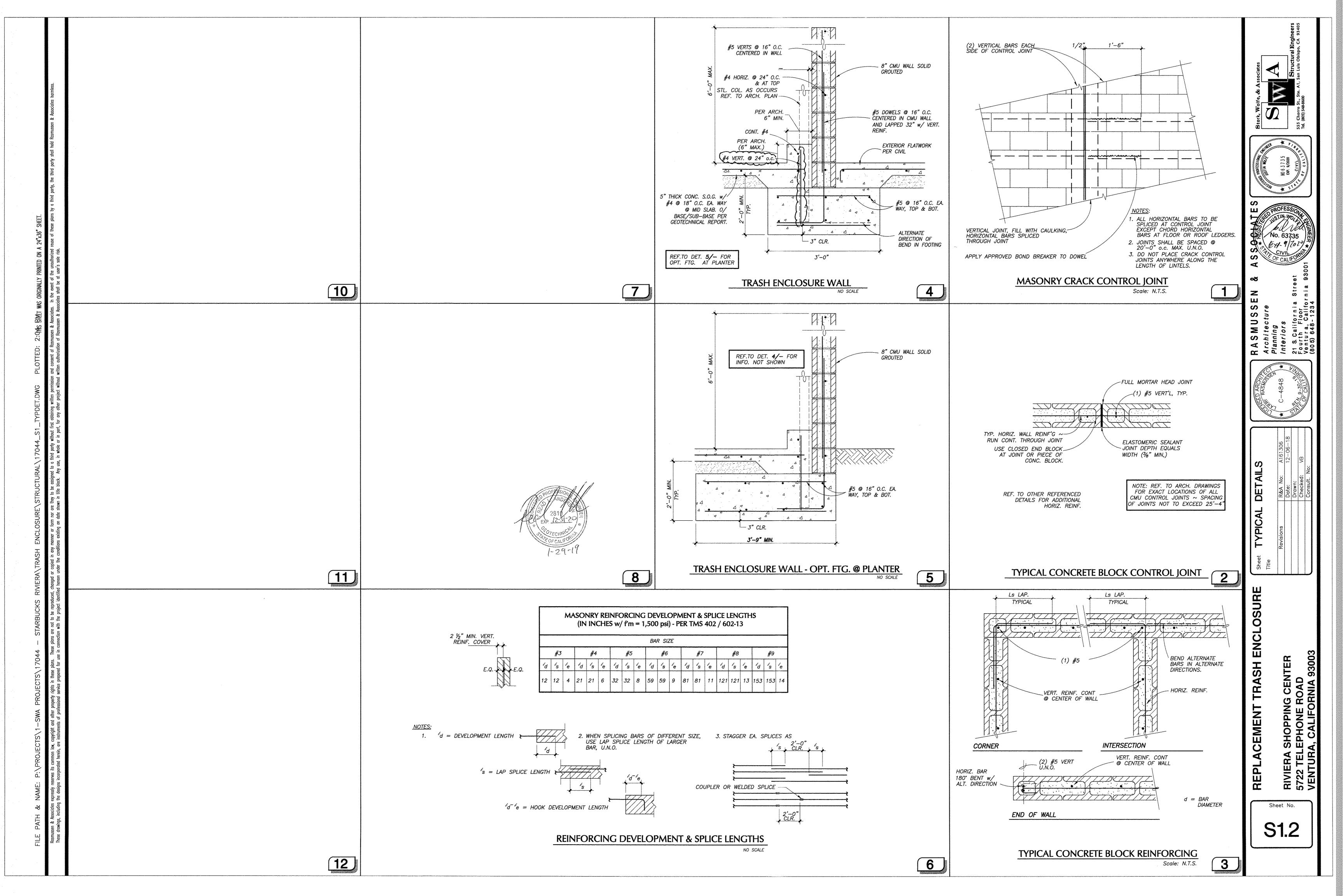
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REPLACEMENT

CENTER PHG SA RIVIER, 5722 TE

Sheet No.

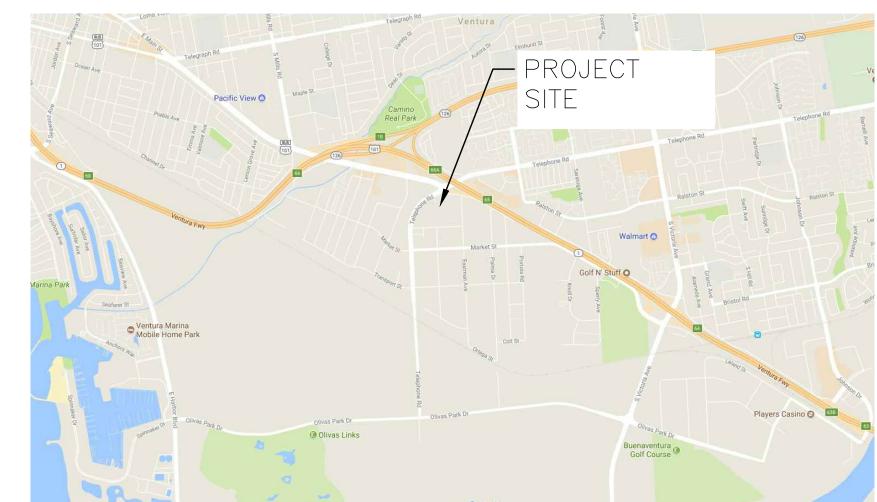




REPLACEMENT TRASH ENCLOSURE PLANS FOR:

RIVIERA SHOPPING CENTER-STARBUCKS COFFEE HOUSE

5722 TELEPHONE ROAD VENTURA, CA 93003



VICINITY MAP: NOT TO SCALE

WESTINGHOUSE STREET MASTER SITE PLAN SCALE 1": 100'-0"

CERTIFICATE OF COMPLETION

This certificate is filled out by the project applicant upon completion of the landscape project.

Date			
Project Name			
Name of Project Applicant	Telephone No.		
	Fax No.	· · · · · ·	
Title	Email Address		
Company	Street Address		
City	State	Zip Code	120

Project Address and Loca	tion:
Street Address	Parcel, tract or lot number, if available.
City	Latitude/Longitude (optional)

Name	Telephone No.		
	Fax No.		
Title	Email Address		
Company	Street Address		
City	State	Zip Code	

Zip Code

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule.

		••
Property Owner Signature		Date

Please answer the questions below:

1. Date the Landscape Documentation Package was submitted to the local agency_

2. Date the Landscape Documentation Package was approved by the local agency_ Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the local water purveyor____

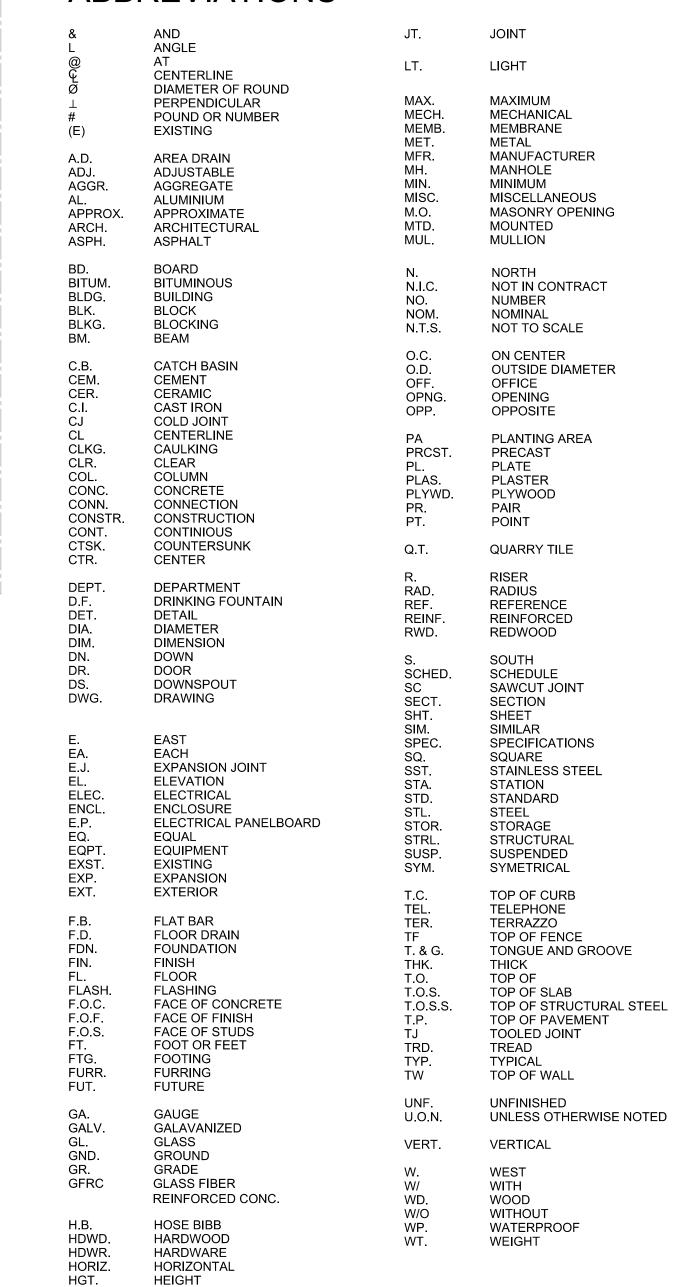
CONSTRUCTION NOTES:

- 1. PERMIT CANNOT BE FINALED UNTIL CERTIFICATION FORMS COMPLETED AND RETURNED
- 2. AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.
- 3. UNLESS CONTRADICTED BY A SOILS REST, COMPOST AT THE RATE OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE BE INCORPORATED INTO THE SOIL

INDEX OF DRAWINGS

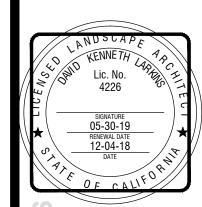
SHEET	SHEET NO.	DESCRIPTION
1	LO.0	LANDSCAPE COVER SHEE
2	L1.0	MWELO WORKSHEET
3	L2.0	IRRIGATION PLANS
4	L2.1	IRRIGATION DETAILS
5	13.0	PLANTING PLAN & DETAL

ABBREVIATIONS



INSIDE DIAMETER

INTERIOR



ENCLOSURE **TRASH** REPLACEMENT

Sheet No. **L0.0**

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MWELO SUBMITTAL CHECKLIST PAGE 1	MWELO SUBMITTAL CHECKLIST PAGE 2	MWELO SUBMITTAL CHECKLIST PAGE 3
UBMITTAL DATE: DECEMBER 6, 2018	IRRIGATION DESIGN PLAN (TITLE 23, CHAPTER 2.7, §492.7)	
ROJECT ADDRESS: 5722 TELEPHONE ROAD, VENTURA, CA		LANDSCAPE DESIGN PLAN (TITLE 23, CHAPTER 2.7, §492.6)
PPLICANT NAME: LRM LANDSCAPE ARCHITECTURE PHONE: 310-839-6600	THE IRRIGATION PLANS, AT A MINIMUM SHALL CONTAIN THE FOLLOWING:	THE LANDSCAPE DESIGN PLANS, AT A MINIMUM, SHALL:
E FOLLOWING CHECKLIST PROVIDES A LIST OF INFORMATION THAT MUST BE INCLUDED ON THE	LOCATION AND SIZE OF WATER METER PROVIDING SERVICE TO THE LANDSCAPE AREA.	DELINEATE AND LABEL EACH HYDROZONE BY NUMBER, LETTER, OR OTHER METHODS.
ANS BEFORE YOUR PERMIT APPLICATION CAN BE PROCESSED. THIS CHECKLIST COVERS BOTH THE REFORMANCE COMPLIANCE METHOD AND THE PRESCRIPTIVE COMPLIANCE METHOD. PLEASE INDICATE ICH COMPLIANCE METHOD IS USED AND PROVIDE THE APPROPRIATE INFORMATION ON THE PLANS.	A DEDICATED WATER SERVICE METER OR PRIVATE SUBMETER SHALL BE INSTALLED FOR ALL (NON-RESIDENTIAL IRRIGATED LANDSCAPES OF AT LEAST 1,000 SQ. FT.) (RESIDENTIAL IRRIGATED LANDSCAPE AREAS OF AT LEAST 5,000 SQ. FT).	☐ IDENTIFY EACH HYDROZONE AS LOW, MODERATE, HIGH WATER, OR MIXED WATER USE.☐ IDENTIFY RECREATIONAL AREAS, AREAS SOLELY DEDICATED TO EDIBLE PLANTS, AREAS IRRIGATED WITH RECYCLED WATER, TYPE AND SURFACE AREA OF WATER FEATURES,
PERFORMANCE APPROACH (SEE PRESCRIPTIVE COMPLIANCE OPTION - APPENDIX D) PERFORMANCE APPROACH LANDSCAPE DOCUMENTATION PACKAGE (TITLE 23, CHAPTER 2.7, §492.3)	LOCATION, TYPE, AND SIZE OF ALL COMPONENTS OF THE IRRIGATION SYSTEM, INCLUDING CONTROLLERS, MAIN AND LATERAL LINES, VALVES, SPRINKLER HEADS, MOISTURE SENSING DEVICES, RAIN SWITCHES, QUICK COUPLERS, PRESSURE REGULATORS, AND BACKFLOW PREVENTION DEVICES.	IMPERMEABLE AND PERMEABLE HARDSCAPE, AND ANY INFILTRATION SYSTEMS. FOR HYDROZONE WITH A MIX OF BOTH LOW AND MODERATE WATER USE PLANTS OR BOTH MODERATE AND HIGH WATER USE PLANTS, THE HIGHER PLANT FACTOR OR THE PLANT FACTOR BASED ON THE PROPORTIONS OF THE RESPECTIVE PLANT WATER USES SHALL BE USED. HYDROZONES CONTAINING A MIX OF LOW AND HIGH WATER USE PLANTS IS NOT PERMITTED.
THE PROJECT'S ADDRESS, TOTAL LANDSCAPE AREA, WATER SUPPLY TYPE, AND CONTACTS SHALL BE STATED ON THE PLANS.	STATIC WATER PRESSURE AT THE POINT OF CONNECTION THE PUBLIC WATER SUPPLY FLOW RATE (GALLONS PER MINUTE), APPLICATION RATE (INCHES PER HOUR), AND DESIGN	
ADD, SIGN AND DATE THE FOLLOWING STATEMENT ON THE PLANS, "I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE." WATER EFFICIENT LANDSCAPE WORKSHEET THAT INCLUDES A HYDROZONE INFORMATION TABLE AND	OPERATING PRESSURE (PRESSURE PER SQUARE INCH) FOR EACH STATION. ADD NOTE TO PLANS: "PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES."	ADD NOTE TO PLANS: "RECIRCULATING WATER SYSTEMS SHALL BE USED FOR WATER FEATURES" ADD NOTE TO PLANS: "A MINIMUM 3-INCH LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING
WATER BUDGET CALCULATIONS SHALL BE SUBMITTED FOR PLAN CHECK. A LANDSCAPE DESIGN PLAN AND IRRIGATION DESIGN PLAN SHALL BE SUBMITTED FOR PLAN CHECK.	MANUAL SHUT-OFF VALVES SHALL BE REQUIRED, AS CLOSE AS POSSIBLE TO THE POINT OF CONNECTION OF THE WATER SUPPLY, TO MINIMIZE WATER LOSS IN CASE OF AN EMERGENCY OR ROUTINE REPAIR.	GROUNDCOVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED."
TER EFFICIENT LANDSCAPE WORKSHEET (TITLE 23, CHAPTER 2.7, §492.4 AND §492.13)	ADD NOTE TO PLANS: "CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR."	ADD NOTE TO PLANS: "FOR SOILS LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL."
INCORPORATE THE WATER EFFICIENT LANDSCAPE WORKSHEET INTO PLANS. SHOW THAT THE MAXIMUM APPLIED WATER ALLOWANCE (MAWA) MEETS OR EXCEEDS THE CALCULATED ESTIMATED TOTAL WATER USE (ETWU).	AREAS LESS THAN 10-FEET IN WIDTH IN ANY DIRECTION SHALL BE IRRIGATED WITH SUBSURFACE OR DRIP IRRIGATION.	
THE EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) FOR THE LANDSCAPE PROJECT SHALL NOT EXCEED A FACTOR OF 0.55 (FOR RESIDENTIAL AREAS) (0.45 FOR NON-RESIDENTIAL).	OVERHEAD IRRIGATION SHALL NOT BE PERMITTED WITHIN 24-INCHES OF ANY NON-PERMEABLE SURFACE.	I AGREE TO COMPLY WITH REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.
THE PLANT FACTOR USED SHALL BE FROM WUCOLS OR FROM HORTICULTURAL RESEARCHERS WITH ACADEMIC INSTITUTIONS. WUCOLS PLANTS DATABASE CAN BE FOUND ONLINE AT:	REQUIRED STATEMENTS AND CERTIFICATION (TITLE 23, CHAPTER 2.7, \$492.6, \$492.7, AND \$492.9)	
http://ucanr.edu/sites/WUCOLS/ ALL WATER FEATURES SHALL BE INCLUDED IN THE HIGH WATER USE HYDROZONE. ALL TEMPORARY IRRIGATED AREAS SHALL BE INCLUDED IN THE LOW WATER USE HYDROZONE. ALL SPECIAL LANDSCAPE AREAS SHALL BE IDENTIFIED ON THE PLANS. THE ETAF FOR NEW AND	ADD THE FOLLOWING STATEMENT ON THE LANDSCAPE AND IRRIGATION PLANS: "I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLANS."	APPLICANT SIGNATURE DATE
EXISTING (NON-REHABILITATED) SPECIAL LANDSCAPE AREAS SHALL NOT EXCEED 1.0. FOR THE PURPOSE OF CALCULATING ETWU, THE IRRIGATION EFFICIENCY IS ASSUMED TO BE 0.75	THE FINAL SET OF LANDSCAPE AND IRRIGATION PLANS SHALL BEAR THE SIGNATURE OF A LICENSED LANDSCAPE ARCHITECT.	
FOR OVERHEAD SPRAY DEVICES AND 0.81 FOR DRIP SYSTEM DEVICES. THE ANNUAL REFERENCE EVAPOTRANSPIRATION (ETo) FOR VENTURA IS 43.5	ADD NOTES TO PLANS: "A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.	
	ADD NOTE TO PLANS: "A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT."	
	ADD NOTE TO PLANS: "AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.	
		L

COMPLETE FOR EACH IRRIGATION POINT OF CONNECTION (EACH METER)

WATER EFFICIENT LANDSCAPE WORKSHEET (COMPLETE FORM FOR EACH IRRIGATION POINT OF CONNECTION)			REFERENCE (ET ₀) 43.5					
HYDROZONE # DESCRIPTION a	VALVE #	PLANT FACTOR (PF)	IRRIGATION METHOD ^b	IRRIGATION EFFICIENCY (IE) ^C	ETAF (PF/IE)	LANDSCAPE AREA (SQ.FT.)	ETAF X AREA	ESTIMATED TOTAL WATER USE (ETWU) d
	REGULAR LANI	DSCAPE AREAS						
					TOTALS			
	SPECIAL LAND	SCAPE AREAS				1.		
					1			
					1			
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		*			TOTALS			
					'	,	ETWU TOTAL	
					MAXIMUM A	LLOWED WATER ALLO	DWANCE (MAWA)	

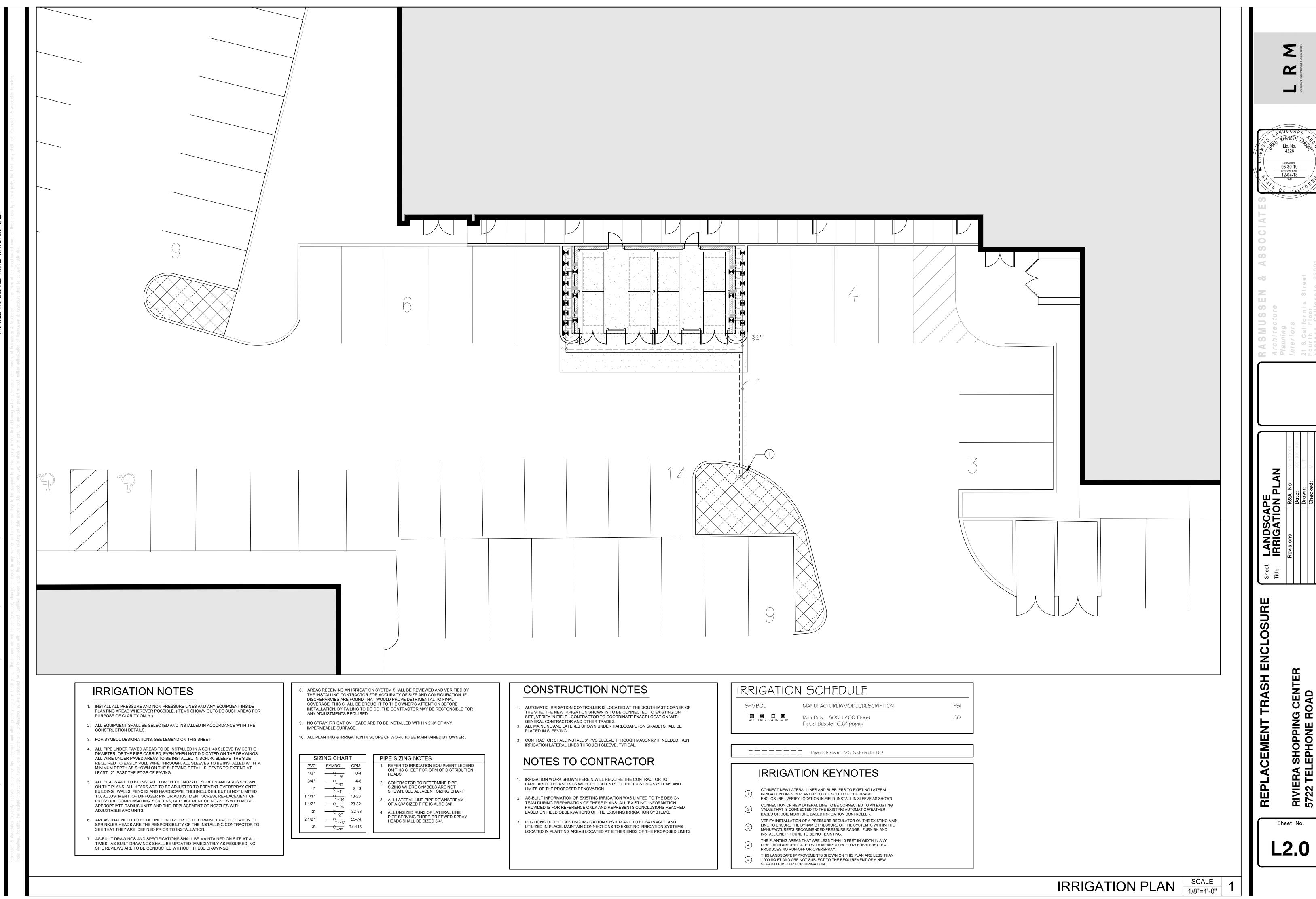
E.G. 1) FRONT LAWN	1) FRONT LAWN				
 LOW WATER USE I MEDIUM WATER USE 					
^b IRRIGATION METHOD OVERHEAD SPRAY OR DRIP					
^C IRRIGATION EFFICIENCY 0.75 FOR SPRAY HEA 0.81 FOR DRIP					
detwu (annual gallo eto X 0.62 X etaf X Where 0.62 IS FACTOR THAT CO ACRE—INCHES PI YEAR TO GALLON FOOT PER YEAR.	(AREA A CONVERSIO INVERTS ER ACRE PER IS PER SQUA	N R			
(1-ETAF X SLA)} WHERE 0.62 IS ACRE-INCHES PI FOOT PER YEAR, FEET, SLA IS TH FEET, AND ETAF	MAWA (ANNUAL GALLONS ALLOWED) = (Eto) (0.62) {(ETAF X LA) + (1-ETAF X SLA)} WHERE 0.62 IS A CONVERSION FACTOR THAT CONVERTS ACRE-INCHES PER ACRE PER YEAR TO GALLONS PER SQUARE FOOT PER YEAR, LA IS THE TOTAL LANDSCAPE AREA IN SQUARE FEET, SLA IS THE TOTAL SPECIAL LANDSCAPE AREA IN SQUARE FEET, AND ETAF IS 0.55 FOR RESIDENTIAL AREAS AND 0.45 FOR NON-RESIDENTAIL AREAS.				
OR BELOW FOR RESIDI	AVERAGE ETAF FOR REGULAR LANDSCAPE AREAS MUST BE 0.55 OR BELOW FOR RESIDENTIAL AREAS, AND 0.45 OR BELOW FOR NON-RESIDENTIAL AREAS.				
ETAF CALCULATIONS					
REGULAR LANDSCAPE	AREAS	ETO FOR			
TOTAL ETAF X AREA		VENTURE =43.5			
TOTAL AREA					
AVERAGE ETAF					
ALL LANDSCAPE AREAS					
TOTAL ETAF X AREA					
TOTAL AREA					
SITEWIDE ETAF					
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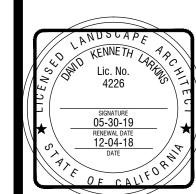
| PRESCRIPTIVE COMPLIANCE OPTION (APPENDIX D) FOR LANDSCAPE AREAS BETWEEN 500 AND 2500 SQUARE FEET. PLANT MATERIAL FOR RESIDENTIAL AREAS 75% OF THE LANDSCAPE, EXCLUDING EDIBLES AND AREAS USING RECYCLED WATER, SHALL CONSIST OF PLANTS THAT AVERAGE A WUCOLS PLANT FACTOR OF 0.3. FOR NON-RESIDENTIAL AREAS, 100% OF THE PLANTS, EXCLUDING EDIBLES AND AREAS USING RECYCLED WATER, SHALL CONSIST OF PLANTS THAT AVERAGE A WUCOLS PLANT FACTOR OF 0.3. ADD NOTE TO PLANS: "A MINIMUM 3-INCH LAYER OF MULCH SHALL BE APPLIED TO ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUND COVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED" ☐ TURF SHALL NOT EXCEED 25% OF THE LANDSCAPE AREA IN RESIDENTIAL AREAS. NO TURF PERMITTED IN NON-RESIDENTIAL AREAS. X TURF NOT PERMITTED ON SLOPES GREATER THAN 25%. TURF IS PROHIBITED IN PARKWAYS LESS THAN 10 FEET WIDE. AUTOMATIC WEATHER-BASED OR SOIL-MOISTURE BASED IRRIGATION CONTROLLERS SHALL BE INSTALLED ON IRRIGATION SYSTEM. PRESSURE REGULATORS SHALL BE INSTALLED ON THE IRRIGATION SYSTEM TO ENSURE DYNAMIC PRESSURE OF THE SYSTEM IS WITHIN THE MANUFACTURER'S RECOMMENDED PRESSURE MANUAL SHUT-OFF VALVES SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE POINT OF CONNECTION OF THE WATER SUPPLY. AREAS LESS THAN 10 FEET IN WIDTH IN ANY DIRECTION SHALL BE IRRIGATED WITH SUBSURFACE IRRIGATION OR OTHER MEANS THAT PRODUCES NO RUN-OFF OR OVERSPRAY. X FOR NON-RESIDENTIAL PROJECTS WITH LANDSCAPE AREAS OF 1,000 SQUARE FEET OR MORE, PRIVATE SUB-METERS(S) TO MEASURE LANDSCAPE WATER USE SHALL BE PROVIDED. ADD NOTE TO PLANS: "AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE." ADD NOTE TO PLANS: "UNLESS CONTRADICTED BY A SOILS TEST, COMPOST AT THE RATE OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE ARE SHALL BE INCORPORATED INTO THE SOIL." I AGREE TO COMPLY WITH REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE. Dos. 12/04/18 APPLICANT SIGNATURE

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE SURE 0 TRASH REPLACEMENT

Sheet No.

CENTER OAD RNIA 9300





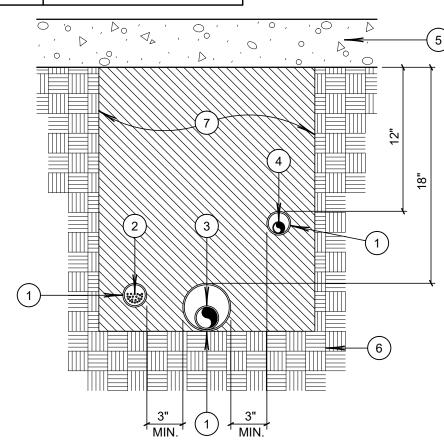
SIZE	DESCRIPTION	SLEEVE SIZE
3/4" - 1 1/4"	PRESSURE SUPPLY LINE	2" SCHEDULE 40 PVC
1 1/2" - 2"	PRESSURE SUPPLY LINE	3" SCHEDULE 40 PVC
2 1/2" - 3"	PRESSURE SUPPLY LINE	4" SCHEDULE 40 PVC
1/2" - 1"	NON-PRESSURE LINE	2" SCHEDULE 40 PVC
1 1/4" - 2"	NON-PRESSURE LINE	3" SCHEDULE 40 PVC
2 1/2" - 3"	NON-PRESSURE LINE	4" SCHEDULE 40 PVC
1-30	CONTROL WIRES	2" SCH 40 PVC.

SLEEVING. SEE SPECIFICATIONS **CONTROL WIRES** PRESSURE SUPPLY LINE NON-PRESSURE SUPPLY LINE

CONCRETE/A.C. PAVING (6) COMPACTED SUBGRADE

7 CLEAN COMPACTED BACKFILL SEE SPECIFICATIONS.

CONDITION 'A'



TRENCHING AND SLEEVING DETAIL

RAIN BIRD BUBBLER SEE SPRINKLER HEAD LEGEND

PLASTIC ADAPTER: RAINBIRD MODEL PA-80

POP-UP SPRAY SPRINKLER RAINBIRD 1804

(4) NOT USED

RAINBIRD SWING JOINT ASSEMBLY MODEL SA-6050

PVC SCH 40 TEE OR ELL

PVC LATERAL LINE

FINISH GRADE

(10) WATERING BASIN

BUBBLER ASSEMBLY 1"=1'-0"

GREEN BUILDING CODE NOTES

- 1. RE-CIRCULATING WATER SYSTEMS SHALL BE USED FOR WATER FEATURES.
- 2. A MINIMUM 3-INCH LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.
- 3. FOR SOILS LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL.
- 4. PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.
- 5. CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.\
- 6. A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
- 7. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE
- 8. AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.

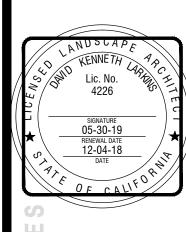
I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLANS.

SIGNATURE

DAVID K. LARKINS NAME

12/04/18 DATE



REPLACEMENT

Sheet No.

